# TABLE OF CONTENTS



**Your Source For Electronic Accessories** 



COMPUTER/DATACOM/ FIBER OPTIC



**TELEPHONE** 



**AUDIO** 



VIDEO/ CONNECTORS



SURGE/ UPS SYSTEMS



CHEMICALS/
PRINTED CIRCUITS



**TOOLS** 



SWITCHES/ PANEL LAMPS/LED'S



**WIRE** 

# GC Electronics Full Line Catalog Put it to work for you.

This catalog contains the full line of GC Electronics products — almost 10,000 electronic accessories and components.

# **Contents**

This catalog has been divided into 2 major sections; Accessories and MRO Components. In Accessories, you'll find Computer/Datacom, Telephone, Audio, Video and Surge. In MRO Components, you'll find Chemicals, Tools, Switches and Wire. Products category names follow each page number found on the lower outside corners of each page.

# **Product Name and Catalog Indexes**

Following the last product category in the catalog are two indexes to help you locate specific product or catalog numbers. The first index is alphabetized by product groups. The second index is in catalog number order. Each index references the appropriate catalog page

number on which a product can be found.

In the upper left hand corner of each index page is a table entitled "LEGEND OF SECTIONS."

Abbreviations have been assigned to each Section to conserve space on the index pages.

The Legend defines these abbreviations.

# **LEGEND FOR SECTIONS**

C/D - COMPUTER/DATACOM

TE - TELEPHONE

A - AUDIO

V - VIDEO

SU - SURGE

C - CHEMICALS

TO - TOOLS

SW - SWITCHES

W - WIRE

# Ordering from the GC Catalog

Many products are available both packaged and in bulk. A product number followed by -BU indicates that the product is available only in bulk. The GC price sheet gives an up-to-date listing of the packaging options available for our products. If you have requirements for forms of packaging that are not listed for specific products, please call Customer Service for a quote.

# **More Information**

Every product listed in the GC Catalog is inventoried to provide uncompromising service to our customers. GC's global sourcing capabilities as a division of Katy Industries, can provide items not listed in this catalog. For product assistance call GC Customer Service 1-800-435-2931.



Fiber Optic For the last 70 years, GC Electronics has been recognized as a leading supplier of low voltage components, tools, and accessories. A strong part of this recognition comes as a result of GC's ability to provide both leading and trailing edge products; giving the industry a "one stop" source for some of the most difficult products to buy. GC is your conduit to nine major product families consisting of almost 10,000 GC part numbers. More importantly, GC gives you access to hundreds of thousands of part numbers from leading suppliers around the world.

Computer Accessories and Datacom products are the most visible examples of the GC story. We stock more than 1,200 product choices in these product categories alone. GC is able to meet your needs, whether you're a distributor with a retail show room, or a contractor who wants consistent quality, without the expense of fancy packaging materials. We are one of the few suppliers who have been able to support the industry through the growth of telephone accessories and make the transition into computer and datacom products. In addition to telephone, datacom, and surge products, GC can also support your needs for the installation of audio and video systems. GC Electronics' Plant Maintenance products, Switches, Wire, Chemicals, and Tools, round out the picture, giving the distributor and installer the products they need.

#### The GC Advantage:

- Broad selection of computer/datacom products to fulfil your needs
- GC products meet/or exceed the industry standards for material and quality
- OEM cables quoted to meet special requirements
- As a full spectrum supplier, GC offers more than 10,000 products; including Audio, Video, Telephone, Wire, Switches, Tools, and Surge Protection devices.
- GC offers limited Lifetime Warranty coverage against defects in materials and workmanship for all computer and datacom products.

# **Computer Accessories**

Cables and Accessories that connect the PC to a peripheral device (printer, scanner, mouse, etc.), or make the workstation more efficient.

All GC computer cables have molded-in strain relief and heavy-duty shielding. These cables are tested in-house to insure that they are properly wired for the intended application and meet industry specifications. As a result, all GC computer cables carry a limited Lifetime Warranty, covering materials and workmanship. In addition to the more than 800 products shown in this section, GC is able to provide custom cables, upon request. Please refer to the pages below to find the specific products that you need:

- Bulk Computer Cable
- Computer Cables
- Bi-Directional **Printer Cables** (IEEE 1284 compliant)
- FireWire Cables (IEEE 1394 compliant)
- Internal Cables and Adapters
- Keyboard Cables and Adapters
- Monitor Cables

- Parallel Printer Cables
- Power Cords and Accessories
- SCSI (I,II, and III) Cables, Adapters, and **Terminators**
- Specialty Computer Cables
- Standard Computer Cables
- USB Cables, Adapters, and Hubs
- Connectors
- Data Switches (Automatic and Manual)
- Gender Changers, Port Protectors, and Adapters
- Multi-Media Accessories
- Small Office and Home Office (SOHO) Accessories
- Tools and Testers
- Workstation Accessories and Input **Devices**
- Wall Plates

#### **Datacom Accessories**

Products that link computers into networks.



GC Electronics offers everything necessary to complete the wiring from the entrance

facility (or equipment closet) to the workstation. GC's products meet ANSI and EIA/TIA specs, making them interchangeable with all other industry compliant products. Our datacom line has grown with the industry, from the earliest use of telephone circuits to today's high-speed networks. Here's an overview of the network data processing speeds covered by GC products:

Cat 1 Analog Voice Applications (POTS - Plain Old Telephone System)

Includes

Digital Voice - 1 MHz

16 MHz

Cat 4 20 MHz

100 MHz Cat 5

Cat 5e 350 MHz

Note: A network will operate at the speed of its lowest component. As a result, a Cat 5e component can be used in a Cat 5 system, without degrading the performance. However, the use of a Cat 5 component in a Cat 5e network will restrict the transmission speed of

GC Electronics offers over 400 Datacom products, including:

- Adapters
- Connectors
- Jacks
- Flush
- Modular
- Surface Mount • Modular Patch Panels

the system to 100 MHz.

- Modular Wall Plates and Inserts
- Network Patch Cables
- Surface Mounted Jacks
- Tools & Testers
- Wire







# USB (UNIVERSAL SERIAL BUS) & "FIREWIRE"

#### USB to Parallel Port

- Economical cables for connecting peripheral devices
- Capable of 12 mbps communication speeds
- Supports up to 127 devices
- New industry standard "plug and play"

 USB cable consists of (1) pair 28 AWG twisted wire for signal + (1) 24 AWG wire for power for cables up to 3m, and (1) 20 AWG power pair for 4m and 5m lengths. All are double shielded with a mylar foil and braided shields.



#### **USB** to Parallel Port

- 100% plug and play
- Fully compatible with Windows 95°/Rev. B & Windows 98°
- Connect to any parallel printer port using your USB port

USB (A) to CEN36 (M) 6' Cat. No. 45-1436

USB (A) to CEN36 (M) 12' Cat. No. 45-1440



# **USB Motherboard Adapter**

 Adds USB capability to your PC
 USB (A) to (2) IDC10 (F) with a Port Bracket

Cat. No. 45-1422



# USB HUB

 Connects up to (4) USB devices to one USB port

Cat. No. 45-1450



# **USB Adapter Cables**

- Connect to input devices such as keyboard & mouse
- Connect to video output port through HDB15



USB (A) (F) to DB15 (F) 6' **Cat. No. 45-1415** 

USB (A) (F) to DB15 (F) 12'

Cat. No. 45-1417



Keyboard & Mouse Adapters

USB (A) (F) to MD6 (M) 6' Cat. No. 45-1418

USB (A) (F) to MD6 (M) 12'

Cat. No. 45-1419



# IEEE1394 "Firewire"

The multimedia connection (connect video cameras, VCR's digital cameras, and printers)

- Real-time data transfer for multimedia applications
- Capable of speeds of 100 mbps to 1000 Mbps (1 Gbps)
- Live connection/disconnection without data loss
- Automatic configuration supporting "plug & play"
- Allows mixing branches and daisy-chains wlfree form network topology

IEEE1394 "Firewire" Cable 4c (M) to 4c (M) 2M (6.5')

Cat. No. 45-1346

IEEE1394 "Firewire" Cable 6c (M) to 6c (M) 2M (6.5')

Cat. No. 45-1366

IEEE1394 "Firewire" Cable 4c (M) to 6c (M) 2M (6.5')

Cat. No. 45-1364



#### USB to USB Cables

USB (B) to USB (A) 1M (3.3') **Cat. No. 45-1413** 

USB (B) to USB (A) 2M (6.5') **Cat. No. 45-1416** 

USB (B) to USB (A) 3M (9.9')

Cat. No. 45-1403

USB (B) to USB (A) 4M (13.2') **Cat. No. 45-1406** 

USB (B) to USB (A) 5M (16.5')



# **MONITOR/VIDEO CABLES**



HD15 (M)

#### Super VGA Cables

#### Premium Quality

- Made with (3) high quality 75Ω mini coax cables
- Double shielded with molded connectors and thumb screws
- Designed for use with high resolution monitors
- Premium quality have ferrite beads for added noise reduction and additional DDC (display data channel) support

#### **Premium Quality**

Super VGA Cable w/Ferrite Bead HD15 (M) / HD15 (M) 6'

Cat. No. 45-1876

Super VGA Cable w/Ferrite Bead HD15 (M) / HD15 (M) 10'

Cat. No. 45-1870

Super VGA Cable w/Ferrite Bead HD15 (M) / HD15 (F) 6'

Cat. No. 45-1866

Super VGA Cable w/Ferrite Bead HD15 (M) / HD15 (F) 10'

Cat. No. 45-1880



HD15 (F)

#### **High Quality**

Super VGA Cable HD15 (M)/ HD15 (M) 6'

Cat. No. 45-1836

Super VGA Cable HD15 (M)/ HD15 (M) 10'

Cat. No. 45-1839

Super VGA Cable HD15 (M)/ HD15 (M) 25'

Cat. No. 45-1841

Super VGA Cable HD15 (M)/ HD15 (M) 50'

Cat. No. 45-1850

Super VGA Cable HD15 (M)/ HD15 (F) 6'

Cat. No. 45-1846

Super VGA Cable HD15 (M)/ HD15 (F) 10'

Cat. No. 45-1838

Super VGA Cable HD15 (M)/ HD15 (F) 25'

Cat. No. 45-1845

Super VGA Cable HD15 (M)/ HD15 (F) 50'

Cat. No. 45-1860



HD15 (M)



**VGA Monitor Cables** 

- These cables use 28 AWG 14 conductor wire
- Heavy duty mylar foil shield
- Molded connectors with thumb

VGA Cable HD15 (M) / HD15 (M) 6' Cat. No. 45-476

VGA Cable HD15 (M) / HD15 (F) 6'

Cat. No. 45-435

VGA Cable HD15 (M) / HD15 (M) 10' Cat. No. 64-4014

VGA Cable HD15 (M) / HD15 (F) 10'

Cat. No. 64-4016



HD9 (M)



HD9 (F)

## **EGA** (Enhanced Graphics Adapter) & CGA (Color **Graphics Adapter) Monitor Cables**

- High quality 28 AWG cable with mvlar foil shield
- Molded connectors with thumb screws

Monitor Cable DB9 (M)/DB9 (F) 6' Cat. No. 45-308

Monitor Cable DB9 (M)/DB9 (F) 10' Cat. No. 45-314

Monitor Cable DB9 (M)/DB9 (M 6' Cat. No. 45-315

Monitor Cable DB9 (M) / DB9 (M 10' Cat. No. 45-316



Video 8 (M)

# **Specialty Monitor Cables**

**RGB Cables** 

RGB Cable DB9 (M) / Video8 (M) 4'

Cat. No. 45-416

RGB Cable (5) BNC (M) / (5) BNC (M) 6'

Cat. No. 45-1505

RGB Cable HD15 (M) / (5) BNC (M) 6'

Cat. No. 45-1840

RGB Cable DB9 (M) / (4) BNC 6' (M) Cat. No. 45-1509





# IEEE 1284 BI-DIRECTIONAL COMPUTER CABLES

- High-speed
- 18 twisted pair cable with a minimum of 35 twists / meter
- Double shielded, heavy duty mylar foil and braided shield
- Uses 28 AWG cable



CEN36 (M)

H.P. CEN36 (M)

# High-Speed Bi-Directional **Printing**

- Low noise bi-directional printer cables
- May be used on most printers
- Fully compliant with H.P.® IEEE 1284 standards

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 3')

Cat. No. 45-1803

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 6')

Cat. No. 45-1806

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 10')

Cat. No. 45-1810

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 25') Cat. No. 45-1828



Parallel Printer Cable IEEE1284 A/C (DB25 (M)/H.P. CEN36 (M) 6')

Cat. No. 45-1826

Parallel Printer Cable IEEE1284 A/C (DB25 (M)/H.P. CEN36 (M) 10')

Cat. No. 454-1830





# High-Speed Parallel **Computer Cables**

- Uses 18 twisted pair, double shielded cable
- Used between computer and bi-directional devices or data

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (M) 3')

Cat. No. 45-2503

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (M) 6')

Cat. No. 45-2506

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (M) 10')

Cat. No. 45-2507

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (M) 25') Cat. No. 45-2525

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (F) 6')

Cat. No. 45-2606

Parallel Cable IEEE1284 A/A (DB25 (M)/DB25 (F) 10')

Cat. No. 45-2610



## **Bi-Directional Data Switches**

- Complies with IEEE 1284 Standards
- All pins wired straight-thru
- Used to share one computer with multiple printers

Manual DB25 A/B Cat. No. 45-2220

Manual DB25 A/B/C/D

Cat. No. 45-2221

Automatic DB25 A/B Cat. No. 45-2225

Automatic DB25 A/B/C/D

Cat. No. 45-2226

# 4 COMPUTER/DATACOM



# PARALLEL PRINTER CABLES

- All printer cables have a minimum of 25 conductors
- Heavy duty mylar foil shielding
- · Molded connectors with built in strain relief
- Cables use 28 AWG stranded cable
- Maximum run length is 50'



## High-Speed Bi-Directional **Printing**

- · Low noise bi-directional printer cables
- May be used on most printers
- Fully compliant with H.P.® IEEE 1284 standards

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 3')

Cat. No. 45-1803

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 6')

Cat. No. 45-1806

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 10')

Cat. No. 45-1810

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 25')

Cat. No. 45-1828

Parallel Printer Cable IEEE1284 A/B (DB25 (M)/CEN36 (M) 50')

Cat. No. 45-1829

Parallel Printer Cable IEEE1284 A/C (DB25 (M)/H.P. CEN36 (M) 6')

Cat. No. 45-1826

Parallel Printer Cable IEEE1284 A/C (DB25 (M)/H.P. CEN36 (M) 10')

Cat. No. 454-1830





CEN36 (M)

90° CEN36 (M)





#### All cables fully wired with 25 conductors

- Premium quality cables have double shielding & lifetime warranty

Standard Parallel Printer

• All high quality computer cables have a 5 year warranty

## **Premium Quality**

**Cables** 

Parallel Printer Cables DB25 (M)/ CEN36 (M) 7'

Cat. No. 45-4424

High Quality

Parallel Printer Cables DB25 (M)/ CEN36 (M) 2'

Cat. No. 45-202

Parallel Printer Cables DB25 (M)/ CEN36 (M) 6'

Cat. No. 45-201

Parallel Printer Cables DB25 (M)/ CEN36 (M) 10'

Cat. No. 45-204

Parallel Printer Cables DB25 (M)/ CEN36 (M) 25'

Cat. No. 45-206

90° Parallel Printer Cables DB25 (M)/ CEN36 (M) 6'

Cat. No. 45-210

90° Parallel Printer Cables DB25 (M)/ CEN36 (M) 10'

Cat. No. 45-213

U/L Listed Parallel Printer Cables DB25 (M)/CEN36 (M) 6'

Cat. No. 45-231

U/L Listed Parallel Printer Cables DB25 (M)/CEN36 (M) 10'

Cat. No. 45-234

Parallel Printer Cables DB25 (M)/ CEN36 (M) 15'

Cat. No. 45-381



H.P. CEN36 (M)

CEN36 (F)

CEN36 (M)

## **Parallel Extension Cables**

- All 36 pin wired straight through
- Heavy duty mylar foil shield
- Molded connectors

Parallel Extension Cable CEN36 (M) CEN36 (M) 6'

Cat. No. 45-700

Parallel Extension Cable CEN36 (M) CEN36 (M) 10'

Cat. No. 45-705

Parallel Extension Cable CEN36 (M) CEN36 (F) 6'

Cat. No. 45-710

Parallel Extension Cable CEN36 (M) CEN36 (F) 10'

Cat. No. 45-715



# **Print Adapters**

DB25 (F)/CEN36 (F) Cat. No. 45-595

DB25 (M)/CEN36 (F) Cat. No. 45-597

DB25 (F)/CEN36 (M) Cat. No. 45-598



IDC CEN36 (M)

# Lap-Top Parallel Printer

- 28 AWG flat ribbon cable
- Lightweight for use with

DB25 (M)/CEN36 (M)

Cat. No. 45-250





45-598



# **MONITOR/VIDEO CABLE & ADAPTERS**



CEN24 (M)



# **Specialty Cables**

- GPIB (General Purpose Interface Bus)
- For attaching sensors and programmable lab instruments

IEEE488 GPIB Cable CEN24 (M) / CEN24 (F) 6.5' **Cat. No. 45-450** 



## Monitor "Y" Adapter

Connect (2) monitors to (1) PC HD15 (M)/(2) HD15 (F) Cat. No. 45-569



# **Monitor Adapters**

 Connect a VGA Monitor to your PC Monitor Adapter DB9 (F)/HD15 (F)
 Cat. No. 45-590

Monitor Adapter DB9 (F)/HD15 (M) Cat. No. 45-591

Monitor Adapter DB9 (M)/HD15 (F) Cat. No. 45-592

Monitor Adapter DB9 (M)/HD15 (M) Cat. No. 45-593



# Monitor Power & Adapter Cables

Monitor Adapter Shrouded (M) / AC (F) 1' Cat. No. 45-401

Monitor Adapter Shrouded (M) / Molded (F) 6' Cat. No. 45-408



Monitor Adapter Shrouded (M) / Molded (F) 12' **Cat. No. 45-409** 



### **Monitor Adapter Cables**

- Adapts monitor to PC
- Molded connectors

Monitor Adapter Cable DB9 (M)/HD15 (M) 6'

Cat. No. 45-437

Monitor Adapter Cable DB9 (F)/HD15 (F) 6'

Cat. No. 45-438



45-2050

## Data Transfer Switches

**Monitor Switch Boxes** 

Monitor Switch HD15 A/B **Cat. No. 45-2050** 

Cat. NO. 45-2050

Monitor Switch HD15 A/B/C/D

Cat. No. 45-2415

Monitor Switch HD15 X

Cat. No. 45-2054



HD15 (F)





45-2255

# **Keyboard & Monitor Switch Boxes**

Monitor & Keyboard Switch HD15 + D5 A/B

Cat. No. 45-2255

Monitor & Keyboard Switch HD15 + MD6 A/B/C/D



# **KEYBOARD CABLES & ADAPTERS**





**Keyboard Extension & Replacement Cables** 

5 PIN DIN plug for use on PC/XT/AT type keyboards

Keyboard Cable D5 (M)/D5 (F) 6' Straight

Cat. No. 45-405

Keyboard Cable D5 (M)/D5 (F) 10' Straight

Cat. No. 45-4410

Keyboard Cable D5 (M)/D5 (M) 6' Coiled

Cat. No. 64-4406

Keyboard Cable D5 (M) /D5 (M) 6' Straight

Cat. No. 64-4407

Keyboard Cable D5 (M) /D5 (M) 10' Straight

\*Cat. No. 45-4510



MD6 (M)



# IBM PS2° Style **Keyboard Cables**

6 PIN Mini DIN for use with notebooks & PS2 keyboards

Keyboard Cable MD6 (M)/MD6 (F) 6'

Cat. No. 45-431

Keyboard Cable MD6 (M)/MD6 (F) 12'

Cat. No. 45-432

Keyboard Cable MD6 (M)/MD6 (F) 6' Coiled

Cat. No. 45-4605

Keyboard Cable MD6 (M)/MD6 (M) 6' Straight

Cat. No. 45-4606

Keyboard Cable MD6 (M)/MD6 (M) 10'

Cat. No. 45-4610

Keyboard Cable MD6 (M)/MD6 (F) 25'

Cat. No. 45-4625

# Keyboards



Windows '95 compatible 104 programmable keys

PC / XT AT Style with Cord & D5 (M) Plug

Cat. No. 64-145



# **Keyboard Adapters**

Keyboards Adapter D5 (F)/MD6 (M) 6" Cat. No. 45-570

Keyboards Adapter D5 (F)/MD6 (M)

Cat. No. 45-573

Keyboards Adapter D5 (M)/MD6 (F) 6"

**Data Transfer Switches** 

Cat. No. 45-571



IBM PS2® Compatible with Cord & MD6 (M) Plug

Cat. No. 64-142



Data Switch MD6 A/B Cat. No. 45-2206

Data Switch D5 A/B





# STANDARD COMPUTER CABLES

Our RS232 cables allow equipment to be moved wherever you wish it to be placed and with very little effort. They will make your work center environment more efficient.

- All computer cables are made to comply with industry standards.
- Cables are made with U/L listed cable which is tested at 80°C @ 300 V
- The connectors have molded cover, and thumbscrews.
- Premium quality cables carry a limited lifetime warranty.
- Premium quality cables are made with 24 AWG stranded cable.
- High quality cables are made with 28 AWG cable and heavy duty mylar foil shield.





#### RS232 Cables

DB25 Cables

**Premium Quality** 

RS232 Cable DB25 (M)/DB25 (M) 5'

Cat. No. 45-4363

RS232 Cable DB25 (M)/DB25 (M) 10'

Cat. No. 45-4364

High Quality

RS232 Cable DB25 (M)/DB25 (M) 2'

Cat. No. 45-1502

RS232 Cable DB25 (M)/DB25 (M) 6'

Cat. No. 45-376

RS232 Cable DB25 (M)/DB25 (M) 10'

Cat. No. 45-377

RS232 Cable DB25 (M)/DB25 (M) 15'

Cat. No. 45-1565

RS232 Cable DB25 (M)/DB25 (M) 25'

Cat. No. 45-378

RS232 Cable DB25 (M)/DB25 (M) 50'

Cat. No. 45-357

RS232 Cable DB25 (M)/DB25 (M) 100'

Cat. No. 45-369

RS232 Cable DB25 (M)/DB25 (F) 2'

Cat. No. 45-358

RS232 Cable DB25 (M)/DB25 (F) 6' Cat. No. 45-379

RS232 Cable DB25 (M)/DB25 (F) 10'

Cat. No. 45-374

RS232 Cable DB25 (M)/DB25 (F) 15' Cat. No. 45-1555

RS232 Cable DB25 (M)/DB25 (F) 25'

Cat. No. 45-375

RS232 Cable DB25 (M)/DB25 (F) 50'

Cat. No. 45-355

RS232 Cable DB25 (M)/DB25 (F) 100'

Cat. No. 45-356

RS232 Cable DB25 (F)/DB25 (F) 6'

Cat. No. 45-371

RS232 Cable DB25 (F)/DB25 (F) 10'

Cat. No. 45-373

RS232 Cable DB25 (F)/DB25 (F) 15'

Cat. No. 454-372







#### RS232 Cables

**DB9 Cables** 

**High Quality** 

RS232 Cable DB9 (M)/Stripped End 7'

Cat. No. 45-302

RS232 Cable DB9 (F)/Stripped End 7'

Cat. No. 45-303

RS232 Cable DB9 (M)/DB9 (M) 6'

Cat. No. 45-315

RS232 Cable DB9 (M)/DB9 (M) 10'

Cat. No. 45-316

RS232 Cable DB9 (M)/DB9 (M) 25'

Cat. No. 45-317

RS232 Cable DB9 (M)/DB9 (F) 6'

Cat. No. 45-308

RS232 Cable DB9 (M)/DB9 (F) 10'

Cat. No. 45-314

RS232 Cable DB9 (M)/DB9 (F) 25'

Cat. No. 45-306





Other "D-Sub" Cables

**DB15 Cables** 

**High Quality** 

Cable DB15 (M)/DB15 (M) 6'

Cat. No. 45-1566

Cable DB15 (M)/DB15 (M) 10'

Cat. No. 45-1558

Cable DB15 (M)/DB15 (F) 6' Cat. No. 45-1556

Cable DB15 (M)/DB15 (F) 8'

Cat. No. 45-330



DB37 Cables RS449

High Quality

RS431 Cable DB37 (M) / DB37 (F) 3'

Cat. No. 45-463

RS431 Cable DB37 (M) / DB37 (F) 6' Cat. No. 45-466





# **INTERNAL CABLES & ADAPTERS**

Internal cables are used to connect the motherboard (the main computer PC board) to the drive units mounted within the computer case. There are two main types of cables used within the computer, and GC Electronics offers a variety of both. They are divided into power splitters and adapters, and data cables.



## **Motherboard Cable Sets**

A (3) Piece Cable Set
DB25 (M)/IDC10 (F) 30cm
DB9 (M) IDC10 (F) 30cm
DB25 (F) IDC26 (F) 30cm

Cat. No. 45-233

A (5) Piece Cable Set
DB25 (M)/IDC10 (F) 30cm 12"
DB9 (M) IDC10 (F) 30cm 12"
DB25 (F) IDC26 (F) 30cm 12"
IDC34 (F)/(2) IDC34 (F) 24"
IDC40 (F)/(2) IDC40 (F) 18"

Cat. No. 45-235

A (2) Piece Cable Set IDC34 (F)/(2) IDC34 (F) 18" IDC40 (F)/(2) IDC40 (F) 18" Cat. No. 45-238



# **Internal SCSI** (Small Computer System Interface) **Cables**

SCSI Cable for (2) Devices IDC50 (F)/(2) IDC50 (F) 2'

Cat. No. 45-899

SCSI Cable for (6) Devices IDC50 (F)/(7) IDC50 (F) 6'

Cat. No. 45-879



SCSI 3 Cable for (1) drive **Cat. No. 45-6801**SCSI 3 Cable for (2) drives **Cat. No. 45-6803**SCSI 3 Cable for (4) drives **Cat. No. 45-6805** 



SCSI 3 Cable for (7) drives Cat. No. 45-6808 SCSI 3 Cable for enclosures Cat. No. 45-6809



#### Internal Drive Cables

Floppy Drive Cable (2) Card Edged34 (F)/(3) IDC34 (F) 32" Cat. No. 45-895



Hard Disk Drive Cable IDC40 (F)/(1) IDC40 (F) 18" **Cat. No. 45-893** 

Hard Disk Drive Cable

IDC40 (F)/(2) IDC40 (F) 24" **Cat. No. 45-894** 



#### **Power Splitters**

(1) 5.25" (M)/(2) 5.25" (F) 6" **Cat. No. 45-410** (1) 5.25" (M)/(2) 5.25" (F) 12" **Cat. No. 45-4104** 



(1) 5.25" (M)/(1) 5.25" (F) + (1) 3.5" (F) 6"

Cat. No. 45-4102 (1) 5.25" (M)/(2) 3.5" (F) 12" Cat. No. 45-4103



# SPECIALTY COMPUTER CABLES



# IBM-AT, PS/2 & Compatible Adapter Cables

Modem Adapter DB9 (F)/ DB25 (M) 6'

Cat. No. 45-320

Modem Adapter DB9 (F)/ DB25 (M) 10'

Cat. No. 45-321

IBM-AT Serial Printer Adapter DB9 (F)/DB25 (M) 6'

Cat. No. 45-391



# **Premium Quality**

IBM-AT Modem Adapter DB9 (F)/DB25 (M) 6'

Cat. No. 45-4427



#### **Null Modem Cables**

The cables allow you to connect two DCE or DTE devices in order to communicate between them. There are several types of Null Modem adapters. GC has included the most popular ones for your convenience.

Null Modem Cable DB9 (F)/ DB9 (F) 6'

Cat. No. 45-389

Null Modem Cable DB9 (M)/ DB9 (M) 10'

Cat. No. 45-390

Null Modem Cable DB25 (M)/ DB25 (F) 6'

Cat. No. 45-393



Null Modem Cable DB25 (M)/ DB25 (F) 10'

Cat. No. 45-395

Null Modem Cable DB25 (M)/ DB25 (M) 10'

Cat. No. 45-394



# **Null Modem Adapters**

Standard Type DB25 (M)/(F) **Cat. No. 45-582** 

Standard Type #1 DB25 (M)/(F) **Cat. No. 45-589** 

Full Handshake DB25 (M)/(F)

Cat. No. 45-583 No-Handshake DB25 (M)/(F)

Cat. No. 45-584

15-583		
DB25M	D	B25F
1		1
2 ———		3
3 ———		2
4		5
5 ———		4
6 ———	$\overline{}$	20
8 —		8
20		6
7 ———		7

5-584	
B25M	DB25F
1 —	1
2 ———	3
3 ———	2
4 —	4
5 —	└ 5
6 —	6
8 —	<u></u> 8
20 —	└── 20
7	7
11	11
12	11

5-58	39	
)B25	M D	B25F
1		1
2		3
3		2
4		
5		8
6		20
7		7
8		4
		5
20		6
G		G



# Lap-Link Cable

The Lap-Link cable provides a universal link between IBM® compatible laptops and desk top computers. This six headed cable offers a choice of connecting computers through their parallel or serial ports. The parallel connectors are male, and the serial connectors are female.



# SCSI (SMALL COMPUTER SYSTEM INTERFACE) CABLES

More powerful computers and faster speeds have given rise to the tremendous growth in the SCSI peripheral devices. The first SCSI standard was adopted in 1986. It supports seven devices on an 8-bit bus at speeds up to 5 Mbps. The most common connectors to be used were DB25, CEN50, and DB50.

• SCSI cables use twisted pair wires

CEN50 (F)

- Cables are double shielded
- Cable is 28 AWG with mylar foil and 85% Braid (SCSI 1 cables have foil shield only)



SCSI 1

- SCSI 1 cable use a CEN50 connector
- Heavy duty mylar foil shield
- Molded connectors
- Supports speed up to 5 Mbps
- Can daisy-chain up to (7) devices

SCSI 1 Cable CEN50 (M)/ CEN50 (M) (25 wire) 3'

Cat. No. 45-853

SCSI 1 Cable CEN50 (M)/ CEN50 (M) (25 wire) 6'

Cat. No. 45-856

SCSI 1 Cable CEN50 (M)/ CEN50 (M) (50 wire) 3'

Cat. No. 45-854

SCSI 1 Cable CEN50 (M)/ CEN50 (M) (50 wire) 6'

Cat. No. 45-855

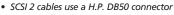
SCSI 1 Cable CEN50 (M)/ CEN50 (F) 3'

Cat. No. 45-873

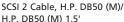
SCSI 1 Cable CEN50 (M)/

CEN50 (F) 6'
Cat. No. 45-876





- Band width of 16 or 32 bits
- Maximum transfer rate of up to 40 Mbps
- Cables are double shielded with mylar foil and 85% braided shield
- Connectors have spring clip catches for easy installation



Cat. No. 45-1813

SCSI 2 Cable, H.P. DB50 (M)/

Cat. No. 45-813

SCSI 2 Cable, H.P. DB50 (M)/

SCSI 2 Cable, H.P. DB50 (M)/ H.P. DB50 (M) 6'

Cat. No. 45-890

SCSI 2 Cable, H.P. DB50 (M)/

H.P. DB50 (M) 10'
Cat. No. 45-8310

SCSI 2 to SCSI 1 Adapter

SCSI 2 to SCSI 1 Cable, H.P. DB50 (M)/CEN50 (M) 3'

Cat. No. 45-905

SCSI 2 to SCSI 1 Cable, H.P. DB50 (M)/CEN50 (M) 6'

Cat. No. 45-896

SCSI 2 to SCSI 1 Cable, H.P. DB50 (M)/CEN50 (M) 10'

Cat. No. 45-8210



SCSI 3

- SCSI 3 cables have a H.P. DB68 connector
- Cables are double shielded with mylar foil and 85% braided shield
- Connectors have spring clip catches for easy installation
- Band width of 16 or 32 bits
- Maximum transfer rate of up to 40 mbps

SCSI 3 Cable, H.P. DB68 (M)/ H.P. DB68 (M) 3'

Cat. No. 45-803

SCSI 3 Cable, H.P. DB68 (M)/ H.P. DB68 (M) 6'

Cat. No. 45-806

SCSI 3 to SCSI 2 & SCSI 1 Adapter Cables

SCSI 3 to SCSI 1 Cable, H.P. DB68 (M)/CEN50 (M) 3'

Cat. No. 45-875

SCSI 3 to SCSI 1 Cable, H.P. DB68 (M)/CEN50 (M) 6'

Cat. No. 45-877

SCSI 3 to SCSI 2 Cable, H.P. DB68 (M)/DB50 (M) 3'

Cat. No. 45-906

SCSI 3 to SCSI 2 Cable, H.P. DB68 (M)/H.P. DB68 (M) 6'

Cat. No. 45-907





#### IBM® RS6000

- Adapts IBM® RS6000 SCSI port to an external SCSI device
- RS6000 cables have a H.P. CEN60 connector

RS6000 to SCSI 1 Cable, H.P. CEN60 (M)/CEN50 (M) 3'

Cat. No. 45-833

RS6000 to SCSI 1 Cable, H.P. CEN60 (M)/CEN50 (M) 5'

Cat. No. 45-884

RS6000 to SCSI 1 Cable, H.P. CEN60 (M)/CEN50 (M) 6'



# SCSI CABLES, ADAPTERS & TERMINATORS







45-826

45-871

45-827

## Internal SCSI (Small Computer System Interface) **Cables**

SCSI Cable for (2) Devices IDC50 (F)/(2) IDC50 (F) 2'

Cat. No. 45-899

SCSI Cable for (6) Devices IDC50 (F)/(7) IDC50 (F) 6'

Cat. No. 45-879

SCSI 3 Cable for (1) Drive

Cat. No. 45-6801

SCSI 3 Cable for (2) Drives

Cat. No. 45-6803

SCSI 3 Cable for (4) Drives Cat. No. 45-6805

SCSI 3 Cable for (7) Drives

Cat. No. 45-6808

SCSI 3 Cable for Enclosures Cat. No. 45-6809







# SCSI Adapters

These adapters make it easy to connect two different types of SCSI devices without purchasing expensive

SCSI 1 to SCSI 2 Adapter, CEN50 (F)/ H.P. DB50 (M)

Cat. No. 45-892

SCSI 1 to SCSI 3 Adapter, CEN50 (F)/ H.P. DB68 (M)

Cat. No. 45-807

SCSI 2 to SCSI 1 Adapter, H.P. DB50 (M)/DB25 (F) Cat. No. 45-864



SCSI 2 to SunMicro Adapter, H.P. DB50 (M)/DB50 (F) Cat. No. 45-865



SCSI 1 "T" Adapter, CEN50 (M)/ (2) CEN50 (F)

Cat. No. 45-868





SCSI 2 Port Adapter, H.P. DB50 (F)/ IDC50 (M) + Bracket



Cat. No. 45-889



SCSI 3 Port Adapter, H.P. DB68 (F)/ IDC CEN50 (F)

Cat. No. 45-6831









# **SCSI Terminators**

SCSI terminators and active terminators. A passive terminator minimizes reflections (standing waves or interference) at the end of the SCSI Cable, and provides impedance close to the impedance of the cable. It is "passive" because it does not regulate power for termination. Active terminators control the impedance at the end of the cable by using a voltage regulator.

SCSI 1 Active Terminator, CEN50 (M)/ Single Ended

Cat. No. 45-826

SCSI 1 Passive Terminator, CEN50 (M)/ CEN50 (F)

Cat. No. 45-870

SCSI 1 Passive Terminator, CEN50 (M)/ CEN50 (F)

Cat. No. 45-871

SCSI 2 Active Terminator, H.P. DB50 (M)

Cat. No. 45-827

SCSI 2 Passive Terminator, H.P. DB50 (M)

Cat. No. 45-828

SCSI 3 Active Terminator, H.P. DB68 (M)

Cat. No. 45-878

SCSI 1 Passive Terminator, DB50 (M)

Cat. No. 45-882

SCSI 1 Active Terminator, DB50 (M)

Cat. No. 45-883

Internal Active Terminator, IDC50 (M)/IDC50 (F)

Cat. No. 45-1811

Internal Active Terminator, IDC50 (M)/Single ended

Cat. No. 45-1812



45-6832

SCSI 3 Port Adapter, H.P. DB68 (M)/ IDC CEN50 (M)



# **PC POWER CORDS & ACCESSORIES**





#### **Power Cords**

These cords are used as replacements for computer, printers, and other SOHO (small office / home office) devices with a current draw of less than 7A @ 125 VAC. Cords are made with 18 AWG stranded U/L listed cable, and molded ends.

Computer Power Cord, AC (M)/ Molded (F) 6'

Cat. No. 45-400

Computer Power Cord, AC (M)/ Molded (F) 10'

Cat. No. 45-406

Computer Power Extension, Shrouded (M)/Molded (F) 1'

Cat. No. 45-403

Computer Power Extension, Shrouded (M)/Molded (F) 6'

Cat. No. 45-404

Computer Power Extension, Shrouded (M)/Molded (F) 12' Cat. No. 45-412





AC Shrouded (M)

# **Monitor Power & Adapter Cables**

Power Adapter Shrouded (M)/ AC (F) 1'

Cat. No. 45-401

Power Adapter Shrouded (M)/ Molded (F) 6'

Cat. No. 45-408

Monitor Adapter Shrouded (M)/ Molded (F) 12'

Cat. No. 45-409



# **Equipment** Cooling Fans 12V DC

- Standard 4-1/8" Centers
- Voltage 115VAC, 60 Hz
- Airflow 105 CFM, Speed 3100 RPM

Cat. No. 2597



## **CPU Cooling Fans 12V DC**

486 Cooling Fan w/Heatsink Cat. No. 45-4486



586 & Pentium Fan w/Heatsink

Cat. No. 45-4586



Pentium Pro Fan w/Heatsink

Cat. No. 45-4686







## **Extension Cord**

AC 3 Conductor (M)/ AC 3 Conductor (F) 6' Cat. No. 45-402



#### Surge Protector & Power Center



These power devices were especially selected for rugged reliability and features for the SOHO environment.

3 Conductor, (6) Outlet, Computer + Modem Protector Strip with Phone/Fax/Modem Line Protection, 330V/510J, Lifetime 100% Equipment Replacment Guarantee, Off-White

Cat. No. WD-2271



Power Center w / (5) Outlets & Switches + Master On/Off



# **MULTIMEDIA ACCESSORIES**













#### **CD-ROM Cables**

The CD-ROM cables are to ease the hook-up of your CD drive to the Sound card. GC offers many kinds of CD-ROM audio cables to fit the most popular drives on the market.

CD-ROM Cable, Sound Blaster/ Panasonic A-D

Cat. No. 45-4702

CD-ROM Cable, Sound Blaster/ Toshiba A-B

Cat. No. 45-4704

CD-ROM Cable, Sound Blaster/NEC

Cat. No. 45-4706

CD-ROM Cable, Sound Blaster/Sony Cat. No. 45-4708

CD-ROM Cable, Sound Blaster/ Mitsumi A-A

Cat. No. 45-4710

CD-ROM Cable, Sound Blaster/ Mitsubishi D-D

Cat. No. 45-4712

CD-ROM Cable, Universal Cat. No. 45-4714



Midi Keyboard Cable

These cables are designed to help

you interface musical input devices

out as well as keyboard in and out.

Midi cable, DB15 (M)/

DB15 (F) + (2) D5 (M) 6' Cat. No. 45-1516 Midi cable, D5 (M)/D5 (M) 6' Cat. No. 45-1515

such as electronic keyboards to your PC. This cable has a Game port in and









# Multimedia Speakers, Microphone & Headphones

Traveling the net is more fun and easy with the multimedia items offered in this catalog. GC offers microphones, headphones and high quality amplified & magnetically shielded speakers for your surfing pleasures.

Multimedia Dynamic Microphone with Stand & Mini Stereo Plug Cat. No. 64-8801

Multimedia Headphone with Boom Type Dynamic Microphone Cat. No. 64-8821

Shielded Speaker w/240 Watt (17-20 W RMS) Amp Cat. No. 64-8828

Magnetically Shielded/2 Channel Stereo Amplifier/Power Output 140 Watts (PMPO)/Volume Controls/ Full Range Response

Cat. No. 64-8861







# **Mounting Hardware**

The hardware in this section has been added to make it convenient for you to add accessories to your PC.

Mounting Rails for Use with 3.5" Size Disk Drives or Tape Back-ups

Cat. No. 45-3500

Disk drive Mounting Kit Frame & Faceplate





# S.O.H.O. (SMALL OFFICE HOME OFFICE) ACCESSORIES



64-353



64-354



**Cleaners & Maintenance** 

Keeping your PC clean on the inside is just as important as keeping it dusted. The dust and contaminants within your drive mechanisms can cause false readings, loss of data, and read/write errors.

Disk Drive Cleaner, Wet/Dry System Cat. No. 64-353

CD Drive Lens Cleaner, with Brush Cat. No. 64-354

Portable Vacuum, Battery Powered Cat. No. 44-275



# 64-3502

#### **Storage Devices**

GC Electronics offers a large variety of home office items to make your workstation more efficient and more comfortable. Our storage devices are durable, functional and versatile.

Flip-Top Diskette Storage Box, holds (10) diskettes

Cat. No. 44-135

Diskette Storage Cases, holds (2) diskettes / (4) pack Cat. No. 64-3502



CD Portable Cases, Soft Sides Holds (12) CD's

Cat. No. 64-1212



Economy CD Portable Cases, Soft Sides Holds (12) CD's

Cat. No. 64-1214



# **Comfort Accessories**

These items offer the computer user both comfort and efficiency when using their work center. They include mouse pads, scanner pads (with builtin grids), and wrist rest.

Mouse Pad, 8.5" x 10" (4) Colors Sold in Display Carton of (12) (colors = red, green, blue & gray)

Cat. No. 64-301 Scanner & Mouse Pad

Cat. No. 64-302 Kevboard Pad & Wrist Rest

Cat. No. 64-303

64-302



loose disks / (4) pack protect your CD's from getting scratched or damaged.

Deluxe CD Jewel Box for storage of

Cat. No. 64-1221



Diskette Storage File, holds (50) diskettes w/key

Cat. No. 64-3550



64-303



64-1220

Stackable CD Storage File, holds



# **WORKSTATION ACCESSORIES & INPUT DEVICES**



#### **Workstation Accessories**

With more time being spent at the computer, its is important the work station be comfortable and efficient. The accessories offered will help make your computer time not only more enjoyable but also more productive.



Bi-Directional Document Holder, Attaches to Monitor

Cat. No. 64-1250

CPU Stand Adjustable 4.75"-6.75" **Cat. No. 64-455** 



Under Carriage Keyboard Drawer with Deluxe Ball-bearing Slides

Cat. No. 64-1041



Deluxe Adjustable Monitor Arm, Holds up to 50 lbs.

Cat. No. 64-454



Deluxe Mouse Holder with Pen Storage. Attaches with Double Sticky Tape.

Cat. No. 64-138







#### Mice

These are Opto-mechanical devices for use on most types of computer systems.

#### (3) Button Serial Mouse

- Compatible w/IBM® PC, XT AT/386/486/PS/2®
- Compatible with all major application software

Serial Mouse with Software, Uses DB9 (F) Connector

Cat. No. 64-140

#### Ergonomic (3) Serial Mouse

- Ergonomic design fits the palm of your hand
- Resolution 20 dpi-6400 dpi
- Fast tracking (500 mm/sec)

Ergonomic Mouse with Software, Uses DB9 (F) Connector

Cat. No. 64-141

#### (2) Button PS/2® Mouse

- Resolution up to 420 dpi
- Fast tracking (650 mm/sec)

PS/2® mouse with software, uses MD6 (M) connector

Cat. No. 64-146

# Keyboards



Windows '95 compatible 104 programmable keys

PC / XT AT Style with Cord & D5 (M) Plug

Cat. No. 64-145



IBM PS2® Compatible with Cord & MD6 (M) Plug



# GENDER CHANGERS/PORT PROTECTORS/ADAPTERS



# **Gender Changers**

The Gender Changers are designed to make it simple to adapt ports and cables to your particular needs. A gender changer has the same configuration on both ends (i.e. male I male or female to female) of the device in order to change the cable or port. A port protector is designed to SAVE or Strengthen the I/O port from wear and tear when continually plugging and unplugging a device or cable.

Full Size, DB25 (M)/(M) Cat. No. 45-500

Full Size, DB25 (F)/(F) **Cat. No. 45-505** 

Low Profile, DB25 (M)/(M) Cat. No. 45-507

Low Profile, DB25 (F)/(F) **Cat. No. 45-508** 

Double Shielded, DB25 (M)/(M) Cat. No. 45-4100

Double Shielded, DB25 (F)/(F)

Cat. No. 45-4101

Full Size, DB9 (M)/(M)

Cat. No. 45-510

Full Size, DB9 (F)/(F) Cat. No. 45-515

Low Profile, DB9 (M)/(M)

Cat. No. 45-517

Low Profile, DB9 (F)/(F) **Cat. No. 45-518** 

Full Size, DB15 (M)/(M)

Cat. No. 45-520

Full Size, DB15 (F)/(F)

Cat. No. 45-525

Low Profile, DB15 (M)/(M **Cat. No. 45-527** 

Low Profile, DB15 (F)/(F) **Cat. No. 45-528** 

Low Profile, DB37 (M)/(M)

Cat. No. 45-540

Low Profile, DB37 (F)/(F) **Cat. No. 45-543** 

Full Size, HD15 (M)/(M)

Cat. No. 45-560

Full Size, HD15 (F)/(F)

Cat. No. 45-561

Full Size, CEN36 (M)/(M)

Cat. No. 45-530

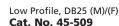
Full Size, CEN36 (F)/(F) **Cat. No. 45-533** 





## **Port Protectors**

Full Size, DB25 (M)/(F)
Cat. No. 45-506





Full Size, DB9 (M)/(F)
Cat. No. 45-516



Low Profile, DB9 (M)/(F) **Cat. No. 45-519** 



Full Size, HD15 (M)/(F) Cat. No. 45-562



Low Profile, HD15 (M)/(F) **Cat. No. 45-563** 



Full Size, DB15 (M)/(F) Cat. No. 45-526



Low Profile, DB37 (M)/(F) **Cat. No. 45-545** 





# **Port Adapters**

These connectors are used to change the I/O (input/output) ports from one type of connector to another. They are most commonly used when hooking up peripheral devices such as a monitor or printer to your PC.

Serial to Modem, DB9 (M)/DB25 (F) Cat. No. 45-512

IBM® to H.P. Plotter Adapter, DB9 (F)/DB25 (M)

Cat. No. 45-587

IBM® to Modem, DB9 (F)/DB25 (M)

Cat. No. 45-585

IBM® Serial Printer Adapter, DB9 (F)/DB25 (M)

Cat. No. 45-586

Straight Thru, DB9 (F) / DB25 (M)

Cat. No. 45-588



Low Profile Serial Adapter, DB9 (M)/

Low Profile Serial Adapter, DB9 (F) /

Low Profile Serial Adapter, DB9 (F)/

Low Profile Serial Adapter, DB9 (M)/

Monitor Adapter, HD15 (M)/DB25 (M)

DB25 (F)

DB25 (M)

DB25 (F)

DB25 (M)

Cat. No. 45-2510

Cat. No. 45-2511

Cat. No. 45-2509

Cat. No. 45-2512

Cat. No. 45-652

45-58/	
DB9F	DB25M
1&6	20
2	2
3 —	
4	- NC
5	7
7&8	- 5
8	NC NC
9 —	NC NC
Shield -	Shield









45-2510





# **ADAPTERS**









# **Monitor Adapters**

Connect a VGA 45590.12.3 BBF HD 1587 H

Monitor Adapter DB9 (F)/HD15 (M) Cat. No. 45-591

Monitor Adapter DB9 (M)/HD15 (F) Cat. No. 45-592

Monitor Adapter DB9 (M)/HD15 (M) Cat. No. 45-593





# **Print Adapters**

DB25 (F) / CEN36 (F)
Cat. No. 45-595

DB25 (M) / CEN36 (F)
Cat. No. 45-597

DB25 (F) / CEN36 (M)
Cat. No. 45-598



## **Keyboard Adapters**

Keyboard Adapter D5 (F)/ MD6 (M) 6"

Cat. No. 45-570

Keyboard Adapter D5 (F)/MD6 (M)

Cat. No. 45-573

Keyboard Adapter D5 (M)/

MD6 (F) 6"

Cat. No. 45-571



# Monitor "Y" Adapter

Connect (2) monitors to (1) PC HD15 (M) / (2) HD15 (F) Cat. No. 45-569



# Keyboard "Y" Adapter

MD6 (M)/(2) MD6 (F) 6" **Cat. No. 45-568** 



# Joystick "Y" Adapter

DB15 (M) / (2) DB15 (F) 6"

Cat. No. 45-566

# 3:1 DATACO





## **Null Modem Adapters**

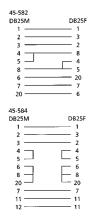
Standard Type DB25 (M)/(F) Cat. No. 45-582

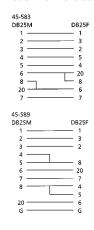
Full Handshake DB25 (M)/(F) Cat. No. 45-583

No-Handshake DB25 (M)/(F)

Cat. No. 45-584 Standard Type #1

DB25 (M)/(F) Cat. No. 45-589











### SCSI Adapters

These adapters make it easy to connect two different types of SCSI devices without purchasing expensive cabling.

SCSI 1 to SCSI 2 Adapter, CEN50 (F)/ H.P. DB68 (M) Cat. No. 45-892

SCSI 1 to SCSI 3 Adapter, CEN50 (F)/ H.P. DB68 (M) Cat. No. 45-807

SCSI 2 to SCSI 1 Adapter, H.P. DB50 (M)/DB25 (F)

Cat. No. 45-864

SCSI 2 to SunMicro Adapter, H.P. DB50 (M)/DB50 (F) Cat. No. 45-865











# Mouse **Adapters**

These adapters make it possible to connect a serial mouse to vour IBM PS/2® computer.

Serial Mouse to PS/2, DB9 (M)/MD6 (M) 6" Cat. No. 45-888

Serial Mouse to PS/2. DB9 (M)/MD6 (M) Cat. No. 45-578

PS/2 Mouse to IBM®

AT, DB9 (F)/MD6 (F) Cat. No. 45-579

These adapters make it possible to connect a Serial Mouse to a MAC® computer.

MAC® Mouse to IBM® AT. DB9 (M)/MD8 (F) Cat. No. 45-574

Serial Mouse to MAC®, DB9 (M)/ MD8 (F)

Cat. No. 45-577

# DATA SWITCHES

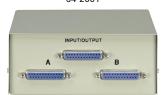
No power required

- Fully shielded metal case with
- Hard wired rotary switch with all connector pins wired

# "D-Sub" Type Manual Switches

The switches are intended to be used for switching low current data signals. All pins are wired through the switch. These switches can be used on either serial or parallel applications.

64-2001



Manual Data Switch, DB25 A/B Cat. No. 64-2001

Manual Data Switch, DB25 A/B/C Cat. No. 45-2002

Manual Data Switch, DB25 A/B/C/D Cat. No. 45-2005

Manual Data Switch, DB25 A/B/C/D/E

Cat. No. 45-2006

Manual Data Switch, DB25 "X" (Cross Wired)

Cat. No . 45-2008

Manual Bi-Directional Data Switch, DB25 A/B

\*Cat. No. 45-2220

Manual Bi-Directional Data Switch, DB25 A/B/C/D

\*Cat. No. 45-2221

no-mar feet

\*Complies with IEEE 1284 Standards

45-2046



Manual Data Switch, DB15 A/B Cat. No. 45-2045

Manual Data Switch, DB15 A/B/C

Cat. No. 45-2046

Manual Data Switch, DB15 A/B/C/D Cat. No. 45-2047



45-2036

Manual Data Switch, DB9 A/B Cat. No. 45-2030

Manual Data Switch, DB9 A/B/C/D

Cat. No. 45-2035

Manual Data Switch, DB9 "X"



# ATAC



#### "D-Sub" Type Auto **Switches**

Parallel Auto Switch, DB25 A/B Cat. No. 45-2091

Bi-Directional Auto switch DB25 A/B \*Cat. No. 45-2225



Bi-Directional Auto switch DB25 A/B/C/D

\*Cat. No. 45-2226

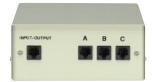


8-Way Auto Switch, DB25 A/B/C/D/E/F/G/H Cat. No. 45-2580

#### 45-2061



45-2056



### Telephone, Voice & **Data Switches**

These switches can be used on either voice or data applications.

Manual Data Switch, RJ11 (4c) A/B Cat. No. 45-2061

Manual Data Switch, RJ11 (4c)

A/B/C/D

Cat. No. 45-2064

Manual Data Switch, RJ11 (4c) "X"

Cat. No. 45-2065

Manual Data Switch, RJ45 (8c) A/B

Cat. No. 45-2055

Manual Data Switch, RJ45 (8c) A/B/C

Cat. No. 45-2056

Manual Data Switch, RJ45 (8c) "X" Cat. No. 45-2060

#### 45-2050



#### **Monitor Data Switches**

Manual Data Switch, HD15 A/B Cat. No. 45-2050

45-2415



Manual Data Switch, HD15 A/B/C/D Cat. No. 45-2415

Manual Data Switch, HD15 "X"

Cat. No. 45-2054

45-2255



Manual Data Switch, HD15 + D5 A/B Cat. No. 45-2255

45-2259



Manual Data Switch, HD15 + MD6 A/B/C/D

Cat. No. 45-2259

45-2205



Manual Data Switch, D5 A/B Cat. No. 45-2205

45-2206

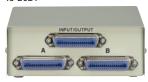


Manual Data Switch, MD6 A/B Cat. No. 45-2206

45-2010



45-2021



**Centronics Type Switch** 

Parallel Data Switch

Manual Data Switch, CEN24 A/B Cat. No. 45-2010

Manual Data Switch, CEN36 A/B

Cat. No. 45-2021

Manual Data Switch, CEN36 A/B/C Cat. No. 45-2022

45-2108



Specialty Switches Manual Switch, BNC A/B Cat. No. 45-2108

Manual Switch, BNC "X" Cat. No. 45-2119

45-2070



Manual MAC Switch, MD8 A/B

Cat. No. 45-2070

Manual MAC Switch, MD8 A/B/C/D Cat. No. 45-2075

45-2080



Manual Switch, DB37 A/B Cat. No. 45-2080



# COMPUTER CONNECTORS



#### "D-Sub" Type Connectors

The GC connectors are provided with the back shells for ease of adding or replacing a cable end. All pins are GOLD plated and the back shells are available in PVC Plastic or Die-cast for shielding purposes.



DB25 Solder Type

DB25 (M) + PVC Shell Cat. No. 45-1060 DB25 (F) + PVC Shell Cat. No. 45-1061

DB25 (M) + Die-cast Shell Cat. No. 45-1080

DB25 (F) + Die-cast Shell Cat. No. 45-1081

45-1035

45-1041

**DB9 Solder Type** 

DB9 (M) + PVC Shell Cat. No. 45-1035

DB9 (F) + PVC Shell Cat. No. 45-1036

DB9 (M) + Die-cast Shell Cat. No. 45-1040

DB9 (F) + Die-cast Shell Cat. No. 45-1041



**DB9 Solder Type** 

DB15 (M) + PVC Shell Cat. No. 45-1131

DB15 (F) + PVC Shell

Cat. No. 45-1132

DB15 (M) + Die-cast Shell

Cat. No. 45-1140 DB15 (F) + Die-cast Shell Cat. No. 45-1141



## "D-Sub" Hoods

With the color coded "D-Sub" hoods listed here, you can key each type of cable or department location with different colored hoods. This makes it easy to locate a particular cable when tracing a problem or changing a location. These hoods are made of PVC material and come with the hardware.



45-5006



**DB25 Hoods** 

PVC Grev Hoods Cat. No. 45-5008

**PVC Black Hoods** Cat. No. 45-5018

**PVC Blue Hoods** Cat. No. 45-5041

**PVC Green Hoods** Cat. No. 45-5042

**PVC Red Hoods** Cat. No. 45-5043

**PVC Yellow Hoods** Cat. No. 45-5045 **DB9 Hoods** 

**PVC Grey Hoods** Cat. No. 45-5006 **PVC Black Hoods** 

Cat. No. 45-5016

**PVC Blue Hoods** Cat. No. 45-5021

**PVC Green Hoods** Cat. No. 45-5022

**PVC Red Hoods** Cat. No. 45-5023 **DB15 Hoods** 

**PVC Grey Hoods** Cat. No. 45-5007

**PVC Black Hoods** Cat. No. 45-5017

**PVC Blue Hoods** Cat. No. 45-5024

**PVC Green Hoods** 

Cat. No. 45-5031

**PVC Red Hoods** 

Cat. No. 45-5033

**PVC Yellow Hoods** Cat. No. 45-5035

**Din Plugs** 











The DIN connector is used for replacement and/or repair of keyboards, mice and other input devices. The connectors are solder type.

MD3 (M)

Cat. No. 45-1151

MD8 (M)

Cat. No. 45-1152

MD6 (M)

Cat. No. 45-1166

MD6 (F)

Cat. No. 45-1167

D5 (M) 180°

Cat. No. 45-1155

D5 (F) 180° Cat. No. 45-1165

### **Insulation Displacement Connectors**

These IDC connectors need no soldering. They use ribbon cable (flat cable with conductors side by side) and the pins within the connectors pierce the insulation and make contact with the conductors.



DB25 IDC Type IDC-DB25 (M) Cat. No. 45-1070 IDC-DB25 (F) Cat. No. 45-1071



**DB9 IDC Type** IDC-DB9 (M) Cat. No. 45-1030 IDC-DB9 (F) Cat. No. 45-1031



Centronics IDC Type IDC--CEN36 (M) Cat. No. 45-1000 IDC--CEN36 (F) Cat. No. 45-1001 45-1511



**Bulk Computer Wire** 

GC's bulk cable has a mylar foil shield plus 85% copper braided shield for better elimination of unwanted signals.

9c Double Shielded 7'

Cat. No. 45-1541

9c Double Shielded 100'

Cat. No. 45-1511

25c Double Shielded 100' Cat. No. 45-1527



# WALL MOUNT FACEPLATES

#### Stainless Steel Wall Plates

Attractive and durable brushed stainless steel wall plates fit standard electrical boxes.

DB25 Single

Cat. No. 45-900

DB25 Double

Cat. No. 45-902

DB9 Single

Cat. No. 45-910

**BNC** Single

Cat. No. 45-920

BNC Double

Cat. No. 45-922

Keystone Style Face Plates

1 Port

Cat. No. 45-921

2 Port

Cat. No. 45-923

3 Port

Cat. No. 45-924

4 Port

Cat. No. 45-925



45-902 45-910



45-920



45-921

# **TOOLS & TESTERS**



#### **Computer Tool Kit**

Kit Contains:

- 2 Slotted Screwdrivers
- 2 Phillips Screwdrivers
- 2 Nutdrivers
- 1 Reversible Torx Screwdriver
- 1 Insertion Tool or Parts Tube
- 1 3-Claw Parts Holder
- 1 Tweezer
- 1 Vinyl Zipper Case.

Cat. No. 44-350



# 45-481

#### **Port Reconfiguration Kits**

These RS232 jumper boxes have both male & female connectors mounted on a printed circuit board with pads for soldering connections and a bus area for tying lines together. A snap-on re-usable shell is provided to protect your connections and make the unit into a permanent adapter.

DB25 (M)/(F) + Hardware Cat. No. 45-480
DB9 (M)/(F) + Hardware Cat. No. 45-481



# Breakout Box (RS232 Type)

This portable, pocket size test set provides access to all 25 conductors of the RS232 interface between the data terminal and the data modem. Ten LED's monitor the status at the source of the primary signals (TD, RD, RTS, CTS, DSR, CD, TC, RC, DTR & TC) and (2) additional LED's scan the dip switches.

RS232 Breakout Box, with jumper wires & case

Cat. No. 45-491



# Surge Protector

Built in MOV (Metal Oxide Varistors) provide protection on (5) data lines.
DB25 (M)/(F)

\*Cat. No. 45-581



# 45-1518

# **Testers**

The GC Electronics testers are designed to test the operation of your computer circuit to help isolate a problem or to map the pin-out configuration of the circuit in question.

Quick Port Checker, DB25 (M)/(F) 7 LED's. This is a loopback tester which provides testing (&) pairs of RS232 (for testing RD, TD, RTS, CTS, DSR, CD & DTR)

Cat. No. 45-580

Port Tester, DB25 (M)/(F) 18 LED's. This tester provides quick testing of (9) of the most circuits with (9) pairs LED's **Cat. No. 45-1518** 



# PUTER/DATACO

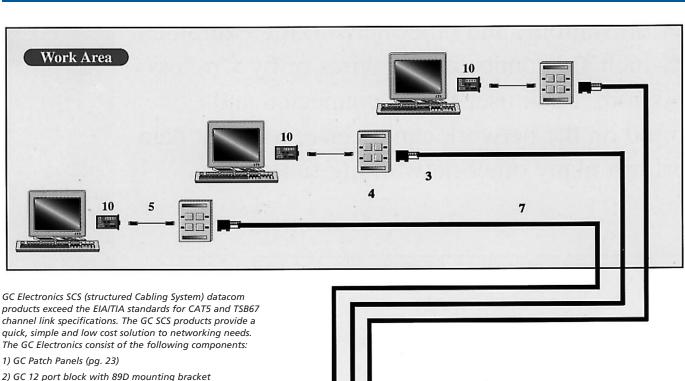


# Typical 10Base-T Structured Cabling System Installation

10Base-T Ethernet is one of the most used and popular LAN networks today. Currently over 80% of all installed LAN's are Ethernet base. 10Base-T Ethernet is popular because of its excellent balance between low cost, data speed and ease of installation. The 10Base-T Ethernet standard is defined by the institute of Electrical and Electronic Engineers (IEEE) as IEEE 802.3. The IEEE 802.3 Ethernet standards defines,

- The operating data speed, 10 Mega-bytes per second (10 Mbps)
- Cabling type Unshielded Twisted Pair (UTP)
- Transmitting and receiving wire pins, 1 (TD+), 2 (TD-), (3 RD+), 6 (RD-)
- Maximum CAT5 distances per segment 100 meters (324 feet), including patch cords
- RJ45 8 position modular jack
- Star topology (cabling configuration where each computer is connected to a central HUB

10Base-T Ethernet requires a minimum of EIA CAT5 rated cabling components, but EIA category 5 cabling is highly recommended for future speed network expectation.



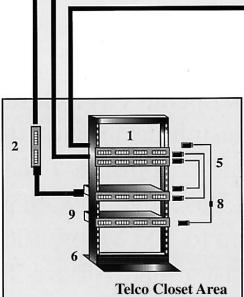
- (part # 45-5889)
- 3) GC Modular mini jacks (pp. 25 & 26)
- 4) GC Modular Face plates (pg. 24)
- 5) GC Modular Patch Cords (pg. 28)
- 6) Equipment rack and mounting accessories
- 7) Bulk UTP horizontal cabling EIA CAT5 & CAT5e (pg. 32)

## **HOT NEW Products**

8) CAT5 & CAT5e in-line couplers (pg. 30) industries smallest, Power sum compliant)

Network Equipment

- 9) 10Base-T, 100Base-T HUB (RJ45 jacks)
- 10) PC 10Base-T, network interface cards



#### Features:

- Simple and easy installation
- U/L verified EIA, TSB40A CAT5 & CAT5e
- · High Density design
- · Extra strength rolled edged patch panel design
- Meets FCC part 68
- · Limited lifetime warranty
- Multi-color patch cords
- Enhanced hardware exceeds CAT5 Power Sum Link

# **MODULAR PATCH PANELS**

Use these attractive and durable black anodized patch panels to bring your network from the equipment closet, or entrance facility to the work area. These panels give you a place to consolidate your cable runs, not only for your CAT5 cable runs but your audio, video and telephone as well.

- Panels are .09" thick and can be mounted on a 19" EIA rack.
- Available in fully populated models with CAT5 modular jacks or pre-punched with square mounting holes for use with other inserts

#### **CAT5 Modular Patch Panels**

- These patch panels are available in 12, 16, 24, 48 port models
- Panel contains 110 style CAT5 connectors
- Meets FCC sub-part 68 requirements
- Insertion life 750 cycles minimum
- Temperature range -40°F to 200°F
- Enhanced PCB design technology provides reliable performance up to CAT5 (100 Mhz, 8 wires)
- Jacks are numbered and have white write-on area

Patch Panel (12) port CAT5, size 1.75" x 19"

Cat. No. 45-5697

Patch Panel (16) port CAT5, size 1.75" x 19"

Cat. No. 45-5698

Patch Panel (24) port CAT5, size 1.75" x 19"

Cat. No. 45-5699

Patch Panel (48) port CAT5, size 3.5" x 19"

Cat. No. 45-5700

# ATS C. THUS C.





45-5700

#### Flexible Modular Patch Panels

- Pre-punched for standard wall plate adapters or Modular jacks
- Most commonly used where mixing of media is needed
- Will accommodate Video, CAT5, telephone & Audio Jacks

Patch Panel (16) station, size 1.75" x 19"

Cat. No. 45-5224

Patch Panel (24) station, size 1.75" x 19"

Cat. No. 45-5238

Patch Panel (32) station, size 3.5" x 19"

Cat. No. 45-5248

Patch Panel (48) station, size 5.25" x 19"

Cat. No. 45-5270



45-5248

### **CAT5e Universal 110 Style**

- Panels are .120" thick pr. .090 rolled edge black painted Aluminum with white writeon blocks
- Meets FCC Sub-part 68 requirements
- Insertion life 750 cycles minimum
- Temperature range -40° -200°F
- Pre-assembled rear cable holders for quick and easy wire management
- Front & rear port numbering for Horizontal LAN cable path locations
- Contacts = Phosphor Bronze alloy with a minimum of 50 micro inches of GOLD plating over Nickel
- Wire range = 22-26 AWG insulated or stranded wire

- U/L listed (file No. E173068)
- Exceeds EIA568A & TSB-40A CAT5e requirements
- Enhanced PCB (printed circuit board) Technology for reliable performance up to 155 Mhz
- Panels are available in 12, 24, 48 & 96 port sizes
- Mini Panels has 12 vertical ports with a wall mount bracket
- Standard Panels meet the EIA standard of 19" width



(12) Port Mini Panel T568B Dimensions: 1.75" H x 19" W Cat. No. 45-5889

(96) Port Panel T568B Dimensions: 7.0" H x 19" W

# PUTER/DATACO



# WALL PLATES







## Multimedia Wall Plates

These wall plates are uniquely designed to minimize your inventory and still give you the flexibility to color-code each department or work station area. This is done through the use of color-coded inserts.

Single Gang (1) Port, White Cat. No. 45-5651

Single Gang (2) Port, White Cat. No. 45-5652

Single Gang (3) Port, White Cat. No. 45-5654

Single Gang (4) Port, White

Cat. No. 45-5653

Single Gang (6) Port, White Cat. No. 45-5655

Double Gang (4) Port, White Cat. No. 45-5656

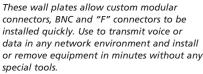
Double Gang (6) Port, White Cat. No. 45-5657

Double Gang (8) Port, White Cat. No. 45-5658





# Standard Datacom Wall Plates



Single Gang (1) Port, Ivory

Cat. No. 45-950

Single Gang (2) Port, Ivory

Cat. No. 45-938

Single Gang (3) Port, Ivory

Cat. No. 45-933

Single Gang (4) Port, Ivory Cat. No. 45-934

Single Gang (6) Port, Ivory

Cat. No. 45-936

Single Gang (1) Port, White Cat. No. 45-5633

Single Gang (2) Port, White

Cat. No. 45-5634

Single Gang (3) Port, White Cat. No. 45-5635

Single Gang (4) port, White

Cat. No. 45-5636

Single Gang (6) port, White Cat. No. 45-5637



## Electrical Style Designer Wall Plates

The electrical style wall plates is made to look like your standard electrical outlet and will mount to a standard electrical box.

Single Gang (1) Port Base, Ivory

Cat. No. 45-961

Single Gang (1) Port Base, White

Cat. No. 45-5961

Single Gang (1) Port Face Plate, Ivory

Cat. No. 45-960

Single Gang (1) Port Face Plate, White

Cat. No. 45-5960

Single Gang (2) Port Base, Ivory

Cat. No. 45-962

Single Gang (2) Port Base, White

Cat. No. 45-5962

Single Gang (2) Port Face Plate, Ivory

Cat. No. 45-963

Single Gang (2) Port Face Plate, White

Cat. No. 45-5963



# **Decor Style Designer** Wall Plates

Single Gang (1) port Base, Ivory Cat. No. 45-971

Single Gang (1) port Base, White

Cat. No. 45-5971

Single Gang (2) port Base, Ivory Cat. No. 45-972

Single Gang (2) port Base, White

Cat. No. 45-5972

Single Gang (3) port Base, Ivory

Cat. No. 45-973

Single Gang (3) port Base, White

Cat. No. 45-5973

Single Gang Face Plate, Ivory

Cat. No. 45-974

Single Gang Face Plate, White

Cat. No. 45-5974



## **Angled Face Plates**

Allows modular jacks, BNC, and "F" connectors to be installed quickly.

Modular (1) Port, White

Cat. No. 45-5981

Modular (2) Port, White

Cat. No. 45-5982

Modular (4) Port, White





# **MODULAR JACKS**







45-5765-BU



45-5766-BU

# 90° 110 Style Modular CAT5 Jacks

- Designed to be used with the 110 type punch-down tool
- 90° Configuration cable orientation
- The mini jack universal design will fit in most keystone hole openings: AMP, Hubbell, Krone, ICC or other .58" x .76" standard sizes.
- Temperature range -40°F to 200°F
- The 110 IDC contacts will accommodate 22-26 AWG solid wire
- Available in multiple colors

Combo Jack T568 (A/B), Ivory

Cat. No. 45-5759-BU

Combo Jack T568 (A/B), Black

Cat. No. 45-5760-BU

Combo Jack T568 (A/B), Red

Cat. No. 45-5762-BU

Combo Jack T568 (A/B), Yellow Cat. No. 45-5764-BU

Combo Jack T568 (A/B), Green

Cat. No. 45-5765-BU

Combo Jack T568 (A/B), Blue Cat. No. 45-5766-BU

Cat. No. 45-5769-BU

Combo Jack T568 (A/B), White



45-5550 front



45-5550 back





45-5675 front





180° 110 Style CAT5 Modular Jacks

- Designed to be used with the 110 type punch-down tool
- 180° Configuration cable orientation
- The mini jack universal design will fit in most keystone hole openings: AMP, Hubbell, Krone, ICC or other .58" x .76" standard sizes.
- Temperature range -40°F to 200°F
- The 110 IDC contacts will accommodate 22-26 AWG solid wire
- Available in multiple colors

Combo Jack T568 (A/B), Black

Cat. No. 45-5550

Combo Jack T568 (A/B), Ivory

Cat. No. 45-5551

Combo Jack T568 (A/B), Blue

Cat. No. 45-5552

Combo Jack T568 (A/B), Red

Cat. No. 45-5553

Combo Jack T568 (A/B), White

Cat. No. 45-5554

Combo Jack T568 (A/B), Yellow

Cat. No. 45-5555

Combo Jack T568 (A/B), Green

Cat. No. 45-5216

## **Modular CAT5 Keystone Jacks IDC Type**

- IDC (insulation displacement contacts) style connectors
- No punch-down tool is needed
- Flip-top plastic lids aid wire installation & protection
- Jack comes with key lock to prevent accidental opening of lid
- The mini jack universal design will fit in most keystone hole openings: AMP, Hubbell, Krone, ICC or other .58" x .76" standard sizes
- Temperature range -40°F to 200°F
- The 110 IDC contacts will accommodate 22-26 AWG solid wire
- Available in multiple colors

Combo Jack T568 (A/B), Black

Cat. No. 45-5674

Combo Jack T568 (A/B), Ivory

Cat. No. 45-5675

Combo Jack T568 (A/B), White

Cat. No. 45-5676

Combo Jack T568 (A/B), Green

Cat. No. 45-5677

Combo Jack T568 (A/B), Yellow

Cat. No. 45-5678

Combo Jack T568 (A/B), Red

Cat. No. 45-5679

Combo Jack T568 (A/B), Blue



# **MINI JACKS**





## CAT5e Universal, 110 Style

This series of 110 jacks is compliant with "PowerSum' products and specifications. The mini jacks exceed EIA 568-A, TSB-40A and DIS11801 category 5e standard. These devices consist of hardware that is designed to support data speed transmissions up to Asynchronous Transfer Mode (ATM) of 155 Mbps (mega bits per second). The CAT5e mini jacks are PowerSum tested with a sweep frequency bandwidth of 1-155 MHz. By designing and testing a system using CAT5e mini jacks you are extending the frequency bandwidth of the system and further guarantee the reliable speed of the system as well as extending the life of your installation.

- Our mini jacks are of universal design to fit most standard keystone openings
- The Material is high impact plastic, Flame retardant U/L-rated 94V-0 thermoplastic
- Insertion life 150 cycles minimum
- Temperature range -40° 200°F
- Contacts = Phosphor Bronze alloy with a minimum of 50 micro inches of GOLD plating over Nickel
- Wire range = 22-26 AWG insulated or stranded wire
- U/L listed (file No. E173068)
- Exceeds EIA568A & TSB-40A CAT5e requirements
- Mini jacks are available in multi-colors
- Uses 90° IDC 110 style connections
- Enhanced PCB (printed circuit board) Technology for reliable performance up to 155 Mhz

lvory

Cat. No. 45-5562

Black

Cat. No. 45-5560

White

Cat. No. 45-5569



## GIGASYS-6 CAT6 System, 110 Style

This GigaSYS-6 Mini Jack is the latest developed for higher performance UTP (Unshielded Twisted Pair) end to end cabling systems. The device is one of the key elements to meet the ISO/IEC 11801 Class E/category 6 Annex G, CENELEC 50173 Annex E and TIA/EIA category 6 and basic link specifications. The GigaSYS-6 Mini Jack utilize Balance-XTI Technology ™. Balance-TXI Technology ™ is the combined use of balance noise removal (Crosstalk) and signal reflection (Return Loss) control circuitry. These devices will provide a 100% less noise over EIA CAT5 specifications, improved link impedance and also provides over 100% more usable frequency bandwidth (>250 Mhz)", and is fully backward compatible with CAT5 rated components. With our Giga SYS-6 product you will receive the most optimum performance for both the present and future application such as Giga-bit Ethernet.

- Mini jack universal design fits most standard keystone holes openings .58" x .76"
- U/L rated and made of high impact 94V-0 thermoplastic
- Meets FCC Sub-part 68 requirements
- Insertion life = 750 cycles minimum
- Temperature range is -40° 200°F
- Contacts, Phosphor Bronze alloy with a minimum 50μ gold plating over Nickel
- 110 IDC range 22-26 AWG insulated solid or stranded wire
- Exceeds EIA568A & TSB-40A CAT5 requirements
- Balance XTI Design Technology
- Enhanced PCB design technology provides reliable performance over 250 Mhz
- Mini jacks are available in multi-colors
- T568A/B wiring
- Backward compatible to CAT5 systems

Ivory

Cat. No. 45-6750

Black

Cat. No. 45-6751

White



# INSERTS. BRACKETS & FLUSH TELEPHONE BLOCKS













## **CAT4 Modular** Jacks

- These connectors are used on telephone and data low speed requirements
- Capable of speed up to 16 Mhz
- RJ11 & RJ12 both can use the RJ12 (6c) iacks
- IDC contacts with snap-on cover

Black Keystone Jack, 6c (RJ12)

Cat. No. 45-5000

Blue Keystone Jack, 6c (RJ12)

Cat. No. 45-5001

Green Keystone Jack, 6c (R112)

Cat. No. 45-5002

Red Keystone Jack, 6c (RJ12)

Cat. No. 45-5003

White Keystone Jack, 6c (RJ12)

Cat. No. 45-5004

Yellow Keystone Jack, 6c (R112)

Cat. No. 45-5005

Black Keystone Jack, 8c (RJ12)

Cat. No. 45-5010

Blue Keystone Jack,

8c (RJ45) Cat. No. 45-5011

Green Kevstone Jack. 8c (RJ45)

Cat. No. 45-5012

Red Keystone Jack, 8c (R 145)

Cat. No. 45-5013

White Keystone Jack, 8c (RJ45)

Cat. No. 45-5014

Yellow Keystone Jack, 8c (R145)

Cat. No. 45-5015













45-942

45-944

45-945

# **Color-Coded** Inserts

- These inserts and adapters are used with multimedia wall plates
- Bezels are front loading and jacks snap into them from the rear
- Adapters are available for "F", BNC, modular jacks and blanks

Insert for Modular Jack, Black

Cat. No. 45-5642

Insert for Modular Jack, Red

Cat. No. 45-5643

Insert for Modular Jack, Green

Cat. No. 45-5644

Insert for Modular Jack, Yellow

Cat. No. 45-5645

Insert for modular jack, Blue

Cat. No. 45-5646

Insert for Modular Jack, White

Cat. No. 45-5664

Insert for Modular Jack, Blank

Cat. No. 45-5660

Insert for "F" Connector Cat. No. 45-5662

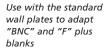
Insert Assembly. "ST" Fiber

Cat. No. 45-5661

Insert Assembly, "BNC" Cat. No. 45-5665

Insert Assembly, "F-81" Cat. No. 45-5666

# Wall Plate Inserts



Blank Insert, Ivory Cat. No. 45-942

Blank Insert, White Cat. No. 45-5638

Insert for "F" Connector, Ivory

Cat. No. 45-944 Insert for "F"

Connector, White Cat. No. 45-944W-BU

Insert for "BNC" Connector, Ivory

Cat. No. 45-945 Insert Assembly "BNC",

White

Cat. No. 45-5640











## Flush Mounted **Telephone Blocks**

- IDC connections for quick, secure installation
- Connectors will accept 22-26 AWG cable
- Use with 110 style punch-down tool
- Voice grade flush jacks, may be wired for either voice or

Single Flush Jack, 4c (RJ11), Ivory Cat. No. 45-115

Single Flush Jack, 6c (RJ12), Ivory Cat. No. 45-116

Single Flush Jack

8c (RJ45), Ivory Cat. No. 45-117

Dual Flush Jack, 6c (RJ12), Ivory Cat. No. 45-5100

Dual Flush Jack, 8c (RJ45), Ivory Cat. No. 45-5102

Dual Flush Jack (1) 6c (RJ12) & (1) 8c

(RJ45), Ivory Cat. No. 45-5101

Single Face Plate, Ivory Cat. No. 45-5103

Dual Face Plate, Ivory Cat. No. 45-5104

45-5602-BU

45-270-BU



# Wall Plate Mounting Accessories

These items help you attach low voltage wall plates to almost any surface.

Back box for single gang face plates

Cat. No. 45-5602-BU

Wall plate mounting Bracket for existing construction, metal Cat. No. 45-270-BU



Quick mounting Bracket for existing construction, plastic



# **MODULAR SURFACE BOXES**

# Modular CAT5 Surface Mounted Boxes

- Uses 110 style IDC type connection to be used with 110 punch-down tool
- IDC connections allow for a more efficient and time saving installation
- Wire retaining caps-provide additional relief to prevent accidental wire pull-out
- Accepts EIA/TIA standards for CAT5 wiring
- Multiple mounting options (screws and double stick tape) allow for quicker installation in a variety of locations

Single Surface Box, White

Cat. No. 45-5618

Single Surface Box, Ivory

Cat. No. 45-5711

Single Low Profile Surface Box, White

Cat. No. 45-5659

Single Low Profile Surface Box, Ivory

Cat. No. 45-5710

Dual Surface Box, White

Cat. No. 45-5620

Dual Surface Box, Ivory

Cat. No. 45-5712

Single Shielded Surface Box, White

Cat. No. 45-5619

Dual Shielded Surface Box, White

Cat. No. 45-5621

Single Low Profile Shielded Surface Box, White

Cat. No. 45-5663

# 45-126



### Combo Voice & Data Surface Boxes

- Designed to quickly install voice & data lines
- To be used in low speed applications
- IDC connections for use with 22-26 AWG cable

Single Surface Mount Voice Grade Box, 4c (RJ11). Ivorv

Cat. No. 45-125

Single Surface Mount Voice Grade Box, 6c (RJ12), Ivory

Cat. No. 45-126

Single Surface Mount Voice Grade Box, 8c (RJ45), Ivory

Cat. No. 45-127

Dual Surface Mount Voice Grade Box, 6c (RJ12), Ivory

Cat. No. 45-5105

Dual Surface Mount Voice Grade Box, (1) 6c + (1) 8c, Ivory

Cat. No. 45-5106

Dual Surface Mount Voice Grade Box, 8c, Ivory

Cat. No. 45-5107



45-5618

45-5712

## **Modular Surface Boxes CAT4**

- Meets the EIA/TIA standards for CAT4
- Type 66 style IDC contacts
- Require a type 66 punch-down tool
- Can be used on 10Base-T and Token Ring systems
- May be used on systems requiring CAT3 or P.O.T.S. (plain old telephone system) wiring as well

Surface Mount CAT4 Box, Single 4c (RJ11)

Cat. No. 45-106

Surface Mount CAT4 Box, Single 6c (RJ12)

Cat. No. 45-109

Surface Mount CAT4 Box, Single 8c (RJ45) Ivory

Cat. No. 45-107

Surface Mount CAT4 Box, Single 8c (RJ31X) with Shorting Bars







# DATACOM PATCH & JUMPER CABLES

These top of the line cables are designed to meet the standards set forth by the TIA/EIA and that you expect from GC Electronics. The jumper or patch cables are used from the HUB to the patch panel, and from the work station to the wall. These cables must be stranded. Jumper cables may be used anywhere that flexibility is required. The maximum cable length or patch cables is 39.6 ft. (or 10M) according to the EIA/TIA standards.



### CAT5e (Enhanced CAT5) Jumper Cables

- Enhance tested to 350 Mhz
- Meets FCC subpart 68, 50μ" of gold & UL 94VO material specifications
- Four pair (4 pr) 24 AWG UTP stranded U/L, CSA & ETL listed cabling
- Molded strain relief
- Wired to EIA/TIA standard T568B (straight through)

CAT5e Jumper Cable, 8c (RJ45) to 8c (RJ45) 3'

Cat. No. 45-6813

CAT5e Jumper Cable, 8c (RJ45) to 8c (R145) 5'

Cat. No. 45-6815

CAT5e Jumper Cable, 8c (RJ45) to 8c (RJ45) 7'

Cat. No. 45-6817

CAT5e Jumper Cable, 8c (RJ45) to 8c (RJ45) 10'

Cat. No. 45-6810

CAT5e Jumper Cable, 8c (RJ45) to 8c (RJ45) 14'

Cat. No. 45-6814

CAT5e Jumper Cable, 8c (RJ45) to 8c (RJ45) 25'

Cat. No. 45-6825



## Stranded CAT5 Cables

- Stranded 24 AWG 4 pr. UTP cable
- PVC jacketed cable
- · Wired to T568B standards configuration
- Can be used between two like devices, either T568A or T568B
- RJ45 connectors have 50u" of Gold and are U/L listed
- All cables are tested and certified to meet the EIA/TIA standards

Grev CAT5 Jumper Cable, 8c (RJ45) to 8c (RJ45) 3'

Cat. No. 45-5281

Grey CAT5 Jumper Cable, 8c (RJ45) to 8c (R 145) 7'

Cat. No. 45-5282

Grey CAT5 Jumper Cable, 8c (RJ45) to 8c (R145) 10'

Cat. No. 45-5696

Grey CAT5 Jumper Cable, 8c (RJ45) to 8c (RJ45) 14'

Cat. No. 45-5301

Grey CAT5 Jumper Cable, 8c (RJ45) to 8c (RJ45) 25'

Cat. No. 45-5303















## **Color-Coded Stranded CAT5 Jumper Cables**

Red Jumper Cable, 3' Cat. No. 45-5681

Yellow Jumper Cable, 31 Cat. No. 45-5682

Blue Jumper Cable, 3' Cat. No. 45-5683

Black Jumper Cable, 3' Cat. No. 45-5684

Green Jumper Cable, 31 Cat. No. 45-5685

Red Jumper Cable, 7' Cat. No. 45-5686

Yellow Jumper Cable, 7' Cat. No. 45-5687

Blue Jumper Cable, 7' Cat. No. 45-5688

Black Jumper Cable, 7' Cat. No. 45-5689

Green Jumper Cable, 7' Cat. No. 45-5690

Red Jumper Cable, 14' Cat. No. 45-5691

Yellow Jumper Cable, 14' Cat. No. 45-5695

Blue Jumper Cable, 14'

Cat. No. 45-5692 Black Jumper Cable, 14' Cat. No. 45-5693

Green Jumper Cable, 14'

Cat. No. 45-5694 Red Jumper Cable, 25'

Cat. No. 45-5322

Yellow Jumper Cable, 25" Cat. No. 45-5324

Blue Jumper Cable, 25' Cat. No. 45-5326

Black Jumper Cable, 25'

Cat. No. 45-5320 Green Jumper Cable, 25'

Cat. No. 45-5325





45-5682



# MISCELLANEOUS DATACOM CABLES



## CAT5 Jumper Cables . . . **Special Contractor Packs**

#### 25 Pieces

- Stranded 24 AWG 4 pr. UTP cable
- PVC jacket
- Wired to T568B standards configuration
- Can be used between two like devices, either T568A or T568B
- RJ45 connectors have 50µ" of gold and are U/L listed
- · All cables are tested and certified to meet the EIA/TIA standards

White Jumper Cables, 3'

Cat. No. 45-5763-25

White Jumper Cables, 7'

Cat. No. 45-5761-25

White Jumper Cables, 10'

Cat. No. 45-5714-25

White Jumper Cables, 14' Cat. No. 45-5715-25

White Jumper Cables, 25'

Cat. No. 45-5716-25



45-1388

#### Modular Data Cables

- Uses 26 AWG flat stranded P.O.T.S. (plain old telephone system) wire
- Wired straight through for data purposes
- Modular connectors have 6µ" of gold on the contacts

Use on 4c (RJ11) or 6c (RJ12) systems

Black Data Cable, 6c (RJ12) to 6c (RJ12) 15'

Cat. No. 45-1376

Black Data Cable, 6c (RJ12) to 6c (RJ12) 25'

Cat. No. 45-1378

Use on 8c (RJ45) systems

Black Data Cable, 8c (RJ45) to 8c (RJ45) 15'

Cat. No. 45-1386

Black Data Cable, 8c (RJ45) to 8c (RJ45) 25'

Cat. No. 45-1388



#### Ethernet (thin-net) Cables

- These cables are used in LAN (local area networks)
- Maximum run length is 607' per segment
- Cable is RG58 A/U which is 50  $\Omega$ impedance and stranded center conductor
- Jumper cables have a BNC connector & molded strain relief on each end

Black Thin-net Cable, BNC (M) to BNC (M) 3'

Cat. No. 45-5803

Black Thin-net Cable, BNC (M) to BNC (M) 6'

Cat. No. 45-5806

Black Thin-net Cable, BNC (M) to BNC (M) 12'

Cat. No. 45-5129

Black Thin-net Cable, BNC (M) to BNC (M) 25'

Cat. No. 45-5130

Black Thin-net Cable, BNC (M) to BNC (M) 50'

Cat. No. 45-5131

Black Thin-net cable, BNC (M) to BNC (M) 75

Cat. No. 45-5825

Black Thin-net cable, BNC (M) to BNC (M) 100'

IBM® Token Ring Cables

This was the original LAN system

and each bit of information was

• Use IBM® type data connector #8642551 & #8642552 or equivalent

passed to the next terminal in

using a ring topology (loop-to-loop)

Cat. No. 45-5132



# 45-5315



# Black Token Ring Cable, 4 Pos. Data (M) to DB9 (M) 8'

the ring.



• Cables are  $150\Omega$ 

(M)/(M) 8' Cat. No. 45-5316







# DATACOM ADAPTERS

GC datacom offers these convenient adapters to convert from one media to another. They come in several different types. Telco adapters allow you to convert form the more expensive RS 232 type cables to the less expensive modular cables. With other adapters you can change equipment from a telephone type wiring system to 10Base-T, or ethernet system.













#### **Telco Adapters**

- Allows low cost connections between computers & peripherals
- One piece construction for quick installation
- Available in RJ11, RJ12 & RJ45 to all male & female "D-Sub" connectors
- Telco (telephone) jacks are fully wired
- Pins may be inserted into the "D-Sub" connector to suit your wiring needs

Telco Adapter, 4c (RJ11) to DB9 (M)

Cat. No. 45-5108

Telco Adapter, 4c (RJ11) to DB9 (F) Cat. No. 45-5111

Telco Adapter, 6c (RJ12) to DB9 (M) Cat. No. 45-5109

Telco Adapter, 6c (RJ12) to DB9 (F)

Cat. No. 45-5112

Telco Adapter, 8c (RJ45) to DB9 (M)

Cat. No. 45-5110

Telco Adapter, 8c (RJ45) to DB9 (F)

Cat. No. 45-5113

Telco Adapter, 4c (RJ11) to DB15 (M)

Cat. No. 45-5118

Telco Adapter, 4c (RJ11) to DB15 (F) Cat. No. 45-5114

Telco Adapter, 6c (RJ12) to DB15 (M)

Cat. No. 45-5119

Telco Adapter, 6c (RJ12) to DB15 (F)

Cat. No. 45-5116

Telco Adapter, 8c (RJ45) to DB15 (M)

Cat. No. 45-5120

Telco Adapter, 8c (RJ45) to DB15(F)

Cat. No. 45-5117

Telco Adapter, 4c (RJ11) to DB25 (M)

Cat. No. 45-5121

Telco Adapter, 4c (RJ11) to DB25 (F)

Cat. No. 45-5125

Telco Adapter, 6c (RJ12) to DB25 (M)

Cat. No. 45-5122

Telco Adapter, 6c (RJ12) to DB25 (F)

Cat. No. 45-5126

Telco Adapter, 8c (RJ45) to DB25 (M)

Cat. No. 45-5123

Telco Adapter, 8c (RJ45) to DB25 (F)

Cat. No. 45-5127

Telco Adapter, 10c (RJ45) to DB25 (M)

Cat. No. 45-5124

Telco Adapter, 10c (RJ45) to DB25 (F)

Cat. No. 45-5128

















USOC (Telephone) RJ12 (F)/8c (RJ45) (M) CAT5

Cat. No. 45-4506

to CATS

USOC (Telephone) RJ45 (M)/8c (RJ45) (F) CAT5

Cat. No. 45-4545

USOC 6c RJ12 (M)/8c (RJ45) (F) USOC Cat. No. 45-6645

CAT5 Extension, 8c (RJ45) (M) to (2) 8c (RJ45) (F)

Cat. No. 45-5786

CAT5 Extension, 8c (RJ45) (F) to (2) 8c (RJ45) (M)

Cat. No. 45-5787









CAT5 Coupler, 8c (RJ45) (F)/(F) Cat. No. 45-5639

CAT5e Coupler, 8c (RJ45) (F)/(F) Cat. No. 45-5739-BU





Adapter BNC (M)/4c (RJ11) (F)





# **CABLE CONNECTORS & WIRE**

Our economical connectors are available in twist-on or crimp-on configurations. We offer the connectors to fit a variety of cable, both PVC & Plenum.

# **Modular Plenum**

#### RJ-11 4-Conductor (4p4c) - (Handset)



Part No.	Description	
30-9912-100	Flat Stranded, 100 Pk., 3 Micron	
30-9912	Flat Stranded, 10 Pk., 3 Micron	
30-8964-100	Round Stranded, 100 Pk., 15 Micron	(jl)
30-8964	Stranded, 10 Pk., 15 Micron	(j)

# RJ-11 4-Conductor (6p4c)



Part No.	Description	
30-9910	Flat Stranded, 10 Pk., 3 Micron	
30-9910-100	Flat Stranded, 100 Pk., 3 Micron	
30-8954	Flat Stranded, 10 Pk., 15 Micron	Ĥ
30-8954-100	Flat Stranded, 100 Pk., 15 Micron	Ĥ
30-8955-100	Flat Stranded, 100 Pk., 15 Micron	(jl)

#### RJ-12 6-Conductor (6p6c)



Part No.	Description	
30-9914	Flat Stranded, 10 Pk., 3 Micron	
30-9914-100	Flat Stranded, 100 Pk., 3 Micron	
30-8956	Flat Stranded, 10 Pk., 15 Micron	(jl)
30-8956-100	Flat Stranded, 100 Pk., 15 Micron	(il)
30-8957-100	Flat Stranded, 100 Pk., 50 Micron	(jl)
30-8986	Round Stranded, 10 Pk., 15 Micron	(jľ
30-8986-100	Round Stranded, 100 Pk., 15 Micron	(ji)

## RJ-45 8-Conductor (8p8c)



Part No.	Description	
30-9918	Flat Stranded, 10 Pk., 3 Micron	
30-9918-100	Flat Stranded, 100 Pk., 3 Micron	
30-8958	Flat Stranded, 10 Pk., 15 Micron	(jl)
30-8958-100	Flat Stranded, 100 Pk., 15 Micron	(ji)
30-8959-100	Flat Stranded, 100 Pk., 50 Micron	(jl)
30-8988	Round Stranded, 10 Pk., 15 Micron	(ji)
30-8988-100	Round Stranded, 100 Pk., 15 Micron	Ŵ

## RJ-45 8-Conductor Keyed (8p8c)



Part No.	Description	
30-8968	Flat Stranded, 10 Pk., 15 Micron	(j)
30-8968-100	Flat Stranded, 100 Pk., 15 Micron	(Ú
30-8969-100	Flat Stranded, 100 Pk., 50 Micron	(1)

## **RJ-45 8-Conductor Shielded**



Part No.	Description	
30-8990	Flat Stranded, 10 Pk., 50 Micron	(jl)
30-8990-100	Flat Stranded, 100 Pk., 50 Micron	Ĥ
30-8992	Round Solid, 10 Pk., 50 Micron	ÛΓ
30-8992-100	Round Solid, 100 Pk., 50 Micron	ÛΓ
	·	



Part No.	Description
30-8994	Round Stranded, 10 Pk., 50 Micron
30-8994-100	Round Stranded, 100 Pk., 50 Micron

## **RJ-45 10-Conductor**



Part No.	Description
30-9916	Flat Stranded, 10 Pk., 3 Micron
30-9916-100	Flat Stranded, 100 Pk., 3 Micron
30-8910-100	Round Stranded, 100 Pk., 3 Micron



















## Colored-Coded Boots with Strain Relief for RJ45 Modular Connectors

These boots protect the connector and they can be used as color-codes for the different departments, work stations or functions of the cables.

Black (1) Piece Boot for Round Cable **Cat. No. 45-5622** 

Green (1) Piece Boot for Round Cable Cat. No. 45-5623

Red (1) Piece Boot for Round Cable Cat. No. 45-5624

Yellow (1) Piece Boot for Round Cable **Cat. No. 45-5625** 

Blue (1) Piece Boot for Round Cable **Cat. No. 45-5626** 

Grey (1) Piece Boot for Round Cable **Cat. No. 45-5627** 

White (1) Piece Boot for Round Cable **Cat. No. 45-5611** 

Black (2) Piece Boot for Round Cable Cat. No. 45-5720

Red (2) Piece Boot for Round Cable **Cat. No. 45-5722** 

Orange (2) Piece Boot for Round Cable Cat. No. 45-5723

Yellow (2) Piece Boot for Round Cable Cat. No. 45-5724

Green (2) Piece Boot for Round Cable Cat. No. 45-5725

Blue (2) Piece Boot for Round Cable **Cat. No. 45-5726** 

Purple (2) Piece Boot for Round Cable Cat. No. 45-5727

White (2) Piece Boot for Round Cable Cat. No. 45-5729





## **Datacom BNC Connectors**

- Available for RG62 and RG58 A/U cable
- Crimp-on & Twist-on types

BNC (M) Twist-on for RG62 cable

Cat. No. 45-5401

BNC (M) (2) piece crimp for RG62

Cat. No. 45-5402

BNC (F) / BNC (F) Bulkhead mount

Cat. No. 45-5403

BNC (M) Twist-on for RG58 A/U

Cat. No. 45-5409

BNC (M) (2) piece crimp for RG58 A/U

Cat. No. 45-5410







#### **Bulk Cable**

GC Electronics offers these cables for your convenience in making custom lengths.

Grey CAT5 Solid PVC CMR Rated Cable 500'

Cat. No. 14-555-8L68

Grey CAT5 Solid PVC CMR Rated Cable 1000'

Cat. No. 14-555-8L88

Grey CAT5 Stranded (for Jumper Cables) CMR Rated Cable 1000'

Cat. No. 14-554-8B88

Blue CAT5 Solid Plenum CMP Rated, 1000'

Cat. No. 14-9555-8L86

White CAT5e 350 Mhz PVC Cable CMR Rated, 1000'

Cat. No. 14-350-8L89

White CAT5e 350 Mhz Plenum Cable CMR Rated, 1000'

Cat. No. 14-9350-8L89



## **NETWORK CABLE TESTERS**



#### **Modular Cable Tester**

This portable modular tester is used for quickly testing modular cable pins continuity and pin-out configuration, such as crossed wire or straight-through. The tester is also equipped with a set of dip switches and jumpers which not only allow you to check the twisted pairs for wiring, but also allows you to change the pin-outs as you want.

Cat. No. 45-5632



# Stationman Probe Speaker Probe Receiver

New locking and non-locking switch which is field adjustable. The test probe is supplied with a cone-shaped tip and a duckbill tip that is longer and flatter, permitting insertion into larger cables or cables under tension where slack cannot be obtained.

- Leads of Lineman's test set are clipped to the "ears" of the Probe, automatically energizing the Probe.
- High input impedance to permit capacitive coupling with pair carrying the test signal.
- Output impedance is low to match the impedance of the telephone handset.
- Quickly and easily locates the proper cable pair containing the tone signal.
- An audible speaker so that the speaker probe may be used with or without a lineman's test set.

Cat. No. 12-5706



#### **LANtest**

#### (Network & Modular Cable Tester)

LANtest is a newly designed and very practical tester that can easily read the correct pin configuration cable continuity, open, short and cross-connect.

#### Features:

- Can test the correct pin configuration of 10Base-T, 10Base-2 thin ethernet cable, RJ45/RJ11 modular cables, 356A, TIA-568A/568B and token ring cable etc.
- Easy to verify cable continuity, open, short and miswire.
- With remote kit it can remotely test cable up to 100 ft. away either on wall plate or patch panel.
- Can test the grounding.
- Features with auto or manual scan for pin-out indicators.
- A power switch is provided for saving battery power.

#### CT-2200 Included are:

- 1 Master box
- 1 Remote box
- 2 BNC adapter cable, 15 cm
- 1 BNC M/M adapter 1 RJ45 modular cable, 15 cm
- 1 Deluxe carrying bag

Cat. No. 45-5767



#### **Tone Tester Set**

#### Features:

- 1000 Hz or 500/1000 alternative tone for tracing pairs.
- · Locates broken pairs/cables in walls.
- Tone generator emits R.F. signal up to 5000 ft. Detectable by 12-5706 station man probe.
- Provides talk power on a dead pair.
- Checks for shorts or opens, using a long-life light-emitting diode, (LED).
- Continuity test.
- Tip and ring identifications.
- Line condition identification: A. Clear, B. Busy line, C. Ringing line.
- Positive line verification.
- · Long battery life.
- Nylon braided tinsel test lead wire for greater wear and flexibility.
- Heavy duty nickel silver "6A" type alligator clips.
- Heavy duty boots made especially for the "6A" type alligator clips.
- Rubber grommet to prevent chafing on the test leads.

#### Specifications:

## Integrated circuit

Dual tone capability: A. 1000 Hz continuous tone, B. 500'1000 Hz alternating tone Power source 9 volt battery: 216 Everready, VS323 RCA, 006P import or equivalent, sold separately.

Cat. No. 12-5705



#### Multi-Network Cable Test Pro (Plug & Play)

The Multi-Network cable tester pro is an advanced design which simplified the test to be plug and test. It can test both 10Base-T and 10Base-2 cable within a few seconds. Just plug cable's both ends and it automatically runs all tests and Green and Red LEDs in the master unit will show you the test results of continuity, open pairs, shorted pairs, crossed pairs or reversed pairs problem. With the remote unit, you can remotely test installed cables either on wall plates or patch panels. In addition, it can also test the ground wire too.

#### Features:

- Plug and test, simplified the test operation.
- Can test either 10Base-T (Category 3-5) cable or 10Base-2 (coax) cable.
- Allowed loop back test or remote test.
- All test results are shown up on master unit.
- Grounding can be tested too.

Cat. No. 45-5768



## **TOOLS & TESTERS**

Having the right tool for the job is everyone's dream. For this purpose GC Electronics offers a great selection for both the occasional user, and the professional installer. With these tools and testers your installation and trouble shooting is made much easier and faster.



#### **Modular Crimp Tools**

- 3 way tools, cut, strip & crimp
- Heavy duty steel or Dura plastic frame

Multifunctional Tool, Use on RJ11, RJ12 & RJ45

Cat. No. 12-454

Economy Multifunctional Tool, Use on RJ11, RJ12 & RJ45

Cat. No. 12-2468

Dura Plastic Tool, Use for RJ11 & RJ12 Line & Handset Plugs

Cat. No. 12-002

Modular Crimp Tool for RJ45

Cat. No. 12-001

Modular Crimp Tool for 4c RJ11 & 6c RJ12 line cord plugs

Cat. No. 12-004

Modular Crimp Tool for 2c & 4c Handset Plugs

Cat. No. 12-005







#### **Punch Down Tools**

- For seating wire into terminals
- Blade is reversible to insert only or insert and cut
- Impact tension is adjustable
- Compartment in handle for spare blade holding

Impact Punch Down Tool, with 110 Blade & 66 Blade

Cat. No. 12-5700

Replacement 66 Blade Cat. No. 12-5701

Cat. No. 12-5/01

Replacement 110 Blade

Cat. No. 12-5702

Impact Punch Down Tool (No Blade)

Cat. No. 45-5628

66 Blade for 12-5628 **Cat. No. 12-5630** 

Economy Plastic Tool for 110

Connections

Cat. No. 45-5631

# **WIRE STRIPPERS**



#### **Coaxial Stripper**

For Stripping RG58, RG59 and RG62 coaxial cable. Equipped with two blades allowing you to strip the insulation and dielectric in the same action.

Coaxial Stripper Cat. No. 12-458

Replacement Blades

Cat. No. 12-468



#### **Professional UTP Wire Stripper**

This multi-purpose Tele-stripper is a versatile product for cable preparation. The tool will slit and strip twisted pair cable.

#### Features

- Long life cutting blades for all stripping and slitting functions.
- Strip and slit lengths may be varied to accommodate different connector requirements.
- The user friendly tool is molded from highly visible, durable Delrin Super-Tuff.
- A recessed cutting surface slits long runs for twisted pair cable.
- A stripping feature with multiple nest cavities allows the removal of a wide variety of jacket materials on twisted pair cable. Disengage tension loop for thin jacketed cable.
- A strip length gauge is molded into the side of the tool.

Cat. No. 12-532



## **UTP Wire Stripper**

The UTP Wire Stripper takes the guesswork out of removing the cable jackets from many types of twisted pair (UTP & STP), multicore (shielded and unshielded) and fiber optic cables. This multipurpose tool will adapt itself to accept cable diameters up to 0.43" (11 mm). It is designed for long blade life and to cut into the insulation while leaving the conductors undamaged. It can be used for voice, video, audio, security and many other applications.

#### Features:

- Safety: the cutting blade is recessed into the housing.
- Self-adjusting: will provide the user with the widest range of stripping options. The tool will adjust automatically to cut PVC, plenum rated materials and other without damaging the braids, foils or conductors.
- One piece design: the tool comes complete and ready to use right out of the package.
- Typical applications data: Ethernet (10Base-T), Token Ring (IBM Cabling Types 1 & 6), AppleTalk and ISDN: Voice: Premis Distribution.

Cat. No. 12-545



# 5-PORT MINI HUB



The 66-9005 is a 10Base-T hub that complies with all IEEE802.3 Ethernet standards. This hub features five modular RI-45 UTP ports for UTP wiring and one RJ-45 up-link port for hub cascading. Each UTP port is equipped with a Link/Activity LED to indicate the networking link and activity status. The Power LED indicates whether power is ON or OFF and the collision LED indicates the presence of collision. These LED's offer a great aid in diagnosing line troubles and indicate when data is being received or transmitted. The external power adapter is also included. With its compact size, the 66-9005 is ideal for small workgroup to set up a 10Base-T network.

#### Technical Specification

- Standards: IEEE 802.3 10Base-T
- Network Connector: (4) RJ-45 jacks + (1) pair MPR & DTE RJ-45 jack
- Data Transfer Rate: 10Mbps
- Duplex: Half
- Cable: 85-110Ω UTP wire, max. length of 100M (328 ft.)
- LED's: Power, Collision and Link/Activity (Ports 1 to 5)
- Power Requirement: Input: 120V AC @60Hz/18W, Output: 7.5V DC @ 1A
- Power Consumption: 4 Watts
- **Dimensions**: 27 x 117 x 91mm (H x W x D)
- EMI Rating: FCC Part 15 Class A and CE Mark

#### Special Functions

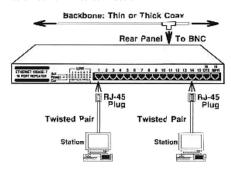
- Fragment Extension
- Auto-partition
- Auto-reconnection
- Preamble Regeneration
- Collision Detection
- Jam Pattern Generation

Cat. No. 66-9005

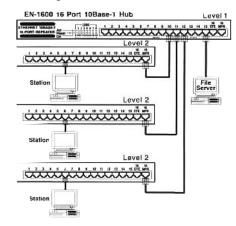
# 16-PORT 10BASE-T-HUB



**Basic Network Interconnection** 



Connecting More Than Two 66-9116



66-9116 is a hub that complies with all IEEE 802.3 Ethernet standards. This hub features 16 modular RJ-45 UTP ports for UTP wiring, one RJ-45 up-link port for hub cascading, one DTE Attachment Unit Interface (AUI) port for thick Ethernet cabling and one BNC port for thin Ethernet cabling. With these features, all different Ethernet cabling systems can be connected together with a wide range of configurations. Each UTP port is equipment with link LED to indicate the network connection status. The power LED indicates whether power is on/off, the activity ACT) LED indicates network traffic and the collision (COL) LED indicates the presence of collision. These LED's offer a great aid diagnosing line troubles and indicate when data is being received or transmitted.

#### Technical Specification

- Standards: IEEE 802.3 10Base-T-2/5/T
- Network Connector: (1) DB-15 AUI connector, (1) BNC connector, (15) RJ-45 jacks and 1 pair (MPR & DTE) RJ-45 jack
- Data Transfer Rate: 10Mbps
- Duplex: Half
- Cable: 0.4" diameter RG-11, 50Ω coaxial cable, max. length/500M (1,640'), 0.2" diameter RG-58A/U, 50Ω coaxial cable, max. length/185M (607'), 85-110 UTP wire, max. length/100M (328')
- LED's: Power, Collision, Activity and Link (Ports 1 to 15)
- Power Requirement: 90-260V AC, 50/60Hz, 0.30/0.15A
- Dimensions: 45 x 483 x 125mm (H x W x D)
- EMI Rating: FCC Part 15 Class A
- Special Functions
- Fragment Extension
- Auto-partition
- Auto-reconnection
- Preamble Regeneration
- Collision Detection
- Jam Pattern Generation

Cat. No. 66-9116



# FAST ETHERNET FLUX SWITCH



### FluxSwitch 10/100Mbps Auto-Negotiation Switches

The 8-port Ethernet switching hub is standard 10/100Base-TX/FX hubs that meet all IEEE 802. 3 Ethernet standards, as well as IEEE 802.3u Fast Ethernet and switching hub specifications. This unit is rack mountable with standard 19" spacing.

#### Technical Specification

- Standards: IEEE 802.3 and IEEE 802.3u
- Network Connector: (1) pair (MPR & DTE) 10/100Base-TX RJ-45 jack and (7) RJ-45 jacks (You can ONLY use either MPR or DTE port)
- Data Transfer Rate: 10/100Base-TX port (s) 10/100Mbps Auto Negotiation
- **Transmission Method:** Store and Forward Filter/Forward
- Rate: 148,800 Packets/sec. per port @ 100 Mbps 14,880 Packets/sec. per port @ 10Mbps
- Duplex: Full/Half
- Cable: Category 5 for 100Base-TX port
- LED's: Hub Power, Link and Activity, Collision each port
- Power Requirement: 100-240V AC, 50/60Hz, 5.0/3.2A
- Dimensions: 45 x 483 x 238mm (H x W x D)
- EMI Rating: FCC Part 15 Class A and CE Mark

#### Special Functions

- Ram Buffer: 2MB per 2-port
- MAC Address: 8K with self-learning mechanism

Cat. No. 66-9112

# ETHERNET LAN LAPTOP ADAPTER



#### **PCMCIA Ethernet Adapter**

66-9200 is the credit-card-size Ethernet adapter for PCMCIA compliant (Type II) notebook computers. It conforms to IEEE 802.3. PCMCIA release 2.1, and JEIDA 4.x standards. The 16KB buffer memory can provide capacity for high data transfer throughput. The software configurable design makes the installation simple and easy. This unit also supports the PCMCIA (CIS) Card Information Structure including Socket and Card Services via a direct enabler program. A diagnostic program to verify both card and cable connection is available. By using (SMT) Surface Mount Technology the device has very low power consumption with reliable performance. Equipped with the auto-sensing feature, 66-9200 can provide the (PnP) Plug and Play connection to either 10Base-T via RJ-45 port or thin Ethernet via BNC port.

#### Technical Specification

- PC Supported: PCMCIA Type II slot notebook computer
- Standards: IEEE 802.3, PCMCIA release 2.1, JEIDA 4.x
- Network Connector: Shielded RJ-45 jack, BNC connector
- LAN Controller Tamarack TC3299N Ethernet PCMCIA Controller
- Data Transfer Rate: 10Mbps
- Duplex: Half
- Cable: CAT3/CAT5. max. length 100M (328 ft.), RG-58A/U Coaxial Cable
- LED's: Link and Activity
- Power Requirement: from notebook
- **Dimensions:** 5 x 54 x 86mm (H x W x D)
- EMI Rating: FCC Part 15 Class A and CE Mark

#### Special Functions

- Credit-card-size with media coupler
- Plug and Play (PnP) into Type II PCMCIA slot
- Switch-less and software configurable design for easy installation
- 16KB buffer memory for high speed data transfer rate

Cat. No. 66-9200

# CARDS CARDS



#### 16-Bit ISA Ethernet Card

This 16-bit ISA Ethernet LAN card is fully compliant with IEEE 802.3 Ethernet standard. This Plug and Play (PnP) function and full duplex mode, makes this the most advanced Novell NE-2000 compatible LAN adapter designed ever. The 66-9110 is perfect for both server and diskless workstation configurations. LED indicators are available media types: 10Base-T and 10Base-2 are provided for the best cable connection flexibility in the Ethernet environment.

#### Technical Specification

- PC Supported: 16-Bit ISA bus computer
- Standards: IEEE 802.3 Ethernet 10Base-T/10Base-2
- Network Connector: Unshielded RJ-45 jack and coaxial BNC (Use connector one at a time)
- LAN Controller: Realtek RTL8019AS Single-Chip Fast Ethernet Controller
- Data Transfer Rate: 10Mbps
- Duplex: Full/Half
- Cable: CAT3 or CAT5 unshielded twisted-pair (RJ-45)/0.2 inch diameter, RG-58A/U ohm coaxial cable (BNC)
- Maximum Wire Length: UTP 100m (328 ft.), Coaxial 185m (607 ft.)
- LED's: Link, & ACT LED's on the bracket
- Power Requirement: 2.0A@+5V PCB Dimensions: 61 x 159mm (H x L)
- EMI Rating: FCC Part 15 Class A and CE Mark

Cat. No. 66-9110





#### 32-Bit PCI Fast Ethernet Card

This is an affordable and high performance 32-bit 10/100Mbps Fast Ethernet adapter for networks demanding high bandwidth and flexibility. It is fully compliant with PCI Revision 2.x, IEEE 802.3 100Base-TX and 10Base-T standards. 66-9010 features N-Way auto-negotiation for automatic speed selection of 10Mbps or 100Mbps in either half or full duplex mode. This card uses the Bus-Mastering DMA approach to optimize throughput while maintaining low CPU utilization. Diagnostic LED's are easily visible for maintenance purpose.

#### Technical Specification

- PC Supported: 32-Bit PCI bus master computer
- Standards: IEEE 802.3u 100Base-TX
- Network Connector: Shielded RJ-45 jack
- LAN Controller: Realtek RTL8139 Single-Chip Fast Ethernet Controller
- Data Transfer Rate: 10/100Mbps N-Way auto-negotiation
- Duplex: Full/Half selectable
- UTP Cable: CAT5, max, length 100m (328 ft.)
- LED's: Link, ACT and FDX LED's on the Bracket
- Power Requirement: 2.0A@+5V
- PCB Dimensions: 61 x 123mm (H x L)
- EMI Rating: FCC Part 15 Class A and CE Mark

Cat. No. 66-9010

# ETHERNET FIBER OPTIC CONVERTER



#### 2 SC Type & 2 RJ45 Connectors

Converts multi-mode fiber to UTP in 10-Base-T environment.

#### Features

- Data Transfer Rate: 10 Mbps in half duplex, 20 Mbps in full duplex
- **LED Indicators For:** Fiber Link, Activity, Power, TP Link and TP Activity
- Cable Run Lengths: Multi-mode fiber up to 2 KM (790') CAT5 copper up to 90 M (395')
- Connectors: (2) SC Multi-mode fiber connectors, (2) RJ45 for UTP connection

Cat. No. 66-8255



#### 2 ST Type & 2 RJ45 Connectors

Converts multi-mode fiber to UTP in 10-Base-T environment.

#### **Features**

- Data Transfer Rate: 10 Mbps in half duplex, 20 Mbps in full duplex
- **LED Indicators For:** Fiber Link, Activity, Power, TP Link and TP Activity
- Cable Run Lengths: Multi-mode fiber up to 2 KM (790') CAT5 copper up to 90 M (395')
- Connectors: (2) SC Multi-mode fiber connectors, (2) RJ45 for UTP connection

Cat. No. 66-8250



## **GLOSSARY**

#### **APPLETALK**

Apple's local area network architecture introduced in 1985. It supports Apple's proprietary LocalTalk access method as well as Ethernet and Token Ring.

(Asynchronous Transfer Mode) A high-speed-cell-switching network technology for LANs and WANs that handles data and realtime voice and video.

In communications, the part of a network that handles the major traffic. It often employs the highest-speed transmission paths in the network and may also run the longest distance. Smaller networks are attached to the backbone.

#### **BI-DIRECTIONAL**

The ability to move, transfer or transmit in both directions.

A device inserted into a multiple-line cable for testing purposes that provides an external connecting point to each wire.

(Color Graphics Adapter) An IBM video display standard that provided low-resolution text and graphics. It was the first graphics standard for the IBM PC and has been superseded by EGA and VGA.

#### **CROSSTALK**

In communications, interference from an adjacent channel.

(Data Circuit-terminating Equipment) A device that establishes, maintains and terminates a session on a network. It may also convert signals for transmission. It is typically the modem.

(Data Terminating Equipment) A communications device that is the source or destination of signals on a network. It is typically a terminal or computer.

(Enhanced Graphics Adapter) An IBM video display standard that provides mediumresolution text and graphics

(Electro Magnetic Interference) Electromagnetic waves that emanate from an electrical device. It often refers to both low-frequency waves from electromechanical devices and high-frequency waves (RFI) from chips and other electronic devices.

#### **ETHERNE**1

A local area network (LAN) developed by Xerox, Digital and Intel. It is the most widely used LAN access method. Twisted pair Ethernet is the most economical wiring to be used, often taking advantage of installed telephone wires.

#### FIBER OPTIC

Communications systems that use optical fibers for transmission.

An I/O connector used to attach a joy stick. It is typically a 15-pin socket on the back of a PC. (See serial port.)

#### **GENDER CHANGER**

A coupler that reverses the gender of one of the connectors in order that two male connectors or two female connectors can be joined together.

(General Purpose Interface Bus) An IEEE 488 standard parallel used for attaching sensors and programmable instruments to a computer. It uses a 24-pin connector. HP's version is the HPIB

A single wire that begins at a central distribution point (hub, PBX, etc.) and runs to its destination (workstation, telephone, etc.) without connecting to anything else.

A central connecting device in a network that joins communication lines together in a star configuration. Hubs are required in twisted pair Ethernet (10 Base T) and Token Ring networks.

## IIO

(Input/Output) Transferring data between the CPU and a peripheral device. Every transfer is an output from one device and an input into another.

#### **IDE CONTROLLER**

The term generally refers to an IDE host adapter, which is the plug-in card used to attach IDE drives. The card very often includes floppy disk control as well as serial and parallel ports

An IEEE standard for an enhanced parallel port that is compatible with the Centronics parallel port commonly used on PCs. It also allows multiple devices to be daisy chained from one port. A higher-speed ECP mode (Enhanced Capabilities Port), originally developed by Microsoft and HP, provides speeds up to 2Mbyte/sec in each direction. The standard also defines a specific type of cable that must be used.

#### JEWEL BOX

A plastic container used to package an audio CD.

#### LAN

(Local Area Network) A communications network that serves users within a confined geographical area. It is made up of servers, workstations, a network operating system and a communications link.

#### LAPLINK

A PC file transfer program from Traveling Software, Inc., that transfers data between laptops and desktop computers.

(Musical Instrument Digital Interface) A standard protocol for the interchange of musical information between musical instruments, synthesizers and computers.

#### **MOTHERBOARD**

The main printed circuit board in an electronic device, which contains sockets that accept additional boards.

(Metal Oxide Varistor) A discrete electronic component used in surge suppressors that diverts excessive voltage to the ground and/or neutral lines.

#### MULTIMEDIA

Disseminating information in more than one form. It includes the use of text, audio, graphics, animated graphics and full-motion video.

#### **NULL MODEM CABLE**

An RS-232 cable used to connect two personal computers in close proximity. It connects to both serial ports and crosses the sending wire on one end to the receiving wire on

#### PLUG and PLAY

The ability to add a new component and have it work without having to perform any technical analysis or procedure. (Plug and Play) Also abbreviated PnP

#### POWERBOOK

A family of Macintosh portable computers from Apple that include a trackball centered in a wrist rest.

(Radio Frequency Interference) High-frequency electromagnetic waves that emanate from electronic devices such as chips.

#### **RGB** monitor

A video display screen that requires separate red, green and blue signals from the computer.

### RS-232

A TIAIEIA standard for serial transmission between computers and peripheral devices (modem, mouse, etc.). It uses a 25-pin DB-25 or 9 pin DB-9 connector. Its normal cable limitation of 50 feet can be extended to several hundred feet with high-quality cable.

(RISC System/6000) IBM family of RISC-based workstations introduced in 1990. It comes in workstation (POWERstation) and server (POWERserver) models.

(Small Computer System Interface) Pronounced "scuzzy". SCSI is a hardware interface that allows for the connection of up to seven peripheral devices.

#### SERIAL

One after the other.

#### SERIAL INTERFACE

A data channel that transfers digital data in a serial fashion: one bit after the other.

A socket on a computer used to connect a modem, mouse, scanner or other serial interface device to the computer

# **SPIKE**

Also called a transient, a spike is a burst of extra voltage in a power line that lasts only a fraction of a second

#### STAR NETWORK

A communications network in which all terminals are connected to a central computer or central hub.

#### SUPER VGA

See VGA.

#### **TERMINATOR**

A hardware component that is connected to the last peripheral device in a series or the last mode in a network.

#### TOKEN RING NETWORK

A LAN access method that uses the token passing technology in a physical ring. Each station in the network passes the token on to the station next to it

(Video Graphics Array) An IBM video display standard that originated with its PS/2 models. VGA has become the minimum standard for PC display.

#### 10BaseT

An Ethernet standard that uses twisted wire pairs (telephone wire). All stations connect in a star





A Katy Company







# FIBER OPTICS - OPPORTUNITY KNOCKING

The question being asked frequently: "Will Fiber optic cable replace copper cable?"

Not in the near future, for both transmission systems offer advantages: Copper has advantages in cost and ease of use and fiber optics in data handling capability.

If data handling were the only requirement, fiber optics would win hands down. Fiber optics can provide up to 9 times more data capacity or bandwidth that copper cable.

For the near future, the benefits and capabilities of both fiber and copper transmission systems will result in a hybrid copper fiber world. With fiber optics knocking at the front door, it will be a great advantage to understand and offer both fiber and copper solutions.

#### What are the basic difference in the two systems:

- Copper cabling uses electricity to transmit signals of both analog and digital data.
- Fiber optics uses digital pulses of light to transmit data.

The same result? Not quite. Copper inherently has greater signal loss at higher frequencies resulting in minimal bandwidth or data communication capacity. Fiber can carry very high frequencies with minimal loss offering much greater bandwidth. When the first Trans-Atlantic fiber optic telephone cable was installed in the late 1980's, it carried approximately 38,000 simultaneous voice conversations. In contrast, the best Trans-Atlantic copper system carried only 4,200 conversations – 90 percent less than fiber!

What does fiber optics mean to you and the growth of your business? Fiber optics will open the potential to increase your customer base in specific areas and in general areas beginning to utilize fiber optics.

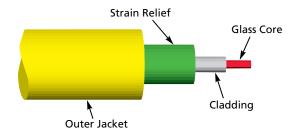
#### **Specific Customer Base**

- 3400 CATV systems. Many purchase locally.
- Installers and services of LAN systems (Local Area Network).
- Universities and trade schools who offer fiber optic courses and training.
- · Hospitals and medical facilities.

#### **General Customer Base**

A significant number of small to medium size corporations will or have begun the transition to high speed data transmission via LAN and WAN (Wide Area Networks). Only fiber optics can support the speed of data transmission that is necessary.

## CONSTRUCTION OF A FIBER OPTIC CABLE



- Glass core carries the light
- Cladding surrounds the core and reflects the light
- Strain relief kevlar fibers for strength
- Outer jacket

#### **Cable Types**

- Simplex cables, a single fiber core allows only one-way data communication.
- Duplex cables, contain two fiber cores allows two-way data communication.
- Multifiber cables, contain more than two fibers. The fibers are in duplex pairs allowing two-way data transmission. A 30 fiber cable contains 15 duplex pairs.

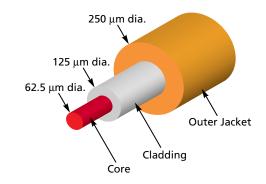


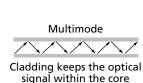


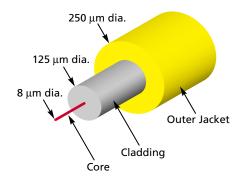
## **METHODS OF TRANSMISSION**

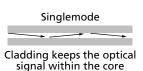
#### Multimode

- Favored in LAN systems.
- Large diameter fiber core, 62.5 micron core typical.
- Short distance applications, having a distance limitation of 2000m (6,560 ft.).
- Is the most common for backbones within buildings and campus environments.
- Generally utilizes a light-emitting diode (LED) light source.
- · Cable color orange.









### Singlemode

- Favored in Telco and CATV applications.
- Small diameter fiber core, 8 micron core is typical.
- Long distance applications may be used for distances up to 3000 m (9,840 ft.).
- Normally uses a laser-light source.
- Cable color yellow.

# Optic Fiber . . . Smaller Than A Human Hair





Diameter of a Singlemode Laser Optic Fiber

# FIBER OPTICS CONNECTORS AND SPLICES

### **Connector Types**

#### Multimode

- SC: Push/pull mechanics. Square plastic body latches by pushing into place. Most popular multimode type. Color beige.
- ST: Bayonet style, twist to latch in place. Round body early design by AT&T. Color beige.

#### Singlemode

- SC: Differs from SC multimode in color and endface geometry. Most popular singlemode type.
- FC: Screw on early type. Difficult to attach and remove.

Note: Single mode connectors differ from similar multimode types in that the angle of the contact endface geometry varies. The types are:

- Physical Contact (PC), Color blue.
- Ultra Physical Contact (UPC), Color blue.
- Angled Physical Contact (APC), Color green.

#### Splices

Two basic types are in wide use.

- 1. Mechanical. Mechanical splices attach the two cable ends using a clamp and/or epoxy.
- 2. Fusion. Melts the two fiber ends together.



# **BER OPTIC**

# MULTIMODE PATCHCORDS

#### Preferred in Datacom Applications



#### **Simplex**

SC/MM to SC/MM, 1 Meter Cat. No. 45-6100 SC/MM to SC/MM. 3 Meter Cat. No. 45-6101

SC/MM to SC/MM. 5 Meter Cat. No. 45-6102 SC/MM to SC/MM, 10 Meter Cat. No. 45-6103

ST/MM to ST/MM, 1 Meter Cat. No. 45-6110

ST/MM to ST/MM, 3 Meter Cat. No. 45-6111

ST/MM to ST/MM, 5 Meter Cat. No. 45-6112

ST/MM to ST/MM. 10 Meter Cat. No. 45-6113

ST/MM to SC/MM, 1 Meter Cat. No. 45-6117 ST/MM to SC/MM, 3 Meter

Cat. No. 45-6118



## **Duplex**

SC/MM to SC/MM, 1 Meter Cat. No. 45-6120

SC/MM to SC/MM. 3 Meter Cat. No. 45-6121

SC/MM to SC/MM. 5 Meter Cat. No. 45-6122

SC/MM to SC/MM, 10 Meter Cat. No. 45-6123

ST/MM to ST/MM, 1 Meter Cat. No. 45-6126

ST/MM to ST/MM. 3 Meter Cat. No. 45-6127

ST/MM to ST/MM, 5 Meter

Cat. No. 45-6128 ST/MM to ST/MM. 10 Meter

Cat. No. 45-6129

ST/MM to SC/MM, 1 Meter

Cat. No. 45-6135

ST/MM to SC/MM, 3 Meter Cat. No. 45-6136

# SINGLEMODE PHYSICAL CONTACT PATCHCORDS

### **Preferred in Telecom Applications**



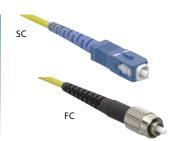
SC/PC to SC/PC, 3mm Fiber, 3 Meter

Cat. No. 45-6140

SC/PC to SC/PC, 3mm Fiber, 5 Meter Cat. No. 45-6141

FC/PC to FC/PC, 3mm Fiber, 3 Meter Cat. No. 45-6145

FC/PC to FC/PC, 3mm Fiber, 5 Meter Cat. No. 45-6146



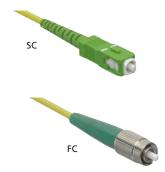
SC/PC to FC/PC, 3mm Fiber, 3 Meter

Cat. No. 45-6150

SC/PC to FC/PC, 3mm Fiber, 5 Meter Cat. No. 45-6151

# SINGLEMODE ANGLED PHYSICAL CONTACT PATCHCORDS

#### **Preferred in Telecom Applications**



SC/APC to SC/APC, 3mm Fiber, 3 Meter

Cat. No. 45-6160

SC/APC to SC/APC. 3mm Fiber. 5 Meter

Cat. No. 45-6161

FC/APC to FC/APC, 3mm Fiber, 3 Meter

Cat. No. 45-6165

FC/APC to FC/APC, 3mm Fiber, 5 Meter

Cat. No. 45-6166



SC/APC to FC/APC, 3mm Fiber, 3 Meter

Cat. No. 45-6167

SC/APC to FC/APC, 3mm Fiber, 5 Meter

Cat. No. 45-6168

# FIBER OPTIC



# CONNECTORS, SC, ST, FC, AND APC TYPE



SC Multimode, Zirconia Cat. No. 45-6170
ST Multimode, Zirconia Cat. No. 45-6171
SC Singlemode, Zirconia Cat. No. 45-6172
ST Singlemode, Zirconia Cat. No. 45-6173
FC Singlemode, Zirconia Cat. No. 45-6174
SC/APC SC 5-12 mm
Radius 8 Degree
Cat. No. 45-6175
FC/APC FC 5-12 mm
Radius 8 Degree

Cat. No. 45-6176

# HEAT SHRINK SPLICE PROTECTORS



61 mm Fusion splice protectors, 1 mm pin Cat. No. 45-6180
45 mm Fusion splice protectors, 1 mm pin Cat. No. 45-6181
35 mm Fusion splice protectors, 1 mm pin Cat. No. 45-6182
61 mm Fusion splice protectors, 1.5 mm pin Cat. No. 45-6183
40 mm Fusion splice protectors, 1.5 mm pin Cat. No. 45-6183

Cat. No. 45-6184

Cat. No. 45-6193

Cat. No. 45-6194

Cat. No. 45-6195

Cat. No. 45-6198

# **ATTENUATORS** I

### Die Cast Bulkhead Doped Fiber Attenuator Dual Bandwidth



SC/PC Bulkhead Attenuator, 2dB Cat. No. 45-6186
SC/PC Bulkhead Attenuator, 5dB Cat. No. 45-6187R
SC/PC Bulkhead Attenuator, 10dB Cat. No. 45-6188



SC/APC Bulkhead Attenuator, 2dB
Cat. No. 45-6190
SC/APC Bulkhead Attenuator, 5dB
Cat. No. 45-6191
SC/APC Bulkhead Attenuator, 10dB
Cat. No. 45-6192



FC/APC Bulkhead Attenuator, 2dB Cat. No. 45-6196
FC/APC Bulkhead Attenuator, 5dB Cat. No. 45-6197
FC/APC Bulkhead Attenuator, 10dB

FC/PC Bulkhead Attenuator, 2dB

FC/PC Bulkhead Attenuator, 5dB

FC/PC Bulkhead Attenuator, 10dB



# **ADAPTERS**





SC/PC to SC/PC

Cat. No. 45-6200

SC/APC to SC/APC

Cat. No. 45-6201

FC/PC to FC/PC

Cat. No. 45-6202

FC/APC to FC/APC

Cat. No. 45-6203



ST/MM to ST/MM

Cat. No. 45-6205

SC/MM to SC/MM

Cat. No. 45-6206

Duplex ST/MM to ST/MM Cat. No. 45-6209

Duplex SC/MM to SC/MM Cat. No. 45-6210

# **CONNECTOR CLEANER, CLETOP**



Cleaner with Cassette, 400 Cleanings Cat. No. 45-6215 Replacement Cassette Cat. No. 45-6216



The advent of voice communications systems launched the need for low voltage systems, both in home and industry. Today, GC Electronics provides an extensive offering of telephone products and accessories that support installations ranging from the old screw terminal style to the newest voice and data systems. The products in this section support wired, cordless, and cellular phones. All GC telephone accessories meet FCC and Western Electric standards.

Most importantly, the products in this section complement the products found in the other Accessory sections of this catalog. Your selection of GC Electronics as your supplier means that you won't have to continue to search for products that you need for the rest of your low voltage needs. In the adjacent sections, you'll find most of the tools and accessories needed for data, audio, and video installations. As your one-stop source, GC offers you the connectors, jacks, cables, wall plates, and other key accessories needed for your jobs. Thanks for almost 70 years of support.

GC's wall plates have a smooth finish to match other styles of wall plates; commonly in use. Available in both standard flush design and Decora style, these wall plates are offered in a variety of colors and configurations. The jacks within this section are available in 4 conductor (RJ11), 6 conductor (RJ12), and 8 conductor (RJ45) configurations. Six conductor jacks may be used in both 4 and 6 conductor applications, since they are the same physical size. The 8 conductor jack is most generally used for commercial applications and is larger in size than either the RJ11 or RJ12 jacks.

#### **Contents:**

- Accessories
- Adapters/Couplers
- Audio Enhancement
- Multi-Line Products
- Tools/Testers
- Batteries
- Cellular
- Cordless
- Cords
- Bulk Line Cord
- Handset Coil Cords
- Modular Extension Cords
- Telephone Station Wire
- Jacks
- Flush/Wall Mount
- Surface Mount
- Modular Plugs
- UL Listed Products







## **MODULAR ACCESSORIES**



#### Flush Wall Jack

Modular flush wall jack assembly allows flushmounted connection of plug-ended modular line cords. Ideal for initial installation or conversion from existing wall receptacles.

4-Conductor Oak
Cat. No. 30-9712
Cat. No. 30-9709
4-Conductor Almond
Cat. No. 30-9747
Cat. No. 30-9760-BU
4-Conductor Ivory
Cat. No. 30-9706
Cat. No. 30-9706

4-Conductor White
Cat. No. 30-9717

4-Conductor Brown

8-Conductor White,
Keyed
Cat. No. 30-9716

Cat. No. 30-9727 8-Conductor Almond,
6-Conductor Ivory Keyed

Cat. No. 30-9761-BU

Flush Wall Jack with Cover

Same as above with protective, spring-loaded door cover jack.

\*4-Conductor Ivory

Cat. No. 30-9701†

4 Conductor Product Complies with USOC numbers RJ11C, RJ13C, RJ1DC

6 or 8 Conductor Product Complies with USOC number RJ12C.RJ18C. RJ19C. RJ25C"



#### Mid-size Flush Wall Jack

Mid-size flush wall jack assembly allows connection of plug ended modular line cords. Ideal for installation where opening is larger than normal.

White

Cat. No. 30-9726

Ivory

Cat. No. 30-9729

Almond

Cat. No. 30-9722-BU



### Stainless Steel Wall Jack

Use when mounting wall-type telephones. Quick connect terminals ensure easy installation.

Punch Down

Cat. No. 30-9724

Complies with USOC numbers RJ11W, RJ12W, RJ13W, RJ14W, RJ1DC

Easy installation with screw terminals

Cat. No. 30-9723



## **Quick-Mount Wall Phone Jack**

4-Conductor Almond Cat. No. 30-9744
4-Conductor Ivory Cat. No. 30-9704

4-Conductor White Cat. No. 30-9714

Complies with USOC numbers RJ11W, RJ12W, RJ13W, RJ14W, RJ1DC



#### Wall-Mount with Dual Side Jacks

Designed for wall-mounting phones, this unique device offers dual side jacks which accommodate hook-up of answering machine, auto dialers or extension phones.

Ivorv

Cat. No. 30-9705

White

Cat. No. 30-9745

Almond

Cat. No. 30-9755-BU



#### Combination Telephone/ Coax Wall Plate

Specially designed wallplate allows hookup of both modular telephone wire and coax cable from one location.

4-Conductor Ivory

Cat. No. 30-9732 4-Conductor White Cat. No. 30-9733

4-Conductor Almond Cat. No. 30-9731-BU



#### Combination Electrical Coax Telephone Plate

Combines for convenience the installation of an electrical, telephone, and coax wall plate into one plate.

Ivory

Cat. No. 30-9715

White

Cat. No. 30-9735



#### Combination Electrical Dual Telephone Plate

Combines for convenience the installation of an electrical and dual telephone jack into one plate.

Ivory





#### **Dual Flush Jack**

Can be flush mounted in wall to eliminate external wires. Two modular jacks permit use of two telephones at same location or one telephone and answering machine or other related equipment. Two solderless jacks can be connected independently or in series, utilizing one or two lines.

4-Conductor Ivory
Cat. No. 30-9703

4-Conductor White
Cat. No. 30-9713

4-Conductor Almond
Cat. No. 30-9748-BU

6-Conductor White
Cat. No. 30-9749-BU

Cat. No. 30-9719

6-Conductor Ivory 8-Conductor White **Cat. No. 30-9710** Keyed

6-Conductor Almond Cat. No. 30-9728 Cat. No. 30-9749-BU

4 Conductor Product Complies with USOC numbers RJ11C. RJ13C. RJ1DC

6 or 8 Conductor Complies with USOC numbers RJ12C, RJ18C, RJ19C, RJ25C



#### **Dual Floor Jack**

The floor jack contains duplex jacks and a center tapped mounting hole. Two modular jacks permit use of two telephones at the same location, one telephone and an answering machine or other related equipment. Spring loaded protective doors cover jacks.

4-Conductor Ivory

Cat. No. 30-9711-BU

Complies with USOC numbers RJ11C, RJ12C, RJ13C, RJ1DC



Modular Surface Jack mounts to baseboard or wall. Screw terminals for easy installation.

4-Conductor Almond

Cat. No. 30-9746

4-Conductor Ivory

Cat. No. 30-9604

4-Conductor White Cat. No. 30-9614

30-9604

30-9609

. . . . . . .

4-Conductor Brown Cat. No. 30-9624

Cat. No. 30-9624

6-Conductor Ivory

Cat. No. 30-9607

6-Conductor White

Cat. No. 30-9609

8-Conductor Ivory Cat. No. 30-9660

8-Conductor White Keyed

Cat. No. 30-9616

Replaces Standard Connecting Blocks, 4-Conductor Ivory

Cat. No. 30-9603

4 Conductor Product Complies with USOC numbers RJ11C, RJ13C, RJ1DC

6 or 8 Conductor Product Complies with USOC numbers RJ12C, RJ18C, RJ19C, RJ25C



#### **Dual Modular Surface Jack**

Surface mounts to baseboard or wall. Dual jacks for hook-up of telephone and answering machine, auto dialer. Screw terminals for easy installation.

4-Conductor Ivory Cat. No. 30-9605 8-Conductor Ivory Cat. No. 30-9665



#### **Voice Connecting Box**

For alarm reporting devices. Equipped with 8-position, non-keyed modular jack with shorting bar. Mounts to flat surface.

Cat. No. 30-9805



#### Modular Flush Jack

Round Flush Jack with mounting bracket attached. Mounts in any standard electrical box.

4-Conductor

Cat. No. 30-9608

Complies with USOC codes RJ11C, RJ13C, RJ1DC.



#### Round Flush Jack

Round version, smaller in size than 30-9700.

4-Conductor Ivory

Cat. No. 30-9702

4-Conductor White Cat. No. 30-9721

Complies with USOC numbers RJ12C, RJ17C



#### Outdoor Modular Wall Plate

Weather resistant outdoor flush mount phone jack mounts in any standard electrical box. Mounting hardware included.





### **Telephone Decor Flush Jacks**

These Decor Wall Plates which are available in white and ivory, with matching color mounting screws will enhance custom interiors. They are in compliance with NEMA Standard WD-1. Modular telephone plates comply with FCC part 68 requirements. Mounts in standard electrical box.

4-Conductor Ivory
Cat. No. 30-9767
4-Conductor Almond
Cat. No. 30-9764-BU

4-Conductor White
Cat. No. 30-9777
6-Conductor White
Cat. No. 30-9790
6-Conductor Almond
Cat. No. 30-9766-BU

8-Conductor White, Keyed Cat. No. 30-9795

8-Conductor Almond, Keyed Cat. No. 30-9768-BU

4 Conductor Product Complies with USOC numbers RJ11C, RJ13C, RJ1DC

6 or 8 Conductor Product Complies with USOC numbers RJ12C, RJ18C, RJ19C, RJ25C



#### **Dual Decor Flush Jacks**

Specially designated to allow the connection of two telephone lines from one location.

4 Conductor Ivory
Cat. No. 30-9797
4 Conductor White
Cat. No. 30-9798
4 Conductor Almond
Cat. No. 30-9791-BU

6-Conductor White

Cat. No. 30-9792

6-Conductor Almond

Cat. No. 30-9793-BU

8 Conductor, Keyed, White

Cat. No. 30-9796

4 Conductor Product Complies with USOC numbers RJ11C. RJ13C. RJ1DC

6 or 8 Conductor Product Complies with USOC numbers RJ12C, RJ18C, RJ19C, RJ25C



#### Dual Combination Decor Flush Jacks

For use with 4-conductor line cord. Specially designed to allow the connection of both telephone wire and coax cable from one location.

vory

Cat. No. 30-9778

White

Cat. No. 30-9779

Almond

Cat. No. 30-9780-BU

4 Conductor Product Complies with USOC numbers RJ11C, RJ13C, RJ1DC

# **UL LISTED TELEPHONE ACCESSORIES**

\*\*These telephone products are constructed with UL 94V-O flame retardant plastic and 50 micro inches of gold plating. They comply with UL standard 1863 and article 800-51 of The National Electrical Code.







#### Flush Wall Jack

Modular flush wall jack assembly allows flush-mounted connection of plug-ended modular line cords. Ideal for initial installation or conversion from existing wall receptacles.

\*\*4-Conductor Ivory

Cat. No. 30-9757-BU

\*\*4-Conductor White Cat. No. 30-9787-BU

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4-Conductor Almond †Cat. No. 30-8743-BU

4-Conductor Ivory

4-Conductor Ivory

†Cat. No. 30-8747-BU

4-Conductor White †Cat. No. 30-8749-BU

6-Conductor Almond

†Cat. No. 30-8763-BU

6-Conductor Ivory

†Cat. No. 30-8767-BU

6-Conductor White

†Cat. No. 30-8769-BU

8-Conductor Almond †Cat. No. 30-8783-BU

8-Conductor Ivorv

8-Conductor ivory

†Cat. No. 30-8787-BU

8-Conductor White

†Cat. No. 30-8789-BU

Mid Size

4-Conductor Mid Size Almond

Cat. No. 30-8733-BU

4-Conductor Mid Size Ivory Cat. No. 30-8737-BU

Cat. No. 30-8/3/-BU

4-Conductor Mid Size White Cat. No. 30-8739-BU

4-Conductor Dual Mid Size Almond

Cat. No. 30-8753-BU

4-Conductor Dual Mid Size Ivory

Cat. No. 30-8757-BU

4-Conductor Dual Mid Size White

Cat. No. 30-8759-BU

4 Conductor Product Complies with USOC numbers RJ11C, RJ13C, RJ1DC.







# EPHO!





#### **Ouick-Mount** Wall Phone Jack

Use when mounting wall-type telephones. Easy-to-hook-up screw-type terminals. Heavy-duty construction.

\*\*4-Conductor Ivory Cat. No. 30-9754-BU

\*\*4-Conductor White Cat. No. 30-9784-BU

4-Conductor Almond †Cat. No. 30-8703-BU

4-Conductor Ivory †Cat. No. 30-8704-BU

4-Conductor White †Cat. No. 30-8709-BU

Complies with USOC numbers RJ11W, RJ12W, RJ13W, RJ14W, RJ1DC.



#### **Dual Flush** Jack



Can be flush mounted in wall to eliminate external wires. Two modular iacks permit use of two telephones at same location or one telephone and answering machine or other related equipment. Two solderless jacks can be connected independently or in series, utilizing one or two lines.



\*\*4-Conductor Ivory Cat. No. 30-9753-BU \*\*4-Conductor White Cat. No. 30-9783-BU 4-Conductor Almond †Cat. No. 30-8443-BU

4-Conductor Ivory †Cat. No. 30-8447-BU

4-Conductor White †Cat. No. 30-8449-BU

6-Conductor Almond

†Cat. No. 30-8663-BU

6-Conductor Ivory †Cat. No. 30-8667-BU

6-Conductor White †Cat. No. 30-8669-BU

8-Conductor Almond

†Cat. No. 30-8803-BU 8-Conductor Ivory

†Cat. No. 30-8807-BU

8-Conductor White †Cat. No. 30-8809-BU

**4 Conductor Product Complies** with USOC numbers RJ11C, RJ12C, RJ13C, RJ14C, RJ1DC.







#### Modular Surface Jack



Surface mounts to baseboard or wall. Screw terminals for easy installation.

\*\*4-Conductor White Cat. No. 30-9786-BU \*\*4-Conductor Ivory Cat. No. 30-9756-BU 4-Conductor Almond †Cat. No. 30-8603-BU

4-Conductor Ivory †Cat. No. 30-8607-BU

4-Conductor White †Cat. No. 30-8609-BU

6-Conductor Almond †Cat. No. 30-8623-BU

6-Conductor Ivory

†Cat. No. 30-8627-BU

6-Conductor White

†Cat. No. 30-8629-BU

8-Conductor Almond †Cat. No. 30-8683-BU

8-Conductor Ivory

†Cat. No. 30-8687-BU

8-Conductor White †Cat. No. 30-8689-BU

4-Conductor Dual Almond †Cat. No. 30-8613-BU

4-Conductor Dual Ivory †Cat. No. 30-8617-BU

4-Conductor Dual White †Cat. No. 30-8619-BU

6-Conductor Dual Almond Cat. No. 30-8633-BU

6-Conductor Dual Ivory

Cat. No. 30-8637-BU 6-Conductor Dual White

Cat. No. 30-8639-BU

8-Conductor Dual Almond Cat. No. 30-8653-BU

8-Conductor Dual Ivory

Cat. No. 30-8657-BU

8-Conductor Dual White

Cat. No. 30-8659-BU

**4 Conductor Product Complies** with USOC numbers RJ11C, RJ12C, RJ13C, RJ14C, RJ1DC.



#### **Combination** Wall Plate



Specially designed wall plate allows hookup of both modular telephone wire and coax cable from one location. Complies with FCC part 68. Complies with UL Standard 1863 and Article 800-51 of the National Flectrical Code.

Ivory

Cat. No. 30-9758-BU

White

Cat. No. 30-9759-BU

4-Conductor Almond Cat. No. 30-8043-BU

4-Conductor Ivory

Cat. No. 30-8047-BU

4-Conductor White

Cat. No. 30-8049-BU

6-Conductor Almond

Cat. No. 30-8063-BU

6-Conductor Ivory

Cat. No. 30-8067-BU

6-Conductor White

Cat. No. 30-8069-BU

Mid Size Combination

Wall Plate

4-Conductor Mid Size

Almond Cat. No. 30-8353-BU

4-Conductor Mid Size

Ivory

Cat. No. 30-8357-BU

4-Conductor Mid Size

White

Cat. No. 30-8359-BU **Phone with Dual Coax** 

4-Conductor Dual Almond

Cat. No. 30-8243-BU 4-Conductor Dual Ivory

Cat. No. 30-8247-BU

4-Conductor Dual White Cat. No. 30-8249-BU











# ELEPHON

# TELEPHONE EXTENSION CORDS, HANDSET/REPLACEMENT CORDS, STATION WIRE



### **Modular Telephone** Replacement Cord

Use for converting "hard-wired" telephones to modular, or as a replacement/extension. Spade terminals one end; modular plug other end.

6 ft. Silver

Cat. No. 30-9540

25 ft. Silver

Cat. No. 30-9542

6 ft. Ivory

Cat. No. 30-9544

25 ft. Ivory

Cat. No. 30-9545



#### Modular Plug to Modular Jack **Extension Cord**

Extension cord with modular plug and jack on each end. Cord offers the convenience of adding 25-foot extension to existing telephone system. Modular plug at one end snaps into wall receptacle while modular jack at the other accepts line cord from existing telephone.

25 ft. Ivory Cat. No. 30-9506

25 ft White

Cat. No. 30-9586



#### Modular Plug to Twin Modular **Jacks Extension Cord**

The 25-foot modular telephone cord has a modular plug on one end and a modular duplex jack on the other end. The modular plug snaps into wall receptacles. The duplex modular jack accepts cords from a telephone and answering machine, or other auxiliary device, at the same time.

25 ft. Ivory

Cat. No. 30-9508



#### **Modular Handset Coil Cords**

Coiled cord with modular plugs at both ends. Available in 3 lengths and 9 color selections. Cords fit between handset and phone base.

6 ft. Almond

Cat. No. 30-9565

12 ft. Black

Cat. No. 30-9519

12 ft. White

Cat. No. 30-9520

12 ft. Beige

Cat. No. 30-9521

12 ft. Chocolate Brown

Cat. No. 30-9524

12 ft. Almond Cat. No. 30-9525 12 ft. Ash

Cat. No. 30-9526

12 ft. Ivory

Cat. No. 30-9528

12 ft. Grey

Cat. No. 30-9541

25 ft. Black

Cat. No. 30-9529

25 ft. White

Cat. No. 30-9530

25 ft. Beige

Cat. No. 30-9531

25 ft. Chocolate Brown Cat. No. 30-9534

25 ft. Almond

Cat. No. 30-9535

25 ft. Ash

Cat. No. 30-9536

25 ft. Ivory Cat. No. 30-9538

25 ft. Grey Cat. No. 30-9551







### Modular Line Cord (Plug to Plug Extension Cord)

Use to extend length of cord between telephone and wall jack or as an extension cord.

26 Gauge, 4-Conductor

5-1/4 inch Silver

Cat. No. 30-9546

7 ft. Silver

Cat. No. 30-9569

7 ft. Ivory

Cat. No. 30-9559

7 ft. White

Cat. No. 30-9579

15 ft. Silver

Cat. No. 30-9515

15 ft. Ivory

Cat. No. 30-9513

15 ft. White

Cat. No. 30-9502

25 ft. Ivory

Cat. No. 30-9514

25 ft. Silver

Cat. No. 30-9516

25 ft. White

Cat. No. 30-9503

25 ft. Black

Cat. No. 30-9507

25 ft. Almond

Cat. No. 30-9509

25 ft. Ash

Cat. No. 30-9512

50 ft. Ivory

Cat. No. 30-9549

100 ft. Ivory

Cat. No. 30-9548

100 ft. White

Cat. No. 30-9553

26 Gauge, 6-Conductor

7 ft. Silver Cat. No. 30-9575

15 ft. Silver

Cat. No. 30-9566

25 ft. Silver

Cat. No. 30-9576

25 ft White

Cat. No. 30-9577

25 ft. Ivory

Cat. No. 30-9567

26 Gauge, 8-Conductor

15 ft. Silver

Cat. No. 30-9568

25 ft. Silver





#### 22-ga. Solid Telephone Station Wire

Beige-jacketed hook-up wire with color-coded wires within.

4-Conductor

25 ft. Hank

Cat. No. 30-9902

50 ft. Hank

Cat. No. 30-9900

100 ft. Hank

Cat. No. 30-9901

500 ft. Knockout Carton

Cat. No. 30-9905

1000 ft. Knockout Carton

Cat. No. 30-9959

1000 ft. Pull-Out Box

Cat. No. 30-9953

5000 ft. Spool

Cat. No. 30-9960

UL CMX 1000 ft. Knockout Carton

Cat. No. 30-9979

6-Conductor

100 ft. Hank

Cat. No. 30-9969

500 ft. Knockout Carton

Cat. No. 30-9970

1000 ft. Knockout Carton

Cat. No. 30-9971

3000 ft. Spool

Cat. No. 30-9972



#### 24-ga. Solid Telephone Station Wire

Beige-jacketed hook-up wire with color-coded wires within.

4-Conductor

100 ft. Hank

Cat. No. 30-9956

UL CMX 100 ft. Hank

Cat. No. 30-9903

500 ft. Knockout Carton

Cat. No. 30-9957

1000 ft. Knockout Box

Cat. No. 30-9958

1000 ft. Pull-Out Box

Cat. No. 30-9952

5000 ft. Spool

Cat. No. 30-9980

UL CMX 1000 ft. Knockout Carton

Cat. No. 30-9978

6-Conductor

1000 ft. Knockout Carton

Cat. No. 30-9976

4000 ft. Spool

Cat. No. 30-9982



#### 26-ga. Stranded Flat Modular Line Cord

Jacketed line cord with color coded wires. Use with telephone modular plugs.

4-Conductor

50 ft. Hank Silver

Cat. No. 30-9907

50 ft. Hank Ivory

Cat. No. 30-9920

100 ft. Hank Silver

Cat. No. 30-9908

100 ft. Hank Ivory

Cat. No. 30-9922

500 ft. Knockout Box Silver

Cat. No. 30-9906

500 ft. Knockout Box

Ivory

Cat. No. 30-9924

1000 ft. Spool Silver

Cat. No. 30-9962

1000 ft. Spool Ivory

Cat. No. 30-9963

5000 ft. Spool Silver Cat. No. 30-9961

5000 ft. Spool Ivory Cat. No. 30-9964 6-Conductor

100 ft. Hank Silver

Cat. No. 30-9932

100 ft. Hank Ivory

Cat. No. 30-9933

500 ft. Knockout

Carton Silver

Cat. No. 30-9934

1000 ft. Spool Silver

Cat. No. 30-9965

1000 ft. Spool Ivory

Cat. No. 30-9966

4000 ft. Spool Silver

Cat. No. 30-9967

4000 ft. Spool Ivory

Cat. No. 30-9968

8-Conductor

500 ft. Spool Silver Cat. No. 30-9945

1000 ft. Spool Silver

Cat. No. 30-9940

3000 ft. Spool Silver Cat. No. 30-9988



### Wire Nail Clips for **Telephone Wire**

Pkg. of 20

Cat. No. 30-9944

Pkg. of 100 Cat. No. 30-9944-100



#### **Adhesive Wire Clips** for Telephone Wire

Pkg. of 12

Cat. No. 30-9947

Pkg. of 100

Cat. No. 30-9947-100



### Telephone Tap **Connector**

For tapping into existing wires without interruption UB connector 22-26 Awg.

Pkg. of 10

Cat. No. 30-8933

Pkg. of 100

Cat. No. 30-8933-100



## **Telephone Butt Splice**

Connects 2 or 3 wires 19-26 Awg. for general splicing UR connector 3 ports.

Pkg. of 10

Cat. No. 30-8931

Pkg. of 100

Cat. No. 30-8931-100



### **Telephone Butt Splice**

Connects 2 wires 22-26 Awg. for bundle splicing UY connector 2 ports.

Pkg. of 10 Cat. No. 30-8932

Pkg. of 100

Cat. No. 30-8932-100



# Cable Entry View Round Cable Flat Cable

30-8964

# **Modular Plugs**

#### RJ-11 4-Conductor (4p4c) - (Handset)

Part No.	Description	
30-9912-100	Flat Stranded, 100 Pk., 3 Micron	
30-9912	Flat Stranded, 10 Pk., 3 Micron	
30-8964-100	Round Stranded, 100 Pk., 15 Micron	(li
30-8964	Round Stranded, 10 Pk., 15 Micron	(i)

#### RJ-11 4-Conductor (6p4c)

the state of the s		
Part No.	Description	
30-9910	Flat Stranded, 10 Pk., 3 Micron	
30-9910-100	Flat Stranded, 100 Pk., 3 Micron	
30-8954	Flat Stranded, 10 Pk., 15 Micron	(ji)
30-8954-100	Flat Stranded, 100 Pk., 15 Micron	(ji)
30-8955-100	Flat Stranded, 100 Pk., 15 Micron	(jl)



#### RJ-12 6-Conductor (6p6c)

Part No.	Description	
30-9914	Flat Stranded, 10 Pk., 3 Micron	
30-9914-100	Flat Stranded, 100 Pk., 3 Micron	
30-8956	Flat Stranded, 10 Pk., 15 Micron	(1)
30-8956-100	Flat Stranded, 100 Pk., 15 Micron	(1)
30-8957-100	Flat Stranded, 100 Pk., 50 Micron	(il
30-8986	Round Stranded, 10 Pk., 15 Micron	(jl)
30-8986-100	Round Stranded, 100 Pk., 15 Micron	(jl)



#### RJ-45 8-Conductor (8p8c)

Part No.	Description	
30-9918	Flat Stranded, 10 Pk., 3 Micron	
30-9918-100	Flat Stranded, 100 Pk., 3 Micron	
30-8958	Flat Stranded, 10 Pk., 15 Micron	(4)
30-8958-100	Flat Stranded, 100 Pk., 15 Micron	(4)
30-8959-100	Flat Stranded, 100 Pk., 50 Micron	(ji)
30-8988	Round Stranded, 10 Pk., 15 Micron	(4)
30-8988-100	Round Stranded, 100 Pk., 15 Micron	(آن)



30-9918

#### RJ-45 8-Conductor Keved (8p8c)

(-p)		
Part No.	Description	
30-8968	Flat Stranded, 10 Pk., 15 Micron	<u>(ji</u> )
30-8968-100	Flat Stranded, 100 Pk., 15 Micron	<u>(h</u>
30-8969-100	Flat Stranded, 100 Pk., 50 Micron	(jř)



Part No.	Description	
30-8990	Flat Stranded, 10 Pk., 50 Micron	(jl)
30-8990-100	Flat Stranded, 100 Pk., 50 Micron	(j)
30-8992	Round Solid, 10 Pk., 50 Micron	<u>(h</u>
30-8992-100	Round Solid, 100 Pk., 50 Micron	<u>(ii)</u>



#### **RJ-45 8-Conductor Level 5**

Part No.	Description
30-8994	Round Stranded, 10 Pk., 50 Micron
30-8994-100	Round Stranded, 100 Pk., 50 Micron



#### **RJ-45 10-Conductor**

Part No.	Description
30-9916	Flat Stranded, 10 Pk., 3 Micron
30-9916-100	Flat Stranded, 100 Pk., 3 Micron
30-8910-100	Round Stranded, 100 Pk., 3 Micron



### Modular Crimp Tool

#### 4-Conductor

Makes it easy to install 4-conductor modular plugs on modular line cord. Also crimps 4-conductor handset plugs. Has built-in wire stripper and cutter.

Cat. No. 30-9951



#### **Telco® Crimping Tool**

These tools do a fast clean cut strip and crimp of Telco/ Telephone wire for application of modular connectors, and are available in three sizes for your crimping needs.

8-contact Professional

Cat. No. 12-001

4 & 6-contact Professional

Cat. No. 12-004

Modular Hand Set 4-contact Cat. No. 12-005



#### **Dura Crimp**

The Duracrimp modular crimp tool will crimp 4 & 6 contact modular plugs as well as 4 position handset plugs. This tool is lightweight, durable, and accurate. The built in blade provides a clean strip of the cable.

Cat. No. 12-002



## **Modular Crimp Tool**

10-Conductor

Makes it easy to install 10-conductor modular plugs.

Cat. No. 30-9955



#### **Dual Cut and Crimp Tool**

Cuts and crimps 2c, 4c, 6c and 8c line cord plugs.

Cat. No. 12-2468



#### Tele-Check Modular **Line Tester**

Analyzes modular phone line problems. Tester inserts into modular jack or in receptacle which holds line wire in network interface panel. Provides visual indication of the type and location of the phone line problem. Eliminates costly unneeded telephone service calls.

# LEPHON

## ADAPTERS/COUPLERS



#### Surface Jack Modular Converter

Converts standard or "hardwired" installations to modular. Screw terminals for easy installation. Modular cover fastens to existing connecting block.

Ivory

Cat. No. 30-9600

White

Cat. No. 30-9601

Complies with USOC number RJ11C



## Standard to Modular Adapter

Adapts modular plug ends to standard (4-Prong) system.

Cat. No. 30-9650



# Modular T Adapter

"T" adapter enables two modular plugs to be used in a single modular jack.

4-Conductor Ivory

Cat. No. 30-9654

4-Conductor White

Cat. No. 30-9615

6-Conductor Ivory

Cat. No. 30-9647

6-Conductor White

Cat. No. 30-9646



#### 8-Conductor Duplex Adapter

Converts one 8-conductor jack into two 8-conductor jacks for telephone or data interfaces.

8-Conductor Ivory

Cat. No. 30-9649

8-Conductor White

Cat. No. 30-9648



### **Modular Triplex Adapter**

Allows three modular plugs to be used in a single modular jack.

Cat. No. 30-9656



#### Two-Line Adapter

Converts a two-line system into two single line outlets.

Cat. No. 30-9655



#### Two-Line Triplex Adapter

Converts a single jack with 2-line service to a line 1 jack, line 2 jack and a combo line 1-2 jack.

Cat. No. 30-9658



### Modular Three-Line **Triplex Adapter**

This adapter allows multiple equipment to share the same telephone line. It does provide additional dial tones or split a 3 line system into line1, line 2 and line 3, if your home or office is wired with a minimum 6 conductor installation wire. Works with all brands.

Ivorv

Cat. No. 30-9663

White

Cat. No. 30-9664



#### 2-Line Y-Coupler

Couples two single-line jacks into one 2-line jack. For use with 2-line devices, with modular plug.

12 Ft. Ivory

Cat. No. 30-9505



#### Modular In-line Couplers

Allows two modular line cords to be connected together to increase length.

Configuration	Description	Part No.
Reverse	4-Conductor Ivory	30-9678
Reverse	4-Conductor White	30-9618
Reverse	6-Conductor Ivory	30-9686
Reverse	6-Conductor White	30-9687
Reverse	8-Conductor Ivory	30-9688
Reverse	8-Conductor White	30-9689
Straight Thru	6-Conductor Ivory	30-9682
Straight Thru	6-Conductor White	30-9683
Straight Thru	8-Conductor Ivory	30-9684
Straight Thru	8-Conductor White	30-9685

Straight thru wiring for data communication. Reverse wiring for voice communication.





#### Three Way Coupler

4-Conductor

Joins three modular cords together. One end has single modular jack, other end has dual modular 4-conductor jacks.

Ivorv

Cat. No. 30-9679

White

Cat. No. 30-9669



### **Telephone Noise Filter**

EMI/RFI filter for the telephone. Reduces static noise on corded telephones.

Cat. No. 30-9653



# Standard Telephone Pick-Up

For recording or amplifying both sides of a telephone conversation. No wiring or installation; just connect pickup to phone with suction cup and plug cord into recorder or amplifier. Miniature (3.5mm) phone plug fits majority of recorders.

Cat. No. 30-6000





#### The Untangler®

No more tangled cords. Fits all standard telephones. Install in seconds. Attach either to the base or the handset.

Cat. No. 30-9311



#### **Twistfree**

Prevents handset cords from becoming twisted and tangled by allowing the handset to rotate freely. Compatible with all modular handset cords. Swivel rotary action spins the cord around to its original position, without decreasing sound quality.

Clear

Cat. No. 30-9310

Almond

Cat. No. 30-9312

White

Cat. No. 30-9313



#### **Outdoor Telephone Bell**

The outdoor telephone bell is a loud mechanical bell. Weather resistant molded housing for use indoors or outdoors, ideal for factory, farm, porch or garage or in any noisy environment. This telephone bell is line powered and uses a modular jack for simple installation. FCC registered.

Cat. No. 30-9835

# **MULTI-LINE PRODUCTS**



#### **Wire Junction**

With or Without Modular Plug With Snap-On Covers

Enables you to add outlets for telephone extensions by running one, two, three or four telephone wires to different parts of your house. The modular plug will connect to an existing modular outlet.

With Modular Plug Cat. No. 30-9800 Without Modular Plug Cat. No. 30-9801



### 3-Line Multi-Line-to-Modular Jack Adapter

Allows a single-line modular telephone to be connected to an existing 50-pin connector. With this adapter, installers are able to convert multi-line service, multi button-equipped telephone stations in minutes.

Cat. No. 30-9812



#### 5-Outlet Modular 4 Conductor Junction Box With Cord

Permits up to five telephone related devices to be used from single modular jack.

6 ft. Ivory

Cat. No. 30-9802



## 5-Outlet Modular Tap

Allows connection of answering machines, dialing equipment, extension phones, modems and other auxiliary equipment to key telephone systems. Also allows conversion of existing multiline connectors to accept telephone equipment with modular plug ended cords. 5 modular outlets are linked to 5 separate outside lines.



# REPLACEMENT TELEPHONE BATTERIES



#### **Cordless Telephone Battery**

3 DK cells with solderless connector. 3.6V, 280 mAH. For use with N.W. Bell (Excursion), Panasonic, and Uniden telephones.

Cat. No. 30-9433



### **Cordless Telephone Battery**

3-1/2 AA cells with solder tabs. 3.6V, 270 mAH. For Bell Phone, G.E., G.T.E., Midland, Pacific Bell, Sony, Uniden.

Cat. No. 30-9490



### **Cordless Telephone Battery**

3 AA cells with solder tabs. 3.6V, 500 mAH. For use with AT&T, Cobra, S.W. Bell (Freedom Phones), G.E., ITT, Midland, N.W. Bell, Panasonic and Uniden

Cat. No. 30-9470



#### **Cordless Telephone Battery**

3-1/2 AA cells with solderless white connector (Molex 5264-02). 3.6V, 270 mAH. For Cobra, Emerson.

Cat. No. 30-9495



#### **Cordless Telephone Battery**

3 AA cells with solderless connector. 3.6V 500 mAH. For Cobra, Panasonic,

Cat. No. 30-9473



#### **Cordless Phone Battery** with Universal Connection

Universal connection fits most phones using the 3-1/2 AA battery configuration. For use with Northwestern Bell, Panasonic, Uniden and others.

Cat. No. 30-9499





### **Cordless Telephone Battery**

4.0V, 500 mAH. For use with Sony phones.

Cat. No. 30-9493



### **Cordless Telephone Battery**

3 DK cells with solderless connector. 3.6V 280 mAH. For N.W. Bell (Excursion), Sonv.

Cat. No. 30-9483



### **Cordless Telephone** Battery

3.6V, 270 mAH. For use with Bell phones, G.E., Pacific Bell, Sony, Uniden and others.

Cat. No. 30-9494



### **Cordless Telephone Battery**

3-1/2 AA cells with solderless connector. 3.6V, 270 mAH. For most AT&T, Pacific Bell. Refer to battery.



# REPLACEMENT TELEPHONE ANTENNAS



#### **Cordless Telephone Antenna**

Antenna Collapsed: 3" Extended: 12-3/4" Sections: 5

For AT&T, Bell South, Cobra

Cat. No. 30-9402



#### **Cordless Telephone Antenna**

Antenna Collansed: 3

Collapsed: 3-3/4" Extended: 13-1/2" Sections: 5

For Southwest Bell (Freedom Phone)

Cat. No. 30-9410



Replace metal antennas with this exact replacement flexible antenna that is much safer and more durable. Replaces AT&T, Bell South, Cobra, GTE, Extena Phone, S.W. Bell and others.

Cat. No. 30-9425

## AUDIO ENHANCEMENT PRODUCTS



#### Telephone Amplifier

The telephone amplifier increases volume to improve communications. The need for additional volume arises often with those with hearing impairments, static on long distance calls, locations with loud background noise or when speaking to people with soft voice levels. The adjustable volume control can increase volume up to five times the original level, in the middle of the conversation, making it an effective assistive listening device. Easily installs into all modular phones. This amplifier is battery powered and is compatible with standard rotary pulse phones and most electronic touch tone phones. The 9 volt battery (not included) provides convenience as no AC outlet is required near the phone. Additional features include an on/off switch which saves battery power. If the volume of incoming calls is loud enough, the handset will still operate when the amplifier is in the off position. An LED indicates if the battery needs to be replaced.

Specifications: Power Gain: 21 dB

Volume Control: -8 dB +21 dB Frequency Response: 200 Hz -3 KHz Power Supply: Standard 9 Volt Battery Current Dissipation (Off-Hook): 1mA (Max.) Current Dissipation (On-Hook): 22uA (Max.)

Cat. No. 30-7501



#### **Telephone Extension Ringer**

Telephone ringer easily installs with modular connections. Ideal when in a remote location such as the basement, garage, patio, laundry room to alert the individual of a phone call. The loud audible signal can be used in noisy locations or for individuals with hearing impairments. The sound can be heard for great distances. The ringer is powered by the telephone line. FCC registered.

Cat. No. 30-7520



#### Light Flasher

Flasher visually signals incoming calls by flashing up to a 300 watt light in place of the audible phone ring. Simply plug any house lamp into the light flasher and connect to your modular phone for quick and easy installation. Ideal for noisy rooms or where you don't want a phone ringing. Also provides assistance for individuals who have difficulty hearing the phone ring.

Cat. No. 30-7522



#### Telephone Extension Ringer

Telephone ringer easily installs with modular connections. Ideal when in a remote location such as the basement, garage, patio, laundry room to alert the individual of a phone call. Combination strobe light/extension ringer has on/off switch but strobe light always lights with an incoming call. The loud audible signal can be used in noisy locations or for individuals with hearing impairments. The audible signal can be adjusted to a volume comfortable for the user up to 90 dB (louder than a smoke alarm). The sound can be heard for great distances and the weatherproof ringer is ideal for outdoor use. The ringer is powered by the telephone line. FCC registered.

Cat. No. 30-7521



#### Strobe Flasher

In addition to the phone ringing, the bright strobe visually alerts the hearing impaired that there is an incoming call. Also provides a visual signal in noisy locations such as factories, workshops, or simply when the television, radio, or stereo are at high volumes. Easily installed to modular phones. FCC registered.

# EPHON





#### Soft Shoulder Rest

The soft shoulder rest provides a comfortable phone use and frees your hands to work at the office or home. Fastens comfortably to any handset with the adhesive tape provided. Almond color.

Cat. No. 30-9421



#### Telephone Recorder Switch

This unique device is installed by inserting the modular plug into the telephone base. The handset is plugged into the back of the recorder switch and the 3.5mm plug is inserted into the microphone jack of the tape recorder. In record position simply activate record switch on any recorder and phone conversation will be recorded. In play position, the device will allow playing the recording back through the phone.

Cat. No. 30-6003



#### **60 Minute Microcassettes**

Two-pack of 60 minute microcassettes for use with telephone answering machines, microcassette recorders and dictation equipment. Authorized under Olympus License.

Cat. No. 30-9880



#### **Modular Surface Jacks** Display of 50

Easily mounts to baseboard or walls with adhesive tape or screws (included). Screw terminals for easy installation.

4-Conductor Ivory Cat. No. 30-9604-50

4-Conductor White Cat. No. 30-9614-50



#### **Telephone Wall Plates** Display of 25

Modular flush wall plate allows for connection of modular line cords. Ideal for initial installation or conversion from existing wall receptacles.

4-Conductor Ivory

Cat. No. 30-9707-25

4-Conductor White

Cat. No. 30-9717-25

# **CELLULAR**



#### Motorola<sup>®</sup> Micro Tac **Leather Case**

- Protects phone from every day use
- Belt clip for carrying convenience
- · Wrist strap protects from dropping/damaging
- Transparent face protects keypad

Cat. No. 30-7950



#### Nickel-Metal Hydride **Battery Pack**

- For use with most Motorola® Flip
- Advantages of Ni-MN; No memory effect, enabling the battery to be fully charged at any level. No conditioning required
- 25 hour standby, 110 minute talk time
- 600 mAh

Cat. No. 30-7910



#### AC/DC Rapid Charger & Conditioner

- Charges both Ni-MH and Ni-Cd
- LED status indicator
- AC adapter for home or office
- DC adapter for car

Cat. No. 30-7960



#### **Nickel Cadmium Battery** Pack

- For use with most Motorola® Flip Phones
- 25 hour standby, 100 minutes talk time
- 100 mAh

Cat. No. 30-7930



#### Nickel-Metal Hydride **Battery Pack**

- For use with most Motorola® Flip
- Advantages of Ni-MH; No memory effect, enabling the battery to be fully charged at any level. No conditioning required
- 18 hour standby, 70 minute talk time
- 600 mAh

Cat. No. 30-7920



#### **Battery Saver/Charger**

- · Allows unlimited use while plugged into your vehicle
- Charges both Ni-MH and Ni-Cd batteries
- LED status indicator
- DC adapter for car



GC Electronics provides a rapidly expanding range of Audio products and accessories for both the Home Theater Market and the Professional Sound System. Distributors and Sound Installers can take advantage of GC's sourcing ability to obtain everything needed for an audio application, including speakers, wire, connectors, wall plates, and volume controls. GC also offers a wide range of plugs, jacks, interlink cables, headphones, adapters, and accessories. In today's homes and offices, sound systems are becoming integrated with voice, data, and video systems. As a result, GC becomes your key partner, integrating all of the major components needed for the complete low voltage system into a single package.

Epitome® Brand Home Theater Components assure you of consistent quality and performance. All Epitome speakers carry a five-year warranty for materials and workmanship. All other Epitome branded products carry a 10-year warranty. This reduces the potential for needless service calls.

#### **Contents:**

- Sound Distribution
- Distribution Products
- Speaker Selectors
- Stereo Distribution Boxes
- Volume Controls
- Speakers
- Free Standing
- In-Wall
- Ceiling
- Wall Plates
- Audio Accessories
- AC Adapters
- Cables
- Shielded and Unshielded
- Interlink Audio/Video Cables
- Connectors
- Audio Plugs, Jacks, Adapters, and Couplers
- Audio Y Adapters
- Power Flex Connectors and Adapters
- Headphones/Microphones
- Stereo Headphones
- Microphones, Connectors, and Replacement Cables
- Speakers and Accessories
- Speakers
- Speaker Selectors
- Tape Head Cleaning Accessories
- Volume Controls
- Speaker Wire























## **EPITOME®**

\*All Epitome speakers carry a five year warranty for material and workmanship. All other Epitome Branded products carry a 10 year warranty.



#### Epitome® 3500 5-1/4" 2-Way In-Wall Speaker

Specifications:

Woofer: 5-1/4" Polypropylene Cone

Tweeter: 1" Soft Dome Impedance: 8 Ohms

Frequency Response: 50 Hz to 20 kHz Power Handling: 60 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 11 "H x 7-1/2 "W x 2-3/4"D

1 Pair w/Grill

Cat. No. 30-3500

5-1/4" New Construction Bracket, 1 Pair

Cat. No. 30-3515



### Epitome® 3506 6-1/2" 2-Way In-Wall Speaker

Specifications:

Woofer: 6-1/2" Polypropylene Cone with 25mm

Voice Coil and 10 oz. Ceramic Magnet

Tweeter: 1" Soft Dome Impedance: 8 Ohms

Frequency Response: 45 Hz to 20 kHz Power Handling: 80 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 12"H x 8-1/2"W x 3"D

1 Pair w/Grill

Cat. No. 30-3506

6-1/2" New Construction Bracket, 1 Pair

Cat. No. 30-3516





#### Epitome® 3576 6-1/2" 2-Way In-Wall Speaker

w/Directional Tweeter

Specifications:

Woofer: 6-1/2" Polypropylene Cone Tweeter: 1" Soft Dome Directional

Impedance: 8 Ohms

Frequency Response: 45 Hz to 20 kHz Power Handling: 80 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 12"H x 8-1/2"W x 3"D

1 Pair w/Grill

Cat. No. 30-3576

6-1/2" New Construction Bracket, 1 Pair

Cat. No. 30-3516



## Epitome® 3508 8" In-Wall Speaker

Specifications:

Woofer: 8" Polypropylene Cone Tweeter: 1" Soft Dome

Impedance: 8 Ohms

Frequency Response: 40Hz to 20 kHz Power Handling: 100 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 14"H x 10-1/4"W x 4"D

1 Pair w/Grill

Cat. No. 30-3508

8" New Construction Bracket, 1 Pair"

Cat. No. 30-3518



#### Epitome® 3580 8" In-Wall Subwoofer

Specifications:

Woofer: 8" Polypropylene Cone

Impedance: 8 Ohms

Frequency Response: 40 Hz to 120 Hz Power Handling: 100 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 14"H x 10-1/4"W x 4"D

1 Piece, Grill Included Cat. No. 30-3580

8" New Construction Bracket, 1 Pair

Cat. No. 30-3518



## Epitome® 3525 5-1/4" Coaxial In-Wall Speaker

Specifications:

Woofer: 5-1/4" Polypropylene Cone Tweeter: 3/4" Polycarbonate Dome

Impedance: 8 Ohms

Frequency Response: 69 Hz to 20 kHz Power Handling: 50 Watts (Max.)

Sensitivity: 90 dB

Dimensions: 6-3/4"H x 6-3/4"W x 2-1/4"D

1 Pair w/Grill







Epitome® 3526 6-1/2" Coaxial In-Wall Speaker

Specifications:

**Woofer:** 6-1/2" Polypropylene Cone **Tweeter:** 3/4" Polycarbonate Dome

Impedance: 8 Ohms

Frequency Response: 65 Hz to 20 kHz Power Handling: 50 Watts (Max.)

Sensitivity: 92 dB

Dimensions: 8"H x 8"W x 2-1/4"D

1 Pair w/Grill Cat. No. 30-3526



Epitome® 3529 6-1/2" Round Coaxial In-Wall Speaker

w/Mounting Tabs

Specifications:

Woofer: 6-1/2" Polypropylene Cone Tweeter: 3/4" Polycarbonate Dome

Impedance: 8 Ohms

Frequency Response: 65 Hz to 20 kHz Power Handling: 70 Watts (Max.)

Sensitivity: 90 dB Dimensions: 9" O.D. 1 Pair w/Grill Cat. No. 30-3529



Epitome® 3532 Shielded Center **Channel Speaker** 

**Contemporary Design** 

Specifications:

Woofer: Dual 3-1/2" Copolymer

Tweeter: 1/2" Mvlar Dome Impedance: 8 Ohms

Frequency Response: 150 Hz to

20kHz Power Handling: 40 Watts (Max.)

Sensitivity: 92 dB

Dimensions: 4-1/2"H x 12-3/4"W x

\*Measurement taken at deepest point"

1 Piece

Cat. No. 30-3532



#### Epitome® 3581 **Directional Bookshelf Speakers**

Use for background music or main system in conjunction with a subwoofer. Can be used in rooms where an unobtrusive speaker is desired and in-wall speakers are out of the question.

Specifications:

Woofer: Two 3" Woofer

Tweeter: Two .5" Coalial Mylar Dome

Impedance: 4 Ohms

Frequency Response: 250 Hz to 20 kHz Power Handling: 120 Watts (Max)

Sensitivity: 93 dB

Dimensions: 7"H x 4"W x 4"D

1 Pair, Black

Cat. No. 30-3581 1 Pair, White

Cat. No. 30-3582



#### **Acoustic Speakers**

Excellent by themselves or in complementing an existing home theater system. Use where space is at a premium and quality sound is a requirement. They are also weather resistant, making them ideal for use in any outdoor or indoor location.

Specifications:

Woofer: 5" Polypropylene Cone

Tweeter: 1/2" Horn Impedance: 8 Ohms

Frequency Response: 50 Hz to 20 kHz

Power Handling: 80 Watts (Max.)

Sensitivity: 89 dB 1 Pair, Black

Cat. No. 30-3510 1 Pair, White

Cat. No. 30-3511



#### Shielded Indoor/Outdoor **Surround Sound Speakers**

These 3-way speakers are magnetically shielded, to allow placement near televisions. They are also weather resistant making them ideal for use in any outdoor or indoor location.

Specifications:

Woofer: 4" Polypropylene Cone Midrange: 2" Polypropylene Cone Tweeter: 3/4" Piezo Dome

Impedance: 8 Ohms

Frequency Response: 120 Hz to 18 kHz Power Handling: 80 Watts (Max)

Sensitivity: 90 dB

1 Pair, Black Cat. No. 30-3562 1 Pair, White







## **DISTRIBUTION PRODUCTS**



#### 6 Pair In-Wall Speaker Selector

#### Features:

- Fits in standard triple gang J-Box
- Two source
- Removable screw to connect terminals for easy installation
- Selectable impedance protection
- Power Handling: 100 watts per channel (RMS) 200 watts per channel (max.)
- Triple Gang Trim Plate Included

Cat. No. 65-2005



#### Stereo Distribution Box

One input (two stereo pairs or 4 wires), 8 sets of wires out, rear panel push to connect terminals handle 10 to 22 gauge wire. Built-in switchable impedance protection can be switched in and out. Left and right channels are totally isolated, universal mounting panel supplied.

#### Specifications:

**Power Handling Capacity:** 300 Watts (protections switched off), 180 Watts (protection switched on).

**Dimensions:** 19"W x 3-1/2"H x 2-1/4"D

Cat. No. 65-2025



#### 2 Source A/B Speaker Selector

An A/B speaker selector allowing either A speaker, B speaker or both A and B speakers to be played. This selector also features 2 sources.

#### Features:

- · Rotary knobs
- Screw to connect terminal blocks for source input and speaker output
- 18 awg. color coded wire leads for volume control input and output
- Mounts in single gang electricial J-Box

Cat. No. 65-2020

## **VOLUME CONTROLS**



**Control** 





A 10 step control with an attenuation range of 30 db to provide a balanced graduation of volume. The unit is sealed to prevent malfunction from the harmful effects of dust and moisture allowing installation in any situation.

#### Specifications:

Power Handling Capacity: 25 Watts RMS, 75 Watts (Avg.) Impedance: 8 Ohms

Frequency Response: 35 Hz to 20 kHz

Attenuation Range: 3 dB per step, last two steps are 6 dB Total Attenuation: 30 dB (Max.), 0 dB (Min.)/Off

Number of Switch Steps: 10

\*Mounts in standard electrical J-Box.

Decor Insert, White Cat. No. 65-1520

Standard Wall Plate, White **Cat. No. 65-1530** 





#### 12 Step Stereo Volume Controls

A 12-step control with an attenuation range of 34 dB to provide a balanced graduation of volume. The unit is sealed to prevent malfunction from the harmful effects of dust and moisture allowing installation in any situation.

#### Specifications:

**Power Handling Capacity:** 216 Watts (Max.)

Impedance: 8 Ohms

Frequency Response: 35 Hz to 20 kHz

**Total Attenuation:** 34 dB in 12 Steps, 8 Steps @ 3 dB, (4dB, 6 dB, Off)

\*Mounts in standard electrical J-Box."

Volume Control, Decor Insert, White Cat. No. 65-3500

Cat. 140. 05-550

Volume Control, Standard Wall Plate, White

Cat. No. 65-3510

Volume Control, Decor Insert, Ivory

Cat. No. 65-3501

Volume Control, Standard Wall Plate, Ivory

Cat. No. 65-3511



#### 12 Step Stereo Volume Control

A 12-step control with an attenuation range of 30 dB to provide a balanced graduation of volume. The control has higher capacity for todays higher power systems. The unit is sealed to prevent malfunctions from the harmful effects of dust and moisture allowing installation in any situation. This unit features removable screws to connect terminals for easy installations.

#### Specifications:

**Power Handling Capacity:** 216 Watts (Max.)

Impedance: 8 Ohms

Frequency Response: 35 Hz to

20 kHz

Total Attenuation: 34 dB in 12 Steps, 8 Stps at 3 dB, (4 dB, 6 dB,

Number of Switch Steps: 12

\*Mounts in deep electrical J-Box at least 2.9" Deep.

Decor Insert, White Cat. No. 65-3540



#### Adjustable Impedance Volume Controls

#### Preset Impedance X2 to X64. Reset At Any Time

A 12-step control with an attenuation range of 34 dB to provide a balanced graduation of volume. The unit is sealed to prevent malfunction from the harmful effects of dust and moisture allowing installation in any situation.

#### Specifications:

**Power Handling Capacity:** 216 Watts (Max.)

Impedance: Adjustable 2-32 Ohms
Frequency Response: 35 Hz to

Attenuation Range: 34 dB In 12 Steps, 8 Steps @ 3 dB, (4 dB, 6 dB, Off)

Number of Switch Steps: 12

\*Mounts in standard electrical J-Box.

Volume Control Decor Insert, Ivory Cat. No. 65-3535

Volume Control Decor Insert, White Cat. No. 65-3536





# UL & CSA APPROVED WALL PLATES







#### **Telephone and Coax**

#### **Standard Wall Plates**

Double Coax. One 6P4C Telephone, White Cat. No. 32-3832

Double Coax, One 6P4C

Telephone, Ivory Cat. No. 32-3834

Double Coax, One 6P4C Telephone, Almond Cat. No. 32-3836

#### **Decor Wall Plate Inserts**

Double Coax. One 6P4C Telephone, White Cat. No. 32-8241

## **WALL PLATES**

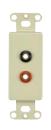
















#### **Coax Connectors**

#### Standard Wall Plates

Single Coax, Gold, White Cat. No. 32-3862

Single Coax, Gold, Ivory Cat. No. 32-3770

Single Coax, Gold, Almond Cat. No. 32-3769

Double Coax, Gold, White

Cat. No. 32-3897

Double Coax, Gold, Ivory Cat. No. 32-3763

Double Coax, Gold, Almond Cat. No. 32-3768



Single Coax, Gold, White Cat. No. 32-3759

Single Coax, Gold, Ivory Cat. No. 65-101

Double Coax, Gold, White Cat. No. 32-3896

Double Coax, Gold, Ivory

Cat. No. 65-121 Triple Coax, Gold, White

Cat. No. 65-130

Triple Coax, Gold, Ivory Cat. No. 65-131

**Standard Wall Plates** 

1 Pair Banana Jacks, Gold, White Cat. No. 30-6240

1 Pair Banana Jacks, Gold, Ivory Cat. No. 30-6140

1 Pair Banana Jacks, Gold, Almond Cat. No. 30-6340

2 Pair Banana Jacks, Gold, White Cat. No. 30-6242

2 Pair Banana Jacks, Gold, Ivory Cat. No. 30-6142

2 Pair Banana Jacks, Gold, Almond Cat. No. 30-6352

# **Decor Wall Plate Inserts**

1 Pair Banana Jacks, Gold, White Cat. No. 30-6040

1 Pair Banana Jacks, Gold, Ivory Cat. No. 65-211

2 Pair Banana Jacks, Gold, White Cat. No. 30-6342

## **Standard Wall Plates**

Single Spring Clip, White Cat. No. 30-1511

Single Spring Clip, Ivory

Cat. No. 30-1512

Single Spring Clip, Almond Cat. No. 30-1516

Double Spring Clip, White

Cat. No. 30-1500

Double Spring Clip, Ivory

Cat. No. 30-1501

Double Spring Clip, Almond

Cat. No. 30-1503

#### **Decor Wall Plate Inserts**

Single Spring Clip, White

Cat. No. 30-1510

Single Spring Clip, Ivory Cat. No. 65-1511

## **Standard Wall Plates**

Double Push-In, Speaker Terminal, White

Cat. No. 30-1531

Double Push-In, Speaker Terminal, Ivorv

Cat. No. 30-1534

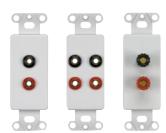
Double Push-In, Speaker Terminal, Almond

Cat. No. 30-1533

#### **Decor Wall Plate Inserts**

Double Push-In, Speaker Terminal, White

Cat. No. 30-1535





These inserts take the soldering out of wall plate installation. The soldering is eliminated by using P.C. board technology.

1 Pair Banana Jacks, Gold, White Cat. No. 65-6210

2 Pair Banana Jacks, Gold, White Cat. No. 65-6220

Double RCA, Gold, White Cat. No. 65-6140

1 Pair 5-Way Binding Posts, Gold, White

Cat. No. 65-6300

2 Pair 5-Way Binding Posts, Gold, White

Cat. No. 65-6310







#### RCA Connectors

**Standard Wall Plates** 

Single RCA, Gold, White Cat. No. 30-1041

Single RCA, Gold, Ivory

Cat. No. 30-1042

Single RCA, Gold, Almond Cat. No. 30-1044

Double RCA, Gold, White

Cat. No. 30-1141

Double RCA, Gold, Ivory Cat. No. 30-1142

Double RCA, Gold, Almond

Cat. No. 30-1144

Triple RCA, Gold, White

Cat. No. 30-1160

Triple RCA, Gold, Ivory

Cat. No. 30-1161

Triple RCA, Gold, Almond Cat. No. 30-1244

Double RCA, Single Coax, Gold,

White

Cat. No. 30-1170



Cat. No. 30-1171

Cat. No. 32-3826

Almond











## **Binding Post Connectors**

**Standard Wall Plates** 

1 Pair 5-Way Binding Posts, Gold, White

Cat. No. 30-1051

1 Pair 5-Way Binding Posts, Gold, Ivory

Cat. No. 30-6050

1 Pair 5-Way Binding Posts, Gold, Almond

Cat. No. 30-1053

2 Pair 5-Way Binding Posts, Gold, White

Cat. No. 30-1151

2 Pair 5-Way Binding Posts, Gold, Ivory

Cat. No. 30-1152

2 Pair 5-Way Binding Posts, Gold, Almond

Cat. No. 30-1153

**Decor Wall Plate Inserts** 

1 Pair 5-Way Binding Posts, Gold, White

Cat. No. 30-1050

2 Pair 5-Way Binding Posts, Gold, White

Cat. No. 30-1150

2 Pair 5-Way Binding Posts, Gold, Ivory

Cat. No. 65-311

## Cat. No. 30-1040 Single RCA, Gold, Ivory Cat. No. 65-141

Double RCA, Single Coax, Gold, Ivory

Double RCA, Single Coax, Gold,

**Decor Wall Plate Inserts** 

Single RCA, Gold, White

Double RCA, Gold, White

Cat. No. 30-1140

Double RCA, Gold, Ivory

Cat. No. 65-051

Triple RCA Gold, White Cat. No. 30-1240

Double RCA, Single Coax, Gold, White

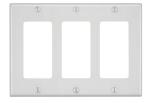
Cat. No. 32-3822

Double RCA, Single Coax, Gold, Ivory

Cat. No. 65-171







#### **Decor Trim Plates**

Decor Wall Plate, Single, White

Cat. No. 30-1010

Decor Wall Plate, Single, Ivory

Cat. No. 65-401

Decor Wall Plate, Double, White

Cat. No. 30-1020

Decor Wall Plate, Triple, White

Cat. No. 65-404-BU

Blank Decor Insert

Use where future applications are planned but are not finalized.

Cat. No. 30-1000

Blank Standard, White

Cat. No. 30-2000

Blank Standard, Ivory

Cat. No. 30-3000

Blank Standard, Almond

Cat. No. 30-5000

Note: Volume Controls and Decor Wall Plate Inserts Do Not include trimplates.





## STEREO HEADPHONES



#### Lightweight Stereo Headphone

Produces clear stereo sound when used with portable equipment such as AM/FM radios and cassette players. Features include adjustable headband and foam earpads, attractive vibrant packaging. One year warranty.

Specifications:

Drive Unit: 27mm Mylar Speaker

Impedance: 32 Ohms

Sensitivity: 100 dB S.P.L. at 1 kHz +2% Frequency Response: 20-20,000 Hz Cord Length: 4 ft.

Cat. No. 61-533



#### Stereo Earbuds

The lightweight design for active individuals complements the live and vibrant sound of these stereo earbuds. Features include compact case for easy storage and portability, attractive four-color consumer packaging and a one vear warrantv.

Specifications:

Drive Unit: 13mm Mylar Speaker

Impedance: 32 Ohms

Sensitivity: 100 dB S.P.L. at kHz +2% Frequency Response: 20-20,000 Hz

Cord Length: 4 ft.

Cat. No. 61-546



#### **Digital Stereo Headphone**

Especially designed for use with compact disc players. High velocity mylar diaphragms have a real deep bass capability. Features include outstanding sound reproduction, attractive packaging, with a one year warranty.

Specifications:

Drive Unit: 27mm Mylar Speaker

Impedance: 32 Ohms

Sensitivity: 101 dB S.P.L. at 1 kHz +2%

Frequency Response: 20-18,000 Hz

Cord Length: 4 ft. Cat. No. 61-548

#### Stereo Headphone

Dynamic stereo headphone with full range response to reproduce crystal clear sound. Lightweight design with an adjustable headband and soft foam earpads for a comfortable fit. 3.5mm stereo plug fits most personal radios and cassette players. One year warranty included.

Specifications:

Drive Unit: 27mm Mylar Speaker

Impedance: 32 Ohms

Sensitivity: 101 dB S.P.L. at 1 kHz +2% Frequency Response: 20-20,000 Hz

Cord Length: 4 ft.

Cat. No. 61-555



#### **Dynamic Stereo Headphone**

Electrodynamic stereo headphones with foam filled vinyl ear cushions for a comfortable airtight fit. Includes left and right volume controls. Stereo/mono switch allows you to hear both drivers when listening to a mono source. 3.5mm stereo plug and a 1/4" stereo adapter.

Specifications:

Frequency Response: 20–18,000 Hz

Impedance: 32 ohms Maximum Input: 100 mΩ Sensitivity: 99 dB at 1KHz"

Cat. No. 90-502



#### **Headphone Extension Cable**

25 ft. coiled extension cable, with a miniature 3.5mm stereo jack to 1/4" stereo phone plug, includes a miniature 3.5mm stereo plug to 1/4" stereo phone jack adapter. Can be used to extend headphone cable to both personal equipment, using a 3.5mm jack, and home stereo equipment, using a 1/4" jack.





#### 500 mA Universal AC Adapter

Powers electronic keyboards, calculators, portable radios and TV's, answering machines and other electronic products. Features six switchable voltage settings. 3 and 12 volts DC allow the universal AC adapter to power most DC powered electronic products. Saves batteries in portable electronic equipment. Six detachable adapter plugs fit all popular electronic products and ensure proper polarity.

Specifications: Input AC: 120 Volts Output DC: 3 - 4.5 - 6 - 7.5 - 9 - 12 Volts Maximum Current: 500 mA Output Adapter Plugs: 2.5mm, 3.5mm, 2.1mm x 5.5mm, 2.5mm x 5.5mm, 1.35mm x 3.5mm, 1.5mm x 5.5mm

Blister Card

Cat. No. 30-6012

Clam Shell

Cat. No. 61-6012



#### 800 mA Universal AC Adapter

Powers electronic keyboards, calculators, portable radios and TV's, answering machines and other electronic products. Features six switchable voltage settings. 3 and 12 volts DC allow the universal AC adapter to power most DC powered electronic products. Saves batteries in portable electronic equipment. Six detachable adapter plugs fit all popular electronic products and ensure proper polarity.

Specifications:

Input AC: 120 Volts

**Output DC:** 3 - 4.5 - 6 - 7.5 - 9 - 12 Volts

Maximum Current: 800 mA

Output Adapter Plugs: 2.5mm, 3.5mm, 2.1mm x 5.5mm, 2.5mm x 5.5mm, 1.35mm x 5.5mm, 1.5mm x 5.5mm

Blister Card

Cat. No. 30-6014

Clam Shell

Cat. No. 61-6014



#### **FM Wireless Intercom Set**

Ideal for home or office and is simply installed by plugging the power cord into an AC outlet. Three separate channels enable you to select an unused channel for interference free operation. Service free, FMIPLL circuitry, assures that your voice communications are crisp and clear. A monitor switch, allows you to monitor children who are in different locations within the home. Attractive desk-type styling fits in any decor. This wireless Intercom set includes a pair of intercoms. A network can be made adding additional sets. Operates on standard AC current with low power consumption (less than a 3 watt light bulb) additional features include, solid state LED indicators, beep call for alerting other stations and a squelch feature to reduce noise. UL listed. FCC registered.

Specifications:

Range: Maximum 1,000 ft.

Modulation: FM Channel: 3 Channels

Circuitry: PLL (Phase-Locked-Loop) Power Source: 115V-120V Power Consumption: 3W Frequency: Channel A 200 kHz

**RF Output Power:**  $50m\Omega$  across 10 ohm Channel B 230 kHz,

Channel C 260 kHz

Measurement: W7" x D4-1/4" x H2" (178 x 121 x 51) mm

**Audio Power:** 350mΩ

Weight: 1-3/16 lb. (550 grams)

Cat. No. 30-6035



#### Audio Cable

This fully shielded audio cable is ideal for custom audio connections. The superior quality of this cable can be used in car and home installations. 500 ft. length.

Dual Audio Cable Cat. No. 14-219-9H63



#### Speaker Wire

Clear plastic, color-coded wire in display package.

18 Gauge, 50 ft.

Cat. No. 30-584

18 Gauge, 100 ft. Cat. No. 30-554

20 Gauge, 50 ft.

Cat. No. 30-553

24 Gauge, 50 ft.

Cat. No. 30-586

24 Gauge, 100 ft.







#### Specifications:

- #12 AWG
- Oxygen free copper, 259 strands per conductor
- 200 x .415 nominal wire size

Cat. No. 30-583

100 ft.

Cat. No. 14-212-9H43

250 ft.

Cat. No. 14-212-9H53

500 ft.

Cat. No. 14-212-9H63

#### PowerFlex<sup>™</sup> Speaker Cable

Oxygen free finely stranded bare copper conductors cabled in a Rope Lay design to increase the conductive surface, reduce "skin effect", and insure maximum flexibility. Extra soft, super flexible 60°C clear PVC insulation. Extremely low capacitance. resistance and inductance of these cables transfer music signals from amplifier to speakers with high clarity and definition. Surface printed for identification and polarity.

#### Specifications:

- #10 AWG
- 413 bare oxygen free copper strands per conductor
- .240 X .485 nom. wire size

Cat. No. 30-581

100 ft.

Cat. No. 14-210-9H43

250 ft.

Cat. No. 14-210-9H53

500 ft.

Cat. No. 14-210-9H63



Power Flex connectors are available in four popular styles. These connectors will provide the best possible connection between your speakers and audio/video equipment. Gold plated solid brass construction provides ultra low resistance and prevents deterioration of contact surfaces. For use with Power FlexTM speaker cable or any other wire not exceeding 10 gauge.



Gold compression (solderless) spade lugs.

(pkg. of 2)

Cat. No. 30-1200

Gold crimp or solder spade lugs.

(pkg. of 2)

Cat. No. 30-1203

Gold crimp or solder flexible pin plugs. Color coded insulators.

(pkg. of 4)

Cat. No. 30-1204

Gold compression (solderless) pin plugs.

(pkg. of 2)

Cat. No. 30-1205

Gold crimp or solder banana plugs. Color coded insulators.

(pkg. of 2)

Cat. No. 30-1208

Gold compression (solderless)

banana plugs. (pkg. of 2)

Cat. No. 30-1210



### PowerFlex™ Audio Adapters

These adapters will provide the best possible connection between your cabling and audio/video equipment. Gold plated solid brass construction provides ultra low resistance and prevents deterioration of contact surfaces.

Gold RCA Jack to RCA Jack

Cat. No. 30-1212

Gold RCA Plug to RCA Plug

Cat. No. 30-1213

Gold RCA Plug to Dual RCA Jack

Cat. No. 30-1215



#### SuperLink™ Dual A/V Cable

SuperLink™ Audio/Video Cable is constructed with OFC (Oxygen Free Copper) stranded center conductor and a 90% copper shield over a 100% mylar foil protected by a super flexible jacket. For use when customizing audio patch cables to interlink CD players, amplifiers, tuners, VCR's and tape decks. This made to measure interconnect keeps the length of cable between connections to a minimum. Use Superlink I or II connectors for termination. Impedance: 75 ohms.

230 O.D.

100 ft

Cat. No. 14-990-2H41

250 ft

Cat. No. 14-990-2H51









## **SuperLink™ Connectors**

The SuperLinkTM connectors use a light weight aluminum alloy connector shell to prevent oxidation and corrosion. 24 K gold plated phono pin plugs provide the best conductivity and maximum signal transfer available. Use with high performance interconnect cables. Available in three color codes, platinum, black, or red. Solder connections.

Platinum Pkg. of 2 Cat. No. 30-1230

Black Pkg. of 2

Cat. No. 30-1231 Red Pkg. of 2

Cat. No. 30-1232

#### **Unshielded Cables**

2-conductor male RCA phono pin plug to male RCA phono pin plug.

20 ft. 24 AWG

Cat. No. 30-1706

40 ft. 24 AWG

Cat. No. 30-1708

20 ft. 18 AWG

Cat. No. 30-1705

40 ft. 18 AWG







#### Shielded Cables

2-conductor RCA phono pin plug to RCA phono pin plug.

1-1/2 ft.

Cat. No. 30-400

3 ft.

Cat. No. 30-402

6 ft.

Cat. No. 30-404

12 ft.

Cat. No. 30-406

3 ft. Gold

Cat. No. 30-402-3

6 ft. Gold

Cat. No. 30-404-3

RCA phono pin plug to 3.5mm miniature phone plug.

3 ft.

Cat. No. 30-401

6 ft.

Cat. No. 30-403

RCA phono pin plug to standard 1/4" phone plug.

6 ft.

Cat. No. 30-444

RCA phono pin plug to RCA phono pin jack.

3 ft.

Cat. No. 30-426

6 ft.

Cat. No. 30-428

12 ft.

Cat. No. 30-430

Right angle RCA phono pin plug to right angle RCA phono pin plug.

6 ft.

Cat. No. 30-1856

Dual RCA phono pin plugs to dual RCA phono pin plugs.

3 ft.

Cat. No. 30-407

6 ft.

Cat. No. 30-408

12 ft.

Cat. No. 30-409

25 ft.

Cat. No. 30-513

3 ft. Gold

Cat. No. 30-407-3

6 ft. Gold

Cat. No. 30-408-3



#### Car Stereo Cable

Dual RCA plugs with grounding wire at both ends. For custom car installations.

17 ft.

Cat. No. 30-413



#### **Dual Stereo Cable**

Premium audio cable with dual RCA plugs at both ends.

17 ft.

Cat. No. 30-419

Dual RCA phono pin plugs to dual RCA jacks.

3 ft.

Cat. No. 30-410

6 ft.

Cat. No. 30-411



#### Shielded Cables

3.5mm miniature phone plug to 3.5mm miniature phone plug.

3 ft.

Cat. No. 30-1808

6 ft.

Cat. No. 30-1809

3.5mm miniature phone plug to 1/4" phone plug.

6 ft.

Cat. No. 30-431

3.5mm miniature phone plug to 3.5mm miniature phone jack.

6 ft.

Cat. No. 30-1806

12 ft.

Cat. No. 30-1807

3.5mm miniature phone plug to stripped ends.

6 ft.

Cat. No. 30-415

1/4" phone plug to 1/4" phone plug.

6 ft.

Cat. No. 30-443

1/4" phone plug to right angle 1/4" phone plug.

20 ft. Coiled

Cat. No. 30-556

Standard and stereo 1/4" phone plug to standard and stereo 1/4" phone jack.
Stereo cables are headphone extension cords.

20 ft. Stereo

Cat. No. 30-1824

25 ft. Coiled Stereo

Cat. No. 30-1825

Dual RCA phono plugs to 3.5mm stereo miniature phone plug.

6 ft.









#### Shielded Cables (cont.)

3.5mm miniature stereo phone plug to 3.5mm miniature stereo phone plug.

Cat. No. 30-1821

3.5mm miniature stereo plug to 3.5mm miniature stereo jack.

10 ft.

Cat. No. 30-1811

2.5mm subminiature plug to 2.5mm subminiature jack.

20 ft.

Cat. No. 30-1830



# Stereo Dubbing Cable

Gold plated triple RCA plugs to gold plated triple RCA plugs. For dubbing between two stereo VCR's.

Cat. No. 30-1537

25 per Carton

Cat. No. 30-1537-25



#### **Pistol Type Cables**

RCA type phono plugs with jack adapter to RCA phono plugs shielded cable.

Use when only one auxiliary input is available and there are two devices (CD player, stereo VCR, etc.) that need to be connected.

3 ft.

Cat. No. 30-1826

6 ft.

Cat. No. 30-1827

12 ft.

Cat. No. 30-1828

# **AUDIO PLUGS**



#### Std. 1/4" Phone Plugs -2-Conductor

Shielded metal handle. Solder terminals.

Cat. No. 30-483-6

Shielded metal handle. Screw terminals.

Cat. No. 30-484-6

Shielded metal handle. Right angle type. Solder terminals.

Cat. No. 30-487

Black plastic handle. Solder terminals.

Cat. No. 30-483

Black plastic handle. Screw terminals.

Cat. No. 30-484

Red plastic handle. Solder terminals.

Cat. No. 30-483-1

Red plastic handle. Screw terminals.

Cat. No. 30-484-1



### Miniature (3.5mm) **Phone Plugs**

Shielded metal handle. Solder terminals.

Cat. No. 30-498-6

Black plastic handle. Solder terminals.

Cat. No. 30-498-2

Gold

Cat. No. 30-498-3



#### Subminiature (2.5mm) **Phone Plugs**

2.5mm subminiature 3-conductor phone plug.

Pkg. of 2

Cat. No. 30-519



#### 1/4" Stereo Phone Plugs -**3-Conductor**

Shielded metal handle. Solder terminals.

Cat. No. 30-489-6

Shielded metal handle. Screw terminals.

Cat. No. 30-490

Black plastic handle. Solder terminals.

Cat. No. 30-489

Black plastic handle. Screw terminals.

Cat. No. 30-488



#### Phono Pin Plugs (RCA Style)

Package of 2 with shielded metal handle. Heavy duty. Solder terminals.

Cat. No. 30-534

Gold

Cat. No. 30-534-3

Pkg. of 10

Cat. No. 30-534-BU

Pkg. of one each with red and black plastic handle. Right angle type. Solderless terminals.

Cat. No. 30-533



Black plastic handle. Solder terminals.

Cat. No. 30-572

Gold

Cat. No. 30-572-3

Pkg. of 10

Cat. No. 30-572-BU







Fits power supply jacks on recorders, radios, dictating machines, calculators, etc. Pkg. of one each for the two standard pin diameters. 2.1mm and 2.5mm.

Pkg. of 2 Standard Length, 10mm approx. 3/8"

Cat. No. 30-475

Pkg. of 2 Long Length, 14mm approx. 9/16"

Cat. No. 30-476

1.3mm DC power plug fits walkman-type cassettes. Molded thermoplastic body. Solder connections.

Cat. No. 30-480



#### **Mike Connectors**

Cannon Style." 3 pin male. Cat. No. 30-1692

Cannon Style." 3 pin female.

Cat. No. 30-1690

Chassis/cabinet style. 3 pin female.

Cat. No. 30-1694

# **AUDIO JACKS** I



#### Std. 1/4" Phone Jacks -2-Conductor

Chassis mounting. Closed circuit. .350" mtg. hole. Solder lugs.

Cat. No. 30-540-1

Chassis mounting. Open circuit. .350" mtg. hole. Solder lugs.

Cat. No. 30-540

Cord mounting. Open circuit. Black plastic handle. Solder terminals.

Cat. No. 30-548



#### Miniature (3.5mm) Phone Jacks

Chassis mounting. Closed circuit. 1/4" mtg. hole. Solder lugs.

Cat. No. 30-546

Cord mounting. Open circuit. Black plastic handle. Solder terminals.

Cat. No. 30-543-1

Cord mounting. Open circuit. Solder connections. For stereo plugs.

Cat. No. 30-575



#### 1/4" Stereo Phone Jacks -2-Conductor

Chassis mounting. Open circuit. 3/8" mtg. hole. Solder lugs.

Cat. No. 30-541

Cord mounting. Open circuit. Heavy duty shielded metal handle. Solder terminals.

Cat. No. 30-542



#### Phono Pin Jacks (RCA Style)

Cord mounting. Open circuit. Pkg. of 2 with shielded plastic handle. Solder terminals.

Cat. No. 30-536

Dual chassis mounting. 1-1/2" long. Open circuit. 130" dia. holes on 1.770" centers. Solder type.

Cat. No. 30-537

Chassis mounting. Open circuit. 1/4" mtg. hole. Solder lugs. Pkg. of 2.

Cat. No. 30-528



### 3.5mm Miniature 3-Conductor Phone Jack

P.C. board mounted or panel-mounted (mounting nut furnished).

Mates with all standard 3.5mm stereo plugs. Normally closed circuit.

Cat. No. 30-574



#### **Chassis Mounting Jack**

Gold plated chassis mounting RCA jack with grounding lug. Gold connections provide optimum performance in home and car installations.

Cat. No. 30-528-3







#### **AUDIO ADAPTERS**



#### Std. 1/4" Phone Plug One End

Std. 1/4" phone plug (2 cond.) to miniature (3.5mm) phone jack.

Cat. No. 30-472-1

N.S.N. 5935-00-601-8693

Mini (3.5mm) stereo phone jack to 1/4" stereo phone plug (3 cond.). Permits use of headphones (with 3.5mm stereo plug) with units which have 1/4" stereo output jacks.

Cat. No. 30-1574

Gold plated 3.5mm stereo jack to 1/4" stereo plug. This adapter permits use of stereo headphones with a 3.5mm plug to be used on home entertainment systems with a 1/4" jack.

Gold

Cat. No. 30-1575

Standard 2-conductor 1/4" phone plug to RCA phono pin jack.

Cat. No. 30-472



#### Phono Pin (RCA Style) Plug One End

Phono pin plug to miniature (3.5mm) phone jack.

Cat. No. 30-473-1

Phono pin plug to std. 1/4" phone jack (2-conductor).

Cat. No. 30-473



#### Miniature (3.5mm) Plug One End

Miniature (3.5mm) phone plug to phono pin jack.

Cat. No. 30-495

1/4" stereo phone jack (3 cond.) to mini (3.5mm) stereo phone plug. Flexible cable prevents damage to equipment jacks. Permits use of headphones (with 1/4" stereo plug) with components with 3.5mm stereo output jacks.

Cat. No. 30-1576

Miniature (3.5mm) phone plug to std. 1/4" phone jack (2-conductor).

Cat. No. 30-496

Miniature (3.5mm) phone plug to 1/4" stereo phone jack (3conductor).

Cat. No. 30-1554

3.5mm stereo jack at one end; 3.5mm monaural plug at the other.

Cat. No. 30-1587



### Subminiature (2.5mm) Phone Plug One End

Subminiature (2.5mm) phone plug to miniature (3.5mm) phone jack.

Cat. No. 30-478

### **AUDIO COUPLERS**



#### Right Angle Adapter

Space limitations often require the use of a RCA male to RCA female right angle adapter. Gold plated connections for optimum performance in home or car installations.

Cat. No. 30-474



#### Stereo Coupler

3.5mm stereo jack to 3.5mm stereo jack. Used to extend 3.5mm stereo cables.

Cat. No. 30-1571



#### **Audio Coupler**

Phono pin jack to phono pin jack.

Cat. No. 30-470

Gold

Cat. No. 30-470-3

Pka. of 10

Cat. No. 30-470-BU



#### **Dual Coupler**

Used to extend dual RCA audio cables. Gold plated for optimum performance in home and car installations.

Cat. No. 30-477

2-conductor standard 1/4" phone jack to 2-conductor standard 1/4" phone jack.

Cat. No. 30-1570



#### **RCA Male Coupler**

Male to male RCA coupler to connect two RCA jacks. Gold plated for optimum performance in home and car installations.





#### **AUDIO "Y" ADAPTERS**



### Phono Pin Plug & Jack Combinations

Phono pin plug to two phono pin jacks.

Cat. No. 30-510

blo

Cat. No. 30-510-3

Pkg. of 10

Cat. No. 30-510-BU

Phono pin jack to two phono pin plugs.

Cat. No. 30-512

Gold

Cat. No. 30-512-3

Pkg. of 10

Cat. No. 30-512-BU

Phono pin plug to two phono pin plugs.

Cat. No. 30-514



#### 1/4" Phone Plug & Jack Combinations

Standard 2-conductor 1/4" phone plug to two standard 2-conductor 1/4" phone jacks.

Cat. No. 30-522

3-conductor 1/4" stereo phone plug to 2-conductor standard 1/4" phone jacks.

Cat. No. 30-524

3-conductor 1/4" stereo phone plug to two 3-conductor 1/4" stereo phone jacks.

Cat. No. 30-1560



### Miniature (3.5mm) Plug & Jack Combinations

Miniature (3.5mm) phone plug to two miniature (3.5mm) phone jacks.

Cat. No. 30-1558

3.5mm mini stereo phone plug to two 3.5mm mini stereo phone jacks.

Cat. No. 30-1559

3.5mm stereo phone plug to two phono pin jacks.

Cat. No. 30-1565



#### Metal "Y" Adapters

Std. 1/4" phone plug (2-conductor) to two phono pin jacks.

Cat. No. 30-500

Phono pin plug to two phono pin jacks.

Cat. No. 30-504

### **AUTO ACCESSORIES**



#### Universal Regulated Car Power Adapter

A high quality 300-500-1200mA regulated DC adapter with the ability to covert the power from your car cigarette lighter to any one of the four output voltages with different current, 3V at 300mA, 6V and 9V at 500mA, 12V at 1200mA. Can be used with most portable cassette players, radios, CD players, mini TVs and many other battery run appliances. This unit also has reverse polarity to allow usage with units which have either positive or negative center pin.

Cat. No. 30-3125



#### **DC Power Cord**

6 ft. Curley Power Cord with right angle 2.1mm power supply plug to cigarette lighter plug. Can be used to replace power cords on most radar detectors and other equipment such as CB's, radios, cellular phones and tape recorders.

Cat. No. 30-3155



#### Cigarette Lighter Plugs

For operating electrical plug-in accessories: trouble lights, transistorized inverters, portable spotlights, bottle warmers, CB's, 12 volt TVs, etc.

Cat. No. 30-3152

Fused Plug [includes 2 amp fuse]







#### Cigarette Lighter Socket Adapters

Allows use of several accessories in your car – scanner, radar detector, tape recorder, portable TV, etc. No power loss when in use.

Dual Adapter with 12" "Y" Connector Cord

Cat. No. 30-3151

Triple Adapter with 4 ft. Cord

Cat. No. 30-3153



#### **Battery Saving DC** Adapter

3, 6, 7.5 or 9 volts

Use your car or boat battery to power a tape recorder, dictating machine, portable radio or CB set. Plugs into cigarette lighter receptacle. Saves batteries – gives you full power, always. Transistor regulated circuit assures constant voltage. Max. current: 300mA. Comes with special adapter with three plugs to fit practically any set and has polarity reversing feature. Switches to 3, 6, 7.5 or 9 volts.

Cat. No. 30-3124



#### Auto Antenna "Y" **Connector**

Allows hook up of an additional AM, FM, AM/FM radio or CB to car radio antenna. Motorola type plug and jack.

2 Plugs to 1 Jack Cat. No. 30-3081

#### SPEAKERS AND ACCESSORIES



#### Pillow Speaker

Enjoy listening to TV or radio without disturbing others. 6 ft. cord with 3.5mm miniature phone plug fits most transistor radios, tape recorders and many TV's. Dynamic type. 8 ohm impedance.

Cat. No. 30-160



#### Stereo Speaker Wall Jack

Convenient, wall-mounted stereo speaker jacks that hook to amplifier to allow operation of stereo speakers in any room. Simply plug speakers in. Equipped with two RCA-type phono jacks.

Cat. No. 30-367



#### **Miniature Earphones**

Lightweight and comfortable. For transistor radios, tape recorders, TV's, etc. Finest dynamic type for crystal clear sound. Earclip is reversible to fit either ear.

Plug	Cord	Imp.	Cat. No.
Mini	3 ft.	Low	30-5300
Mini	3 ft.	High	30-5302
Sub-Mini	3 ft.	Low	30-5304
Mini	12 ft.	Low	30-5306



#### **Foot Switch**

SPST, normally open. Maximum rating: 250V-5A. Includes 4 ft. cable with sub-mini (2.5mm) plug. Skid-proof rubber base.

Cat. No. 30-041



#### **Audio System Selector**

The audio selector allows for the switching of up to 4 stereo audio input sources (CD Players, Tape Decks, Receivers, etc.) to 1 audio output. RCA type phono jack connections.





#### **VOLUME CONTROLS**



#### **Cabinet Mounting Type**

"L" pad circuit with power handling capacity of 10 watts peak audio. For use with 8 to 16 ohm speakers. Long threaded shafts permit installation in cabinets up to 1" thick. Single-hole mounting. Supplied with knob and black plastic face with silver lettering. Solder terminals.

Single "L" Pad Cat. No. 30-315 Stereo "LL" Pad Cat. No. 30-316



#### Wall Mounting Type

Same circuitry and electrical specifications as Cabinet Type shown above, but mounted on elegant brushed gold plate which fits standard electrical outlet box. Can also be mounted flush in any wall opening of 2-1/4" x 2-3/4". Screw terminals

Single "L" Pad Cat. No. 30-364 Stereo "LL" Pad Cat. No. 30-372

#### TAPE CLEANING ACCESSORIES



#### Tape Head Cleaner

Head Cleaner removes dirt and grease from heads, guides and capstans. Cotton swab applicators included.

2 fl. oz. [59 ml.] **Cat. No. 19-5302** *N.S.N. 5835-00-885-3818* 



#### Cassette Head Cleaner Kit

The professional way to "solvent clean" heads in cassette recorders. Will safely remove all deposits on heads, guides, etc., and restore original sound quality. Exclusive process uses special cloth belt. Just apply a few drops of liquid to belt in cassette, play, and your recorder will sound like new.

Cat. No. 30-622



#### **Lintless Head Cleaning Swabs**

Lintless swabs are ideal for cleaning delicate audio or video tape head mechanisms.

Nonabrasive, absorbent tips are polyurethane foam over cotton on a 6" wooden handle.

Swabs are re-usable. Pkg. of 20.

Cat. No. 10-277



#### Electronic Cassette Demagnetizer

Effectively reduces magnetic buildup and upgrades tape performance on all cassette decks. Requires only 1 second for complete demagnetization. LED indicates unit is operating. Includes battery and protective case.

Cat. No. 30-633



#### Clean Sticks

Cotton-tipped swabs for lubricating and cleaning recorder heads and other electronic or mechanical equipment. Excellent for getting at hard-to-reach places. Pkg. of 50 6" swabs.

Swabs, 50 pcs. Cat. No. 10-270





### **MICROPHONES & CORDS**



#### **Cassette Power Cord**

SPT-1, 18 gauge, 2 conductor cord. Nonpolarized. 6 ft. Replacement for Sony Model 1-534-830, Panasonic Model SJA 50, Craig, Hitachi, Crown and others.

Cat. No. 30-467



## **Shielded Low-Noise Replacement Cable for Microphones**

Heavy duty 2-conductor 16 ft. rubber cable features a Switchcraft type A3F 3-pin female connector with spring locking latch at one end to a shielded 1/4" phone plug at the other.

Cat. No. 30-1697



#### 20 Ft. Replacement Microphone Cables

Heavy duty 2-conductor shielded cable with Switchcraft 3-pin female connector on one end and a Cannon type 3-pin male at the other. Lock switch pushbutton connects and releases cable. For balanced line microphones.

Cat. No. 30-1695



## Low Impedance Tape Recorder Microphone

For the recording enthusiast who wishes to improve the quality of a low or medium priced tape recorder. Low impedance matches most late model (solid state) portable recorders. Onloff switch. Removable desk stand furnished. 200 ohm impedance. 4 ft. cable with 2.5mm plug and 3.5mm plug.

Cat. No. 30-2300



#### **Matched Pair Stereo Microphones**

Rugged, high impact plastic stereo microphones for all voice and stereo recording applications. Sensitive omni-directional response pattern minimizes feedback. Each mike features on/off remote control switch, windscreen and desk stand. 500 ohm impedance. 4.3 ft. cable with 1/4" plug. 3.5mm plug to 1/4" jack 0 included.

Pair of Microphones **Cat. No. 30-2308** Single Microphone **Cat. No. 30-2307** 



Finding the right connector can be the most frustrating experience that an Electronics professional can have. GC simplifies your search. In this section, you'll find a greatly expanded range of connectors, covering the most common applications known. However, if you have more stringent specs, take advantage of GC's 70 years of industry contacts and let us find you the product you need.

GC's Video products make it easy to meet the growing needs of the video market. This section offers you some of the most difficult to find products that are required for "on air" reception, cable, and satellite systems. The advent of DSS has given rebirth to the need for antennas and antenna hardware, for local reception. In addition, digital broadcasting and HDTV make antenna systems more critical than ever before. This section gives you access to hundreds of products that enable you to adapt your video needs to the delivery system that is best for you.

GC's offering of Video products enables you to obtain all of the tools and accessories needed in today's low voltage world from a single source. Combine your Video needs with the offerings found in the other accessory sections of this catalog, including Datacom, Voice, and Audio installations.







#### COMMERCIAL COAX CONNECTORS



#### "F" Coaxial Connectors

 Cable Type
 Cat. No.

 RG-6 Tri-Shield
 32-416-BU

 RG-59 Tri-Shield
 32-425-BU

 RG-6 Brass
 32-432

 RG-59 & 62 Brass
 32-433

Male crimp-on with attached 1/2" crimp ring.

RG-59 & 62 Brass	32-433
RG-6	32-439
RG-59 & 62	32-440
RG-6 Quad Shield	32-2990-BU
RG-59 Quad Shield	32-2991-BU



Male crimpless twist-on.

Cat. No.
32-3002
32-3003
32-3702



Male crimp-on with 1/8" attached crimp.

Cable Type	Cat. No.
RG-59 & 62	32-3000
RG-59 & 62 Gold	32-3701



Male crimp-on with 1/2" separate crimp ring.

Cable Type	Cat. No.
RG-59 & 62	32-428-BU



Male crimp-on with 1/4" separate crimp ring.

Cable Type	Cat. No.
RG-6	32-429
RG-59 & 62	32-430



Male crimp-on with 1/8" separate crimp ring.

Cable Type	Cat. No.
RG-59 & 62	32-427-BU



Male crimp-on with 1/4" attached crimp ring.

Cable Type

Cat. No.

Cable Type	Cat. No.
RG-6	32-412-BU



Male twist-on/push-on, crimpless.

Cable Type	Cat. No.
RG-59 & 62	32-3202



## Gel-filled Blue RG-6 Connector with Sealer Ring

A universal connector fits RG-6 quad, trishield and standard RG-6 Coax. Sealer ring prevents moisture from damaging connection integrity. 1 1/4" ring.

Cat. No. SD-443-BU



Cat. No. SD-444-BU



#### Gel-filled with Permanent "O" Ring Seal RG-6

Weatherproof "F" Connector RG-6. Requires coax hex crimp tool for attachment.

Cat. No. SD-445



### Commercial Weatherproof "F" Connector RG-6

Compression crimp protects center conductor from crimp damage. Includes locking nut to weatherproof head-end of connector.

RG-6

Cat. No. SD-446-BU
Locking Nut only
Cat. No. SD-446-1-BU



#### **Twist On Connector RG-6**

Easily attaches by hand. No crimp tool needed.

Pkg. of 1 RG-6

Cat. No. SD-447-BU



#### **Ouick-lock Connector RG-6**

RG-6 (Indoor). Secures positive, tug-resistant connection.

Cat. No. SD-448-BU



#### "F" Chassis Mounts

Chassis mount with nut and washer.

Cat. No. 32-466-BU



PC board chassis mount.

Cat. No. 32-465



Right angle PC mount 28mm.

Cat. No. 32-467-BU







"F" Adapters

Female to female, knurled. Cat. No. 32-3999-BU



"F" Female to RCA Female Cat. No. 33-1566



"F" Female to female with nut and washer.

Cat. No. 32-3006

Gold Cat. No. 32-3706



"F" Male to RCA Female.

Cat. No. 32-3108



"F" Double male coupler, knurled.

Cat. No. 32-3007



"F" Female to 3.5 mm male.

Cat. No. 32-3103



"F" Adapters

"F" Female to push-on "F" Male.

Cat. No. 32-3100 Gold

Cat. No. 32-3700



"F" Female to BNC Male

Cat. No. 32-3104



"F" Female to Pal Female

Cat. No. 32-4001-BU



"F" Male to BNC Female.

Cat. No. 32-3120



"F" Female to Pal Male

Cat. No. 32-3174



"F" Male to PAI Female

Cat. No. 32-4000-BU



Blocks harmful DC voltage from cable company transmissions that could damage TV's, VCR's, etc. (Voltage Blocking Coupler)

Cat. No. 32-3180



Right angle connector "F" Male to "F" Female.

Cat. No. 32-3110



"F" Female to UHF (PL-259) Male.

Cat. No. 32-3101-BU



Right Angle F Quick Male to Female

Cat. No. 32-3105



"F" Male to UHF Female

Cat. No. 32-3114



"F" Terminator, 75 ohm 1/2 Watt @ 5%.

Cat. No. 32-436



"F" Female to RCA Male







#### **BNC Coaxial Connectors**

Male twist-on, one piece construction, crimpless and solderless.

Cable Type	Cat. No.
RG-59 & 62	33-1100
RG-6	33-1148
RG-58	33-1149
RG-59 & 62 Teflon	33-1150



Female crimp type, two piece construction,

Cable Type	Cat. No.
RG-59 & 62	33-1120-BU
RG-58	33-1121-BU
RG-6	33-1122-BU



Female twist-on, one piece construction, crimpless and solderless.

Cable Type	Cat. No.
RG-59 & 62	33-1101-BU



Female twist-on, one piece construction, crimpless and solderless.

Cable Type	Cat. No.
RG-58	33-1130-BU
RG-6	33-1131-BU



Male compression, four pieces, solder center pin.

Cable Type	Cat. No.
RG-58	33-1180-BU
RG-59 & 62	33-1181-BU



#### **BNC Terminators.**

Rating	Cat. No.
BNC 50 Ohm	33-1176-BU
BNC 75 Ohm	33-1175-BU
BNC 93 Ohm	33-1177-BU



Male crimp type, two piece construction, solderless.

Cable Type	Cat. No.
RG-59 & 62	33-1103
RG-58	33-1104
RG-6	33-1169-BU
RG-59 & 62 Teflon	33-1153-BU
RG-58 AU	33-1167-BU



#### **BNC Adapters**

BNC Double Male.

Cat. No. 33-1195





BNC "T" one male, two female.

Cat. No. 33-1196



Male crimp type, three piece construction, solderless.

Cable Type	Cat. No.
RG-59 & 62	33-1160
RG-58	33-1161
RG-6	33-1162
RG-59 & 62 Teflon	33-1163
RG-174, 179 & 187	33-1165-BU
RG-58 AU	33-1168-BU



BNC three male.

Cat. No. 32-3123



BNC double female.

Cat. No. 32-3119



Male compression, six pieces, solder center pin.

Cable Type	Cat. No.
RG-58	33-1155
RG-59 & 62	33-1173



BNC "T" three female.

Cat. No. 33-1197



Male Clamp-On

Cable Type	Cat. No.
RG-59 & 62	32-3005-BU



BNC four female.

Cat. No. 33-1199-BU







BNC male to RCA female.

Cat. No. 32-3109



Right angle male to female

Cat. No. 33-1102



BNC female to RCA male.

Cat. No. 32-3121



**BNC Chassis Mounts** 

BNC dual female chassis mount, mounting hole 1/2"

Cat. No. 33-1106-BU



BNC female to UHF female.

Cat. No. 32-3122-BU



BNC female chassis mount, insulated, mounting hole 3/8"

Cat. No. 33-1232-BU



BNC female to UHF male.

Cat. No. 32-3118-BU



BNC female chassis mount, mounting

hole 3/8"

Cat. No. 33-1231-BU



BNC male to UHF female.

Cat. No. 32-3115



#### "N" Connectors

Male compression, six piece construction.

Cable Type	Cat. No.
RG-8, 213 & 214	33-1500-BU



BNC male to "N" male.

Cat. No. 32-3116-BU



Male crimp type, two piece construction.

Cable Type	Cat. No.
RG-59 & 62	32-3112-BU
RG-58	32-3128-BU



BNC male to "N" female.

Cat. No. 32-3117



Male clamp type.

Cable Type	Cat. No.
RG-59 & 62	32-3125-BU
RG-58	32-3124-BU



BNC female to "N" male.

Cat. No. 33-1555



"N" Chassis Mount

"N" female chassis mount.

Cat. No. 33-1525-BU



BNC male to TNC female.

Cat. No. 32-3190



#### "N" Adapters

"N" double male.





"N" double female.

Cat. No. 33-1520



Male twist-on, teflon insulator solder center pin.

Cable Type	Cat. No.
RG-8, 11, 213, 214	33-550-BU



"N" male to "F" female

Cat. No. 33-1565



Male crimp-on, reducer.

Cable Type	Cat. No.
RG-58	33-505-BU
RG-59 & 62	33-507-BU



"N" male to double "N" female

Cat. No. 33-1536



**UHF Chassis Mount** 

UHF female to UHF female, panel mount.

Cat. No. 33-502-BU



Right Angle "N" double male

Cat. No. 33-1534



**UHF Adapters** 

UHF double female.

Cat. No. 33-509



Right Angle "N" male to female

Cat. No. 33-1535



UHF double male.

Cat. No. 33-510



"N" Terminators

"N" male terminator, 50 Ohm

Cat. No. 33-1537



UHF three female.

Cat. No. 33-501



"N" female terminator, 50 Ohm

Cat. No. 33-1538



Right Angle UHF male to female.

Cat. No. 32-3161



**UHF Connectors** 

Male crimp-on.

Cable Type	Cat. No.
RG-58	33-540
RG-59 & 62	33-541



UHF male to double UHF female.

Cat. No. 33-500



UHF male to "N" female.

Cat. No. 32-3126-BU

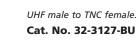






UHF male to RCA female.

Cat. No. 32-3107





Mini UHF male to TNC female.

Cat. No. 33-863-BU



Cat. No. 32-3127-BU



Mini UHF female to TNC male.

Cat. No. 33-842-BU



#### **Mini UHF Connectors**

Male twist-on, solderless.

Cable Type	Cat. No.
RG-58	33-850



Mini UHF male to UHF female.

Cat. No. 33-840-BU



Male crimp-on, three piece construction.

Cable Type	Cat. No.
RG-58	33-860-BU



Mini UHF female to UHF male.

Cat. No. 33-843-BU



#### **Mini UHF Adapters**

Mini UHF double female.

Cat. No. 33-861



#### **TNC Connectors**

Male crimp-on, three piece construction.

Cable Type	Cat. No.
RG-58	33-1261
RG-59 & 62	33-1260
RG-174	33-1265



Mini UHF three female.

Cat. No. 33-847



Male twist-on.

Cable Type	Cat. No.
RG-59 & 62	33-1200
RG-58/U	33-1249



Mini UHF male to double female.

Cat. No. 33-846



Female twist-on.

Cable Type	Cat. No.
RG-58	33-1248
RG-59 & 62	33-1201



Right Angle Mini UHF male to female.

Cat. No. 33-844



Push-on crimp.

Cable Type	Cat. No.
RG-58	33-1210-BU



Mini UHF male to BNC female.

Cat. No. 33-862-BU



**TNC Adapters** 

TNC double female.

Cat. No. 33-1207



Mini UHF female to BNC male.

Cat. No. 33-841-BU



TNC male to BNC female.

Cat. No. 33-1208-BU







TNC male to UHF female.

Cat. No. 33-1209



**SMA Connectors** 

Male crimp type Cat. No. 33-1311-BU



#### **TNC Terminators**

TNC male terminator, 50 ohm Cat. No. 33-1212-BU TNC male terminator, 75 ohm

Cat. No. 33-1213-BU



#### **SMA Adapters**

SMA double female.

Cat. No. 33-1312



SMA male to BNC female.

Cat. No. 33-1313-BU



#### **Twin-Ax Connectors**

Twin-ax male compression.

Cat. No. 33-1300-BU

Gold Pins

Cat. No. 33-1302-BU



SMA female to BNC female.

Cat. No. 33-1315-BU



#### **Twin-Ax Adapters**

Twin-ax double female.

Cat. No. 33-1304



SMA male to UHF male.

Cat. No. 33-1314



Twin-ax three female.

Cat. No. 33-1305



SMA female to UHF male.

Cat. No. 33-1320



Right Angle Twinax male to female.

Cat. No. 33-1306



SMA female to Mini UHF male.

Cat. No. 33-1316



#### Twin-Ax Terminators

Twin-ax male terminator, 50 ohm

Cat. No. 33-1309-BU

Twin-ax male terminator, 75 ohm

Cat. No. 33-1310-BU



SMA female to Mini UHF female.

Cat. No. 33-1317



**RCA Adapters** 

RCA male to UHF female.

Cat. No. 32-3113-BU



SMA female to N male.

Cat. No. 33-1318-BU



RCA female to 3.5 mm male

Cat. No. 30-495



SMA female to TNC female.

Cat. No. 33-1319



Antenna Plug

Standard "Motorola" type shielded pin plug. For auto, radio, test and CB equipment.

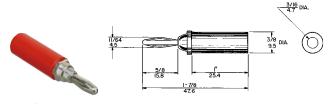
Cat. No. 26-804-BU





#### **PLUGS & JACKS**

#### Banana Plugs



#### Specifications:

Rating: 15 amps AC for 10°C temperature rise continuous duty

Handle: Molded nylon, per MIL-P-20693A

Body: Hex brassConnection: Internal brass stud for solder or solderless type

Tip: Four leaved, phosphor bronze, nickel plated spring

Red

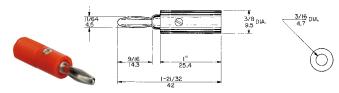
Cat. No. 33-000-BU

N.S.N. 5935-00-079-3892

Black

Cat. No. 33-002-BU

N.S.N. 5935-00-949-0104



#### Specifications:

Rating: 15 amps AC for 10°C temperature rise, continuous duty

Handle: Molded nylon, per MIL-P-20693A

**Body:** Brass Connection: Screw

Tip: Four leaved, phosphor bronze, nickel plated spring

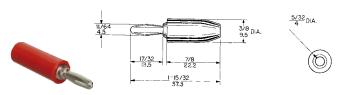
Cat. No. 33-006-BU

N.S.N. 5935-00-583-2715

Black

Cat. No. 33-008-BU Slide Screw Connection

Cat. No. 30-1004



#### Specifications:

Rating: 15 amps AC for 10°C temperature rise, continuous duty

Handle: Molded nylon, per MIL-P-20693A

Body: Hex brass

Connection: Internal stud for solder or solderless type. Tip: Four leaved, phosphor bronze, nickel plated spring

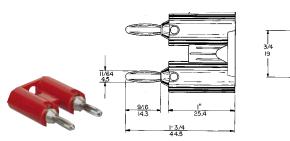
Red

Cat. No. 33-032-BU

N.S.N. 5935-00-925-0341

Black

Cat. No. 33-033-BU



#### Specifications:

Rating: 15 amps AC for 10°C temperature rise, continuous duty. 5k volts 60 cycle AC continuous working voltage. Capacitance 1.0 pf between conductors.

Handle: Black polystyrene plastic

**Body:** Nickel plated brass

Connection: Screw

Tip: Four leaved, phosphor bronze, nickel plated spring

**Description:** Mates with standard dual binding posts with 3/4" centers and can be stacked for multiple connections. Polarity is indicated by rib.

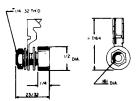
Black Cat. No. 33-010-BU

Cat. No. 33-011-BU

N.S.N. 5935-00-079-7348

#### Heavy-Duty Banana Jack





#### Specifications:

Rating: 15 amps AC for 10°C temperature rise, continuous duty. 750 volts 60-cycle AC continuous working voltage. Capacitance 4.0 mmfd.

Head: Molded plastic per MIL-P-14 CFG

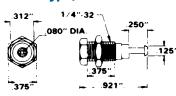
Description: Nickel-plated brass body; supplied with extruded fibre washer (to insulate from metal panels), lock washer, heavy-duty solder lug and mounting nut. Metal jack is recessed in insulated head to provide shockproof design. Exclusive hex design prevents turning in assembly.

Cat. No. 33-186-BU

Cat. No. 33-188-BU

#### Nylon Tip Jack (Wrap Around Type)





Specifications:

Salt Spray Test: 100 hours

Insulation Resistance: 5000 megohms

Rated Voltage & Current: 1000 volts peak at 5 amp max.

Nominal Capacity: 55° to 150° C

Test Voltage: 2.0 pfBody: 9000 volts DC peak

Contact: Nylon, per MIL-P-20693A

Description: Silver plated beryllium copper. Supplied with hex nut. Contacts recessed in head. Fits all standard phone tip plugs. Mounts in

1/4" hole in panels up to 1/4" thick.

Black Cat. No. 33-240-BU Cat. No. 33-242-BU





#### Miniature Alligator Clip





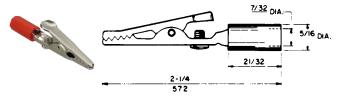
Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty Body: Nickel plated steel. 1/2" (12.700mm) jaw opening

Connection: Solder type Cat. No. 33-077-BU

N.S.N. 5999-00-060-8996

#### **Alligator Clip**



Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty

Handle: Vinyl sleeve

Body: Nickel plated steel. 5/16" (7.938mm) jaw opening

Connection: Screw or solder type

Red

Cat. No. 33-075-BU

N.S.N. 5999-00-880-5534

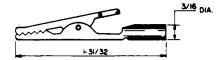
Black

Cat. No. 33-076-BU

N.S.N. 5999-00-235-0214

#### **Alligator Clip**



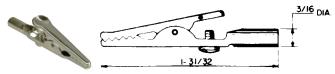


Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty Body: Nickel plated steel, 3/8" (9.525mm) jaw opening Connection: Accepts banana plug or wire may be soldered to clip.

Cat. No. 33-078-BU

#### **Alligator Clip**



Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty Body: Nickel plated steel or solid copper, 3/8" (9.525mm) jaw opening Connection: Screw type. Also accepts banana plug.

Steel

Cat. No. 33-079-BU

Copper

Cat. No. 33-080-BU

#### **Alligator Clip Insulator**



Flexible, molded vinyl insulator. Fits all standard size alligator clips. Insulates completely while permitting maximum jaw opening.

Red

Cat. No. 33-081-BU

Black

Cat. No. 33-082-BU

#### **BINDING POSTS**

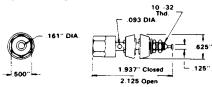
#### **BNC Male Dual Binding Post**



UPPER: BNC Male, gold plated center contact. Nickel plated brass body.
LOWER: .750" Spaced dual binding post.
164" Diameter holes in body for side stackable connection.

Cat. No. 33-1192

#### **Heavy Duty Binding Post**



#### Specifications:

Rating: 30 amps AC for 10°C temperature rise, continuous duty. 2 k volts 60-cycle AC continuous working voltage. Capacitance 5.0 pf.

Head and Washer: Molded nylon, per MIL-P-20693A

**Body:** Nickel plated brass

**Description:** Supplied with molded plastic insulating spacer with "D" shaped shoulder that keys into chassis mounting hole to prevent post from turning. Mounts in 1/2" hole in panels up to 1/4" thick. Accepts banana or tip plug, spade lug, alligator clip or bare wire.

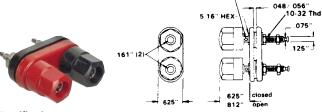
Red

Black

Cat. No. 33-278-BU

Cat. No. 33-280-BU

#### **Dual Binding Posts**



#### Specifications:

Rating: 15 amps AC for 10°C temperature rise, continuous duty. 2 k volts 60-cycle AC continuous working voltage. Capacitance 2.0 pf between conductors, 3.0 pf to panel

Head: Molded nylon, per MIL-P-20693A

**Body:** Nickel plated brass

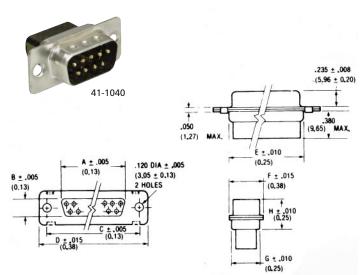
**Description:** Supplied with molded styrene washer. Mounts in two 1/2" holes on 3/4" centers in panels up to 1/4" thick. Accepts single or dual banana plugs.

Cat. No. 33-292-BU





#### **CONNECTORS**



#### **D-Subminiature Crimp Removable Connectors**

#### Features:

- Availiable in all standard contact configurations including 9, 15, 25, 37 and 50.
- Designed to comply with most industry standards such as EIA RS-232C, EIA RS-449, IEEE Project 802.
- Listed separately in this section are solder cup type D-subminiature and back shells (hood kits) with hardware.
- Rear release snap-in contact design provides (max.) field service economy.

#### Specifications:

Contact Rating: 7.5 amperes (max.)

Contact Resistance: 5m (max.) intial 10m (max.) after environmental testing

Dielectric Withstand Voltage: 1000V AC RMS (min.) at sea level

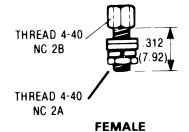
Insulation Resistance: 5000 Meg (min.)
Operating Temperature: -55°C to +105°C

Wire Sizes: #20 to #24 AWG

Male Cat. No.	No. Of Pins	Contact Postions	A	В	c	D	E	F	G	н
41-1040-BU	9	9	.666 (16.92)	.329 (8.36)	.984 (24.99)	1.218 (30.94)	.758 (19.25)	.500 (12.70)	.422 (10.72)	.422 (10.72)
41-1041-BU	15	15	.994 (25.25)	.329 (8.36)	1.312 (33.32)	1.546 (39.27)	1.082 (27.48)	.500 (12.70)	.422 (10.72)	.422 (10.72)
41.1042-BU	20	25	1.534 (38.96)	.329 (8.36)	1.852 (47.04)	2.088 (53.04)	1.624 (41.25)	.500 (12.70)	.422 (10.72)	.426 (10.82)
41.1044-BU	40	50	2.0888 (53.03)	.441 (11.20)	2.406 (61.11)	2.640 (67.06)	2.117 (55.30)	.612 (15.54)	.534 (13.56)	.426 (10.82)
41-1045-100	25	100	Male Contact Pins							

Female Cat. No.	No. Of Pins	Contact Postions	A	В	c	D	E	F	G	н
41-1050-BU	9	9	.643 (16.33)	.311 (7.90)	.984 (24.99)	1.218 (30.94)	.758 (19.25)	.500 (12.70)	.422 (10.72)	.429 (10.90)
41-1051-BU	15	15	.971 (24.66)	.311 (7.90)	1.312 (33.32)	1.546 (39.27)	1.082 (27.48)	.500 (12.70)	.422 (10.72)	.429 (10.90)
41-1052-BU	20	25	1.511 (38.38)	.311 (7.90)	1.852 (47.04)	2.088 (53.04)	1.624 (41.25)	.500 (12.70)	.422 (10.72)	.429 (10.90)
41-1053-BU	30	37	2.159 (54.84)	.311 (7.90)	2.500 (63.50)	2.734 (69.44)	2.271 (57.68)	.500 (12.70)	.422 (10.72)	.429 (10.90)
41-1054-BU	40	50	2.064 (52.43)	.4223 (10.74)	2.406 (61.11)	2.640 (67.06)	2.177 (55.30)	.612 (15.54)	.534 (13.56)	.429 (10.90)
41-1055-100	25	100 Fei	nale Contact	Pins						In. (mm)





#### **Screw Lock Assemblies**

Note: Each kit contains hardware for one connector.

**Specifications: Material:** Steel

Finish: Cadmium plate, yellow chromate

Corrosion Resistance: Passes 50-hour exposure to salt spray in a accordance with MIL-STD-202A, Method 101A, Condition B

Female

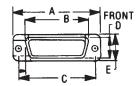
Cat. No. 41-1032-BU

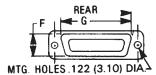
Hex Nuts

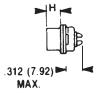
Cat. No. 41-1033-100











#### **D-Subminiature Connectors**

Designed primarily for applications where space and weight are of major importance. All connectors are gold-plated and accommodate a large number of circuits in proportion to their size. They are adaptable for use in cabling applications by the addition of accessories and integral clamps. Connectors are mateable with MIL-C-24308 connectors. These numbers have product packaged 1 to a card. Solder cup types, back shells (hoods) are availiable separately.

Specifications:

Contact Rating: 5 amperes Wire Sizes: #20 AWG (max.) Contact Resistance: 10 m $\Omega$  (max.) Temperture Range: -55°C to +105°C Insulation Resistance: 5000 Meg $\Omega$  (min.)

Dielectric Withstanding Voltage: 1250V AC at sea level Insulator Material: Two-piece Nylon UL, Rated 94V-0

Shell Material and Finish: Zinc Plated

Contact Pin Material: Brass

Contact Socket Material: Phosphor Bronze

Contact Pin and Scoket Finish: Gold over Nickel Plate

Dimension: In. (mm)

#### Solder Cup Type

**Standard Configuration** 



DB15





DB37

Α	В	c	D	E	F	G	н	Cat. No.
1.213	.697	.984	.359	.496	.422	.759	.370	(Pin)
(30.8)	(17.7)	(25)	(9.14)	(12.6)	(10.72)	(19.3)	(6)	41-1111-BU
1.231	.640	.984	.308	.496	.422	.759	.370	(Socket)
(30.8)	(16.26)	(25)	(7.82)	(12.6)	(10.72)	(19.3)	(6.2)	41-2111-BU
1.539	1.025	1.311	.359	.496	.422	1.083	.236	(Pin)
(39.1)	(26.04)	(33.3)	(9.14)	(12.6)	(10.72)	(27.5)	(6)	41-1211-BU
1.539	.969	1.311	.308	.496	.422	1.083	.244	(Socket)
(39.1)	(24.6)	(33.3)	(7.82)	(12.6)	(10.72)	(27.5)	(6.2)	41-2211-BU
2.087	1.583	1.850	.378	.496	.422	1.626	.236	(Pin)
(53)	(40.21)	(47)	(9.6)	(12.6)	(10.72)	(41.3)	(6)	41-1311-BU
2.087 (53)	1.508	1.850	.308	.496	.422	1.626	.244	(Socket)
	(38.3	(47)	(7.82)	(12.6)	(10.72)	(41.3)	(6.2)	41-2311-BU
2.728	2.156	2.500	.308	.496	.422	2.272	.244	(Socket)
(69.3)	(54.76)	(63.5)	(7.82)	(12.6)	(10.72)	(57.7)	(6.2)	41-2411-BU

#### **Hi-Density**

**Hi-Density Configuration** 



11013



•••••••••••••••••••••••••••••••••••••••	
HD62	

A	В	c	D	E	F	G	Н	Cat. No.
1.213	.697	.984	.359	.496	.422	1.083	.236	(Pin)
(30.8)	(17.7)	(25)	(9.14)	(12.6)	(10.72)	(27.5)	(6)	41-2115-BU
1.213	.640	.984	.308	.496	.422	.759	.244	(Socket)
(30.8)	(16.26)	(25)	7.82)	(12.6)	(10.72)	(19.3)	(6.2)	41-2116-BU
1.539	1.025	1.311	.359	.496	.422	1.083	.236	(Pin)
(39.1)	(26.04)	(33.3)	(9.14)	(12.6)	(10.72)	(27.5)	(6)	41-2124-BU
2.728	2.231	2.500	.378	.496	.422	2.272	.370	(Pin)
(69.3)	(56.67)	(63.5)	(9.6)	(12.6)	(10.72)	(57.7)	(2.4)	41-2142-BU







#### DB and Centronics Shielded "Double Shells" (Adapter Hood Kits)

Snap together kits allow assembly of adapters for mating equipment with unconventionally wired connectors. These double-shells are provided with hardware but not with connectors. User may use either male or female connectors. (All connectors are available in both genders elsewhere in this section).

Double-shells are made of molded plastic with a chrome plating inside and out for shielding. Standardization of connectors permits use with nearly any make of connector. Ideal for making both adapters or assembling surge arrestors using MOV's.

DB25 Each End

Cat. No. 41-2925-BU

DB25 to Centronics 36 Pin

Cat. No. 41-2932-BU

DB9 to DB25

Cat. No. 41-2927-BU

DB9 to DB9

Cat. No. 41-2909-BU











#### Subminiature "D" Hood Kits

Hood Kits fit both solder-type and loose-pin style Subminiature "D" Connectors. Several types are available as follows; all include assembly hardware.

- Plain plastic hoods, most economical type.
- ABS Plastic Multifit™ hoods Extremely tough case material, includes strain relief and mounting hardware.
- Metallized Multifit™ hoods Chrome plated for excellent shielding characteristics; ABS plastic is very durable. Includes five sizes of strain relief grommets for use with all common cable sizes. Exceeds FCC requirements.
- Metal hoods Die cast zinc hoods for use where (max.) durability plus shielding are required.

Plain Plastic

9 Pin

Cat. No. 41-1000-BU

15 Pin

Cat. No. 41-1001-BU

25 Pin

Cat. No. 41-1002-BU

ABS Plastic Multifit™

25 Pin

Cat. No. 41-2704-BU

Metallized (shielded) ABS Plastic Multifit™

9 Pin

Cat. No. 41-2720-BU

25 Pin

Cat. No. 41-2724-BU

37 Pin

Cat. No. 41-2726-BU

**Die-Cast Metal Hoods** 

9 Pin

Cat. No. 41-2730-BU

15 Pin

Cat. No. 41-2732-BU

25 Pin

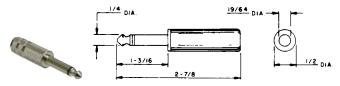
Cat. No. 41-2734-BU





#### PHONE PLUGS AND JACKS

#### 1/4" Two-Conductor Phone Plug



#### Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty. 750 volts,

60-cycle AC continuous working voltage Handle: Molded plastic or nickel plated brass

Connection: Screw type

Overall Length: 2-3/4" (69.9 mm)

Black

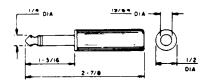
Cat. No. 33-085-BU

Metal

Cat. No. 33-086-BU

#### 1/4" Two-Conductor Phone Plug





#### Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty

Handle: Molded plastic

Connection: Solder type. Has "grounding" terminal which clamps around cable insulation or shield; acts as strain relief

Black—Import

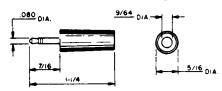
Cat. No. 33-087-BU

Metal-brass-handle—Import

Cat. No. 33-088-BU

#### **Sub-Miniature Two-Conductor Phone Plug**





#### Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty. 750 volts

60 cycle AC continuous working voltage. Handle: Molded plastic or nickel plated brass

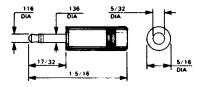
Connection: Solder lug type.

Black

Cat. No. 33-091-BU

#### 3.5 mm Miniature Two-Conductor Phone Plug





#### Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty. Tested for

500 V/mil. break down Handle: Molded Plastic

Connection: Combination clamp and solder terminalsMetal-brass handle

Cat. No. 33-092-BU

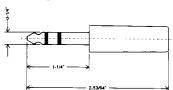
Black

Cat. No. 33-093-BU

N.S.N. 5935-00-609-3014

#### **Three-Conductor Phone Plug**





#### Specifications:

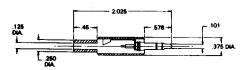
Rating: 5 amps AC for 10°C temperature rise, continuous duty

Handle: Molded plastic or nickel plated brass Connection: Combination clamp and solder lug type

Length 2-53/64" Black Cat. No. 33-089-BU Length 2-1/2" Metal Cat. No. 33-090-BU

#### 3.5 mm Miniature Three- Conductor Phone Plug





#### Specifications:

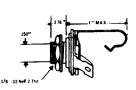
Rating: 5 amps AC for 10°C temperature rise, continuous duty

Handle: Molded plastic Connection: Solder lug type Cat. No. 33-665-BU

#### **Panel Mounting Two-Conductor Phone Jack**







Specifications:

Rating: 10 amps AC for 10°C temperature rise, continuous duty. 1.2 k V

60-cycle AC continuous working voltage

Type: Open circuit, 2 conductor

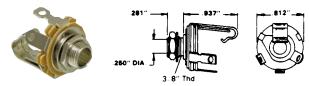
Cat. No. 33-096-BU

N.S.N. 5935-01-028-1721





#### 1/4" Panel Mounting Two- Conductor Phone Jack



Specifications:

Rating: 10 amps AC for 10°C temperature rise, continuous duty

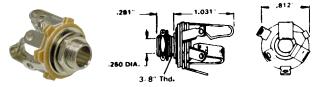
Type: Closed circuit, 2-conductor panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass, mounts in 3/8" hole

Cat. No. 33-097-BU

#### 1/4" Panel Mounting Three-Conductor Phone Jack



Specifications:

Rating: 10 amps AC for 10°C temperature rise, continuous duty

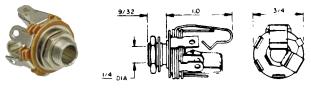
Type: Open circuit, 3 conductor, panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass, mounts in 3/8" hole

Cat. No. 33-098-BU

#### 1/4" Panel Mounting Three-Conductor Phone Jack



Specifications:

Rating: 10 amps AC for 10°C temperature rise, continuous duty

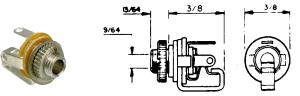
Type: Single closed circuit, 3-conductor

Spring: Nickel silver

Mounting Bushing: Nickel plated brass

Cat. No. 33-099-BU

#### 2.5 mm Sub-Miniature Two-Conductor Phone Jack



Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty. 750 volts

60 cycle AC continuous working voltage

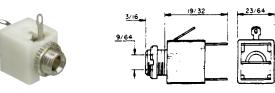
Type: Closed circuit, panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass, mounts in 1/4" (6.350 mm) hole.

Cat. No. 33-103-BU

#### 3.5 mm Miniature Two-Conductor Phone Jack



Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty. 1.2 k volts

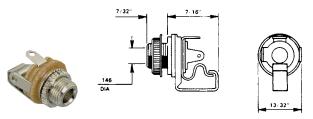
60 cycle AC continuous working voltage **Type:** Closed circuit, molded panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass, mounts in 1/4" (6.350 mm) hole.

Cat. No. 33-101-BU

#### 3.5 mm Miniature Two-Conductor Phone Jack



Specifications

Rating: 5 amps AC for 10°C temperature rise, continuous duty, 500 volts

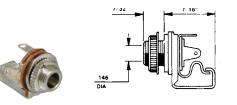
60 cycle AC continuous working voltage **Type:** Open circuit, panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass, mounts in 1/4" (6.350 mm) hole.

Cat. No. 33-102-BU

#### 3.5 mm Miniature Panel Mount Jack





Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty

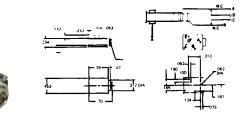
Type: Closed circuit, 2-conductor, panel mounting

Spring: Nickel silver

Mounting Bushing: Nickel plated brass. 33-104-BU mounts in 5/16" (7.938 mm) hole.

Cat. No. 33-104-BU

#### 3.5 mm Miniature Three- Conductor Phone Jack



Specifications:

Rating: 5 amps AC for 10°C temperature rise, continuous duty

Type: Normally closed circuit

Spring: Nickel silver

**Mounting Bushing:** Nickel plated brass with knurled nut, mounts in 1/4" hole or may be AC mounted.

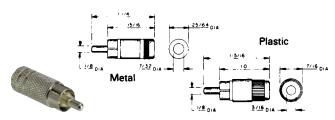
Cat. No. 33-724-BU





#### PHONO PIN PLUGS AND JACKS

#### **Phono Pin Plug**



Specifications:

**Pin:** RCA type. Nickel plated brass **Shell:** Cadmium plated brass

**Handle:** Molded plastic or nickel plated brass **Terminals:** Combination clamp and solder type

**Description:** Easier to attach than standard phono pin plug. Provides

"finished" appearance

Metal

Cat. No. 33-133-BU

Black Plastic

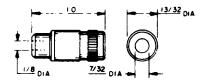
Cat. No. 33-131-BU

Red Plastic

Cat. No. 33-132-BU

#### **Phono Pin Jack**





Specifications:

**Type:** RCA type. Cord mounting **Contacts:** Cadmium plated brass

Handle: Molded plastic or nickel plated brass
Terminals: Combination clamp and solder type
Description: Also known as "extension" or "in-line" jack

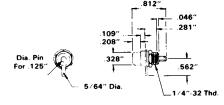
Meta

Cat. No. 33-134-BU

N.S.N. 5935-00-023-5360

#### Single Hole Panel Phono Jack





Specifications:

Body: Nickel plated brass Contacts: Brass alloy Insulator: Phenolic Washer: Phenolic

Max. Panel Thickness: 5/32"

Description: Mounts in 9/32" hole

Cat. No. 33-135-BU

#### 2 Position Pushbutton Terminal Board



This terminal board mounts on most speaker cabinets, for easy wire connection. Red and black posts. Mounts in 2" hole, 2-7/16" mounting centers.

Cat. No. 33-1402

#### 4 Position Pushbutton Terminals



These terminals have spring loaded posts for easy connection with two red and two black. These are perfect for various audio applications, such as speaker connections, and amplifiers. 2-3/4" x 3/4" x 1-5/16", mounting centers 2-5/16".

Cat. No. 33-1404



#### 8 Position Pushbutton Terminals

These terminals have eight connecting posts, four red, and four black. The posts are spring loaded for easy connection. These terminals are designed for several audio applications, such as surround sound units, amplifiers, and speaker connections. 2-1/2" x 5/8" x 1-3/16", mounting centers 2-1/4".

Cat. No. 33-1408



#### BNC Female to Dual Banana Plug

UPPER: BNC Female, gold plated center contact. Nickel plated brass body.

LOWER: .750" Spaced dual banana plug. Brass body, beryllium copper nine piece leaf spring, nickel plated..

164" Diameter holes in body for side

stackable connection

Cat. No. 33-1191



#### Banana Plugs

With internal stud for solderless connection. Pkg. of one each red and black plastic handle.

Bulk Pack of Ten—Black Cat. No. 33-013-BU Bulk Pack of Ten—Red Cat. No. 33-015-BU





#### **PowerFlex™ Audio Connectors**

Power Flex connectors are available in four popular styles. These connectors will provide the best possible connection between your speakers and audio/video equipment. Gold plated solid brass construction provides ultra low resistance and prevents deterioration of contact surfaces. For use with Power FlexTM speaker cable or any other wire not exceeding 10 gauge.



Gold compression (solderless) spade lugs.

(pkg. of 2)

Cat. No. 30-1200

Gold crimp or solder spade lugs.

(pkg. of 2)

Cat. No. 30-1203

Gold crimp or solder flexible pin plugs. Color coded insulators.

(pkg. of 4)

Cat. No. 30-1204

Gold compression (solderless) pin plugs.

(pkg. of 2)

Cat. No. 30-1205

Gold crimp or solder banana plugs. Color coded insulators.

(pkg. of 2)

Cat. No. 30-1208

Gold compression (solderless)

banana plugs. (pkg. of 2)

Cat. No. 30-1210







#### PowerFlex™ Audio Adapters

These adapters will provide the best possible connection between your cabling and audio/video equipment. Gold plated solid brass construction provides ultra low resistance and prevents deterioration of contact surfaces.

Gold RCA Jack to RCA Jack

Cat. No. 30-1212

Gold RCA Plug to RCA Plug

Cat. No. 30-1213

Gold RCA Plug to Dual RCA Jack

Cat. No. 30-1215







#### **SuperLink™ Connectors**

The SuperLinkTM connectors use a light weight aluminum alloy connector shell to prevent oxidation and corrosion. 24 K gold plated phono pin plugs provide the best conductivity and maximum signal transfer available. Use with high performance interconnect cables. Available in three color codes, platinum, black, or red. Solder connections.

Platinum Pkg. of 2 **Cat. No. 30-1230** Black Pkg. of 2 **Cat. No. 30-1231** Red Pkg. of 2 **Cat. No. 30-1232** 

#### **AUDIO PLUGS**



### Std. 1/4" Phone Plugs - 2-Conductor

Shielded metal handle. Solder terminals.

Cat. No. 30-483-6

Shielded metal handle. Screw terminals. **Cat. No. 30-484-6** 

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Shielded metal handle. Right angle type. Solder terminals.

Cat. No. 30-487

Black plastic handle. Solder terminals.

Cat. No. 30-483

Black plastic handle. Screw terminals.

Cat. No. 30-484

Red plastic handle. Solder terminals.

Cat. No. 30-483-1

Red plastic handle. Screw terminals.

Cat. No. 30-484-1



#### 1/4" Stereo Phone Plugs -3-Conductor

Shielded metal handle. Solder terminals.

Cat. No. 30-489-6

Shielded metal handle. Screw terminals.

Cat. No. 30-490

Black plastic handle. Solder terminals.

Cat. No. 30-489

Black plastic handle. Screw terminals.

Cat. No. 30-488



#### Miniature (3.5mm) Stereo Phone Plug

Black plastic handle. Solder terminals.

Cat. No. 30-572

Gold

Cat. No. 30-572-3

Pkg. of 10

Cat. No. 30-572-BU







#### Miniature (3.5mm) **Phone Plugs**

Shielded metal handle. Solder terminals.

Cat. No. 30-498-6

Black plastic handle. Solder terminals.

Cat. No. 30-498-2

Gold

Cat. No. 30-498-3



#### Subminiature (2.5mm) Phone Plugs

2.5mm subminiature 3-conductor phone plua.

Pkg. of 2

Cat. No. 30-519



#### Phono Pin Plugs (RCA Style)

Package of 2 with shielded metal handle. Heavy duty. Solder terminals.

Cat. No. 30-534

Gold

Cat. No. 30-534-3

Pkg. of 10

Cat. No. 30-534-BU

Pkg. of one each with red and black plastic handle. Right angle type. Solderless terminals.

Cat. No. 30-533



#### **Power Supply Plugs**

Fits power supply jacks on recorders, radios, dictating machines, calculators, etc. Pkg. of one each for the two standard pin diameters, 2.1mm and 2.5mm.

Pkg. of 2 Standard Length, 10mm approx. 3/8"

Cat. No. 30-475

Pkg. of 2 Long Length, 14mm -

approx. 9/16"

Cat. No. 30-476

1.3mm DC power plug fits walkman-type cassettes. Molded thermoplastic body. Solder connections.

Cat. No. 30-480



#### **Mike Connectors**

Cannon Style." 3 pin male.

Cat. No. 30-1692

Cannon Style." 3 pin female.

Cat. No. 30-1690

Chassis/cabinet style. 3 pin female.

Cat. No. 30-1694

### **AUDIO JACKS**



#### Std. 1/4" Phone Jacks -2-Conductor

Chassis mounting. Closed circuit. .350" mtg. hole. Solder lugs.

Cat. No. 30-540-1

Chassis mounting. Open circuit. .350" mtg. hole. Solder lugs.

Cat. No. 30-540

Cord mounting. Open circuit. Black plastic handle. Solder terminals.

Cat. No. 30-548



#### Miniature (3.5mm) Phone Jacks

Chassis mounting. Closed circuit. 1/4" mtg. hole. Solder lugs.

Cat. No. 30-546

Cord mounting. Open circuit. Black plastic handle. Solder terminals.

Cat. No. 30-543-1

Cord mounting. Open circuit. Solder connections. For stereo plugs.

Cat. No. 30-575



#### 1/4" Stereo Phone Jacks -2-Conductor

Chassis mounting. Open circuit. 3/8" mtg. hole. Solder lugs.

Cat. No. 30-541

Cord mounting. Open circuit. Heavy duty shielded metal handle. Solder terminals.

Cat. No. 30-542



#### Phono Pin Jacks (RCA Style)

Cord mounting. Open circuit. Pkg. of 2 with shielded plastic handle. Solder terminals.

Cat. No. 30-536

Dual chassis mounting. 1-1/2" long. Open circuit. 130" dia. holes on 1.770" centers. Solder type.

Cat. No. 30-537

Chassis mounting. Open circuit. 1/4" mtg. hole. Solder lugs. Pkg. of 2.

Cat. No. 30-528



#### 3.5mm Miniature 3-Conductor Phone Jack

P.C. board mounted or panel-mounted (mounting nut furnished).

Mates with all standard 3.5mm stereo plugs. Normally closed circuit.

Cat. No. 30-574



#### **Chassis Mounting Jack**

Gold plated chassis mounting RCA jack with grounding lug. Gold connections provide optimum performance in home and car installations.

Cat. No. 30-528-3





#### **AUDIO ADAPTERS**



#### Std. 1/4" Phone Plug One End

Std. 1/4" phone plug (2 cond.) to miniature (3.5mm) phone jack.

Cat. No. 30-472-1

N.S.N. 5935-00-601-8693

Mini (3.5mm) stereo phone jack to 1/4" stereo phone plug (3 cond.). Permits use of headphones (with 3.5mm stereo plug) with units which have 1/4" stereo output jacks.

Cat. No. 30-1574

Gold plated 3.5mm stereo jack to 1/4" stereo plug. This adapter permits use of stereo headphones with a 3.5mm plug to be used on home entertainment systems with a 1/4" jack.

Gold

Cat. No. 30-1575

Standard 2-conductor 1/4" phone plug to RCA phono pin jack.

Cat. No. 30-472



#### Phono Pin (RCA Style) Plug One End

Phono pin plug to miniature (3.5mm) phone jack.

Cat. No. 30-473-1

Phono pin plug to std. 1/4" phone jack (2-conductor).

Cat. No. 30-473



#### Miniature (3.5mm) Plug One End

Miniature (3.5mm) phone plug to phono pin jack.

Cat. No. 30-495

1/4" stereo phone jack (3 cond.) to mini (3.5mm) stereo phone plug. Flexible cable prevents damage to equipment jacks. Permits use of headphones (with 1/4" stereo plug) with components with 3.5mm stereo output jacks."

Cat. No. 30-1576

Miniature (3.5mm) phone plug to std. 1/4" phone jack (2-conductor).

Cat. No. 30-496

Miniature (3.5mm) phone plug to 1/4" stereo phone jack (3conductor).

Cat. No. 30-1554

3.5mm stereo jack at one end; 3.5mm monaural plug at the other.

Cat. No. 30-1587



### Subminiature (2.5mm) Phone Plug One End

Subminiature (2.5mm) phone plug to miniature (3.5mm) phone jack.

Cat. No. 30-478





#### Right Angle Adapter

Space limitations often require the use of a RCA male to RCA female right angle adapter. Gold plated connections for optimum performance in home or car installations.

Cat. No. 30-474



#### Stereo Coupler

3.5mm stereo jack to 3.5mm stereo jack. Used to extend 3.5mm stereo cables.

Cat. No. 30-1571



#### **Audio Coupler**

Phono pin jack to phono pin jack.

Cat. No. 30-470

Gold

Cat. No. 30-470-3

Pkg. of 10

Cat. No. 30-470-BU



#### **Dual Coupler**

Used to extend dual RCA audio cables. Gold plated for optimum performance in home and car installations.

Cat. No. 30-477

2-conductor standard 1/4" phone jack to 2-conductor standard 1/4" phone jack.

Cat. No. 30-1570



#### RCA Male Coupler

Male to male RCA coupler to connect two RCA jacks. Gold plated for optimum performance in home and car installations.





#### **AUDIO "Y" ADAPTERS**



### Phono Pin Plug & Jack Combinations

Phono pin plug to 2 phono pin jacks.

Cat. No. 30-510

Gold

Cat. No. 30-510-3

Pkg. of 10

Cat. No. 30-510-BU

Phono pin jack to 2 phono pin plugs.

Cat. No. 30-512

Gold

Cat. No. 30-512-3

Pkg. of 10

Cat. No. 30-512-BU

Phono pin plug to 2 phono pin plugs.

Cat. No. 30-514



### 1/4" Phone Plug & Jack Combinations

Standard 2-conductor 1/4" phone plug to 2 standard 2-conductor 1/4" phone jacks.

Cat. No. 30-522

3-conductor 1/4" stereo phone plug to 2-conductor standard 1/4" phone jacks.

Cat. No. 30-524

3-conductor 1/4" stereo phone plug to 2 3-conductor 1/4" stereo phone jacks.

Cat. No. 30-1560



## Miniature (3.5mm) Plug & Jack Combinations

Miniature (3.5mm) phone plug to 2 miniature (3.5mm) phone jacks.

Cat. No. 30-1558

3.5mm mini stereo phone plug to two 3.5mm mini stereo phone jacks.

Cat. No. 30-1559

3.5mm stereo phone plug to two phono pin jacks.

Cat. No. 30-1565



#### Metal "Y" Adapters

Std. 1/4" phone plug (2-conductor) to 2 phono pin jacks.

Cat. No. 30-500

Phono pin plug to 2 phono pin jacks.

Cat. No. 30-504



### Auto Antenna "Y" Connector

Allows hook up of an additional AM, FM, AM/FM radio or CB to car radio antenna. Motorola type plug and jack.

2 Plugs to 1 Jack





#### **SPLITTERS**



#### 2-Way Hybrid Splitter

#### With Built-In Grounding Block

Takes one 75 ohm input and splits it into two 75 ohm outputs. All terminals use "F" type connectors. Die cast body features cast-in grounding block and mounting tabs. Anticorrosion plating and sealed case resist the elements.

Cat. No. 32-3018

Gold

Cat. No. 32-3718

Miniature Version

Cat. No. 32-2018-BU



#### 3-Way Hybrid Splitter

#### With Built-In Grounding Block

Takes one 75 ohm input and splits it into three 75 ohm outputs. All terminals use "F" type connectors. Die cast body features cast-in grounding screw and mounting tabs. Anti-corrosion plating and sealed case resist the elements.

Cat. No. 32-3033



#### 4-Way Hybrid Splitter

#### With Built-In Grounding Block

Takes one 75 ohm input and splits it into 2, 3 or 4 75 ohm outputs. All terminals use "F" type connectors. Die cast body features cast-in grounding block and mounting tabs. Anti-corrosion plating and sealed case resist the elements.

Cat. No. 32-3022

Gold

Cat. No. 32-3722



#### 8-Way Splitter

From one input this splitter provides up to eight outputs. Built-in grounding block ensures easy installation. Excellent isolation is compatible with all applications.

Specifications:

Band Width: 5-1000 MHz Return Loss: -24 dB at 600MHz Isolation: -40 dB at 600 MHz

Cat. No. 32-3039-BU



#### **UHF/VHF/FM Droptap**

This 12 dB UHF/VHF/FM droptap provides a constant 75 ohm impedance. Includes nut & washer for wall plate mounting. Can be used as a coupler for coaxial connections

tions.

Cat. No. 32-3183-BU



### Miniature UHF/VHF/FM Droptap

These UHF/VHF/FM Droptaps provide a constant 75 ohm impedance.

6 dB

Cat. No. 32-2006

9 dB **Cat. No. 32-2009** 

12 dB

Cat. No. 32-2012

.....

20 dB

Cat. No. 32-2020

### **DIN CONNECTORS**



#### Inline Male

Silver plated contact pins provide better connections. All in-line models have a protective strain relief for longer life. These connectors are manufactured to DIN (Deutsch Industrie Norm) specifications.

Specifications:

Contact Rating: 2A 100V AC Contact Resistance: 10mW Max.

Insulation Resistance: 100 MegW @ 500V DC Dielectric Withstand Voltage: 1000V RMS @ 50/60 Hz

Insertion Force: 4.0 Kg. Max. Withdrawal Force: 1.8 Kg. Min. Contact Life: 5000 Cycles Min.

3 @ 180°	4 @ 210°	5 @ 180°	5 @ 240°	5 @ 360°	6 @ 240°	7 @ 270°	8 @ 270°
33-951-BU	33-952-BU	33-953-BU	33-954-BU	33-955-BU	33-956-BU	33-957-BU	33-958-BU







#### **Inline Female**

Silver plated contact pins provide better connections.

All in-line models have a protective strain relief for longerlife. These connectors are manufactured to DIN (Deutsch Industrie Norm) specifications.

Specifications:

Contact Rating: 2A 100V AC Contact Resistance: 10mW Max.

Insulation Resistance: 100 MegW @ 500V DC Dielectric Withstand Voltage: 1000V RMS @ 50/60 Hz

Insertion Force: 4.0 Kg. Max. Withdrawal Force: 1.8 Kg. Min.

Withdrawal Force: 1.8 Kg. Mir Contact Life: 5000 Cycles Min.

3 @ 180°	5 @ 180°	6 @ 240°	7 @ 270°	8 @ 270°
33-961-BU	33-963-BU	33-966-BU	33-967-BU	33-968-BU



## No. of Contacts Contact Configuration







#### **Mini Din Connectors**

Silver plated contacts, pins and sockets, are used to provide a better connection. All models have a molded strain relief to prolong the life of the connector.

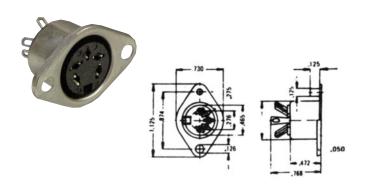
Specifications:

**Contact Rating:** 2A 100V AC **Contact Resistance:** 10mW Max.

Insulation Resistance: 100 MegW @ 500V DC Dielectric Withstand Voltage: 1000V RMS @ 50/60 Hz

Insertion Force: 4.0 Kg. Max. Withdrawal Force: 1.8 Kg. Min. Contact Life: 5000 Cycles Min.

	4 @ 210°	6 @ 240°	8 @ 290°
Male	33-934-BU	33-936-BU	33-938
Female	33-944-BU		



#### **Chassis Mount Receptacle**

Silver plated contact pins provide better connections. All in-line models have a protective strain relief for longer life. These connectors are manufactured to DIN (Deutsch Industry Norm) specifications.

Specifications:

**Contact Rating:** 2A 100V AC **Contact Resistance:** 10mW Max.

Insulation Resistance: 100 MegW @ 500V DC Dielectric Withstand Voltage: 1000V RMS @ 50/60 Hz

Insertion Force: 4.0 Kg. Max. Withdrawal Force: 1.8 Kg. Min. Contact Life: 5000 Cycles Min.

33-971-BU	33-972-BU	33-973-BU	33-974-BU	33-975-BU	33-976-BU	33-977-BU	33-978-BU
3 @ 180°	4 @ 210°	5 @ 180°	5 @ 240°	5 @ 360°	6 @ 240°	7 @ 270°	8 @ 270°





### ANTENNA ROTOR

Outdoor antennas are available through a partnership with Winegard. Call customer service for price and availability.



#### Antenna Rotor

Locks antenna or station signal for brighter, clearer TV and FM reception. Easily handles the largest residential outdoor TV antenna arrays. Automatic antenna control indicates position of antenna.

- Zinc diecast, weather sealed motor housing
- Maximum wind load area of 5 sq. ft.
- Brake withstands 1,440 inch oz. of torque
- 360° rotation in one minute
- Control 115V, 60 cycles, AC .7 amps
- Motor operates on 24V AC
- 22 Awg 3 conductor lead wire required

Cat. No. 32-9015

#### INDOOR TV ANTENNAS



## Amplified VHF/UHF/FM Stereo Antenna

- Amplified circuitry for improved fringe performance
- Digital satellite design
- 7 Section VHF elements extend to 44" for maximum performance
- Switchable integrated auxiliary input for use with digital satellite or cable
- Built-in combiner circuit
- 75 Ohm 48" coaxial output cable
- Antenna fine tuning power control
- Power supply UL, CSA approved
- Color hang tab display carton

Cat. No. 32-373



#### VHF/UHF/FM Stereo Antenna

- Slim line design
- 4 Section VHF elements extend to 32"
- Clear image circuitry improves reception
- Built-in combiner circuit
- 75 Ohm 48" coaxial output cable
- 12 position fine tuning dial
- Color hang tab display carton

Cat. No. 32-371



#### Deluxe VHF/UHF/FM Stereo Antenna

- Digital satellite design
- 7 Section VHF elements extend to 44" for maximum performance
- Clear image circuitry improves reception
- Built-in combiner circuit
- 75 Ohm 48" coaxial output cable
- 12 position fine tuning dial
- Color hang tab display carton

Cat. No. 32-372



#### VHF/FM Stereo Antenna

- Low profile modern design
- 4 Section VHF elements extend to 36"
- 75 Ohm 39" coaxial output cable

• Color hang tab display carton







#### VHF/UHF/FM Stereo Antenna

- 12 position fine tuning dial
- 4 section VHF elements extend to 30"
- High impact base with felt pad
- 300 Ohm output cable
- Hang tab poly bag

Cat. No. 32-302



- 3 section VHF elements extend to 30"
- High impact base with felt pad
- 300 Ohm output cable
- Hang tab poly bag

Cat. No. 32-300



#### **Butterfly "Snap-On" UHF Antenna**

Snaps securely on rabbit ear to improve UHF reception. Easy to adjust. Complete with lead wire, terminals.

Cat. No. 32-315



#### Replacement Antenna

Replaces Panasonic, RCA and many other models. It comes complete with lead wires and terminals. 32" extended, 9" collapsed. 3 ft. leads.

Cat. No. 32-317



#### "Folded Dipole" Indoor FM Radio Antenna

Improves FM and multiplex stereo reception. Just connect to terminals on radio and locate antenna behind set, along baseboard or under carpet. Installs in a few minutes.

Cat. No. 30-270



#### **Back-of-Set Loop UHF Antenna**

Adjustable swivel attachment brackets for fastening to UHF terminals. Fits all TV sets. Constructed of heavy-duty plated wire.







### **INSTALLATION HARDWARE**



#### **Combo Standoffs**

VHF Standard Insulator

Machine and woodscrew type. 10-20 thread.

3-1/2" long. Box of 100 **Cat. No. 4027-C** 5-1/2" long. Box of 100 **Cat. No. 4028-C** 



#### **Combo Standoffs**

**"B" Type Insulator** *Machine and woodscrew type. 10–20 thread.* 

3-1/2" long. Box of 100 Cat. No. 4027-BC
5-1/2" long. Box of 100 Cat. No. 4028-BC
Card of 4 No. 4027-BC

Cat. No. 32-050



## 9" Combo Strapping with "T" Nut

10–20 thread. Has extra deep T-Nut welded to strap. For use with Combo type standoffs.

Stainless Steel, Box of 100 Cat. No. 4050-NC



#### **Nut Type Standoffs**

10–32 thread. "B" type insulator. 9" stainless steel straps.

Card of 2

Cat. No. 32-048



#### Heavy Duty Snap-In Chimney Mount

Fits masts up to 1-1/2" diameter. Extra heavy gauge steel construction. Doubly protected against rust. Zinc plated and clear chromate dipped for long life. Chimney clearance

of 4". Simply "snap" mast into place and tighten bolts. Easy to handle. Complete with both heavy duty strap clamp and Speed-E-Strap clamp, strapping and necessary hardware. All strapping is 5/8" wide.

Stainless Steel Strapping-Heavy Duty Strap Clamp

Mount with 2-12 ft. lengths of strapping

Cat. No. 8610

Mount with 2-18 ft. lengths of strapping

Cat. No. 8610-L



#### Chimney "Z" Mount

Extra heavy gauge steel, zinc plated and clear chromate dipped for long life. Fits masts up to 1-1/2" diameter. Chimney clearance of 3". Complete with straps and necessary hardware. All strapping is 5/8" wide.

Stainless Steel Strapping-Heavy Duty Strap Clamp Mount with 2-12 ft. lengths of strapping

Cat. No. 8005

Card of 1 No. 8005

Cat. No. 32-010

Mount with 2-18 ft. lengths of strapping

Cat. No. 8005-L







#### "Snap-In" Wall Mount

Made of extra heavy gauge steel, zinc plated and clear chromate dipped for double weather protection. Mounting hardware included. Mounting hole spaced 16" for fastening to studs.

Туре	Clearance	For Masts	Cat. No.
Heavy Duty	6"	to 1-3/4"	8306
Heavy Duty	8"	to 1-3/4"	8308
Heavy Duty	12"	to 1-3/4"	8312#
Heavy Duty	18"	to 1-3/4"	8318#

<sup>#</sup> Brace Included



#### **Wall Mount**

Made of heavy gauge steel, zinc plated, clear chromate dipped for added weather protection. 2 brackets per set. All necessary hardware and assembly instructions are included

Туре	Pkg.	Clearance	For Masts	Cat. No.	
Heavy Duty Box of 1		2-1/2"	to 2-1/2"	8305	
	Poly Bag of 1- No. 8305			8307	
Economy	Carton of 1	3-1/4"	1-1/2"	9262	
Medium Duty	Box of 1	4"	to 1-3/4"	8304	
Med. to Hvy. Duty	Box of 1	6"	to 1-1/2"	9236	
	Card of 1- No. 9236			32-004	



#### Vent Mount

Easy-to-use mounts that quickly install on vents or pipes. Made of extra heavy gauge steel, zinc plated and clear chromate dipped for double weather protection. For masts up to 1-3/4" diameter.

Poly Bag of 1 For Vents 2" to 4" Cat. No. 8802

Poly Bag of 1 For Vents 4" to 6" Cat. No. 8803



#### **Vent Clamp**

For mounting TV antennas on vents up to 2-1/4" diameter. Made of extra heavy gauge steel, clear zinc plated. Accepts masts up to 1-1/4" diameter.

Box of 1 Cat. No. 8799



Pivot swing-up mount for masts up to 1-1/4" diameter. Made of heavy gauge steel, zinc plated and clear chromate dipped for long life. Corrosion resistant. Mounts on either roof or wall.

Cat. No. 8622



#### **Handy Mount**

Inexpensive mount, designed for extra solid mounting support through an extra "leg" and reinforcing ribs. Zinc plated, clear chromate dipped for all-weather protection. Pre-assembled, will support masts up to 1-1/2" diameter.

Cat. No. 8800-U



#### Tar Pad Kit

Includes: Six 1/4" x 2" lag bolts and three 1" x 4" insulating sealant strips. For mounting antenna hardware to roofs and walls. Excellent for tower bases, wall mounts and mast mounts. Prevents water seepage.

Cat. No. 32-8197



#### Steel Antenna Masts

Pewter Grey Coat Finish

Rugged 1-1/4" diameter steel pipe with lock seams. Swaged end allows masts to be telescoped together for extra length.

5 ft., 18 gauge Cat. No. 32-8972 5 ft., 16 gauge Cat. No. 32-8975 10 ft., 16 gauge

Cat. No. 32-8976



#### Steel Antenna Masts

Galvanized Steel

Rugged 1-1/4" diameter steel pipe with lock seams. Swaged end allows masts to be telescoped together for extra length.

5 ft., 22 gauge Cat. No. 32-9013 10 ft., 16 gauge Cat. No. 32-9014



#### **Tri-Pod Tower Antenna Bases**

Exclusive "swing-up" feature provides easy installation. Adjustable to any roof pitch. Fully assembled—ready to install. Accepts masts up to 1-3/4" " diameter. Towers are tubular galvanized steel with extra heavy duty collars. Mast stop holds mast securely in place while adding extra height.

#### **Galvanized Tower**

3 ft., boxed, with 6 lag screws and 3 patches, Legs 36" Long With 30" Spread, 1-11/64" Dia.

Cat. No. 9160

5 ft., unboxed, no lag screws or patches Cat. No. 32-9005







#### Antenna Guy Wire

4-stranded, 20 gauge wire made of galvanized steel. 50 ft.

Card of 1

Cat. No. 32-114



#### **Aluminum Ground Wire**

Heavy (1/8" diameter) soft aluminum wire for grounding masts and connecting antenna discharge units. 50 ft.

Cat. No. 32-123



#### Antenna Wire

Stranded 16-gauge copper wire, not insulated. The standard wire for outside antennas. 50 ft.

Cat. No. 32-146



#### **Cable Clamps**

Popular guy wire clamps to hold wires securely. Galvanized steel.

1/4" wire size

Cat. No. 8131

1/8" wire size

Cat. No. 8133



#### 3-Way Guy Wire Mast Clamp

Three screw eyes for attaching guy wire to masts up to 1-1/2" diameter. Guy Wire Kit includes 3-way guy wire clamp, 3 screw hooks, 3 turnbuckles and 50 ft. of guy wire.

Box of 1 Mast Clamp

Cat. No. 8911

Card of 1 No. 8911

Cat. No. 32-026



#### **Mast Clamp Assembly**

Complete clamp assembly to fasten cross bars to mast. Edges are serrated to prevent twisting.

Mast clamp assembly with reinforcing plate

Cat. No. 8718

Card of 1 No. 8718

Cat. No. 32-030

Mast clamp assembly only

Cat. No. 8718-N



#### **Ground Rods**

Heavy copper plated rod with tapered tip. Easily driven into the ground. Complete with clamp.

4' x 3/8" diameter

Cat. No. 8929

6' x 3/8" diameter

Cat. No. 9016



#### **Turnbuckles**

Extra strong turnbuckles. For installing guy wires on antennas.

Closed 4", open 5-5/8"

Cat. No. 8057

Closed 5-1/2", open 7-5/8"

Cat. No. 8365



#### Screw Hook

Steel, zinc plated. 4-3/8" long; 1/4" wire size, 11/32" I.D.

Cat. No. 8732



#### Screw Eyes

Steel, zinc plated.

3" long; 7/32" wire size; 7/16" I.D.

Cat. No. 8342

5" long; 1/4" wire size; 5/8" I.D.

Cat. No. 8486



#### Slotted Hex Washer Head Lag Screw

Steel, zinc plated. Designed for installation of TV antenna mounts and brackets.

1/4" x 2-1/2"

Cat. No. 8061



#### 75 Ohm Antenna/Rotor Wall Plate

Connects antenna with 75 ohm down-lead and rotor wire to same wall plate.

Ivorv



# **VIDEO**

#### **VIDEO ENHANCEMENT PRODUCTS**



#### Coax Surge Suppressor

Provides protection to electronic equipment from surges that occur on coaxial cable lines. Use in-line with TV's, VCR's.

Cat. No. 32-3185



#### Video System Selector

Audio/Video System
Selector, selects between
base band video input
sources (VCR's, Video
Camera, Video Disc Players,
etc.) simply at the push of a
button. Designed for use
with stereo or monoaural
equipment. RCA type phone
jack connectors.

Cat. No. 32-3240



#### **RF Modulator**

Converts Audio and Video output signals from computers, TV games, video cameras, and satellite receivers, into normal VHF TV signals that may be viewed on channel 3 or 4 of any television set. FCC approved.

Cat. No. 32-3092



#### Outdoor Mini UHF/VHF Antenna Amplifier

- Amplifies weak UHF/VHF television signals.
- Increases incoming signal by 20 times.
- Consists of antenna boom mounted amplifier,

UL listed power supply, 6'RG-59 coaxial cable, weather boot, and tie wrap.

Packaged in a clear, clam shell blister pack for optimum consumer appeal.

#### Specifications:

Frequency Range: 54-88 MHz 174-806 MHz Impedance: 300 Ohm (in), 75 Ohm (out)

Gain: 13 dB Noise Figure: 3.5 dB Power Required: 117 VAC

Output Capability: 45 dBmV per ch. (8 chs.)

Cat. No. 32-3111



#### Solid-State 75 Ohm VHF/FM Signal Amplifier

Recommended for any system that uses a single antenna feeding more than 2 TV sets and for areas with a medium to weak TV signal. Provides 10 dB increase in signal strength. Input and output terminals take 75 ohm coaxial cable "F" type connectors.

Cat. No. 32-3090



#### Two Way Amplifier

This two-way signal amplifier provides up to 24 dB gain to two 75 ohm outputs. FM trap prevents interference by blocking frequencies 88-108 MHz when switched on. The gain control will adjust signal strength by 10 dB.

Specifications:

Noise Figure: 6 dB Gain (dB) VHF: 24 dB Gain (dB) UHF: 21 dB

Power: 117V AC, 60 Hz, 3.6 Watts

Cat. No. 32-3069



#### **Deluxe VHF/UHF Amplifier**

with FM Trap, 24 dB

75 ohm broad band distribution amplifier, designed to restore and improve video signal normally weakened when using multiple TVIVCR hookups and switches. Features built-in, switchable FM trap, on-off indicator light and high overload protection. 117V AC, 60 Hz.

Cat. No. 32-3091



### 4-Way UHF/VHF Cable Distribution Amplifier

Allows for the splitting of the cable or antenna signal to 4 outputs (TV's, VCR's etc.) without losing any signal strength. 50–890 MHz, minimum 1 dB gain, noise figure 5 dB 120 VAC 60 Hz.

Cat. No. 32-3094



### Remote Control A/B Switch

This infrared remote control video switch allows you to switch between two 75 ohm inputs (cable, antenna, satellite or dual cable systems) and a 75 ohm output (probably a TV) without leaving the comfort of your chair. Complies with FCC part 15.6 and is recommended when switching between cable TV and antenna systems inputs. Isolation 80 dB. AC adaptor.

Specifications:

Frequency Range: 5-2050

MHz







### Combination Prep Tool for Coax Cable

Attach twist-on "F" connectors like a professional when you use this convenient cable preparation tool. One end quickly enlarges space between shield and insulation with a simple twist of the wrist. The other end is threaded to hold "F" connectors snuggly, while perfectly placing them onto coax cable, ready to crimp. Nickel-chrome. T shaped tool easily fits into pocket or tool box.

RG-6 Cable **Cat. No. 12-390** RG-59 Cable **Cat. No. 12-395** 

#### **VIDEO CABLES**



#### Deluxe Picture-In-Picture Hookup Kit

#### With Gold-Plated Connectors

For use on TVs with picture-in-picture (PIP) feature. Contains six cables and one splitter for most common hookups. A necessary accessory for every PIP TV set. The gold-plated connectors virtually eliminate audio and visual noise. A great item for television add-on sales.

Cat. No. 32-3164

### **BAND SEPARATORS**

Frequency Range (MHz.)	Insertion Loss VHF UHF		requency Loss Input		Output Connector	Cat. No.
54-890	1.0	1.5	75 ohm	(2) 300 ohm	32-3028	
54-890	1.0	1.5	75 ohm	(3) 300 ohm	32-3032	
54-890	2.0	3.0	75 ohm	(1) 75 ohm (1) 300 ohm	32-3040	
54-890	2.0	3.0	75 ohm	(1) 75 ohm (2) 300 ohm	32-3042	



#### 75 to 300 Ohm UHF/VHF Band Separator

Matches 75 ohm input from coaxial antenna cable to 300 ohm Video Cassette Recorders and TV sets.

Cat. No. 32-3028



#### 75 to 300 Ohm UHF/VHF/FM Band Separator

Matches 75 ohm input from coaxial antenna cable to 300 ohm Video Cassette Recorder and TV sets. Separates VHF, UHF and FM signals. With FM tap.

Cat. No. 32-3032



RG-59 "F" Type plug to "F" type plug.

1.5 ft.
Cat. No. 32-3175
3 ft.
Cat. No. 32-3130
3 ft. Gold Connectors
Cat. No. 32-3230
6 ft.
Cat. No. 32-3131
6 ft. Gold Connectors.
Cat. No. 32-3231

Cat. No. 32-3132 25 ft. Cat. No. 32-689 3 ft. white coax Cat. No. 32-3330 6 ft. white coax. Cat. No. 32-3331 12 ft. white coax.

Cat. No. 32-3332
25 ft. white coax.

Cat. No. 32-3335
50 ft. white coax.

Cat. No. 32-3344
100 ft. white coax.

Cat. No. 32-3345



RG-6 "F" Type to "F" type plug.

Cat. No. 32-3173 6 ft. Cat. No. 32-3176 12 ft. Cat. No. 32-3178 3 ft. white **Cat. No. 32-3333** 6 ft. white **Cat. No. 32-3334** 12 ft. white

Cat. No. 32-3336

25 ft. w/ground wire **Cat. No. 32-3273** 100 ft. w/ground wire **Cat. No. 32-3277** 



#### 75 to 75/300 Ohm UHF/VHF/FM Band Separator

Matches 75 ohm coaxial cable to 75 ohm VHF output and 300 ohm UHF output for VCR and TV set.

Cat. No. 32-3040



RG-59 "F" type plug to "F" type plug with rubber weather boot.

50 ft. **Cat. No. 32-691** 

75 ft. **Cat. No. 32-693** 

100 ft.

Cat. No. 32-695



#### 75 to 75/300 Ohm UHF/VHF/FM Band Separator

Matches 75 ohm input from coaxial cable to 75 ohm VHF output and 300 ohm UHF output. Also separates FM signals.

Cat. No. 32-3042



RG-59 BNC plug to BNC plug.

3 ft.

Cat. No. 32-3142

6 ft.

Cat. No. 32-3143

12 ft.



















RG-59 Phono (RCA-type) plug to Phono (RCA-type) plug.

3 ft.

Cat. No. 32-3148

6 ft.

Cat. No. 32-3149

12 ft.

Cat. No. 32-3150

RG-59 BNC plug to Phono (RCA-type) plug.

3 ft.

Cat. No. 32-3154

6 ft.

Cat. No. 32-3155

RG-59 Right-angle "F" type plug to Right-angle "F" type plug. Push-on type 6 ft.

Cat. No. 32-3160

RG-59 Straight "F" type plug to Straight "F" type plug. Push-on type

3 ft.

Cat. No. 32-3163

6 ft.

Cat. No. 32-3162

RG-59 Gold dual-phono (RCA-type) plug to gold dual-phono (RCA-type) plug.

6 ft.

Cat. No. 32-3236

RG-59 Gold triple-phono (RCA-type) plug to gold triple-phono (RCA-type) plug. For stereo VCR's.

6 ft.

Cat. No. 32-3237

RG-59 75 Ohm round coaxial down-lead cable (without connectors).

50 ft.

Cat. No. 32-3068

300 Ohm flat foam-filled twin-wire down-lead cable (without connectors).

50 ft.

Cat. No. 14-520-2N21

75 ft.

Cat. No. 14-520-2N31



#### **High Resolution Video Cable**

High resolution video cable with goldplated RCA plugs on each end make better contact to provide the best possible image from video tape and laser disc players. Superior shielding reduces ghosting and color impurities associated with external interference.

6 ft.

Cat. No. 32-3765



#### Super VHS Video Cable

4-pin mini DIN plugs on both ends are designed for Super VHS video cassette recorders. PE foam improves degree of isolation providing the highest resolution picture available, free from external interference. Gold-plated pins prevent loss at point of contact for the sharpest possible image.

2 Meter Cable

Cat. No. 32-3766

5 Meter Cable

Cat. No. 32-3767



4 pin S-connector plug to 4 pin S-connector plug. Compatible with S-VHS equipment and televisions that use a 4 pin S-connector to separate luminance (Y) and chroma (C) signals, which will provide an enhanced, signal to noise ratio, horizontal resolution, contrast and picture quality.

6 ft.

Cat. No. 32-3165

12 ft.

Cat. No. 32-3166

25 ft.

Cat. No. 32-3167

#### **S-VHS Adaptor**

4 pin S-connector jack to 4 pin S-connector jack, used to connect two S-VHS video cables with 4 pin S-connector plugs.

Cat. No. 32-3170



A replacement cable identical to those most VCR manufacturers supply with their units. A quick-connect "F" Type plug with 5' of 75 ohm coaxial cable attached to a switchable 300/75 ohm transformer makes for a 75 ohm coaxial signal or a 300 ohm twin lead antenna connection.

Cat. No. 32-3011





#### **Twin Lead Jumper**

6' of 300 ohm twin lead cable with spade lug terminals on both ends allow remote extension between VCR and TV set.





#### VIDEO HOOKUP HARDWARE





#### Cable Clips For 75 Ohm Coaxial Cable

Use these easy-to-install clips to secure coaxial cable to wood, dry wall, plaster, brick, cement - almost any surface. Made of tough non-corrosive plastic with hardened steel nails.

For RG59-U, Pkg. of 10, White

Cat. No. 32-3058

For RG59-U, Pkg. of 10, Black

Cat. No. 32-3057

For RG-6, Pkg. of 6, White Cat. No. 32-3351

For RG-6. Black

Cat. No. 32-3051-BU

For Ouad Shield RG-6. Black

Cat. No. 32-3071-BU

For Quad Shield RG-6, Pkg. of 6, Black

Cat. No. 32-3056





#### **Coax Grounding Block**

Used with 75 ohm antenna installations to protect system from damage caused by lightning.

Cat. No. 32-3015

#### Feed-thru Bushing

For 75 Ohm Coaxial Cable

Gives your installation a professional look. Flanges secure and protects cable, help seal opening. Bushing fits RG-59-U 75 ohm coaxial cable.

Bulk only Ivory

Cat. No. 32-3050-BU

**Bulk only Black** 

Cat. No. 32-3052-BU

Pkg. of 4, 2 Ivory and 2 Black

Cat. No. 32-3049

#### **TRANSFORMERS**



#### 75 to 300 Ohm Indoor Matching Transformer

Matches 75 ohm input from coaxial cable to 300 ohm output. UHF/VHF/FM with AC/DC locking and shielding to minimize direct pickup. 3 capacitors. Connects to 75 ohm coaxial cable with an "F" connector. 300 ohm twin-lead cable attaches to 300 ohm terminals on VCR or TV set.

Cat. No. 32-3008

Gold

Cat. No. 32-3708



#### 300 to 75 Ohm Outdoor **Matching Transformer**

Tough, weatherproof transformer is sealed against the elements. Matches 75 ohm input from coaxial cable to 300 ohm output. By simply reversing the unit it will match 300 ohm twin-lead cable to 75 ohm coaxial cable. Can be mounted directly on outdoor TV antenna. Coaxial cable attaches directly to transformer with an "F" connector.

Cat. No. 32-3010

Gold

Cat. No. 32-3710



#### 300 to 75 Ohm Push-On Matching Transformer

Push-on quick-connect unit matches 300 ohm twin-lead cable to 75 ohm input of VCR, TV or Video Projection System. It is also reversible. Twin-lead cable connects to insulation piercing screw terminals on the unit. Similar to transformers supplied as original equipment..

Cat. No. 32-3012



#### **UHF/VHF Combiner Transformer 75 Ohm** VHF/300 Ohm UHF to 75 Ohm

For use with TV sets or VCR's with a single 75 ohm UHF/VHF input. It is used in conjunction with a 300 ohm antenna down lead and a 75 ohm coaxial cable.

Cat. No. 32-3035



#### **UHF/VHF Combiner** Transformer 300 Ohm to 75 Ohm

For use with late model TVs and VCRs having a single combined UHF/VHF 75 ohm input. Separates combined input into separate 300 ohm UHF and VHF

Cat. No. 32-3045



#### 300 to 75 Ohm Matching **Transformer**

Matches 300 ohm input from twinlead cable to 75 ohm output. Twinlead cable connects to insulation piercing terminals on the unit. 75 ohm coaxial lead cable attaches to VCR or TV set with "F" connector.

Cat. No. 32-3026



#### **UHF/VHF Combiner Transformer 75 Ohm** to 75 Ohm

For use with TV sets or VCR's with a single 75 ohm UHF/VHF input. It is used in conjunction with two 75 ohm coaxial cables.



# **VIDEO**

## **VIDEO SWITCHES**



# 2-Way 75 Ohm Coaxial Switch

Use this unit for switching between two different signal sources – such as from Cable TV to VCR, also permits VCR system to record from two video sources. Isolation 40 dB.

Cat. No. 32-3024



# High Isolation A/B Coaxial Switch

Heavy-duty high isolation switch prevents interference between two inputs. Interference is often a problem when the inputs are modulated at the same frequency (i.e. both VCR and Cable TV on Channel 3). Two 75 ohm "F" type inputs, one "F" type 75 ohm output. Complies with FCC part 15.6 recommended for use when switching between cable TV and antenna system inputs. Isolation 90 dB.

Cat. No. 32-3210





# **Channel 3 Signal Combiner**

Eliminates the need for an A-B Switch with any Channel 3 output device by creating a Channel 3 input into an existing antenna or cable signal. Compatible with cable box, satellite receiver or VCR. Adjustable controls for signal balancing.

Channel 3 Version Cat. No. 32-3031 Channel 4 Version Cat. No. 32-3041



#### Diplex/Mixer

Combine or divide two signals. 40 – 2050 MHz.

Outdoor High. Performance Cat. No. SD-4160-BU
Outdoor Std. Performance

Cat. No. SD-4164-BU



# High Isolation A/B Switch

Miniature high isolation switch prevents interference between two inputs. Switches TV set between antenna and VCR or cable TV. Two 75 ohm inputs, one 75 ohm output. Complies with FCC part 15.6. Recommended for use when switching between cable TV and antenna system inputs. Isolation 80 dB.

Cat. No. 32-3211



**WALL PLATES** 

# Wall Plate for "F" Type to "F" Type Connections

This flush-mounted wall plate has a standard "F" type connector for input, and an "F" type connector for output. Includes mounting screws.

Brown

Cat. No. 32-3060

Ivory

Cat. No. 32-3062

\/\hite

Cat. No. 32-3066

Almond

Cat. No. 32-3192-BU

Mid-Size White

Cat. No. 32-3043-BU

Mid-Size Ivory

Cat. No. 32-3047-BU



#### High Isolation A/B/C Coaxial Switch

Ultra-high isolation coaxial switch prevents interference when switching between three inputs. Recommended for use when switching between cable and an antenna system and any other input (VCR etc.). Three 75 ohm "F" type inputs, one "F" type 75 ohm output. Complies with FCC part 15.6. Recommended for use when switching between cable TV and antenna system inputs. Isolation 90 dB.

Cat. No. 32-3212



#### Dual "F" Connector Wall Plate

For use with two televisions, television and VCR or television and stereo.

White

Cat. No. 32-3197

vorv

Cat. No. 32-3063

Almond

Cat. No. 32-3193-BU



#### 3-Way Video Selector Switch

Shielded, low-loss switcher permits instant selection of three different outputs from one signal source. Easily installs in-line. Isolation 40 dB.

Cat. No. 32-3029







#### **Coax Decor Wall Plates**

These Decor Wall Plates which are available in white and ivory, with matching color mounting screws will enhance custom interiors. They are in compliance with NEMA Standard WD-1. Coax plates have a F-81 type bulkhead "F" jack for use with 75 ohm coax cable.

Ivory

Cat. No. 32-3061

White

Cat. No. 32-3059

Almond

Cat. No. 32-3191-BU



# Decor Dual "F" Connector Wall Plates

For use with two televisions, television and VCR or television and stereo.

lvory

Cat. No. 32-3195

White

Cat. No. 32-3196





#### Feed-Thru Wall Plates

This wall plate allows cable to be directly connected to TV or VCR. Can also be used with splitters and drop taps.

Ivorv

Cat. No. 32-3053

White

Cat. No. 32-3054

# Selectable Isolation Line Tap-Off

UHF/VHF/FM Tap-Off, single 75 ohm output from 75 ohm trunk line. Clip wire on back of tap to change isolation from 12 dB to 17 dB. Trunk line connections are clamp type for all 75 ohm RG-59 or RG-6 cable. ACIDC passive, low insertion loss.

Ivorv

Cat. No. 32-3065-BU

White

Cat. No. 32-3169-BU

# **GAME ACCESSORIES**



#### Nintendo® AC Power Supply

Replacement AC Power Supply for Nintendo® games. Output 9 VAC at 1.3 Amps. UL Listed.

Cat. No. 32-6013

Nintendo® is a registered trademark of Nintendo of America Inc.



#### **Universal Game Switch**

Dual input/dual output switch for hookup of TV game to TV with either 75 or 300 ohm input. May be used with either 75 or 300 ohm antenna input. Isolation 40 dB.

Cat. No. 32-3027



#### Automatic TV/Game Switch

For use with Nintendo® and other games that use a DC voltage to automatically switch from TV to a game.

Cat. No. 32-3037

Nintendo® is a registered trademark of Nintendo of America Inc.



# Video Tape Copying (Dubbing) Kit

Use this kit to connect two home Video Cassette Recorders for video tape duplicating and editing. Kit connects the two VCR's in a "line" mode for best quality video and audio fidelity.

#### Kit Contains:

- 6 ft., 75 ohm coaxial video cable with phono (RCA-type) plugs at both ends, Cat. No. 32-3149
- 6 ft. audio cable with phono (RCA-type) plugs at both ends, Cat. No. 30-404
- 2 adapters with phono (RCA-type) jack to 3.5 mm plug, Cat. No. 30-495

Cat. No. 32-3077



#### TV/Video Game Switch

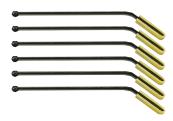
This precision switching device lets you convert your TV receiver to TV games or into a TV monitor for a home computer and then back to a TV receiver by moving one switch. Connects to your TV VHF input terminal. VHF twin-lead antenna cable is easily connected to the insulation piercing terminals on the switch body. Isolation 40 dB.

Cat. No. 32-3025





# **CLEANING PRODUCTS**



#### **Chamois Cleaning Wands**

These top quality wands are tipped with soft absorbent chamois and angled slightly to fit easily into hard-to-reach places. Reusable.

6 to a pkg.

**Cat. No. 32-3088** 50 to a pkg.

Cat. No. 32-3098



# VHS Format VCR Head Cleaning Cartridges

Wet Type

These cartridges gently clean accumulated oxides, dirt and dust from recorder and playback heads, capstans and rollers along the entire tape path inside your VCR. Regular use after 10-15 hours of playing time helps keep picture and sound clear and crisp. More frequent use is recommended if VCR is used in areas where it is exposed to heavy tobacco smoke or salt air or if the stop-frame mode is often used. Cartridges snap into place just like a VCR cartridge. Cleaning tape is super soft and non-abrasive. (Cleaning liquid included).

VHS Format

Cat. No. 32-3186



#### Lintless Head Cleaning Swabs

Designed specially to clean delicate VCR and audio tape head mechanisms without scratching. Soft, absorbent polyurethane foam on 6" wooden dowel. Reaches deep into recording unit to clean out even the most stubborn dust. Reusable. 20 swabs to a package.

Cat. No. 10-277

# CABLE HELPERS



#### 3 Ft. Video Cables

40 per Carton

"F" to "F" type, 75 ohm coax. Ideal for rack systems.

Cat. No. 32-3130-40



#### **Coax Wall Plates**

40 per Carton

Flush mounted ivory wall plate has an "F" type connector for input and output. Ideal for connecting 75 ohm coaxial cables in additional locations. Includes mounting screws.

Ivory

Cat. No. 32-3062-40

White

Cat. No. 32-3066-40



#### 6 Ft. Video Cables

25 per Carton

"F" to "F" type, 75 ohm coax. Most popular length.

Cat. No. 32-3131-25



#### **Two-Way Splitters**

80 per Carton

Takes one 75 ohm input and splits it into two 75 ohm outputs. Die cast body features cast-in grounding block and mounting tabs.

Cat. No. 32-3018-80





# **TELEVISION WALL MOUNTS**



New space-saving television/monitor mounts are ideal for today's home or office. As space-saving becomes more valuable in every room, GC mounts provide a modern alternative to bulky TV stands and home entertainment centers. By attaching your TV to a GC mount, you will save space while adding to the decor of your bedroom, den, office, bar or any room in the house. The

high-tech black, scratch resistant finish complements today's contemporary lifestyles and television designs.

In addition to saving space, GC wall mounts make watching TV easier. The 10° shelf tilt angle and the 90° left/right swivel lets you position the television for optimum viewing from any point in the room. GC wall mounts fit most 13", 19"/20" and 25"/27" televisions and monitors. All mounts include hardware for wood installation.



#### 13" Television Mount

Tray Width: 14" Max. Depth of Set: 15-1/2" Load Rating: 85 lbs. Fits: Most 13" Sets

Black

Cat. No. 32-1813

White

Cat. No. 32-1813-WH



#### 25"/27" Television Mount

Tray Width: 25"
Max. Depth of Set: 19-1/2"
Load Rating: 125 lbs.
Fits: Most 25" and 27" Sets.

Black

Cat. No. 32-1827

Ceiling Mount

Cat. No. 32-1827-CM



#### Satellite Receiver/VCR Bracket

- Attaches to Wall or Ceiling Mount
- · Adjustable Height and Width
- 2-1/2" to 4-1/2" High
- 12-1/2" to 17-1/4" Wide

Black

Cat. No. 32-1830

White

Cat. No. 32-1830-WH



#### 19"/20" Television Mount

Tray Width: 20"
Max. Depth of Set: 18"
Load Rating: 100 lbs.
Fits: Most 19" and 20" Sets

Black

Cat. No. 32-1820

White

Cat. No. 32-1820-WH

Ceiling Mount

Cat. No. 32-1820-CM



# Ceiling/Wall Anchor Kit with 4 Bolts

For concrete walls.

Cat. No. 32-1820-AK

# SATELLITE SYSTEM ACCESSORIES



#### 7 mm Coax Clip

For attaching RG-6 coaxial cable to wood or plaster walls.

10 Pack Black

Cat. No. SD-461



## RG-6 Feed-Thru Bushing

For feeding RG-6 coaxial cable thru walls.

6 Pack Black

Cat. No. SD-471



#### Coax Clip for Cement

For attaching RG-6 coaxial cable to cement or stucco walls.

10 Pack

Cat. No. SD-463



# Stereo Audio/Video Cable

For connecting satellite receiver to television. Gold-plated triple RCA plugs to triple RCA plugs.

12 ft.

Cat. No. SD-1538





#### 1-Way Indoor Amplifier

The 1-way signal amplifier provides up to 25dB gain to one 75 ohm output. FM trap prevents interference by blocking frequencies 88-108 MHz when switched on.

Cat. No. SD-4302



#### **Compression Crimp Tool**

For RG-6 cable with SD-446-BU weatherproof connector.

Cat. No. 12-556



#### **In-Line Amplifier**

950-1450 MHz for Satellite Signal.

Cat. No. SD-4005



# **RG-6 Direct Burial Coax**

Attached weatherproof "F" connectors. Fully compatible with mini dish satellite systems. 18 gauge, minimum 45% braid, swept 950-1450 MHz. Bonded aluminum shielding.

12 ft.

Cable

Cat. No. SD-700

Cat. No. SD-702

50 ft.

Cat. No. SD-704

75 ft.

Cat. No. SD-706

100 ft.

Cat. No. SD-710

1000 ft. Pkgd. in Pull-Out Box

Cat. No. SD-711



#### **Ground Rod**

Includes ground wire connection.

3/8" x 8' Copper-Clad

Cat. No. SD-9692



#### **Ground Straps and Connector**

Connects mini dish or coax grounding block to grounded location.

Galvanized Strap

Cat. No. SD-440

Copper Strap

Cat. No. SD-441

**Split Connector** 

Cat. No. SD-435-BU



#### Satellite Finder

Cat. No. SD-5001



#### **Ground Rod Clamp 5/8"**

Connects ground rod to #8 aluminum ground wire.

Cat. No. SD-426



## CATV TO 1 GHz" |



#### **Premium Grounding Block**

1 GHz

Cat. No. SD-3050-BU





All of the equipment connected to GC Accessory products are susceptible to damage from electronic surges, whether from a lightning strike or from disruption of service. That's why GC Electronics' offering of Surge products, supported by the offering from Woods Industries, our sister company, is so important to you. These electrical surges can enter expensive appliances through more than just the power lines. That's why you'll find surge protection for cable TV, DSS, and telephone as an important addition to the full range of standard AC surge protectors. GC gives you a choice of both cost-effective standard protection as well as access to premium surge protectors, all on one order. Surge protectors are offered in a variety of forms, including single and multiple wall taps, as well as multiple outlet strips. Today, GC and Woods offer you a variety of strips with longer cords to accommodate a variety of needs.

Surge protection is classified by the type and amount of protection provided:

**Basic:** Consists of one MOV (metal oxide varistor), protecting only the Hot to Neutral connection. This level of protection works well for answering machines, telephones, radios, and other appliances that are not as susceptible to damage.

**Full:** Three MOVs are mounted across all three lines (Hot to Neutral, Neutral to Ground, and Hot to Ground). This offers protection regardless of how the house or appliance is wired, or how the surge is transmitted. These units are best for TVs, VCRs, video games, and other more valuable equipment.

**Premium:** These protectors include the same features as the full protection devices plus EMI/RFI filtering and generally have higher ratings. As a result, many of the premium surges carry extended warranties. They are best suited to computer, fax, and professional AV applications.

#### **How do GC and Woods Surge Suppressors protect your equipment?**

The MOV acts like an electronic sponge. It absorbs the excess voltage and keeps it from damaging your equipment. This is accomplished in two ways. If the voltage spike is less than 1,000 nanoseconds (one millionth of a second), the spike is absorbed and no damage occurs to the appliance or the surge protector. If the spike is greater than 1,000 nanoseconds, the MOV self-destructs, protecting the equipment. When this occurs, the surge protector must be replaced.

#### **Glossary of Terms**

#### Joule Rating:

A joule is a measurement of energy. The joule rating of a suppressor indicates the amount of energy that the device is capable of absorbing. In general, the higher the joule rating, the greater the protection.

#### Clamping Voltage:

This is the amount of voltage that triggers the unit to provide surge protection. The lower the clamping voltage rating, the better the protection offered by the device. The current UL (Underwriters Laboratories) ratings indicate that the best protection available today is 330 volts, AC.

#### Response Time:

The reaction time of a surge suppressor is called its response time. Superior units have a response time of less than one nanosecond.

#### EMI/RFI Protection:

Electro Magnetic Interference and Radio Frequency Interference are forms of electronic noise that travel along the electrical lines or through the air and can interfere with electronic equipment performance. Computers, modems, printers, and fax machines are the most susceptible devices to EMI and RFI.





## **POWER STRIPS**



#### 6-Outlet Plastic Strip

Electrical Ratings: 120V/15A/1875W Power Cord: 14 Awg, UL SJT Circuit Breaker: 15 Amp Resettable

Cat. No. 64-807

4 ft. cord





#### 6-Outlet Metal Strip

Electrical Ratings: 120V/15A/1875W Power Cord: 14 Awg, UL SJT Circuit Breaker: 15 Amp Resettable



4 ft. cord

Cat. No. 64-808

10 ft. cord

Cat. No. 64-8080

15 ft. cord

Cat. No. 64-8085

# SURGE SUPPRESSORS



#### Single Outlet

Extra Protection

Electrical Ratings: 125V/15A/1875W

Maximum Surge Dissipation: 270 Joules

Maximum Spike Current: 4500 Amps

Clamping Voltage: 330 Volts

Response Time:

Less than 1 nanosecond Maximum Surge Voltage: 6000 Volts

Lines Protected:

Hot to Neutral, Neutral to Ground, Hot to Ground

EMI/RFI Noise Specifications Frequency: 100 KHz — 50 MHz Attenuation: -10db — -58 db

Cat. No. 64-811



#### 6-Outlet Strip

General Protection

Electrical Ratings: 125V/15A/1875W

Maximum Surge Dissipation: 90 Joules

Maximum Spike Current: 4500 Amps

Clamping Voltage:

330 Volts Response Time:

Less than 1 nanosecond

Maximum Surge Voltage: 6500 Volts Line Protected:

Hot to Neutral

4 ft. cord

Cat. No. 64-661

10 ft. cord

Cat. No. 64-6610

15 ft. cord

Cat. No. 64-6615

4 Outlet Strip, 90 joule protection 3 ft. cord

Cat. No. 64-663



#### Wall Mount 6-Outlet

Maximum Protection

Electrical Ratings: 125V/15A/1875W

Maximum Surge Dissipation: 240 Joules

Maximum Spike Current:

4500 Amps

Clamping Voltage: 400 Volts

Response Time: Less than 1 nanosecond

Maximum Surge Voltage: 6500 Volts

Lines Protected:

Hot to Neutral, Neutral to

Ground, Hot to Ground Coax Line Surge

Specifications Maximum **Energy Dissipation:** 46 Joules

Maximum Spike Current: 1200 Amps

Cat. No. 64-802



#### 3-Outlet Surge and EMI/RFI Filter

Suppresses Surges on all lines, hot to neutral, hot to ground, neutral to ground

**Electrical Ratings:** 15A, 125VAC, 60 Hz, 1875W

Maximum Spike: 171 Joules

Maximum Spike Voltage: 6000 Volts

Clamping Spike Voltage: 340 Volts

Maximum Spike Current: 9000 Amps

Clamping Response Time: ≤ 1 Nanosecond

EMI/RFI Filter

Filters: Normal and common mode 100 khz to 100 Mhz

Attenuation: 5db to 52 db, continuous duty

Cat. No. 64-813



# 6-Outlet Strip

Maximum Protection

Electrical Ratings: 125V/15A/1875W Maximum Surge Dissipation:

270 Joules Maximum Spike Current: 4500 Amps

Clamping Voltage:

330 Volts Response Time:

Less than 1 nanosecond Maximum Surge Voltage:

6500 Volts Line Protected:

Hot to Neutral, Neutral to Ground, Hot to Ground

Cat. No. 64-668



(UL)

#### 6-Outlet Strip

Electrical Ratings: 125V/15A/1875W

Maximum Surge Dissipation: 555 Joules

Maximum Spike Current: 13000A x 3 lines Clamping Voltage:

330 Volts

Response Time: Less than 1 nanosecond

Maximum Surge Voltage: 6000 Volts

Lines Protected:

Hot to Neutral, Neutral to Ground, Hot to Ground EMI/RFI Filtering: 150 KHz to 100 Mhz up to

40dB 4 ft. cord

Cat. No. 64-667





#### 5-Outlet Strip EMI/RFI

Maximum Protection

Electrical Ratings: 125V/15A/1875W
Maximum Surge Dissipation: 200 Joules
Maximum Current: 4500 Amps
Maximum Spike Voltage: 6500 Volts

Clamping Voltage: 400 Volts

Response Time: Less than 1 nanosecond Maximum Surge Voltage: 6500 Volts

Lines Protected: Hot to Neutral, Neutral to Ground,

Hot to Ground

Coax Line Surge Specifications Maximum Energy Dissipation: 46 Joules Maximum Spike Current: 1200 Amps

EMI/RFI Noise Specifications Frequency: 100 KHz - 30 MHz Attenuation: -5db — -40db

Cat. No. 64-830





# 6-Outlet Strip EMI/RFI

Maximum Protection

Electrical Ratings: 125V/15A/1875W Maximum Surge Dissipation: 357 Joules Maximum Current: 4500 Amps

Maximum Spike Voltage: 6000V Clamping Voltage: 330 Volts Response Time: Less than 1 nanosecond

Maximum Surge Voltage: 6000 Volts
Lines Protected: Hot to Neutral, Neutral to Ground,

Hot to Ground

Phone Line Surge Specifications

Maximum Energy Dissipation: 72 Joules

Clamping Voltage: 395 Volts
Maximum Spike Current: 1200 Amps

EMI/RFI Noise Specifications Frequency: 150 KHz – 100 MHz Attenuation: Up to 40 db"

Cat. No. 64-804







# **SURGE SUPPRESSORS & POWER STRIPS**

## Six-Outlet Metal Surge Suppressor

**Maximum Protection** 

Surge suppressor functions to absorb excess voltage and reduce the surge to a safe level before it reaches your electrical/electronic equipment. Has circuit breaker for overload protection. Indicator verifies the unit is protecting. Durable steel case with baked enamel finish. Meets UL 1449 for surge suppressors.

Specifications:

Electrical Rating: AC 125 Volts, 15 Amps, 1875 Watts

3 Line Protection: (Hot, Neutral, Ground)

Surge Dissipation: 270 Joules Surge Voltage: 6000 Volts Surge Current: 4500 Amps

Response Time: Less than 1 Nanoseconds

Surge Indicator: Fused LED

Cord: 4 ft.

EMI/RFI\*: Noise Reduction 100 Hz to 50 MHz

(Electromagnetic/Radio Frequency Interference) "

Cat. No. 64-631



#### 5 Outlet Metal Power Center

**Maximum Protection** 

Electrical Ratings: 125V/15A/1875W Maximum Surge Dissipation: 260 Joules Maximum Current: 4500 Amps Maximum Spike Voltage: 6000 V

Clamping Voltage: 330 Volts Response Time: Less than 1 nanosecond Maximum Surge Voltage: 6000 Volts 3 Lines Protected: Hot to Neutral

Phone Line Surge Specifications Maximum Energy Dissipation: 40 Joules Clamping Voltage: 395 Volts

Maximum Spike Current: 1200 Amps EMI/RFI Noise Specifications Frequency: 100 KHz – 1 MHz

Attenuation: -10 db to -35 db 5 1/2 foot cord

Cat. No. 64-6651







# **UPS (UNINTERRUPTIBLE POWER SUPPLIES)**

Protect your PC, external drives and monitor with battery backup. All-in-one power protection gives you UPS, surge protector and tel/modem/network surge protector. Simultaneous operation allows you to protect your entire computing environment at the same time. Choose the unit that is right for your needs.

#### **Multi-Device UPS**

Protect your PC, external storage drives and monitor with battery backup. Spread full-time surge suppression keeps any remaining integrated peripherals, like modems and phone systems safe.

Specifications: Capacity: 500VA

Spike Protection: 240 Joules

EMI/RFI Filter: 10 dB @ 0.15 Mhz, 50 dB @ 30 Mhz UPS Output: Overload and short circuit protection

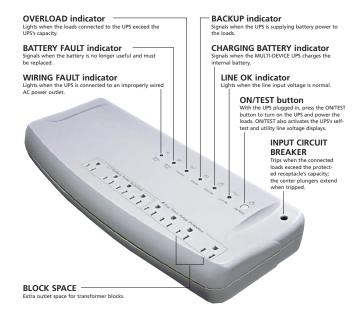
Tel/Fax/Modem: Singe Line (2 wires, RJ11 or 10Base T Cable Port)

Network (UTP, 11/RJ45) compatible jacks Short Circuit: Output: immediate UPS cutoff

Input: circuit breaker protection

Battery Back-Up: 3-15 minutes depending on computer load

Cat. No. 64-501



#### **Battery Back-Up & Surge Protection**

The ideal power protection system for home/office systems and it is internet ready.

Specifications: Capacity: 460VA

Battery Back-Up: 12-24 minutes

Input Voltage (single phase): +/- 18% at line input
Output Voltage (on battery): Simulated sine wave +/- 5%

Battery Output Frequency: 50 Hz 60 Hz +/- 5%

Cat. No. 64-460

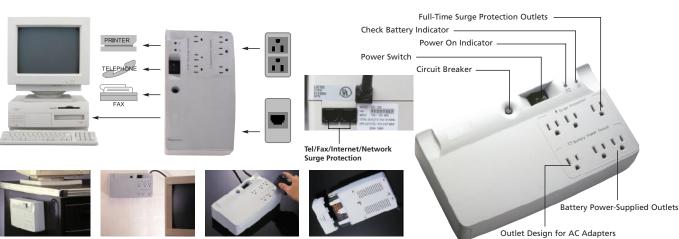
Specifications: Capacity: 330VA

Battery Back-Up: 7-15 minutes

Input Voltage (single phase): +/- 18% at line input Output Voltage (on battery): Simulated sine wave +/- 5%

Battery Output Frequency: 50 Hz 60 Hz +/- 5%

Cat. No. 64-330







#### Line Interactive UPS

Complete protection for internet computers and advanced servers.

Specifications: Capacity: 425VA

Voltage Range: +/- 25% at line input Frequency: 50 or 60 Hz +/- 10%

Voltage (on battery): Simulated sine wave @ +/- 5%

Frequency (on battery): 50 or 60 Hz +/- 5%

Spike Protection: 320 Joules

Unit Input: Fuse for overload & short circuit EMI/RFI Filter: 10 dB @ 0.15 Mhz, 50 dB @ 30 Mhz Short Circuit: UPS output cut off immediately

#### Cat. No. 64-425

Specifications: Capacity: 625VA

Voltage Range: +/- 25% at line input Frequency: 50 or 60 Hz +/- 10%

Voltage (on battery): Simulated sine wave @ +/- 5%

Frequency (on battery): 50 or 60 Hz +/- 5%

Spike Protection: 320 Joules

Unit Input: Fuse for overload & short circuit EMI/RFI Filter: 10 dB @ 0.15 Mhz, 50dB @ 30 Mhz Short Circuit: UPS output cut off immediately

#### Cat. No. 64-625

Specifications: Capacity: 1000VA

Voltage Range: +/- 25% at line input Frequency: 50 or 60 Hz +/- 10%

Voltage (on battery): Simulated sine wave @ +/- 5%

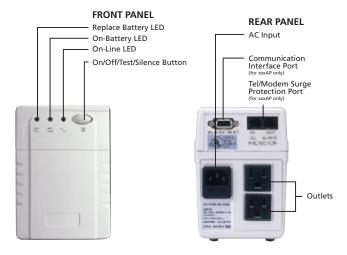
Frequency (on battery): 50 or 60 Hz +/- 5%

Spike Protection: 320 Joules

Unit Input: Fuse for overload & short circuit EMI/RFI Filter: 10 dB @ 0.15 Mhz, 50 dB @ 30 Mhz Short Circuit: UPS output cut off immediately

Cat. No. 64-1001

# Complete Protection for Internet Computers and Advanced Servers



#### **UPS Monitoring Software Features:**

- Scheduled system shutdown/reboot
- Data log for power quality and UPS/power events
- Automatic shutdown and reboot
- Real-time graphical for UPS status and power events
- Broadcast power abnormal status
- Software control ON/OFF output power



**IIIV**oods<sup>®</sup>



# **ELECTRICAL CONVENIENCE - MULTIPLE OUTLETS**

Extensive consumer research led to the development of this unique program of taps and strips that add style and function to the home or office. Decorative design, guide lights and safety features in patented, proprietary designs make this program exactly what consumers are looking for. All products are rated 15A, 125V, 1875W.

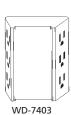
#### Home

Decorative design and safety features make these taps and strips ideal for the home.









WD-7406

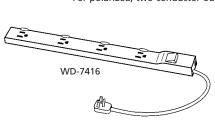


•					
Cat #	Cond	Туре	Description	Color	Std Pack
WD-87401*	2	6-Outlet	Tight Spot™ Polarized Side Entry Tap	white	8 pc. dispak
WD-7402	3	6-Outlet	Tight Spot™ Grounded Side Entry Tap	white	3
WD-87406	3	4-Outlet	Flip Top™ with night light and flip top	white	8 pc. dispak
WD-7409	3	6-Outlet	Accent™ Decorative faceplate design	white	3
WD-87410	3	6-Outlet	Wallpaper™ Side Entry Tap with snap on clear front Panel for inserting wallpaper	white	8 pc. dispak
WD-7403	3	6-Outlet	Power Light Side Entry Tap with nightlight.	white	3
WD-7404	3	4-Outlet	Easy Access™ With glow panel.	white	3

#### **Strips**

Cat #	Cond	Type	Description	Color	Std Pack
WD-7416	3	4-Outlet	Countertop™ Plastic Strip for kitchen backsplash, spring-loaded outlet covers, 1.5' cord	white	3
WD-7447	3	6-Outlet	Safety Strip™ Plastic Strip with safety covers. 3' cord	light gray	6

<sup>\*</sup>For polarized, two-conductor outlets only







#### Workshop

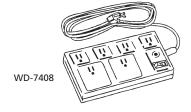
Durable strips with safety features and added room for transformer outlets make these strips ideal for the workshop.

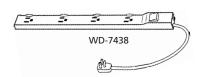






Cat #	Cond	Туре	Description	Color	Std Pack
WD-7405	3	4-Outlet	Shop Block™ Plastic Strip with hinged outlet covers, 10' cord	black/yellow	3
WD-2177	3	4-Outlet	Power Block Metal Strip, 4' cord	black/yellow	4
WD-7411	3	6-Outlet	Tough Strip™ Metal Strip, 4' cord	black/yellow	3
WD-7408	3	6-Outlet	Transformer Deck™ Plastic Strip fits 2 transformers and 4 regular outlets, 4' cord	black/yellow	3
WD-7438	3	4-Outlet	Workbench Plastic Strip with spring-loaded outlet covers	white	4
WD-7413	3	4-Outlet	Workshop	black/yellow	3











# **HOME IMPROVEMENT – MULTIPLE OUTLETS**

Woods offers a complete selection of converters ranging from a simple plug adapter to six-outlet converters and strips. All Woods' multi-outlet products are carded, blister packed, boxed or in a clamshell for attractive display at point of sale.

#### **Converters**









WD-7415

# Multiple outlet taps convert a standard wall outlet into three, four or six grounded outlets.

Cat #	Cond	Type	Description	Color	Std Pack
WD-7415	2	3-Outlet	Polarized swivel top	white	6
WD-0795	2	6-Outlet	Polarized	ivory	5
WD-0395	2	6-Outlet	Polarized	white	5
WD-0796	3	6-Outlet	Grounded	ivory	5
WD-0396	3	6-Outlet	Grounded	white	5



#### **Strips**

Taps

Multiple outlet strips convert a standard wall outlet into six or eight grounded outlets. All feature built-in circuit breaker.

Cat #	Cond	Туре	Description	Wire	Color	Std Pack
WD-0799	3	6-Outlet	Metal, 4' cord	14/3 SJT	ivory	12
WD-0728	3	6-Outlet	Plastic, 4' cord	14/3 SJT	ivory	12
WD-2371	3	6-Outlet	Plastic, 3' cord, unlighted switch	14/3 SJT	warm gray	12
WD-2174	3	6-Outlet	Plastic, 8' cord	14/3 SJT	ivory	6
WD-2178	3	8-Outlet	Metal, 6' cord	14/3 SJT	black	2







#### **Adapters**

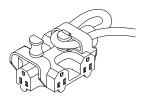




WD-2524



WD-0794



WD-87462

#### **1-Outlet Adapters**

The PowerLite™ Plug shows power is on.

Cat #	Cond	Туре	Description	Package	Color	Std Pack
WD-2524	3	1-Outlet	Grounded	Twin-Pack	vellow	3

#### **3-Outlet Adapters**

Multiple outlet adapters convert a single outlet into three grounded outlets.

Cat #	Cond	Type	Description	Package	Color	Std Pack
WD-80794	3	3-Outlet	Grounded	Bulk	beige	25
WD-0794B	3	3-Outlet	Grounded	Blister	beige	5
WD-807940	3	3-Outlet	Grounded	Bulk	orange	25
WD-07940B	3	3-Outlet	Grounded	Blister	orange	5
WD-0794GB	3	3-Outlet	Grounded	Blister	green	5
WD-80794G	3	3-Outlet	Grounded	Bulk	green	25

#### **5-Outlet Adapters**

Multiple outlet adapters convert a single outlet into five grounded outlets. Outdoor rated for use on construction sites or for the DIYer outdoor lighting projects. Features two cord locks to secure cords.

Cat #	Cond	Туре	Description	Package	Color	Std Pack
WD-87462	3	5-Outlet	Grounded	Bulk	yellow	6







# **POWER SOLUTIONS PROGRAM - FOR THE HOME & OFFICE**

Woods' Power Solutions Program was designed to offer practical, real life solutions to everyday power needs. Whether adding a multiple outlet tap that allows furniture to be pressed firmly against the wall to optimize space or adding a multiple outlet strip with an extra-long cord, Power Solutions has it covered. Contemporary packaging makes this the perfect complement to any sales floor.

#### **Power Solutions**







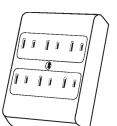


Cat #	Cond	Туре	Description	Color	Std Pack
WD-5606	2	3-Outlet	10' Cord	gray	25
WD-5601	3	1-Outlet	25' Cord	black	12
WD-5607	3	3-Outlet	10' Cord	gray	10
WD-5754	3	3-Outlet	20' Cord	gray	12

#### **Cord Covers**

Cat #	Description	Color	Std Pack
WD-5610	6' x 1/2" Cord Channel	putty	6
WD-5612	6' x 1/2" Cord Channel	black	6



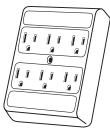


WD-0395 & 0795

#### Taps

Cat #	Cond	Туре	Description	Color	Std Pack
WD-0795	2	6-Outlet	Polarized	ivory	5
WD-0395	2	6-Outlet	Polarized	white	5
WD-7415	2	3-Outlet	Polarized, swivel top	white	6
WD-2105	3	6-Outlet	Plastic side entry w/circuit breaker	white	5
WD-0796	3	6-Outlet	Grounded	ivory	5
WD-0396	3	6-Outlet	Grounded	white	5
WD-5625	3	6-Outlet	Plastic side entry	white	5





WD-0396 & 0796

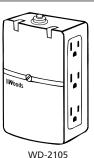
Strips					
Cat #	Cond	Туре	Description	Color	Std Pack
WD-0728	3	6-Outlet	Plastic, 4' cord	off-white	12
WD-5627	3	6-Outlet	Plastic, 4' cord	off-white	12
WD-0799	3	6-Outlet	Metal, 4' cord	ivory	12
WD-2371	3	6-Outlet	Plastic, 3' cord	off-white	12
WD-2174	3	6-Outlet	Plastic, 8' cord	off-white	6
WD-7499	3	9-Outlet	Plastic, 3' cord transformer spaced outlets	light gray	2
WD-6400	3	6-Outlet	Safety Strip with covers	light gray	6

#### Adapters















# APPLICATION SPECIFIC SERIESTM - SURGE PROTECTION

Woods' Application Specific Series™ program provides a complete line of surge protection products in an easy-to-understand packaging format. Packaging is color coded to help identify specific consumer application. Product application is also clearly stated on the front of each package along with a photograph showing the electronics that unit is designed to protect. Packaging targeted to the specific consumer application makes the buying decision easier and ensures that the consumer will choose the right level of protection for their electronics.

Product features such as number of outlets, cord length, power shut down protection and phone or coax line protection are listed in the same order on every package. This makes it easy for the consumer to identify and compare each product. A large, bright logo is used to identify the product warranty statement. A gold medallion is used for the 100% Lifetime Equipment Replacement Guarantee, while a silver medallion represents the 100% 1-Year Equipment Replacement Guarantee. All product information on the package is translated into French on the back and one side panel, and products meet UL, CSA, and CUL standards, making these products ideal for both domestic and Canadian markets. All products are rated 15A, 125V, 1875W. Phone line protection meets UL 497A.

#### **Power Solutions**







Taps  Cat #	Cond	Type	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-5187	3	6-Outlet	Computer + Modem Protector Tap with phone/fax/modem line protection	330V/510J	off- white	4	-	Yes



Strips Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-2271	3	6-Outlet	Computer + Modem Protector Strip with phone/fax/modem line protection	330V/510J	off- white	5	_	Yes
WD-5196	3	7-Outlet	Computer + Modem Protector Strip with phone/fax/modem line protection	330V/510J	off- white	6	_	Yes



Console	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-5274	3	4-Outlet	Computer + Modem Protector Console with phone/fax/modem line protection	330V/510J	off- white	2	_	Yes

#### Portable Computer + Modem Surge Protection



Lifetime 100%

1-Year 100%





Cat #	Cond	Туре	Description	500 amps/ Joules	Color	Std Pack	Replacement Guarantee	Replacement Guarantee
WD-2724	<b>4</b> 3	2-Outlet	Portable Computer + Modem Protector Tap with ModemMate™ protection	330V/300J	black	5	Yes	_

**UL Clamping** 



# IIIVoods<sup>®</sup>



1-Year 100%

#### Multimedia - Computer / Modem & Cable / Coax Surge Protection



Lifetime 100%





Cat #	Cond	Туре	Description	Voltage @ 500 amps/ Joules	Color	Std Pack	Equipment Replacement Guarantee	Equipment Replacement Guarantee
WD-5199	3	7-Outlet	Multimedia Protector Strip with phone/fax/ modem line and cable/coax protection	330V/510J	off- white	4	-	Yes

**UL Clamping** 

#### **Computer Surge Protection**







Taps					UL Clamping Voltage @ 500 amps/		Std	1-Year 100% Equipment Replacement	Lifetime 100% Equipment Replacement
Cat #	#	Cond	Type	Description	Joules	Color	Pack	Guarantee	Guarantee
WD-	5185	3	6-Outlet	Computer Protector Tap	330V/510J	off- white	4	_	Yes



Strips  Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-5175	3	7-Outlet	Computer Protector Strip with 10' power cord	330V/510J	off- white	4	_	Yes
WD-5194	3	7-Outlet	Computer Protector Strip	330V/510J	off- white	6	_	Yes

### **Stereo System Surge Protection**







Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-2272	3	6-Outlet	Stereo Protector Strip	330V/510J	off- white	5	_	Yes

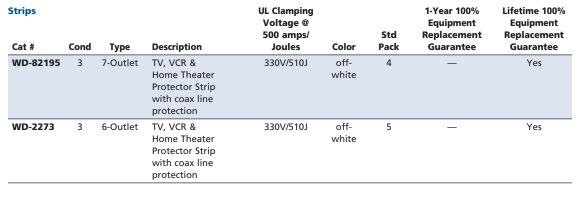
## TV, VCR & Home Theater Surge Protection



















### **Digital Satellite & Cable TV Surge Protection**







Cable				UL Clamping Voltage @ 500 amps/		Std	1-Year 100% Equipment Replacement	Lifetime 100% Equipment Replacement
Cat #	Cond	Type	Description	Joules	Color	Pack	Guarantee	Guarantee
WD-5198	3	6-Outlet	Digital Satellite & Cable TV Protector Strip with Cable/Coax, Phone and Digital Satellite line protection	330V/680J	off- white	3	-	Yes

## Office Equipment Surge Protection







Tap Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1-Year 100% Equipment Replacement Guarantee	Lifetime 100% Equipment Replacement Guarantee
WD-5613	3	3-Outlet	Office Equipment Protector Tap	330V/270J	off- white	5	Yes	_
Strip				UL Clamping			1-Year 100%	Lifetime 100%
-				Voltage @ 500 amps/		Std	Equipment Replacement	Equipment Replacement
Cat #	Cond	Туре	Description	Voltage @	Color	Std Pack	Equipment	Equipment

### **Appliance Surge Protection**







				UL Clamping Voltage @		e. 1	1-Year 100% Equipment	Lifetime 100% Equipment
Cat #	Cond	Туре	Description	500 amps/ Joules	Color	Std Pack	Replacement Guarantee	Replacement Guarantee
WD-2278	3	1-Outlet	Appliance Protector Tap	330V/300J	off- white	5	Yes	_

### **Appliance Surge Protection**









Тар	Тар		UL Clamping Voltage @ 500 amps/	Voltage @			Lifetime 100% Equipment Replacement	
Cat #	Cond	Туре	Description	Joules	Color	Pack	Guarantee	Guarantee
WD-0414	3	6-Outlet	Home Electronics	330V/300J	off- white	4	Yes	_



Strip				UL Clamping Voltage @ 500 amps/		Std	1-Year 100% Equipment Replacement	Lifetime 100% Equipment Replacement
Cat #	Cond	Type	Description	Joules	Color	Pack	Guarantee	Guarantee
WD-0417	3	6-Outlet	Home Electronics Protector Metal Strip	330V/400J	off- white	6	Yes	_
WD-0418	3	6-Outlet	Home Electronics Protector Strip	330V/400J	off- white	12	Yes	_
WD-0425	3	6-Outlet	Home Electronics Protector Strip	330V/100J	off- white	12	_	_
WD-5723	3	6-Outlet	Home Electronics Protector Strip with 10' Cord	330V/400J	off- white	4	Yes	_



Surge Suppressor Cord		ı	UL Clamping Voltage @ 500 amps/ Std			1-Year 100% Equipment Replacement	Lifetime 100% Equipment Replacement	
Cat #	Cond	Type	Description	Joules	Color	Pack	Guarantee	Guarantee
WD-5805	2	3-Outlet	Home Electronics Protector Surge Cord with 10' 16/2 SPT-2 (13A)	400V/73J	gray	10	_	_







1-Year 100%

1-Year 100%

#### Phone, Fax & Answering Machine Surge Protection



Lifetime 100%





Cat #	Cond	Туре	Description	Voltage @ 500 amps/ Joules	Color	Std Pack	Equipment Replacement Guarantee	Equipment Replacement Guarantee
WD-2277	3	1-Outlet	Phone, Fax & Answering Machine Protector Tap with phone line protection	330V/300J	off- white	5	Yes	_

**UL Clamping** 

#### **Phone Surge Protection**



Lifetime 100%

\$500





Cat #	Cond	Туре	Description	Voltage @ 500 amps/ Joules Color		Std Pack	Equipment Replacement Guarantee	Equipment Replacement Guarantee	
WD-5631	n/a	n/a	Phone Line Protector Tap (phone line only)	465V/120J	off- white	5	_	_	

UI Clamping

# SPECIALTY SURGE PROTECTION

#### StormGuard™ Electronics Surge Protection

Woods StormGuard™ Electronics Surge Protector's unique, compact design provides easy portability when protecting home electronics such as TVs, VCRs, boom boxes and modern appliances. Patented "pass-through" connection allows unit to mount directly onto the male (2 or 3 conductor) plug of the electronic equipment being protected. Indicator light shows unit is protecting. The StormGuard™ sells best at retail when cross-merchandised next to the items it is designed to protect. To help the retailer cross-merchandise this item, Woods packages the StormGuard™ on a clip strip with twelve per pack for easy placement at retail.



				Voltage @ 500 amps/	Std	Equipment Replacement	
Cat #	Cond	Туре	Description	Joules	Color	Pack	Guarantee
WD-7461	2	1-Outlet	Electronics Protector Tap	400V/70J (L-N)	white	12	Yes

**UL Clamping** 

#### Safety Surge Protector

Woods' Safety Surge Protector strip offers a practical solution where both protection from surges and protection for small children are needed. The unit also features Power Shut Down Protection, a safety circuit breaker to prevent electrical overload, a lighted power switch and an indicator light to show the unit is protecting.



Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	3 Year 100% Equipment Replacement Guarantee
WD-7437	3	6-Outlet 4' cord	Safety Surge Protector with slide-safe™ covers on each outlet	330V/270J	off- white	3	Yes

#### **TV Game Surge Protector**

Woods' TV Game Surge Protector was designed for the video game enthusiast in mind. The 6 outlets are labeled for each specific application and can accommodate two transformer spaced outlets. The perfect addition to any TV Game unit purchase.



Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	\$2,000 Equipment Replacement Guarantee
WD-7451	3	6-Outlet 4' cord	TV Game Surge Protector	330V/219J	gray	3	Yes







#### **Industrial Grade Surge Protection**

Woods' Industrial Grade Surge Protector has a tough steel construction that stands up to job site abuse. The 15 foot hi-visibility power cord and multiple outlets provide safety and power where needed, without having to mess with additional extension cords. 510 Joules provide protection for today's high-tech power tools.



Cat #	Cond	Туре	Description	UL Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	3 Year 100% Equipment Replacement Guarantee
WD-7407	3	6-Outlet 15' cord	Industrial Grade Surge Protector with 15' hi-visibility cord	330V/510J	black	2	Yes

# TRUEPROTECTION<sup>TM</sup> PROGRAM

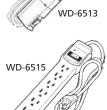
Woods' TrueProtection offers great protection on a mid-scale budget. Innovative product designs, featuring exciting and educational packaging and high joule ratings make this the perfect program for any environment.

#### **TrueProtection**









Тар	Cond/ Cord			Clamping Voltage @ 500 amps/		Std	1 Year 100%	Lifetime 100%
Cat #	Length	Type	Description	Joules	Color	Pack	Warranty	Warranty
WD-6510	3-cond.	1-Outlet	Home Electronics Surge Protector	330V/ 300J	light putty	4	Yes	
WD-6511	3-cond.	6-Outlet	Home Electronics Surge Protector	330V/ 3001	light	4	Yes	

Strip Cat #	Cond/ Cord Length	Туре	Description	Clamping Voltage @ 500 amps/ Joules	Color	Std Pack	1 Year 100% Warranty	Lifetime 100% Warranty
WD-6512	3 ft.	6-Outlet	Home Electronics Surge Protector with power shut down protection and space saving power plug	330V/ 300J	light putty	4	Yes	
WD-6513	3 ft.	7-Outlet	Computer and Modem Surge Protector with double-sided design, phone/fax/modem protection, child safety covers, transformer- spaced outlets, a space-saving power plug and a 6' cord	330V/ 510J	light putty	4		Yes
WD-6514	3 ft.	7-Outlet	Home Theater Surge Protector with Coax/Cable protection and a space saving power plug	330V/ 510J	dark gray	4		Yes
WD-6515	3 ft.	6-Outlet	Digital Satellite/Home Theater Surge Protector with phone, cable and satellite protection, a space saving power plug and 6' cord	330V/ 680J	dark gray	4		Yes



Every day, everyone involved in the Electronics industry reaches for one or more tools that are chemical in origin. GC Electronics began its proud history by supplying the essential tools to those who needed products that helped maintain or improve the performance of electronic devices. From the first product, 10-302 Radio Service Cement, to the latest, Big Bath ISO, a non-HCFC based contact cleaner, GC has provided a wide range of products in containers that made practical and economic sense to the technician.

Today, GC Electronics offers both commodity electronic-oriented aerosol chemicals and small containers of adhesives, coatings, heat sinks, and specialty chemicals that are used in the maintenance and repair of electronic components. GC's offering of chemicals is unparalleled in the industry.

GC was one of the first companies to offer aerosol-packaged chemicals to the Electronics industry. Today, GC continues to research new, environmentally friendly chemicals to make the technicians' day more productive. Distributors and technicians can rely on GC to continue to monitor both scientific and legislative trends, providing them with the latest developments in Electronic chemicals.

Chemicals, like adhesives, sealants, coatings, and heat sinks are used by the gallon in Electronic production. But, if you're repairing circuits or speakers or other electronic devices, you can't afford to handle large containers of these chemicals. For almost 70 years, GC Electronics has researched the most important chemicals used in the Electronic industry and brought them to you in manageable container sizes. This effort has resulted in one of the most comprehensive lines of chemical tools in any industry. GC continues to refine and expand its offering of chemicals to meet today's challenges.

- AirJet Duster
- Freeze Mist
- HCFC Products
- Hydrocarbon Products
- Flux Removers
- Non-Aerosol Cleaners
- Adhesives
- Head Cleaners and Accessories
- Static Control Products
- Glass Cleaners
- Heat Sink Compounds
- Specialty Chemicals
- Thinners and Solvents
- Coatings
- Chemical Applications
- Technical Specifications
- Printed Circuit Products
- Solder Flux







#### Formulating the Future

GC Electronics has been the primary supplier of electronics to the electrical and electronic industries since 1930. In 1997, GC upgraded its technology base to include the new environmental laws. GC has come up with a starting line-up of contact cleaners to comply with these laws; Big Bath, Big Bath HFE and Big Bath ISO. Big Bath ISO is a new contact cleaner that is non-ozone depleting and can be sold to anyone. Plus, it contains no CFS or HCFCS and is safe on all plastics.

GC offers a complete line of chemicals for use by electronics, electrical and industrial users. In addition to offering the most up-to-date line of aerosols, GC also supplies hard-to-find non-aerosols. GC also offers a broad range of adhesives, heat sink compounds, lubricants and conformal coatings.



#### Air Jet®

Air Jet is formulated for the dusting and cleaning of components and equipment. Air Jet contains no flammable additives. This high pressure product is used for blowing dust, dirt and residue out of hard to reach places without scratching. Air Jet is an excellent product for both home and office use.

Applications: Computers, keyboards, printers, fax machines, audio equipment, video equipment, typewriters

Air Jet contains no ozone depleting chemicals. Anti static formulation minimizes the risk of electrostatic damage to sensitive components.

8 oz. Net Wt. Aerosol **Cat. No. 19-8508** 10 oz. Net Wt. Aerosol **Cat. No. 19-8475-10** 12 oz. Net Wt. Aerosol

12 oz. Net Wt. Anti-Static Aerosol

Cat. No. 19-8475-SF

Cat. No. 19-8475



#### Freeze Mist

Freeze Mist is a refrigerant spray used to locate thermal intermittents in electronic components such as capacitors, resistors and semi-conductors. Great for removing chewing gum from fabrics, freezing adhesives for easy removal, protecting heat sensitive components during soldering or for thermal fitting metal parts. The flow control trigger nozzle enables the user to apply the product with pinpoint accuracy and reduce product usage.

**Applications:** Avionics, electronic equipment, computers.

Freeze Mist contains no ozone depleting chemicals. The anti static formulation minimizes the risk of electrostatic damage to sensitive components.

6 oz. Net Wt. Aerosol **Cat. No. 19-8410-6** 10 oz. Net Wt. Aerosol **Cat. No. 19-8410-10** 12 oz. Net Wt. Aerosol

Cat. No. 19-8410

12 oz. Net Wt. Anti-Static Aerosol Cat. No. 19-8410-SF

# **HCFC CONTACT CLEANERS**

Note: HCFC cleaners can be sold to commercial users only. HCFC's are aggressive cleaners, check for plastic compatibility.



#### Big Bath®

Big Bath is an excellent cleaner and degreaser. This non-flammable and fast evaporating universal solvent removes dirt, oil, grease, and fluxes from electronic and electrical equipment. This non-residue cleaner/degreaser is effective on switches, motors, PC boards and other components. Big Bath cleans both polar and non-polar contaminants from metals and other surfaces. Big Bath can be used to dissipate moisture in electronic and electrical devices. Formulated with HCFCs and contains no CFCs.

**Applications** include switches, motors, PC boards and other components. Test for compatibility with sensitive plastics.

Environmental Data

CFC: 0%, HCFC: 92%, Cl. Solv.: 0%,

ODP: .10, VOC: 5% 6 oz. Net Wt. Aerosol Cat. No. 19-903-6

12 oz. Net Wt. Aerosol **Cat. No. 19-902** 

12 oz. Net Wt. Anti-Static Aerosol

**Cat. No. 19-902-SF** 22 oz. Net Wt. Aerosol **Cat. No. 19-903** 

22 oz. Net Wt. Anti-Static Aerosol

Cat. No. 19-903-SF



#### **Dry Kleen**

A dry contact cleaner formulated to clean all electrical controls, contacts, relays and other components where oil and grease are not desired. Leaves no deposits. Will not damage electrical parts when used properly.

**Applications:** contacts, potentiometers, tools, machinery, electronic and mechanical components.

Environmental Data

CFC: 0%, HCFC: 50%, Cl. Solv.: 26%,

ODP: .10, VOC:47%

16 oz. Net Wt. Aerosol **Cat. No. 19-8669** 

# **CHEMICALS**





#### **Component Bath**

A non-flammable and quick evaporating general use cleaner/degreaser for removing dirt, oil, grease, and fluxes from electronic and electrical contacts in switches, motors, PC boards, etc. Non-residual and formulated to dissolve contaminants.

#### Environmental Data

CFC: 0%, HCFC: 97%, Cl. Solv.: 0%,

ODP: .10, VOC: 0%

16 oz. Net Wt. Aerosol Cat. No. 19-901

22 oz. Net Wt. Aerosol Cat. No. 19-624



#### SPRA-KLEEN

GC's most powerful general purpose contact cleaner consists of a combination of solvents, scientifically blended to dissolve and remove practically any type of deposit that accumulates. It is non-flammable. Cleans, lubricates and retards future corrosion. Will craze or melt some plastics, especially polystyrene.

Contains Dichlorofluoroethane.

6 oz. Net Wt. [170 gms.] Aerosol

Cat. No. 19-8666

16 oz. Net Wt. [454 gms.] Aerosol

Cat. No. 19-8666-16



#### Jif-Action®

Jif-Action provides dependable long lasting protection for all electronic controls and contacts. Stops noise and squeaks. Formulated to clean and lubricate all electronic and electrical contacts in switches, relays, potentiometers, as well as other electronic and electrical components. Silicone is added for greater efficiency.

#### Environmental Data

CFC: 0%, HCFC: 60%, Cl. Solv.: 0%,

ODP: .10, VOC: 25%

6 oz. Net Wt. Aerosol

Cat. No. 19-634

16 oz. Net Wt. Aerosol **Cat. No. 19-636** 



#### Big Bath® HFE

Big Bath HFE is the most effective contact cleaner. Safe on all plastics. One of the least toxic contact cleaner. Non-flammable.

3 oz. Net Wt. Aerosol
Cat. No. 19-2903-3
8 oz. Net Wt. Aersol

Cat. No. 19-2903-8

# **HYDROCARBON PRODUCTS**

Note: HCFC cleaners can be sold to commercial users only. HCFC's are aggressive cleaners, check for plastic compatibility.



#### **Big Bath® ISO**

Big Bath ISO does not deplete the ozone layer. Safe on all plastics. Contains no HCFC's. Cleans and restores relays, controls, switches, etc. Removes oil, dust and other contaminants. Leaves no residue.

9 oz. Net Wt. Aerosol

Cat. No. 19-904



#### GC Bath

#### Contact Cleaner/Degreaser for De-Energized Equipment

GC Bath is formulated with hydrocarbons/alcohol as a heavy duty cleaner/degreaser. Exceptional performance can be expected where heavy buildups of grease, oil, dirt, grime, adhesive, and other unwanted substances are encountered. This strong action product can be sprayed on the surface to break down, wash away, and clean grease from equipment, floors, work areas, engines, metal parts, and any area needed to be cleaned. GC Bath has been found to be effective to remove adhesive and adhesive over spray from surfaces. Test for compatibility with sensitive plastics. GC Bath is formulated with no chlorinated solvents and thus has no ozone depleting chemicals. No CFC's. No HCFC's.

4 oz. Net Wt. Aerosol

Cat. No. 19-724

10 oz. Net Wt. Aerosol **Cat. No. 19-725** 

16 fl. oz. Can

Cat. No. 19-725-16

55 gal., 360 lbs. Wt.

Cat. No. 19-725-55G





#### Little Bath

Hydrocarbon (petroleum) based cleaner/lubricant. Provides long lasting lubricating and oxidation protection for electrical controls and contacts.

**Applications** include: switches, contacts, potentiometers, tools, mechanical and electrical components.

Not for use on energized equipment. Safe for most plastics, check for compatibility.

4 oz. Net Wt. [113.4 gms.] Aerosol

Cat. No. 19-723





#### **DE-OX-ID**

Solventless, light oil based contact treatment compound with active ingredients to counteract oxidation. Lowers contact resistance, inhibits arcing, lubricates and protects against corrosion. For use on connectors, sockets, potentiometers, switch contacts, battery connections, telescoping antennas, relay and thermostat contacts. Should be applied sparingly (e.g. with a toothpick or a hypodermic needle injector) on dirty, dusty and heavily oxidized contacts. Precleaning with a solvent type cleaner is recommended. Best results are obtained with small amounts.

2 fl. oz. [59 ml.] Bottle

Cat. No. 19-1902

4 oz. Net Wt. [113.4 gms.] Aerosol

Cat. No. 19-1906



#### Jiffy Bath

Consists of hydrocarbon solvents, safe for use on most materials. It possesses a balanced ratio of cleaning solvents to lubricating and protecting ingredients. Contains silicone oils which will not oxidize and will remain active as protective coating and lubricating agent for years, even under adverse environmental conditions such as high humidity and contaminated atmosphere. One of the most universal and safe contact cleaners and may be used on all rotating and sliding contacts in any types of switches or controls.

2 fl. oz. Bottle Cat. No. 19-630

4 oz. Net. Wt. Aerosol Cat. No. 19-638

10 oz. Net. Wt. Aerosol

Cat. No. 19-640

16 fl. oz. can.

Cat. No. 19-640-16



#### GC Natural Citrus Cleaner

Excellent non-corrosive cleaner/degreaser with pleasant citrus scent. Safely removes most adhesives, plastics and tape residue. Created out of concern for the environment, this natural citrus cleaner is effective for removal of adhesives, grease, oil, stains, road tar, rubber marks, residue from decals, heel marks, graffiti, lipstick, release agents, and even soap film. Use where chlorinated solvents are not recommended. This can be used safely on most substrates, including painted surfaces, glass, porcelain, concrete, and is compatible with most plastics. This product does not contain ozone depleting chemicals. No CFC's. No HCFC's. Do not use as an electrical contact cleaner.

12 oz. Net Wt. Aerosol **Cat. No. 19-700** 





## FLUX REMOVERS



#### General Use Flux Solv

General Use Flux Solv evaporates quickly and is excellent for the removal of most ionic and rosin fluxes from electronic components, PC boards or other surfaces requiring a general flux remover. Contains HCFC and alcohol.

**Applications:** PC boards, electronic components, electrical components.

**Environmental Data** 

CFC: 0%, HCFC: 72%, Cl. Solv.: 0%,

ODP: .10, VOC: 25%

12 oz. Net Wt. Aerosol **Cat. No. 19-328-12** 22 oz. Net Wt. Aerosol

Cat. No. 19-328-22



#### Extra Strength Flux Solv

Non-flammable and fast evaporating. Extra Strength Flux Solv is excellent for the removal of ionic and non ionic fluxes from electronic components, PC boards or other surfaces requiring an extra strength flux remover. Contains Perchloroethylene.

**Applications:** PC boards, electronic and electrical components

Environmental Data

CFC: 0%, HCFC: 85%, Cl. Solv.: 6%,

ODP: .10, VOC: 12%

16 oz. Net Wt. Aerosol Cat. No. 19-270



#### **GC Flux Solv**

#### For De-Energized Equipment

GC Flux Solv has a hydrocarbon/alcohol base. It is excellent for the removal of Ionic and Non-Ionic fluxes from electronic components, PC boards or other surfaces requiring an extra strength flux remover. Fast evaporation. GC Flux Solv is formulated with no chlorinated solvents and thus has no ozone depleting chemicals. No CFCs or HCFCs.

10 oz. Net Wt. Aerosol **Cat. No. 19-825** 

16 fl. oz. can

Cat. No. 19-825-16

1 gal.

Cat. No. 19-825-G



#### Flux Remover & Cleaner 2

Removes all types of organic flux. Pinpoint applicator supplied. Non ODC. Contains: Trichloroethylene, Carbon Dioxide and Isopropyl Alcohol.

2 fl. oz. [59 ml.]

Cat. No. 19-220 16 fl. oz. [473 ml.] Can Cat. No. 19-229

16 oz. Net Wt. [454 gms.] Aerosol

Cat. No. 22-271



#### Static-Free High Strength Flux Remover

A powerful Flux Remover that will dissolve and flush away all known fluxes immediately. May cause loss of nomenclature from capacitors or like products. Can discolor some plastics. Will not harm circuit performance. Static-free formulation. Contains Trichloroethylene, Isopropanol and Carbon Dioxide

Static-Free 12 oz. Net Wt. [340 gms.] Aerosol

Cat. No. 19-7518

Static-Free 18 oz. Net. Wt. [510 gms.] Aerosol

Cat. No. 19-7522





## NON-AEROSOL CLEANERS



#### Isopropyl Alcohol

(Anhydrous)

This extremely pure alcohol is frequently the recommended cleaner by manufacturers of tape heads, disc drives, etc. Does an excellent job of dissolving and removing oxides from recording heads, also an excellent degreaser. Leaves no residue. This is not an aerosol, but an aerosolstyle can with a screw on top. Suggested for use with swabs, clean cloth, or by immersion or trigger sprayer.

16 fl. oz. [473 ml.] Cat. No. 10-1507 1 gal. [3.29 l.]

Cat. No. 10-1507-G

## GLASS CLEANERS



#### Glass & Plastic Cleaner

Wipes dirt, dust and grime from all glass and plastic surfaces without leaving streaks or dulling residue. Contains grease-cutting ammonia. Convenient aerosol packaging. Economical for home or industry.

14 oz. Net. Wt. [397 gms.] Aerosol Cat. No. 10-9082



#### **GC Glass Treatment Compound**

For glass, plastics, and finished surfaces. Easy to apply and very effective in removing smudges, dirt, oily films and other deposits with a minimum amount of rubbing. Active ingredients are silicone-glycol polymers which provide a high lustre and minimize or eliminate dust attracting static. Harmless to practically any surface, will not scratch, discolor or streak.

6 fl. oz. [177 ml.] Bottle Cat. No. 10-1756

N.S.N. 7930-01-053-3758

# **HEAD CLEANERS**



#### VCR/Magnetic Head Cleaner

VCR/Magnetic Head Cleaner removes dust, dirt and oxide from record and playback heads on VCR's, cassette decks and computer drives. Evaporates quickly and leaves no residue.

Environmental Data

CFC: 0%, HCFC: 0%, Cl. Solv.: 0%,

ODP: .0, VOC 100%

2 fl. oz. Non-Aerosol Cat. No. 19-5302

4 fl. oz. Net Wt. Aerosol

Cat. No. 19-5304

16 fl. oz. Non-Aerosol

Cat. No. 19-5302-16

1 gal.

Cat. No. 19-5302-G



#### Travel Dispenser

Designed for easy one-handed delivery of a wide variety of liquids onto a cloth, cleaning pad, cotton ball or other wipe-on applicators. Can conveniently apply polishes, removers or other liquid products onto the applicator eliminating direct hand contact, spillage, fumes and waste while protecting product quality. The locking top makes this product excellent for use in the technicians tool box. This dispenser is available empty or prefilled with two of your favorite GC Chemicals; Head Cleaner and Isopropyl Alcohol.

\*4 fl. oz. VCR/Magnetic Head Cleaner [19-5302]

Cat. No. 19-773

\*4 fl. oz. Isopropyl Alcohol [10-1507]

Cat. No. 19-770

4 fl. oz. Dispenser only

Cat. No. 19-774

\*Note: These NO.'s are prepackaged with Cat. No.'s in brackets

# **CHEMICALS**

## **LUBRICANTS**



#### Lubriplate

White, lithium soap base grease lubricant that provides superior lubrication and reduces friction and wear to a minimum. Suitable for use on wiping contacts. It retains consistency over a wide range of temperatures, will not oxidize or harden and provides outstanding protection against corrosion.

1-3/4 fl. oz. [52 ml.] Tube **Cat. No. 10-2302** 



#### Luberex

Superior calcium stearate base grease compound for general use in industry, the shop or at home. Provides excellent lubrication for bearings, appliances, hand tools, bicycles and other sporting equipment including fishing reels and guns; also for business machines, instruments and automotive lubrication. Excellent dielectric properties.

2 fl. oz. [59 ml.] Tube **Cat. No. 10-1206** 



#### **Tunerlub**

Special lubricant for high frequency contact applications such as television tuners. Purified without traces of metals or metal oxides. Gives lasting protection against oxidation and corrosion. Especially important for use on equipment operated in corrosive atmospheres such as seashores or in industrial areas.

1-3/4 fl. oz. [52 ml.] Tube **Cat. No. 10-2610** *N.S.N. 9150-01-054-0546* 



#### **Phonolube**

Light bodied grease made of polymerized oil, specially developed for the lubrication of small geared mechanisms such as phonographs, record changers, TV channel and record mechanisms, etc. Retains its viscosity over a wide range of temperatures. Highly resistant to oxidation. Will retain its excellent lubricating qualities for years.

2 fl. oz. [59 ml.] Tube **Cat. No. 10-1223** 



#### Conductive Grease & Anti-Oxidant Compound

A lithium soap base grease with zinc and graphite fillers. As a lubricant, it will dissipate static charges (use only in light load applications). Also useful for wire connectors and aluminum conduit joints. Penetrates aluminum oxide to maintain inter-strand and interconductor current paths. Guards against oxidation, improves conductivity and produces a cooler connection.

1 oz. Net Wt. **Cat. No. 19-820** 



#### **Graphite Lubricant**

Dry powdered graphite is the finest lubricant for metal, wood, plastic, and rubber. (No solvents to harm plastics.) Guards against sticking and dirt build up. Reduces wear and corrosion. Ideal for many uses including locks, hinges, doors, wheels, and rubber parts.

1-1/8 oz. Net Wt. Cat. No. 19-821



#### Reach-All Pen Oiler

High quality, non-gumming instrument oil. Tube extends and retracts. Excellent for lubricating instruments, gears, timers, clocks, guns, fishing reels, and other densely mechanized items.

1/2 fl. oz. [15 ml.] Pen Type Cartridge

Cat. No. 10-984



#### **Pocket Oiler**

High grade electronic oil in a leakproof seethrough plastic barrel container with pocket clip attached. Accurately dispenses one drop at a time. For use on electronic and electrical devices, clocks, office machines and sporting goods. Not refillable.

0.135 fl. oz. [4 ml.] **Cat. No. 10-8885** 



#### Teles-Oiler

Highly refined natural petroleum oil for general purpose lubrication on motors, small gears, sliding mechanisms and others. Rust and oxidation inhibitor. Includes a wetting agent for better penetration. A special feature is the plastic container with a telescoping spout which pulls out to 7".

4 fl. oz. [118 ml.] Bottle **Cat. No. 10-9410** 

N.S.N. 4930-00-092-3912 N.S.N. 4930-00-131-2871







#### Rust Penetrant & Lubricant

Effectively cleans most surfaces of grease, tar, grime, and contains a long lasting lubricant that continues to lubricate long after other products have evaporated. Use on dies & molds, tools, vending equipment, windows, doors, locks, rusted bolts or fittings, linkages, cables, chains, cranks, electronic gear, battery terminals, plus thousands of other uses.

10 oz. Net Wt. Aerosol **Cat. No. 19-070** 4 oz. Net Wt. Aerosol **Cat. No. 19-074** 



#### Formula 70

Formula 70 has the ability to lubricate, dispel and remove moisture, penetrate to free corroded parts and provide a protective shield against rusting and corrosion. Will be appreciated by owners of automobiles, motorcycles, snowmobiles and campers as it dries and protects cables and distributors; lubricates and prevents squeaks in chaindrives, locks, windows and sliding seats. Provides maintenance for doors, windows, hand tools, power tools, sliding doors, electrical appliances, locks, hinges and garden tools. Also used on firearms, rods and reels, motorboats (wet engines) and a host of other uses.

Meets Mil. Spec.: MIL-C-23411-A Meets Fed. Spec. BB-C-101B

12 avdp. oz. [340 gms.] Aerosol

Cat. No. 10-700





#### Sili-Spray

Quality silicone lubricant. Handy aerosol features adjustable 3-way valve. Dispenses lubricating film either light, medium, or heavy according to need. Leaves no residue buildup. Ideal for home, office, workshop, hinges, slides, and other moving parts on automobiles, boats, appliances, toys and drawers (wooden types). May be painted over.

4 oz. Net Wt. [113.4 gms.] Aerosol

Cat. No. 19-600



#### **Dry TFE**

GC Dry TFE is an all purpose dry film lubricant and release agent that contains minute Teflon® particles to lubricate where a dry lubricant is needed. Excellent as a mold release and for potting compounds. Temperatures range: -300° F to +500° F. (Teflon is a registered trademark of Dupont.)

4 oz. Net Wt. [113.4 gms.] Aerosol

Cat. No. 19-810





## **ADHESIVES**

GC Electronics offers three basic types of adhesives:

- 1. EPOXY CEMENTS: Among the strongest and most universal of all bonding materials. They consist of two parts which must be mixed before applications. Epoxies dry without heat or pressure at room temperature through catalytic action.
- 2. CYANOACRYLATE ADHESIVES: Do not require the use of an added catalyst, nor heat or pressure. Dries within seconds through the process of polymerization.
- 3. SOLVENT-RELEASE ADHESIVES: Resins or polymers in solution. This general category also includes welding type adhesives which create a bond of exceptional strength.

#### **Epoxy Cements**

Two-component, solventless cements which form an exceptionally strong bond (up to 4,000 psi) and they do not shrink on curing. May be used to cement porous and non-porous substances including all metals, glass, ceramics, most plastics, cardboard, wood, rubber, and fiber. They resist moisture, most solvents, acid, and alkalis. The consistency of epoxy is that of semi-fluid or putty. They have a tendency to "fill-in" and will produce strong bonds even if the parts to be cemented do not match perfectly. Epoxy cures at room temperature, but elevated temperatures (up to 80°C) may be employed to speed up the curing time. All GC epoxy cements are easy to prepare as they require a 50/50 composition to be mixed. This can be judged when squeezing out the tube, for the exact ratio is not critical. The working life, often called "pott life" of the mixture, is the time span from mixing the two parts until the chemical reaction starts to harden the compound. A product with short working, and correspondingly short curing time, is indicated where a single repair is to be made and the mixture can be applied immediately after preparation. For production purposes, a type with long pott life should be selected.



#### **Quik Stik**

5 Minutes Set

Clear, fast curing epoxy adhesive. In view of its short pott life, use is recommended when a single repair must be made and the mixed adhesives can be used within one or two minutes. Cemented items can be safely handled within eight to twelve minutes, with full hardness obtained after several hours. This cement is relatively thin in consistency and should be used to cement closely matching surfaces. The glue line is usually invisible.

Pkg. of two 1/2 fl. oz. Tubes

Cat. No. 10-114

Double Syringe 30cc Cat. No. 19-822



# **Epoxy Super Glue**

5-6 Hour Set

Versatile epoxy cement particularly suitable for cementing non-porous materials. Cures at room temperature. Bond strength of over 3000 psi. Will not shrink through curing. Resistant to water, solvents, heat, cold and fungus. Excellent dielectric properties. Mix in equal parts from two tubes.

Pkg. of two 3/4 fl. oz. [44 ml.] Tubes Cat. No. 10-100



#### **Epoxy Glue**

5 Hours Set

Provides an exceptionally hard and strong bond. Good dielectric properties. Gray-white in color with fillers added to increase viscosity and make it thixotropic (non-running). May be used to fill gaps or to replace broken sections. Bonds may be over-filled and filed or sanded after curing.

Pkg. of two 2 fl. oz. [59 ml.] Tubes

Cat. No. 10-347

N.S.N. 8040-00-281-2308



#### **GC Potting Epoxy**

Black opaque epoxy used for potting and encapsulating electronic circuits. Use to environmentally protect or conceal circuits. This product is excellent when used with Chassis Boxes. Working Time (Pott Life), 1 Hour, Mix ratio: 1 to 1, Temperature Range: -40° to 180° F.

**Electrical Properties:** 

Volume Resistivity: 1012 @ 300°F Dielectric Constant: 4.2 (104 CPS @ 77°F) Dissipation Factor: 0.014 (104 CPS @ 77°F)"

8 oz. Net Wt. Kit (2 - 4 oz. Bottles)

Cat. No. 19-823

18 oz. Kit (2 - 9 oz. Bottles)

Cat. No. 19-824

2 gal. Kit (2 - 1 gal. Containers)

Cat. No. 19-824-2G







#### **Conductive Epoxy**

Electrically conductive two part for attaching electrical components. Mix ratio 1/1. Pot life 40 minutes. Cure 24 hours. Vol res. 5.0 x 10-3 ohm-cm max.

6 gms. Net Wt. Kit Cat. No. 19-2092



#### **Epoxy Putty**

GC Epoxy Putty is a two part epoxy in a single tube. Amount needed is cut off and kneaded together. Two minute work life. Dielectric strength: 400 volts/mil. Sets hard in 20 minutes, may be drilled and tapped. Max. useful temp. 300° F.

Applications: Plumbing repairs, works under water. Electrical, use in place of tape.

4 oz. Net Wt. [113.4 gms.] Tube

Cat. No. 19-348

#### Cyanoacrylate Adhesives & Debonders

"Instant bonding" cyanoacrylate adhesives cure in seconds, do not depend on evaporation of solvents and require no clamping. They are colorless and moisture resistant. They are ideal for bonding metals, plastics, rubber, glass and ceramics to each other or to dissimilar materials. Bonding strength up to several thousand psi is possible making them among the strongest adhesives available. These adhesives are economical, as only a drop is required. The best type should be determined by experimentation. Use them to repair broken plastic cabinets and other plastic items, attaching nameplates and rubber feet to panels and chassis, cementing broken ceramic glass and rubber items, repairing jewelry, etc. Porous surfaces may be bonded with Gelweld No. 19-177. The average setting time is between 10 and 100 seconds, after which the cemented articles can be handled. These adhesives may even be used to bond surfaces which are normally difficult to cement, such as teflon, polyethylene, vinyl, silicone rubber and glass.



#### **GR-R-RIP**

World famous Ethyl Cyanoacrylate rapid bonding adhesive. Bond strength not affected by temperatures from -112°F to +212°F (-80°C to +100°C).

0.075 fl. oz. [3 gm.] Bottle

Cat. No. 19-115



#### **GELWELD**

**GEL Cyanoacrylate Adhesive** 

Ethyl Cyanoacrylate super strength adhesive in a "gel" form - will not drip or run. Fills gaps well.

0.101 fl. oz. [3 ml.] Tube

Cat. No. 19-117



# GC Super Glue Regular Formula

#### Ethyl Cyanoacrylate Adhesive

Medium viscosity formula for efficient wicking action, faster curing time. Excellent for bonding any combination of plastic, rubber or metal parts. This grade is ideal for small or fine work on nonporous, smooth surfaces. It fills gaps of .003-.005" ". Highly resistant to acid, alkali, alkali water, solvents and fungus. Non-toxic.

Meets Mil. spec. MIL-A-46050B Type 1 Class 2.

0.075 fl. oz. [2 ml.] Tube Cat. No. 10-120



#### **GC Super Adhesive**

#### Ethyl Cyanoacrylate Adhesive

Forms strong, lasting bonds in seconds between either similar or dissimilar materials—metal, porcelain, plastic, glass, most rubbers, hardwoods, and other non-porous materials with smooth, close-fitting surfaces. The bond resists softening at temperatures up to 320°F (160°C). Your most versatile adhesive for bonding, attaching, fixturing. Cures to a strength of 5000 psi; because it is solvent-free, there is no shrinking during curing and no solvent fumes. Fills gaps to .003".

Meets Mil. Spec. MIL-A-46050C Type I Class 2.

1 fl. oz. [29 ml.] Bottle

Cat. No. 10-128





#### Solvent Release Adhesives

Most lacquer, rubber or plastic base adhesives are the solvent-release type. They are universal and easy to apply with no special preparation required. However, they are limited in their application as they are not suitable for cementing non-porous surfaces such as metals, glass, glazed ceramics and others, due to the inability of the solvent to evaporate quickly, except around the edges. They do work very well if one or both of the bonding surfaces consists of material which has some porosity.



#### General Purpose Plastic Cement

A solvent-release adhesive with a special Nitrocellulose Lacquer Base. The bond is usually invisible and hard, but not brittle. Adheres especially well to plastics, paper, leather, ceramics and metal. Quick-drying and waterproof. Widely used by repairmen, model builders, hobbyists and do-ityourselfers.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-324

N S N 8040-00-063-1387

8 fl. oz. [237 ml.] Bottle with Brush

Cat. No. 10-328



#### GC Bond

Thermoplastic adhesive based on synthetic components with unusually strong bonding characteristics to most materials. Produces a waterproof, resilient and long-lasting flexible bond. Light tan in color. GC Bond's uses range from cementing paper and cardboard to cementing electronic components to circuit boards and chassis. Sticks well to all metals and glass. Dries in 15 to 30 minutes.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-4302

N S N 8040-00-682-6690

8 fl. oz. [237 ml.] Bottle with Brush

Cat. No. 10-4308

N S N 8040-00-181-7710

16 fl. oz. [473 ml.] Bottle

Cat. No. 10-4316

N.S.N. 8040-00-230-9676



#### Service Cement

A quick-drying and waterproof clear adhesive which forms a strong, hard but vibration-resistant bond with minimal shrinkage. A true universal adhesive for shop, industry, home and hobby use. Ideal for speaker repairs. May also be used for gluing porous or semi-porous materials to each other or to metals, plastics, etc. Not suitable for metal-to-metal, glass-to-metal or other non-porous to non-porous surfaces, for which Perma-Bond, GR-R-RIP or epoxy cements are more suitable.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-302 1 gal. [3.8 l.] Can Cat. No. 10-310



#### Rubber-to-Metal Cement

A heavy-bodied, black rubber-based cement with outstanding bonding qualities to many materials such as natural and synthetic rubber, metal, wood and plastics. Dries quickly and produces a lasting, flexible bond which often exceeds the strength of the material itself. Used to cement any rubber or flexible plastic part to cabinets, chassis or panels; also for gaskets, weather strips, etc.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-352

N.S.N. 8040-00-261-8450



#### **Acrylic Cement**

Consists of solvent for acrylics (plexiglass, lucite and others), slightly thickened with dissolved acrylic resin. It actually "welds" items made of plexiglass. The joint is usually invisible and stronger than the material itself. Cements many items used in electronics for decorative or functional purposes as well as acrylic signs, art objects and decorative pieces.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 19-4002

N.S.N. 8040-00-209-1346 N.S.N. 8040-00-259-6181 N.S.N. 8040-00-503-0315

8 fl. oz. [237 ml.] Bottle with Brush

Cat. No. 19-4008

N.S.N. 8040-00-063-1381



#### **Vinylite Cement**

Vinyl resin-base cement that is waterproof, almost invisible and has excellent resistance to moisture, most acids and alkalis. Used to cement items made of rigid or flexible vinyl, wood, cardboard, paper, metal, plastics, and glass. Very flexible. Lends itself particularly well to items where a rigid bond is not desirable

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-5802

N S N 8030-00-264-3838



#### **General Adhesive** can be used on any surface

#### Spray Adhesive

This contact adhesive bonds paper, cardboard, plastic, glass, rubber, cloth, foil, metal, etc. Excellent for placing labels.

Cat. No. 19-712



# **CHEMICALS**

## RTV



#### Silicone Rubber Adhesive/Sealant

One-component elastomer cures to a tough, rubbery solid when exposed to moisture in the air. Designed to fulfill industrial and electronic service sealing and bonding requirements, this sealant has excellent adhesive strength, high elongation and outstanding insulation and heat resistance qualities. Develops primerless adhesion to a variety of materials, including metal, glass, most wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fibers; most plastics and painted surfaces. Resists weathering, vibration and exposure to oil, moisture, ozone, and temperatures from sub-zero to 450°F. Cures to a tack-free surface in 20 minutes. Full cure, 24 hours, Ideal for many sealing, bonding and insulating applications, including general

electrical insulation, potting exposed electronic components, bonding gaskets for heating and refrigeration units, formed-in-place gaskets for gear boxes, compressors, pumps and outdoor motor covers, pressure sealing of aircraft cabins and cockpits, caulking sheet metal stacks, ductwork and equipment housings, and as an anti-abrasion coating.

#### As Cured—Electrical

ASTM D 257 Volume Resistivity, ohm-cm – 1.5 X 10<sup>15</sup>
ASTM D 149 Dielectric Strength, volts/mil – 550
ASTM D 150 Dielectric Constant, at 60 Hz – 2.8 at 100 Hz – 2.8 at 100 kHz – 2.8 ASTM D 150 Dissipation Factor, at 60 Hz – 0.0015 at 100 Hz – 0.0015 at 100 kHz – 0.0015

#### Silicone Rubber Sealant meets the following requirements:

FDA: FDA regulation No. 21 CFR 177.2600 when fully cured and washed. UL: Recognized for service to 30°F (150°C) where elongation is not necessary. Meets Mil. Spec. Mil-A-46106A Type 1, Meets Fed. Spec. TT-S-001543A

\*3 fl. oz. [90 ml.] Tube w/Dispensing Nozzle Clear

Cat. No. 10-150

\* Manufactured for GC Electronics by Dow Corning



#### Electronic Grade Silicone Sealant/Adhesive

One part non-corrosive, neutral cure electronic grade silicone sealant. Will remain flexible from -70° F to +300° F. (-60° C to +200° C) An excellent adhesive for many electrical and electronic applications where corrosion to metals is a problem. Good dielectric properties, high surface resistivity and resists electrical tracking. Meets the requirements of Mil-A-46146A-Type 1; meets the requirements of FDA status, FDA regulation #177.260

3 fl. oz. [90 ml.] Color: Clear

Cat. No. 19-155



#### Silicone Caulk Tube

GC Industrial RTV Silicone is a one-part high modulus Sealant/Adhesive and Gasketing material. Remains flexible from -80°F to +400°F (-63°C to +205°C). Will not crack, crumble or dry out. Unaffected by ultra-violet, weather, most chemicals and solvents. Adheres to metal, wood, glass. fiberglass, ceramics, fabrics and many plastics. Meets the following specifications: Agriculture Canada; USDA; FDA regulation No. 21 CFR 175.105; Mil Spec Mil-a-46106A-Type1 and US Fed. Specs. TT-S-001543A Class B and TT-S-00230C Type 2, Class B.

10.2 fl. oz. [301.6 ml.] Caulk Tube

Cat. No. EL-615

# GC HEAT SINK COMPOUNDS

The technology of today's electronic devices has increased current handling capacity. The additional heat buildup places great demands on heat sink materials. GC offers a complete line of heat sink compounds to meet these demands. The HTC product offers over twice the thermal conductivity of conventional products and is available in silicone and non-silicone versions. The water-soluble heat sink grease offers excellent thermal conductivity and easy cleanup. The standard silicone and non-silicone products continue to meet most requirements. See chart for typical properties.



#### Silicone (Z9)

Industry standard zinc oxide filled silicone heat sink grease for most applications. Will not soften at elevated temperatures or dry out or harden. Meets Mil. Spec. C-47113.

1 fl. oz. [29 ml., 2.3 oz. avdp.] Tube

Cat. No. 10-8109 6.5 gms. avdp. Tube Cat. No. 10-8108 1 lb. [454 gms.] Can Cat. No. 10-8106



#### HTC (High Thermal Conductivity)

Higher thermal conductivity formula has all the same benefits of conventional heat sink greases, plus is exceptionally stable in high humidity applications. Available in silicone and non-silicone versions.

Silicone Based, 1 oz. avdp. [28.4 gms.] Syringe

Cat. No. 10-8135

Non-Silicone Based, 1 oz. avdp. [28.4 gms.] Syringe

Cat. No. 10-8130

1 lb. [454 gms.] Jar

Cat. No. 10-8135-1







#### Type 44 Non-Silicone

Compounded with 100% synthetic base stocks. Features excellent heat transfer efficiency, thermal stability, high flow rate, no separation, bleed or migration typical of silicone based greases. Meets Bellcore Spec. KS21334 and Mil. Spec. C-47113.

1/2 fl. oz. [1.46 oz. avdp., 41.4 gms.] Jar Cat. No. 10-8118
2.5 avdp. oz. Tube Cat. No. 10-8120
1 lb. [454 gms.] Jar Cat. No. 10-8126



#### Water Soluble

Easy clean-up, non-migrating. Eliminates use of solvents, is non-reactive, exhibits excellent dielectric properties.

1 oz. avdp. [28.4 gms.] Syringe **Cat. No. 10-8132** 

#### **Heat Sink Properties (Typical)**

Tests	Test Methods	10-8109 Standard Silicone	10-8118 Standard Non-Silicone	10-8135 H.T.C. Silicone	10-8130 H.T.C. Non-Silicone	10-8132 Water Soluble Non-Silicone
Appearance	Visual	White Paste	White Paste	Off-White Paste	Off-White Paste	White Paste
Consistency - Penetration	ASTM D-217	290	260	290	305	250-350
Specific Gravity 60° F	ASTM D-70	2.4	2.5	2.5	2.2	2.8
Bleed, 30 Hrs. %Wt. 150°C 200°C 300°C	FTM-321 (Modified)	<0.5	<0.5	<0.2	<0.2	1.00
Evaporation, 30 Hr. %Wt 150°C 200°C 300°C	FTM-321 (Modified)	<0.1	<0.1	<0.1	<0.1	1.00
Thermal Conduvtivity CAL/SEC/cm K	Hot Wire Method	1.8 x 10-3	1.8 x 10-3	3.4 x 10-3	3.3 x 10-3	28.2 x 10-3
Dielectric Strength 0.050" gap volts/mil.	ASTM D-149	400	420	300	300	265
Dielectric Constant 1000 HzD-150	ASTM 4.9	4.5	4.9	4.9	5.02	
Dissipation Factor 50 Hz, Ohm-cm 1000 Hz, Ohm-cm	ASTM D-257	0.005 0.001	0.003 0.003	0.002 0.002	0.002 0.002	0.0022
Volume Resistivity OHM-CMD-257	ASTM 2 x 10-15	1 x 10-15	2 x 10-13	9 x 10-11	2.0 x 10-15	
Operating Range °C		-40 to 400	-22 to 390	-40 to 400	-22 to 390	-40 to 150
Arc Resistance, sec		130	130	250	240	





## THINNERS & SOLVENTS



#### **Polystyrene Q-Dope Thinner**

For thinning polystyrene base coil dopes and cements. Can also be used for cementing polystyrene parts.

2 fl. oz. [59 ml.] Bottle **Cat. No. 10-4102** *N.S.N. 8010-00-063-1376 N.S.N. 8040-00-902-1159* 



#### **Paint Thinner**

All purpose mineral spirit type thinner and solvent for paint and varnish base products.

2 fl. oz. [59 ml.] Bottle **Cat. No. 10-6702** *N.S.N. 8010-00-054-1521* 



#### **Radio-TV Cement Solvent**

Fast acting solvent formulated for use in speaker repair. Dissolves cement on speaker cones, spiders, frames, voice-coils. May also be used as a thinner for all lacquer type cements.

2 fl. oz. [59 ml.] Bottle Cat. No. 10-312 8 fl. oz. [237 ml.] Bottle Cat. No. 10-318

16 fl. oz. [473 ml.] Bottle **Cat. No. 10-320** 

1 gal. [3.8 l.] Can Cat. No. 10-321



#### **Print Kote Solvent**

A solvent to remove silicone and other types of protective coatings from PC boards. Required when modifying PC boards or replacing components where the protective coating interferes with the desoldering and resoldering operation.

2 fl. oz. [59 ml.] Bottle **Cat. No. 22-209** *N.S.N. 6810-00-711-2185* 



## **COATINGS**



#### Silver Print

#### (Conductive Paint)

For PC repair or add-on circuit traces. Pure silver in lacquer based carrier may be brushed on for either conductors or shielding. Connections have equal or better conductivity than copper (0.1 ohms per square).

1/2 troy oz. [15.69 gms.] Bottle

Cat. No. 22-201

1 troy oz. [31.1 gms.] Bottle

Cat. No. 22-202



#### **Nickel Print**

#### (Conductive Paint)

A quick drying lacquer-based coating, pigmented with powdered nickel. For repair and modification of printed circuits. Conductivity is 5 to 6 ohms per square.

2 fl. oz. [59 ml.] Bottle

Cat. No. 22-207



#### Red Insulating Varnish

Alkyd-based compound, especially resistant to environmental extremes including oils, water and most acids and alkalis. Retains its high dielectric strength even if wet and is, therefore, especially adaptable to the insulation of electrical and electronic devices or components which may be operated in a very humid climate and up to 250°F (121°C). For general insulation of coils, transformers, motor windings and for all-around protection against oxidation and atmospheric attacks.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-9002

8 fl. oz. [237 ml.] Can

Cat. No. 10-9008



#### **Print Kote Conformal Coating**

The ultimate coating for PC boards provides a protective shield to resist environmental contaminants. Prevents arcing and shorting. Air dry 15 to 30 minutes. May be baked at 200°C for 30-60 minutes for extreme high temperature applications.

2 fl. oz. [59 ml] Bottle Cat. No. 22-203

5 oz. Net Wt. [142 ams.] Aerosol

Cat. No. 22-204 N.S.N. 5970-00-223-7275

11 oz. Net Wt. [311 gms.] Aerosol Cat. No. 22-245

N S N 8030-00-497-1328



#### **Insulating Coating**

Heavy-bodied, black insulating coating which replaces insulating tape in applications where wrap-around tape could not readily be applied. This compound dries quickly to a strong pliable finish that will not crack, peel or chip. It is water and oil proof and may be used outdoors to insulate any electrical terminal, connection or wire splice. Excellent for providing insulation on handles, etc. Voltage rating 700v/mil (min.)

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-1762

16 fl. oz. [473 ml.] Bottle

Cat. No. 10-1766



#### Corona Dope

This lacquer has excellent dielectric, arc and corona resisting properties, and protects surfaces against moisture. Achieved with a quick drying, black lacquer insulating coating, based on a cellulose resin. Temperature range: to 325°F (163°C). This lacquer is used to coat flybacks, coils, transformers to improve the insulation and weather resistant properties of wires. Dielectric Strength: 3,800 Volts/Mil Min

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-4702

N.S.N. 8030-00-778-4278 N.S.N. 5970-00-063-0685



#### **Q** Dope

Solution of pure polystyrene in solvents. Dries fast and leaves a clear, protective coating on coils and transformers, with no or minimal effect on inductive values. May also be used as a cement for molded or fabricated items made of polystyrene.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-3702

N.S.N. 8010-00-868-3866 N.S.N. 5970-00-044-6790

N.S.N. 5970-00-982-3909

4 fl. oz. [118 ml.] Bottle with Brush

Cat. No. 10-3704

N.S.N. 5970-01-047-9265

N.S.N. 8040-00-598-9748

1 gal. [3.8 l.] Can

Cat. No. 10-3709 N.S.N. 8030-00-182-6416



#### Red-X Corona Dope

Thixotropic polyester-base red enamel that will not drip or sag, has excellent adhesion and is oil and waterproof. Temperature range: to 220°F (104°C). An excellent insulator, corona and spark preventive coating. For moisture-proofing and insulation of high voltage coils and other high voltage components, especially in high humidity problem areas. Also recommended for rotor and field coils in motors, to coat transformers, etc. Dielectric strength: 1,700 Volts/Mil Min., dielectric constant: 3.7.

2 fl. oz. [59 ml.] Bottle with Brush

Cat. No. 10-5002

N.S.N. 8040-00-779-2866

12-1/4 oz. Net Wt. [361 gms.] Aerosol

Cat. No. 10-5012





# CHEMICALS

#### **Acrylic Plastic**

Transparent (glass-like) lacquer. Seals, protects, insulates and tarnish-proofs any object to which it is applied. This coating has high dielectric strength and resists moisture, caustic solutions and alcohols. Used to coat electronic component and connections as well as metal or art objects (to protect against tarnish and corrosion).

Meets Fed. Spec.: TT-L-50-G Type II.

11 oz. Net Wt. [312 gms.] Aerosol

Cat. No. 10-8665

N.S.N. 5970-00-279-7091



#### **EMI-RFI Shield**

Effective method for protecting circuitry from external interference or for keeping low level signals inside circuit housing. Conductive graphite coating in a tough binder that requires no undercoat. Adheres well to most plastics and also glass. May be applied in more than one coat for severe interference problems. Sheet resistance of properly-applied Shield is approximately 7.5 ohms/square @ 1 mil. Point-to-point 10 ohms @ 1 inch spacing @ 1 mil. Maximum service temperature 180°F. Shielding ability generally ranges from 30-50 dB at 2 mils in conventionally-used RF devices. Full R.F. spectrum test have not been conducted and may be different in your application. Approximately 12 sq. ft. coverage.

12 oz. Net Wt. [340 gms.] Aerosol

Cat. No. 10-4807

2 lb

Cat. No. 10-4807-2LB

## **SOLDER FLUX** I



#### Liquid Solder Flux

Completely non-corrosive liquid solder flux consisting of a solution of special rosin in alcohol. Contains no traces of acids or chlorides and is completely safe to use on even the most delicate electronic equipment.

2 fl. oz. [59 ml.] Bottle

Cat. No. 10-4202

16 fl. oz. [473 ml.] Bottle

Cat. No. 10-4216



#### **Soldering Paste**

A strong flux for soldering sheet metal parts, bus wires to steel chassis, tinning and cleaning of soldering iron tips, etc. Not recommended for electronic or printed circuit soldering.

2 fl. oz. [59 ml.] Bottle **Cat. No. 10-1207** 



#### Solder Flux

A flux for all metals, as effective as acid or chloride types but non-corrosive. Solders even hard-to-solder metals such as aluminum, zinc-based alloys, steel, etc. Ideal for soldering bus and ground wires to aluminum and steel chassis, to hermetically seal lids to metal cases, for pot-tinning of copper and brass parts, etc. Not recommended for electronic wiring, including printed circuits.

2 fl. oz. [59 ml.] Bottle Cat. No. 10-200



#### Water Removable Soldering Paste

Lubricates, cleans, fluxes and rinses away.

2 fl. oz. [59 ml.] Bottle **Cat. No. 10-202** 





# SPECIALTY CHEMICALS



#### **Odor Neutralizer**

Heavy duty. Formulated to eliminate the toughest odors from all washable surfaces. Odors are eliminated at their source and the scientifically crafted formula continues to work with a long lasting residual effect. Eliminates odors caused by organic decay, animals, mold and mildew, smoke, fires, sewage and chemicals. Non-Toxic and Biodegradable.

4 fl. oz. [113.4 g.] Bottle **Cat. No. 19-708** 



#### **Belt & Drive Non-Slip**

Prevents slippage in mechanical or electromechanical devices which are driven with cords, belts, pulleys and drives. Restores proper functions on belts and drive pulleys in turntables, record changers and tape recorders, especially where the rubber parts have hardened and/or become slick and cause slippage.

2 fl. oz. [59 ml.] Bottle with Brush Cat. No. 10-8602



#### High Voltage Putty

Silicone rubber compound with excellent insulating characteristics. It will never harden, will not shrink and has good adhesive properties. Supplied in strips which are approximately 1" wide and 1/4" thick (approximately 18" length). Provides a corona and arc suppressing coating in high voltage systems. Especially useful for coating sharp points, edges or corners. Also useful to form gaskets and seals where a putty-like, non-hardening property is desired. (Approx. 550 Volts/MIL Di-electric strength).

1-1/4 oz. Net Wt. [36 gms.] **Cat. No. 10-8880** 



#### **Anti-Seize Compound**

Specifically engineered to resist seizing and corrosion on any threaded surface up to 2100°F. This is an excellent product for eliminating seizing of soldering iron tips, especially threaded types. Will prevent seizing, "cold-welding" and fretting corrosion of all metal threads; a preliminary degreasing with Trichloroethane or similar solvent is suggested for maximum benefit. Apply by dipping, brush, etc.

1 fl. oz.

Cat. No. 10-1230



#### **Silicone Compound**

Soft, inert silicone grease with excellent dielectric properties. Usable over a wide range of temperatures. Its consistency is vaseline-like and it is white opaque in color. It provides an excellent dielectric coating which excludes moisture and prevents high voltage arcing. Applicable to components in the high voltage section of TV receivers. Protects ignition systems in automobiles and boats, in addition to providing an outstanding corrosion resistant coating on exposed metal surfaces, such as TV antenna terminals as well as general rustproofing. This compound also makes an excellent lubricant for rubber or plastic.

1 fl. oz. [29 ml.] Tube **Cat. No. 10-8101** *N.S.N. 6850-00-268-7963* 

1 gal. [3.78 l.] Can Cat. No. 10-8102

1/3 fl. oz. [10 ml.] Chem-O-Jector

Cat. No. 10-568



# **CHEMICALS**



# **Static Null®**Static Preventive

Neutralizes and prevents static electricity in a wide variety of applications. May be used on circuit boards, carpeting, clothing, cabinetry or generators of static electricity. One application lasts for weeks. An excellent maintenance area product for use on test equipment, circuits being serviced and work surfaces.

Static-Free 8 oz. Net Wt. [226.8 gms.] Aerosol

Cat. No. 19-1004



#### Bee, Wasp & Hornet Killer

Kills insects up to 12 feet away.

Dielectric strength: 30KU/25mm.

15 oz. Net Wt. [425 gms.] Aerosol

Cat. No. EL-013



#### **Cold Galvanizing Compound**

Cold Galvanizing Compound stops rust and corrosion by forming a galvanic coating that adheres to iron and steel. 95% pure zinc fluid compound that is applied by spraying. Dries to a gray matte finish that will not crack or peel.

Applications include machinery, equipment, outdoor towers, or any items exposed to the elements of weather.

14.5 oz. Net Wt. Aerosol **Cat. No. EL-100** 

## **ACCESSORIES**



# Squeeze Bottle & Squeeze Riser

These reliable bottles accurately dispense solvents in the required amounts in the proper location. For use with GC Bulk Chemicals, wipes and brushes. Can be used safely with all GC chemicals. The squeeze riser professionally dispenses chemicals without using an aerosol.

4 oz. Squeeze Bottle

Cat. No. 19-780

4 oz. Professional Squeeze Riser

Cat. No. 19-781



# "The PUMP"TM

"The Pump" is a new air-powered spray bottle that provides an environmentally conscious alternative to conventional aerosols. The refillable, reusable spray bottle uses air as a propellant with its self-contained "Air Pump." Save money with "The Pump" by buying liquid solvents in bulk. This durable unit replaces the use of aerosol cans. "The Pump" provides an excellent cleaning alternative to aerosols. Use with cleaners, degreasers, alcohol, CFC's, HCFC's and other chemicals.

3 fl. oz. Pump Bottle

Cat. No. 19-769

6 fl. oz. Pump Bottle

Cat. No. 19-763



#### **Needle Tip Chemical Bottles**

GC bottles for quantity chemical use when buying in bulk. These bottles allow you to work with precision and buy economically. Use polyethylene bottles for troublefree dispensing of oils, mixtures and other liquids.

4 oz. Size

Cat. No. 10-284



#### **GC Touch Dispenser**

Stops waste. Dispense only as much fluid as needed for the job. Saves time and effort. No stopper or cap to remove. One-handed touch on the dish dispenses the required amount of fluid, leaving the other hand free. Prevents contamination. Liquid in bottle stays clean until used. Fluid pumped into dish doesn't drip back into bottle. Hinged lid protects dish when not in use. Use with all GC cleaner/degreaser and defluxing solvents. Not for use with iodine, acids or bases.

4 oz. Bottle with Pump

Cat. No. 19-764

6 oz. Bottle with Pump

Cat. No. 19-766

8 oz. Bottle with Pump

Cat. No. 19-768

# **CHEMICALS**





#### **Chemical Injector**

Needle type injector, supplied with 1 oz. vial. Ideal for contact cleaners, light oils, etc.

Cat. No. 8383 N.S.N. 4930-01-038-4337



#### **GC** Wipes

Soft non-woven GC wipes with the strength of polyester rayon. Safe for critical applications. Provides excellent contamination control on precise instrumentation, semiconductors and other critical uses.

Applications: for cleanroom applications; resistant to most solvents, alcohols and dilute acids; cleaning photo processing equipment; high liquid retention; wiping laboratory instrumentation; will not abrade surfaces; computer screens: contamination control.

White 7" x 13-1/2" - 30 sheets per package

Cat. No. 19-746



#### Chem-O-Jector

Plunger type applicator for all grease type or semiliquid chemicals. Made of polyethylene with neoprene plunger unaffected by most chemicals. Length: 5-1/2" (plunger extended).

6 cc 2 fl. oz. **Cat. No. 8887** 



#### **Cotton Applicators**

6" Pointed cotton-tip applicator on wooden shaft. Head size @ .105" D, tapering to .020" Dia. Package of 100.

Cat. No. 19-756

6" Single cotton-tip applicator on wood shaft. Head size 3/16" D x 5/8" L. Package of 100.

Cat. No. 19-755

Double-tipped cotton applicator. Package of 100.

Cat. No. 19-759

3" Cotton-tip applicator on wood shaft. Head size 3/16" D x 5/8" L. Package of 100.

Cat. No. 19-758



#### Lubricator

Small applicator for oils and greases. Plunger type design with extension tube for hard-to-reach places. Length: 2" with 4" tube.

1.4 cc

Cat. No. 8690 N.S.N. 4930-00-975-9541



#### **Foam Applicators**

5" Rectangular foam-tip applicator on polypropylene shaft. Head size 11/16" W x 1" L. Package of 50.

Cat. No. 19-751

7" Spatula-end foam tip applicator on polypropylene shaft. Head size 11/16" W x 1" L. Package of 50.

Cat. No. 19-750

6" Foam-tip applicator on polypropylene shaft. Head size 3/16" D x 11/16" L. Package of 50.

Cat. No. 19-753



#### GC Trigger

An all purpose consumer sprayer for those applications requiring a smaller spray pattern. The 3position nozzle allows spray or stream applications. Shipped in the "off" position, this is a true "shipper" unit. This unit fits most glass or plastic containers with a threaded top. The dip tube is 7-1/4" long to fit GC's nonaerosol containers. This trigger is compatible with all GC chemicals.

16 oz. Bottle with Trigger

Cat. No. 19-765

Trigger

Cat. No. 19-830



#### **Anti-Static Applicators**

These static-dissipative swabs are designed to attract dust and contaminants for easy cleaning while reducing static electricity.

6" Applicator with anti-static polyolefin handle. Head size 3/16" D x 11/16" L. Package of 50.

Cat. No. 19-754

5" Rectangular applicator, with anti-static foam and anti-static polyolefin handle. Head size 11/16" D x 1" L. Package of 50.

Cat. No. 19-752







#### **Double Headed Cleaning Swabs**

Cotton tipped swabs for general cleaning with Alcohol, Freon TF, 1,1,1 Trichloroethane, etc. 6" length, package of 50 swabs.

Swabs, 50 pcs. **Cat. No. 10-270** 



#### **Poly & Cotton Lint Free Swabs**

A special absorbent polyurethane swab with a fine texture that is gentle enough for cleaning delicate surfaces. Particularly good for delicate tape heads and similar usage. Reusable if used with solvents such as TF solvent, alcohol, etc.

Pkg. of 30 Swabs **Cat. No. 10-277** 



#### **Acid Brushes**

Brushes for cleaning with solvents, applying coatings and a host of other uses. These brushes are economical enough to use as throw-aways in many applications. Or may be used repeatedly with cleaners such as Freon TF, Chlorothene, Flux Solv, etc. Handles are of tin plated steel and bristles a medium-fine horse hair. Also fine for dusting keyboards, optics, etc. All 6" long, width below refers to width at base of bristles.

Width	Qty.		
(Bristle)	Per Pkg.	Description	Cat. No
3/8"	4	No. 1 Acid Brush	10-251
7/16"	4	No. 2 Acid Brush	10-252
1/2"	3	No. 3 Acid Brush	10-253
3/4"	2	No. 5 Acid Brush	10-255
_	_	Assortment, 7 pcs.	10-259

# CHEMICALS PRINTED CIRCUIT



#### CIRCUIT BOARDS



#### **Bare Copper Circuit Boards**

One ounce copper (0.0014") on base of either FR-4 (G-10) fiberglass or CEM-1 type epoxy reinforced board, 1/16" thick.

Copper on One Side Only:

3" x 5"

Cat. No. 22-250

4" x 6"

Cat. No. 22-260

6" x 6"

Cat. No. 22-261

6" x 9"

Cat. No. 22-263

8" x 10"

Cat. No. 22-264

11" x 14"

Cat. No. 22-268

Copper on Both Sides:

6" x 9"

Cat. No. 22-267

Assortment of 4 one sided boards: [1]  $2" \times 4-1/2"$ ,

[1] 3" x 4-1/2", [2] 2-1/4" x 3"

Cat. No. 22-272



# Positive Pre-Sensitized Phenolic Circuit Boards

Made of 1.5 mm (1/16") thick phenolic base with one ounce (0.0014") copper. Coated with POSITIVE photo etch resist. Use with GC Developer, Cat. No. 22-225 or 22-226 concentrate. Mix at a ratio of 9 parts water to 1 part concentrate. Dielectric constant at 1 MHz=5.3.

Copper on One Side Only:

2" x 4"

Cat. No. 21-124

3" x 4"

Cat. No. 21-134

3" x 6"

Cat. No. 21-136

4" x 6"

Cat. No. 21-146

6" x 6"

Cat. No. 21-166

6" x 9"

Cat. No. 21-169

7" x 10"

Cat. No. 21-1710

12" x 12"

Cat. No. 21-1212



## Positive Pre-Sensitized Circuit Roards

1 oz. copper (0.0014") on a 1/16" (UL 94V-O) epoxyglass FR-4 board. New high quality positive pre-sensitized PC boards are double protected from light and handling damage. The peel-off coating protects the board while handling or cutting prior to exposure. Can be exposed with common fluorescent lamp. GC makes it easy for anyone to make a professional looking board. Use with GC Developer Cat. Nos. 22-225 or 22-226 mixed 1 to 9 with water. Dielectric constant at MHz=5.4".

Meets Fed. Spec.: S-10941-1.

Copper on Both Sides:

3" x 4"

Cat. No. 21-339

6" x 6"

Cat. No. 21-350

6" x 9" Cat. No. 21-353

12" x 12"

Cat. No. 21-357

Copper on One Side Only

2" x 4" 6" x 6" Cat. No. 21-336 Cat. No. 21-336

3" x 4" 6" x 9" Cat. No. 21-332 Cat. No. 21-338

3" x 6" 7" x 10" Cat. No. 21-243 Cat. No. 21-247

4" x 6" 12" x 12" Cat. No. 21-334 Cat. No. 21-252

#### PROTOTYPE BOARDS



#### Plug-In IC Phenolic Prototype Board

IC's plug directly into board. 0.1" spacing accepts 14 pin or 16 pin IC's, up to 20 pin IC's. Silver plated lands with 24-way card edge connector plug on one end. Made of tough phenolic. 0.1" centers x 2-3/8" wide x 4" long x 1/16" thick, .035" holes.

Cat. No. 22-500



#### Versa Strip Phenolic Prototype Board

Alpha-numerical indexing. Silver-plated land patterns. Predetermined short tracks for multi IC work. 0.1" centers x 3-1/2" wide x 6" long x 1/16" thick, .035" holes.

Cat. No. 22-502



# CHEMICALS PRINTED CIRCUIT



# Export Design Phenolic Prototype Board

Accommodates all types of IC's, transistor packages and passive parts. Lands and buss bars are tinplated. 0.1" centers x 3-1/8" wide x 5-1/16" long x 1/16" thick.

**Printed Strip Phenolic** 

Alpha-numerical indexing. Tin-

plated land patterns for positive

pin identification. 0.1" centers x

3-1/2" wide x 6" long x 1/16"

**Prototype Board** 

thick, .035" holes.

Cat. No. 22-506

Cat. No. 22-504



#### Experimenter's Phenolic Prototype Board

Save time and money with ready-to-use printed circuit boards. Excellent for use in prototype building, experimenting, hobby or science projects and kit building. Made of tough phenolic with .03" punched holes. Choice of single or quad land pattern. 3-318" wide x 6-3/4" long x 1/16" thick."

Cat. No. 22-510 Single Land Pattern Cat. No. 22-512

Ouad Land Pattern



#### Perforated Bare Phenolic Prototype Boards

Unexcelled for prototypes, breadboards, hobby or science projects. Made of tough phenolic with punched holes. Boards are bare phenolic—no copper clad.

0.042" holes; 0.100" spacing 2-1/4" wide x 6" long x 1/16" thick **Cat. No. 22-514** 

Cat. No. 22-516
3-3/4" wide x 8" long x 1/16" thick
Cat. No. 22-518

4-1/2" wide x 6" long x 1/16" thick



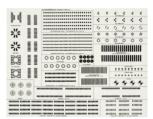
# Experimenter's Phenolic Prototype Board

Ready-to-use copper plated printed circuit board has 550 solder tiepoints, 94 five-point terminals and two 40-point buss strips on 0.3" centers. Phenolic board has prepunched holes, mounting holes. 2" wide x 6" long x 1/16" thick.

Cat. No. 22-508



## DRAFTING AIDS



# Circuit Board Drafting Patterns

An 8-1/2" x 11" sheet containing two dozen of the most commonly used pre-spaced component configurations. Self-adhesive pads may easily be removed from master sheet with printed circuit knife and placed upon Mylar® positive artwork. Interconnection may be made with GC's line of opaque drafting tapes. A highly refined process and ink assures true opacity and the excellent definition necessary for quality printed circuit work.

Cat. No. 21-677



#### **Etch Resist Ink Pens**

Black felt tip pens for marking nomenclature and touching up photo artwork or etch resist circuits directly on the PC board or on the positive. Dries instantly. Easy application. Can be removed with Stripping Solution (22-240) or alcohol.

Std. Size – draws lines approx. 1/32" wide

Cat. No. 22-220

Fine Line – draws lines as thin as 1/64" wide

Cat. No. 22-222



#### Mylar® Layout Film

Package of 2 transparent mylar sheets with clear finish plus one grid pattern sheet. Std. 0.10" spacing.

8-1/2" X 11"

Cat. No. 22-290

Mylar is a registered trademark of

# EMICALS PRINTED CIRCUIT





#### Positive-Acting Etch Resist Sensitizer

An excellent PC board-making system for the prototype engineer to produce today's high density, fine-line circuit boards. Easy aerosol application covers 25 to 30 square feet from an 11-ounce aerosol can.

2.68 avdp. oz. [76 gms.] Aerosol Cat. No. 22-074



#### **Exposing Frame**

Assures tight contact between positive or negative and the photosensitive material. Results in perfect transfer of circuit image to the board.

For boards up to 4-1/2" to 6-1/2" Cat. No. 22-280 For boards up to 10" to 12"

Cat. No. 22-393

#### PC DEVELOPING & ETCHING



#### Positive Type Developer **Concentrate**

For developing photo sensitized PC boards coated with positive type etch resist. To be diluted with 9 parts of water to 1 part of developer. 8 oz. will develop 10 to 20 sq. ft. of PC board

2 fl. oz. [59 ml.] Bottle Cat. No. 22-225 6 fl. oz. [177 ml.] Bottle Cat. No. 22-226



#### **PC Board Etching** Solution

This ferric chloride solution is one of the most effective and safest etching materials for copper clad PC boards. 6 oz. will etch about 180 sq. inches of PC board. Use only in plastic or glass trays. pH. 1.57

6 fl. oz. [177 ml.] Bottle

Cat. No. 22-237

32 fl. oz. [946 ml.] Bottle

Cat. No. 22-238

1 Gallon [3.8 I.] Container

Cat. No. 22-239



#### **Developing and Etching Trays**

Two plastic trays (5-1/4" x 7-1/4" I.D.) for positive method developing and for etching. One aluminum tray for rinsing (4-1/4" x 6-3/4" I.D.).

Set of 3

Cat. No. 22-284

High Grade Blk Plastic 8" x 10" I.D.

Cat. No. 22-285

High Grade Blk Plastic 11" x 14" I.D.

Cat. No. 22-286



#### **Etching Solution Heater**

Fits in tank and heats solution up to 38°C (100°F). Used to further reduce etching time. Built-in adjustable thermostat controls temperature continuously to 100°F. 120V AC/100 W Max.

Cat. No. 22-392



#### Professional PC Board Power Etching System

A semi-automatic etching device for use in labs, schools, prototype shops and for limited PC board production. Reduces etching time to minutes. Air pump agitates etching solution for fast, very even etches. Handles up to two 8" X 10" PC boards at a time, either single or double sided. Tank comes with a tip-proof wire stand that can remain portable or attached to the bench with screws. For professional labs, it can be mounted as a bench well. Boards fit into a submersible rack with handles that keep hands away from the etchant as well as separating the PC boards. Lid prevents splashes, reduces evaporation, and can be turned upside down and used as an auxiliary tray.

#### Kit contains:

1 Etching Tank and Reservoir Lid (12"H x 2-1/2"W x 10-1/2"L) Molded Polyethylene - ABS PC Board Holder

Capacity - 1.25 Gallons of Etching Solution

- 1 Etch-O-Matic Power Agitating Pump, 120V AC Operation
- 1 Permanent or Portable Tip-Free Base
- 1 PC Board Holder and Handle
- 4 Feet of Supply Hose

Cat. No. 22-394



# EMICALS PRINTED CIRCUIT

#### PC REPAIR



#### Silver Print

#### Conductive Paint

Bottle for PC repair or add-on circuit traces. Pure silver in lacquer based carrier may be brushed on for either conductors or shielding. Connections have equal or better conductivity than copper (0.1 ohms per square).

1/2 troy oz. [15.69 gms.] Bottle

Cat. No. 22-201

1 troy oz. [31.1 gms.] Bottle

Cat. No. 22-202



#### **Nickel Print**

#### **Conductive Paint**

A quick drying lacquer-based coating, pigmented with powdered nickel. For repair and modification of printed circuits. Conductivity is 5 to 6 ohms per square.

2 fl. oz. [59 ml.] Bottle

Cat. No. 22-207



#### **Print Kote Conformal Coating**

The ultimate coating for PC boards. Provides a protective shield to resist environmental contaminants. Prevents arcing and shorting. Air dry 15-30 minutes. May be baked at 200°C for 30-60 minutes for extreme high temperature applications.

2 fl. oz. [59 ml.] Bottle

Cat. No. 22-203

N.S.N. 8010-00-711-2173

5 oz. Net Wt. [142 gms.] Aerosol

Cat. No. 22-204

N.S.N. 5970-00-223-7275

11 oz. Net Wt. [311 gms.] Aerosol

Cat. No. 22-245

N.S.N. 8030-00-497-1328



#### **Print Kote Solvent**

A solvent to remove silicone and other types of protective coatings from PC boards. Required when modifying PC boards or replacing components where the protective coating interferes with the desoldering and resoldering operation.

2 fl. oz. [59 ml.] Bottle

Cat. No. 22-209

N.S.N. 6810-00-711-2185



#### **Stripping Solution**

Removes remaining etch resist from PC boards. Removes any coating that remains over the copper after etching which may interfere with the soldering of the component leads to the PC board.

2 fl. oz. [59 ml.] Bottle

Cat. No. 22-240



#### Flux Remover and Cleaner II

Convenient, fast and easy to use. Removes all types of organic flux. Pinpoint applicator supplied. Non ODC.

16 oz. Net Wt. [454 gms.] Aerosol

Cat. No. 22-271



#### **Etch Resist Lacquer**

For touch-up or modification of resist patterns before etching. Fast drying, easy to apply on PC boards. Bottle is supplied with small brush attached to cap.

1/2 fl. oz. [14.8 gms.] Bottle

Cat. No. 22-244





#### Small Printed Circuit Repair Kit

For repair and servicing of printed circuits.

Cat. No. 22-682

N S N 3439-00-986-2582

N.S.N. 5999-00-755-1808

#### Kit contains:

1-Solder Aid Tool Cat. No. 9093

1—Low-Melt Solder Cat. No. 9132

1—PC Repair Foil

1—Fiberglass Eraser

1—Tweezers Cat. No. 7948

Asst. Solder Washers (Fluxed)

# EMICALS PRINTED CIRCUIT





#### **Printed Circuit Tool Kit**

Printed circuit solder aid tools in a vinyl pouch. Includes electronic assembly tweezers of stainless steel, stainless steel scissors tweezers and double-ended, non-sticking soldering tool with angle reamer tip and forked tip.

Cat. No. 22-9496



#### **Pure Copper Circuit Tape**

6-foot roll of self-adhesive pure copper tape for quick repairs or circuit modification. Adheres readily to PC boards and similar surfaces; solders readily. Flexible enough to be used around corners, between PC boards, between board and chassis, etc. Extremely low resistance (.002" thick). Supplied on 1" I.D. core.

1/16" wide

Cat. No. 22-507

Cat. No. 22-509

1/8" wide



#### **Micro Inspection** Magnifier

Superb tool for the close inspection and trouble shooting of micro-circuits and PC boards. Provides 2X magnification from 2-1/2" dia. precision-ground glass that swings a full 360° with positive-lock swivel adjustments.

Cat. No. 22-386



#### **Drill Bit Sets**

For drilling component lead wire holes in phenolic and glass epoxy PC boards. Made of high speed tool steel for long life.

#### **Set Contains:**

No. 66 Bit .0330" Dia., No. 60 Bit .0440" Dia., No. 1/16 Bit .0625" Dia.

Cat. No. 22-275

#### Set Contains:

No. 31 Bit .1200" Dia., No. 27 Bit .1440" Dia., No. 3/32 Bit .0938" Dia.

Cat. No. 22-276

## **CHEMICAL SPECIFICATION MATRIX**

#### **Adhesives Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Curing/ Drying Time	Suggested Solvent	Shelf Life Months	DOT Shipping
10-114 19-822	Quik Stik	Pkg. of 2 1/2 fl. oz. 30 cc.	Mod. Epoxy	Clear	Above 149 C (300 F)	1.17 (Resin) 1.13 (Hardener)	Hard 4 hrs.	None	12	Not Regulated
10-100	Epoxy Super Glue	Pkg. of 2 3/4 fl. oz.	Bisphenol A (Resin) Polyamide (Hardener)	Transparent Lt. Straw.	Above 149 (300 F)	1.16 (Resin) 0.97 (Hardener)	Hard 24 hrs.	None	12	Not Regulated
10-347	Epoxy Glue	Pkg. of 2 2 fl. oz.	Epoxy Resin	Grey White	Above 204 C (400 F)	1.26 (Resin) 1.28 (Hardener)	Hard 24 hrs.	None	36	Not Regulated
19-823 19-824 19-824-2G	GC Potting Epoxy	8 oz. kit 500 gms. kit 2 gal. kit	Ероху	Black Opaque	300 F	1.13/9.0	24 hrs @ 77 F 2 hrs @ 150 F	None	12	Not Regulated
19-2092	Conductive Epoxy	6 gm. Kit	Silver Epoxy	Silver			Hard 24 hrs.	None	6	Not Regulated
19-348	Epoxy Putty	4 oz.	Epoxy Resin	Grey	None	1.5	Sets in 20 mins.	None	36	Not Regulated
19-115	GR-R-RIP	0.075 fl. oz.	Ethyl Cyanoacrylate	Clear	83 C( 182 F)	1.05	15-60 secs.	Acetone	12	Not Regulated
19-117	GELWELD	0.101 fl. oz.	Ethyl Cyanoacrylate	Clear	181.4 F	1.04	15-60 secs.	Acetone	12	Not Regulated
10-120	GC Super Glue	0.075 fl. oz.	Ethyl Cyanoacrylate	Clear	83 C (182 F)	1.05	15-60 secs.	10-312 or Lacquer Thinner	36	ORM-D
10-128	GC Super Adhesive	1 fl. oz.	Ethyl Cyanoacrylate	Clear	80 C (176 F)	1.12	15-60 secs.	Acetone	12	Not Regulated
10-324 10-328	General Purpose Plastic Cement	2 fl. oz. 8 fl. oz.	Ethyl Acetate & Nirocellulose	Clear Lt. Staw.	24 F	0.954	10-15 mins.	10-312 Lacquer Thinner	36	ORM-D
10-4302 10-4308 10-4316	GC Bond	2 fl. oz. 8 fl. oz. 16 fl. oz.	Synthetic Thermoplastic Resin	Tan	22 F	0.87	4 hrs.	10-312 Lacquer Thinner or MEK	24	ORM-D
10-302 10-310	Service Cement	2 fl. oz. 1 gal.	Nirocellulose Lacquer	Clear Lt. Staw.	24 F	0.975	20-30 mins.	10-312 Lacquer Thinner	36	ORM-D
10-352	Rubber-to-Metal Cement	2 fl. oz.	Rubber Resin	Black	-10 C (14 F)	0.9	6-8 hrs.	10-6702 or Petroleum Naptha	36	Not Regulated
19-4002 19-4008	Acrylic Cement	2 fl. oz. 8 fl. oz.	Acrylic Resin	Black Opaque	-7 F	<1	15 mins.	Methyl Ethyl Ketone	36	ORM-D
10-5802	Vinyl Cement	2 fl. oz.	Vinyl Resin	Clear	-20 C (-4 F)	0.86	25 mins.	Acetone	36	ORM-D
19-712	Spray Adhesive	11 oz.	SBR	Amber	0F	0.72	15 mins.	Acetate	12	ORM-D





#### **Silicone Sealants Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Consistency	Tensile Strength	Extrusion Rate	% Elogation	Shelf Life Months	DOT Shipping
10-150	Silicone Rubber Adhesive/Sealant	3 fl. oz.	Vulcanized Silicone	Clear	Non- Flammable	1.04	Non-Slump Paste	220 PSI min.	220-425 gram. min.	350 min.	18	Not Regulated
19-155	Electronic Grade Silicone Sealant/Adhesive	3 fl. oz.	Vulcanized Silicone	Clear	Non- Flammable	1.03	Non-Slump Paste	220 PSI min.	220-425 gram. min.	350 min.	12	Not Regulated
EL-615	Silicone Caulk Tube	10.2 fl. oz.	Vulcanized Silicone	Clear	Non- Flammable	1.03	Non-Slump Paste	220 PSI min.	220-425 gram. min.	350 min.	18	Not Regulated

#### **Cleaners Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Pounds per Gallon	Shelf Life Months	DOT Shipping
19-8508 19-8475-10 19-8475 19-8475-SF	Air Jet	8 oz. aerosol 10 oz. aerosol 12 oz. aerosol 12 oz. aerosol	Halogenated Hydrocarbons	Clear	None	1.21	9.68	30	ORM-D
19-8410-10 19-8410 19-8410-SF	Freeze Mist	10 oz. aerosol 12 oz. aerosol 12 oz. aerosol	Halogenated Hydrocarbons	Clear	None	1.21	9.68	30	ORM-D
19-903-6 19-902 19-902-SF 19-903 19-903-SF	Big Bath	6 oz. aerosol 12 oz. aerosol 12 oz. aerosol 22 oz. aerosol 22 oz. aerosol	Halogenated Hydrocarbons	Clear	None	1.22	9.76	30	ORM-D
19-8669	Dry Kleen	16 oz. aerosol	Chlorinated Hydrocarbons	Clear	None	1.32	10.9	30	ORM-D
19-901 19-624	Component Bath	16 oz. aerosol 22 oz. aerosol	Halogenated Hydrocarbons	Clear	None	0.75	6	30	ORM-D
19-634 19-636	Jif-Action	6 oz. aerosol 16 oz. aerosol	Halogenated Hydrocarbons	Clear	53 F	1.1	8.8	30	ORM-D
19-8666 19-8666-16	Spray-Kleen	6 oz. aerosol 16 oz. aerosol	Halogenated Hydrocarbons	Clear	Flammable	1.15	9.6	30	ORM-D
19-724 19-725 19-725-16 19-725-55G	GC Bath	4 oz. aerosol 10 oz. aerosol 16 oz. can 55 gal. drum	Hydrocarbons	Clear	20 F	0.75	6.24	30	ORM-D
19-723	Little Bath	4 oz. aerosol	Hydrocarbons	Clear	20 F	0.75	6.24	30	ORM-D
19-630 19-638 19-640 19-640-16 19-640-G	Jiffy Bath	2 oz. bottle 4 oz. aerosol 10 oz. aerosol 16 oz. can 1 gal.	Hydrocarbons	Clear	20 F	0.75	6	30	ORM-D
19-1902 19-1906	DE-OX-ID	2 oz. bottle 4 oz. aerosol	Refined Oil in Hydrocarbon Solvent	Light Yellow	20 F	0.75	6	42	ORM-D
19-700 19-704	GC Natural Citrus Cleaner	12 oz. aerosol 4 oz. aerosol	Citrus Terpene	Light Amber	None	0.79	6.3	30	ORM-D
19-2903-3 19-2903-8	Big Bath HFE	3 oz. aerosol 8 oz. aerosol	Hydrocarbons and HFE	Clear	None	1.3	6.6	30	ORM-D
19-904	Big Bath ISO	9 oz. aerosol	Isohexane	Clear	20 F	0.692	6.6	30	ORM-D
10-1507 10-1507-G	Isopropyl Alcohol	16 oz. can 1 gal.	Isopropyl Alcohol	Clear	12 C (53 F)	0.79	6.6	42	ORM-D
19-5302 19-5304 19-5302-16 19-5302-G	VCR/Magnetic Head Cleaner	2 oz. bottle 4 oz. aerosol 16 oz. can 1 gal.	Alcohol	Clear	13 C	0.79	6.6	30	ORM-D
10-9082	Glass Cleaner	14 oz. aerosol	Water & Ammonia	Clear	Nonflammable	0.98	8	36	ORM-D
10-1756	Glass Compound	6 oz. bottle	Water & Silicone	Clear	Nonflammable	0.99	8	36	ORM-D





#### **Lubricants Specifications**

	- по оросински					Specific	Pounds	Viscosity	Useful Temp.	Shelf Life	DOT
Cat. No.	Description	Contents	Base	Color	Flashpoint	Gravity	per Gallon	Viscosity	Range	Months	Shipping
10-2302	Lubriplate	1-3/4 fl. oz	Lithium Soap Grease	Off-White	Non- Flammable	15.6	7.97	< 100 Sus at 100 F	-35 C to +77 C (-30 F to +170 F)	36	ORM-D
10-1206	Luberex	2 fl. oz.	Calcium Sterate Grease	Yellow	Non- Flammable	<1	7.97	290-325 at 100 F	-35 C to +77 C (-30 F to +170 F)	36	Not Regulated
10-2610	Tunerlub	1-3/4 fl. oz	Petrolatum	Milky White	Non- Flammable	0.86	6.99	5 x 3 CP at 210 F	-35 C to +77 C (-30 F to +170 F)	36	Not Regulated
10-1223	Phonolube	2 fl. oz.	Mineral Oil	Semi Transparent Tan	Non- Flammable	0.9	7.97	750 Sus at 38 C	-35 C to +77 C (-30 F to +170 F)	36	Not Regulated
19-820	Conductive Grease Compound	1 oz.	Lithium Soap Grease w/ Zinc & Graphite Filler	Black Opaque	None	1.1	8.8	100 Sus at 100 F	170 F	42	ORM-D
19-821	Graphite Lubricant	1-1/8 oz.	Powdered Graphite	Dark Gray	None	2.25	-	-	400 F	42	Not Regulated
10-984	Reach-All Pen Oiler	1/2 fl. oz.	Paraffin Oil	Clear Lt. Straw	146 C (295 F)	0.84	-	9.6 CST at 40 C	-	42	Not Regulated
10-8885	Pocket Oiler	0.135 fl. oz.	Paraffin Oil	Semi Transparent Lt. Tan	435 F	0.925	7.67	13.5 CS at 100 F	-65 F to +300 F	36	ORM-D
10-9410	Teles-Oiler	4 fl. oz.	Paraffin Oil	Clear to Lt. Brown	Above 121 C (250 F)	0.8665	6.26	31.5 CS at 40 C	-23 C to +65 C (-10 F to +150 F)	36	Not Regulated
19-070 19-074	GC 70 GC 70	10 oz. aerosol 4 oz. aerosol	Naptha/Quar. Ammonia	Clear Straw.	20 F	0.75	6	-	-	30	ORM-D
10-700	Formula 70	12 oz. aerosol	Mineral Spirits	Clear Amber	38 C	0.75	8.12	-	-	30	ORM-D
19-600	Sili-Spray	4 oz. aerosol	Hydrocarbon Polysiloxane	Clear Amber	20 F	0.75	6	-	-40 C to +85 C	30	ORM-D
19-810	Dry TFE	4 oz. aerosol	Hexane	White Opaque	-40 F	0.7	6	-	-	30	ORM-D

#### **Coatings Specifications**

•	•						Specific	Curing/	Useful Temp.	Suggested	Shelf Life	DOT
Cat. No.	Description	Contents	Base	Color	Flashpoint	Gravity	Drying Time	Viscosity	Range	Solvent	Months	Shipping
22-201 22-202	Silver Print	1/2 troy oz. 1 troy oz.	Lacquer	Dull Silver	19 C (66 F) O.C.	1.6-1.7	Dry 16-20 mins. Hard 1 hr. @ 140		-	Butyl Acetate	12	ORM-D
22-207	Nickel Print	2 fl. oz.	Lacquer	Dull Grey	41 F O.C.	2	Dry 16-20 mins. Hard 1 hr. @ 140		-	Butyl Acetate	12	ORM-D
10-9002 10-9008	Red Insulating Varnish	2 fl. oz. 8 fl. oz.	Alkyd-Resin Based Enamel	Red	27 C (81 F) O.C.	1.1	Dry 30 mins. Hard 4-8 hrs. @ 25 C	#4 Ford Cup 65-85 Sec. @ 25 F	Up to 93 C (200 F)	Xylene	36	ORM-D
22-203 22-204 22-245	Print Kote Conformal Coating	2 fl. oz. 5 oz. aerosol 11 oz. aerosol	High Polymer Silicone Resin	Clear	16 C (61 F) O.C.	0.88	Dry 20 mins. Hard 1 hr. @ 77 i	F 500 CS	-65 to 200 C	22-209	18	ORM-D
10-1762 10-1766	Insulating Coating	2 fl. oz. 16 fl. oz.	Synthetic Resin in Solvent	Black	7 F (45 F) C.C.	0.9	12 mins. tack free	V2000-3000 CP @25 C	2 C to 66 C	22-209	12	ORM-D
10-8665	Acrylic Plastic	11 oz. aerosol	Polymetric Acrylic Ester	Clear	-156 F	1	10 mins. tack free	250 CP @ 25 C	Up to 190 C	10-4102	30	ORM-D
10-4702	Corona Dope	2 fl. oz.	Cellulose Compound	Black	-1 C (30 F) O.C.	0.9	30-60 mins.	220 CP @ 25 C	Up to 340 F	10-312 or Lacquer Thinne	r 36	ORM-D
10-5002 10-5012	Red-X Corona Dope	2 fl. oz. 12-1/4 oz. aerosol	Thixotopic Polyester Enamel	Red	10 C (50 F) O.C.	1.12	2 hrs.	6000-10000 BRKFLD #1 Spindle 2 RPM @27 C	Up to 105 C (220 F)	10-6702 Naptha or Xylo	J 36	ORM-D
10-3702 10-3704 10-3709	Q Dope	2 fl. oz. 4 fl. oz. 1 gal.	Stryene	Milky White	45 F	0.91	2 hrs.		-	10-4102	36	ORM-D
10-4807	EMI-RFI Shield	12 oz. aerosol	Lacquer & Graphite	Dark Grey	-4 C (2.5 F) O.C.	0.89	3-9 mins.	0.5-0.7 BRKFLD @25 C	Up to 197 F Constant	10-312 or Lacquer Thinne	r 12	ORM-D

#### **Solvents Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	<b>Shelf Life Months</b>	DOT Shipping
10-4102	Q Dope Thinner	2 fl. oz.	Toulene	Clear	4 C (40 F)	0.27	42	ORM-D
10-312 10-318 10-320 10-321	Radio-TV Cement Solvent	2 fl. oz. 8 fl. oz. 16 fl. oz. 1 gal.	Acetone Acetate	Clear	-9.5 C (15 F)	0.88	42	ORM-D
10-6702	Paint Thinner	2 fl. oz.	Mineral Spirits and Toulene	Clear	21 C (70 F)	0.9	42	ORM-D
22-209	Print Kote Solvent	2 fl. oz.	Toulene	Clear	4 C (40 F)	0.87	42	ORM-D





#### **Flux Removers Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Months	Shipping
19-328-12 19-328-22	General Use Flux Solv	12 oz. aerosol 22 oz. aerosol	Halogenated Hydro Carbon	Clear	53 F	1.1	42	ORM-D
19-270	Extra Strength Flux Solv	16 oz. aerosol	Halogenated Hydro Carbon	Clear	None	1.24	42	ORM-D
19-825 19-825-16 19-825-G	GC Flux Solv	10 oz. aerosol 16 fl. oz. 1 gal.	Hydrocarbon Solvent & I.P.A.	Clear	20 F	0.75	30	ORM-D
19-220 19-229 22-271	Flux Remover & Cleaner 2	2 fl. oz. 16 fl. oz. 16 oz. aerosol	Halogenated Hydro Carbon	Clear	None	1.24	30	ORM-D
19-7517 19-7521	Static-Free High Strength Flux Remover	12 oz. aerosol 18 oz. aerosol	Chlorinated Hydrocarbons	Clear	None	1.29	42	ORM-D

#### **Solder Flux Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Shelf Life Months	DOT Shipping
10-4202 10-4216	Liquid Solder Flux	2 fl. oz. 16 fl. oz.	Rosin & Alcohol	Clear to Lt. Straw.	12 C (250 F)	0.882	36	ORM-D
10-200	Solder Flux	2 fl. oz.	Monoethanalomine Drethandamine	Clear to Lt. Yellow	None	1.1	42	ORM-D
10-1207	Soldering Paste	2 fl. oz.	Petrolatum	Amber	Non-Flammable	1.08	36	Not Regulated
10-202	Water Soluble	2 fl. oz.	Rosin	Milky White	400 F	1.1	42	ORM-D

#### **Specialty Products Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Shelf Life Months	DOT Shipping
10-8880	High Voltage Putty	11 oz.	Silicone Rubber Compounds	Clear	-156 F	1	36	Not Regulated
19-1004	Static Null	8 oz. aerosol	Dimethyl Ether & IPA	Clear	-42 F	<1	36	ORM-D
10-8602	Belt & Drive Non-Slip	2 fl. oz.	Alcohol	Clear to Lt. Brown	54 F	0.91	36	ORM-D
19-708	Odor Neutralizer	4 fl. oz.	Non-Toxic Biodegradable	Clear	None	1.42	36	ORM-D
10-1230	Anti-Sieze Compound	1 fl. oz.	Molykote	Black	250 F	1.26	36	Not Regulated
10-8101 10-8102 10-568	Silicone Compound	1 fl. oz. 1 gal. 1/3 fl. oz.	Silicone Grease	White Paste	>400 F	1.03	36	Not Regulated
EL-013	Bee, Wasp & Hornet Killer	15 oz. aerosol	Naphtha	Clear to Lt. Brown	Flammable	<1.0	36	ORM-D
EL-100	Cold Galvanizing Compound	14.5 oz. aerosol	Zinc, Resin & Naptha	Gray	<0 F	1.09	24	ORM-D

#### **Printed Circuit Products Specifications**

Cat. No.	Description	Contents	Base	Color	Flashpoint	Specific Gravity	Pounds per Gal.	Shelf Life Months	DOT Shipping
22-074	Positive-Acting Etch Resist Sensitizer	2.68 oz. aerosol	Novolak	Green	0 F	0.83	9	12	ORM-D
22-225 22-226	Positive Type DeveloperConcentrate	2 fl. oz. 6 fl. oz.	Sodium Hydroxide	Milky White	Non- Flammable	1.08	9	42	ORM-D
22-237 22-238 22-239	PC Board Etching Solution	6 fl. oz. 32 fl. oz. 1 gal.	Ferric Chloride & Water	Dark Brown	Non- Flammable	1.42	11.8	42	ORM-D
22-240	Stripping Solution	2 fl. oz.	MEK & Xylene	Clear	23 F	0.84	7	42	ORM-D
22-244	Etch Resist Lacquer	2 fl. oz.	Hyrdo Carbon Solvent	Black	2 C (35 F) O.C.	0.92	7.7	36	ORM-D



Whether you're a technician, working at a bench, an installer, working in the field, or a contractor, on the job site, the combination of GC's Electronic Tools and Supplies and Thorsen Tools provide you with high quality products to get the job done right.

The GC Professional tool line gives you an extensive selection of precision pliers, cutters, and screwdrivers; designed for electronic service work. Our alignment tools have set an industry standard for the service technicians for decades. But we don't stop there.

GC Electronics offers a broad range of soldering aids and work-handling tools to make your work easy and consistent. Our selection of test leads and specialty tools cover a wide range of electronic service tasks. Field Service Technicians have learned to depend on GC's extensive selection of wire strippers. Often copied, GC's 766 Speed-O-Matic Wire Stripper gave the Electronic Industry its first consistent quality strip. Today, GC continues to expand its line of cable strippers and crimping tools. If you're working with wire, GC can supply all of your needs; ranging from the wire or cable itself, to the stripping and crimping tools, and finally, the connectors needed for your job.

Today, static control is one of the most critical concerns in the production and handling of electronic devices. GC's line of ESD mats, straps, and testers offer you the tools that you need to make sure that your work is protected. When combined with the Static Control Chemicals, offered by GC, you have most of the tools you need for production or field work.

But we don't stop there. Thorsen Tools, complements the GC Electronics product offering. This contractor-grade line of pliers, wrenches, sockets, and screwdrivers gives the contractor and the Plant Maintenance professional high quality tools, covered by a Lifetime Warranty, at very attractive prices.







## GC PROFESSIONAL™ PLIERS AND CUTTERS

- · Lifetime warranty.
- Box joint construction: a unique joint that allows the two
  parts of the pliers or cutter to be mated during the early
  stage of the manufacturing process, creating a precision fit.
  Dual bearing surfaces on each handle of the tool eliminate
  "slack" or "play" in the joint producing perfect joint alignment and long wear.
- Pliers and cutters are made from solid 420 stainless steel, MIRROR polished and correctly hardened for long lasting service. These tools will not rust.
- Dual leaf springs reduce tension for ease of operation.
- Static Dissipative handles provide greater operator comfort and protect electronic components from Electro Static Discharge (ESD).

#### **Box Joint Construction**



Precision manufacturing process improves jaw strength and maintains accurate jaw alignment.

When selecting electronic cutting pliers, you should attempt to minimize your cost per cut by selecting the proper tool for each application. The type of cut, cutting area access, cutting edge quality and user preference will influence your choice.

#### Type of Cut

Electronic pliers are available with cutting edge angles that produce standard, semi-flush and flush cuts. These terms refer to the amount of "pinch" left on the tip of a wire after it has been cut.

**Standard** cutting edges should be used for applications that







are not sensitive to either the amount of shock transmitted through the wire to the component (during cutting) or to the amount of "pinch" left on the wire tip (after cutting).

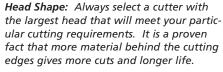
**Semi-flush** edges can be employed for most applications. They reduce shock transmittal and wire tip "pinch".

Flush edges should be selected only for delicate applications, which require minimal shock transmittal and wire tip "pinch". Flush cutters produce a clean cut, which facilitates soldering and increases connection reliability. With small cutting edge angles, the life of flush cutters is substantially less than that of semi-flush cutters. The larger the cutting edge angle, the more cuts you can expect from the tool. For electronic assembly work, the semi-flush cutter is often the most cost-effective choice.

#### **Cutting Area Access**

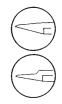
Access to cutting areas can determine the shape and thickness of the cutting head. Tight clearances around the cutting area, the need to reach over in-place components or to work from directly above, and visibility requirements are all factors which will affect your choice of a tool. However, it is important to recognize that head shape and thickness are directly related to cutting edge life.







Oval head cutters are the most versatile. They have the most material behind the cutting edges, and last longest. Tapered and angled head cutters should be selected only when access to the cutting area is limited. These cutters have less head mass, and provide proportionally fewer cuts.



Head Thickness: Head thickness is related to cutting life in the same way as head shape. Cutting pliers with thicker heads also last longer. Whenever possible, use pliers with standard head thickness. Relieved head designs should be chosen only to accommodate difficult access problems.

#### **Cutting Edge Quality**

The quality of a pair of cutting pliers can be determined by visual inspection. The blades should meet smoothly and evenly at the tips. From a point just behind the tips to the joint, an increasing amount of light should be visible.



A precision tip interface assures clean cutting of fine wires, while the "no contact" area behind the tips extends cutter life by allowing the tips to continue to meet as they wear.

#### User Preference

Other considerations can be a matter of personal preference. Handle shape, grip color, grip material, spring tension and leverage ratio are usually related to user comfort.



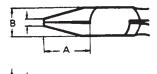
Proper spring tension will allow pliers to open and close with minimum effort. Finally, pliers with high leverage ratios provide the greatest ease of use and the longest life. Leverage ratio is obtained by dividing dimension A into dimension B.

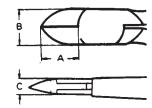




#### **GC TOOL TIPS**

For optimum performance and durability, semi-flush cutters should be used whenever a flush cut is not required.







#### 4-1/2" Chain Nose Pliers

All purpose tool for pickup, wire coiling and bending. Most popular shape.

A 0.80" B 0.35" C 0.20

Smooth

Cat. No. 12-7301

Serrated

Cat. No. 12-7307



#### 5" Chain Nose Pliers

Same as our 12-7301 but 5" in length and larger jaws.

A 1.00" B 0.45" C 0.20"

Smooth

Cat. No. 12-7302

Serrated

Cat. No. 12-7308



#### 4-1/2" Flat Nose Pliers

For straightening and holding. Also useful for wire bending and component handling.

A 0.88" B 0.35" C 0.22"

Smooth

Cat. No. 12-7303



#### 5" Flat Nose Pliers

Same as our 12-7303 but larger head dimensions.

A 1.00" B 0.45" C 0.30"

Smooth

Cat. No. 12-7304



#### 4-1/2" Round Nose Pliers

Excellent for forming and coiling fine wire. Round jaws reduce damage to wire by eliminating sharp edges.

A 0.86" B 0.45" C 0.30

Smooth

Cat. No. 12-7305



#### 5" Round Nose Pliers

Same as our 12-7305 but larger jaws.

A 0.86" B 0.45" C 0.30"

Smooth

Cat. No. 12-7306



#### 4-1/2" Bent Nose

For reaching into inaccessible areas. Pliers have a 30° bend.

A 1.00" B 0.36" C 0.24"

Smooth

Cat. No. 12-7309

Serrated

Cat. No. 12-7310



#### 5" Extra Long Chain Nose

Excellent to reach into inaccessible areas. For forming, coiling and handling components.

A 1.20" B 0.36" C 0.22"

Smooth

Cat. No. 12-7311



#### 5" Extra Long Bent Nose

Reaches into inaccessible areas. Square jaws provide an excellent grip.

A 1.20" B 0.36" C 0.22"

Smooth

Cat. No. 12-7312



#### 6" Extra Long Bent Nose

Excellent for reaching into inaccessible areas.

A 2.00" B 0.36" C 0.30"

Smooth

Cat. No. 12-7313



#### 5-3/4" Extra Long Needle Nose

Designed for light work where space and accessibility are limited.

A 1.95" B 0.40" C 0.20

Serrated

Cat. No. 12-7314



## 4-3/4" Long Nose with Side

General purpose plier for component handling and looping or bending wire. Built in side cutter cuts wire up to 22 gauge.

A 1.08" B 0.38" C 0.22"

Serrated

Cat. No. 12-7315



#### 6" Long Nose Pliers

Ideal for general assembly and wire bending work. Provides a strong grip.

A 1.52" B 0.48" C 0.30"

Serrated

Cat. No. 12-7333







#### 4-1/2" Flush Tip Cutter

For use in limited access areas. Cutting capacity 24 GA soft wire.

A 0.68" B 0.36" C 0.25"

Flush

Cat. No. 12-7330



#### 4-1/2" Oval Head Cutter

Available in semi flush and flush configuration. Semi flush cutting capacity 22 GA soft wire and flush cutting capacity 24 GA soft wire.

A 0.68" B 0.46" C 0.28"

Semi Flush

Cat. No. 12-7321

Flush

Cat. No. 12-7323



#### 5" Oval Head Cutter

Available in semi flush and flush configuration. Semi flush cutting capacity 20 GA soft wire and flush cutting capacity 22 GA soft wire.

A 0.70" B 0.60" C 0.38"

Semi Flush

Cat. No. 12-7322

Flush

Cat. No. 12-7324



#### 4-1/2" Tapered Head Cutter

Excellent for cutting in confined areas. Semi flush cutting capacity 22 GA soft wire and flush cutting capacity 24 GA soft wire.

A 0.56" B 0.45" C 0.30"

Semi Flush

Cat. No. 12-7325

Flush

Cat. No. 12-7326



#### 4-1/2" Mini Tapered Flush Cutter

For precision cutting in confined areas. Flush cutting capacity 24 GA soft wire.

A 0.36" B 0.34" C 0.24"

Flush

Cat. No. 12-7331



#### 4-1/2" Mini Oval Head Cutter

For precision cutting in confined areas. Flush cutting capacity 24 GA soft wire.

A 0.36" B 0.34" C 0.24"

Flush

Cat. No. 12-7332

## PLIERS AND CUTTERS



#### **Palm Grip Pliers**

Six of the most commonly used cutters and pliers, precision-built with stainless steel working ends and lightweight but durable molded handles. Allows hours of uninterrupted use without the cramped fingers. Spring loaded with minimal travel. Fits in the palm of the hand for easy control during close, delicate work. Color-coded handles for quick identification.

Flush Cutter Cat. No. 12-200

Flat-Nose Pliers, Serrated Cat. No. 12-204

Flat-Nose Pliers, Non-Serrated Cat. No. 12-208

Round-Nose Pliers
Cat. No. 12-212

Needle-Nose Pliers

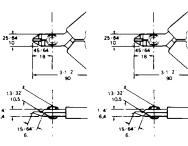
Cat. No. 12-216

Curved-Nose Pliers
Cat. No. 12-220

GC TOOL TIPS

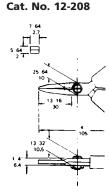
To maintain blade edge DO NOT exceed recommended cutting capacity.

Flush Cutter Cat. No. 12-200



Flat-Nose Pliers, Serrated

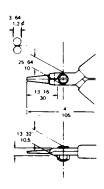
Cat. No. 12-204



Flat-Nose Pliers,

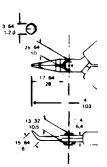
Non-Serrated

Round-Nose Pliers Cat. No. 12-212



Needle-Nose Pliers Cat. No. 12-216

Curved-Nose Pliers Cat. No. 12-220



# **TOOLS**





#### Stainless Steel Pliers

5-Piece Precision Stainless Steel Pliers Set

5 piece set fills diverse needs for technicians, designers, hobbyists and quality assurance professionals. Micro Flat Nose is perfect where jaw thickness must be minimal. Snub Nose Micro-Cutting Nippers are ideal for trimming components and soft, copper wire. Micro Round Nose Pliers hold tiny wires. Micro Bent Nose Pliers reach under PC boards to hold Micro-Cutting circuitry. Micro Long Nose style covers multiple applications for design, repair and micro-assembly. Spring-loaded handles are extra-cushioned for added comfort. Overall length is only 4".

Cat. No. 12-7070



#### Micro Snub Nose Cutting Nipper

Snub-nose design makes this Micro-Cutting Nipper desirable to use for cutting soft, copper wire up to 1.2 mm and for trimming components. Also excellent for plastic cutting where a wide bite is required. Springloaded handles are extra-cushioned for added comfort. Overall length is only 4".

Cat. No. 12-7072



#### **Micro Flat Nose Pliers**

Extra-sharp Flat Nose jaws are useful for close work where blade thickness must be minimal. Long jaws extend into difficult to reach areas. Spring-loaded handles are extra-cushioned for added comfort. Overall length is only 4".

Cat. No. 12-7071



#### **Micro Round Nose Pliers**

Tight spaces are never a problem with these precision Micro Round Nose Pliers. Easily reaches into tight spaces to hold tiny wires. Highly useful for retooling, model designing, and prototype development. Spring-loaded handles are extra-cushioned for added comfort. Overall length is only 4".

Cat. No. 12-7073



#### **Micro Long Nose Pliers**

Pointed ends flatten corners and burred edges when high-quality results are required. Covers multiple applications for design, repair, and micro-assembly. Springloaded handles are extra-cushioned for added comfort. Overall length is only 4".

Cat. No. 12-7074



#### **Micro Bent Nose Pliers**

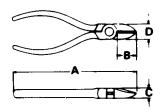
This Micro Bent Nose can be the most versatile tool on your bench, with its 45 degree jaws and long extra-thin professional design. Angled jaws reach under PC boards to hold micro-circuitry. Spring-loaded handles are extra-cushioned for added comfort. Overall length is only 4"

Cat. No. 12-7075

#### **Diagonal Cutting Pliers**

For industrial applications and for use on assembly lines. Supplied with cushion-grip handles.

Dimensions:





## Miniature Diagonal Cutting

Precision matched cutting edges are induction hardened. Cuts most types of small wire.

 length
 A
 B
 C
 D
 weight

 4"
 4-1/8"
 15/32"
 1/4"
 13/32"
 .16 lbs.

 With Spring
 Cat. No.
 12-300

 length
 A
 B
 C
 D
 weight

 4-1/2"
 4-5/8"
 5/8"
 5/16"
 9/16"
 .16 lbs.

 Cat. No.
 12-306



## Narrow Diagonal Cutting Pliers

Narrow jaws work easily in confined areas. Useful for all general purpose electric and electronic work. Induction hardened cutting edges.

length A B C D weight 5" 5-1/4" 13/16" 3/8" 5/8" .22 lbs. Cat. No. 12-312







# High Leverage Diagonal Cutting Pliers

Powerful leverage for heavy cutting ease. Induction hardened cutting edges.

length A B C D weight 7" 7-1/8" 13/16" 1/2" 13/16" .56 lbs. Cat. No. 12-318



#### Clip & Grip Flush Cutter

Production quality flush cutter for trimming component leads. Retaining device holds clipped ends and prevents them from flying into the eye or remaining in the circuitry. Semi-flush jaws for close trimming and longer life. For copper wire up to .047" dia

Cat. No. 12-504



#### Flush Cutter

Economy flush cutter with the "feel" and precision of tools costing twice as much. Angular design is ideal for trimming wires or circuit boards. Precision ground cutting edges specified to 14 AWG copper wire. 5" long overall.

Cat. No. 12-500

## PRECISION ELECTRONIC SCREWDRIVERS

GC precision screwdrivers feature color-coded swivel caps for ease of identification and added comfort. All shafts are made of durable nickel chrome steel. Black oxidized tips reduce glare and reflection.



Cat. No.	Blade Size	Shaft Dia.	Shaft Length	Handle Length	Overall Length
12-6114	1.4 mm	2.0 mm	40 mm	S-80 mm	120 mm
12-6120	2.0 mm	2.0 mm	40 mm	S-80 mm	120 mm
12-6124	2.4 mm	2.4 mm	40 mm	S-80 mm	120 mm
12-6130	3.0 mm	3.0 mm	40 mm	S-80 mm	120 mm
12-6220	2.0 mm	2.0 mm	75 mm	M-95 mm	170 mm
12-6224	2.4 mm	2.4 mm	75 mm	M-95 mm	170 mm
12-6225	2.4 mm	2.0 mm	100 mm	M-95 mm	195 mm
12-6230	3.0 mm	3.0 mm	100 mm	M-95 mm	195 mm
12-6231	3.0 mm	3.0 mm	150 mm	M-95 mm	245 mm
12-6330	3.0 mm	3.0 mm	100 mm	L-105 mm	205 mm
12-6331	3.0 mm	3.0 mm	150 mm	L-105 mm	255 mm
12-6340	4.0 mm	4.0 mm	100 mm	L-105 mm	205 mm
12-6341	4.0 mm	4.0 mm	150 mm	L-105 mm	255 mm



Cat. No.	Blade Size	Shaft Dia.	Shaft Handle Length Length		Overall Length	
12-6414	1.4 mm	2.0 mm	40 mm S-80 mm		120 mm	
12-6420	2.0 mm	2.0 mm	40 mm S-80 mm		120 mm	
12-6424	2.4 mm	2.4 mm	40 mm S-80 mm		120 mm	
12-6430	3.0 mm	3.0 mm	40 mm S-80 mm		120 mm	
12-6520	2.0 mm	2.0 mm	75 mm M-95 mm		170 mm	
12-6524	2.4 mm	2.4 mm	75 mm M-95 mm		170 mm	
12-6525	2.4 mm	2.4 mm	100 mm M-95 mm		195 mm	
12-6526	2.4 mm	3.0 mm	75 mm M-95 mm		170 mm	
12-6530	3.0 mm	3.0 mm	100 mm M-95 mm		195 mm	
12-6630	3.0 mm	3.0 mm	100 mm L-105 mm		205 mm	
12-6631	3.0 mm	3.0 mm	150 mm L-105 mm		255 mm	
12-6640	4.0 mm	4.0 mm	100 mm L-105 mm		205 mm	
12-6641	4.0 mm	4.0 mm	150 mm	L-105 mm	255 mm	





#### PRECISION ELECTRONIC SCREWDRIVER SETS



#### 6-Piece Precision Screwdriver Set

Easy grip swivel-cap handles are indispensable for hobbyists and experimenters. Small blades find uses in assembly and repair of electronic devices, models, jewelry and toys. Six flat blades include sizes .9 mm, 1.2 mm, 1.8 mm, 2.4 mm, 3.0 mm, and 3.5 mm, packaged in plastic storage box.

Cat. No. 12-043



#### 6-Piece High Quality Precision Screwdriver Sets

100% Phillips blades in the most popular sizes; 1.6 mm, 2.0 mm, 2.4 mm, 3.0 mm, 3.5 mm, and 4.0 mm. All handles are nickel-chrome plated steel with superior tooling. A perfect complement to Cat. No. 12-063. Extra-strength storage box included.

Cat. No. 12-064



#### 7-Piece High Quality Micro Mini Precision Screwdriver Set

Ultra-precision and watch repair accuracy in a complete set of flat blade screwdrivers. Color-coded and swivel caps make micro repairs convenient. Each handle is numbered for quick identification. Every shaft is reversible, providing extended durability. Sizes are .022", .025", .029", .038", .045", .053", and .062". Handles are nickel-chrome steel with superior tooling. Includes plastic view-top storage case.

Cat. No. 12-057



#### 6-Piece High Quality Precision Screwdriver Set

Nickel-chrome steel and superior tooling adds increased comfort and durability to this upgrade version of Cat. No. 12-062. Kit includes flat blade assortment in sizes 1.4 mm, 2.0 mm, 2.4 mm and 3.0 mm. Also includes 3.0 mm and 4.0 mm Phillips blades. Extra-strength storage box completes the set.

Cat. No. 12-065



#### 6-Piece Precision Screwdriver Set

Make lab bench repairs comfortably with easy grip, swivel cap handles. Handy storage box with clear plastic cover holds four flat blade screwdrivers in popular sizes of 1.4 mm, 2.0 mm, 2.4 mm, and 3.0 mm. Also included are 3.0 mm and 4.0 mm Phillips blades.

Cat. No. 12-062



# 11-Piece Precision Screwdriver and Tool Set

Easy grip swivel-cap handles hold a single magnet and multi-purpose awl in this versatile tool set. Magnet tip picks up hard-to-hold screws. Sharp tip awl starts new screw holes easily. Matching flat blade screwdrivers in sizes 1.0 mm, 1.2 mm, 1.4 mm, 1.8 mm, 2.4 mm and 3.0 mm plus Phillips sizes 2.4 mm, 3.0 mm and 4.0 mm. All eleven pieces packaged in a convenient double-sided tool kit

Cat. No. 12-066



#### 6-Piece High Quality Precision Screwdriver Set

100% flat blades include 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm, and 3.8 mm. All handles are nickel-chrome steel with superior tooling. This popular sized kit is a must for every technician's workbench. Extra strength storage box included.

Cat. No. 12-063



# 11-Piece Precision Screwdriver and Tool Set

Miniature parts are easily managed with a 2" magnifying lens and precision tweezers packaged in a double-sided tool kit with eight swivel cap screwdrivers. Flat head sizes include 1.0 mm, 1.2 mm, 1.4 mm, 1.8 mm, 2.4 mm, and 3.0 mm. Phillips 2.0 mm and 2.4 mm complete the set.

Cat. No. 12-067





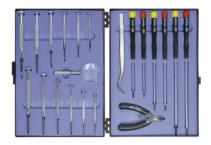
#### 21-Piece Precision Screwdriver and Tool Set



Complete all repairs from one tool kit when you own this set. Includes open wrench sizes 4.0 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm; Phillips 3.0 mm, 4.0 mm; hex key wrench 1.5 mm, 2.0 mm, 2.5 mm; nutdriver 3.0 mm, 3.5 mm, 4.0 mm, 4.5 mm, 5.0 mm; and flat blades 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm, and 3.8 mm. Crossbar included for extra torque. Entire kit is fully visible, packaged in a convenient plastic box.

Cat. No. 12-068

#### 21-Piece Deluxe Precision Screwdriver and Tool Set



Professional style fitted tool case with magnifier, bent-nose tweezers, micro-cutting nippers and three screwdriver sets. Includes electronic flat blades 2.4 mm, 3.0 mm, and 3.8 mm; electronic Phillips 3.0 mm, 3.5 mm with 75 mm, 100 mm, and 150 mm shafts. Also, precision flat 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm, 3.8 mm; precision Phillips 1.6 mm, 2.0 mm, 2.4 mm, 3.0 mm, 3.5 mm, and 4.0 mm. Tweezers and nippers are stainless steel.

Cat. No. 12-069

#### 10-Piece Electronic Screwdriver and Tool Set



Stainless steel magnifier and tweezers insure greater accuracy when working with micro-components and intricate repairs. Electronic screwdrivers have black oxidized tips to reduce glare and reflections. Shafts are constructed of nickel-chrome steel for extra durability. Precision flat blade sizes: 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, Phillips sizes 1.6 mm, 2.0 mm, 2.4 mm. Multi-purpose awl provides pinpoint accuracy to construction projects, PC repairs and fine cleanup work. Short length 80 mm handles have colored swivel tips for added comfort and ease of identification. Packaged in reusable plastic box.

Cat. No. 12-6043

#### 6-Piece Precision Electronic Screwdriver Sets



Electronic screwdrivers have black oxidized tips to reduce glare and reflections. Durable nickel-chrome steel shafts guarantee extra durability for use on TV sets, clocks VCR's, optical instruments and computers. Precision flat blades sizes: 2.4 mm, 3.0 mm, 4.0 mm. Phillips sizes 2.4 mm, 3.0 mm, 4.0 mm. Medium length 95 mm and long 150 mm handles reach deep and allow greater comfort and increased torque.

Cat. No. 12-6900



Black oxidized tips hold up with repetitive use while reducing glare and reflections. Shafts are constructed of nickel-chrome steel for extra durability. Precision flat blade sizes: 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm, 3.5 mm. Short length 80 mm handles offer accuracy in tight spaces for repair and construction of telephone equipment, toys and electrical appliances. Packaged in reusable plastic box.

Cat. No. 12-6901

#### 7-Piece Precision Electronic Screwdriver Sets



This set features our seven most popular sizes with short length 80 mm handles. Great for varying work requirements where extreme accuracy is required. Nickel-chrome steel makes these shafts strong enough to use on tough repairs. Precision flat blade sizes: 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm. Phillips sizes: 2.0 mm, 2.4 mm, 3.0 mm. Packaged in reusable plastic box.

Cat. No. 12-6912



Color-coded end caps and easy grip handles make the precision screwdrivers the favorites of technicians, professional designers and engineers. Extra strong nickel-chrome steel shafts extend into tiny work spaces. Precision flat blade sizes: 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm. Phillips sizes: 1.6 mm, 2.4 mm, 3.0 mm. Two sizes of handles (80 mm and 95 mm) are included to comfortably reach wherever accuracy is necessary. Storage tray included.

Cat. No. 12-6923

# TOOLS





#### 8-Piece Precision Electronic Screwdriver Set

Easily locate the right tool every time with color-coded end caps and handy professional rack to keep screwdrivers organized. Precision flat blade sizes: 1.0 mm, 1.4 mm, 2.0 mm, 2.4 mm, 3.0 mm. Phillips sizes: 1.6 mm, 2.0 mm, 2.4 mm. Short length 80 mm handles. Includes convenient benchtop rack with tray for holding loose screws.

Cat. No. 12-6931



#### 6-Piece Precision Electronic Screwdriver and Tool Set

Includes stainless steel micro-cutting nippers and micro-long nose pliers. Electronic screwdrivers have black oxidized tips to reduce glare and reflections. Shafts are constructed of nickel-chrome steel for extra durability. Precision flat blade sizes: 2.4 mm, 3.0 mm. Phillips sizes 2.4 mm and 3.0 mm. Medium length 95 mm handles.

Cat. No. 12-6955



#### 9-Piece Precision Electronic Screwdriver Set

Includes 1.5" x 3.5" magnifying lens, stainless steel micro-cutting nippers and micro-long nose pliers. Electronic screwdrivers have black oxidized tips to reduce glare and reflections. Shafts are constructed of nickel-chrome steel for extra durability. Precision flat blade sizes: 1.4 mm, 2.0 mm, 2.4 mm. Phillips sizes: 1.6 mm, 2.0 mm, 2.4 mm. Short length 80 mm handles. Packaged in reusable plastic box.

Cat. No. 12-6952



# 10 Piece Screwdriver & Nutdriver Set

Compact set of No. 1 and No. 2 Phillips type screwdrivers; 1/8", 3/16", 1/4" slotted screwdrivers; 3/16", 1/4", 5/16", 11/32", and 3/8" nutdrivers. Plastic case holds all drivers plus powerful torque handle. Handle fits onto each of the drivers and increases your hand's gripping power.

Cat. No. 12-041

## THORSEN® FULL SIZE PLIERS & CUTTERS



#### Slip Joint Pliers

Our most popular size of slip joint pliers with two jaw positions.

Cat. No. TH-54206 8" Slip Joint Pliers Cat. No. TH-54208 10" Slip Joint Pliers

6" Slip Joint Pliers

Cat. No. TH-54210



#### **Groove Joint Pliers**

Jaws can be positioned and locked to give the user a wide range of jaw openings.

8" Groove Joint Pliers Cat. No. TH-54308

10" Groove Joint Pliers Cat. No. TH-54310



#### Diagonal Cutting Pliers

Three sizes of tapered-nose diagonal cutting pliers with standard bevel knives.

5" Diagonal Cutting Pliers Cat. No. TH-54905

6" Diagonal Cutting Pliers Cat. No. TH-54906

7" Diagonal Cutting Pliers **Cat. No. TH-54907** 



#### Linesmen Cutting Pliers

Our most popular side cutting linesmen pliers.

7" Linesmen Cutting Pliers Cat. No. TH-54917

8" Linesmen Cutting Pliers Cat. No. TH-54908



#### Long Nose Pliers

Standard long nose design with cutting knives at the hinge.

5" Long-Nose Plier Cat. No. TH-54914

6" Long-Nose Plier

Cat. No. TH-54916

8" Long-Nose Pliers

Cat. No. TH-54918



#### **Bent Nose Pliers**

Bent nose allows for work in hard to reach areas.

11" 15 degree Bent Nose Plier

Cat. No. TH-56924

11" 45 degree Bent Nose Plier Cat. No. TH-56926

11" 90 degree Bent Nose Plier





**Phillips Screwdrivers** 

#### THORSEN® CUSHION GRIP SCREWDRIVERS

#### Slotted Screwdrivers

Thorsen Cushion Grip Screwdrivers with its large ergonomic handle and hollow for the thumb will resist slippage while providing the user with more turning torque. All blades are made of chrome vanadium and handles are marked with the size and Thorsen number.

1/8" Shank Width x 3" Shank Length

Cat. No. TH-56200

3/16" Shank Width x 4" Shank Length"

Cat. No. TH-56202

3/16' Shank Width x 6" Shank Lenath

Cat. No. TH-56204

TH-56202 1/4" Shank Width x 1-1/2" Shank

Lenath Cat. No. TH-56206 1/4" Shank Width x 4" Shank

Cat. No. TH-56208

1/4" Shank Width x 6" Shank Lenath

Cat. No. TH-56212

5/16" Shank Width x 6" Shank Length

Cat. No. TH-56214

TH-56206

5/16" Shank Width x 8" Shank Length with hex Cat. No. TH-56216

#### T-Bit Screwdrivers

T10 T-Bit

Cat. No. TH-56310

T15 T-Rit

Cat. No. TH-56315

T20 T-Rit

Cat. No. TH-56320

T25 T-Rit

Cat. No. TH-56325

T27 T-Rit

Cat. No. TH\_56327

T30 T-Rit

Cat. No. TH-56330

TH-56315

#### 3/16" Dia. X 3" Length x #1 Cat. No. TH-56220 1/8" Dia. X 3" Length x #0 Cat. No. TH-56221 1/4" Dia. X1-1/2" Length x #2 Cat. No. TH-56222 3/16" Dia. x 4" Length x #1 Cat. No. TH-56223

1/4" Dia. x 4" Length x #2

Cat. No. TH-56224

1/4" Dia. x 6" Length x #3 Cat. No. TH-56225

5/16" Dia. x 6" Length w/hex x #3

Cat. No. TH-56226





TH-56236

#### Screwdriver Sets

A wide selection of screwdriver sets.

6 in 1 Cushion Grip

Screwdriver Cat. No. TH-56236

6 in 1 Cushion Grip

Screwdriver (12 pack)

Cat. No. TH-56236D 4 in 1 Cushion Grip Torx Driver

Cat. No. TH-56314

22 Pc Screwdriver set Cat. No. TH-33722 4 Pc Screwdriver set #2 x 4". #1 x 3", 1/8" x 3", 3/16" x 4"

Cat. No. TH-56254

2 Pc T-Bit Driver Set T15, T20 Cat. No. TH-56352

4 Pc T-Bit Driver Set T10, T15, T20, T25

Cat. No. TH-56354

6 Pc Screwdriver Set

Cat. No. TH-56256

## THORSEN® CUSHION GRIP **NUTDRIVERS** I



TH-57462

#### Nutdrivers

The hollow shaft will accommodate even the longest studs/bolts.

3/16" Hollow Shaft

Cat. No. TH-56467

1/4" Hollow shaft Cat. No. TH-56468

5/16" Hollow Shaft

Cat. No. TH-56470

3/8" Hollow Shaft Cat. No. TH-56472

7/16" Hollow Shaft

Cat. No. TH-56474

1/2" Hollow Shaft Cat. No. TH-56476

6 Pc SAE Nutdriver Set 3/16",1/4",5/16",3/8",7/16",1/2"

Cat. No. TH-57462

6 Pc Metric Nutdriver Set 5, 6, 7, 8, 9, 10 mm Cat. No. TH-67462

## THORSEN® FULL SIZE ADJUSTABLE WRENCHES



TH-56726

4" Adj. Wrench

Cat. No. TH-56724

Adjustable Wrenches

6" Adj. Wrench, 8 mm wide handle

Cat. No. TH-56726

plated to resist rust.

8" Adj. Wrench, 9.4 mm wide handle

All adjustable wrenches are made of drop forged, heat treated carbon alloyd steel and are chrome

Cat. No. TH-56728

10" Adj. Wrench, 10.4 mm wide handle

Cat. No. TH-56730

12" Adj. Wrench, 12.2 mm wide handle

Cat. No. TH-56732

15" Adj. Wrench

Cat. No. TH-56735

18" Adj. Wrench

#### THORSEN® HAMMERS



12 oz. Ball Pien Hammer

Cat. No. TH-157843F

8 oz. Claw Hammer

Cat. No. TH-157860F

16 oz. Claw Hammer

Cat. No. TH-157862F

22 oz. Framing Hammer Cat. No. TH-157876F

#### THORSEN® RATCHETS



#### Ratchets

Finger Rachets.

3/8" Finger Ratchet Only Cat. No. TH-51100

1/4" Drive x 5-1/2" lg, Quick

release

Cat. No. TH-50178

3/8" Drive x 8" lg, Quick release.

Cat. No. TH-51178

3/8" Drive x 4" stubby. Reversible

Cat. No. TH-51176

3/8" Drive x 8" lg. Flipper ratchet. Cat. No. TH-51175

1/2" Drive x 10" lg. Push Release. Cat. No. TH-52178



#### 15 Piece Industrial **T-Bit Driver Set**

#### Set includes:

Standard Length Bits: T-10, T-15, T-27, T-30, 3" Extra Reach Bits: T-20, T-25, T-30, T-40, T-45, T-47, T-50, T-55, T-60 Socket Adapter

Cat. No. TH-38515

## THORSEN® SOCKET SETS



#### Socket sets

Both SAE and MM sizes.

3/8" Deep Drive, 6pc, 12 point, SAE, 7/16, 1/2, 9/16, 5/8, 11/16 & 3/8" drive socket rail

#### Cat. No. TH-31056

3/8" Deep Drive, 6pc, 12 point, metric, 10, 12, 13, 14, 15 mm & 3/8" drive socket rail

Cat. No. TH-41056



1/4" Drive, 9pc, 6 Point SAE, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2 & 1/4" drive socket rail

#### Cat. No. TH-30006

3/8" Drive, 9pc, 12 point, SAE, 1/4, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4 & 3/8" drive socket rail

#### Cat. No. TH-31059

3/8" Drive, 9pc, 12 Point, metric, 10, 11, 12, 13, 14, 15, 17, 19 mm & 3/8" drive socket rail

Cat. No. TH-41059



TH-31059

3/8" Drive, 10 Pc, Hex/Screwdriver bit SAE, Reg. Slotted screwdriver, #2 Phillips, Screwdriver Bit, Hex Bit Sockets, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8 and a metal tool box.

Cat. No. TH-31010



1/4" & 3/8" Drive, 11 Pc, Star Bit Socket Set, 1/4" Sockets (T10, T15, T20, T25), 3/8" Sockets (T27, T30, T40, T45, T50, T55), Socket Rail.

3/8" Drive 12 Pc., 12 Point SAE with 5" extension and 8" reversible

11/16, 3/4. 13/16" 6 point sparkplug

ratchet, 3/8, 7/16, 1/2, 9/16, 5/8,

socket and a metal toolbox.

Cat. No. TH-38510



TH-31012

Cat. No. TH-31012

12 Pc. 3/8" Drive, 12 Point Metric with 5" extension and 8" reversible ratchet, spin disc 9, 10, 12, 13, 14, 17, 19 mm with 13/16" 6 point sparkplug socket and metal toolbox.

Cat. No. TH-41012



5" extension, 10" reversible ratchet, 13/16" 6 point sparkplug socket and metal toolbox. 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 and 1" sockets.

1/2" Drive,15 Pc., 12 Point SAE with





# THORSEN® SOCKET ACCESSORIES



#### **Socket Accessories**

Extensions, Adaptors and Flex Handles.

1/4" Drive x 6" Extension

Cat. No. TH-50153

3/8" Drive x 5" Extension.

Cat. No. TH-51153

3/8" Drive x 10" Extension. **Cat. No. TH-51157** 

1/2" Drive x 5" Extension

Cat. No. TH-52153

1/2"F x 3/8"M Reducing Adaptor.

Cat. No. TH-52194

1/2" Drive Universal Joint.

Cat. No. TH-52133

1/4" Drive Universal Joint.

Cat. No. TH-50133

3/8" Drive x 8" lg. Flex Handle

Cat. No. TH-51112

1/2" Drive x 14-1/2" lg. Flex Handle

Cat. No. TH-52115

# THORSEN® COMBINATION WRENCH SETS





#### **Combination Wrench Sets**

6 And 10 Piece SAE and Metric Combination Wrench Sets

6 Pc SAE Wrench Set Includes: 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" and a vinyl pouch

Cat. No. TH-34056

6 Pc Metric Wrench Set Includes: 10mm,11 mm, 12 mm, 13 mm, 14 mm, 15 mm and a vinyl pouch

Cat. No. TH-44056

10 Pc SAE Wrench Set Includes: 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16" and a vinyl pouch

Cat. No. TH-34060

10 Pc Metric Wrench Set Includes: 8 mm, 9 mm, 10 mm, 11 mm, 12 mm, 13 mm, 14 mm, 15 mm, 17 mm, 19 mm and a vinyl pouch

Cat. No. TH-44060

# THORSEN® COMBINATION WRENCHES



#### **Combination Wrenches**

1/4" to 1" SAE Raised Combination Wrenches.

1/4" Combination Wrench

Cat. No. TH-54008

5/16" Combination Wrench

Cat. No. TH-54010

3/8" Combination Wrench Cat. No. TH-54012

7/16" Combination Wrench

Cat. No. TH-54014

1/2" Combination Wrench

Cat. No. TH-54016

9/16" Combination Wrench

Cat. No. TH-54018

5/8" Combination Wrench

Cat. No. TH-54020 11/16" Combination Wrench

Cat. No. TH-54022

3/4" Combination Wrench

Cat. No. TH-54024

13/16" Combination Wrench

Cat. No. TH-54026

7/8" Combination Wrench

Cat. No. TH-54028

15/16" Combination Wrench

Cat. No. TH-54030 1" Combination Wrench





#### WIRE STRIPPERS



#### Round Cable Rotary Wire Stripper

Can be used on single or multi-conductor cable up to 1.75". Blade will cut around the cable jacket as well as slit the length for easy removal. Spare blades included (storage in handle).

Cat. No. 12-197



#### Maxim Universal Wire Stripper

The Maxim is a self adjusting wire stripping/cutting tool for PVC insulated wires and cables from 28 AWG (0.08 mm²) to 10 AWG (6.0 mm²). The Maxim is a fast, safe and more precise alternative to a knife, side cutters or less efficient tools available. The Maxim utilizes a new "closed loop" cam mechanism which produces a greater power to torque ratio than existing tools to reduce operator fatigue. The Maxim uses the well proven laminated stripping blade system. This allows the blades to adapt and form around the insulation of round, oval or flat cables to avoid damage to the conductors during stripping. The Maxim incorporates a direct drive cutter for powerful but controlled cable cutting of up to 10 AWG (6.0 mm2) conductors.

#### Features:

- Powerful new cam design gives greater mechanical advantage to reduce operator fatigue.
- Precise laminated blade design strips any shape of PVC insulation without damage to the conductors.
- Automatic no adjustment slides or screws required.
- Integral wire cutter fully recessed into the housing and incorporates a sight window to ensure a clean square cut without damaged strands or conductors.
- Fast easy access for stripping and cutting increases productivity.
- Safe and Ergonomic designed with no exposed cutting blades and smooth housing to insure a comfortable fit in the operators hand.
- Versatile for use with a wide range of wire types from miniature electronic to power rated wires.
- Repeatable strip lengths available with quick fit wire stops to set strip lengths from 0.12" (3 mm) to 0.71" (18 mm).
- Durable Construction all critical components are manufactured from high grade hardened steel. The body is molded from glass reinforced nylon to withstand the routines of the harshest working environment.

#### Specifications

Stripping capacity: 28 AWG (0.08 mm²) to 10 AWG (6.0 mm²)
Cutting capacity: 10 AWG (6.0 mm²) stranded, 12 AWG (4.0 mm²) solid
Dimensions: 8.07" (205 mm) x 4.13" (105 mm) x .75" (19 mm)
Weight: 0.44 lbs. (0.2 kg.)

Cat. No. 12-175





#### **Rotary Action Pocket Stripper**

The pocket stripper is a self-adjusting wire stripping/cutting tool for flexible power supply cables up to .35" (9 mm) in diameter. This unique tool is the safe alternative to the knife in preparing cables in industrial, electronic and electrical applications. The enclosed blade and rounded tool body ensures completely safe operation. The patented stripping design ensures that the conductor will not be damaged. The compact design makes it ideal for every tool kit.

#### Features:

- Preset no adjustments required.
- Integral wire cutter guillotine action ensures clean, square cuts.
- Precise rotary action design gives clean cuts with no damage to the conductors.
- Safe no exposed blades.
- Versatile strips inner and outer insulation from a wide range of power supply cables.
- Rugged simple encapsulated design enables it to withstand the roughest treatment.
- Handy pocket sized design is ideal for tool kits.
- Ten packed in GC Tool Countertop Display.

#### Specifications:

Stripping capacity: Round/oval cables up to .35" (9 mm) diameter Cutting capacity: Flexible cables up to 16 AWG (1.5 mm²) Dimensions: 3.54" (90 mm) x 1.50" (38 mm) x .71" (18 mm)

Weight: 1.34 oz. (35 gms.)

Cat. No. 12-540







#### Speed-O-Matic Wire Stripper

Features "Fully Automatic Delayed Action" to prevent crushing fine wires. Speed-O-Matic has narrow, easy-grip, handles and interchangeable blades. Patent No. 2,755,691.

For Sizes 12 to 20 Wire Cat. No. 766

For Sizes 14 to 30 Wire Cat. No. 766-A

For Sizes 10 to 18 Wire

Cat. No. 766-B
For Sizes 8 to 22 Wire
Cat. No. 766-I

18 to 28 ga. Teflon Stripper

Cat. No. 766-TEF

Display Carded 766-I Cat. No. 766-IP

Display Carded 766-C Cat. No. 766-CP



#### **Electrician's Scissors**

For cutting soft, thin gauge wire or metal. With double notches for stripping. This hot-drop forged tool is more durable than most and a good tool for both the lab and a field technician's tool case.

Cat. No. 12-292



#### **Round Cable and Wire Cutter**

Cuts multi-conductor cable up to .500 inch (12.7 mm) and solid wire up to 8 AWG (10 mm). Built in return spring. Locking latch. User easy grip. Hardened steel cuting blades.

Cat. No. 12-462



#### One Step Stripper

- Quickly and easily strips RG-59 & RG-6 cables for CATV.
- No adjustments needed spring action adjusts cutting depth automatically.
- Replaceable blade cassette lasts 1,000 2,000 strips.
- Convenient built-in belt clip.

One Step Stripper

Cat. No. 12-551



#### Kwik-Strip Coax Stripper

Cuts and strips RG-58/U or RG-59/U coaxial cables. Toggle latch keeps stripper closed when not in use. Precision ground cutter blades are replaceable. 3-1/4" x 2-1/8" x 1-1/4". Weighs 2.6 oz.

On Display card **Cat. No. 12-164** Replacement Blade Set **Cat. No. 12-165** 



#### 2-Level Coax Stripper

Designed for "F" type, single crimp BNC/TNC, twist-on BNC/TNC, Twin-ax, UHF connectors, RG-6, RG-58, RG-59 and RG-62 coax. Strips braid and dielectric to .250" (6.4 mm). Stripper is adjustable and will accept 2 & 3 level replacement blade cartridges.

Cat. No. 12-171

2-level replacement blade cartridges

Cat No. 12-173



#### 3-Level Coax Stripper

For dual crimp BNC/TNC, Thinnet BNC connectors, RG-6, RG-58, RG-59 and RG-62 coax. Strips braid and dielectric to .109" (2.8 mm). Stripper is adjustable and will accept 2 & 3 level replacement blade cartridges.

Cat. No. 12-172

3-level replacement blade cartridges

Cat No. 12-174



#### 3 in 1 Wire Stripper

This multi-function, fully adjustable stripper is simple to operate, safe and inexpensive. Can be used on RG-58, RG-59 and RG-62 coax, flat telcom wire and 16-26 AWG wire.

Cat. No. 12-178



#### Wire Stripper Kits

Kits include wire stripper and 3 sets of replaceable blades—for 14 to 30 AWG wire and RG-58 and RG-59 coaxial cable. Packed in special plastic storage box. Perfect for the electronic and electric prototype shop, experimental laboratory, home workshop, as well as maintenance and production applications.

Speed-O-Matic Stripper Kit

Cat. No. 766-K



#### **Fully Automatic Wire Stripper**

Stripper is so automatic that all you need to do is insert any insulated wire and squeeze the handles. Repetitively strips perfectly every time and automatically adjusts to any wire from 26 gauge up to 10 gauge. It will not strip Teflon insulation but neatly handles all other standard insulations. Blades are of an advanced sintered steel material and will yield long life.

Wire Stripper Cat. No. 12-155 Replacement Blade Set Cat. No. 12-166

# **TOOLS**





#### Combination Prep Tool for Coax Cable

Attach twist-on "F" connectors like a professional when you use this convenient cable preparation tool. One end quickly enlarges space between shield and insulation with a simple twist of the wrist. The other end is threaded to hold "F" connectors snugly, while perfectly placing them onto coax cable, ready to crimp. Nickel-chrome, T-shaped tool easily fits into pocket or tool box.

RG-6 Cable **Cat. No. 12-390** 

RG-59 Cable Cat. No. 12-395



#### Strip-Er-Clip

Features an 8-stop gauge (for wires No. 12 to 26) which adjusts instantly to correct wire size. Made of heat-treated tool steel with specially-ground cutting edges for fast, effortless stripping, a heavily insulated grip for comfort and streamlined jaws for use in tight spots. Economical.

Cat. No. 12-760



#### **Coaxial Stripper**

For stripping RG-58, RG-59, and RG-62 coaxial cable. Equipped with two blades allowing you to strip the insulation and dielectric in the same action.

Cat. No. 12-458
Replacement Blades
Cat. No. 12-468



#### ThorSelect™ Two Level Coax Stripper

Two level stripper for RG-6, RG-59 and RG-62. Cutting blade is rated for 1500 drop cable preparations. Molded from high impact Delrin and has integral blade for versatility and ease of use. Made in U.S.A.

Cat. No. 12-501



#### ThorSelect™ Three Level Coax Stripper

Three level stripper for RG-58, RG-59 and RG-62. Cutting blade is rated for 1500 drop cable preparations. Molded from high impact Delrin and has integral blade for versatility and ease of use. One tool works on all braid and shielding variations. Made in U.S.A.

Cat. No. 12-531



#### **Line Cord Stripper**

Multi-function tool cuts/strips flat telephone line cord. For RJ-11 & RJ-45 modular plugs. A built-in stripping guide assures correct strip lengths.

Cat. No. 12-176



#### **Professional UTP Wire Stripper**

This multi-purpose Tele-stripper is a versatile product for cable preparation. The tool will slit and strip twisted pair cable.

#### Features

- Long life cutting blades for all stripping and slitting functions.
- Strip and slit lengths may be varied to accommodate different connector requirements.
- The user friendly tool is molded from highly visible, durable Delrin Super-Tuff.
- A recessed cutting surface slits long runs for twisted pair cable.
- A stripping feature with multiple nest cavities allows the removal of a wide variety of jacket materials on twisted pair cable. Disengage tension loop for thin jacketed cable.
- A strip length gauge is molded into the side of the tool.

Cat. No. 12-532



#### **UTP Wire Stripper**

The UTP Wire Stripper takes the guesswork out of removing the cable jackets from many types of twisted pair (UTP & STP), multicore (shielded and unshielded) and fibre optic cables. This multipurpose tool will adapt itself to accept cable diameters up to 0.43" (11 mm). It is designed for long blade life and to cut into the insulations while leaving the conductors undamaged. It can be used for voice, video, audio, security and many other applications.

#### Features:

- Safety the cutting blade is recessed into the housing.
- One piece design the tool comes complete and ready to use right out of the package.
- Self-adjusting will provide the user with the widest range of stripping options. The tool will adjust automatically to cut PVC, plenum rated materials and others without damaging the braids, foils or conductors.
- Typical applications Data: Ethernet (10 Base T), Token Ring (IBM Cabling Types 1 & 6), Appletalk, and ISDN; Voice: Premis Distribution.
- Ten packed in GC Tool Countertop Display.

#### Specifications:

Stripping Capacity: Round/oval cables up to 0.43" (11 mm) in diameter.

Dimensions: 3.54" (90 mm) x 1.50" (38 mm) x 0.71" (18 mm).

Weight: 1.34 oz. (35 gms.)

Cat. No. 12-545

# Manual Wire Wrap

Wraps 30 AWG (.254 mm) wire onto .025" wire wrap posts. In addition, it unwraps as well as strips 30 AWG wire nick-free. The tool also makes a modified style of wrap in which approximately 1-1/2 turns of insulated wire are wrapped in

addition to the bare wire for purposes of added

mechanical stability.

Cat. No. 12-600

#### 2 5 6 5 7 8

#### **Dual Wrap Tool**

The GC Dual Wrap Tool wraps, strips and unwraps 22 and 24 AWG solid hookup wires. The tool fits over .045" square posts. Extremely simple to use in all three operations. Tool is lightweight, durable, pocket sized.

Cat. No. 12-603



#### Wire Wrap

Each spool contains 100 ft. of silver plated, solid 30 AWG KYNAR® wire.

Red **Cat. No. 12-636** 

White **Cat. No. 12-634** 

Blue **Cat. No. 12-630** 

Yellow **Cat. No. 12-632** 





## 9000 SERIES PROFESSIONAL RATCHETING CRIMP TOOL

#### **Heavy Duty Crimping Tool**

Frame only



Description	Complete Tool Catalog Number	Replacement Die Set
22-10 AWG Insulated Terminals, Color Coded Nests	12-9001	12-9101
22-12 AWG Non-Insulated Terminals	12-9002	12-9102
22-10 AWG Full Insulated Quick Disconnect Terminals with Thinner Wire Barrels	12-9003	12-9103
RG-58, 59/62 BNC/TNC Coax Connectors	12-9004	12-9104
Cambridge CP-88, CP-89, RG-58, 59/62 BNC/TNC	12-9005	12-9105
22-8 AWG Non-Insulated Terminals	12-9006	12-9106
16-26 AWG Mini Insulated Rings, Spade and Butt Splices	12-9007	12-9107
Fiber Optic SMA, SMB, SFR Connectors	12-9008	12-9108
AMP Fiber Optic SMA or SFR Type Connectors	12-9009	12-9109
RG-58/174 and Belden 8218, 50 & 75 Ohm Cables	12-9010	12-9110
RG-59, RG-6, 8281 50 and 75 Ohm Cables	12-9011	12-9111
N-Series RG-8/11 Connectors	12-9012	12-9112
RG-174, Mini 59 BNC/TNC Connectors	12-9013	12-9113
RG-6, RG-174, 8281 Cable	12-9014	12-9114
Twinax (Hex)	12-9015	12-9115
Plenum & Non-Plenum, Thinwire also Teflon	12-9016	12-9116
AMP Thinwire Dual Crimp BNC Coax Connectors	12-9017	12-9117
AMP RG-58 Dual Crimp BNC/TNC Coax Connectors	12-9018	12-9118
AMP RG-59/62 Dual/Crimp BNC/TNC Coax Connectors	12-9019	12-9119
Mini UHF and BNC/TNC 5 Cavity	12-9020	12-9120
RG-59, RG-6 F-Type CATV Connectors	12-9021	12-9121
Modular Plug RJ-45 8 Position Keyed or Non-Keyed	12-9022	12-9122
Modular Plug RJ-11 2, 4, & 6 Position	12-9023	12-9123
Modular Plug DEC MMJ 6 Position with an Offset Release Tab	12-9024	12-9124
Modular Plug AMP RJ-45 8 Position/Primary Strain Relief is Located Further Back on Die	12-9025	12-9125
Modular Plug RJ-22 2 & 4 Position	12-9026	12-9126





#### Die Sets for 9000 Series Professional Ratcheting Crimp Tool

- Interchangeable with any 9000 Series Ratcheting Crimp Tool
- Wide range of applications
- Quick die change (2 screws)
- Precision tool grade steel

#### **12-9101** Die Set Only





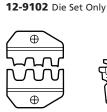
22-10 AWG (.324 mm<sup>2</sup> - 5.261 mm<sup>2</sup>) Insulated Terminals, Color Coded Nests

Tool with Die 12-9001





Tool with Die 12-9002





22-10 AWG (.324 mm<sup>2</sup> - 5.261 mm<sup>2</sup>) Full Insulated Quick **Disconnect Terminals** with Thinner Wire Barrels

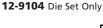
Tool with Die 12-9003





RG-58, 59/62 BNC/TNC Coax Connectors (Hex, 0.255 (6.48 mm), 0.213 (5.41 mm), 0.068 (1.73 mm))

Tool with Die 12-9004



**12-9103** Die Set Only





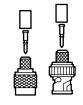
Cambridge CP-88, CP-89, RG-58, 59/62 BNC/TNC (Hex, 0.305 (7.75 mm), 0.068 (1.73 mm), 0.228 (5.79 mm))

Tool with Die 12-9005



**12-9106** Die Set Only





22-8 AWG  $(.3 \text{ mm}^2 - 8 \text{ mm}^2)$ Non-Insulated Terminals





Tool with Die 12-9006

**12-9107** Die Set Only





12-9108 Die Set Only





12-9109 Die Set Only





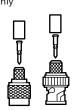
12-9110 Die Set Only





12-9111 Die Set Only





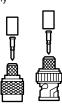
**12-9112** Die Set Only





**12-9113** Die Set Only





16-26 AWG (1.31 mm<sup>2</sup> – .128 mm<sup>2</sup>) Mini Insulated Rings, Spade and Butt Splices

Tool with Die 12-9007

Fiber Optic SMA, SMB, **SFR Connectors** (Hex, 0.151 (3.84 mm), 0.178 (4.52 mm), 0.213 (5.41 mm))

Tool with Die 12-9008

AMP Fiber Optic SMA or SFR Type Connectors (Round, 0.195 (4.95 mm), 0.165 (4.19 mm), 0.138 (3.51 mm))

Tool with Die 12-9009

RG-58/174 and Belden 8218, 50 & 75 Ohm Cables (Hex, 0.213 (5.41 mm), 0.178 (4.52 mm), 0.068 (1.73 mm), 0.042 (1.07 mm))

Tool with Die 12-9010

RG-59, RG-6, 8281 50 and 75 Ohm Cables (Hex, 0.324 (8.23 mm), 0.255 (6.48 mm), 0.068 (1.73 mm), 0.042 (1.07 mm))

Tool with Die 12-9011

N-Series RG-8/11 Connectors (Hex, 0.429 (10.90 mm), 0.100 (2.54 mm), 0.080 (2.03 mm))

Tool with Die 12-9012

RG-174, Mini 59 **BNC/TNC Connectors** (Hex, 0.178 (4.52 mm), 0.128 (3.25 mm), 0.068 (1.73 mm))

Tool with Die 12-9013





**12-9114** Die Set Only





RG-6, RG-174, 8281 Cable (Hex, 0.324 (8.23 mm), 0.178 (4.52 mm), 0.068 (1.73 mm))

Tool with Die 12-9014

12-9121 Die Set Only





RG-59, RG-6 F-Type **CATV** Connectors (Hex, 0.350 (8.89 mm), 0.320 (8.13 mm), 0.255 (6.48 mm))

Tool with Die 12-9021

**12-9115** Die Set Only





Twinax (Hex, 0.429 (10.90 mm), 0.075 (1.90 mm), 0.075 (1.90 mm))

Tool with Die 12-9015

Plenum & Non-Plenum,

Thinwire also Teflon

(1.07 mm))

(Hex, 0.213 (5.41 mm),

0.190 (4.83 mm), 0.068 (1.73 mm), 0.042

**TELEPHONE** 

12-9122 Die Set Only



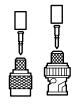


Modular Plug RJ-45 8 Position Keyed or Non-Keyed

Tool with Die 12-9022

12-9116 Die Set Only





Tool with Die 12-9016

12-9123 Die Set Only

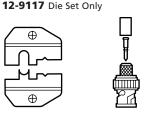




Modular Plug RJ-11 2, 4, & 6 Position

Tool with Die 12-9023





Crimp BNC Coax Connectors ("0", 0.202 (5.13 mm), 0.042 (1.07 mm), box center pin)

AMP Thinwire Dual

Tool with Die 12-9017

AMP RG-58 Dual Crimp

BNC/TNC Coax

AMP RG-59/62

center pin)

**Coax Connectors** 

Dual/Crimp BNC/TNC

("0", 0.240, .042, box

Tool with Die 12-9019

("0", 0.218, .049)

**12-9124** Die Set Only



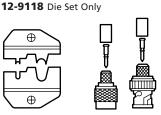


Modular Plug DEC MMJ 6 Position with an Offset Release Tab

Tool with Die 12-9024

12-9119 Die Set Only





Tool with Die 12-9018

12-9125 Die Set Only





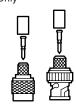
Modular Plug AMP RJ-45 8 Position/Primary Strain Relief is Located Further Back on Die

Tool with Die 12-9025

**12-9120** Die Set Only



 $\oplus$ 



Mini UHF and BNC/TNC 5 Cavity (Hex, 0.052 (1.32 mm), 0.068 (1.73 mm), 0.100 (2.54 mm), 0.213 (5.41 mm), 0.255 (6.48 mm))

Tool with Die 12-9020

12-9126 Die Set Only





Modular Plug RJ-22 2 & 4 Position

Tool with Die 12-9026

# **TOOLS**



#### **INSTALLER CRIMP TOOLS**



# **Crimping Tool & Terminal Assortment**

Crimps solderless terminals. Assortment of noninsulated terminals included. Strips wire from 22-10 gauge. Built-in cutter allows wire to be cut to desired length. Steel constructed with insulated grips. 7" long.

Cat. No. 12-400



#### 5-in-1 Crimping Tool

Universal tool serves as a crimper, wire cutter, stripper and pliers as well as a 6-range bolt cutter.
Crimps solderless terminals including ring tongue, quick disconnect and butt style. Cuts copper wire.
Strips 22-10 gauge wire. Serrated edges at nose of tool make it useful as pliers. Cuts bolts #4-#10. All operations clearly marked. Made of high-quality steel with precision-ground cutting edges and insulated handles. 8" long.

Cat. No. 8175



#### **Crimping Tool**

For "F" Connectors

Makes an excellent hex crimp in "F" Type and BNC connectors. Use RG-58, RG-59 and RG-62 cable

Cat. No. 12-455



#### **Coax Crimp Tool**

Designed for coaxial fittings on RG-59, RG-6 and RG-11 coaxial cable. The compound action and heavy-cushioned handles makes crimping effortless. Made of tempered steel. 8" long.

Cat. No. 12-450



#### **Compression Crimp Tool**

For RG-6 cable with SD-446-BU weatherproof connector.

Cat. No. 12-556



#### **Coaxial Center Conductor Cutter**

Trims coax center conductor to 3/16" length for precise installation into dual crimp coax connector.

Cat. No. 12-461



#### Small Blade Copper Wire Shears

Oval head width of .290" (7.36 mm) and an end profile of .010" (.3 mm) radius cuts between SMD leads as close as .040" (1 mm) center to center. Cuts copper wire up to .04" (1 mm).

Cat. No. 12-7404



#### **Telco® Crimping Tool**

These tools do a fast clean cut strip and crimp of Telco/Telephone wire for application of modular connectors, and are available in three sizes for your crimping needs.

8-contact Professional

Cat. No. 12-001

4 & 6-contact Professional

Cat. No. 12-004

Modular Hand Set 4-contact

**Cat. No. 12-005** 10-contact Professional

Cat. No. 30-9955



#### **Dura Crimp**

The Duracrimp modular crimp tool will crimp 4 & 6 contact modular plugs as well as 4 position handset plugs. This tool is lightweight, durable, and accurate. The built in blade provides a clean strip of the cable.

Cat. No. 12-002



# **TOOLS**



#### **Modular Crimp Tool**

#### 4-Conductor

Makes it easy to install 4 conductor modular plugs on modular line cord. Also crimps 4-conductor handset plugs. Has built-in wire stripper and cutter.

Cat. No. 12-9951 Cat. No. 30-9951



#### **Modular Crimp Tool**

Multi-function, cuts - strips - crimps. For RJ-11 and RJ-45 modular 6 and 8 way connectors. Heavy duty steel frame for dependable long

Cat. No. 12-454



#### **Crimping Tool**

#### For "D" Subminiature Connectors

Crimps both standard solderless terminals in sizes 10-22 AWG and D-Subminiature contacts. Tool is all steel with black parkerized finish with cushion-grip handles.

Cat. No. 12-460



#### **IDC Crimp Tool**

For crimping many styles of I.D.C. Connectors onto flat cable (A.K.A. ribbon cable). Works with card edge connectors, D-Sub, Centronics style and others. A good tool for the custom cable maker, short production runs, etc. All steel with cushion grips.

Cat. No. 12-463



#### **D-Sub/Double-D Service Tool**

Crimps stamped contacts and D-Sub contacts, also Double-D high density contacts. Open barrel design. Replacement for AMP open barrel service tool. Includes openings for crimping insulated terminals and cutters for machining tools.

Cat. No. 12-464



#### 4-Way Indent Crimper

This tool is used to crimp closed barrel, screw machine pin and socket style contacts. Performs a simultaneous 4 indent crimp for superior contact retention. Crimper has built-in locators for fast, precise contact alignment, full cycle ratchet action on a high carbon tool steel frame covered with a rust resistant black oxide finish and vinyl handles. For use on 26-20 AWG D-sub contacts.

Cat. No. 12-466



#### **Dual Cut & Crimp Tool**

Cuts and crimps 2c, 4c, 6c, 8c line cord plugs.

Cat. No. 12-2468

# Paris Contraction of the Paris Contraction of

IMPACT TOOL
AND BLADES

#### Adjustable Impact Punch Down Tool

Professional impact tool terminates and cuts wires on 66 and 110 pin blocks. Hi, low impact adjustment. Both 66 and 110 blades included. Convenient blade storage in handle prevents blade loss. Positive blade lock. Comfortable ergonomic design.

Cat. No. 12-5700

Replacement Blades - Blade 66

Cat. No. 12-5701

Blade 110

Cat. No. 12-5702





#### ADJUSTMENT AND ALIGNMENT TOOLS



#### 2 In 1 Ceramic Adjuster

Includes 1.8 mm Flat blade and 3.0 mm Phillips. Non-slip handle securely holds ceramic adjusting tip. Removable protective cap fits directly on tip, or can be used with handle, as an extension. Completely insulated, nonmagnetic and anti-static. Resists heat up to 1000°C. Resists acids (except Hydrofluoric) and solder.

Cat. No. 12-575



#### **Ceramic Adjuster Set**

Six sizes include Flat Blade .9, 1.3, 1.8, 2.6 mm and Phillips. 1.7 and 3.0 mm. These adjusters are anti-static and nonmagnetic. Protective caps are included to keep tips clean and contamination-free. Solder does not adhere to tip surface. Resists acids (except Hydrofluoric) and solder. Comfortable, smooth handles and tips are 100% rustproof. Packaged in form-fitted storage tray.

Cat. No. 12-577



#### 4 In 1 Ceramic Adjuster

Includes .9, 1.8, 2.6 mm Flat blade and 1.7 mm Phillips. Non-slip handle securely holds ceramic adjusting tip. Removable protective cap fits directly on tip, or can be used with handle, as an extension. Completely insulated nonmagnetic and anti-static. Resists heat up to 1000°C. Resists acids (except Hydrofluoric) and solder.

Cat. No. 12-576



#### TV Service Mirrors and Stands

An invaluable aid for TV behind-the-set adjustments. Large 10" x 12" mirrors in nickel plated frames. Clear, distortion-free image. Stand is fully adjustable for height and swivel in all directions—folds for easy moving or storage.

Plexiglass Mirror Only Cat. No. 8378

Adjustable Stand Only Cat. No. 8379

#### **ALIGNMENT TOOL KITS**



#### All Purpose Alignment Tool and Service Aid Kit

Selection of the most popular TV alignment tools and service aids, all in one attractive, durable plastic case. Roll-up case stores easily in service kit.

#### Kit contains 1 each: 5097 K-Tran Tool

Core Aligner 8271 8276 **Duplex Aligner** 8289 "Shorty" Aligner 8606 Hex Wrench—5"

Screwdriver—16" 8729 Screwdriver 8988

9050-L Zenith Alignment Tool 9088 Brush/Forked Tip Tool

9089 TV Aligner 9091 Hex Wrench Core Tool

Hex Alignment Tool

Cat. No. 5040

N.S.N. 5120-00-020-1360



#### Alignment and Specialty Kit

Comprehensive selection of the most popular alignment tools and service aids. Packaged in a handsome carrying case, designed to provide easy removal and replacement of tools. Ideal for the technician and engineer who requires a wide variety of tools for every purpose.

#### Kit contains 1 each:

8606-L Hex Wrench—11"

12-760	Wire Stripper	8721	2-IN-1 Tool—9"	9295	Delrin Hex Tool—11"
5000	Alignment Screwdriver	8722	2-in-1 Tool—7"	9296	Delrin Hex Tool—11"
5004	Adjustment Screwdriver	8728	Alignment Tool—12"	9300	Hex Core Tool
5028	Wrench Kit	8728-A	Screwdriver—7"	9302	Hex Wrench
5090	Inspection Mirror	8867	Tel-A-Turn Tool	9304	Double End Tool
5091	Extension Shaft	8868	Tel-A-Turn Tool	9338	Burnishing Tool
5097	K-Tran Tool	8869	Tel-A-Turn Tool	9356	Fuse Puller
5100	Neo-Lite Tester	8885	Oiler	9440	Transistor Tool
5105	Lo Volt Tester	8987	Screwdriver—9-1/2"		

7948 **Tweezers** 9076 Reamer/Forked Tip Tool

8195 TV Channel Tunung Tool 9077 Heat Sink 9089 TV Aligner 8271 Core Aligner

8275 9091 Hex Iron Core Tool-5-3/32" Universal Aligner 9091-L 11" Hex Tool 8276 **Duplex Aligner** 8277 "Shorty Duplex Aligner" 9093 Solder Probe

8282 Zenith Alignment Tool 9094 Brush/Scraper Tool 12-4614 I.C. Removal Tool 8605 Capacitor Tool Hex Wrench—5" 9293 Alignment Tool—12" 8606

Cat. No. 5050 N.S.N. 5120-00-020-1360







#### Deluxe Alignment Tool Kit

Handy roll type case of durable leatherette that contains the most frequently used alignment tools. Case has fold-over flap to prevent tools from becoming lost.

#### Kit contains 1 each:

2515 K-Tran Tool

5066 Neutralizing Tool

5080 Alignment Wrench

8195 TV Channel Tuning Tool

8196 TV-FM Tuning Tool

8271 Core Aligner

8273 TV Aligner

8274 Long-Reach Aligner

**8275** Universal Aligner

**8276** Duplex Aligner

8277 Shorty Duplex Aligner

8278 Tuning Wand

8279 Core Aligner

8282 Zenith Alignment Tool

8606 Hex Wrench—5"

**8608** Potentiometer Adjustment Tool

Cat. No. 8280

N.S.N. 5180-00-715-6062



#### **Radio-Television Alignment Tool Kit**

Designed for the electronic technician who likes a complete assortment of alignment and adjustment tools. Includes tools used on mobile communication, marine, and amateur equipment.

#### Kit contains 1 each:

5000 Alignment Screwdriver

5004 Adjustment Screwdriver

**5066** Neutralizing Tool

5080 Alignment Wrench

5097 K-Tran Tool

8195 TV Channel Tuning Tool

8196 TV-FM Tuning Tool

**8271** Core Aligner

8273 TV Aligner

8274 Long-Reach Aligner

**8275** Universal Aligner

8276 Duplex Aligner

8277 Shorty Duplex Aligner

8279 Core Aligner

8282 Zenith Alignment Tool

8289 Shorty Aligner

8290 Universal Aligner

**8606** Hex Wrench—5"

8609 Alignment Tool

8721 2-IN-1 Alignment Tool—9"

8722 2-IN-1 Alignment Tool—7"

**8727** Alignment Tool **8728-A** Screwdriver—7"

8867 Tel-A-Turn Tool

9090 Adjustable Shorty Tool

Cat. No. 8283

N.S.N. 5120-00-949-8368



#### Universal Color TV Alignment Tool Kit

Five different alignment tools for all standard adjustments on color TV sets. All tools are made of Delrin in various colors for easy identification. Included is the "Extend-it" to make long reach aligners out of each tool. This handy kit is packaged in a pocket-saver pouch. Compact, neat package for color TV alignment.

#### Kit contains 1 each:

"Extend-it" Shaft Extension

8282 Zenith Alignment Tool

9091 Hex Iron Core Tool 9300 Hex Core Tool

**8606** Hex Wrench—5"

9304 Double End Tool

Cat. No. 8454



#### Standard TV Alignment Tool Kit

Made to last and wear—a quality kit with essential alignment tools in a roll type case.

#### Kit contains 1 each:

5004 Adjustment Screwdriver

5097 K-Tran Tool

8195 TV Channel Tuning Tool

8196 TV-FM Tuning Tool

**8271** Core Aligner

8273 TV Alianer

8274 Long Aligning Tool

**8275** Universal Aligner

**8276** Duplex Aligner

Cat. No. 8455

N.S.N. 5180-00-760-2114



## TV-FM Alignment Tool

Here, in one handy leatherette case, are all the necessary tools for aligning any TV or FM set.

#### Kit contains 1 each:

"Extend IT" Shaft Extension

2512 Wire Dressing Tool

2515 K-Tran Tool

2520 Duplex Aligner

2522 Turret Tuner Tool

8273 TV Aligner

8279 Core Aligner

8282 Zenith Alignment Tool

**8289** Shorty Aligner **8722** 2-in-1 Alignment Tool—7"

9051 Zenith-RCA Alignment Tool

9087 Coil Slug Adjusting

Cat. No. 580

N.S.N. 5180-00-996-8673



## "Lucky 13'" General Purpose Alignment Tool

For TV sets, AM-FM radios and CB equipment.

#### Kit contains 1 each:

2512 Wire Dressing Tool

2515 K-Tran Tool

2520 Duplex Aligner

8282 Zenith Alignment Tool

**8289** Shorty Aligner **8279** 2-in-1 Alignment Tool—7"

8867 Tel-A- Turn Tool

8868 Tel-A- Turn Tool

8869 Tel-A- Turn Tool

**8885** Oiler

9051 Zenith-RCA Alignment Tool

9088 Brush/Forked Tip Tool

9291 Screwdriver—7"

Cat. No. 582







#### **CB Alignment Tool Kit**

A must for every CB owner or repairman—eight of the finest made, precision tools, serving a multitude of purposes. For tuning I.F. transformers, RF coils, antennas and oscillator coils, plus countless other fine, intricate adjustments.

Kit contains 1 each:

5009 Duplex No-Metal Screwdriver

5097 K-Tran Tool

**8271** Core Aligner

8276 Duplex Aligner

8282 Zenith Aligner Tool

9091 Hex Iron Core Tool

**9440** Transistor Tool

9304 Double End Tool

Cat. No. 18-530

#### **Anti-Static Alignment Tools**

In response to the problems that static electricity causes in modern electronic circuitry, GC Electronics offers a series of anti-static alignment tools. Nine part numbers are available. Dimensionally, these tools are the same as items that have been produced for many years. Electrically, the tools are conductive, made of a tough conductive nylon. Thus, the tools are not able to retain a static charge. Use of these tools is suggested whenever servicing or aligning equipment containing static-sensitive devices. Further protection by employing industry accepted procedures (i.e. operator grounding wrist-straps, etc.) is strongly urged. These tools can be recognized by an "AS" prefix added to the traditional GC catalog number. Other GC tools can be made of the new material for quantity purchasers. Please contact the Rockford factory with your requirements.

These tools are made of conductive nylon. Not for use on high voltage circuitry.



# Anti-Static Alignment Tool Kit

Kit contains all nine anti-static alignment tools. The wide range of tip styles and sizes assures that the user will have a tool for adjusting or aligning any conventional component. Supplied with pocket storage case.

Kit contains 1 each:

**AS-5004** Adjustment Screwdriver

AS-8275 Combination Aligner

AS-8276 Steel Tip Duplex Aligner

**AS-8605** Small Hex & Screwdriver **AS-8606** Hex & Tip Tool

AS-8608 Mini Potentiometer & Trimmer Tool

AS-9300 Double Ended Hex Tool

**AS-9302** 3-in-1 Hex Core Tool **AS-9440** Square & Hex Tool

Cat. No. AS-5007



#### Adjustment Screwdriver

Material: Conductive Nylon

Shaft: 1/4" (6.3 mm) dia. 7" (17.7 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 7" (17.7 cm)
Cat. No. AS-5004



#### **Combination Aligner**

Material: Conductive Nylon

Shaft: Long end 1/8" (3.2 mm) dia., 2-1/2" (6.3 cm) long; short end 7/32"

(5.5 mm) dia., 2-7/16" (6.2 cm) long

Ends: 1/32" thick screwdriver tip (long end); 1/8" (3.2 mm) wide steel tip,

recessed 1/16" (short end)
Total Length: 4-15/16" (12.5 cm)

Cat. No. AS-8275

N.S.N. 5120-00-541-1462



#### Steel Tipped Duplex Aligner

Material: Conductive Nylon

Shaft: 7/32" (5.5 mm) dia., 61/8" (15.5 cm) long;

Ends: 1/8" (3.2 mm) wide steel tip; 1/8" (3.2 mm) wide steel tip, recessed

1/16". Fits no. 6 slotted stud **Total Length:** 6-1/8" (15.5 cm)

Cat. No. AS-8276

N.S.N. 5120-00-288-7781



#### Small Ends Hex & Screwdriver

Material: Conductive Nylon, Hex 0.050"

Ends: Hex (allen) steel 0.050" (1.25 mm), 3/32" (2.4 mm) long; 3/32" (2.4 mm) wide steel screwdriver tip with 3/32" (2.4 mm) shank, 13/4" (4.4 cm) long shank

Total Length: 53/16" (13.2 cm)

Cat. No. AS-8605

N.S.N. 5120-00-724-3767







#### **Hex & Special Tip Tool**

Material: Conductive Nylon, Hex 0.100"

Ends: Flat screwdriver tip (0.027" thick—0.095" wide), followed by 0.100" hex; 0.100" hex, 7/32" long, undercut shaft to reach bottom slugs in coils Total Length: 5-3/32" (12.9 cm)

Cat. No. AS-8606

N.S.N. 5120-00-282-7786



#### Miniature Potentiometer—Trimmer Adjustment Tool

Material: Conductive NylonShaft: 1/4" (6.3 mm) dia. 4-15/16" (12.5 cm) long Ends: .085" (2.2 mm) wide steel tip; .085" (2.2 mm) wide steel tip, recessed .040"

Total Length: 4-15/16" (12.5 cm)

Cat. No. AS-8608



#### **Double Ended Hex Tool**

Material: Conductive Nylon, Hex 5/64" (0.078")

Ends: 1/4" long hex, 0.096" dia. shaft; 3/8" long hex, undercut (0.068" dia.)

shaft to reach bottom slugs in coils **Total Length:** 5" (12.7 cm)

Cat. No. AS-9300



#### 3-in-1 Hex Core Tool

Material: Conductive Nylon, Hex 5/64" (0.078") and 0.100" Ends: Small (0.078") hex followed by 0.100" hex; 0.100" hex (3/8" long), undercut shaft to reach bottom slugs in coils

**Total Length:** 5-3/8" (13.7 cm)

Cat. No. AS-9302

N.S.N. 5120-00-089-8216



#### Square & Hex Tool

Material: Conductive Nylon, Hex 0.100"

Ends: 0.100" (2.5 mm) hex, 3/8" (9.5 mm) long; 1/16" (0.062"-1.6 mm)

square, 1/32" (0.1 cm) long Total Length: 5-1/16" (12.8 cm)

Cat. No. AS-9440



#### **Duplex Alignment Screwdriver**

Material: Delrin

Shaft: Long end 7/32" (5.5 mm) dia., 6" (15.2 cm) long; short end 5/32"

(4 mm) dia., 1" (2.5 cm) long

Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 7" (17.7 cm)

Cat. No. 2520

N.S.N.5120-00-778-6241



#### Metal Tip Alignment Screwdriver

Material: Butyrate Shaft: 7/32" (5.5 mm) dia Ends: 1/8" (3.2 mm) wide steel tip Total Length: 6-1/8" (15.5 cm)

Cat. No. 5000 N.S.N. 5120-00-288-7780



#### **No-Metal Insulating Adjustment Screwdriver**

**Material:** Delrin

Shaft: 1/4" (6.3 mm) dia., 7" (17.7 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 7" (17.7 cm)

Cat. No. 5004

N.S.N. 5120-00-508-9755



#### **Duplex No-Metal Alignment Screwdriver**

**Material:** Delrin

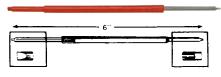
Shaft: Long end 1/4" (6.3 mm) dia., 5-1/4" (13.3 cm) long; short end 1/8"

(3.2 mm) dia., 3/4" (1.9 cm long)

Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 6" (15.2 cm)

Cat. No. 5009



#### K-Tran Tool

Material: Delrin

**Shaft:** Long end 1/8" (3.2 mm) dia., 1-1/2" (3.8 cm) long; short end 5/32" (4 mm) dia., 1" (2.5 cm) long

Ends: 1/32" thick screwdriver tip (long end); 1/16" thick screwdriver tip (short end)

Total Length: 6" (15.2 cm)

Cat. No. 5097

# TOOLS





#### Screwdriver with Plastic Handle

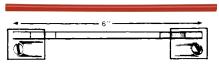
Material: Delrin

Shaft: 1/8" (3.2 mm) dia., 4-21/32" (11.8 cm) long

Ends: 1/32" thick screwdriver tip; 23/8" (6 cm) long screwdriver handle

Total Length: 7-1/32" (17.8 cm)

Cat. No. 8195



#### **TV Core Aligner**

Material: Butyrate

Shaft: 7/32" (5.5 mm) dia., 6" (15.2 cm) long

Ends: 1/8" wide tip, recessed 1/16". Fits no. 6 slotted stud; 5/32" (4 mm) dia.,

slotted tip, recessed 1/16"
Total Length: 6" (15.2 cm)

Cat. No. 8271

N.S.N. 5120-00-333-9809



#### **Combination Aligner**

for Zenith & Others

Material: Delrin

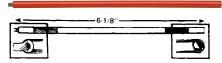
**Shaft:** Long end 1/8" (3.2 mm) dia., 2-1/2" (6.3 cm) long; short end 7/32" (5.5 mm) dia., 2-7/16" (6.2 cm) long

Ends: 1/32" thick screwdriver tip (long end); 1/8" (3.2 mm) wide steel tip, recessed 1/16" (short end)

Total Length: 4-15/16" (12.5 cm)

Cat. No. 8275

N.S.N. 5120-00-541-1462



#### Steel Tip Duplex Aligner

Material: Butyrate

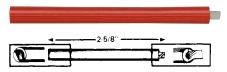
Shaft: 7/32" (5.5 mm) dia., 6-1/8" (15.5 cm) long

Ends: 1/8" (3.2 mm) wide steel tip, 1/8" (3.2 mm) wide steel tip, recessed

1/16". Fits no. 6 slotted stud Total Length: 6-1/8" (15.5 cm)

Cat. No. 8276

N.S.N. 5120-00-288-7781



#### Short Steel Tipped Aligner

Material: Butyrate

Shaft: 7/32" (5.5 mm) dia., 2-1/2" (6.3 cm) long (each end)

Ends: 1/8" (3.2 mm) wide steel tip; 1/8" (3.2 mm) wide steel tip, recessed

1/16". Fits no. 6 slotted stud **Total Length:** 2-5/8" (6.7 cm)

Cat. No. 8277

N.S.N. 5120-00-840-0604



#### **Hex-Screwdriver Combination**

Material: Delrin, Hex 0.100"

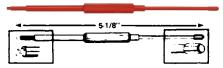
Ends: Screwdriver (plastic) 1/8" blade; 1/4" long hex, undercut (0.095" dia.)

shaft to reach bottom slugs in coils **Total Length:** 5-7/16" (13.8 cm)

Cat. No. 8282

N.S.N. 5120-00-572-3237

N.S.N. 5120-00-767-7582

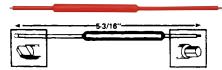


#### Magna Tuning Tool

Material: Delrin, Hex 0.100"

Ends: Flat screwdriver tip (0.027" thick—0.080" wide), followed by 0.080" hex; 0.100" hex, 7/32" long, undercut shaft to reach bottom slugs in coils Total Length: 5-1/8" (13 cm)

Cat. No. 8284



#### Small Ends Hex & Screwdriver

Material: Delrin, Hex .050"

Ends: Hex (allen) steel 0.050" (1.25 mm), 3/32" (2.4 mm) long; 3/32" (2.4 mm) wide steel screwdriver tip with 3/32" (2.4 mm) shank, 1-3/4" (4.4 cm) long shank Total Length: 5-3/16" (13.2 cm)

Cat. No. 8605



#### Hex & Special Tip Tool

Material: Delrin, Hex 0.100"

Ends: Flat screwdriver tip (0.027" thick—0.095" wide), followed by 0.100" hex; 0.100" hex, 7/32" long, undercut shaft to reach bottom slugs in coils Total Length: 5-3/32" (12.9 cm)

Cat. No. 8606

N.S.N. 5120-00-288-7786







"Hex & Special Tip Tool, Long"

Material: Delrin, Hex 0.100"

Ends: Flat screwdriver tip (0.027" thick—0.095" wide), followed by 0.100" hex; 0.100" hex, 7/32" long, undercut shaft to reach bottom slugs in coils Total Length: 11-3/32" (28.2 cm)

Cat. No. 8606-L



#### **Miniature Potentiometer-Trimmer Adjustment Tool**

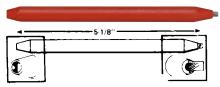
Material: Nvlon

Shaft: 1/4" (6.3 mm) dia. 4-15/16" (12.5 cm) long

Ends: .085" (2.2 mm) wide steel tip; .085" (2.2 mm) wide steel tip,

recessed .040" Total Length: 4-15/16" (12.5 cm)

Cat. No. 8608



#### Alignment Tool

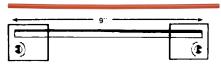
Material: Tenite

Shaft: 3/8" (9.5 mm) dia., 5" (12.7 cm) long

Ends: 1/8" (3.2 mm) dia. steel tip, recessed 1/16". Fits no. 4 slotted stud

Total Length: 5-1/8" (13 cm)

Cat. No. 8609 N.S.N. 5120-00-227-7291



#### TV 2-in-1 Long Reach Duplex Aligner

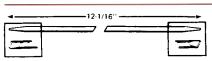
Material: Butyrate

Shaft: 7/32" (5.5 mm) dia., 9" (22.9 cm) long

Ends: 1/8" (3.2 mm) wide steel tip, recessed 1/16". Fits no. 4 slotted stud; 1/8" (3.2 mm) wide steel tip, recessed 1/16". Fits no. 6 slotted stud

Total Length: 9" (22.9 cm)

Cat. No. 8721



#### Long Reach Alignment Stick

Material: Fiberglass

Shaft: 1/8" (3.2 mm) dia., 12-1/16" (30.6 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 12-1/16" (30.6 cm)

Cat. No. 8728 N.S.N. 5120-00-965-9549

same as above, except 16-1/16"

Cat. No. 8729



#### **Double Ended Alignment Stick**

Material: Delrin

Shaft: 1/8" (3.2 mm) dia., 7" (17.7 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 7" (17.7 cm) Cat. No. 8728-A



#### Screwdriver with Plastic Handle

Material: Fiberglass

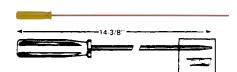
Shaft: 1/8" (3.2 mm) dia., 7" (17.7 cm) long

Ends: 1/32" thick screwdriver tip; 2-3/8" (6 cm) long screwdriver handle

Total Length: 9-3/8" (23.8 cm)

Cat. No. 8987

N.S.N. 5120-00-134-4958 N.S.N. 5120-00-542-2936



#### Long Reach Screwdriver with Plastic Handle

Material: Fiberglass

Shaft: 1/8" (3.2 mm) dia., 12" (30.5 cm) long

Ends: 1/32" thick screwdriver tip; 2-3/8" (6 cm) long screwdriver handle

Total Length: 14-3/8" (36.5 cm)

Cat. No. 8988



Material: Butvrate

Shaft: 7/32" (5.5 mm) dia., 3/4" recessed end

Ends: 1/8" wide steel tip Total Length: 5-13/16" (14.8 cm)

Cat. No. 9089

N.S.N. 5120-00-043-3110

N.S.N. 6625-00-689-7689



#### **Double Sided Hex End Tool**

Material: Delrin, Hex: 1/8" (0.125")

Ends: 7/32" long hex; 3/8" long hex and small screwdriver tip, 0.100" wide,

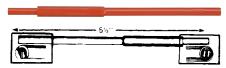
0.020" thick

Total Length: 5-3/32" (12.9 cm)

Cat. No. 9091







#### **TV Alignment Tool**

Material: Nylon

Shaft: Long end 7/32" (5.5 mm) dia., 3" (7.6 cm) long: short end 3/16" (4.8 mm) dia., 3/4" (1.9 cm) long

Ends: 1/8" (3.2 mm) wide steel tip, recessed 1/16". Fits No. 6 slotted stud; 5/32" (4 mm) dia. slotted tip, recessed 3/64"

Total Length: 5-1/2" (14 cm)

Cat. No. 9150 N.S.N. 5120-00-410-5989



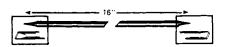
#### **Double Ended Long Screwdriver**

Material: Fiberglass

Shaft: 5/32" (4 mm) dia., 12" (30.5 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 12" (30.5 cm)

Cat. No. 9293



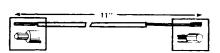
#### **Double Ended Extra Long Screwdriver**

Material: Fiberglass

Shaft: 5/32" (4 mm) dia., 16" (40.6 cm) long Ends: 1/32" thick screwdriver tip (Both Ends)

Total Length: 16" (40.6 cm)

Cat. No. 9294



#### **Double Ended Long Hex Tool**

Material: Delrin, Hex 0.100"

Ends: 3/8" long hex: 1/4" long hex, undercut (0.090" dia.) shaft to reach

bottom slugs in coils

Total Length: 11" (27.9 cm)

Cat. No. 9295



#### **Double Sided Hex End Tool**

Material: Delrin, Hex 5/64" (.078")

Ends: 1/4" long hex, 0.096" dia. shaft; 3/8" long hex, undercut (0.068" dia.)

shaft to reach bottom slugs in coils

Total Length: 11" (27.9 cm)

Cat. No. 9296



#### Hex Tool

Material: Delrin, Hex 5/64" (0.078")

Ends: 1/4" long hex, 0.096" dia. shaft; 3/8" long hex, undercut (0.068" dia.)

shaft to reach bottom slugs in coils Total Length: 11-1/8" (28.3 cm)

Cat. No. 9297

N.S.N. 5120-00-932-7764



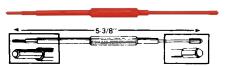
#### Double Sided Hex End Tool

Material: Delrin, Hex 5/64" (0.078")

Ends: 1/4" long hex, 0.096" dia. shaft; 3/8" long hex, undercut (0.068" dia.) shaft to reach bottom slugs in coils

Total Length: 5" (12.7 cm)

Cat. No. 9300



#### 3-in-1 Hex Core Tool

Material: Delrin, Hex 5/64" (0.078")

Ends: Small (0.078") hex followed by 0.100" hex; 0.100" hex (3/8" long),

undercut shaft to reach bottom slugs in coils Total Length: 5-3/8" (13.7 cm)

Cat. No. 9302

N.S.N. 5120-00-089-8216



#### Hex Screwdriver Combination

Material: Delrin, Hex 5/64" (0.078")

Ends: Screwdriver (plastic), 0.110" blade; 3/8" long hex, undercut (0.068" dia.)

shaft to reach bottom slugs in coils Total Length: 5-9/16" (14.1 cm)

Cat. No. 9304



### Square & Hex End Tool

Material: Delrin, Hex 0.100"

Ends: 0.100" (2.5 mm) hex, 3/8" (9.5 mm) long; 1/16" (0.062"-1.6 mm) square, 1/32" (0.1 cm) long

Total Length: 5-1/16" (12.8 cm)

Cat. No. 9440

N.S.N. 5120-00-990-1378





## STATIC DISSIPATIVE TWEEZERS



## **Static Dissipative Tweezers**

Tweezers are made of non-magnetic acid resistant plastic that will dissipate static.

4-1/2" Straight, Flat, Rounded Tips

Cat. No. 12-9511

4-1/2" Curved, Rounded Tips

Cat. No. 12-9514

4-1/2" Very Fine Straight Tips Cat. No. 12-9517

4-1/2" Very Fine Angular Tips

Cat. No. 12-9520

4-1/2" Very Fine Curved Tips Cat. No. 12-9523

4-1/2" Straight, Flat Tips Cat. No. 12-9526

4-1/2" Straight, Broad Flat Tips

Cat. No. 12-9529

## TEST AND MEASUREMENT



#### **Tone Test Set**

#### Features:

- 1000 Hz or 500/1000 alternative tone for tracing pairs.
- Locates broken pairs/cables in walls.
- Tone generator emits R.F. signal up to 5000 ft. Detectable by 12-5706 station man probe.
- Provides talk power on a dead pair.
- Checks for shorts or opens, using a long-life light-emitting diode, (LED).
- Continuity test.
- Tip and ring identifications.
- · Line condition identification: A. Clear line, B. Busy line, C. Ringing line.
- Positive line verification.
- · Long battery life.
- Nylon braided tinsel test lead wire for greater wear and flexibility.
- Heavy duty nickel silver "6A" type alligator clips.
- Heavy duty boots made especially for the "6A" type alligator clip.
- Rubber grommet to prevent chafing on the test leads.

#### Specifications:

Integrated circuit

Dual tone capability: A. 1000 Hz continuous tone, B. 500/1000 Hz alternating tone Power source 9 volt battery: 216 Everready, VS323 RCA, 006P import or equivalent. Sold Separately

Weight: 3-1/2 oz. Leather carrying case 3 oz. Heavy duty ABS case

Cat. No. 12-5705

#### Stationman Probe

New locking and non-locking switch which is field adjustable. The test probe is supplied with a cone-shaped tip and a duckbill tip that is longer and flatter, permitting insertion into larger cables, or cables under tension where slack cannot be obtained.

#### Features:

- Leads of Lineman's Test Set are clipped to the "ears" of the Probe, automatically energizing the Probe.
- High input impedance to permit capacitive coupling with pair carrying the test signal.
- Output impedance is low to match the impedance of the telephone handset.
- Quickly and easily locates the proper cable pair containing the tone signal.
- An audible speaker so that the speaker probe may be used with or without a Lineman's Test

Cat. No. 12-5706



#### Capacitance Substitution Unit

Excellent for circuit development—easy to use. Simply place wires in unit and adjust switches to determine capacitor value. Dual contact slide switches allow simple adding or subtracting to the value desired. Rugged, sturdy design. 5-1/2" x 3-1/2" x 15/16".

#### Specifications:

Range: 100pF to 4.7 mFd

**Precision:** 10% capacitors throughout Voltage: 200 Volt DC, non-polarized Residual Capacitance: 100pF internal; 100pF to ground

Terminals: Push Type Cat. No. 12-102



#### Resistance Wheel

Helps select resistors for any circuit. Color-coded insulated alligator clips attach easily to circuit and easily readable dial, then indicates resistor value when rotated. 1/4 watt, 5% resistor values (5  $\Omega$ 1M), 100 V max.





#### **Continuity Tester**

Clip lead to circuit and use needle point to test. Light "on" indicates circuit continuity. Light "off" indi-cates fault in circuit. 42" lead with alligator clip for ground connections. Large red lens. Requires 2 "AA" batteries (not included).

Cat. No. 12-105



#### Sub-Miniature I.C. Test **Clips**

Insulated to single contact point to assure accurate readings. Test wire may be soldered directly to test clip. Clips to wires and posts up to .030" diameter. 5/32" travel.

Voltage Rating: 500V AC/DC Insulation Resistance: 1000M

Pkg. 1 Red and 1 Black Cat. No. 12-1640



#### **Medium Duty Unbreakable Test Leads**

Specifications:

Construction: One piece molded Tips: Phone tips both ends Wire: 30" ultra-flexible.

Pair of 1 each, Red and Black Cat. No. 12-1647



#### **Heavy Duty Test Leads**

Specifications:

Handle: Molded plastic Tip: Phone tips to banana plugs Wire: 35" leads 25 ga. (20 X 38) Description: Pair of 1 each, Red and Black

Cat. No. 12-1656



#### Resistance Decade Box

For The Design Engineer, Service Technician, Experimenter All Resistors ± 1% At 1/2 Watt. A helpful aid to help determine the best value of a resistor needed in experimental circuits. Values may be changed instantly in one ohm increments by setting switches.

Specifictions:

Size: 3-5/8"W x 6"L x 2-1/8"H Weight: 12-1/2 ounces Case: ABS hi-impact & aluminum Power Capacity: 1/2 Watt Accuracy: ± 1% tolerance minimum Range: From 1 Ohm to 11,111,110 Ohms in 1 Ohm increments

Cat. No. 12-109



#### Miniature I.C. Test Clips

Quick, easy miniature test connections. Ideal for today's I.C. circuitry. Adapts to standard size pin plug. Connections from the finest transistor lead up to No. 16 wire. Clips to side of P.C. board for ground connections. Copper conductor-nylon insulator. 1/8" travel.

Voltage Breakdown: 1500V AC

Pkg. 1 Red and 1 Black



1 minute

Insulation Resistance: 500V DC 100M or more.

Cat. No. 12-1642



#### **Medium Duty Unbreakable Test Leads**

Specifications:

Construction: One piece molded Tips: Phone tips to banana plugs Wire: 30" ultra-flexible Rated: 300 volts

Cat. No. 12-1648



Popular tester has 5" insulated leads with tip prods for safe and easy testing of both AC and DC circuits (80 volts AC to 500 volts AC or DC). Excellent for tracing all types of trouble, such as grounded lines, open circuits, short circuits.

Cat. No. 5101



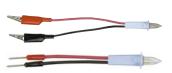
#### "Jumper" Wire Test Leads

Handy test leads with insulated alligator clips attached to ends. Ideal for breadboarding, experiments, temporary hookups, numerous applications. Package contains black, red, white, green and yellow jumpers.

27 AWG, 2 each, 15" long thin leads with miniature clips, 10 jumpers **Cat. No. 12-1650** 

21 AWG, Heavy Duty Leads, 1 each, 22" long leads with standard size clips, 5 jumpers

Cat. No. 12-1655



#### **Lo-Volt Test Lights**

For checking circuits from 5 to 50 volts. Tests batteries, generators, thermostats, tube filaments and other electrical items which operate on low voltage, AC or DC.

Tester w/test prods-5" Leads

Cat. No. 5105

Tester w/alligator clips—8" Leads Cat. No. 5110







#### Hi-Voltage Testing Screwdriver

A combination screwdriver and electrical tester that checks AC voltages from 100 to 500 volts. Pocket sized, only 9/16" O.D. and 5-5/16" long. Simple to use in tracing all types of trouble such as grounded lines, open or short circuits.

Cat. No. 5120



#### GC Automotive Electrical Tester

The GC pocket sized Automotive Electrical Tester is utilized to locate "hot" leads in automotive electrical systems. Sharp tip of tool pierces insulation. Much handier than toting around a meter. Supplied with an 18" lead wire equipped with an alligator clip on one end and banana type plug on the opposite. Versatile, portable, reliable. Clear handle. Tool length 5-3/16".

Cat. No. 5128



#### 6" Stainless Steel Flexible Rule"

6" Stainless Steel Flexible Rule with etched graduations in 32nds and 64ths. 15/32" wide. Decimal equivalents etched on back. Furnished with pocket clip.

Cat. No. 12-1716

## CRAFT TOOLS



#### 17 Pc. Precision Knife Set

A kit of three knife handles with commonly used blades plus an assortment of ten extra blades. This kit is useful in PC artwork, lab use for cutting cambric, etc. Supplied in wooden case with magnetic spareblade holder in lid.

Cat. No. 12-007



#### **Miniature Scissors**

Extra fine, 4-1/2" overall scissor for fine work. Excellent for shaping printed circuit patterns, trimming fine wires etc. An asset for today's prototype builder. A very handy P.C. graphic art tool.

Cat. No. 12-280



#### Technician's Knife with 6 Blades

Includes flat, curved, angled, and pointed razor blades. Useful for etching, scribing and scraping PC boards, contacts and micro components. Ideal for precision cutting or trimming of PC artwork, stencils, layouts, and pasteups. Solid aluminum handle with easy-grip, tension adjustment. Packaged in convenient storage tray.

Cat. No. 12-008



#### **Lab Scissors**

Medium weight, 5-1/2". Excellent tool for trimming fine leads, copper foils, etc. Heavy enough to be used for shaping cambric, lighter weight fish papers, etc. Belongs in all electronics labs.

Cat. No. 12-284



#### 23-Piece Standard Hobby/Craft Tool Set

Contains three knives, block sander, spoke shave, block plane, balsa stripper, two routers, four gouges, and nine assorted blades. Complete with convenient storage tray in attractive plastic chest.

Cat. No. 12-009



#### **Electronic Assembly Tweezers**

6-1/2" Long-Self Closing, Blunt Points, serrated

Cat. No. 7946

6-1/2" Long-Slide Lock, Smooth Points

Cat. No. 7947

4-1/2" Long-Fine Points

Cat. No. 7948

N.S.N. 5120-00-784-2890





#### Tweezer Kit

For the shop or laboratory, to pick up small parts, start screws, to get into hard-to-reach places, fastening springs—numerous uses.

Self-Closing, Blunt Point Tweezer Slide-Locking, Smooth Point Tweezer Sharp Point Tweezer.

6" Long-Straight Jaw

Cat. No. 7950

N.S.N. 5120-00-920-8420



#### **Scissor Tweezers**

Versatile, general purpose soldering tool. Excellent clamp-type heat sink for soldering diodes and transistors. Available in straight or curved jaw type. Made of the finest stainless steel.

5" Long-Straight Jaw

Cat. No. 7976

6" Long-Straight Jaw

Cat. No. 7977

5" Long-Curved Jaw

Cat. No. 7978

6" Long-Curved Jaw

Cat. No. 7979



#### **Precision Quality Tweezers**

For electronic and fine assembly work where non-contamination is essential. Stainless steel.

4-5/8" Long-Beveled Points

Cat. No. 7992

4-1/8" Long-Fine Points

Cat. No. 7993

4-1/4" Long-Extra Fine Points

Cat. No. 7994

4-1/2" Long-Curved Points

Cat. No. 7995



#### **Dental Probes**

Stainless steel probes that have been popular for a long time are now even more valued as soldering/desoldering aids in SMD assemblies. Stainless is non-contaminating, static-free and will not solder. Needle point tips permit exact placement. Hex handles prevent rolling, allows better arip.

5-1/2" Probe-Straight

Cat. No. 12-2260

5-1/2" Probe-Hooked

Cat. No. 12-2264

5-1/2" Probe-Curved Cat. No. 12-2266

Set of all 3 Probes

Cat. No. 12-2270

## **SOLDER AND SOLDERING IRONS**



#### 60/40 Rosin Core Solder

Comes in economy 1/2-lb. and 1-lb. rolls for heavy solder users. 60% tin/40% lead with quick-wetting rosin core to help assure perfect solder connections. Meets Federal Specification Q9-5-571E.

Cat No.	Gauge	Dia.	Spool Size	Tin/Lead%
6033	20	.032"	1/2 lb.	60/40
6039	16	.047"	1/2 lb.	60/40
6044	14	.062"	1/2 lb.	60/40
6034	20	.032"	1 lb.	60/40
6040	16	.047"	1 lb.	60/40
6045	14	.062"	1 lb.	60/40



#### Low-Melt Solder

63/37 (Eutectic) Rosin Core

Low-melt Solder is the best blend of tin/lead for melting at the lowest (361°F) possible temperature. Lowmelt solder reduces the probability of heat-damaged components, lifted circuit traces, etc. by reducing soldering time as well as temperature. Bonds more quickly and securely to copper or silver. Organic Resin Core, fine wire solder on spools. Exceeds Fed. Spec. QQ-S-571E.

Cat No.	Dia.	Spool Size	Tin/Lead%
6035	.032"	1/2 lb.	63/37
6037	.032"	1 lb.	63/37







#### Silver Bearing Solder

#### 60/38/2 Rosin Core

Reduces leaching of silver, gold, etc. from contacts and edge connectors. An excellent high-strength solder that may be used safely in all electronic circuits. Exceeds Fed. Spec. QQ-S-571E.

.032" Dia, 1/2 lb., 60/38/2 Tin/Lead%

Cat. No. 6056

.032" Dia, 1 lb., 60/38/2 Tin/Lead%

Cat. No. 6059



#### Solder/Braid The Perfect Pair

1 spool of .031 " 20 ft. 60/40

rosin core solder and 1 spool of size 3 (.075") GC braid. Spools snap together for convenience.

Cat. No. 12-5001



#### Fine Line Solder

Specially designed for today's PC needs. Thin, neat—rapid melting 60/40 rosin core type, .032" 20 ga. diameter. Convenient, clear plastic, self-feed dispenser contains 12 feet of solder.

Cat. No. 9132

Carded

Cat. No. H3-391



#### Standard Solder

60/40 rosin core in popular 0.050" 16 ga. diameter. Convenient, clear plastic, self-feed dispenser contains 6-1/2 feet of solder.

Cat. No. 9134

Carded

Cat. No. H3-390



#### **GC Braid**

5 ft. Spools

Cat No.	Width	Color
12-5025	.025"	Silver
12-5050	.050"	Gold
12-5075	.075"	Green
12-5100	.100"	Blue
12-5125	.125"	Brown



#### **GC Braid**

25 ft. Spools

Cat No.	Width	Color
12-6025	.025"	Silver
12-6050	.050"	Gold
12-6075	.075"	Green
12-6100	.100"	Blue
12-6125	.125"	Brown



#### GC Solder

25 ft. Spools

Cat No.	Width		
12-5380	.020" x 25'		
12-5391	.031" X 20'		

## SOLDER TOOLS



### **Soldering Kit**

Ideal for technicians and kit builders. Contains 30 watt soldering iron, 60/40 rosin core solder, stainless steel solder aid tool and heat sink for semi-conductor soldering. Tool has forked end for wrapping or removing wires from terminals. Other end has a metal brush for removing solder from P.C. boards or terminals.

Cat. No. 12-031



#### 30 Watt Soldering Iron

A handy lightweight soldering iron complete with a hot tip iron rest. 117V AC. Complete with replaceable solder tip.

Cat. No. 12-055 Replacement Solder Tip Cat. No. 12-056



#### **PSI-100**

- · Self-igniting portable gas soldering heat tool.
- Solders, heat shrinks, cuts nylon rope.
- Rugged stainless steel body.
- Temperature adjustable up to 1.076 °F.
- Uses standard butane fuel.
- Runs for up to two hours on a single butane refill.
- Ten professional-quality, ironplated tips available.

Cat. No. PSI-100



#### Portasol® Model P-1

This is the state of the art in pocketable butane soldering tools. The Model P-1 offers totally portable operation, permitting an average 90 minutes of soldering from one refill. A variety of soldering and special purpose tips makes this the most flexible system of its type.

Mail Order Packed

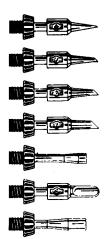
Cat. No. P-1-B





## PORTABLE SOLDER IRONS

#### Weller Portasol® Ten Professional-Quality, Iron-plated Tips 1.0 mm (1/32" single flat) soldering tip - temperature range up to 450 C (850 F). Cat. No. PSI 1 2.4 mm (3/32" single flat) soldering tip - temperature range up to 450 C (850 F). Cat. No. PSI 2 3.2 mm (1/8" single flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 3 4.8 mm (3/16" single flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 4 1.0 mm (1/32" double flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 5 2.4 mm (3/32" double flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 6 3.2 mm (1/8" double flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 7 4.8 mm (3/16" double flat) soldering tip - temperature range up to 450 C (850 F) Cat. No. PSI 8 Hot blower tip - temperature range up to 450 C (850 F) Cat. No. PSI 9 Hot knife tip - temperature range up to 450 C (850 F) Cat. No. PSI 10



### Replacement Portasol® Tips

Replacement Portasol Tips for the new Model P-1B and the Professional. A range of soldering and special purpose tips for both lab and field needs. Soldering tips range from 1.0 mm to broad at 4.8 mm wide. The Hot Blow Tip converts the Portasol into a miniature heat-gun for shrink tubing, softening plastics, etc. The blow-torch tip operates at 2300°F (2372° peak) for melting metals or heavy soldering jobs.

1.0 mm Solder Tip

Cat. No. T-1

2.4 mm Solder Tip

Cat. No. T-2

3.2 mm Solder Tip

Cat. No. T-3

4.8 mm Solder Tip Cat. No. T-4

Blow Torch Tip

Cat. No. T-5

Hot Blow Tip

Cat. No. T-6

Hot Knife Tip

Cat. No. T-7



A premium grade butane for use in the Portasol soldering iron, Portasol professional and all other similar tools that require butane fuel. This is a quality butane that contains no contaminants and will not clog valves or deactivate catalytic conversion material.

3 fl. oz. Aerosol Cat. No. 12-133



#### **PSI-100K**

Kit includes PSI-100 soldering tool, PSI 6 (2.4 mm) double flat tip, PSI 9 hot blower, PSI 8 (4.8 mm) double flat tip, PSI 10 hot knife, cleaning sponge, and rugged storage case. Fuel not included.

Cat. No. PSI-100K



#### **Model P-1K Portasol®** Soldering Tool Kit

Pocket-size butane soldering iron, blow torch and miniature heat gun. In addition to soldering, interchangeable tips add a hot-blow (i.e., heat gun) for shrink tubing, a blowtorch for heavy duty soldering. A hot knife tip is included for cutting plastics, cutting and cauterizing nylon rope, etc. May be used for all

electronic soldering, both assembly and repair. One filling of butane fuel allows an average of 90 minutes soldering time. The Portasol iron is 7" long and 3/4" in diameter. The kit measures 3"W x 9"L x 13/16"D.

#### Kit contains:

Portasol Model P-1 Soldering Tool 2.4 mm Standard Soldering Tip Hot Blow Tip (heat gun) Blow-Torch Tip Tip Cleaning Sponge Wire Hot-Iron Stand Plastic Storage Case

Mail Order Packed Cat. No. P-1K-B







## **SOLDER PRODUCTION TOOLS**



#### Solder Aid Kit

Seven tools provide complete solder maintenance capabilities to technicians, hobbyists, and electronics designers. Spring-loaded "extra fingers" clamp onto hot wires, while sharp-angled scraping tool cleans away excess solder with ease and accuracy. Hard to reach wires are quickly tamed with versatile wire clip. Smooth out solder beads with handy brush and detail tiny circuitry with 30° angled soldering prong. Kit contains the right tools for every job.

Cat. No. 9065



#### Reamer & Scraper Tip

Reamer and scraper tips for scraping joints or reaming out lug holes.

6-1/2" Long, Plastic Handle

Cat. No. 9069



#### **Brush & Forked Tip**

Brush on one end, forked tip on the other is for twisting or holding wires. 6-1/2" Long, Plastic Handle

Cat. No. 9073



#### **Brush & Scraper Kit**

Brush on one end for dusting away excess solder chips, and scraper tip for scraping joints.

6-1/2" Long, Plastic Handle

Cat. No. 9074

5-3/4" Long, Wood Handle

Cat. No. 9474



#### Straight Reamer & Forked Tip

Made from stainless steel, solder will not stick to it. Forked tip on one end, straight reamer on the other.

6-1/2" Long, Plastic Handle

Cat. No. 9075

5-3/4" Long, Wood Handle

Cat. No. 9475

## Heavy-Duty Brush & Forked Tip

One end stiff wire brush for cleaning off solder terminals. Other end is machined to help in unsoldering wires which are wrapped around terminals and lugs, and for holding wires.

8" Long, Plastic Handle

Cat. No. 9088

N.S.N. 5120-00-611-7136

N.S.N. 3439-00-611-7136

7-1/2" Long, Wood Handle

Cat. No. 9488



#### Angle Reamer & Forked Tip

Handy, fine point probe specially designed to aid in probing and soldering printed circuits. Made with special stainless steel hardened probes, solder will not stick to tool.

8" Long, Plastic Handle

Cat. No. 9093

N.S.N. 3439-00-800-7989

7-1/2" Long, Wood Handle

Cat. No. 9493



#### Brush & Scraper Kit

Fine stainless steel brush and hardened steel scraper.

8" Long, Plastic Handle

Cat. No. 9094

N.S.N. 5120-00-767-9125

7-1/2" Long, Wood Handle

Cat. No. 9494

#### Angle Reamer & Forked Tip

Heat treated tool steel prevents solder from sticking to tool. Forked tip for twisting or holding wires, angled reamer on the other end.

6-1/2" Long, Plastic Handle

Cat. No. 9076

N.S.N. 3439-00-330-5075

5-3/4" Long, Wood Handle

Cat. No. 9476



Straight reamer for cleaning out lug holes, forked tip is ideal for twisting or holding wires. Both tips are stainless steel to prevent solder from sticking to tool.

Cat. No. 9086

7-1/2" Long, Wood Handle

Cat. No. 9486







#### Anti-Static Solder Removal Tool

A standard size (7-3/4" overall length) solder removal tool with a relatively large vacuum chamber that provides a greater solder pulling action than most designs. Dual "O" rings enhance the greater pulling power. Conductive tip insures ESD free operation when used by a grounded operator.

Solder Remover Cat. No. 12-2105 Replacement "O" Rings Cat. No. 12-2106

Replacement Tips Cat. No. 12-2107



#### Anti-Static 8-28 Pin IC Extractor Tool

Anti-static extraction tool offers unique patented design that holds the IC being extracted without slippina.

Cat. No. 12-4126



#### Solder Popper®

3-Wire Grounded

Combines the popular snap-vacuum solder removal tool with a 30 watt soldering iron for fast, onehand operation and is an excellent tool for field repair or production work. Tightly sealed vacuum pump snaps-up all of the solder quickly. A removable reservoir stores solder and features a long life tip that unscrews for easy replacement.

Solder Popper

Cat. No. 12-2157 Replacement Tip Cat. No. 12-2160 Replacement "O" Ring Seal Cat. No. 12-2161



#### **Anti-Static 8-28 Pin IC** Extractor/Inserter Kit

Anti-static tools offer patented features to extract, insert, or hold an IC to be worked on. This kit contains one 8-28 pin extractor and one 8-28 pin inserter.

Cat. No. 12-4127



#### **Anti-Static I.C. Insertion Tools**

Insertion tools for all popular DIP I.C.'s. Narrow design permits insertion on crowded boards. Tools are molded of a tough plastic and plated with a metallic (conductive) coating to prevent ESD problems when used in conjunction with a wrist strap. Handles have pin straightener molded in for respective I.C.'s.

14-16 Pin

Cat. No. 12-4116

24-28 Pin

Cat. No. 12-4128

36-40 Pin

Cat. No. 12-4140



## Heat Sink

Protect heat-sensitive components, such as semi-conductors, from heat damage while soldering or desoldering. The H3-388 will absorb maximum heat. The thin 9077-25/ 9077-1 will fit short leads such as transistors mounted close to PC board.

Pkg. of 2

Cat. No. H3-388

Heat Sink

Cat. No. 9077-1

Order 25 Display Card Cat. No. 9077-25



#### 28-40 Pin Grounded DIP I.C. **Extractor**

By simply placing the tool on the socket and depressing the plunger one has instant and accurate extraction. Conductive finish with ground strap connection point.

Cat. No. 12-4612



#### Anti-Static 8-28 Pin IC Inserter Tool

Anti-static insertion tool offers unique patented design that places the IC into position.



# **TOOLS**

## SPECIALTY TOOLS



#### Long Reach Fluorescent Magnifying Work Lamp

An excellent lamp for PC repair or rework or other assemblies requiring magnification. A 22 watt circular fluorescent bulb supplies even, shadow-free light for a center-mounted magnifying (3-diopter) lens. Lamp arms reach up to 45". This lamp is UL Listed and well made for many years of use. 5 ft. cord.

Cat. No. 22-423

Replacement Bulb Cat. No. 22-425

Replacement Switch Cat. No. 22-427



# Illuminated Inspection & Service Mirrors

Hinge mounted mirror fastened to a 6" transparent lucite rod, which transmits light from a small anodized, aluminum flash-light. Locking switch for easy on-off, one hand operation. Furnished with bulb. Insulated shaft. Overall length: 12-1/4", mirror dia.: hard quad 7/8"; frame O.D.: 11/116".

Cat. No. 8725

N.S.N. 6230-00-066-1262



#### **Inspection Mirror**

7-1/2" long mirror. Metal shaft and plastic handle. Cat. No. 5090

N.S.N. 5120-00-620-9233

7-7/8" long all plastic insulated mirror. No danger of shock or shorting.

Cat. No. 5090-P

N.S.N. 5120-00-159-8180



#### **Miniature Inspection Mirror**

Only 4-1/8" long. The mirror surface is 3/4" diameter. Stem and frame are non-conductive plastic.

Cat. No. 5093



#### Extra Hands with Magnifier

Two alligator spring clamps and double ball joints hold work at any angle. Third clamp holds 2" magnifying lens for doubling size of hard to read part numbers and verifying repair accuracy. Spring clip holds objects at any angle leaving both hands free to glue, solder, repair or assemble with ease. Heavy cast-iron metal base provides stable error-free assistance.

Cat. No. 12-053



#### **Double Hand Holder**

Six ball joints permit movement to the exact angle required for hands-free operation. Tightened (locked in place) by thumb screw. Alligator clips, adjustable to any position, holds small shapes securely. Heavy base prevents tipping. May be used in vise or clamped to workbench.

Cat. No. 12-051



#### Miniature Vacuum Vise

Attaches instantly to smooth, nonporous surfaces. Side lever controls powerful suction cup base. Completely portable but can be permanently mounted—mounting holes provided on base. 1-1/2" jaws open to 1-3/4". Ideal for quick, changeable setups involving small precision parts and microelectronic accessories. 2-5/8" H x 2-1/4" W x 2-1/4"D. Durable molded plastic.

Cat. No. 41-616



#### Swivel Vacuum Vise

#### Heavy Duty

Attaches quickly to any smooth, nonporous surface. Vise tilts up to 180° vertically—swivels a full 360° horizontally. Rugged casting with 3" wide, metal, V-groove jaws which open to 2-5/8". Versatility makes it useful in the shop or lab and for light production work. Base size: 6-1/4". Hammertone finish.

Cat. No. 12-061



One of the handiest tools in any shop or toolbox. Holds and starts screws from No. 2 thru No.

Cat. No. 12-042



#### Snap Lock Screw Starter

Double ended Screw Starter for Phillips and standard slotted screws. Cam action holds screws straight and firm. For most screw sizes normally used in electronic work up to 1/4". Overall length 9" for tough to reach places.

# **TOOLS**





#### Metric Hex Wrench Kit

Kit of the 9 most popular size metric hex wrenches: 0.9 mm to 3.2 mm sizes. Made of specially tempered steel. Complete with plastic carrying pouch.

Cat. No. 5026



#### Hex & Spline Wrench Kit

A complete wrench kit for both hex and spline type screws used in the electronics field. Twelve wrenches in an attractive leatherette case. Will fit No. 2 to 3/8" screws.

Cat. No. 5028

N.S.N. 5120-00-585-6240



## Hexagon Key Wrench Kit

Kit of 5 key wrenches, essential for every repairman. Made of special alloy steel. Tools fit No. 4 to 1/4" set screws and No. 2 to No. 8 cap screws. Convenient leatherette carrying pouch.

Cat. No. 5029



#### Spline Key Wrench Kit

Kit of 6 popular "Spline" type wrenches for use on many electronic devices. Made of alloy steel. Tools fit No. 4 to 1/4" set screws and No. 2 to No. 8 cap screws. Complete with handy carrying pouch.

Cat. No. 5070

N.S.N. 5120-00-585-6257



#### **Pocket Hex Key Wrench Set**

Wrenches open like pocket knife blades. Six popular size wrenches: 0.50" to 3/16", fitted in steel case. Made of the finest nickel chrome alloy steel.

Cat. No. 9124



#### **Knurl-Nut Wrenches**

Tightens or loosens knurled finish nuts. Collet-type pressure jaws provide positive vise-like grip. Reverse quarter turn loosens jaws and drops nut. 1/16" adjustment takes finish nuts of slightly less or greater size. Hollow collet barrel fits the long shank of many toggle switches.

Cat. No. 9358

N.S.N. 5120-00-88-4009

5/8" dia. Nut **Cat. No. 9359** 



#### **Contact Burnishing Tools & Kits**

GC burnishing tools—consist of stainless steel strips, micro-scored to an ultra-fine file surface. They remove oxide and corrosion on relay and switch contact points made of platinum, paladium, molydenum, gold tungsten and silver. The standard tool is used on medium and large contact points whereas the fineline tool is recommended for use on small and miniature components.

0.120" wide Fineline tool.

Cat. No. 9337

Display of 24

Cat. No. 9337-24

.0250" standard width tool.

Cat. No. 9338

Display of 24

Cat. No. 9338-24



#### **Taper Reamer**

Indispensable for work on chassis or cabinet. Start with 1/8" or larger hole and enlarge to required size. Will also remove burrs. Tapers to 13/16"

Cat. No. 12-040



#### **Pin Extractor Tools**

Manufactured for clean and easy removal of male or female pins from nylon connectors, these tools are spring loaded and cause automatic collapse of the locking flanges before pushing the connector from the housing. This two-stage action assures a quick process without damage to the nylon housing or the pin connectors.

For .062" Pins **Cat. No. 12-650** For .093" Pins

Cat. No. 12-653



#### Spring Steel Extractor

An economical Spring Steel Extractor, one piece spring steel construction. It will fit all LSI, MSI, and SSI devices from 8 to 24 pins.







#### **Professional High-Power Degaussing Coil**

Eliminates magnetic fields in CRT TV picture tubes or computer monitors as required prior to purity adjustments. Safe to use. Coil is made to standard industry specifications and is completely encased in 13" dia. molded, highimpact plastic housing. Supplied with 8 ft. cord and momentary contact switch that permits de-energizing of coil without pulling plug. UL approved.

Cat. No. 9317

N.S.N. 5950-01-046-7345



#### Fyberoid "Fish Paper"

#560 Thin Insulated "Fish Paper". For numerous repair jobs around the shop where electrical insulation is required. Its qualities of toughness, flexibility, and edge-tearing resistance, combined with high dielectric strength, and ready absorption of insulating varnish, have led to its predominant use as an IMPROVED motor slot call insulation.

#### Characteristics and Uses:

- Flexibility: Bends readily without fracturing in either direction of grain. The extraordinary flexibility makes it possible to form over and lay flat a 1/8" wide cuff along the edges of coils or strips.
- Edge Tearing Resistance: Highly resistant to tearing force at edges of material. Will resist tearing at the ends of cells under conditions destructive to ordinary insulation. It is recommended that it be cut with the grain running around the cell form, rather than lengthwise of the cell. When pieces are cut off and folded up into motor slot, the cuffed ends greatly increase the resistance to tearing.
- Extreme Toughness: Will stretch before tearing. The unique combination of this extreme toughness with flexibility enables it to be used successfully in many other difficult assemblies.

#### Specifications:

- Size: 10" wide
- Description: Vulcanized Cellulose Fiber
- Color: Blue-Grey
- Thickness: 0.010 inch ± 10%
- Uses: All electrical insulation
- Tensile Strength: MD 15,000 psi, (typical) CD 6,000 psi, (typical)
- Density: 1.1 gram per cubic centimeter min.
- Electrical Strength: 300 Volts per mil (typical) • Bursting Strength: (Mullen) 270 psi, (typical)
- Tearing Strength: MD 375 grams, (typical)
  - CD 450 grams, (typical)
- Zinc Chloride Content: 0.05% max.
- UL 94 Flame Class: 94HB UL File #E55656
- Meets Mil. Spec. MIL-1-695A Type F.

Rolled Cat. No. 560

Cat. No. 560-BU



#### **Insulating Cambric**

Dry, yellow (polyester coated glass cloth) for transformers, chokes, resistors and motors. Needed to insulate parts and wires. 210 sq. inch roll. 9" wide-0.010" thick: Dielectric strength: 5000 volts. Rated at 180°C (356°F) with a 200 min. lbs/in. width tensile strength. High resistance to moisture and solvents. Meets MIL-1-17205C.

Cat. No. 549



#### **Nibbling Tool**

Cuts metal and non-brittle plastic. Will cut any size or shape contour, starting from the edge or from a 3/8" inside hole, the deluxe version is a spring operated nibbler which withdraws the punch from the metal, thereby speeds up the cutting. These tools cut steel up to 18 gauge (0.046") as well as copper. brass, aluminum and plastic up to 1/16" (0.062").

Deluxe Nibbler with Spring Operated Stripper Cat. No. 806

Replacement Cutter for Nibbler Tool Cat. No. 805 Cat. No. 810



#### **Push/Pull Tools**

#### Spring Hooks

Combination push/pull/lifter tool for manipulating drive belts and springs into tight place. One end is a hook for pulling, the other an "S" for pushing.

5' Length

Cat. No. 12-2015

8' Length

Cat. No. 12-2018

11' Length

Cat. No. 12-2021



#### **Duo-Tongs Universal Fuse Puller**

Shock proof, molded nylon universal fuse pullers. Accommodates all kinds and types of fuses, including house-hold screw-in type and industrial cartridge fuses up to 3/4" or 100 amp type. Non-conductive, non-flammable and virtually unbreakable.

Cat. No. 9356 N S N 5120-00-554-3372



#### **Tube & Parts Extractor**

Designed by the U.S. Military for all electronic service. Constructed of spring steel, nickel plated. Rubber cushioned prongs.

Cat. No. 5092

N.S.N. 5120-00-288-7680



#### **Mini-Drill**

Precision performance and features at an economical price. A versatile, portable drill suitable for most light drilling applications. Particularly designed with P.C. board work in mind, but capable of handling metal and plastic chassis boxes too. Operates as a portable on 4 "AA" batteries (not included) at 2500 RPM with a well-geared motor for high torque. An external power jack permits use with a 9 or 12V DC power supply. A power cord and connector are included. Also included with the drill are three collets that will accept bits up to .125" (.024 minimum), three popular bits (#32, #47, #53), a grinding wheel, collet wrenches and a hinged plastic storage box. A drill stand is available separately. For additional drill bits, see Nos. 12-275 and 12-276.

Cat. No. 12-107



#### **Drill Stand**

Designed specifically as a "drill-press" for No. 12-107 Mini-Drill. Particularly useful for P.C. work when accuracy really counts and many holes must be drilled. Drill simply snaps into stand and is equally easy to remove. Height adjustment for easy travel, spring-loaded return. Deep support arms allow for drilling P.C. boards up to 5-1/4" wide.







#### **Drill Bit Sets**

For drilling component lead wire holes in phenolic and glass epoxy PC boards. Made of high speed tool steel for long life.

#### Set Contains:

No. 66 Bit, .0330" Diam.; No. 60 Bit .0400" Diam.; No. 1/16 Bit, .0625" Diam.

Cat. No. 12-275

Set Contains:

No. 31 Bit .1200" Diam.; No. 27 Bit .1440" Diam.; No. 3/32 Bit .0938" Diam.

Cat. No. 12-276

#### Flexible Pick-Up Tool

Convenient, mechanical fingers pick up pieces and parts dropped into inaccessible places; holds to start screws, nuts and bolts.

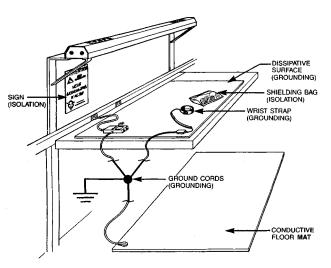
Long Reach 24" Tool

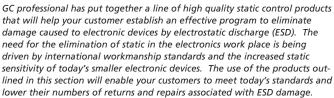
Cat. No. 5089

Miniature 5" Tool

Cat. No. 12-044

## **ESDISTATIC PROTECTION**





#### Applications for specific ESD products:

- Wrist bands: When properly grounded a wrist strap will eliminate static electricity an operator generates during normal activities.
- Table mats: When properly grounded will eliminate static electricity from items in the workstation area and items that are brought into the workstation area.
- ESD bags: Will protect electronic devices from static electricity during transportation and storage.
- ESD floor mats: When properly grounded can be used in conjunction with heel straps to eliminate static charges from an operator.
- Heel straps: Eliminate static charges from an operator when combined with a grounded ESD mat or flooring material. Can be used in conjunction with a wrist strap.
- Wrist strap and foot strap testers: Used to verify that ground cords, wrist straps and foot straps are functioning properly.
- ESD tape: Eliminates the large static charge generated by the use of conventional tape.
- I.C. lotion: Helps ensure a good contact with wrist straps and the skin without the risk of leaving residue on sensitive electronics.



#### GC Professional Adjustable Wrist Strap Kit

Elastic material: extra wide and soft for wearer comfort. Easy to replace without tools. Has silver impregnated nylon knitted on inside for superior conductivity.

Adjustable: may be fitted to any size. Once adjusted and locked, the material will not slip.

Unique patented adjustable design: eliminates exposed conductive "tail" – added safety.

**Stainless steel stud:** long lasting. **Nonallergenic stainless steel:** no allergic reactions.No sloughing: safe for micro electronics.

#### Complete kit includes:

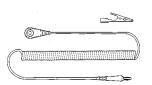
10' coil cord, 4 mm snap stud and alligator clip

Cat. No. 12-8012 Wrist Strap Only Cat. No. 12-8013











#### **Adjustable Economy Wrist** Strap Kit

Complete wrist strap kits include 6' coil cord with 4 mm snap stud and alligator clip.

#### Wrist Strap:

- Machined .160" (4 mm) stud, 300 series stainless steel. To fit 1/8" (4 mm) spring loaded medical snap socket
- Easy to open plastic clasp secures elastic material in place, and allows the user to easily adjust the wrist band size. Maintains electrical continuity even when open.
- Non-allergenic stainless steel base plate, provides excellent skin contact, for superior grounding.
- Insulating cap, thermoplastic.
- · Soft elastic band.



#### **Touch Type On Demand** Wrist Strap Tester

Operates on either 120V AC or a 9 volt battery with a ground cord that is independent of the AC utility plug. Tests the entire circuit including the connection to the skin with a reliable resistance test.

The tester can be easily mounted any place on the bench or on the wall. Wrist strap does not have to be plugged into the unit to test. 9 volt batterv and AC adapter sold separately.

#### Features:

3 state indicators: indicates low-pass-high.

Compact size: maximum portability.

Audible/visual indication: easy to use.

Operates on AC or batteries: allows for use as a portable or permanently installed unit.

Range: 750K ohm to 10 Megohm

Size: 3" x 4" x 1 5/8".

Cat. No. 12-8050 AC Adapter for Tester

Cat. No. 12-8051

#### Ground Cord:

- Barrel type banana plug. Fits industry standard banana jack .166 in. (4.22 mm)
- · Metallized, high flex tinsel, black jacket.
- One megohm, 1/4 watt, series resistor, molded within snap assembly, limits current for operator safety.
- Spring loaded snap socket.

IST STRAP/FOOTWEAR TESTER

Alligator clip included.

Cat. No. 12-8010

Wrist Strap Only

Cat. No. 12-8011

## **Combination Wrist** Strap/Footwear Tester

The combination wrist strap and footwear tester is a simple-to-operate single station test fixture designed for fast, frequent testing of ESD personnel grounding devices. The tester is easy to operate and interpret. The tester automatically switches

internal circuitry to test at the appropriate ranges. The tester will operate on either a 9 volt alkaline battery or a special AC adapter. 9 volt battery and AC adaptor sold separately. A 17" x 22" wall poster is also included detailing both wrist strap and footwear testing procedures.

#### Features:

Dual test circuits: ensures accuracy when testing either footwear or wrist

Auto-ranging circuitry: automatically selects proper test range for footwear and wrist strap.

3 state indicators: indicates low-pass-or high results. Low-battery indicator: ensures proper operation.

Battery operated: maximum portability. Mounting slots: quick and easy wall mounting.

Wrist strap test range: 750K - 10M Foot ground test range: 750K - 100M.

Test parameters are factory set but can be adjusted to match your own specifications.

**Combination Tester** 

Cat. No. 12-8055

AC Adapter

Cat. No. 12-8056

Stand and Baseplate Cat. No. 12-8057 Footplate and Cord Cat. No. 12-8058

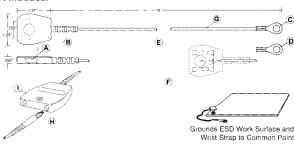


#### **Common Point Ground** Cords for Bench Mats

#### Includes:

- Wire terminated with a #10 (.200") ring terminal. An extra ring terminal is provided to allow custom tailoring to vour installation.
- Two banana jacks for wrist straps connected directly to ground without resistors.

Yellow striped green wire (International code for ground). Both the mat snap and banana jacks are connected directly to ground. Workstation mat not included.



- A. 10 mm (.395") snap stud to ground work surface.
- B. Molded in black thermoplastic elastomer.
- Ring terminal .200 " ID (#10).
- D. Extra ring terminal included for customizing length.
- The 12-8032 has no resistor between the snap and ground, with banana jacks also at ground potential.
- Wire is autosplice crimped to secure it inside of the mold.
- G. High flex strand copper, 20 gauge, with PVC insulated jacket (green insulation with yellow stripe, OD = .100").
- H. Dual banana jacks at ground potential.
- I. Ground symbol molded into the plastic

# **TOOLS**

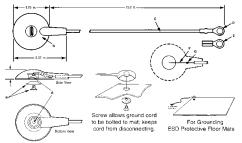




## **Ground Cords for Floor Mats with 10 mm Studs**

Fifteen feet of wire, terminated with a #10 (.200") ring terminal. An extra ring terminal is provided to allow custom tailoring to your installation. Actual product may vary slightly from photo.

Yellow striped green wire (International code for ground). The mat snap is connected directly to ground. **Workstation mat not included.** 



- A. 10 mm (.395 in.) male snap to ground floor mats.
- B. Molded in black thermoplastic elastomer.
- C. High flex strand copper, 20 gauge, with PVC insulated jacket (green insulation with yellow stripe, OD = .107")
- D. Ring terminal, .200" ID, (#10).
- **E.** Extra ring terminal provided for customizing length.
- F. Item 12-8026 has no resistor between the snap and ground.
- **G.** Brass crimp secures conductors and provides stress relief.
- H. 6-32 x 1/4" flat head screw and washer allow floor mat ground to be bolted to mat.

Cat. No. 12-8026

2 Pack, 3/8" Push and Clinch 10 mm Snap Stud

Cat. No. 12-8028



## **Ground Cords for Mats** with 10 mm Studs

Ten feet of wire, terminated with a #10 (.200") ring terminal. An extra ring terminal is provided to allow custom tailoring to your installation. Yellow striped green wire (International code for ground). The mat snap is connected directly to ground.

Cat. No. 12-8024

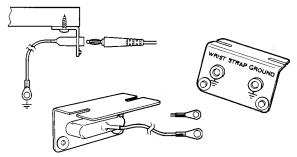


#### **Dual Bench Mount**

Features include:

2 banana jacks: allows 2 people to ground wrist straps simultaneously.
2 "parking studs": prevent cord from being accidentally stepped on when not in use.

Mounts under the front edge of workstation: saves work space.



- A. Dual banana jacks for grounding two wrist straps.
- **B.** Black anodized aluminum angle bracket frame, mounts underneath worksurface.
- C. Dual .155" (4 mm) studs for "parking" wrist strap ground cords when not in use.
- D. 10' ground wire. Insulator: PVC, yellow striped green, .100" OD. Conductor: 105 strands each. Approximately 22 gauge with a #10 (.200" ID) ring terminal.
- E. Slotted bracket allows easy installation for screws with a maximum diameter of .175" (4.4 mm).
- F. Grounding symbol markings on each banana jack..
- G. Extra #10 (.200" ID) ring terminal for custom installation.
- H. Vinyl boot insulates electrical circuits.

Cat. No. 12-8030



#### Field Service Kit

This kit is designed to be folded to fit into a shirt or pants pocket. The kit includes one ground snap, adjustable wrist strap and ground cord.

Laminated Vinyl 18 Mil Red. Size: 15" x 20"
Surface Resistivity: 10° – 10° ohms/sq per ASTM-D257.

Cat. No. 12-8038

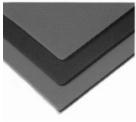


#### **Dissipative Workstation Kit**

Mat with Common Point Ground for those who already have wrist straps and need to install bench tops. Each kit includes: 1–18" x 24" blue bench mat (12-8041) 1–Common point ground cord (12-8032) 1–Universal snap kit (12-8028).



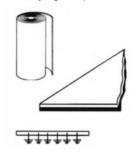




#### ESD Two Layer Workstation Mat

The two layer construction allows it to be used as a dissipative or a conductive matting product. The soft dissipative layer makes an excellent table mat, ideal for use in soldering and assembly areas. The conductive layer provides a durable slip resistant flooring surface, ideal for use in applications requiring conductive footwear. This rubber material has superior

resistance to abrasion, chemicals and is very easy to clean and maintain. This material is heat resistant and will not produce toxic fumes if exposed to extremely high temperatures. Solder and flux will not damage the surface.



#### Specifications:

RTT: 4 x 106 - 9 x 106 Ohms per ANSI/EOS/ESD-S4.1 @ 100 volts RTG: 2 x 106 - 4 x 106 Ohms per ANSI/EOS/ESD-S4.1 @ 100 volts Charge Decay: 0.01 - 0.02 seconds per FTMS 101C, Method 4046 Thickness: .060 in. (1.5 mm) Color: Blue

Grounding hardware is NOT INCLUDED with rolls and must be ordered separately. Continuous runs of static dissipative materials should be grounded at six-foot intervals to ensure proper dissipation rates.

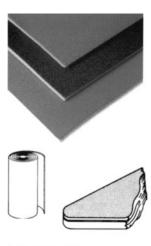
Cat. No. 12-8043



### **Two Layer Workstation Kit**

Mat with Common Point Ground for those who already have wrist straps and need to install bench tops. Each kit includes: 1–18" x 24" blue bench mat (12-8043) 1–Common point ground cord (12-8032) 1–Universal snap kit (12-8028)

Cat. No. 12-8044



#### ESD Three Layer Workstation Mat

Material is a highly effective three-layer material. Its durable top layer makes it ideally suited for use as an ESD protective bench or floor mat. Its highly conductive middle layer provides a superior discharge path to ground. A closed cell foamed dissipative bottom layer provides excellent protection against physical damage.

#### Specifications:

RTT: 4.0 x 107 Ohms per EOS/ESD-S4.1 per @ 10 volts RTG: 2.4 x 107 Ohms per EOS/ESD-S4.1

per @ 10 volts

Thickness: 100" (2.5 mm)

Color: Blue

Grounding hardware is NOT INCLUDED with rolls and must be ordered separately. Continuous runs of static dissipative materials should be grounded at six-foot intervals to ensure proper dissipation rates.

24" x 40' Bulk Roll Cat. No. 12-8045



<del>++++++</del>

#### **Three Layer Workstation Kit**

Mat with Common Point Ground for those who already have wrist straps and need to install bench tops.

#### Each kit includes:

1–18" x 24" blue bench mat (12-8045) 1–Common point ground cord (12-8032) 1–Universal snap kit (12-8028)

Cat. No. 12-8046





## Antifatigue Dissipative Floor Mat

Foamed soft antifatigue floor mat is designed to reduce fatigue or for use where cushioning is required. Material has shown no loss of electrical properties due to wear and aging over a ten year period. Due to the extra thickness of this material, long grounding studs are required. Universal Snap Kit (12-8028) for the grounding stud is recommended.

#### Specifications:

RTT: 2.5 x 109 Ohms per EOS/ESD-S4.1 RTG: 4.6 x 109 Ohms per EOS/ESD-S4.1 Charge Decay: Less than .1 seconds per FTMS 101C Method 4046, IS-5A Thickness: .375" (9.5 mm) Color: Grey with yellow safety stripe

Grounding hardware is NOT INCLUDED with rolls and must be ordered separately. Continuous runs of material should be grounded at six-foot intervals to ensure proper dissipation rates.

Cat. No. 12-8047



#### Floor Ground Kit

Kit Includes: 1–24" x 36" floor mat (12-8047) 1–Ground cord (12-8026) 1–Universal snap kit (12-8028).

Cat. No. 12-8048



#### **Antistatic Packaging Tape**

Antistatic tape is a transparent cellophane tape that provides protection against the generation of static charges. This tape will typically generate less than 250 volts compared to over 5000 volts for standard tape.

Appearance: Light yellow transparent

cellulose based film
Length: 216 ft. (72 yds.)
Thickness: 2 mils (0.002 inch)

Static Generation: <250 volts @ 50%RH

Core Size: 3 inch

Tensile Strength: 90 N/25 mm Peel Adhesion: 19 N/25 mm Elongation at Break: 18%.

1" Width

Cat. No. 12-8061

2" Width

Cat. No. 12-8062



#### **Hand Lotion**

A static dissipative, non-contaminating hand lotion enriched with Aloe Vera and Vitamin E. This non-acidic lotion promotes softer, healthier hands and nails. Static dissipative helps in keeping skin moist for better contact between the wrist strap and the skin. No glycerin, mineral oil, silicones or lanolin. Absorbs immediately and is completely non-greasy so it won't interfere with grip or dexterity.



# **SWITCHES/** PANEL LAMPS/LED'S

There are few electronic devices or circuits that do not have a switch of some sort. This catalog offers you more than 400 different switches, designed to meet your needs. These switches are usually available to you from stock or can be obtained in a relatively short time frame. But GC is more than just 400 stock switches.

In the course of developing this broad line of commodity switches, GC has developed relationships with the majority of the major switch manufacturers around the world. GC's knowledge of the switch industry and its daily contacts with manufacturers enables us to cut your lead time and sourcing efforts down to a simple call. If you do not find the switch that you need on the following pages, call us and we'll find it for you.

#### **Contents:**

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AC/DC Switches

Appliance

Automotive/Marine

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Light/Medium/Heavy Duty

Lighted

Miniature

Paddle Handle

Standard

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Curved Style

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Rocker w/LED

Snap-In

Standard

V-Style

#### **PUSHBUTTON Switches**

AC/DC Switches

**Appliance** 

Auto/Marine Starter & Horn

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4-Tumbler Style

6-Tumber Style

With/Without Wire Leads

### CIRCUIT BREAKERS

3-Through 30 Amp Selection

#### **DIP Switches**

1 Through 12 Positions

Right Angle Style

Side Actuated Style

Splash Resistant

Washable/Open Style









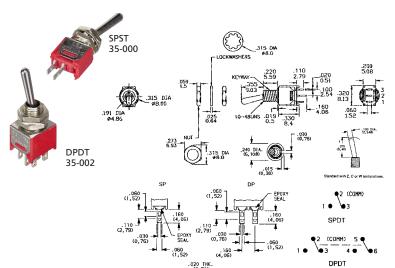








## TOGGLE SWITCHES



#### Sub-Miniature Bat Handle Toggle Switches

Specifications:

Current Rating: 3A-120V AC/28V DC (3A-125V AC, 35-000) Initial Contact Resistance: 20 Milliohms or less @ 2-4VDC

Insulation Resistance: 20 Miniornis of ress & Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Coin Silver – silver plated

**Terminal Material:** Copper Alloy – silver plate **Temperature Rating:** -30°C to 85°C

Electrical Life: 60,000 make-and-break cycles at full load

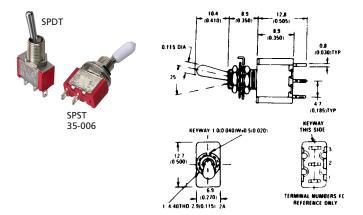
Terminal Type: Solder

Mounting Hole: 0.219"-35-00/0.203"-35-01/02

Hardware for 35-000, 35-002: Nut (2), Locking Ring, Lockwasher

Hardware for 35-001: Nut (2), Washer (1)

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-000
SPDT	ON	ON	Metal	35-001
DPDT	ON	ON	Metal	35-002



#### Miniature Bat Handle Toggle Switches



Specifications

Current Rating: 5A-120V AC, 2A-250V AC, 28V DC Initial Contact Resistance: 10 Milliohms (max.)@2-4 V DC

Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Coin Silver – Silver plated
Terminal Material: Copper Alloy – Silver plate

Temperature Rating: -30°C to 85°C

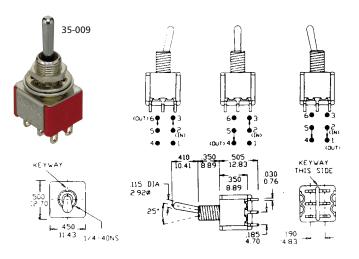
Electrical Life: 40,000 make-and-break cycles at full load: 35-004=

100,000 cycles Terminal Type: Solder Mounting Hole: 0.250"

Hardware: Nut (2), Locking Ring, Lockwasher

TYPE	ACTION			ACTUATOR	CAT. NO.
SPDT	ON		(ON)	Metal	35-003
SPDT	ON		ON	Metal	35-004
SPDT	ON	OFF	ON	Metal	35-005
SPST	ON		OFF	Metal w/White Boot	35-006
SPDT	ON	OFF	(ON)	Metal	35-007
SPDT	(ON)	OFF	(ON)	Metal	35-008

SPECIAL NOTE: ( ) = Momentary Function



### Miniature Bat Handle Toggle Switch



Specifications:

Current Rating: 5A 120V AC, 2A 250V AC

Initial Contact Resistance: 2-4V DC .1A 10 Milliohms

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS

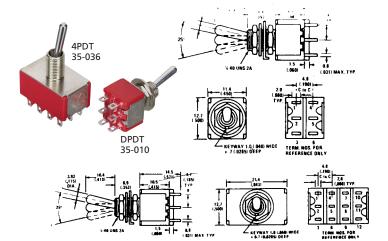
Contact Material: Coin Silver – Silver plate Terminal Material: Brass – Silver plate Temperature Rating: -30°C to +85°C Electrical Life: 50,000 cycles

Terminal Type: Solder Mounting Hole: 0.250" Hardware: Nuts (2)/washer

TYPE	ACTION			ACTUATOR	CAT. NO.
DPDT	ON	ON	ON	Metal	35-009

# **SWITCHES**





### Miniature Bat Handle Toggle Switches

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Specifications:

Current Rating: 5A-120V AC/28V DC, 2A-250V AC Initial Contact Resistance: 10 Milliohms (max.) @2-4V DC

Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Coin Silver – Silver plated
Terminal Material: Copper Alloy – Silver plate

Temperature Rating: -30°C to 85°C

Electrical Life: 100,000 make-and-break cycles at full load

(35-010/35-036); others 40,000 cycles

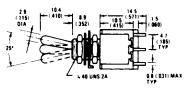
Terminal Type: Solder Mounting Hole: 0.250"

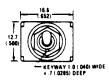
Hardware: Nuts (2), Locking Ring, Lockwasher

TYPE	A	CTIO	N	ACTUATOR	CAT. NO.
DPDT	ON		ON	Metal	35-010
DPDT	ON	OFF	ON	Metal	35-012
DPDT	ON		(ON)	Metal	35-014
DPDT	ON	OFF	(ON)	Metal	35-016
DPDT	(ON)	OFF	(ON)	Metal	35-018
4PDT	ON		ON	Metal	35-036
4PDT	ON	OFF	ON	Metal	35-038

SPECIAL NOTE: ( ) = Momentary Function









## Miniature Bat Handle Toggle Switches



Specifications:

Current Rating: 5A-120V AC/28V DC,2A-250V AC Initial Contact Resistance: 2-4V DC 10 Milliohms Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Coin Silver – Silver plated
Terminal Material: Copper Alloy – Silver plate
Temperature Rating: -30°C to 85°C

Electrical Life: 100,000 cycles (35-24)/40,000 (35-26)

**Terminal Type:** Solder **Mounting Hole:** 0.250"

Hardware: Nuts (2), Lockring, Lockwasher

TYPE	ACTION			ACTUATOR	CAT. NO.
3PDT	ON		ON	Metal	35-024
3PDT	ON	OFF	ON	Metal	35-026

## Miniature Plastic Toggle Switches



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC
Initial Contact Resistance: 10 Milliohms (max.)
Insulation Resistance: 1000 Megohms (min.)
Dielectric Strength: 2000V RMS (min.)

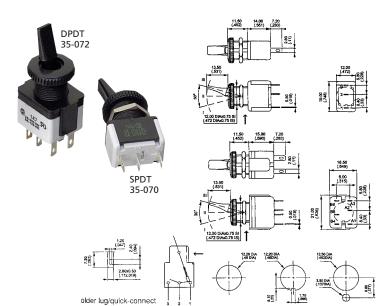
Contact Material: Coin Silver Terminal Material: Coin Silver Temperature Rating: -20°C to +55°C Electrical Life: 10,000 (min.) cycles

Terminal Type: Combination Solder Lugs/Quick Connect

Mounting Hole: 0.500"

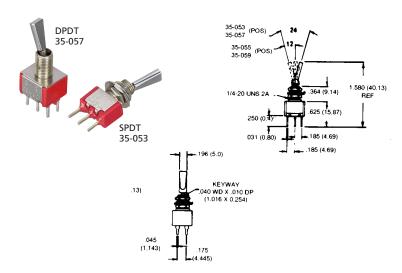
Hardware: Hex nut, Black Knurled nut

TYPE	А	CTION	ı	ACTUATOR	CAT. NO.
SPDT	ON		ON	Plastic	35-070
SPDT	ON	OFF	ON	Plastic	35-071
DPDT	ON		ON	Plastic	35-072
DPDT	ON	OFF	ON	Plastic	35-073









#### Miniature P.C. Toggle Switches

Specifications:

Current Rating: 5A-120V AC/28V DC-2A-250V AC
Initial Contact Resistance: 10 Milliohms @ 2-4VDC

Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Coin Silver – Silver plate
Terminal Material: Copper Alloy – Silver plate
Temperature Rating: -30°C to 85°C

Electrical Life: 100,000 make-and-break cycles at full load

(35-024/35-057), others at 40,000 cycles

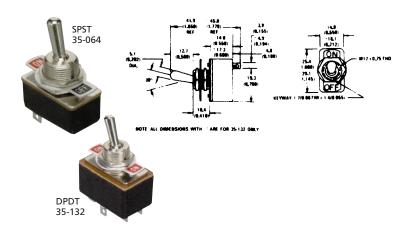
Terminal Type: Printed Circuit

Mounting Hole: 0.250"

Hardware: Nut (2), Locking ring, Lockwasher

TYPE	ACTION			ACTUATOR	CAT. NO.
SPDT	ON		ON	Flat Lever	35-053
SPDT	ON	OFF	ON	Flat Lever	35-055
DPDT	ON		ON	Flat Lever	35-057
DPDT	ON	OFF	ON	Flat Lever	35-059

NOTE: Actuator chrome plated plastic



#### **Light-Duty Bat Handle Toggle Switches**

Specifications:

Current Rating: 4A-125V AC,2A-250V AC--35-64/3A-125V AC--35-132

Initial Contact Resistance: 1A, 20 Milliohms (max.)
Insulation Resistance: 100 Megohms (min.) @500V DC

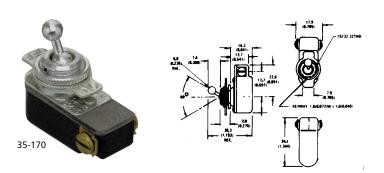
Dielectric Strength: 1250V RMS

Contact Material: Silver

Terminal Material: Copper Alloy – Tin plate

Terminal Type: Solder Mounting Hole: 0.500" Hardware: ID plates, Nuts (2)

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-064
DPDT	ON	ON	Metal	35-132



## Standard Size Ball Handle Toggle Switch

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Specifications:

Current Rating: 6A-125V AC,3A-250V AC Initial Contact Resistance: 5.5V/1A, 0.025 Ohms

Insulation Resistance: 2000 Megohms Dielectric Strength: 1250V RMS Contact Material: Copper Alloy Terminal Material: Copper Alloy Terminal Type: Screw

Mounting Hole: 0.500"

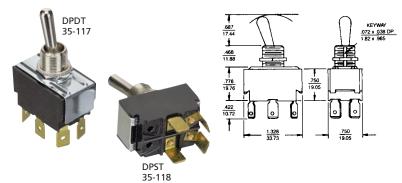
Hardware: Hex nut, ID plate, Knurled nut, Screws

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-170

NOTE: Compact Design



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#### Toggle Switch

Specifications:

Current Rating: 6A-125V AC, 3A-250V AC, 1/4HP 125-250V AC

Initial Contact Resistance: 5.5V/1A, 0.025 Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

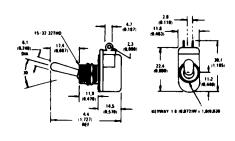
Contact Material: Silver

Terminal Material: Brass - Nickel plated Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,0000 cycles (min.) Terminal Type: 0.250" Quick Connect

Mounting Hole: 0.500" Hardware: Hex nut, Knurl nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
DPDT	ON	ON	Metal	35-117
DPST	ON	OFF	Metal	35-118





### Medium Duty Bat Handle Toggle Switch



Specifications:

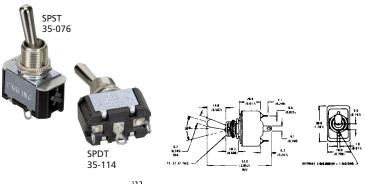
Current Rating: 6A-125V AC, 3A-250V AC

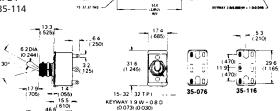
Initial Contact Resistance: 003 Ohms @ 125V, .010 @ 250V

Insulation Resistance: 100 Megohms (min) Dielectric Strength: 1000V RMS (min) Contact Material: Brass - Bright dip Terminal Material: Brass - Tin plated Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 (min.) cycles Mechanical Life: 50,000 cycles Terminal Type: Solder Mounting Hole: 0.500"

Hardware: Hex nut, Knurled nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-160





## Medium-Duty Bat Handle Toggle Switches



Specifications:

Current Rating: 6A-125V AC 3A-250V AC, 1/4 H.P. 120/240V AC

Initial Contact Resistance: 5.5V/1A, 0.025 Ohms

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS Contact Material: Silver

Terminal Material: Brass - Silver plate Temperature Rating: Not to exceed 85°C

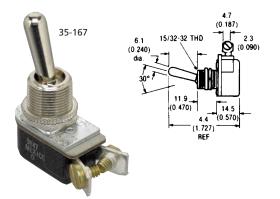
Electrical Life: 10,000 cycles Mechanical Life: 50,000 cycles Terminal Type: Solder Mounting Hole: 0.500" Hardware: Hex nut, Knurled nut

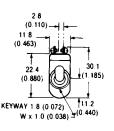
TYPE	ACT	TION	ACTUATOR	CAT. NO.
SPST	OFF	(ON)	Metal	35-076
SPDT	ON	(ON)	Metal	35-116
SPDT	ON	ON	Metal	35-114

SPECIAL NOTE: () = Momentary Function









#### Medium Duty Bat Handle Toggle Switch



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC

Initial Contact Resistance: 0.003 Ohms @ 125V, 0.010 Ohms @ 250V

Insulation Resistance: 100 Megohms (min.)

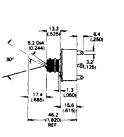
Dielectric Strength: 1000V AC
Contact Material: Copper-Silver plated
Terminal Material: Copper-Silver plated
Temperature Rating: Not to exceed 85°C
Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)

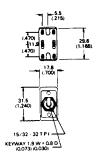
Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurled nut, Screws

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-167







## Medium-Duty Bat Handle Toggle Switch



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC,1/4HP 125-250VAC

Initial Contact Resistance: 5.5V/1A, 0.025 Ohms

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS

Contact Material: Copper Alloy – Silver plate

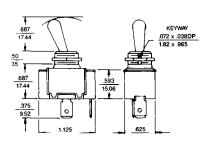
Terminal Material: Brass – Tin plate Temperature Rating: -30°C to +85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

Terminal Type: Solder Mounting Hole: 0.500" Hardware: Hex nut, Knurl nut

TYPE	ACTION		ACTUATOR	CAT. NO.
DPDT	ON	(ON)	Metal	35-154

SPECIAL NOTE: ( )=Momentary Function





#### **Medium-Duty Bat Handle Toggle Switches**

Specifications

Current Rating: 6A-125V AC, 3A-250V AC,1/4HP 120-240V AC

Initial Contact Resistance: 5.5V/1A, 0.025 Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS Contact Material: Silver

Terminal Material: Brass – Silver plate
Temperature Rating: Not to exceed 85oC
Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)

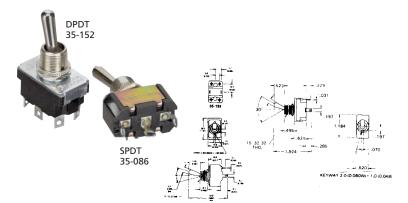
Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut, Face nut, Screws

TYPE	ACT	TION	ACTUATOR	CAT. NO.
SPST	OFF	(ON)	Metal	35-1076
SPDT	ON	(ON)	Metal	35-1116
SPDT	ON	ON	Metal	35-1114

SPECIAL NOTE: ( ) = Momentary Function





## Medium-Duty Bat Handle Toggle Switches



Specifications:

Current Rating: For 35-086, 6A, 125V AC, 3A 250V AC, 1/4 H.P. 120/240V AC, For 35-112/35-152, 15A-120V AC, 10A - 240V AC

Initial Contact Resistance: 5.5V/1A, .025 Ohms

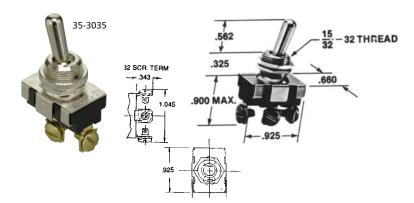
Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS Contact Material: Copper Alloy

Terminal Material: Copper Alloy - Tin plate Temperature Rating: -30oC to 60oC Electrical Life: 6000 cycles (min.) Terminal Type: Solder Mounting Hole: 0.500"

Hardware: Hex nut, Knurl or Face nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPDT	ON C	FF (ON)	Metal	35-086
DPST	ON	OFF	Metal	35-112
DPDT	ON	ON	Metal	35-152

SPECIAL NOTE: ( ) = Momentary Function



## **Utility Bat Handle Toggle Switch**



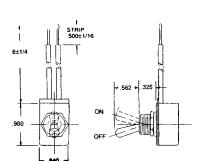
Specifications:

Current Rating: 6A-125V AC, 3A-250V AC Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.) **Contact Material:** Copper Alloy – Silver plate Terminal Material: Copper Alloy – Silver plate Temperature Rating: -30oC to +60oC Electrical Life: 6,000 cycles (min.)

Terminal Type: Screw Mounting Hole: 0.500" Hardware: 2 nuts

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Brass	35-3035





#### Utility Bat Handle AC/DC Toggle Switch



Specifications:

Current Rating: 10A-125V AC, 8A-125V DC, 4A 250V DC, 1/3 H.P.

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy - Silver plate Terminal Material: Copper Alloy – Silver plate

Temperature Rating: -30°C to 60°C Electrical Life: 6,000 cycles (min.) Terminal Type: 6" Wire Leads Mounting Hole: 0.500" Hardware: 2 nuts

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Brass	35-3050

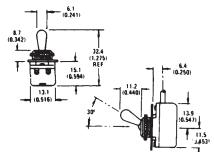




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## Bat Handle Appliance Type Toggle Switch

Specifications:

Current Rating: 6A-125V AC, 3A-250V AC

Initial Contact Resistance: 2.5V DC 1A 20m Ohms or Less Insulation Resistance: 500V DC 200 Megohms or More

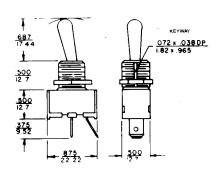
Dielectric Strength: 1250V AC Contact Material: Copper Alloy Terminal Material: Copper

Terminal Type: No. 18AWG 105°C Plastic 6" wire Leads,

Stripped 1/2" and Tinned Mounting Hole: 0.500" Hardware: ID plate, Knurl nut

TYPE AC		ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Plastic	35-854





#### **Toggle Switches**

Specifications:

Current Rating: 10A-125V AC, 5A-250V AC,1/2HP 125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Resistance: 1000V AC (min.)

Contact Material: Silver

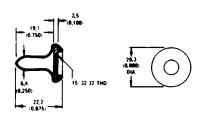
Terminal Material: Brass – Nickel plated Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles min Mechanical Life: 50,000 cycles (min.) Terminal Type: 0.250 Quick Connect

Mounting Hole: 0.500"

Hardware: Knurled nut, Hex nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-119
SPDT	ON	ON	Metal	35-120





#### **Bat Handle Toggle Switch Boot**

Flexible molded splashproof cover for standard bat handle toggle switches. Protects switching mechanism from dust and moisture. Accepts switch levers to 1/4" diameter and 3/4" length. Supplied with internal ring nut to fit 15/32" diameter bushing.

#### Material Cat. No. Fits switches listed below:

35-076	35-114	35-126	35-143	35-151	35-167
35-078	35-116	35-130	35-144	35-152	35-168
35-080	35-117	35-132	35-146	35-153	35-170
35-086	35-118	35-139	35-148	35-154	35-1076
35-110	35-119	35-140	35-149	35-155	35-1114
35-112	35-120	35-141	35-150	35-160	35-1116

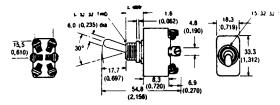
THREAD SIZE	MATERIAL	CAT. NO.	
15/32-32	Vinyl Elastomer	35-060	

# **SWITCHES**









ON/OFF Standard ID Plate for toggle switches: fits 15/32 bushings

10 pack Only

Cat. No. 35-061-BU

Switch ID Plate

#### Heavy Duty Bat Handle Toggle Switches



#### Specifications:

Current Rating: 20A-125V AC/10A-277V AC/3/4 HP 125-250V

AC for 35-80,35-110, 35-130, 35-153, 35-155

Current Rating: 20A-125V AC/10A-277V AC/1-1/2 HP 125-250V

AC for 35-146, 35-148, 35-150, 35-151, 35-3120 Initial Contact Resistance: 50m Ohms (max.) Insulation Resistance: 1000 Megohms (min,) Dielectric Strength: Exceeds 1000V RMS Contact Material: Brass – Nickel plate

Terminal Material: Brass

**Temperature Rating**: -30°C to 60°C **Electrical Life**: 6000 cycles (min.)

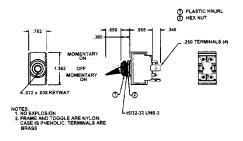
Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut, Screws - 35-80 inclds ID plate

TYPE	ACTION			ACTUATOR	CAT. NO.
SPST	ON		OFF	Metal	35-080
SPDT	ON	OFF	ON	Metal	35-110
SPDT	ON		ON	Metal	35-130
DPDT	ON		ON	Metal	35-146
DPDT	ON	OFF	ON	Metal	35-148
DPDT	(ON)	OFF	(ON)	Metal	35-150
DPDT	ON	OFF	(ON)	Metal	35-151
SPDT	ON	OFF	(ON)	Metal	35-153
SPDT	(ON)	OFF	(ON)	Metal	35-155
DPST	ON		OFF	Metal	35-3120

SPECIAL NOTE: ( ) = Momentary Function





#### **Reversing Toggle Switch**



Specifications:

Current Rating: 14V @ 21A DC

Insulation Resistance: 100 Megohms (min.)

Dielectric Strength: 1000V AC (min.)

Contact Material: Silver Terminal Material: Brass

Temperatue Rating: -30°C to 85°C Electrical Life: 6000 cycles min Terminal Type: .250 Quick Connect

Mounting Hole: 0.500"

Hardware: Black Face nut, Nickel Hex nut

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	(ON) OFF (ON)	Nylon	35-3125









### **Utility Bat Handle Toggle Switches**

Specifications:

Current Rating: 20A-125V AC, 10A-250V AC, 3/4 HP 125-250V AC

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy

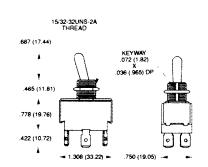
Terminal Material: Copper Alloy – Brass plated

Temperature Rating: -30°C to 60°C Electrical Life: 6000 cycles (min.) Terminal Type: 0.250 Quick Connect

Mounting Hole: 0.500" Hardware: Hex nut, Knurl nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Brass	35-3005
SPDT	ON	ON	Brass	35-3010
SPDT	ON O	FF ON	Brass	35-3015





#### **Utility Bat Handle Toggle Switches**



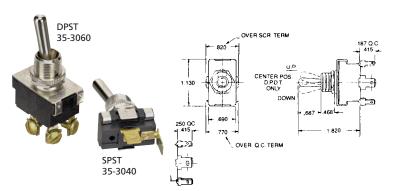
Specifications:

Current Rating: 20A-125V AC, 10A-277V AC 1-1/2HP 125-250VAC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.) Contact Material: Fine Silver or Brass Terminal Material: Brass - Nickel plate Temperature Rating: -30°C to 88°C Electrical Life: 6000 cycles (min.) Terminal Type: 0.250 Quick Connect

Mounting Hole: 0.500" Hardware: 2 nuts

TYPE	AC	TION	ACTUATOR	CAT. NO.
DPDT	ON	ON	Brass	35-3020
DPDT	ON (	OFF ON	Brass	35-3025



### **Utility Bat Handle Toggle Switches**



Specifications:

Current Rating: 20A-125V AC, 10A-250V AC, 3/4 HP 125-250V AC

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy - Silver plated Terminal Material: Copper Alloy - Silver plated

Temperature Rating: -30°C to 85°C

Terminal Type: 0.250 Quick Connect/Screw on 35-3060 Only

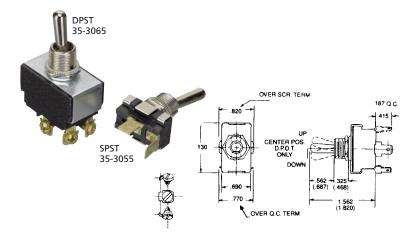
Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut (2 nuts/screws for 35-3060 only)

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Brass	35-3040
DPST	ON	OFF	Brass	35-3045
DPST	ON	OFF	Brass	35-3060

# **SWITCHES**





### **Utility Bat Handle Toggle Switches**



Specifications:

Current Rating 35-3055: 20A-125V AC, 10A-250V AC, 3/4 H.P.

125-250V AC

Current Rating 35-3065: 20A-125V AC, 10A-277V AC, 1-1/2 H.P.

125-250V AC

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.)

**Contact & Terminal Material:** Copper Alloy – Silver plate (35-3055) **Contact & Terminal Material:** Brass – Nickel plate (35-3065)

Temperature Rating: -30°C to 60°C Electrical Life: 6000 cycles in.

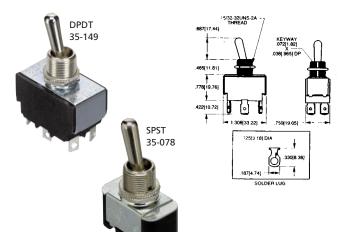
Terminal Type: Screw 35-3065, Quick Connect 35-3055

Mounting Hole: 0.500"

Hardware: Hex nut, Face nut + Screws for 35-3065 only

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	OFF	(ON)	Brass	35-3055
DPST	ON	(OFF)	Brass	35-3065

SPECIAL NOTE: () = Momentary Function



## **Heavy Duty Bat Handle Toggle Switches**



Specifications:

Current Rating: 15A-125V AC, 10A-250V AC 3/4 H.P. 125-250V AC(35-078)--20A-125V AC,10A-277V AC/1-1/2 HP 125-250VAC

(35-144/149)

Initial Contact Resistance: 5.5V/1A, 0.005 Ohms Insulation Resistance: 1000 Megohms

**Dielectric Strength:** 1000V RMS **Contact Material:** Silver or Brass

Terminal Material: Copper Alloy – Silver plate or Brass – Nickel plate

Temperature Rating: Not to exceed 85°C

Electrical Life: 10,000 cycles (min.)

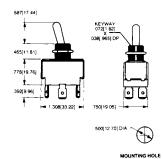
Mechanical Life: 50,000 cycles min (35-078)/others UL rated 6000 (min.)

Terminal Type: Solder Mounting Hole: 0.500"

Hardware: Hex nut, Face or Knurl nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-078
DPDT	ON	ON	Metal	35-144
DPDT	ON C	OFF ON	Metal	35-149





**Toggle Switch** 



Specifications:

Current Rating: 20A-125V AC, 10A-277V AC 1-1/2 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Silver – Brass
Terminal Material: Brass – Nickel plate
Temperature Rating: -30 to 85°C
Electrical Life: 6000 cycles (min.)
Terminal Type: 0.250" Quick Connect

Mounting Hole: 0.500"

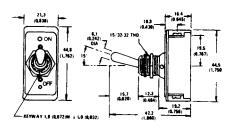
Hardware: hex nut with Knurl or Face nut

TYPE	E ACTION		ACTUATOR	CAT. NO.
DPST	ON	OFF	Metal	35-185









### Heavy-Duty Bat Handle Toggle Switch

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Specifications:

Current Rating: 16A-125V AC, 8A-250V AC, 1HP 125-250VAC

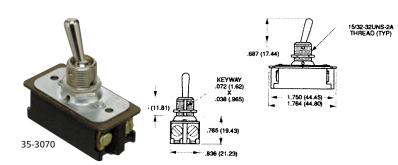
Initial Contact Resistance: 5.5V/1A, 0.005 Ohms

Insulation Resistance: 1000 MegW Dielectric Strength: 1000V RMS Contact Material: Silver Terminal Material: Brass - Silver plate

Temperature Rating: Not to Exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

Terminal Type: Screw Mounting Hole: 0.500" Hardware: Face nut, Hex nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
DPST	ON	OFF	Metal	35-126



#### Heavy Duty AC Bat Handle Toggle Switch

Specifications:

Current Rating: 16A-125V AC,8A-250V AC, 1-1/2 H.P.

125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

Contact Material: Copper Terminal Material: Copper

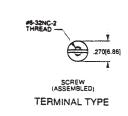
Temperature Rating: Not to Exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

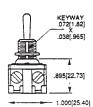
Terminal Type: Screw Mounting Hole: 0.500" Hardware: Screws, Hex nuts

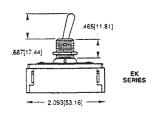
TYPE		ACT	ION	ACTUATOR	CAT. NO.
	SPST	ON	OFF	Brass	35-3070

Heavy Duty AC/DC Bat Handle Toggle Switch











MOUNTING HOLE

Current Rating: 20A-125V ACIDC, 10A-250V ACIDC, 1-1/2 H.P.

125-250V AC/DC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy - Brass plated Terminal Material: Copper Alloy - Brass plated Temperature Rating: Not to Exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

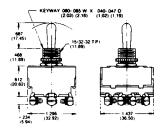
Terminal Type: Screw Mounting Hole: 0.500" Hardware: Screws, Hex nuts

TYPE	TYPE ACTION		ACTUATOR	CAT. NO.
DPST	ON	OFF	Brass	35-3075

# **SWITCHES**







#### Heavy Duty AC Bat Handle Toggle Switch

Specifications:

Current Rating: 35-139, 35-140 1-1/2 H.P. 250V AC, 35-141/1-1/2 H.P. 250V AC: 17A-125V AC/12A-250V AC 35-143 3/4 H.P. 125/250V AC: 15A-125V AC. 10A-250V AC

125/250V AC: 15A-125V AC, 10A-250V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

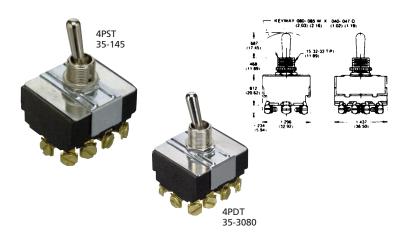
Contact Material: Silver

Terminal Material: Brass – Nickel plate Temperature: Rating: Not to Exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Screws, Face nut, Hex nut

3PST         ON         OFF         Metal         35-1           3PDT         ON         OFF         ON         Metal         35-1           3PDT         ON         ON         Metal         35-1	TYPE
51 51 611 611 611 111 111 111 111 111 11	3PST
3PDT ON ON Metal 35-1	3PDT
	3PDT
4PDT ON OFF ON Metal <b>35-1</b>	4PDT



#### **Heavy Duty AC Toggle Switch**



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Specifications

Current Rating: 15A-125V AC, 10A-250V AC,3/4 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

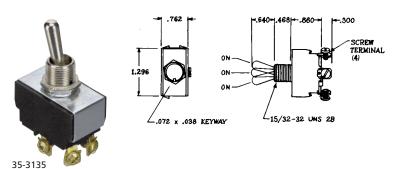
Contact Material: Silver

Terminal Material: Brass – Nickel plate
Temperature Rating: Not to exceed 85°C
Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)

Terminal Type: Screw Mounting Hole: 0.50"

Hardware: Screws, Face nut, Hex nut

TYPE	ACTION		ACTUATOR	CAT. NO.
4PST	ON	OFF	Metal	35-145
4PDT	ON	ON	Metal	35-3080



#### **Utility Bat Handle Toggle Switch (Two Circuit)**

Specifications:

Current Rating: 20A-125V AC, 10A-277V AC, 1-1/2 H.P. 125/250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.) Contact Material: Brass – Nickel plate

Terminal Material: Brass

**Temperature Rating:** -30°C to 85°C **Electrical Life:** 6000 cycles (min.)

**Terminal Type:** Screw **Mounting Hole:** 0.500"

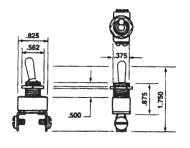
Hardware: Hex nut, Face nut, Screws

TYPE	ACTION	ACTUATOR	CAT. NO.
Progressive	1 & 2 1ON OFF	Brass	35-3135
Two Circuit	ON		









#### Automotive/Marine Bat Handle Toggle Switch

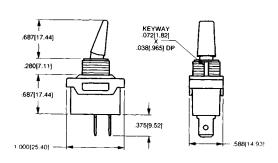
Specifications:

Current Rating: 35A-6V DC, 20A-12V DC

Terminal Material: Brass Terminal Type: Screw Mounting Hole: 0.438" Hardware: Screws, Knurled nut

TYPE		ACT	ION	ACTUATOR	CAT. NO.
	SPST	ON	OFF	Brass	35-3170





### Flat Lever Toggle Switch (Insulated)



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Specifications:

Current Rating: 20A-125V AC, 10A-250V AC,1-1/2 HP 125-250V AC

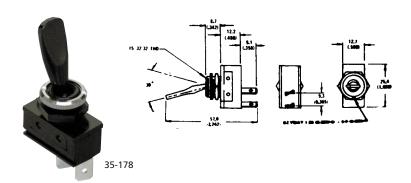
Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

Contact Material: Copper Terminal Material: Copper

Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.) Terminal Type: 0.250 Quick Connect

Mounting Hole: 0.500" Hardware: Black Knurl nut

TYPE		AC	TION	ACTUATOR	CAT. NO.
ĺ	SPST	ON	OFF	Nylon	35-3009



#### Standard Size Paddle Handle Toggle Switch

Specifications:

Current Rating: 20A-125/250V AC, 1/2 H.P. 125V AC,1 H.P. 250V AC

Initial Contact Resistance: 5.5V/1A, 0.010 Ohms Insulation Resistance: 2000 Megohms

Dielectric Strength: 1500V AC RMS Contact Material: Silver

Terminal Material: Silver Plated Copper Alloy

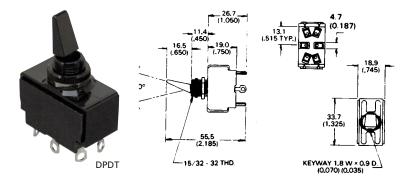
Terminal Type Combination: 1/4" Quick Connect and Solder

Mounting Hole: 0.500"

Hardware: Black Hex nut, Brass Face nut

TYPE		ACT	ION	ACTUATOR	CAT. NO.
	SPST	ON	OFF	Black Plastic	35-178





#### Standard Size Paddle Handle Toggle Switch

Specifications:

. Current Rating: 6A-125V AC, 3A-250V AC,1/4HP 125-250V AC

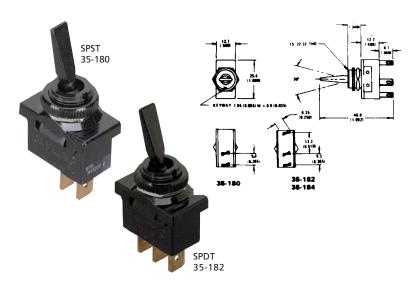
Initial Contact Resistance: 5.5V/1A, 0.010 Ohms Insulation Resistance: 100 Megohms Dielectric Strength: 1000V AC RMS

Contact Material: Silver

Terminal Material: Copper Alloy – Tin plated Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

Terminal Type: Solder Mounting Hole: 0.500" Hardware: Face nut, Hex nut

TYPE	AC	TION	ACTUATOR	CAT. NO.
DPDT	ON	ON	Black Plastic	35-186
DPDT	ON C	OFF ON	Black Plastic	35-188



## Standard Size Paddle Handle Toggle Switch

Specifications:

Current Rating: 10A-125V AC, 5A-250V AC, 1/2HP 125-250V A

Initial Contact Resistance: 5m Ohms (max.) Insulation Resistance: 100 Megohms Dielectric Strength: 1000V AC (min.) Contact Material: Silver Terminal Material: Copper Alloy Temperature Rating: Not to exceed 85°C

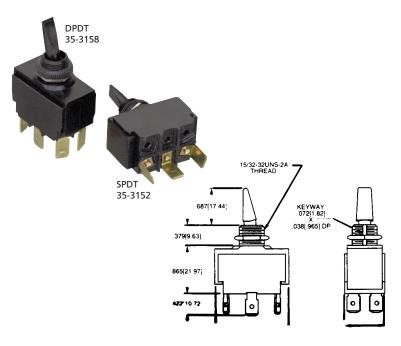
Electrical Life: 10,000 cycles (min.) Mechanical Life: 50,000 cycles (min.)

Terminal Type: Combination 1/4" Quick Connect and Solder

Mounting Hole: 0.500"

Hardware: Nylon Face nut, Nickel Hex nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Black Plastic	35-180
SPDT	ON	ON	Black Plastic	35-182
SPDT	ON (	OFF ON	Black Plastic	35-184



#### Automotive/Marine Toggle Switches

Specifications:

Current Rating: 20A-125V AC, 10A-277V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Fine Silver Terminal Material: Brass Temperature Rating: -30°C to 60°C Electrical Life: 6000 cycles (min.) Terminal Type: 0.250 Quick Connect

Mounting Hole: 0.500

Hardware: Black Face nut, Nickel Hex nut

TYPE	AC	TION	ACTUATOR	CAT. NO.
SPDT	ON C	OFF ON	Nylon	35-3150
SPDT	(ON) C	OFF (ON)	Nylon	35-3152
DPST	ON	OFF	Nylon	35-3154
DPDT	ON	ON	Nylon	35-3156
DPDT	ON C	OFF ON	Nylon	35-3158

SPECIAL NOTE: ( ) = Momentary Function

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### **Automotive/Marine Toggle Switches**

Specifications:

Current Rating: 20A-125V AC, 10A-250V AC\* Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

Contact Material: Fine Silver Terminal Material: Brass

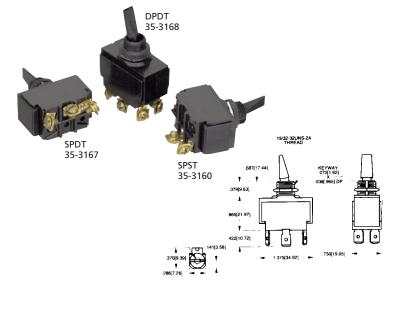
**Temperature Rating:** -30°C to 60°-85°C **Electrical Life:** 6000 cycles (min.)

Terminal Type: Screw Mounting Hole: 0.500"

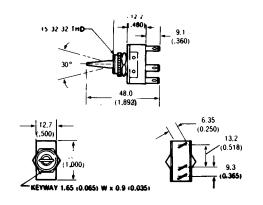
Hardware: Black Face nut, Screws, Nickel Hex nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Nylon	35-3160
SPDT	ON	ON	Nylon	35-3162
DPST	ON	OFF	Nylon	35-3164
DPDT	ON	ON	Nylon	35-3166
DPDT	ON O	FF ON	Nylon	35-3168
SPDT	(ON) O	FF (ON)	Nylon	35-3167

No. SPECIAL NOTE: () = Momentary Function
\*Some switches now rated at 10A-277V AC



35-092



#### **Lighted Paddle Handle Toggle Switches**

Specifications:

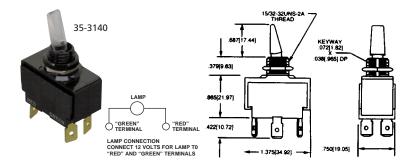
Current Rating: 16A-12V DC

Initial Contact Resistance: 5 Milliohms (max.)
Insulation Resistance: 100 Megohms
Dielectric Strength: 1500V AC (min.)
Contact Material: Silver – Silver plated
Terminal Material: Silver – Silver plated
Terminal Type: 1/4" Quick Connect & Solder

Mounting Hole: 0.500"

**Lamp:** 12V, 55MA, 10,000 Hour Average Life **Hardware:** Black Hex nut, Nickel Lock nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Red	35-090
SPST	ON	OFF	Green	35-092
SPST	ON	OFF	Amber	35-094



#### **Lighted Toggle Switch**

Specifications:

Current Rating: 15A-125V AC, 10A-250V AC,3/4HP 125-250V AC

Red-Green positions/12V lamp Insulation Resistance: 100 Megohms (min.)

Dielectric Strength: 1000V AC (min.)

Contact Material: Copper Terminal Material: Copper

Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)
Terminal Type: 0.250 Quick Connect

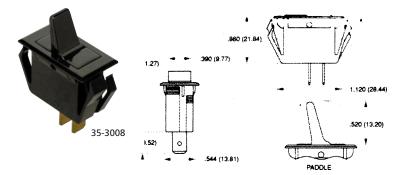
Mounting Hole: 0.500"

Hardware: Black Face nut, Brass Hex nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Polycarbonate	35-3140

# **SWITCHES**





#### Paddle Switch (Black)



Specifications:

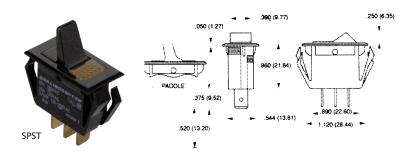
Current Rating: 15A-125V AC, 10A-250V AC, 3/4 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.)
Dielectric Strength: 1000V RMS (min.)

Contact Material: Copper Terminal Material: Copper

Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)
Terminal Type: 0.250 Quick Connect
Mounting Hole: 0.55" x 1.125"

TYPE ACTION		ION	ACTUATOR	CAT. NO.	
SPST	ON	OFF	Nylon	35-3008	



### **Lighted Paddle Switches**



Specifications:

Current Rating: 15A-125V AC, 10A-250V AC, 3/4 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

Contact Material: Copper Terminal Material: Copper

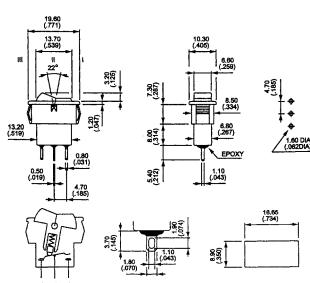
Temperature Rating: Not to exceed 85°C Electrical Life: 10,000 cycles (min.)
Mechanical Life: 50,000 cycles (min.)
Terminal Type: 0.250 Quick Connect
Mounting Hole: 0.55" x 1.125"

Lamp: 125 V Neon

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST (Amber)	ON OFF	Nylon	35-3091
SPST (Red)	ON OFF	Nylon	35-3092

## **ROCKER SWITCHES**





#### Miniature Snap-In Rocker Switches



Specifications:

Current Rating: 4A-125V AC, 2A-250V AC Initial Contact Resistance: 10m Ohms (max.) Insulation Resistance: 10,000 Megohms (min.)

**Dielectric Strength:** 1,000V RMS at 50Hz between contacts. 4,000V RMS at 50Hz between terminals and panel (metal)

Contact Material: Silver

Terminal Material: Gold Plated Silver Temperature Rating: -40°C to +85°C Electrical Life: 50,000 cycles

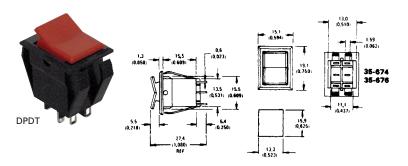
**Terminal Type:** Solder **Mounting Hole:** 0.35" x 0.734"

	TYPE	AC	TION	ACTUATOR	CAT. NO.
Ī	SPDT	ON	ON	Black PLastic	35-602
	SPDT	ON	(ON)	Black PLastic	35-603
ĺ	SPDT	ON (	OFF ON	Black PLastic	35-604

No. SPECIAL NOTE: ( ) = Momentary Function







### Miniature Snap-In Rocker Switches

(JL)

Specifications:

Current Rating: 8A-125V AC, 4A-250V AC

Initial Contact Resistance: 10 Milliohms (max.) @ 2-4V DC

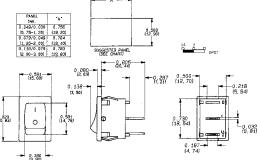
Insulation Resistance: 1000 MegW (min.) Dielectric Strength: 2500V AC RMS Contact Material: Silver Plated Copper Alloy Terminal Material: Silver Plated Copper Alloy

Terminal Type: Solder

Mounting Hole: 0.625" x 0.523"

TYPE	ACTION			ACTUATOR	CAT. NO.
DPDT	ON		ON	Red PLastic	35-674
DPDT	ON	OFF	ON	Red PLastic	35-676





#### Miniature Power Rocker Switch



Specifications:

Current Rating: 10A-125V AC, 5A-250V AC Insulation Resistance: 10(9) Ohms (min.) Dielectric Strength: 1000V AC (min.) Contact Material: Copper or Brass – Silver plated Terminal Material: Copper or Brass - Silver plated

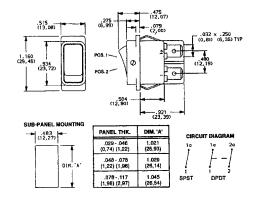
Electrical Life: 10,000 Mechanical Life: 100,000

Terminal Type: Quick Connect/socket Mounting Hole: 0.508"x0.755"

Legend: O/I

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Black PLastic	35-642





#### **Miniature Power Rocker Switch**



Specifications:

Current Rating: 16A-125/250V AC;1/4HP@125V AC;1/2HP@250V AC

Insulation Resistance: 10(9) Ohms (min.) Dielectric Strength: 1000V RMS (min.) Contact Material: Coin Silver - Siver plated Terminal Material: Copper – Silver plate

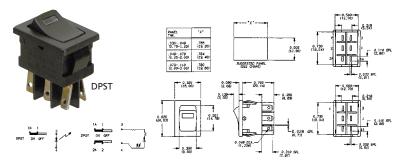
Electrical Life: 10,000 cycles Mechanical Life: 100,000 cycles Terminal Type: Quick Connect Mounting Hole: 0.488"x1.031

Legend: 0//

TYPE	ACTION		ACTUATOR	CAT. NO.
DPST	ON	OFF	Black PLastic	35-643
DPST	ON	OFF	White PLastic	35-3705

# **SWITCHES**





#### **Lighted Miniature Power Rocker Switch**

Specifications:

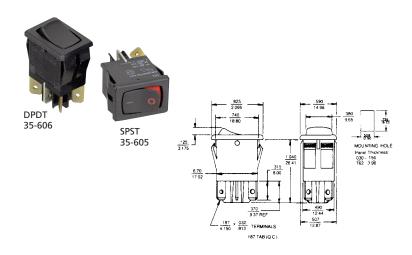
Current Rating: 10A-125V AC, 5A-250V AC Insulation Resistance: 10(9) Ohms (min.) Dielectric Strength: 1000V AC (min.) Contact Material: Coin Silver – Silver plate Terminal Material: Copper or Brass – Silver plated

Electrical Life: 10,000 cycles Mechanical Life: 100,000 cycles Terminal Type: Solder

Lamp: L.E.D.

Mounting Hole: 0.755" x 0.508"

TYPE	ACTION		PE ACTION ACTUATOR		CAT. NO.
SPST	ON	OFF	Red L.E.D. in Black Plastic	35-645	
DPST	ON	OFF	Red L.E.D. in Black Plastic	35-646	



#### Miniature Rocker Switches

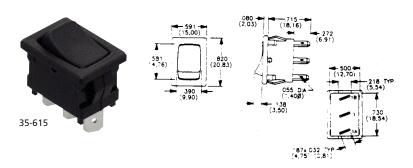
Specifications:

Current Rating: 8A-125V AC, 4A-250V AC Initial Contact Resistance: 5 Megohms Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.) Contact Materia: Gold Plate over Nickel plate Terminal Materia: Brass – Silver plate

Terminal Typ: 0.187 Quick Connect Mounting Hole: .508 x .756 Legend: O/I (Red) 35-605

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Black PLastic	35-605
DPDT	ON	ON	Black PLastic	35-606
SPST	ON	OFF	Black PLastic	35-607†
DPST	ON	OFF	Black PLastic	35-608
SPDT	ON	ON	Black PLastic	35-609

†35-607 11A 125VAC



#### Miniature Rocker Switch

Specifications:

Current Rating: 4A-125V AC, 2A-250V AC Insulation Resistance: 10(9) Ohms Dielectric Strength: 1,000 V RMS (min.) Electrical Life: 10,000 cycles (min.) Mechanical Life: 100,000 Cycles (min.) Contact Material: Copper – Silver plated

Terminal Material: Copper Terminal Type: Quick Connect

TYPE		ACTION	ACTUATOR	CAT. NO.
SPDT	ON	ON	Black PLastic	35-615



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# SPDT 35-644 35-648

#### **Miniature Rocker Switches**

Specifications:

Contact Rating: 10A-125V AC: 5A-250V AC

Electrical Life: 10,000 Cycles

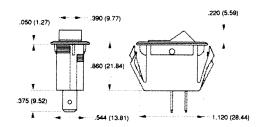
Mechanical Life: 100,000 Cycles (min.) Insulation Resistance: 10(9) Ohm (min.) Dialectric Strength: 1000V RMS (min.) Contact Material: Silver - Silver plated

Terminal Material: Copper or Brass - Silver plated

Actuator Housing: 6/6 Nylon (UL 94V-2) Terminal Type: 0.187" Quick Connect

TYPE	ACTION		ACTION ACTUATOR	
SPDT	ON	ON	Black	35-644
DPDT	ON	ON	Black	35-648





#### V Style Rocker Switch

(UL)

Specifications:

Current Rating: 15A-125V AC, 10A-250V AC, 3/4 H.P. 125-250V AC

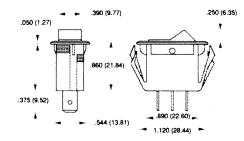
Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.) Contact Material: Copper Terminal Material: Copper

Terminal Type: 0.250 Quick Connect Mounting Hole: 0.55" x 1.125"

TYPE	ACTION		ACTUATOR	CAT. NO.	
SPST	(ON)	OFF	White Nylon	35-3760	

SPECIAL NOTE: ( ) = Momentary Function





## **Lighted V Style Rocker Switches**



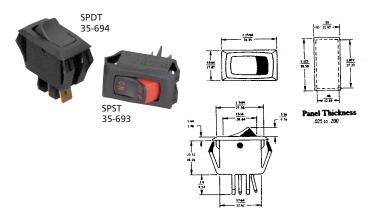
Specifications:

Current Rating: 15A-125V AC, 10A-250V AC, 3/4 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Copper Terminal Material: Copper Terminal Type: 0.250 Quick Connect Mounting Hole: 0.55" x 1.125" Lamp Rating: 125V Neon Lamp

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST (Amber)	ON	OFF	Amber Nylon	35-3790
SPST (Red)	ON	OFF	Red Nylon	35-3795



#### **Rocker Switches**



Specifications:

Current Rating: 16A-125V AC, 10A-250V AC Initial Contact Resistance: 5 Milliohms (max.) Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Silver Terminal Material: Brass

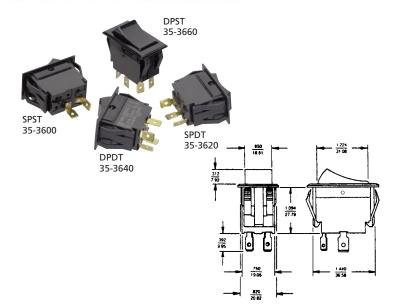
Terminal Type: Combination 1/4" Quick Connect and Solder Mounting Hole: 0.48" x 1.072" w/0.025-0.200 Panel Thickness

0.55" x 1.125" w/0.050-0.200 Panel Thickness

TYPE	Α	CTION	ı.	ACTUATOR	CAT. NO.
SPST	ON		OFF	Black Plastic	35-691
SPST	ON		OFF	Black Plastic	35-693
SPDT	ON	OFF	ON	Black Plastic	35-694

Note: 35-693 has a molded in on-off red Visi-Rocker.





#### **Rocker Switches**

Specifications:



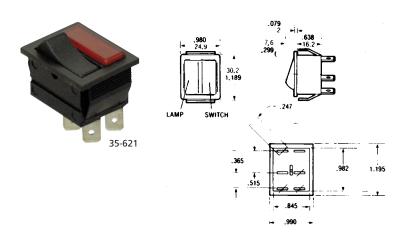
Current Rating: 15A-125V AC, 10A-250V AC, 3/4 H.P. 125-250V AC

Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.) Contact Material: Fine Silver

Terminal Material: Brass Terminal Type: 0.250" Quick Connect Mounting Hole: 0.830" x 1.450"

TYPE	A	CTIO	N	ACTUATOR	CAT. NO.
SPST	ON		OFF	Nylon	35-3600
SPDT	ON		ON	Nylon	35-3610
SPDT	ON	OFF	ON	Nylon	35-3620
DPST	ON		OFF	Nylon	35-3630
DPDT	ON		ON	Nylon	35-3640
DPDT	ON	OFF	ON	Nylon	35-3650
DPST	(ON)		OFF	Nylon	35-3660
DPDT	(ON)		ON	Nylon	35-3680
DPDT	(ON)	OFF	ON	Nylon	35-3690
DPDT	(ON)	OFF	(ON)	Nylon	35-3695
DPST	(OFF)		ON	Nylon	35-3670

SPECIAL NOTE: ( ) = Momentary Function



#### Lighted Snap-In Rocker Switch



Specifications:

Current Rating: 16A-125/250V AC Initial Contact Resistance: 10 Milliohms Insulation Resistance: 20 Megohms (min.)

Dielectric Strength: 1000V RMS Contact Material: Fine Silver Terminal Material: Brass – Silver plated

Terminal Type: Combination 1/4" Quick Connect & Solder

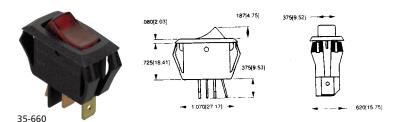
Mounting Hole: 0.875" x 1.150"

Lamp Color: Red

Lamp Neon Voltage: 2A-105V-130V AC

TYPE	ACT	TION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Black Plastic	35-621
			w/Red Lens	







#### DC Lighted Std. Size Snap-In Rocker Switch

Specifications:

Current Rating: 10A @ 30V DC

Initial Contact Resistance: 5 Milliohms (max.)
Insulation Resistance: 100 Megohms (min.)
Dielectric Strength: 1500V AC (min.)

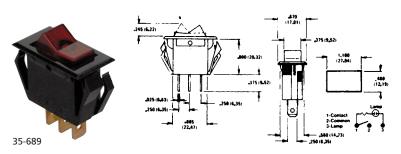
Contact Material: Silver

Terminal Material: Brass - Silver plate

Terminal Type: Combination 1/4" Quick Connect and Solder

**Lamp:** 12V Incandescent Lamp **Mounting Hole:** 0.550" x 1.125"

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Lighted Red Lens	35-660



#### Lighted Snap-In Rocker Switch

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Specifications:

Current Rating: 15A-125V AC,10A-250V AC Initial Contact Resistance: 50 Milliohms (max.) Insulation Resistance: 100 Milliohms (min.)

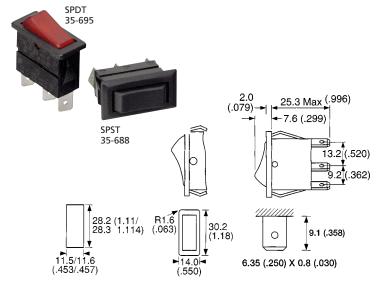
Dielectric Strength: 1000V AC Contact Material: Copper Alloy Terminal Material: Copper

Terminal Type: Combination 1/4" Quick Connect/Solder Lug Mounting Hole: 1.100" x 0.480"

Lamp: 125V AC Neon Lamp

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Red Translucent Rocker	35-689

NOTE: Built in resistor



Panel Thickness .75-2.5 (.029-.098)

#### Standard Size Snap-In Rockers/Lighted/Unlighted



Specifications:

Current Rating: 16A-125/250V AC, 1 H.P. 250V AC (35-640/35-695): others 15A-125 250V AC, 1/2 H.P. 125V AC, 1 H.P. 250V AC

Initial Contact Resistance: 5 Milliohms (max.) Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1500V AC (min.) Contact Material: Silver

Terminal Material: Brass – Silver plated

Terminal Type: Combination 1/4" Quick Connect/Solder

Lamp: 35-688: 105-130V AC Neon; 35-662, 35-664, 12V Incandescent Mounting Hole: 0.453" x 1.110" 35-695: 0.55" x 1.12"; 35-640:

1.11 x .453

TYPE	ACTION		ACTUATOR	CAT. NO.
SPDT	ON	ON	Black Plastic	35-640
SPST	ON	OFF	Lighted Red Lens	35-688
SPST	ON	OFF	Lighted Amber Lens	35-662
SPST	ON	OFF	Lighted Green Lens	35-664
SPDT	(ON)	OFF (ON)	Black Plastic	35-695

SPECIAL NOTE: () = Momentary Function







A cool on	RECOMMENDED PANEL OPENING
	- B

PANEL THICKNESS	^	В
030[.76]050[1.27]	.508(12.90)	.756[19.20]
050(1.27)078(1.98)	508(12.90)	.764[19.40]
078[1.98]125[3.17]	.508[12.90]	780[19.81]

#### **Lighted Rocker Switch**



Specifications:

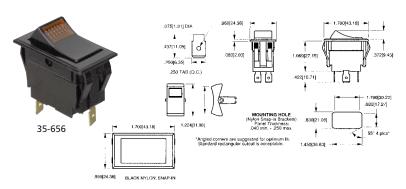
Current Rating: 12A-125V AC 1/2 H.P. 125V AC Insulation Resistance: 50 Megohms (min.)
Dielectric Strength: 1500V AC (min.)

Contact Material: Silver Terminal Material: Brass

Terminal Type: 0.187" Quick Connect

Mounting Hole: 0.50" Lamp Rating: 125V Neon

TYPE	PE ACTION		ACTUATOR	CAT. NO.	
SPST	ON	OFF	Red Translucent Rocker	35-696	
			Rockei		



#### **Lighted Rocker Switch**



Specifications:

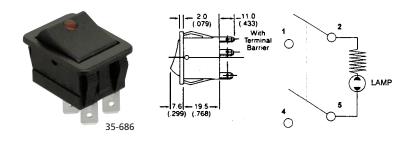
Current Rating: 15A-125V AC, 10A-250V AC, 1/2 H.P. 125/250V AC

Initial Contact Resistance: 5 Megohms Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Silver

Terminal Material: Brass – Silver plated Terminal Type: 0.250 Quick Connect Mounting Hole: 1.45" x 0.830" Light Rating: 0.002A 125V AC

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Black Plastic	35-656



#### **Lighted Rocker Switch**



Specifications:

Current Rating: 20A-125/250V AC, 1/2 H.P. 125V AC, 1 H.P. 250V AC

Initial Contact Resistance: 5 Megohms Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Silver

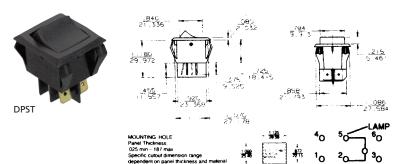
Terminal Material: Brass – Silver plated Terminal Type: 0.250 Quick Connect Mounting Hole: 1.18" x 0.870"

Light Rating: 0.002A 105-125V AC Red Neon

TYPE		ACTION		ACTUATOR	CAT. NO.
	DPST	ON	OFF	Black Plastic	35-686







#### **Lighted/Non-Lighted Rocker Switches**

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Specifications:

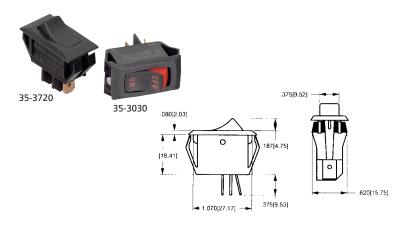
Current Rating: 20A-125V AC, 15A-250V AC Initial Contact Resistance: 5 Megohms Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Silver

Terminal Material: Brass – Silver plate Mountiing Hole: 1" x 1.250" Terminal Type: 0.250 Quick Connect

TYPE	ACTION		ACTUATOR	CAT. NO.
DPST	ON	OFF	Black Plastic	35-654
DPST	ON	OFF	Red Plastic	35-655

No.35-655 - Lighted 125V Neon



#### **Curved Rocker Switches**



Specifications:

Current Rating 35-3030, 35-3710: 16A-125V AC, 10A-250V AC,

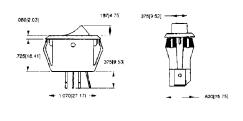
Current Rating 35-3720: 16A-125V AC, 12A-250V AC

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V AC (min.)

Contact Material: Copper Terminal Material: Copper Terminal Type: 0.250 Quick Connect Mounting Hole: 0.555" x 1.125"

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Nylon	35-3030
(Imprinted)				
SPST	ON	OFF	Nylon	35-3710
SPDT	ON	ON	Nylon	35-3720





#### **Lighted Curved Rocker Switches**



Specifications:

Current Rating: 16A-125V AC, 8A-250V AC (35-3740); 15A-125VAC, 7.5A-250VAC (35-3730/35-3750)

Insulation Resistance: 100 Megohms Lamp Voltage: 125V Neon Dielectric Strength: 1000V AC (min.)

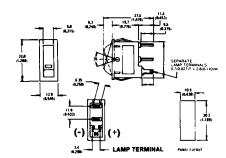
Contact Material: Copper Terminal Material: Copper

**Terminal Type:** 0.250 Quick Connect **Mounting Hole:** 0.55" x 1.125"

TYPE	AC	ΓΙΟΝ	ACTUATOR	CAT. NO.
SPST	ON	OFF	Nylon	35-3730
(Transparent Amber)				
SPST	ON	OFF	Nylon	35-3740
(Transparent Red)				
SPST	ON	OFF	Nylon	35-3750
(Translucent Green)			•	







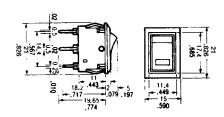


35-3700

.343 DIA. (8,71g0)

1.100

(15,62)



#### Rocker Switch with LED

Specifications:

Current Rating: 10A-125V AC

Initial Contact Resistance: 5 Milliohms (max.) Insulation Resistance: 2.5V DC @ 20 Megohms Dielectric Strength: 500V DC, 100 Millohms

Contact Material: Silver Terminal Material: Silver plate Terminal Type: Solder

Lamp: L.E.D. (requires external resistor & diode if operated on A/C)

Mounting Hole: 0.430" x 1.189"

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Red L.E.D. In White Plastic	35-684

#### **Rocker Switches with LED**

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Specifications:

Current Rating: 5A-125V AC, 3A-250V AC

Initial Contact Resistance: 100 Millohms @ 2.5V DC 1A Insulation Resistance: 500 Megohms @ 500V DC 1 Minute

Dielectric Strength: 2000V AC 1 Minute

Contact Material: Copper with Rivet-Type Silver Contact

Terminal Material: Outer: Copper Silver Plated Center: Brass Silver

Plated

Terminal Type: Combination 3/16 Quick Connect and Solder

Mounting Hole: 0.512" x 0.750"

L.E.D. Color: 35-680 – Orange; 35-681 – Green; 35-682 – Red

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	Orange L.E.D. In Black Plastic	35-680
SPST	ON	OFF	Green L.E.D. In Black Plastic	35-681
SPST	ON	OFF	Red L.E.D. In Black Plastic	35-682

NOTE: A resistor is required in series with pilot lamp for use on DC. Diode is also required for AC use. For resistor and diode ratings see chart inserted in package.

#### Rocker Switch for use w/LED



Specifications:

Current Rating: 5A-120V AC, 2A-250V AC, 5A-28VDC Initial Contact Resistance: 10 Millohms or less @ 2-4V DC

Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Copper Alloy – Silver plated
Terminal Material: Copper Alloy – Silver plated

Temperature Rating: -30°C to 85°C Electrical Life: 100,000 cycles

Connected Terminals: Position 1: 2-3 Position 2: 2-1 Snap-in Front

Panel Mount

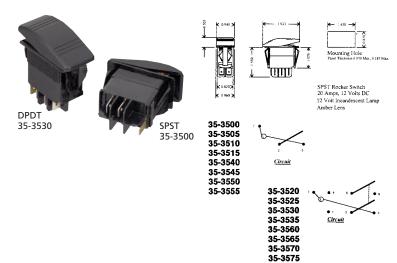
CRK MARKING THIS SIDE Mounting Hole: 0.620/0.625

TYPE	ACTION		ACTUATOR	CAT. NO.
SPDT	ON	ON	Black Plastic.	35-3700

SPECIAL NOTE: LED Not Included







#### Sealed Automotive/Marine Rocker Switches

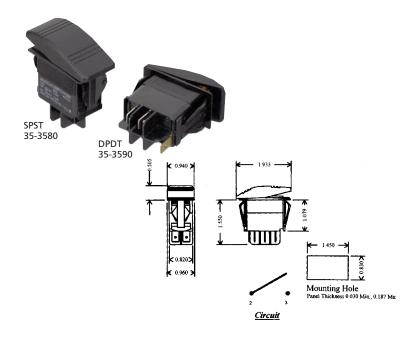
Specifications:

Current Rating: 20A-12V DC Insulation Resistance: 50 Megohms Dielectric Strength: 2000V RMS Contact Material: Silver Terminal Material: Brass

Terminal Type: 1/4" Quick Connect Mounting Hole: 0.830" x 1.450" Lamps: Incandescent Light 12V

TYPE	A	CTIO	N	ACTUATOR	CAT. NO.
SPST	ON		OFF	Amber Nylon	35-3500
SPST	ON		OFF	Green Nylon	35-3505
SPST	ON		OFF	Red Nylon	35-3510
SPST	ON		OFF	Blue Nylon	35-3515
DPDT	ON	OFF	ON	Amber Nylon	35-3520
DPDT	ON	OFF	ON	Green Nylon	35-3525
DPDT	ON	OFF	ON	Red Nylon	35-3530
DPDT	ON	OFF	ON	Blue Nylon	35-3535
SPST	(ON)		OFF	Amber Nylon	35-3540
SPST	(ON)		OFF	Green Nylon	35-3545
SPST	(ON)		OFF	Red Nylon	35-3550
SPST	(ON)		OFF	Blue Nylon	35-3555
DPDT	(ON)	OFF	(ON)	Amber Nylon	35-3560
DPDT	(ON)	OFF	(ON)	Green Nylon	35-3565
DPDT	(ON)	OFF	(ON)	Red Nylon	35-3570
DPDT	(ON)	OFF	(ON)	Blue Nylon	35-3575

SPECIAL NOTE: () = Momentary Function Sealed against spray and submersion Replacement Gasket # 999-16543-001



#### Sealed Rocker Switches

Specifications:

Current Rating: 15A-125V AC,10A-250V AC 1/2 H.P. 125-250V AC

20A-12V DC on 35-3585, 35-3590 Insulation Resistance: 50 Megohms Dielectric Strength: 2000V RMS Contact Material: Silver Terminal Material: Brass

Terminal Type: 1/4" Quick Connect Mounting Hole: 0.830" x 1.450"

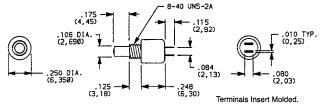
TYPE	ACT	TION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Nylon 🔑	35-3580
DPDT	ON	ON	Nylon	35-3585
DPDT	ON O	FF ON	Nylon	35-3590

Replacement Gasket # 999-16543-001



#### **PUSHBUTTON SWITCHES**





#### Sub-Miniature Pushbutton Switch



Specifications:

Current Rating: 1/2A-120V AC, 1/4A-250V AC

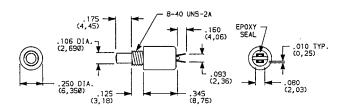
Initial Contact Resistance: 30 Millohms (max.) @ 2-4V DC

Insulation Resistance: 10(9) Ohms Dielectric Strength: 500V AC RMS Contact Material: Coin Silver – Silver plate Terminal Material: Copper Alloy – Silver plate

Temperature Rating: -30°C to +65°C Electrical Life: 250,000 cycles Terminal Type: Solder Mounting Hole: 0.172" Hardware: Mounting Nut

TYPE ACTION		ACTUATOR	CAT. NO.	
SPST	N.O. = Off – On	Black Plastic	35-400	





#### Sub-Miniature Pushbutton Switch



Specifications:

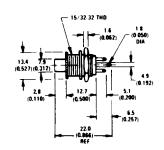
Current Rating: 1/4A-120V AC or 28V DC

Initial Contact Resistance: 30 Milliohms (max) @ 2-4V DC

Insulation Resistance: 10(9) Ohms Dielectric Strength: 500V AC RMS Contact Material: Coin Silver Terminal Material: Coin Silver Temperature Rating: -30°C to +65°C Electrical Life: 250,000 cycles Terminal Type: Solder Mounting Hole: 0.172" Hardware: Mounting Nut

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	N.C. = On – Off	Black Plastic	35-402





#### Miniature Pushbutton Switch



Specifications:

Current Rating: 250mA, 30W (max.) AC Initial Contact Resistance: 50 Millohms (max.) Insulation Resistance: 1000 Megohms (min.) Dielectric Strength: 500V AC

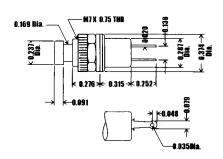
Contact Material: Nickel - Silver plated Terminal Material: Brass – Silver plate

Terminal Type: Solder Mounting Hole: 0.469"

Hardware: Locknut, Lockwasher, Hex nut

TYPE ACTION		ACTUATOR	CAT. NO.
SPDT	N.C. Momentary = On – (Off)	Red Button	35-416





#### Miniature Pushbutton Switch

Specifications:

Current Rating: 1A-125V AC

Initial Contact Resistance: 10 Milliohms (max.) @ 2.5V DC 1A

Insulation Resistance: 100 Megohms (min.) 500V DC

Dielectric Strength: 1000V AC 1 Minute Contact Material: Brass - Silver plated Terminal Material: Brass - Silver plated

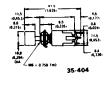
Electrical Life: 20,000 cycles Terminal Type: Solder Mounting Hole: 0.281 Hardware: Hex nut, Knurl nut

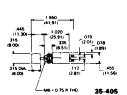
TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	N.O. Momentary = Off – (On)	Red Button	35-410
SPST	N.O. Momentary = Off – (On)	Black Button	35-401
SPST	N.O. Momentary = $Off - (On)$	Green Button	35-403











#### **Miniature Pushbutton Switches**

Specifications:

Current Rating: 3A-125V AC

Initial Contact Resistance: 2.5V DC, 1A, 20 Milliohms or Less Insulation Resistance: 500V DC,100 Megohms or More

Dielectric Strength: 1000V AC, 1 Minute

Contact Materia: Silver

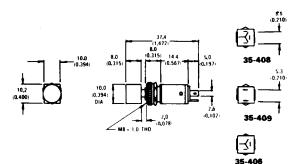
Terminal Materia: Copper Alloy – Silver plated

Terminal Type: Solder Mounting Hole: 0.250"

Hardware: Hex nut, Washer, Knurl nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPDT	Push-On	Push-On	Black Button	35-404
DPDT	Push-On	Push-On	Black Button	35-405





#### **Miniature Pushbutton Switches**

Specifications:

Current Rating: 3A-125V AC

Initial Contact Resistance: 2.5V DC @ 1A-20 Milliohms Insulation Resistance: 500V DC, 100 Megohms

Dielectric Strength: 1000V DC

Contact Material: Silver Plated Copper Alloy Terminal Material: Silver Plated Copper Alloy

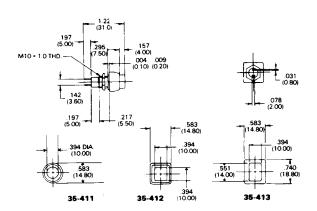
**Terminal Type:** Solder **Mounting Hole:** 0.343 **Hardware:** Hex nut, Washer

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Black Button	35-406
SPDT	Push-On	Push-On	Black Button	35-408
SPST	N.O. Momentary Off – (On)		Black Button	35-409









## Miniature Pushbutton Switches (Round/Square/Rectangular)

Specifications:

Current Rating: 3A-125V AC, 1A-250V AC Initial Contact Resistance: 20 Milliohms or Less Insulation Resistance: 100 Megohms Dielectric Strength: 1500V AC 1 Minute Contact Material: Copper – Silver plated Terminal Material: Copper – Silver plated

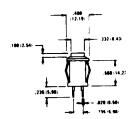
Terminal Type: Solder Mounting Hole: 0.431 " Hardware: Hex nut, Washer

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	Normally Open Momentary	Round Black Button	35-411
SPST	Normally Open Momentary	Square Black Button	35-412
SPST	Normally Open Momentary	Rectangular Black Button	35-413
SPST	Normally Open Momentary	Rectangular Red Button	35-417

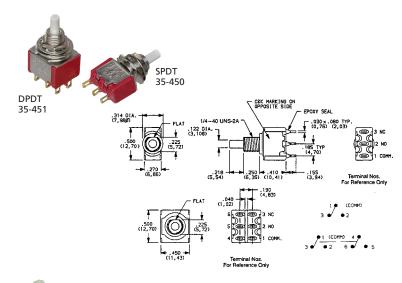
NOTE: Normally Open = OFF/(ON)



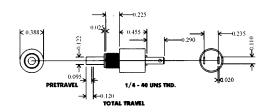




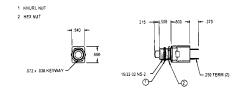












#### Miniature Pushbutton Switch

Specifications:

Current Rating: 1A-125V AC, 0.5A-250V AC

Initial Contact Resistance: 2.5V DC, 1A, 20 Milliohms or Less Insulation Resistance: 500V DC, 100 Milliohms or More

Dielectric Strength: 1500V AC 1 Minute

Contact Material: Silver

Terminal Material: Silver Plated Copper Alloy

Terminal Type: Solder or Q.C. .187"
Mounting Hole: 0.500" x 0.437"

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	N.O. Momentary	Square	35-415
	Off – (On)	Red Button	
SPST	N.O. Momentary Off – (On)	Square White Button	35-407

#### Miniature Snap Action Pushbutton Switches

Specifications:

Current Rating: 1A-120V AC or 28V DC

Initial Contact Resistance: 50 Milliohms (max.) @ 2-4V DC

Insulation Resistance: 10 (9) Ohms (min.) Dielectric Strength: 1000V AC RMS Contact Material: Silver – Gold plate

Terminal Material: Copper - Gold over Nickel plate

Temperature Rating: -30°C to +75°C Electrical Life: 60,000 cycles Terminal Type: Solder Mounting Hole: 0.250"

Hardware: 2 Hex nuts, Lockwasher, Lockring

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	Snap Action N.C. Momentary	White Plastic	35-450
DPDT	Snap Action N.C. Momentary	White Plastic	35-451

#### **Pushbutton Switch**

Specifications:

Current Rating: 1/4A-125V AC/DC

Initial Rating Resistance: 30 Milliohms @2-4V DC Insulation Resistance: 10(9) Ohms (min.) Dielectric Strength: 1000V RMS (min.) Contact Material: Bronze or Silver Terminal Material: Copper – Silver plated

Temperature Rating: -30°C to +85°C Electrical Life: 10,000 cycles Terminal Type: Solder Mounting Hole: 0.250" Hardware: Mounting nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST N.O.	OFF	(ON)	Nylon	35-3459

SPECIAL NOTE: ( ) = Momentary Function

#### **Pushbutton Switch**

Specifications:

Current Rating: 2A-120V AC,1A-277V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS (min.)

Contact Material: Copper Terminal Material: Copper Terminal Type: Quick Connect Mounting Hole: 0.500" Hardware: Mounting Nut

TYPE	ACTION		ACTION ACTUATO		ACTUATOR	CAT. NO.
SPST N.C.	(OFF)	ON	Nylon	35-3470		

SPECIAL NOTE: ( ) = Momentary Function

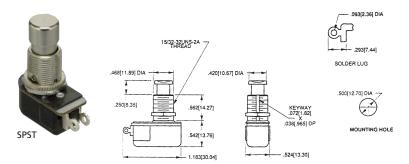


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#### Standard Size Metal Pushbutton Switches

Specifications:

Current Rating: 6A-125V AC/3A-250V AC Initial Contact Resistance: 3-10 Milliohms Insulation Resistance: 200 Megohms (min.) Dielectric Strength: 1200V AC

Contact Material: Silver Plated Copper Alloy Terminal Material: Silver Plated Copper Alloy

Terminal Type: Solder Mounting Hole: 0.500" Hardware: Hex nut, Knurled nut

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	N.O. Momentary Off – (On)	Metal Plunger	35-430
SPST	N.C. Momentary On – (Off)	Metal Plunger	35-432

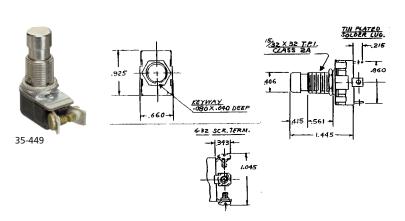




Snap-on thermoset plastic caps for standard pushbutton switches. Provides attractive front-of panel appearance, aids identification and also serves as a button shroud.

I.D.	COLOR	MATERIAL	CAT. NO.
.340"	1-each Red & Black	Thermoset Plastic	35-436

Note: For use with Cat. No. 35-430 and 35-432. Note: to order RED only 35-437-BUto order Black only 35-438-BU



#### Standard Size Metal Pushbutton Switches (I)L



Specifications:

NOTE: 35-437-BU Red 35-438-BU Black

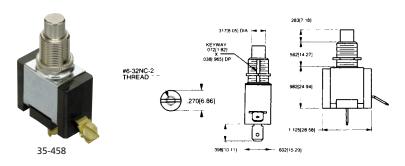
> Current Rating: 6A-125V, 3A-250V AC Initial Contact Resistance: 3-10 Milliohms Insulation Resistance: 200Megaohms (min.)

Dielectric Strength: 1200V AC Contact Material: Bronze - Silver plated Terminal Material: Bronze - Silver plated Terminal Type: Solder (35-448) Screw (35-449)

Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut, Screws on (35-449)

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	Push-On Push-Off	Metal Plunger	35-448
SPST	Push-On Push-Off	Metal Plunger	35-449



#### Standard Size Metal Pushbutton Switch

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Specifications:

Current Rating: 15A-125V AC, 10A-250V AC Insulation Resistance: 100 Megohms (min.)

Dielectric Strength: 1000V (min.) Contact Material: Silver

Terminal Material: Nickel plated Brass

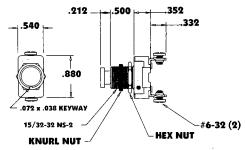
Terminal Type: Screw Mounting Hole: 0.50"

Hardware: Hex nut, Knurled nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Metal	35-458







#### **Momentary Pushbutton Switches**



Specifications:

Current Rating: 6A-120V AC, 3A-240V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V (min.)

Contact Material: Copper Alloy
Terminal Material: Copper Alloy & Brass

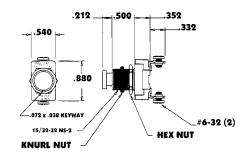
Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurled nut & Screws

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST N.O.	OFF	(ON)	Black	35-3457

SPECIAL NOTE: () = Momentary Function





#### **Momentary Pushbutton Switches**



Specifications:

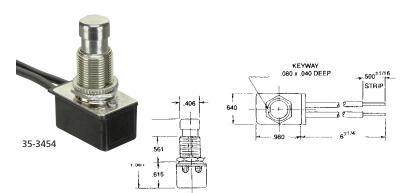
Current Rating: 3A-120V AC,1.5A-277V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V (min.)

Dielectric Strength: 1000V (min Contact Material: Copper Alloy Terminal Material: Brass Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurled nut

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST N.C.	(OFF)	ON	Red	35-3458

SPECIAL NOTE: () = Momentary Function



#### **Utility AC/DC Pushbutton Switch**



Specifications:

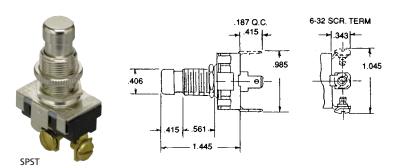
Current Rating: 10A-125V AC, 4A-250V AC/DC, 8A-125V AC/DC,

1/3 H.P. 125V AC

Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy Terminal Material: Brass Terminal Type: 6" Wire Leads Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Metal Plunger	35-3454



#### **Utility AC Pushbutton Switches**



Specifications:

Current Rating: 15A-125V AC, 10A-250 AC
Insulation Resistance: 100 Megohms (min.)
Dielectric Strength: 1000V RMS (min.)
Contact Material: Copper Alloy

Terminal Material: Brass Terminal Type: Screw Mounting Hole: 0.500"

Hardware: Hex nut, Knurl nut, Binding head screws

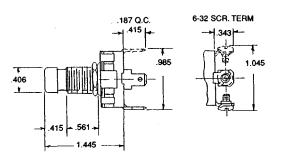
TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Chrome Metal	35-3425
SPST N.O.	OFF	(ON)	Chrome Metal	35-3427
SPST N.C.	ON	(OFF)	Chrome Metal	35-3429

SPECIAL NOTE: ( ) = Momentary Function









#### **Heavy Duty AC Pushbutton Switch**

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Specifications:

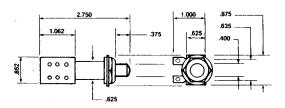
Current Rating: 15A-125V AC, 10A-250V AC Insulation Resistance: 100 Megohms 21A 14.5V DC

Dielectric Strength: 1000V RMS (min.) Contact Material: Copper Alloy Terminal Material: Brass

Terminal Type: Screw Mounting Hole: 0.500" Hardware: 2 nuts, Screws

Т	YPE	ACTION		ACTUATOR	CAT. NO.
S	PDT	Push-On	Push-Off		35-3490





## Auto/Marine Insulated Push Button Starter & Horn Switch

Specifications:

Current Rating: 25A-6V DC, 15A-12V DC Mounting Bushing: 1-1/4" L x 5/8" Diameter Overall Length: 2-7/8" Stainless Steel Springs

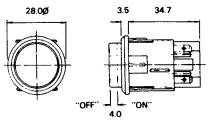
Terminal Type: Screw Mounting Hole: 0.641" Hardware: Nut, Washer

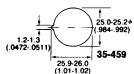
TYPE	AC	TION	ACTUATOR	CAT. NO.
SPST N.O.	OFF	(ON)	Black Chrome	35-3484

SPECIAL NOTE: ( ) = Momentary Function









#### **Large Round Pushbutton Switches**



Specifications:

Current Rating: 16A-125/250V AC Initial Contact Resistance: 5 Milliohms Insulation Resistance: 100 Megohms Dielectric Strength: 1500V AC Contact Material: Silver

Terminal Material: Brass – Silver plated

Electrical Life: 10,000 cycles Mechanical Life: 750,000 cycles

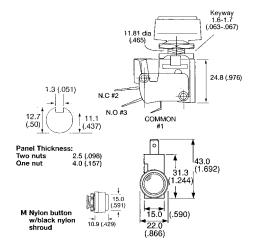
Terminal Type: Combination 1/4" Quick Connect and Solder

Mounting Hole: 1.02"

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Red Plastic	35-455
SPST	Normally Open Momentary		Red Plastic	35-457
SPST	Normally Open Momentary		Black Plastic	35-459







#### NO or NC Round Pushbutton Snap Action Switch-RED Button



Specifications:

Current Rating: 15A-125/250V AC,1/2HP 250V AC Initial Contact Resistance: 10 Milliohms or less Insulation Resistance: 100 Megohms (min.) @ 500 VDC

Dielectric Strength: 1650V AC (min.)

Contact Material: Silver

Terminal Material: Copper - Silver plated

Mounting Hole: .500

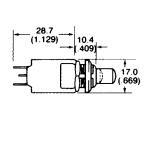
Terminal Type: .250 quick connect Mechanical Life: 1 million operations

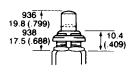
Hardware: 1 Nylon Hex nut

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	N.O. or N.C. (Momentary)	Red w/Black Shroud	35-473
	(ivioineritary)	Jinoud	

Using common terminal, snap-action switch can be wired NO or NC circuits







#### Momentary Pushbutton Switch-Black Button

Specifications:

Current Rating: 0.5A 125/250V AC Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V AC (min.)

Contact Material: Silver

Terminal Material: Brass - Nickel plated

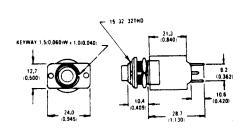
Mounting Hole: .500

Terminal Type: 6.3mm Tab Terminals Hardware: 1 Black Hex nut, 1 Brass Lock nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	(ON)	OFF	Black Plastic	35-475

SPECIAL NOTE: ( ) = Momentary Function





#### Momentary Pushbutton Switch -Red Button

Specifications:

Current Rating: 0.5A-125V/250V AC Initial Contact Resistance: 2.3 Milliohms Insulation Resistance: 600 Megohms Dielectric Strength: 7200V AC Contact Material: Brass - Silver plated Terminal Material: Brass – Silver plated

Terminal Type: Combination 1/4" Quick Connect Solder

Mounting Hole: 0.500"

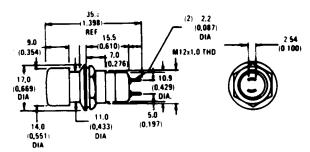
Hardware: 1 Black Hex nut, 1 Brass Lock nut

TYPE	AC	TION	ACTUATOR	CAT. NO.
SPST N.O.	(ON)	OFF	Red Plastic	35-476









#### Standard Size Round Pushbutton Switches

Specifications:

Current Rating: 3A-250V AC

Initial Contact Resistance: 10 Milliohms (max.) @ 2.5V DC 1A Insulation Resistance: 100 Megohms (min.) @ 500V DC

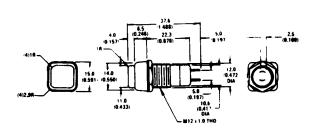
Dielectric Strength: 1500V AC 1 Minute Contact Material: Silver – Silver plated Terminal Material: Silver plated Copper Alloy

Electrical Life: 20,000 cycles Terminal Type: Solder Mounting Hole: 0.500" Hardware: Nut, Washer

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	N.O. Momentary		Red Plastic	35-420
	Off -	- (On)		
SPST	Push-On	Push-Off	White Plastic	35-422

SPECIAL NOTE: Chrome Ring Mounting..
\*\*White button available Bulk only
(35-0425 made to order)





#### Standard Size Square Pushbutton Switch

Specifications:

Current Rating: 3A-250V AC

Initial Contact Resistance: 25V DC @ 1A, 20 Milliohms

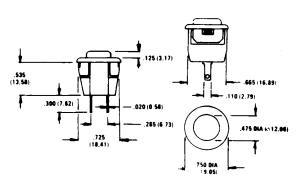
Insulation Resistance: 1000 Megohms Dielectric Strength: 500V DC Contact Material: Silver

Terminal Material: Silver Plated Copper Alloy

Electrical Life: 20,000 cycles Terminal Type: Solder Mounting Hole: 0.500" Hardware: Nut, Washer

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	N.O. Momentary Off (On)	Red Plastic	35-421





#### Standard Size Round Pushbutton Switch

Specifications:

Current Rating: 3A-125V AC

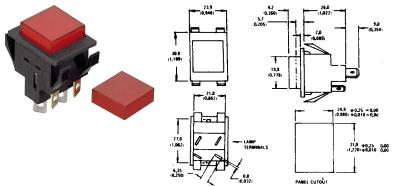
Initial Contact Resistance: 2.5V DC, 1A, 20 Milliohms or Less Insulation Resistance: 500V DC 100 Megohms or More

Dielectric Strength: 1000V AC-1 Minute
Contact Material: Silver Plated Copper Alloy
Terminal Material: Silver Plated Copper Alloy

Electrical Life: 30,000 cycles Terminal Type: Solder Mounting Hole: 0.687" Snap-in

ACTION	ACTUATOR	CAT. NO.
N.O. Momentary	Red Plastic	35-423
		N.O. Momentary Red Plastic





#### **Lighted Square Pushbutton Switches**



Specifications:

Current Rating: 10A-125/250V AC; 1/4HP-125V AC;10A 14VDC

Initial Contact Resistance: 2.5 Milliohms Typical Insulation Resistance: 5-10 MegaohmsTypical

Dielectric Strength: 2000V AC RMS

Contact Material: Silver

Terminal Material: Silver – Brass plated

Electrical Life: 25,000 cycles
Mechanical Life: 100,000 cycles

Terminal Type: Combination 1/4" Quick Connect and Solder

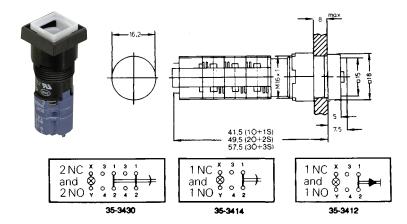
Lamp: 12V Incandescent (Non-replaceable)

Mounting Hole: 1.100" x 0.880"

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Red Lens Button	35-480
SPST	Push-On	Push-Off	Amber Lens Button	35-482
SPST	Push-On	Push-Off	Green Lens Button	35-484

SPECIAL NOTE: Replacement Red Cap - Bulk only - 35-481

NOTE: N.O. = Off



#### **Square Lighted Pushbutton Switches**



Specifications:

Current Rating: 4A-250V AC

Initial Contact Resistance: 20 Milliohms

Contact Material: Silver Terminal Material: Silver Electrical Life: 600,000 cycles

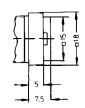
Temperature Rating: -25°C to +70°C w/o lamp;-25°C to +55°C w/lamp

Terminal Type: Solder Mounting Hole: 0.638"

TYPE	ACTION ALTERNATING	ACTUATOR	CAT. NO.
SPDT	1 N.C. and 1 N.O. Momentary	Square Lighted Pushbutton	35-3412
SPDT	1 N.C. and 1 N.O.	Square Lighted Pushbutton	35-3414
DPDT	2 N.C. and 2 N.O.	Square Lighted Pushbutton	35-3430

NOTE: Select one of the square colored lenses below to complete these switches. Can be wired to normally open or closed.





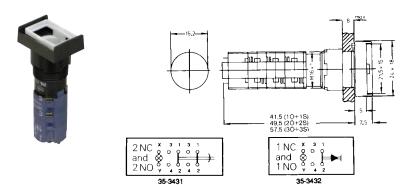
#### **Square Colored Lenses and Diffuser**

DESCRIP	CAT. NO.	
Square	Transparent Green Lens and Diffuser	35-3435
Square	Transparent Red Lens and Diffuser	35-3437
Square	Transparent Clear Lens and Diffuser	35-3438
Square	Transparent Yellow Lens and Diffuser	35-3439

NOTE: For use with 35-3412, 35-3414, 35-3430.....to order Bulb Only ML-T4.5 12/40 (12V--T 1-1/4 L Slide Base T4.5L)







## Rectangular Lighted Pushbutton Switches



Specifications:

Current Rating: 4A-250V AC

Initial Contact Resistance: 20 Milliohms

Contact Material: Silver Terminal Material: Silver Electrical Life: 600,000

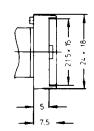
Temperature Rating: -25°C to +77°C w/o lamp; -25°C to +55°C w/lamp

Terminal Type: Solder Mounting Hole: 0.638"

TYPE	ALTERNATING ACTION	ACTUATOR	CAT. NO.
DPDT	2 N.C. and 2 N.O.	Rectangular Lighted Pushbutton	35-3431
SPDT	1 N.C. and 1 N.O. Momentary	Rectangular Lighted Pushbutton	35-3432

NOTE: Select one of the rectangular colored lenses below to complete these switches. NOTE: Can be wired normally open or closed.



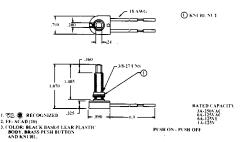


#### **Rectangular Colored Lenses and Diffuser**

[Lamp Included]						
DESCRIPTION		CAT. NO.				
Rectangular	Transparent Green Lens and Diffuser	35-3440				
Rectangular	Transparent Red Lens and Diffuser	35-3442				
Rectangular	Transparent Clear Lens and Diffuser	35-3443				
Rectangular	Transparent Yellow Lens and Diffuser	35-3444				

NOTE: For use with 35-3431, 35-3432....to order Bulb Only 35-3425-003R (12V--T 1-1/4 L Slide Base T4.5L)





#### **Canopy Pushbutton Switch**



Specifications:

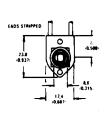
Current Rating: 6A-125V AC, 3A-250V AC Insulation Resistance: 100 Megohms

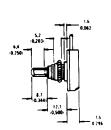
Dielectric Strength: 1000V Contact Material: Copper Terminal Material: Copper Alloy Terminal Type: Wire Leads-18 AWG Mounting Hole: 0.375"

Hardware: Brass Knurled nut, Hex nut

TYPE	ACT	ION	ACTUATOR	CAT. NO.
SPST	ON	OFF	Plastic	35-3460







#### **Pushbutton Appliance Switch**



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC

Initial Contact Resistance: 2.5V DC 1A 20 Milliohms or Less Insulation Resistance: 500V DC 100 Megohms or More

Dielectric Strength: 1250V Contact Material: Copper Alloy Terminal Material: Copper Alloy

Terminal Type: No. 18 AWG 105°C Plastic, 6" Long, Stripped 1/2"

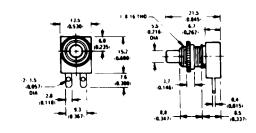
and Tinned

Mounting Hole: 0.375" Hardware: Hex nut, Knurled nut

TYPE	ACTION		ACTUATOR	CAT. NO.	
SPST	Push-On	Push-Off	Black Plastic	35-852	







#### **Pushbutton Appliance Switch**

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Specifications:

Current Rating: 3A-125V AC, Inductive/2A Lamp Load Contact Material: Copper Alloy – Tin plated Terminal Material: Copper Alloy – Tin plated

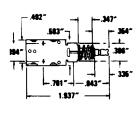
Terminal Type: Solder Mounting Hole: 0.375"

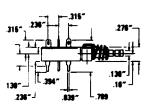
Hardware: Black Knurl nut, Washer

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	Push-On	Push-Off	Black Plastic	35-860

NOTE: To be discontinued.







#### **Power Pushbutton Switch**



On-off power switch has indicator which needs no wiring. For use in computers-modems-telecommunications, audio, test and medical instrumentation. Pin can be removed to make into momentary switch. Can be P.C.-mounted or hard-wired when panel mounted.

Specifications:

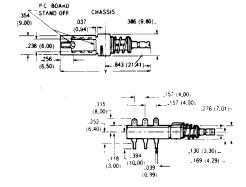
Current Rating: 8A @ 125V AC-UL Rated, 6A-250V AC-Motor Load

Initial Contact Resistance: 10 Milliohms (max.) Contact Material: Copper – Silver plated Terminal Material: Copper – Silver plated

**Terminal Type:** P.C./Solder Eye **Mounting Hole:** 9/16" **Hardware:** Black Dress Nut

TYPE ACTION		ACTUATOR	CAT. NO.	
DPDT	Push-On	Push-Off	Plastic	35-490





#### **Power Pushbutton Switch**

Pin can be removed to make momentary action. Can be P.C.-mounted.

Specifications:

Current Rating: 0.5A-100V AC/0.2A-250V AC Initial Contact Resistance: 10 Milliohms (max.)

Insulation Resistance: 1 x 10 (14) Ohms (Dry) 2 x 10 (12) Ohms

(After Humidity Test) **Dielectric Strength:** 1500V AC **Contact Material:** Silver

**Terminal Material:** Copper Alloy – Silver plated

Electrical Life: 100,000 (min.) cycles Temperature Rating: -20°C to +70°C Terminal Type: P.C./Solder Eye

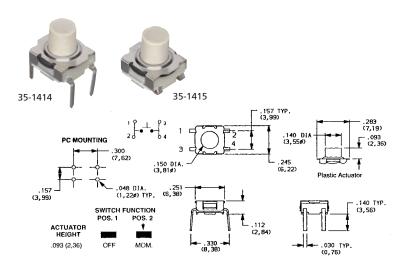
Mounting Hole: N/A

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	Push-On or Push-Off	Black Plastic	35-491
Mo	omentary if Pin Removed		

A round black button included.(button #43-0610-6R) Dim.: .350" D X .406" H.







#### **Tactile Sealed Miniature Key Switches**

Specifications:

Current Rating: 1.0 VA max.@50V AC/DC

Initial Contact Resistance: 50 Milliohms or less @2-4VDC,100mA

Insulation Resistance: 10(9) Ohms (min.)
Dielectric Strength: 250V RMS (min.)
Contact Material: Stainless Steel – Silver plated

Terminal Material: Copper Alloy – Tin-lead Alloy over Nickel plate

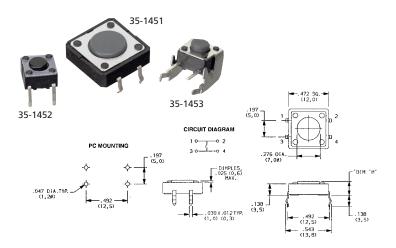
Temperature Rating: -40°C to +90°C
Electrical & Mechanical Life: 100,000 cycles

Connected Terminals: Position 1: OPEN, Position 2: 1,2-3,4

**Seal:** Silicone rubber **Size:** 0.250" square (6mm)

STYLE	TYPE	AC	TION	HEIGHT	CAT. NO.
PC Mount	SPST	OFF	(ON)	.093"	35-1411
PC Mount	SPST	OFF	(ON)	.156"	35-1414
Surface Mount	SPST	OFF	(ON)	.093"	35-1412
Surface Mount	SPST	OFF	(ON)	.156"	35-1415

SPECIAL NOTE: ( ) = Momentary Function



#### **Sub-Miniature Tactile Pushbutton Switches**

Specifications:

Contact Rating: 50mA @ 12V DC

Initial Contact Resistance: 100 Milliohms max.
Insulation Resistance: 100 Megohms
Dielectric Strength: 250V RMS (min.)
Contact Material: Bronze – Silver plated
Terminal Material: Brass – Silver plated
Temperature Rating: -10°C to +60°C

Electrical & Mechanical Life: 100,000 (200,000 - 35-1451) cycles

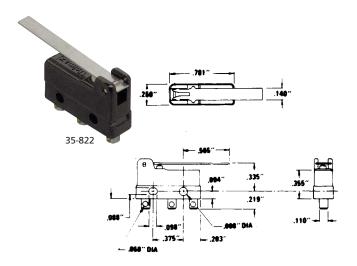
Size: 6mm (12mm 35-1451) Low Profile PCB Mount

TYPE	ACTION	ACTUATOR HEIGHT	ACTUATOR COLOR	OPER. FORCE	CAT. NO.
SPST	Off – (On)	.169	Gray	160 grs.	35-1451
SPST	Off – (On)	.169	Black	130 grs.	35-1452
SPST	Right Angle Off – (On)	.151	Gray	200 grs.	35-1453

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SPECIAL NOTE: ( ) = Momentary Function

#### **SNAP ACTION SWITCHES**



#### Sub-Miniature Snap Action Switch

Specifications:

Current Rating: 5A-250V AC

Initial Contact Resistance: 0.025 Ohms (max.)
Insulation Resistance: 1000 Megohms (min.)
Dielectric Strength: 1000V to Dead Metal or Ground

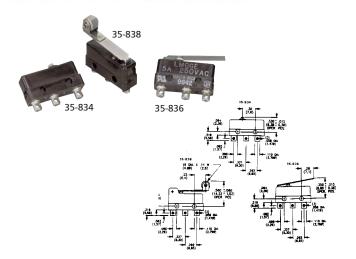
Contact Material: Fine Silver Terminal Material: Brass – tin plate Temperature Rating: -55°C to +135°C Electrical Life: 100,000 cycles Mechanical Life: 3,000,000 cycles

**Terminal Type:** Solder **Action:** Momentary SPDT

ACTUATOR	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
Pivoted Lever	.240"	.030"	2-1/2 oz.	.062"	35-822



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#### **Sub-Miniature Snap Action Switches**

Specifications:

Current Rating: 5A-250V AC

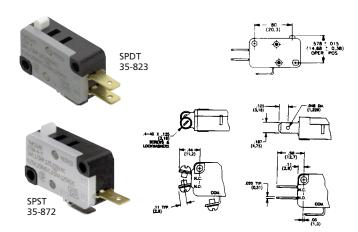
Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

**Dielectric Strength:** 1000V AC RMS **Contact Material:** Silver

Terminal Material: Brass - Tin plate Temperature Rating: -55°C to +135°C Electrical Life: 100,000 cycles Mechanical Life: 350,000 cycles

Terminal Type: Solder

ACTUATOR	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
Plunger	.030"	.005"	5 oz./142 g	.004"	35-834
Lever	.094"	.0470"	6 oz./170 g	.031"	35-836
Roller	.094"	.0470"	6 oz./170 g	031"	35-838



## Miniature Snap Action Switches with Pin Plunger Actuator

Actuator
Specifications:

. Current Rating: 10A-125/250V AC,1/3 HP 125-250V AC;1/2A-125V DC;

1/4A-250V DC (35-3930-10A-277V AC) Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.) Dielectric Strength: 1000V RMS (1500V AC 35-3930)

Contact Material: Silver

Terminal Material: Brass - Silver plate

Temperature Rating: -55°C to +150°C(35-3930 -40°C to +85°C)

Electrical Life: 350,000 cycles (35-3930 300,000 cycles)

Mechanical Life: 1,000,000 cycles

Terminal Type: Solder – Quick Connect, Screw - 35-3930 only

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.056"	.040"	75 g.	.013"	35-823
SPDT	.047"	.040"	225 g.	.010"	35-3930
SPST	.056"	.040"	75 g.	.013"	35-870††
SPST	.056"	.040"	75 g.	.013"	35-872†

†35-872 is normally open. ††35-870 is normally closed.

## Miniature Snap Action Switch with Pin Plunger Actuator



Specifications:

Current Rating: 15A-125/250V AC, 1/2 H.P. 125/250V AC,

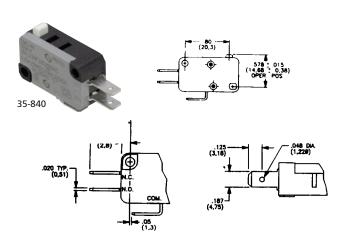
1/2A 125V DC; 1/4A 250V DC

Initial Contact Resistance: .005 Ohms (max.)
Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS

Contact Material: Silver – Silver Plate
Terminal Material: Silver – Silver Plate
Temperature Rating: -55°C to +150°C
Electrical Life: 150,000 cycles
Mechanical Life: 1,000,000 cycles
Terminal Type: Solder/Quick Connect

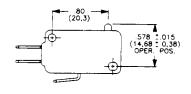
TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.056"	.040"	60 g. to150 g.	.013"	35-840











## Miniature Snap Action Switch with Pin Plunger Actuator



Specifications:

Current Rating: 20A-250V AC, 1 H.P. 125V AC Initial Contact Resistance: 25 Ohms at 6 VDC Insulation Resistance: 1000 Megohms (min.) Dielectric Strength: 1500V RMS

Contact Material: Silver Cadmium Oxide Terminal Material: Copper CDS Alloy Temperature Rating: -40°C to +85°C Electrical Life: 300,000 @ 10A @ 250VAC Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.047"	.040"	225 g.	.010"	35-3932

# 35-3900 (15.8) : .010 (15.8) : .0.25 (19.8) (25.40) (25.40)

#### Miniature Snap Action Switch with Pin Plunger Actuator



Specifications:

Current Rating: 15A-125/250V AC, 1/4 H.P. 125V AC, 1/2 H.P. 250V AC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

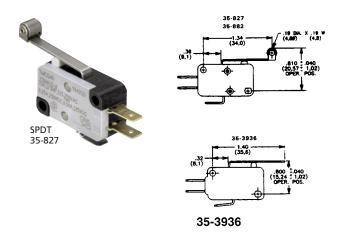
Dielectric Strength: 1500V RMS

Contact Material: Silver

Terminal Material: Copper – Silver plate Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles @ 20A-250VAC Mechanical Life: 10,000,000 cycles typical

**Terminal Type:** Screw **Action:** Momentary

	MAX.	MIN.	MAX.		
	PRE-	OVER-	OPERATING	MAX.	CAT.
TYPE	TRAVEL	TRAVEL	FORCE	DIFFERENTIAL	NO.
SPDT	.020"	.005"	13 oz./370 q.	.002"	35-3900



#### Miniature Snap Action Switches with Roller Actuator

Specifications

Current Rating: 10A-125/250V AC,1/3 H.P. 125/250V AC, 1/2A-125V DC, 1/4A-250V DC (35-827,35-882) 10A-277V AC,1/3HP-125/250V AC, 1/2A-125V DC,

1/4A-250V DC (35-3936)

Initial Contact Resistance: 0.005 Ohms (max.)
Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS AC (1500 VRMS 35-3936)

Contact Material: Silver

**Terminal Material:** Brass – Silver plate

**Temperature Rating:** -55°C to +150°C (35-827/882)/-40°C to +85°C (35-3936) **Electrical Life:** 350,000 cycles (min.) (35-827/882)/300,000 cycles (35-3936)

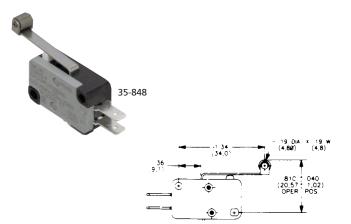
Mechanical Life: 1,000,000 cycles (min.)

Terminal Type: Solder/Quick Connect Screw - 35-3936 only

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.160"	.065"	45 g.to 75 g.	.030"	35-827
SPDT	.160"	.065"	80 g.	.030"	35-882
SPDT	.100"	.065"	85 g. to 150 g.	.030"	35-3936



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#### Miniature Snap Action Switch with Roller Actuator

Specifications:

Current Rating: 15A-125/250V AC, 1/2 H.P. 125/250V AC,

1/2A 125V DC, 1/4A - 250VDC

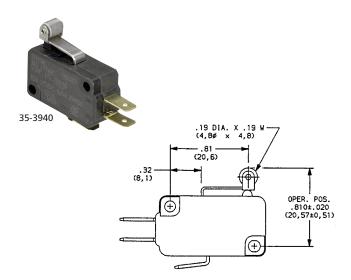
**Initial Contact Resistance:** 0.005 Ohms (max.) **Insulation Resistance:** 1000 Megohms (min.)

**Dielectric Strength:** 1000V RMS **Contact Material:** Silver

Terminal Material: Brass CDA Alloy Temperature Rating: -55°C to + 150°C Electrical Life: 350,000 cycles (min.) Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.160"	.065"	80 g. to 150 g.	.030"	35-848



## Miniature Snap Action Switch with Short Roller Actuator



Specifications:

Current Rating: 10A-125/250V AC, (35-3940 - 10A-277V AC), 1/3 H.P.

125/250V AC, 1/2A-125V DC, 1/4A-250V DC Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS(1500 V RMS 35-3940)

Contact Material: Silver

Terminal Material: Brass CDA Alloy

**Temperature Rating:** -55°C to + 150°C (-40°C to +85°C 35-3940)

Electrical Life: 350,000 cycles (300,000 cycles 35-3940)

Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.70"	.040"	75 g. to 90 g.	.013"	35-846
SPDT	.70"	.040"	150 g. to 180 g.	.013"	35-876
SPDT	.60"	.030"	225 g.	.015"	35-3940

# 35-3944 .19 DIA. X .19 W (4,8% × 4,8) .81 (20,6) OPER. POS. .810±.020 (20,57±0,51)

## Miniature Snap Action Switch with Short Roller Actuator



Specifications:

Current Rating: 15A-125/250V AC (15A-277VAC - 35-3944) 1/2 H.P. 125/250V

AC, 1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.)
Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS AC(1500 VRMS 35-3944)

Contact Material: Silver

Terminal Material: Brass CDA Alloy

Temperature Rating: -55°C to +150°C (-44°C to +85°C 35-3944) Electrical Life: 150,000 cycles min/300,000 cycles 35-3944

Mechanical Life: 1,000,000 cycles

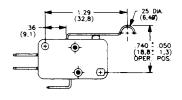
Terminal Type: Solder/Quick Connect - 35-874, Screw - 35-3944

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.070"	.040"	150 g. to 180 g.	.013"	35-874
SPDT	.060"	.030"	400 g.	.015"	35-3944









## Miniature Snap Action Switch with Simulated Roller Actuator

Specifications:

Current Rating: 10A-125/250V AC, 1/3 H.P. 125/250V AC, 1/2A-125V DC,

1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.)
Insulation Resistance: 1000 Megohms (min.)

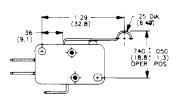
**Dielectric Strength:** 1000V AC **Contact Material:** Silver

Terminal Material: Brass CDA Ally Temperature Rating: -55°C to +150°C Electrical Life: 350,000 cycles (min.) Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

	MAX. PRE-	MIN. OVER-	MAX. OPERATING	MAX.	CAT.
TYPE	TRAVEL	TRAVEL	FORCE	DIFFERENTIAL	NO.
SPDT	.140"	.062"	90 g. to 150 g.	.050"	35-878





## Miniature Snap Action Switch with Simulated Roller Actuator

Specifications:

Current Rating: 15A-125/250V AC, 1/2 H.P. 125/250V AC, 1/2A-125V DC,

1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

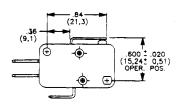
Dielectric Strength: 1000V AC Contact Material: Silver

Terminal Material: Brass CDA Alloy Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles (min.) Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

	MAX.	MIN.	MAX.		
	PRE-	OVER-	OPERATING	MAX.	CAT.
TYPE	TRAVEL	TRAVEL	FORCE	DIFFERENTIAL	NO.
SPDT	.140"	.062"	90 g. to 150 g.	.050"	35-842





#### Miniature Snap Action Switch with Short Lever Actuator

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Specifications:

Current Rating: 10A-125/250V AC, 1/3 H.P. 125/250V AC, 1/2A-125V DC,

1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS
Contact Material: Silver
Terminal Material: Brass CDA Alloy
Temperature Rating: -55°C to +150°C
Electrical Life: 350,000 cycles (min.)

Mechanical Life: 1,000,000
Terminal Type: Solder/Quick Connect

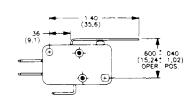
TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.080"	.040"	75 g. to 90 g.	.013"	35-3934



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#### Miniature Snap Action Switches with Lever Actuator

Specifications:

Current Rating: 10A-125/250V AC, 1/3 H.P. 125/250V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

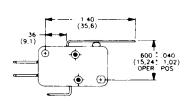
Dielectric Strength: 1000V RMS
Contact Material: Silver

Terminal Material: Brass CDA Alloy Temperature Rating: -55°C to + 150°C Electrical Life: 350,000 cycles (min.) Mechanical Life: 1,000,000 cycles

**Terminal Type:** Solder **Action:** Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.160"	.073"	40 g. to 75 g.	.032"	35-880
SPDT	.160"	.090"	30 g. to 50 g.	.032"	35-3942





#### Miniature Snap Action Switch with Lever Actuator

Specifications:

Current Rating: 15A-125/250V AC, 1/2 H.P. 125/250V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

**Dielectric Strength:** 1000V RMS **Contact Material:** Silver

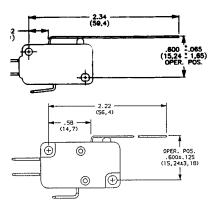
Terminal Material: Brass CDA Alloy Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles (min.)

Mechanical Life: 1,000,000 cycles
Terminal Type: Solder/Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.160"	.075"	80 g. to 150.g	.032"	35-844





## Miniature Snap Action Switches with Long Lever Actuator

Specifications:

Current Rating: 10A-125/250V AC, (35-3938 10A-277V AC) 1/3 H.P. 125/250V

AC, 1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.) Dielectric Strength: 1000V RMS (1500 VRMS 35-3938)

Contact Material: Silver

Terminal Material: Brass CDA Alloy

Temperature Rating: -55°C to +150°C(-40oc to +85°C 35-3938) Electrical Life: 350,000 cycles (min.) (300,000 cycles 35-3944)

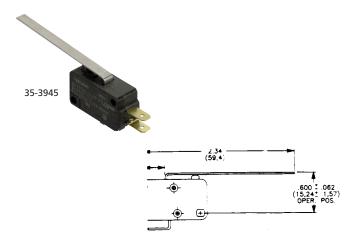
Mechanical Life: 1,000,000 cycles

Terminal Type: Solder/Quick Connect 0.187"

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.500"	.200"	17 g. to 75 g.	.125"	35-824
SPDT	.250"	.125"	70 g. to 225 g.	.045"	35-3938







#### Miniature Snap Action Switch with Long Lever **Actuator**



Specifications:

Current Rating: 15A-277V AC, 1/2 H.P. 125/250V AC, 1/2A-125V DC, 1/4A-250V DC

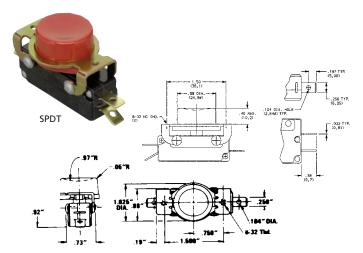
Initial Contact Resistance: 0.005 Ohms (max.)

Insulation Resistance: 1000 Megohms (min.) Dielectric Strength: 1500V RMS

Contact Material: Silver Terminal Material: Brass CDA Alloy Temperature Rating: -40°C to +85°C Electrical Life: 300,000 cycles (min.) Mechanical Life: 1,000,000 cycles Terminal Type: Solder/Quick Connect

Action: Momentary

	MAX.	MIN.	MAX.		
	PRE-	OVER-	OPERATING	MAX.	CAT.
TYPE	TRAVEL	TRAVEL	FORCE	DIFFERENTIAL	NO.
SPDT	.250"	.125"	120 g. to 400 g.	.045"	35-3945



#### General Purpose Pushbutton Snap Action Switch



Specifications:

Current Rating: 15A-125/250V AC, 3/4 H.P.- 125V AC, 1-1/2" H.P. - 250V AC

Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

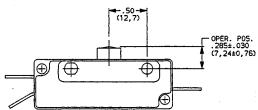
Dielectric Strength: 1000V AC RMS Contact Material: Fine Silver Terminal Material: Brass - Silver plate Temperature Rating: -55°C to +85°C Electrical Life: 200,000 cycles Mechanical Life: 500,000 cycles Terminal Type: .250 Quick Connect

Mounting Hole: 1" Action: Momentary

Actuator: Red or Black Pushbutton

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	ACTUATOR	CAT. NO.
SPDT	.050"	.050"	20 oz./567 g.	.010"	Red	35-830
SPDT	.050"	.050"	20 oz./567 g.	.010"	Black	35-831





#### Standard Snap Action Switches with Pushbutton **Actuator**



Specifications:

Current Rating: 15A-125/250V AC, 3/4 H.P. 125V AC, 1-1/2 H.P. 250V AC

Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS

Contact Material: Silver

Terminal Material: Brass - Silver plate Temperature Rating: -55°C to +85°C Electrical Life: 200,000 cycles Mechanical Life: 500,000 cycles Terminal Type: 0.250" Quick Connect

Mounting Hole: 0.344" Action: Momentary

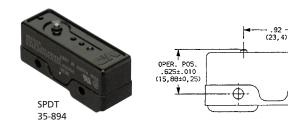
Hardware: 35-462 - 2 Hex nuts

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.050"	.050"	20 oz./567 g.	.010"	35-461
SPDT	.050"	.187"	20 oz./567 g	.010"	35-462†
DPDT	.050"	.050"	30 oz./850 g.	.010"	35-990

†35-462 has an over travel plunger.



(ŅL)



## Standard Precision Snap Action Switches with Pin Plunger Actuator

Specifications:

Current Rating: 20A-125/250/480V AC, 1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

**Dielectric Strength:** 1500V RMS **Contact Material:** Silver

Terminal Material: Copper – Silver Plate Temperature Rating: -55°C to 150°C Electrical Life: 150,000 cycles

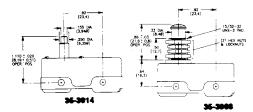
Mechanical Life: 10,000,000 cycles typical

Terminal Type: Screw/Solder

Action: Momentary

	TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
	SPDT	.020"	.005"	13 oz./370 g.	.002"	35-894
	SPDT	.030"	.005"	26 oz./740 g.	.005"	35-980





## Standard Snap Action Switches with Air Plunger Actuator



Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/4 H.P. 250V AC, 1/2A-125V DC, 1/4A-250V DC Initial Contact Resistance: 25 Milliohms max. @ 6V DC Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

Contact Material: Silver

Terminal Material: Copper – Silver plate Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles

**Terminal:** Type Screw **Action:** Momentary

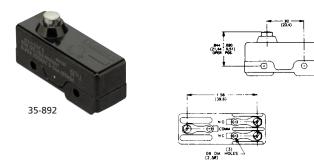
Hardware: 35-3908 2 large Hex, 2 Lockhex nuts

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.020"	.055"	13 oz./370 g.	.002"	35-3902†
SPDT	.020"	.220"	13oz./370 g.	.002"	35-3908††
SPDT	.020"	. 062"	13oz./370 g.	.002"	35-3914†††

† 35-3902 is a stub plunger

†† 35-3908 is a high over travel plunger

††† 35-3914 is a small over travel plunger



## Standard Precision Snap Action Switch with Plunger Actuator

Specifications:

Current Rating: 20A-125/250/480V AC, 1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

Contact Material: Silver

Terminal Material: Copper – Silver plate Temperature Rating: -55°C to 150°C Electrical Life: 150,000 cycles

Mechanical Life: 10,000,000 cycles typical

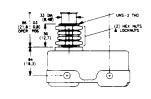
**Terminal Type:** Solder **Action:** Momentary

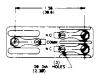
TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
				2111211111111	
SPDT	.020"	.055"	13 oz./370 g.	.002"	35-892











#### Standard Precision Snap Action Switches with **Plunger Actuator**



Specifications:

Current Ratingc: 20A-125/250/480V AC, 1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

Contact Material: Silver

Terminal Material: Copper - Silver plate Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles

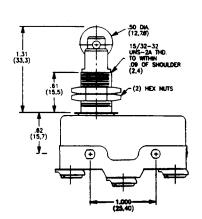
Mechanical Life: 10,000,000 typical cycles

Terminal Type: Screw/Solder

Hardware: 2 Hex nut, 2 Lockhex nuts

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.020"	.220"	13 oz./370 g.	.002"	35-896
SPDT	.030"	.220"	26 oz./740 g.	.005"	35-982





#### Standard Snap Action Switch with Roller Plunger **Actuator**



Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/4 H.P. 250V AC, 1/2A-125V DC, 1/4A-250V DC Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

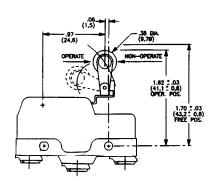
Contact Material: Silver

Terminal Material: Copper – Silver plate Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles

Terminal Type: Screw Action: Momentary Hardware: 2 Hex nuts

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.	
SPDT	.020"	.141"	13 oz./370 g.	.002"	35-3910	





#### Standard Snap Action Switch with Hinged Roller **Actuator**



Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

Contact Material: Silver

Termianl Material: Copper - Silver plate Temperature Rating: -55°C to 150°C Electrical Life: 150,000 cycles

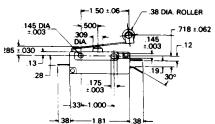
Mechanical Life: 10,000,000 cycles typical

Terminal Type: Screw Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	_	.094"	18 oz./510 g.	.020"	35-3922







#### Standard Snap Action Switch with Roller Actuator

Specifications:

Current Rating: 15A-125/250/V AC, 3/4 H.P. 125V AC, 1-1/2 H.P. 250V AC

Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS

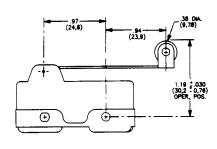
Contact Material: Silver

Terminal Material: Brass - Silver plate Temperature Rating: -55°C to +85°C Electrical Life: 200,000 cycles Mechanical Life: 500,000 cycles Terminal Type: 0.250 Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.281"	.062"	20 oz./567 g.	.094"	35-463





#### Standard Precision Snap Action Switch with Roller **Actuator** (ŲL)

Specifications:

Current Rating: 20A-125/250/480V AC, 10A-125V AC, 1/2A-125V DC,1/4A-250V DC,

1 H.P. 125V AC, 2 H.P. 250V AC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS Contact Material: Silver

Terminal Material: Brass CDA Alloy - Tin plate

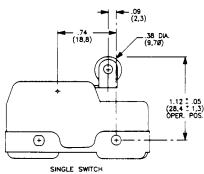
Temperature Rating: -55°C to 150°C Electrical Life: 100,000 cycles

Mechanical Life: 1,000,000 cycles typical

Terminal Type: Screw Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.468"	.062"	2.5 oz./71 g. to 22 oz./624 g.	.085"	35-986





#### Standard Snap Action Switch with Short Roller **Actuator**

(ŲL)

Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/2A-125V DC. 1/4A-250V DC

Initial Contact Resistance: 0.005 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

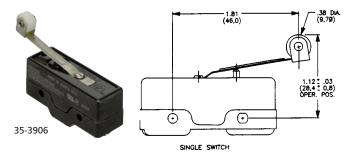
Dielectric Strength: 1500V RMS Contact Material: Silver

Terminal Material: Brass - Tin plate Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles Terminal Type: Solder/Quick Connect

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.080"	.090"	10 oz./284 g. to 13 oz./370 g.	.008″	35-3920







#### Standard Snap Action Switch with Leaf Roller **Actuator**



Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

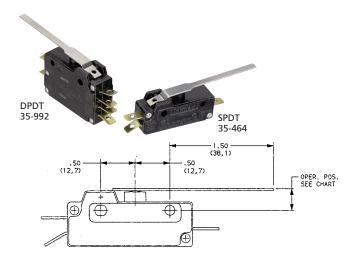
Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS Contact Material: Silver

Terminal Material: Brass - Tin plate Temperture Rating: -55°C to 150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles

Terminal Type: Screw Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.156"	.062"	5 oz./142 g. to 13 oz./370 g.	.050"	35-3906



#### Standard Snap Action Switches with Lever Actuator

Specifications:

. Current Rating: 15A-125/250V AC, 3/4 H.P. 125V AC 1-1/2 H.P. 250V AC

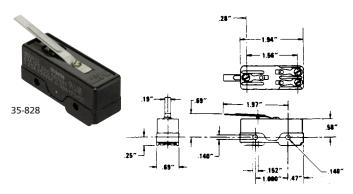
Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1000V RMS Contact Material: Silver

Terminal Material: Brass CDA Alloy Temperature Rating: -55°C to +85°C Electrical Life: 200,000 cycles Mechanical Life: 500,000 cycles Terminal Type: 0.250" Quick Connect

Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.312"	.187"	20 oz./567 g.	.062"	35-464
DPDT	.312"	.187"	30 oz./850 g.	.062"	35-992



#### **Precision Snap Action Switch with Lever Actuator**

Current Rating: 20A-125/250/480V AC,- 1/4A-250V DC 1/2A-125V DC

Initial Contact Resistance: 0.025 Ohms (max.) Insulation Resistance: 1000 Milliohms (min.)

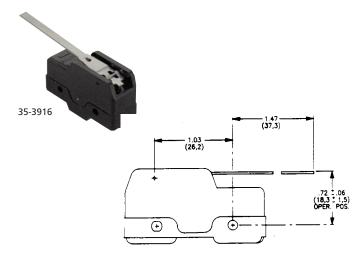
Dielectric Strength: 1500V RMS Contact Material: Fine Silver

Terminal Material: Brass Alloy - Tin plate Temperature Rating: -55°C to -150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles Terminal Type: Solder Lug

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.156"	.062"	5 oz./142 g. to 13 oz./370 g.	.050"	35-828







#### Standard Snap Action Switch with Lever Actuator

Specifications:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

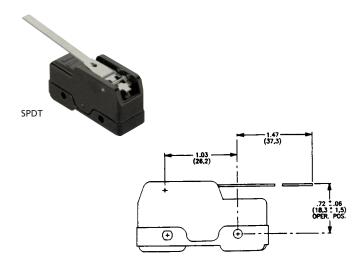
Dielectric Strength: 1500V RMS Contact Material: Silver

Terminal Material: Brass Alloy - Tin plated Temperature Rating: -55°C to +150°C

Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles

Terminal Type: Screw Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.380″	.190″	2.5 oz./71 g. to 18 oz/510 g.	.078"	35-3916



#### Standard Precision Snap Action Switches with Lever **Actuator**

Specifications:

Current Rating: 20A-125/250/480V AC, 1/2A-125V DC, 1/4A 250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

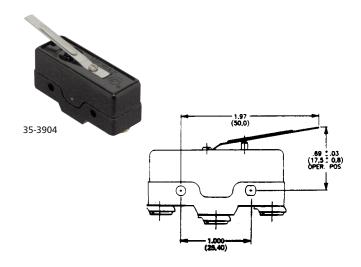
Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS Contact Material: Silver

Terminal Material: Brass Alloy - Tin plate

Terminal Material: Brass Terminal Type: Screw/Solder Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.380″	.190″	3.5 oz./100 g. to 26 oz./740 g.	.156″	35-890
SPDT	.380"	.190″	2.5 oz./60 g. to 9 oz./255 g.	.047"	35-984



#### Standard Snap Action Switch with Lever Actuator

Specifcations:

Current Rating: 20A-125/250/480V AC, 1 H.P. 250V AC, 1/2 H.P. 125V AC,

1/2A-125V DC, 1/4A-250V DC

Initial Contact Resistance: 25 Milliohms (max.) @ 6V DC

Insulation Resistance: 1000 Megohms (min.)

Dielectric Strength: 1500V RMS

Contact Material: Silver

Terminal Material: Brass CDA Alloy - Tin plate

Temperature Rating: -55°C to +150°C Electrical Life: 150,000 cycles Mechanical Life: 10,000,000 cycles

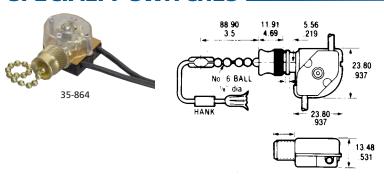
Terminal Type: Screw Action: Momentary

TYPE	MAX. PRE- TRAVEL	MIN. OVER- TRAVEL	MAX. OPERATING FORCE	MAX. DIFFERENTIAL	CAT. NO.
SPDT	.156"	.062"	5 oz./142 g. to 13 oz./370 g.	.050"	35-3904





#### SPECIALTY SWITCHES



#### **Pull Chain Appliance Switch**



Specifcations:

Current Rating: 6A-125V AC/3A-250V AC

Insulation Resistance: @ 500V DC, 100 Megohms or Less

Dielectric Strength: 1000V RMS Contact Material: Copper Alloy Terminal Material: Copper

Temperature Rating: not to exceed 54°F Electrical life: UL test 6000 cycles (min.)

Terminal Type: No. 18 AWG/ 105C Plastic, 6" Long, Stripped 1/2"

Mounting Hole: 0.406"

Hardware: Large brass Knurl nut, Brass chain and 3' extension

string w/bell

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	ON – OFF	3-1/2" Pull Chain	35-864



#### **Pull Chain Switch**



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Specifcations:

Current Rating: 3A-250V AC, 6A-125V AC,

Dielectric Strength: 1000V RMS Contact Material: Copper Alloy Terminal Material: Copper

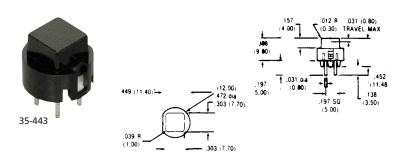
**Temperature Rating:** not to exceed 54°F **Electrical Life:** UL tested 6000 cycles (min.)

Terminal Type: Push-In

Terminal Mounting: Hole 0.406"

Hardware: Large brass Knurl nut, Brass chain, 3' extension string

TYPE	ACTION	ACTUATOR	CAT. NO.
Rotary	Two Circuit	3-3/4" Pull Chain	35-865
	Three Position		
	OFF-ON-ON		
SP3T	OFF-ON-ON-ON	3-3/4" Pull Chain	35-867



#### Low Travel-Key Switch

Specifcations:

Current Rating: 10mA/35V DC (max.), 10mA - 100V AC Initial Contact Resistance: Less than 20 Milliohms

**Insulation Resistance:** 100,000 Megohms **Dielectric Strength:** 500V

Contact Material: Laminated Silver (Self Cleaning)

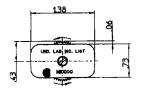
Terminal Material: Copper – Silver clad Temperature Rating: 20°C to 85°C Electrical Life: 500,000 cycles Terminal Type: Printed Circuit

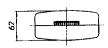
Actuator Color: Black

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	Normally Open	Square Plastic (ABS)	35-443
	Momentary	Black	







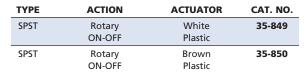


#### **Cord Switch**

Specifcations:

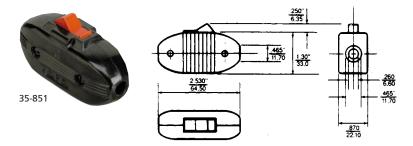
Current Rating: 3A-250V AC/6A-125V AC

Contact Material: Brass Terminal Material: Spring Brass Terminal Type: Insulation Piercing



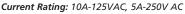


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#### In Line Cord Switch

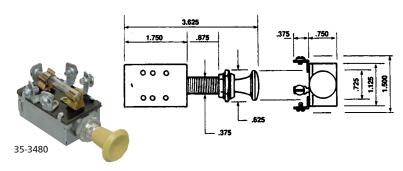
Specifications:



Dielectric Strength: 300 Volt Terminal Material: Brass Terminal Type: Screw

Mounting Hole: Wire Type - SPT-2 (18AWG 2-Cond.)

TYPE	AC	TION	ACTUATOR	CAT. NO.	
SPST	On	OFF	Red Rocker	35-851	



## Automotive / Marine Push Pull Switch (2-Circuit) DC

Specifications:

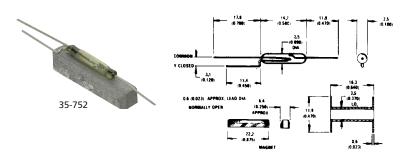
Current Rating: 15A-12V DC, 25A-6V DC

Terminal Material: Brass Terminal Type: Screw

Mounting Hole: 13/32" Diameter

TYPE	A	CTIO	V	ACTUATOR	CAT. NO.
	(1)	(	1 & 2)		
SPDT	OFF	ON	ON	Knob	35-3480

SPECIAL NOTE: ( ) = Momentary Function



#### Miniature Reed Switch Kit

Specifications:

Current Rating: 0.5A (max.) @ 20V AC/DC (10 Watts max.) Voltage Rating: 120V AC (max.) @ 0.08A 80V DC (max.) @ 0.1A

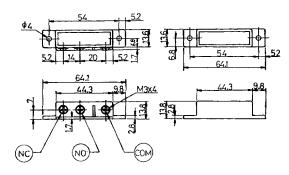
Contact Material: Gold Plated Iron Alloy Terminal Material: Tin Plated Iron Alloy Temperature Rating: -40°C to +125°C

Terminal Type: Solder

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	Normally Open and Normally Closed Contacts	Magnet	35-752

SPECIAL NOTE: 35-752 contains switch, magnet and coil form. 35-753-BU contains switch only.





#### **Reed Switches**

Specifications:

Current Rating: 0.5A (max.) @ 20V AC/DC, 10 Watts (max.) Voltage Rating: 120V AC (max.) @ 0.08A 80V DC (max.) @ 0.1A

Contact Material: Gold Plated Iron Alloy Terminal Material: Plated Steel

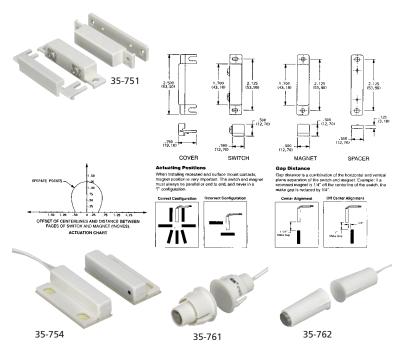
Terminal Type: Screw

Mounting Hole: 0.136" (1.970" Centers)

SPST	Normally Open without Magnet	Magnet	35-750
SPDT	Normally Open without Magnet or Normally Closed without Magnet	Magnet	35-756







#### **Reed Switches**



Specifications:

Current Rating: 3.0W (max.) @ 30V DC or 30 V AC (max.) @ 0.3A (max.)

Initial Contact Resistance: 100 Milliohms (max.)

Dielectric Strength: 200 VDC

**Temperature Rating:** -40°C to 100°C

Electrical & Mechanical Life: 10 million operations

Wire Leads: UL 1061, 22AWG, stranded copper or aluminum-12"

stripped/white

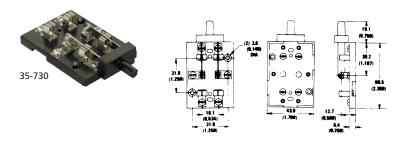
**Electrical Circuit:** SPST NO (normally open-off). Reed switch opens when magnet is removed from proximity. Contacts are held closed (on) when magnet is within actuation range.

**Operating Distance:** Operate (pull-in or make) points are with +/- 10% tolerance. Release points are 110% to 150% of the

operating points

Hardware: 2-4 screws for Screw mounts, Specs data sheets for all items included.

TERMINAL TYPE	MOUNTING TYPE	GAP (in.)	ACTUATOR	CAT. NO.
Screw	Terminal Surface	1-1/4"	Magnet	35-751
Side Wire Lead	Submin. Surface	1"	Magnet	35-754
Wire Lead	Recessed Magnet 3/4" dia.	1-1/4"	Magnet	35-761
Wire Lead	Recessed Magnet 3/8" dia.	1-1/4"	Magnet	35-762



#### **Knife Switch**

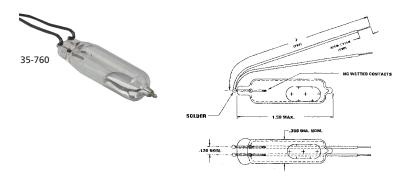
Specifications:

Current Rating: 0.5A -6V DC

Initial Contact Resistance: 15mW (max.)
Contact Material: Nickel Plated Steel
Terminal Material: Nickel Plated Steel

**Terminal Type:** Screw **Mounting Hole:** 3.4mm

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-OFF-ON	Plastic Handle	35-730



#### Mercury Tilt Switch

Specifications:

Current Rating: 3A-120V AC, 2A-240V AC, 6A-30V AC--4A-30V DC,

2A-120V DC, 1A-240V DC

Contact Material: Iron Alloy/Mercury

Terminal Material: Copper Wire #26 AWG Insulated

Terminal Type: 5-1/2" (14 cm) typical/overall 7" typical Flexible

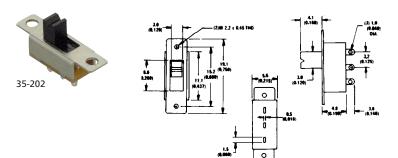
Leads-Stripped

Differential Angle: .350 PVC Insulation - 80°C

		TILT		
TYPE	ACTION	ANGLE	ACTUATOR	CAT. NO.
SPST	Normally Open or	10° Max	Mercury	35-760
	Closed Depending	8° Make/		
	on Orientation	Break		



## **SLIDE SWITCHES**



#### Miniature Slide Switch

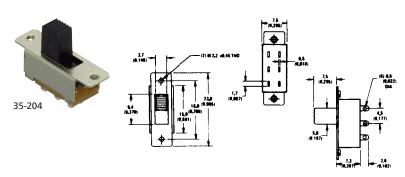
Specifications:

Current Rating: 0.3A-30V

Initial Contact Resistance: 5 Milliohms (max.) Insulation Resistance: 100 Megohms Dielectric Strength: 1200V RMS Contact Material: Bronze – Silver plate Terminal Material: Copper – Silver plate

Terminal Type: Solder

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-ON	Black Plastic	35-202



#### Miniature Slide Switch

Specifications:

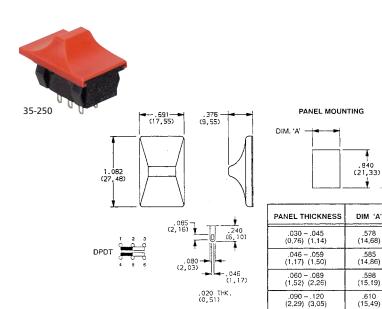
Current Rating: 0.3A-30V

Initial Contact Resistance: 5 Milliohms (max.)
Insulation Resistance: 100 Megohms
Dielectric Strength: 1200V RMS

Contact Material: Bronze – Silver Terminal Material: Copper – Silver plated

Terminal Type: Solder

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-ON	Black Plastic	35-204



#### Miniature Slide Switch



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC

Initial Contact Resistance: 10 Milliohms or Less @2-4VDC,100mA

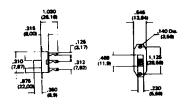
Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V RMS Contact Material: Copper – Silver plate Terminal Material: Copper – Silver plate Electrical Life: 10,000 cycles

Mechanical Life: 100,000 cycles Mounting Hole: 0.840" x 0.625" Mounting Style: Snap-in wlo Tabs Termination Type: Solder lug wlhole

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-ON	Red Cap	35-250









#### Standard Size Slide Switch

Specifications:

Current Rating: 11A-125V AC, 5A-125V DC Initial Contact Resistance: 5 Milliohms Insulation Resistance: 100 Megohms Dielectric Strength: 1200V RMS Contact Material: Silver Plated Copper Alloy

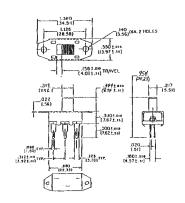
Terminal Material: Silver Plated Copper Alloy

Terminal Type: Solder

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-ON	Black Plastic	35-242

NOTE: Unpackaged - 34-162-1R





#### Standard Size Slide Switch



Specifications:

Current Rating: 6A-125V AC,0.5A-125V DC Initial Contact Resistance: 0.01 Ohm at 20mA DC

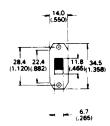
Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS Contact Material: Bronze – Silver plated Terminal Material: Copper – Silver plated Temperature Rating: -10°C to +104°C

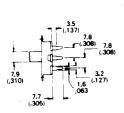
Electrical Life: 6000 (min.) w/load...10,000 cycles (min.) w/no load

Terminal Type: Printed Circuit

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-ON	Black Plastic	35-210







#### Standard Size Slide Switch



Specifications:

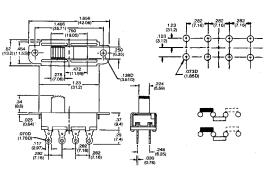
Current Rating: 6A-125V AC, 3A-250V AC Initial Contact Resistance: 30 Milliohms (max.) Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS

Contact Material: Bronze – Silver plated Terminal Material: Copper – Silver plated

Terminal Type: Printed Circuit

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-ON	Black Plastic	35-222





#### Standard Size Slide Switch



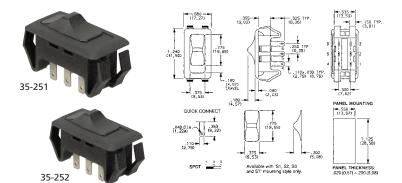
Specifications:

Current Rating: 3A-125V AC, 0.5A V DC Initial Contact Resistance: 5 Milliohms (max.) Insulation Resistance: 100 Megohms Dielectric Strength: 1000V RMS Contact Material: Bronze – Silver plated Terminal Material: Copper – Silver plated Temperature Rating: 65°C standard Electrical Life: 6000 UL tested

Terminal Type: Printed Circuit

TYPE	ACTION	ACTUATOR	CAT. NO.
DP3T	ON OFF ON	Black Plastic	35-240





#### Standard Size Slide Switch

(li)

Specifications:

Current Rating: 15A-125V AC,6A-250V AC

Initial Contact Resistance: 10 Milliohms or less @2-4V DC

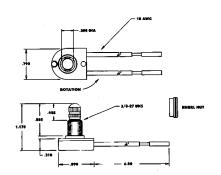
Insulation Resistance: 10(9) Ohms Dielectric Strength: 1,000 V RMS (min.) Contact Material: Copper – Silver plate Terminal Material: Copper – Silver plate

Electrical Life: 10,000 cycles Mechanical Life: 100,000 cycles Terminal Type: .250 Quick Connect Mounting Hole: 1.125" x 0.550"

TYPE	ACTION	ACTUATOR	CAT. NO. 35-251	
SPDT	ON-ON	Red Cap		
DPDT	ON-ON	Black Cap	35-252	

## ROTARY SWITCH KEYLOCK/DIP/CIRCUIT BREAKERS





#### **Rotary Switch**



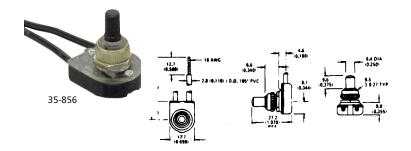
Specifications:

Current Rating: 6A-125V AC, 3A-250V AC Insulation Resistance: 500 Megohms Dielectric Strength: 1250V RMS Contact Material: Copper Alloy Terminal Material: 6" Wire Leads

Mounting Hole: 0.375"

Hardware: Finishing nut, Knurl nut

TYPE	ACTION		ACTION ACTUATOR		ACTUATOR	CAT. NO.	
SPST	ON	OFF	Metal	35-855			



#### **Rotary Appliance Switch**



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC

Initial Contact Resistance: 2.5V DC, 1A, 20 Milliohms or Less Insulation Resistance: 500V DC, 100 Megohms or More

Dielectric Strength: 1000V RMS Contact Material: Copper Alloy Terminal Material: Copper

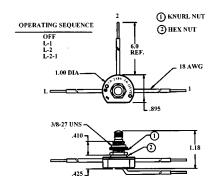
Terminal Type: No. 18 AWG 105°C Plastic, 6" Long, Stripped 1/2"

and Tinned

Mounting Hole: 0.375" Hardware: Hex, Finishing nut

TYPE ACTION		ACTUATOR	CAT. NO.
SPST	ON – OFF	Black Plastic	35-856





#### **Rotary Switch**



Specifications:

Current Rating: 6A-125V AC, 3A-250V AC Insulation Resistance: 500 Megohms Dielectric Strength:1000V RMS Contact Material: Copper Alloy Terminal Material: 6" Wire Leads

Mounting Hole: 0.375"

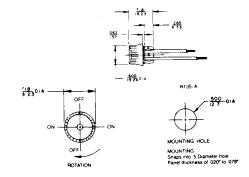
Hardware: Hex nut, Finishing nut

TYP	E AC	TION ACT	TUATOR (	CAT. NO.	
SP3	T OFF ON	N ON ON N	Лetal	35-1857	









#### **Rotary Appliance Switch**

Specifications:

Current Rating: 3A 125VAC, 1.5A 250V AC Initial Contact Resistance: 5 Megohms Insulation Resistance: 100 Megohms (min.) Dielectric Strength: 1000V RMS Contact Material: Brass - Nickel plate Terminal Material: Wire Lead 6"

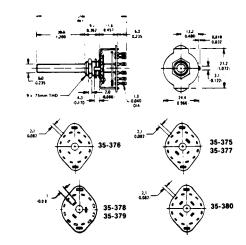
Terminal Type: Solder

Mounting Hole: 0.500" (0.375" for 35-3816) Hardware: Hex nut, Lockring washer

TYPE	ACTION		ACTUATOR	CAT. NO.
SPST	ON	OFF	White Plastic	35-859
SPST	ON	OFF	Black Plastic	35-3816

NOTE: 35-3816 has threaded mounting bushing





#### **Rotary Switches**

Specifications:

Current Rating: 0.3A - 125V AC

Initial Contact Resistance: 25 Milliohms @ 2-4V DC, 1A

Insulation Resistance: 1000 Megohms Dielectric Strength: 500V AC RMS

Contact Material: Silver Plated Phosphor Bronze Terminal Material: Silver Plated Phosphor Bronze

Terminal Type: Solder Mounting Hole: 0.375" Shaft and Bushing: Aluminum Bracket: Steel, zinc plated Hardware: 1 Hex, Stop lockring

TYPE	POSITIONS	<b>POLES</b>	ACTUATOR	CAT. NO.
Shorting	6	2	1/4" Metal Shaft	35-375
Shorting	12	1	1/4" Metal Shaft	35-376
Non-Shorting	5	2	1/4" Metal Shaft	35-377
Non-Shorting	3	3	1/4" Metal Shaft	35-378
Shorting	4	2	1/4" Metal Shaft	35-379

NOTE: Index = 30°



#### Half-Inch Rotary Switches

Specifications:

Current Rating: 6A Continuous; Switch: 250mA@125V AC or

(ŶL)

28VDC-NON-SHORTING Contacts

Initial Contact Resistance: 20 Milliohms or less @ 2-4V DC

Insulation Resistance: 10(10) Ohms (min.) Dielectric Strength: 600V AC RMS

Contact Material: Copper Alloy – Silver plated Terminal Material: Copper Alloy – Silver plated

Temperature Rating: -30°C to +85°C

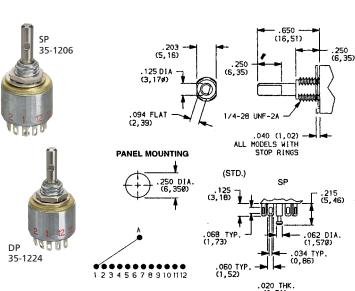
Electrical Life: 10,000 cycles @ 150mA,125VAC or 28VDC

Terminal Type: Solder Lug/Panel Mount Mounting Hole: 0.250"

Housing and Bushing: Zinc Alloy, Zinc Plated w/clear Chromate finish

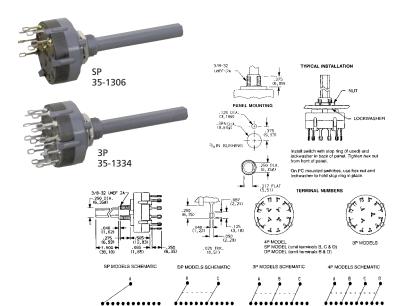
Hardware: Hex nut, Stop lockring

TYPE	POSITIONS	POLES	ACTUATOR	CAT. NO.
SP	12-No-Stops	1	1/2" Metal Shaft	35-1212
SP	6	1	1/2" Metal Shaft	35-1206
DP	6-No-Stops	2	1/2" Metal Shaft	35-1226
DP	4	2	1/2" Metal Shaft	35-1224









#### Rotary Switches - 1-4 Poles

(JL)

Specifications:

Current Rating: 2.5A-125V AC; 350mA-125V DC

Carry: 5A continuous-NON-SHORTING Contacts (break-before-make) Initial Contact Resistance: 20 Milliohms or less @ 2-4V DC, 100mA

Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V AC RMS Contact Material: Silver – Silver plated Terminal Material: Brass – Silver plated

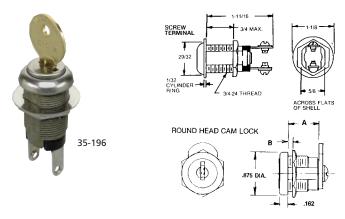
Electrical Life: 15,000 cycles (300,000 w/detent operations)

Terminal Type: Panel Mount w/Solder or P.C. lug Mounting Hole: 0.386"

Housing and Bushing: Glass filled 6/6 nylon (UL-94V-0)

Hardware: Hex nut, Lockwasher, Stop ring

TYPE	POSITIONS	POLES	INDEXING	CAT. NO.
SP	12-No-Stops	1	30°	35-1312
SP	6	1	30°	35-1306
SP	12	1	30°	35-1314
DP	4	2	30°	35-1324
3P	4	3	30°	35-1334
4P	3	4	30°	35-1343
SP	8	1	45°	35-1323



#### Plate Tumbler Lock Switch

Specifications:

Current Rating: 2.5A-120V AC (480V.A.)/2.1A-46V DC (96 V.A.)

Contact Material: Brass Terminal Material: Brass Terminal Type: Screw Mounting Hole: 0.875"

Hardware: Cylinder Ring, Hex Nut, 2 Screws, 2 keys Available in std. key changes: HC530, HC531, HC540, HC541,

HC550, HC553, HC571

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	ON-OFF Remove Key in Off or On Position	Metal Key	35-196

# Keylock Switch-4 Tumbler w/Detent



Specifications:

Current Rating: 4A-125V AC, 2A-250V AC, 4A-28V DC Initial Contact Resistance: 10 Milliohms @ 2-4VDC

Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V RMS Contact Material: Copper

Terminal Material: Coper – Silver plated

Electrical Life: 10,000 cycles

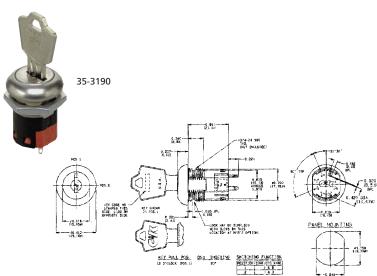
Connected Terminals: Position 1: 1-8; Position 2: 1-3

Terminal Type: Solder lug w/hole

Indexing: 90°

Mounting Hole: 0.760" x.640" Hardware: Mounting Hex nut, 2 keys

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-ON Remove Key in Both Positions	Metal Key	35-3190





35-3192



#### **Keylock Switch-4 Tumbler w/Detent**





Current Rating: 4A-125V AC, 2A-250V AC, 4A-28VDC Initial Contact Resistance: 10 Milliohms @ 2-4VDC

Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V RMS Contact Material: Copper – Silver plated Terminal Material: Copper – Silver plated

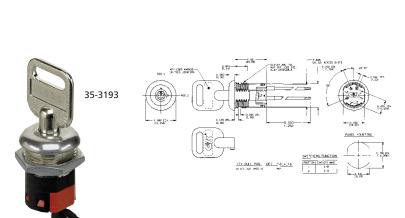
Electrical Life: 10,000 cycles

Connected Terminals: Position 1: 1-8/4-5; Position 2: 1-3/5-7

Terminal Type: Socket Indexing: 90° Mounting Hole: 0.760"

Hardware: Mounting Hex nut/2 keys

TYPE	ACTION	ACTUATOR	CAT. NO.
DPDT	ON-ON Remove Key in Both Positions	Metal Key	35-3192



0 3rd

C.237

-3/4-24 UNS THO: (HUT THELLUDED

-LOCK HAY BE SUPELIED WITH SLOTS IN THIS LOCATION AT MARK GPEION PANEL MOUNTING

#### Keylock Switch-6 Tumbler-Tubular Lock



Specifications

Current Rating: 4A-125V AC, 2A-250V AC, 4A-28V DC

Contact Resistance: 10 Milliohms @ 2-4VDC

Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V RMS Contact Material: Copper – Silver plated

Terminal Material: Copper – Silver plated
Connected Terminals: Position 1: 8-1; Position 2: 1-3

Electrical Life: 10,000 cycles Terminal Type: 6" Wire Leads Mounting Hole: 0.760" x0.640"

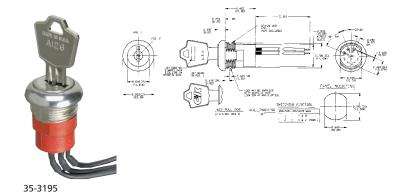
Hardware: Mounting Hex nut, 2 Chrome plated keys (to order keys only #1110801-all keyed alike)

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-ON Remove Key in Both Positions	Barrel Key	35-3193
SPDT	ON-ON Remove Key in Position 1	Barrel Key	35-3194

NOTE: Index = 90°

# **SWITCHES**





#### **Keylock Switch-4 Tumbler - Momentary**

(JL)

Specifications:

. Current Rating: 4A-125V AC, 2A-250V AC, 4A-28V DC

Contact Resistance: 10 Milliohms @2-4VDC Insulation Resistance: 10(9) Ohms

Dielectric Strength: 1000V RMS Contact Material: Copper – Silver plated Terminal Material: Copper – Silver plated

Electrical Life: 10,000 cycles

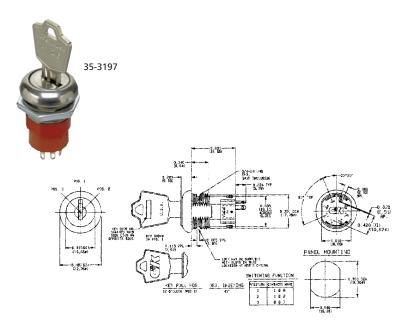
Connected Terminals: Position 1: 1-8; Position 2: 1-2

Terminal Type: 6" Wire Leads

Indexing: 45°

Mounting Hole: 0.760" x0.640"
Hardware: Mounting Hex nut, 2 keys

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-(ON)	Metal Key	35-3195
	Remove Key in		
	Position 1		



#### Keylock Switch-4 Tumbler -3 Positionw/Detent



Specifications:

Current Rating: 4A-125V AC, 2A-250V AC, 4A-28VDC

Initial Contact Resistance: 10 Milliohms Insulation Resistance: 10(9) Ohms Dielectric Strength: 1000V RMS Contact Material: Copper – Silver plated Terminal Material: Copper – Silver plated

Electrical Life: 10,000 cycles

Connected Terminals: Position 1: 8-1; Position 2: 1-2; Position 3: 7-8

Terminal Type: Solder

Indexing: 45°

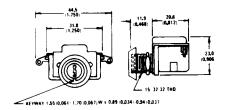
Mounting Hole: 0.760" x 0.640" Hardware: Mounting Hex nut, 2 keys

TYPE	ACTION	ACTUATOR	CAT. NO.
SPDT	ON-ON-ON Remove Key in Position 1	Metal Key	35-3197





35-192





### **Keylock Switches**

Specifications:

Current Rating: 6A-125V AC DC, 3A-250V DC Initial Contact Resistance: 3-10 Milliohms Insulation Resistance: 200 Megohms (min.) Contact Material: Bronze - Silver plated Terminal Material: Bronze - Silver plated

Temperature Rating: 0°F to 150°F(-17.8°C to +65.6°C)

Dielectric Strength: 1000 V RMS

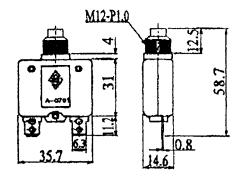
Terminal Type: Solder Mounting Hole: 0.500"

Hardware: Hex nut, Chamfered nut (to order keys only - #13-5496 (min.) 25 ea)

TYPE	ACTION	ACTUATOR	CAT. NO.
SPST	ON-OFF Remove Key in Off or On Position	Metal Key	35-192

SPECIAL NOTE: Ward-type lock – all keyed alike – 1 key furnished.





#### **Circuit Breakers**

(ĥ) The circuit will remain disconnected until manually reset. Provides permanent protection in electrical equipment. All are UL approved and CSA certified.

Specifications:

Calibration: Will carry continuously 100% of rating. Will trip between 6-30 seconds at 200% of rated load at 25°C

Standard Rating: UL 3-20A @ 125/250VAC Input Power: 50VDC/125VAC/250VAC

Dielectric Strength: Over 1500 VAC/1 (min.) RMS

Insulation Resistance: 100 Megohms.

Contact Endurance: 125VAC x 150% of rated current for 500 cycles Interrupt Capacity: 1000 AMPS w/FUSE at 50V/DC,

Terminals: 0.250" Quick Connect

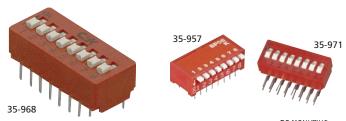
Mounting Hole: 0.500"

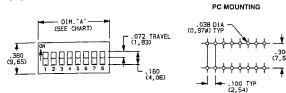
RATING IN AMP	CAT. NO.	RATING IN AMP	CAT. NO.
3	35-2103	10	35-2110
4	35-2104	12	35-2112
5	35-2105	15	35-2115
6	35-2106	20	35-2120
7	35-2107	25	35-2125
8	35-2108	30	35-2130

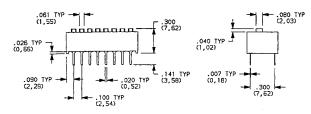
SPECIAL NOTE: HP Rating @ 120V & 240V available upon request

# **SWITCHES**

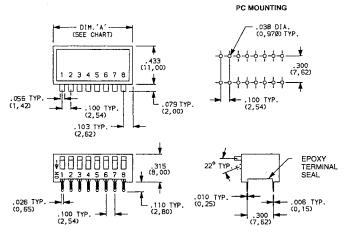




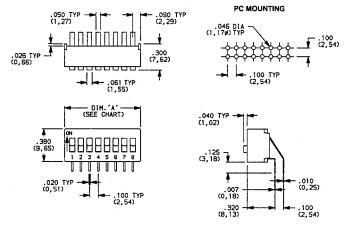




Part No. 35-968



Part No. 35-957



Part No. 35-971

#### **DIP Switches-Washable/Open Base**

Specifications:

Contact Rating: Carry 100mA @50 V DC

Switch: 100mA @ 5VDC or 25mA max. @ 25VDC Initial Contact Resistance: 50 Milliohms or less@2-4VDC,100mA

Insulation Resistance: 10(9) Ohms

Dielectric Strength: 500VRMS

Electrical & Mechanical Life: 10,000 (2,000 35-953/35-957)

Temperature Rating: -40°C to +85°C(-20°C to 60°C: 35-953/35-957)

Vibration Test: No contact opening more than 1 microseconds/no contact closure when exposed to vibration .06 in DA or 5g or less,

from 10 to 55Hz and 10g from 55 to 500 Hz

Contacts: WE#1 = 69% gold - 25% silver - 6% palladium

(35-953/35-957: Gold over nickel over bronze)

Terminals: Phosphor bronze, w /tin-lead alloy over nickel plate

(35-053/35-957: Bronze - Tin Plate

Solderability Test: Per MIL-STD-202F method 208D, or EIA RS-186

method 9 (1 hr.steam aging)

Wave Soldering: recommended @ 5000F solder temp. Hand Solder: -30W @ 5000F,10 sec. max/terminal. All switch actuators must be in OFF position during

soldering/cleaning

**Base:** Polybutylene Telephtalate UL 94V-0: 35-953/35-957: Epoxy terminal seal, removable tape actuator seal, splash resistant

POS.	DIM. A mm (in	.)	CAT. NO.
1	.180 (4.57)		35-961
2	.280 (7.11)		35-962
3	.380 (9.65)		35-963
4	.480 (12.19)		35-964
5	.580 (14.73)		35-965
6	.680 (17.27)		35-966
7	.780 (19.81)		35-967
8	.880 (22.35)		35-968
9	.980 (24.89)		35-969
10	1.080 (27.43)		35-970
12	1.280 (32.51)		35-974
8	.880 (22.35)	Right Angle	35-971
4	.506 (12.85)	Side Actuated	35-953
8	.906 (23.00)	Side Actuated	35-957





### **GLOSSARY**

#### **ACTUATION FORCE**

The force required to move the actuator of a switch from one position to another.

#### **ACTUATOR**

A movable part of the switch that causes a change in the electrical configuration of the switch - i.e., toggle, rocker, slider, plunger, etc.

#### **ALTERNATE ACTION**

Also known as 'Push-Push', Push to close the switch contacts, then push again to open the contacts.

#### ARCING

The flow of electric current between switch contacts during opening or closing of the contacts.

#### **BREAK-BEFORE-MAKE**

The movable contact breaks contact with one fixed contact before making contact with another fixed contact on actuation.

#### **CONTACT RATING**

The allowable current and voltage the switch contacts can carry during opening or closing. Ratings may be resistive, inductive or capacitive, or a combination of the three.

#### CONTACT RESISTANCE

The resistance, usually in millohms, measured across a closed contact pair.

#### CYCLE

The complete sequence of indexing through all switch positions and returning to the original position.

#### DETENT

A mechanical stop that holds the contacts in a given position or prevents changing of the contact position at less than a specified actuation force.

#### **DIELECTRIC STRENGTH**

The ability of an insulator to withstand a voltage without arcing across its surface (also called Dielectric Withstanding Voltage or Breakdown Voltage).

#### DIP

Dual-in-line package commonly used for integrated circuits with 2 rows of terminals .300( apart and a pitch of .100( from terminal to terminal

#### DP (double pole)

A switch device that opens, closes or changes connection of two conductors in an electrical circuit.

#### **DPDT** (double pole-double throw)

A switch device that opens, closes or changes connection of two conductors in an electrical circuit and completes a circuit at both extreme positions of its actuator.

#### **ELECTRICAL LIFE**

The number of cycles of operation at a given electrical load that does not result in degradation of any electrical or mechanical parameter beyond the published end-of-life criteria.

#### **INDUCTIVE LOAD**

A load in which the initial curent during contact closure is less than the steady-state current, and greater during contact opening. Current lags the voltage in inductive loads, characteristic of which is motors.

#### INSULATION RESISTANCE

The electrical resistance between insulated parts. This is usually measured at a specific voltage and measured in megohms.

#### LED

Light emitting diodes. They are used for long life and low power consuming illumination.

#### **MAINTAINED ACTION**

A position of the switch actuator that remains unchanged when the actuation force is removed. Also see Momentary.

#### MAKE-BEFORE-BREAK

The movable contact makes contact with a fixed contact before breaking contact with another fixed contact (or connects a second circuit before disconnecting the first).

#### **MECHANICAL LIFE**

The number of actuations of a switch without electrical load that does not result in degradation of parameters of the switch beyond published end-of-life criteria.

#### **MOMENTARY ACTION**

A switch position where the actuator returns to the starting position when the actuation force is removed. It is also called 'spring return'.

#### **MOVABLE CONTACT**

The contact moved by the actuator to or away from a fixed contact, therefore making or breaking the electrical circuits for the switch.

#### NORMALLY CLOSED

Normally closed contacts are closed when the actuator is in its un-actuated or 'free' position.

#### **NORMALLY OPEN**

Normally open contacts are open when the actuator is in its un-actuated or 'free' position.

#### **OPERATING TEMPERATURE**

The temperature range in which the switch may be operated.

#### **OVERTRAVEL**

The distance the actuator can be moved after rhe contacts make without causing damage to the switch.

#### **POLE**

The number of separate circuits that can be operated by a switch at any time. A single pole switch allows one closed circuit at a time, while a double pole switch allows two closed circuits at a time, etc.

#### **PRETRAVEL**

The distance that the switch actuator travels from rest position until the contacts make in another position.

#### **QUICK-CONNECT TERMINAL**

A flat tab or blade style terminal designed to accept push-on female wire connectors, thereby eliminating the need to solder the switch.

#### RESISTIVE LOAD

A load in which the voltage and current are in phase. Also see Capacitive Load, Inductive Load, Power Factor and Inrush.

#### **SNAP ACTION**

Fast transfer of contacts from one position to another that is usually independent of the speed of the actuator. These mechanisms generally employ over-center coil or leaf springs in pushbutton switches.

#### SP (single pole)

A device that opens, closes or changes connection of a single conductor in an electrical circuit.

#### SPST (single pole- single throw)

A switch that opens, closes or completes a circuit at only one of the extreme positions of its actuator.

#### **TERMINAL**

The metal leads (or terminals) coming out of the switch body that are used to connect the switch to the electrical circuit(s). Many different configurations are used, including solder lug, quick-connect, printed circuit, etc.

#### THROWS

Number of circuits that can be controlled by one pole of a switch. In a single poledouble throw switch, only one circuit can be connected at a time, but there are two possible circuits (throws) that can be made.

#### TRAVE

The total distance the actuator can move to change the electrical position.

#### WASHABLE

A generic term applied to printed circuit mounting switches indicating compatibility with various cleaning processes used after soldering. These switches are sealed to prevent the entry of contaminants into the switch case.

#### **WAVE SOLDERING**

A method of soldering in which a wave of molten solder contacts the component terminals on the printed circuit board as the board with the components is automatically conveyed through the wave.



Panel lamps are widely used in every facet of life today. We have indicators in our homes, industry, automobiles, and the toys we give our children. With the importance of these items GC Electronics has chosen to add a variety of panel lamps & LED's to our extensive listing of commercial, and MRO products.

In the following pages you will discover an offering of the most popular and widely used incandescent and LED products in the industry today.

The panel lamps in this brochure include several types of snap-in mounts in round, square, and rectangular shaped lamps. They are offered 6 Volt, 12 Volt, 24 Volt, and 125 Volt styles. There is a wide variety of colors to choose as well as several different lens shapes.

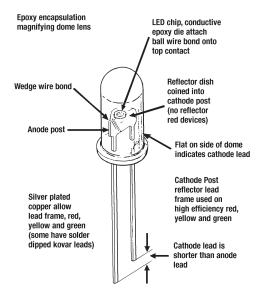
# INCANDESCENT PANEL LAMPS



The lamps offered have incandescent bulbs for voltages of 6V, 12V, and 24V, and the 125V, lamps have neon bulbs. In addition, the 125V lamps have U/L listed.

### LED'S

The LED's (light emitting diode) offered in this catalog are available in discrete devices (LED's without housings) and lamps which include housings and/or mounting hardware. The actual LED consists of four components: a lead frame, a dice (or LED chip), and a fine wire bond which is all encapsulated in an epoxy base. (See Fig. 1) Depending on the material used for the dice (or chip), the observer will see a monochromatic red, orange, yellow, green, or blue light. Since there are no moving parts or loose components, it is considered to be a solid state device and very reliable under shock and vibration conditions.





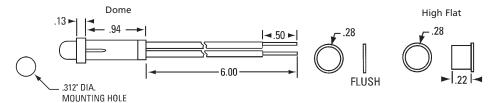


# **INCANDESCENT PANEL LAMPS**



#### **Press-to-Fit Panel Lamps**

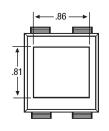
These press-to-fit panel lamps fit into a .312" mounting hole, and are available in several colors and voltages. They are made from Nylon material and have 18 AWG 6" wire leads.

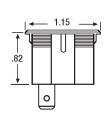


CAT. NO.	LAMP VOLTAGE	LAMP CURRENT	LAMP TYPE	LAMP TERMINATION	LAMP LIFE	LAMP SHAPE	LAMP COLOR
38-3540-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	Clear
38-3540-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	Clear
38-3542-06	6.3V	.04A	#32	Wire Leads	50,000	Flush	Red
38-3542-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	Red
38-3542-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	Red
38-3543-06	6V	.04A	#32	Wire Leads	50,000	Flush	Amber
38-3543-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	Amber
38-3543-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	Amber
38-3545-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	Green
38-3545-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	Green
38-3546-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	Blue
38-3546-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	Blue
38-3549-50	125V		C2A-5 Neon	Wire Leads	25,000	Flush	White
38-3549-12	12V/14V	.08A	#35	Wire Leads	50,000	Flush	White
38-3550-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Clear
38-3550-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Clear
38-3552-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Red
38-3552-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Red
38-3553-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Amber
38-3553-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Amber
38-3555-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Green
38-3555-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Green
38-3556-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Blue
38-3556-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Blue







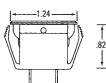


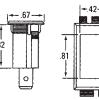
#### Large Square Snap-in Panel Lamps

These press-to-fit panel lamps fit into a panel cutout 1" x 1.125" with panel thickness .020" x .025" and are available in several colors and voltages. They are made from Nylon material and have 18 AWG 6" wire leads.

CAT. NO.	LAMP VOLTAGE	LAMP CURRENT	LAMP TYPE	LAMP TERMINATION	LAMP LIFE	LAMP SHAPE	LAMP COLOR
38-1132-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Red
38-1132-12	12V/14V	A80.	#35	Wire Leads	50,000	Square	Red
38-1133-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Amber
38-1133-12	12V/14V	A80.	#35	Wire Leads	50,000	Square	Amber
38-1135-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Green
38-1135-12	12V/14V	A80.	#35	Wire Leads	50,000	Square	Green
38-1139-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	White
38-1139-12	12V/14V	A80.	#35	Wire Leads	50,000	Square	White





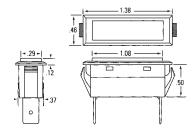


# Rectangular Snap-in Panel Lamps

This is the most popular of the rectangular lamps used today. They are used in a large variety of appliances and automotive applications. The device snaps into a panel cutout .550" x 1.125" with a minimum panel thickness of .020" x .025". All lamps are made of a Nylon material with 18 AWG 6" wire leads.

CAT. NO.	LAMP VOLTAGE	LAMP CURRENT	LAMP TYPE	LAMP TERMINATION	LAMP LIFE	LAMP SHAPE	LAMP COLOR
38-1022-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Red
38-1022-12	12V/14V	.08A	#35	Wire Leads	50,000	Rectangular	Red
38-1023-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Amber
38-1023-12	12V/14V	.08A	#35	Wire Leads	50,000	Rectangular	Amber
38-1025-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Green
38-1025-12	12V/14V	.08A	#35	Wire Leads	50,000	Rectangular	Green
38-1029-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	White
38-1029-12	12V/14V	.08A	#35	Wire Leads	50,000	Rectangular	White





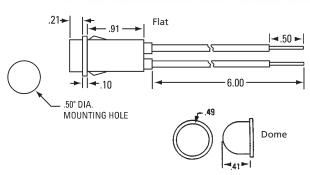
#### 3/8 Snap-in Rectangular Panel Lamps

A large lamp for use in tight places. The low profile rectangular panel lamp has many uses. The device snaps into a panel cutout of .375" x 1.28" and is ideal for cramped spaces with their .5" depth. The body of the lamp is made of Nylon and comes with 6" 18 AWG wire leads.

CAT. NO.	LAMP VOLTAGE	LAMP CURRENT	LAMP TYPE	LAMP TERMINATION	LAMP LIFE	LAMP SHAPE	LAMP COLOR
38-3002-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Red
38-3003-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Amber
38-3005-50	125V		C2A-5 Neon	Wire Leads	25,000	Rectangular	Green

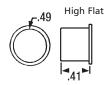


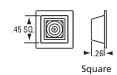




#### 1/2" Press-to-Fit Panel Lamps

These are press-to-fit panel lamps for a .500" mounting hole and are available in several colors and voltages. They are made from Nylon material and have 18 AWG 6" wire leads.







38-5452-50	CAT. NO.	LAMP VOLTAGE	LAMP CURRENT	LAMP TYPE	LAMP TERMINATION	LAMP LIFE	LAMP SHAPE	LAMP COLOR
38-5453-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Amber           38-5453-50         125V         C2A-5 Neon         Wire Leads         25,000         Square         Amber           38-5453-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Amber           38-5455-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Green           38-5455-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Green           38-5459-06         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads <td< th=""><th>38-5452-50</th><th>125V</th><th></th><th>C2A-5 Neon</th><th>Wire Leads</th><th>25,000</th><th>Square</th><th>Red</th></td<>	38-5452-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Red
38-5453-50         125V         C2A-5 Neon         Wire Leads         25,000         Square         Amber           38-5453-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Amber           38-5455-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Green           38-5455-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Green           38-5459-66         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5459-50         125V         C2A-5 Neon         Wire Leads         50,000         Square         White           38-5459-50         125V         C2A-5 Neon         Wire Leads         50,000         Square         White           38-5462-16         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-10         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat<	38-5452-12	12V/14V	.08A	#35	Wire Leads	50,000	Square	Red
38-5453-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Amber           38-5455-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Green           38-5455-06         1.25V         C2A-5 Neon         Wire Leads         25,000         Square         Green           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5462-12         12V/14V         .08A         #35         Wire Leads	38-5453-06	6.3V	.04A	#32	Wire Leads	50,000	Square	Amber
38-5455-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Green           38-5455-00         125V         C2A-5 Neon         Wire Leads         25,000         Square         Green           38-5455-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Write           38-5459-06         6.3V         .04A         #32         Wire Leads         50,000         Square         Write           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Write           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000	38-5453-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Amber
38-5455-50         125V         C2A-5 Neon         Wire Leads         25,000         Square         Green           38-5455-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Green           38-5459-66         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5459-50         125V         C2A-5 Neon         Wire Leads         50,000         Square         White           38-5459-60         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5463-12         12V/14V         .08A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000	38-5453-12	12V/14V	.08A	#35	Wire Leads	50,000	Square	Amber
38-5455-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         Green           38-5459-06         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5465-06         1.25V         C2A-5 Neon         Wire Leads         50,000         High Flat         Amber           38-5465-10         1.25V         C2A-5 Neon         Wire Leads         25,0	38-5455-06	6.3V	.04A	#32	Wire Leads	50,000	Square	Green
38-5459-06         6.3V         .04A         #32         Wire Leads         50,000         Square         White           38-5459-50         125V         C2A-5 Neon         Wire Leads         25,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-10         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Amber           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         <	38-5455-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	Green
38-5459-50         125V         C2A-5 Neon         Wire Leads         25,000         Square         White           38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,	38-5455-12	12V/14V	.08A	#35	Wire Leads	50,000	Square	Green
38-5459-12         12V/14V         .08A         #35         Wire Leads         50,000         Square         White           38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-50         12SV         C2A-5 Neon         Wire Leads         50,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5469-12         12V/14V         .08A         #35         Wire Lea	38-5459-06	6.3V	.04A	#32	Wire Leads	50,000	Square	White
38-5462-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Red           38-5462-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Amber           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5469-10         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Wire Leads           38-5499-50         125V         C2A-5 Neon         Wire Leads         50,000	38-5459-50	125V		C2A-5 Neon	Wire Leads	25,000	Square	White
38-5462-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Red           38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-10         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Wire Leads           38-5469-10         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         White           38-549-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome	38-5459-12	12V/14V	.08A	#35	Wire Leads	50,000	Square	White
38-5462-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Red           38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-10         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         Green           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-549-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         White           38-5492-10         125V         C2A-5 Neon         Wire Leads         50,000         Large	38-5462-06	6.3V	.04A	#32	Wire Leads	50,000	High Flat	Red
38-5463-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Amber           38-5463-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5469-06         6.3V         .04A         #32         Wire Leads         25,000         High Flat         White           38-5469-12         12V/14V         .08A         #35         Wire Leads         25,000         High Flat         White           38-549-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5492-12         12V/14V         .08A         #32         Wire Leads         25,000 <th>38-5462-50</th> <th>125V</th> <th></th> <th>C2A-5 Neon</th> <th>Wire Leads</th> <th>25,000</th> <th>High Flat</th> <th>Red</th>	38-5462-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Red
38-5463-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat High Flat Amber           38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat High Flat Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat High Flat Green           38-5465-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat High Flat Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat High Flat Green           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat High Flat Green           38-5469-10         125V         C2A-5 Neon         Wire Leads         50,000         High Flat High Flat White           38-5491-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat High Flat Green           38-5491-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat Green           38-5492-12         12V/14V         .08A         #32         Wire Leads         50,000         Large Dome Red           38-5	38-5462-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Red
38-5463-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Amber           38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-549-50         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         White           38-549-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-549-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Larg	38-5463-06	6.3V	.04A	#32	Wire Leads	50,000	High Flat	Amber
38-5465-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         Green           38-5465-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Red           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Larg	38-5463-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Amber
38-5465-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         Green           38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-12         125V         C2A-5 Neon         Wire Leads         50,000         High Flat         White           38-549-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5492-06         6.3V         .04A         #32         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-10         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Red           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000 <th>38-5463-12</th> <th>12V/14V</th> <th>.08A</th> <th>#35</th> <th>Wire Leads</th> <th>50,000</th> <th>High Flat</th> <th>Amber</th>	38-5463-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Amber
38-5465-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         Green           38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5499-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Red           38-5493-10         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-10         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Lar	38-5465-06	6.3V	.04A	#32	Wire Leads	50,000	High Flat	Green
38-5469-06         6.3V         .04A         #32         Wire Leads         50,000         High Flat         White           38-5469-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5469-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000 <th>38-5465-50</th> <th>125V</th> <th></th> <th>C2A-5 Neon</th> <th>Wire Leads</th> <th>25,000</th> <th>High Flat</th> <th>Green</th>	38-5465-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	Green
38-5469-50         125V         C2A-5 Neon         Wire Leads         25,000         High Flat         White           38-5469-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000	38-5465-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	Green
38-5469-12         12V/14V         .08A         #35         Wire Leads         50,000         High Flat         White           38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Red           38-5493-06         6.3V         .04A         #32         Wire Leads         25,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads	38-5469-06	6.3V	.04A	#32	Wire Leads	50,000	High Flat	White
38-5490-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Clear           38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000 </th <th>38-5469-50</th> <th>125V</th> <th></th> <th>C2A-5 Neon</th> <th>Wire Leads</th> <th>25,000</th> <th>High Flat</th> <th>White</th>	38-5469-50	125V		C2A-5 Neon	Wire Leads	25,000	High Flat	White
38-5492-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Red           38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads	38-5469-12	12V/14V	.08A	#35	Wire Leads	50,000	High Flat	White
38-5492-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Red           38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Red           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000	38-5490-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	Clear
38-5492-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Red           38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-06         6.3V         .04A         #32         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads	38-5492-06	6.3V	.04A	#32	Wire Leads	50,000	Large Dome	Red
38-5493-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Amber           38-5493-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-50         125V         C2A-5 Neon         Wire Leads         50,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads	38-5492-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	Red
38-5493-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Amber           38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5492-12	12V/14V	.08A	#35	Wire Leads	50,000	Large Dome	Red
38-5493-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Amber           38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5493-06	6.3V	.04A	#32	Wire Leads	50,000	Large Dome	Amber
38-5495-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Green           38-5495-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5493-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	Amber
38-5495-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Green           38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5493-12	12V/14V	.08A	#35	Wire Leads	50,000	Large Dome	Amber
38-5495-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Green           38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5495-06	6.3V	.04A	#32	Wire Leads	50,000	Large Dome	Green
38-5496-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         Blue           38-5496-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5495-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	Green
38-5496-50         125V         C2A-5 Neon         Wire Leads         25,000         Large Dome         Blue           38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5495-12	12V/14V	.08A	#35	Wire Leads	50,000	Large Dome	Green
38-5496-12         12V/14V         .08A         #35         Wire Leads         50,000         Large Dome         Blue           38-5499-06         6.3V         .04A         #32         Wire Leads         50,000         Large Dome         White	38-5496-06	6.3V	.04A	#32	Wire Leads	50,000	Large Dome	Blue
<b>38-5499-06</b> 6.3V .04A #32 Wire Leads 50,000 Large Dome White	38-5496-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	Blue
. 3	38-5496-12	12V/14V	.08A	#35	Wire Leads	50,000	Large Dome	Blue
38-5499-50 125V (2A-5 Neon Wire Leads 25 000 Large Dome White	38-5499-06	6.3V	.04A	#32	Wire Leads	50,000	Large Dome	White
Ville Leads 23,000 Large Dollie Willie	38-5499-50	125V		C2A-5 Neon	Wire Leads	25,000	Large Dome	White
<b>38-5499-12</b> 12V/14V .08A #35 Wire Leads 50,000 Large Dome White	38-5499-12	12V/14V	.08A	#35	Wire Leads	50,000	Large Dome	White





# STANDARD LED'S

GC Electronics offers a vast line of both standard and custom discrete (without mounting hardware) LED products for the lighting industry. Since LED's offer a very dependable source of light in a vast array of package sizes and configurations they can be used for most applications. LED's are a current limiting device and work off voltages. If operating voltages are higher than typically needed, than a resistor must be used.



#### 3mm (T-1)

These devices are 3mm in diameter, which is .125"

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-4301	20	2.5V	2.0V	High Red	Diffused	60	3mm (T-1)
39-4302	10	2.5V	2.0V	Red	Diffused	60	3mm (T-1)
39-4303	10	2.5V	2.0V	Amber	Diffused	60	3mm (T-1)
39-4304	10	2.5V	2.0V	Yellow	Diffused	60	3mm (T-1)
39-4305	20	2.5V	2.0V	Green	Diffused	60	3mm (T-1)
39-4391	20	2.5V	2.0V	High Red	Diffused	60	3mm (T-1)
39-4392	10	2.5V	2.0V	Red	Diffused	60	3mm (T-1)
39-4393	10	2.5V	2.0V	Orange	Diffused	60	3mm (T-1)
39-4394	10	2.5V	2.0V	Yellow	Diffused	60	3mm (T-1)
39-4395	20	2.5V	2.0V	Green	Diffused	60	3mm (T-1)



#### 5mm (T-1-3/4)

These devices are 5mm in diameter, which is .219"

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-3501	20	2.5V	2.0V	High Red	Diffused	60	5mm
39-3502	10	2.5V	2.0V	Red	Diffused	60	5mm
39-3504	10	2.5V	2.0V	Yellow	Diffused	60	5mm
39-3505	10	2.5V	2.0V	Green	Diffused	60	5mm
39-3506	20	2.5V	2.0V	Blue	Diffused	60	5mm
39-3512	20	2.5V	2.0V	Super Red	Diffused	60	5mm
39-3513	10	2.5V	2.0V	Pure Orange	Diffused	60	5mm
39-3515	10	2.5V	2.0V	Super Green	Diffused	60	5mm



#### 10mm

These devices are 10mm in diameter, which is .433"

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-3182	20	2.5V	2.0V	High Red	Diffused	60	10mm
39-3183	10	2.5V	2.0V	Pure Orange	Diffused	60	10mm
39-3184	10	2.5V	2.0V	Yellow	Diffused	60	10mm
39-3185	20	2.5V	2.0V	Green	Diffused	60	10mm



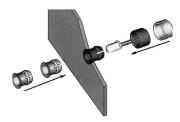




#### Rectangular

These devices are 2mm x 5mm in size, which is .079" x .197"

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-3011	20	2.5V	2.0V	High Red	Diffused	110	2mm x 5mm
39-3012	10	2.5V	2.0V	Red	Diffused	110	2mm x 5mm
39-3013	10	2.5V	2.0V	Pure Orange	Diffused	110	2mm x 5mm
39-3014	10	2.5V	2.0V	Yellow	Diffused	110	2mm x 5mm
39-3015	20	2.5V	2.0V	Green	Diffused	110	2mm x 5mm
39-3111	20	2.5V	2.0V	Super Red	Diffused	110	2mm x 5mm



#### **Snap-in Mounting Hardware for Panel Mount LED's**

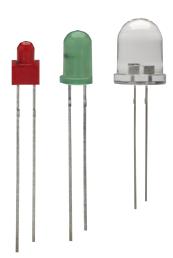
Cat. No.	LED Size		
39-105	5mm (T-1-3/4)		
39-150	5mm (T-1-3/4))		
39-205	5mm (T-1-3/4)		
39-250	5mm (T-1-3/4)		

Cat. No.	LED Size
39-130	3mm (T-1)
39-230	3mm (T-1)
39-901	10mm



### Molded and Stackable LED Holders for 90° Display Mounting

Cat. No.	LED Size	No. of LED's
39-132	3mm (T-1)	1
39-232	3mm (T-1)	2
39-152	5mm (T-1)	1
39-252	5mm (T-1)	2



#### **Blinking LED's**

The blinking LED is designed to flash on/off at regular intervals depending upon the operating voltage. The frequency of the flashing ranges from 2.5Hz to 1.5Hz. The higher the operating voltage, the slower it flashes.

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-6161	20	2.5V	2.0V	Blinking High Red	Diffused	60	3mm (T-1)
39-6162	20	2.5V	2.0V	Blinking Red	Diffused	60	3mm (T-1)
39-6165	20	2.5V	2.0V	Blinking Green	Diffused	60	3mm (T-1)
39-6501	10	2.5V	2.0V	Blinking High Red	Diffused	60	5mm (T-1.75)
39-6502	20	2.5V	2.0V	Blinking Red	Diffused	60	5mm (T-1.75)
39-6511	20	2.5V	2.0V	Blinking Super Red	Diffused	60	5mm (T-1.75)
39-6514	10	2.5V	2.0V	Blinking Yellow	Diffused	60	5mm (T-1.75)
39-6515	20	2.5V	2.0V	Blinking Green	Diffused	60	5mm (T-1.75)
39-6182	20	2.5V	2.0V	Blinking Super Red	Clear	40	10mm
39-6185	20	2.5V	2.0V	Blinking Green	Diffused	60	10mm





#### **B-Color LED's**

The LED's emit two different colors of light depending on the way the voltage is applied to the device. These are available in both two (2) legged and three (3) legged versions. With the three (3) legged models, if voltage is applied from both directions at the same time, a third color is visible.

Cat. No.	Forward/Rev Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-7324	20/10	2.5V	2.0V	High Red/Yellow	Diffused	60	3mm (T-1)
39-7325	20/20	2.5V	2.0V	High Red/Green	Diffused	60	3mm (T-1)
39-7354	20/10	2.5V	2.0V	Green/Yellow	Diffused	60	3mm (T-1)
39-7524	20/10	2.5V	2.0V	High Red/Yellow	Diffused	60	5mm (T-1.75)
39-7525	20/20	2.5V	2.0V	High Red/Green	Diffused	60	5mm (T-1.75)
39-7554	20/10	2.5V	2.0V	Green/Yellow	Diffused	60	5mm (T-1.75)
39-9524	20/10	2.5V	2.0V	High Red/Yellow	Diffused	60	5mm (T-1.75)
39-9525	20/20	2.5V	2.0V	High Red/Green	Diffused	60	5mm (T-1.75)
39-9554	20/10	2.5V	2.0V	Green/Yellow	Diffused	60	5mm (T-1.75)
39-9125	20/20	2.5V	2.0V	High Red/Green	Diffused	50	10mm

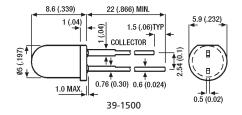
#### **Infra-Red Emitters**

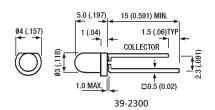
The infrared emitting LED's are widely used in transmitters and remote control devices.

Cat. No.	Forward Current (If) ma	Max Forward Voltage	Typical Forward Voltage	LED Emitting Color	Case Type	View Angle	LED Size
39-3507	20	1.5V	1.2V	Infrared	Transparent	30	5mm (T-1.75)
39-3508	20	1.5V	1.2V	Infrared	Transparent	30	5mm (T-1.75)
39-4355	20	1.7V	1.4V	Infrared	Transparent	30	3mm (T-1)

#### **Phototransistors**

An electronic switch, that when activated, allows current to pass through the device.





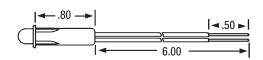
Cat. No.	Collector/Emitter Breakdown Voltage	Emitter/Collector Breakdown Voltage	On State Collector Current	LED Emitting Color	Case Type	View Angle	LED Size
39-1500	30V	5V	2ma-8ma	Photo Transistor	Clear	n/a	5mm (T-1.75)
39-2300	30V	5V	2ma-8ma	Photo Transistor	Clear	n/a	3mm (T-1)



### Press-to-Fit .25" Hole Panel Lamps

These Press-to-fit panel lamps fit into a .25" mounting hole and are available in several colors and voltages. They are made from Nylon material and have 24 AWG 6" wire leads. These devices have current limiting resistors in the housing.



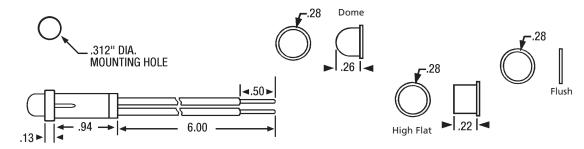


Cat. No.	Forward Current (If) ma	Operating Voltage	Resister Included	LED Emitting Color	Mounting Type	LED/Lamp Size
39-1752-06	10	5V/6V	Yes	Red	Snap-in	5mm (T-1-3/4)
39-1752-12	10	12V/12V	Yes	Red	Snap-in	5mm (T-1-3/4)
39-1752-24	10	24V/28V	Yes	Red	Snap-in	5mm (T-1-3/4)
39-1753-06	10	5V/6V	Yes	Amber	Snap-in	5mm (T-1-3/4)
39-1753-12	10	12V/12V	Yes	Amber	Snap-in	5mm (T-1-3/4)
39-1753-24	10	24V/28V	Yes	Amber	Snap-in	5mm (T-1-3/4)
39-1755-06	10	5V/6V	Yes	Green	Snap-in	5mm (T-1-3/4)
39-1755-12	10	12V/12V	Yes	Green	Snap-in	5mm (T-1-3/4)
39-1755-24	10	24V/28V	Yes	Green	Snap-in	5mm (T-1-3/4)



#### Press-to-Fit .312" Hole Panel Lamps

These Press-to-fit panel lamps fit into a .312" mounting hole and are available in several colors and voltages. They are made from Nylon material and have 18 AWG 6" wire leads. These devices have current limiting resistors in the housing.









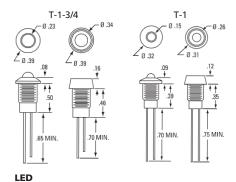




#### **Bezel Mounted LED Panel Lamps**

**Forward** 

The Bezel mounts are available in several styles for both T-1 (3mm) and T-1-3/4 (5mm) sizes. The T-1 size uses a mounting hole of .24" and the T-1-3/4 uses .31" diameter hole. All devices greater than 2V have current limiting resistor mounted in the lead and have 26 AWG wire leads.





Cat. No.	Current (If) ma	Operating Voltage	Resister Included	Emitting Color	Mounting Type	LED/Lamp Size
39-4612-05	10	5V/6V	Yes	Red	Recess Chrome	3mm (T-1)
39-4612-12	10	12V/14V	Yes	Red	Recess Chrome	3mm (T-1)
39-4614-05	10	5V/6V	Yes	Yellow	Recess Chrome	3mm (T-1)
39-4614-12	10	12V/14V	Yes	Yellow	Recess Chrome	3mm (T-1)
39-4615-05	10	5V/6V	Yes	Green	Recess Chrome	3mm (T-1)
39-4615-12	10	12V/14V	Yes	Green	Recess Chrome	3mm (T-1)
39-5612-05	10	5V/6V	Yes	Red	Recess Chrome	5mm (T-1-3/4)
39-5612-12	10	12V/14V	Yes	Red	Recess Chrome	5mm (T-1-3/4)
39-5614-05	10	5V/6V	Yes	Yellow	Recess Chrome	5mm (T-1-3/4)
39-5614-12	10	12V/14V	Yes	Yellow	Recess Chrome	5mm (T-1-3/4)
39-5615-05	10	5V/6V	Yes	Green	Recess Chrome	5mm (T-1-3/4)
39-5615-12	10	12V/14V	Yes	Green	Recess Chrome	5mm (T-1-3/4)



39-4622-05	10	5V/6V	Yes	Red	Recess Black	3mm (T-1)
39-4622-12	10	12V/14V	Yes	Red	Recess Black	3mm (T-1)
39-4624-05	10	5V/6V	Yes	Yellow	Recess Black	3mm (T-1)
39-4624-12	10	12V/14V	Yes	Yellow	Recess Black	3mm (T-1)
39-4625-05	10	5V/6V	Yes	Green	Recess Black	3mm (T-1)
39-4625-12	10	12V/14V	Yes	Green	Recess Black	3mm (T-1)
39-5622-05	10	5V/6V	Yes	Red	Recess Black	5mm (T-1-3/4)
39-5622-12	10	12V/14V	Yes	Red	Recess Black	5mm (T-1-3/4)
39-5624-05	10	5V/6V	Yes	Yellow	Recess Black	5mm (T-1-3/4)
39-5624-12	10	12V/14V	Yes	Yellow	Recess Black	5mm (T-1-3/4)
39-5625-05	10	5V/6V	Yes	Green	Recess Black	5mm (T-1-3/4)
39-5625-12	10	12V/14V	Yes	Green	Recess Black	5mm (T-1-3/4)



39-4632-05	10	5V/6V	Yes	Red	Dome Chrome	3mm (T-1)
39-4632-12	10	12V/14V	Yes	Red	Dome Chrome	3mm (T-1)
39-4634-05	10	5V/6V	Yes	Yellow	Dome Chrome	3mm (T-1)
39-4634-12	10	12V/14V	Yes	Yellow	Dome Chrome	3mm (T-1)
39-4635-05	10	5V/6V	Yes	Green	Dome Chrome	3mm (T-1)
39-4635-12	10	12V/14V	Yes	Green	Dome Chrome	3mm (T-1)
39-5632-05	10	5V/6V	Yes	Red	Dome Chrome	5mm (T-1-3/4)
39-5632-12	10	12V/14V	Yes	Red	Dome Chrome	5mm (T-1-3/4)
39-5634-05	10	5V/6V	Yes	Yellow	Dome Chrome	5mm (T-1-3/4)
39-5634-12	10	12V/14V	Yes	Yellow	Dome Chrome	5mm (T-1-3/4)
39-5635-05	10	5V/6V	Yes	Green	Dome Chrome	5mm (T-1-3/4)
39-5635-12	10	12V/14V	Yes	Green	Dome Chrome	5mm (T-1-3/4)



39-5635-12	10	12V/14V	Yes	Green	Dome Chrome	5mm (T-1-3/4)
39-4642-05	10	5V/6V	Yes	Red	Dome Black	3mm (T-1)
39-4642-12	10	12V/14V	Yes	Red	Dome Black	3mm (T-1)
39-4644-05	10	5V/6V	Yes	Yellow	Dome Black	3mm (T-1)
39-4644-12	10	12V/14V	Yes	Yellow	Dome Black	3mm (T-1)
39-4645-05	10	5V/6V	Yes	Green	Dome Black	3mm (T-1)
39-4645-12	10	12V/14V	Yes	Green	Dome Black	3mm (T-1)
39-5642-05	10	5V/6V	Yes	Red	Dome Black	5mm (T-1-3/4)
39-5642-12	10	12V/14V	Yes	Red	Dome Black	5mm (T-1-3/4)
39-5644-05	10	5V/6V	Yes	Yellow	Dome Black	5mm (T-1-3/4)
39-5644-12	10	12V/14V	Yes	Yellow	Dome Black	5mm (T-1-3/4)
39-5645-05	10	5V/6V	Yes	Green	Dome Black	5mm (T-1-3/4)
39-5645-12	10	12V/14V	Yes	Green	Dome Black	5mm (T-1-3/4)





# **GLOSSARY**

#### LED

Light emitting diode

#### **VIEWING ANGLE**

The typical light output pattern for an LED. It is measured by determining the angle between half intensity points on either side of lamp axis.

This expresses the light output of the LED in Millicandelas. This is in reverse of the viewing angle. The wider the viewing, the lower the intensity.

#### **FORWARD CURRENT (IF)**

The maximum continuous operating current an LED can withstand without change.

#### FORWARD VOLTAGE

This is the operating voltage of the LED.

#### RESISTORS

Current limiting devices used to allow LED's to operate at voltages other than normal for the LED.

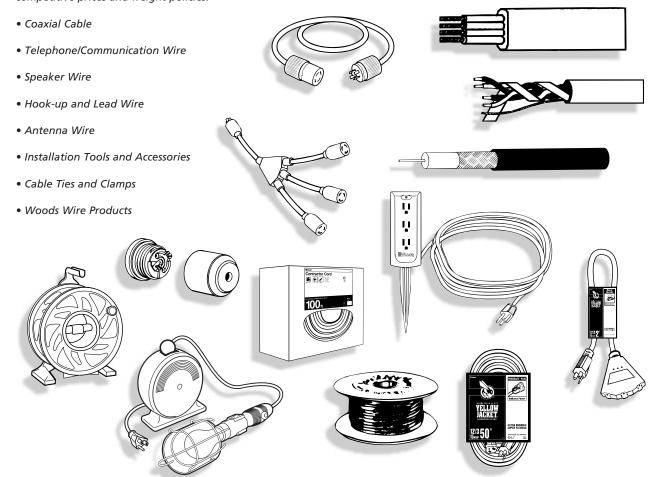


GC Electronics' line of wire and cable has grown with the industry. Few suppliers can offer the range of conductor types supplied by GC. As one of the original manufacturers of antenna wire, GC still offers a full selection of the cables used today, ranging from 300-ohm flat and foam-filled wire to coaxial cable. In addition to our breadth of product type, GC offers you a variety of put-ups enabling you to do one installation, or an entire network. But GC offers you more than antenna wire.

Communication cables have grown from simple telephone station wire to more complex designs; including twisted pair and coax cables. GC has grown along with the industry, offering both the commodity-grade products needed for standard installations and the high bandwidth cables required for today's computer networks. GC, as your one source supplier, offers you the latest cable configurations; including Category 5 and Enhanced Category 5 cables. But GC's selection of cables covers more than just communications.

If you're repairing electro-mechanical devices, GC's selection of hook-up and magnet wire, in small, cost-effective put-ups, makes it easy to get the job done. If you're installing a stereo system, a home theater, or a professional sound studio, GC's line of speaker wire will meet your needs. But as part of the Katy Companies, GC's line of wire continues to grow.

In this section, you'll find a complete line of power cables, both in bulk wire and finished cord sets and devices. Woods Wire products give you industrial and consumer-grade cordage to meet your portable power needs. Choose from a wide selection of extension cords, work lights, and cable management accessories, stocked in Rockford for prompt shipment. Like most products supplied by GC, you can order Woods products one cord at a time or one pallet at a time and benefit from GC's competitive prices and freight policies.







### COAXIAL CABLE



#### **RG-58/U**

Non-UL

Specifications:

Conductor (AWG)/Type: 20 gauge

Solid Bare Copper

% of Braid: 80% Bare Copper Braid Nominal Impedance: 53 Ohms

Dielectric Material/Nominal O.D.: Solid

Polyethylene/0.116"

Jacket Material/Nominal O.D.: Black PVC/0.195"

Nominal Velocity of Propagation: 66% Nominal Capacitance: 28.5 (pF/ft.)

Nominal Attenuation per 100 ft.:

50 MHz 3.1dB

100 MHz 4.6 dB 200 MHz 7.0 dB

400 MHz 10.0 dB

900 MHz 16.0 dB

#### Applications:

Broadcast, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
1000 ft.	Black	Spool	14-920-9H81



#### **RG-59/U**

Non-UL

Specifications:

Conductor (AWG)/Type: 22 gauge

Solid Bare Copper

% of Braid: 70% Bare Copper Braid Impedance: 80 Ohms Dielectric Material Nominal O.D.: Polyethylene Foam/0.146" Jacket Material/Nominal O.D.: Black or White

PVC/0.240"

Nominal Velocity of Propagation: 78% Nominal Capacitance: 16.3 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 2.0 dB

100 MHz 2.9 dB

200 MHz 4.1 dB

400 MHz 5.9 dB

900 MHz 8.8 dB

#### Applications:

Citizen Band Radio, Local Area Network, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
500 ft.	Black	Spool	14-922-9H61
1000 ft.	Black	Spool	14-922-9H81
1000 ft.	White	Spool	14-922-9H89



#### **RG-59/U**

Dual Rated: UL NEC Type CL2/CATV/AWM 1354

Specifications:

Conductor (AWG)/Type: 20 gauge Solid Bare Copper Covered Steel % of Braid: 100% Aluminum Foil;

40% Aluminum Braid

Nominal Impedance: 75 Ohms

Dielectric Material/Nominal O.D.: Polyethylene

Foam/0.143"

Jacket Material/Nominal O.D.: Black PVC/0.240"

Nominal Velocity of Propagation: 78% Nominal Capacitance: 17.3 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 1.8 dB

100 MHz 2.5 dB

200 MHz 3.7 dB

400 MHz 6.2 dB

900 MHz 8.7 dB

#### Applications:

CATV, Internal Class 2 Circuits Wiring, Local Area Network, MATV, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
500 ft.	Black	Spool	14-920-1H61



# **RG-59/U**

Non-UL

Specifications:

Conductor (AWG)/Type: 22 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Aluminum Foil; 40% Aluminum Braid

Nominal Impedance: 80 Ohms

Dielectric Material/Nominal O.D.: Polyethylene Foam/0.143"

Jacket Material/Nominal O.D.: Black PVC/0.240" Nominal Velocity of Propagation: 78% Nominal Capacitance: 16.3 (pF/ft.)

Nominal Attenuation per 100 ft.:

50 MHz 2.0 dB

100 MHz 2.9 dB

200 MHz 4.1 dB

400 MHz 5.9 dB

900 MHz 8.8 dB

#### Applications:

Local Area Network, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
500 ft.	Black	Spool	14-924-9H61
1000 ft.	Black	Spool	14-924-9H81



#### **RG-59/U**

Dual Rated: UL NEC Type CL2/CATV/AWM 1354

Specifications:

Conductor (AWG)/Type: 22 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Foil; 20% Aluminum Braid

Nominal Impedance: 80 Ohms

Dielectric Material/Nominal O.D.: Polyethylene Foam/0.143"

Jacket Material/Nominal O.D.: Black PVC/0.235" Nominal Velocity of Propagation: 78% Nominal Capacitance: 16.3 (pF/ft.)

Nominal Attenuation per 100 ft.:

50 MHz 2.0 dB

100 MHz 2.9 dB

200 MHz 4.1 dB

400 MHz 5.9 dB 900 MHz 8.8 dB

#### Applications:

CATV, Internal Class 2 Circuits. Local Area Network, MATV, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
1000 ft.	Black	Spool	14-921-9H81



#### RG-59/U Quad Shield Dual Rated: UL NEC Type

CL2/CATV/AWM 1354

Specifications:

Conductor (AWG)/Type: 22 gauge Solid Bare Copper Covered Steel % of Braid: 100% Aluminum Foil; 40% Aluminum Braid (Two of Each) Nominal Impedance: 80 Ohms

Dielectric Material/Nominal 0.D.: Polyethylene

Foam/0.143'

Jacket Material/Nominal O.D.: Black PVC/0.255"

Nominal Velocity of Propagation: 78% Nominal Capacitance: 16.3 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 2.0 dB

100 MHz 2.9 dB

200 MHz 4.1 dB

400 MHz 5.9 dB 900 MHz 8.8 dB

2 Circuits Wiring

CATV, FM Broadcast, MATV, RF Signal Transmission, Local Area Network, Internal Class

Length	Color	Pkg.	Cat. No.	
1000 ft.	Black	Spool	14-944-9H81	







#### RG-62A/U 100% Shield

#### Non-UL

Specifications:

Conductor (AWG)/Type: 22 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Aluminum Tape Shield;

38% Aluminum Braided Shield Nominal Impedance: 93 Ohms

Dielectric Material/Nominal O.D.: Semi-Solid

Polyethylene/0.146"

Jacket Material/Nominal O.D.: Black PVC/0.240" Nominal Velocity of Propagation: 84%

Nominal Velocity of Propagation: 8 Nominal Capacitance: 13.5 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 1.9 dB 100 MHz 2.7 dB 200 MHz 3.7 dB 400 MHz 5.3 dB 900 MHz 8.1 dB

#### Applications:

Computer, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
1000 ft.	Black	Spool	14-824-9H81



#### **RG-6/U**

Dual Rated: UL NEC Type CL2/CATV/AWM 1354

Specifications:

Conductor (AWG)/Type: 18 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Foil; 60% Aluminum Braid

Nominal Impedance: 75 Ohms

Dielectric Material/Nominal O.D.: Polyethylene

Foam/0.180'

Jacket Material/Nominal O.D: Black PVC/0.240"

Nominal Velocity of Propagation: 78% Nominal Capacitance: 17.3 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 1.5 dB 100 MHz 2.1 dB 200 MHz 3.2 dB 400 MHz 6.2 dB 900 MHz 7.2 dB

#### Applications:

FM Broadcast, Local Area Network, RF Signal Transmission

Length		Color	Pkg.	Cat. No.
	500 ft.	Black	Spool	14-918-9H69
	1000 ft.	Black	Spool	14-918-9H89



#### Super Link™ Dual A/V Cable

Super Link™ Audio/Video Cable is constructed with OFC (oxygen free copper) stranded center conductor and a 90% copper shield over a 100% Mylar foil protected by a super flexible jacket. For use when customizing audio patch cables to interlink CD players, amplifiers, tuners, VCR's and tape decks. This made to measure interconnect keeps the length of cable between connections to a minimum. Use Superlink I or II connectors for termination.

24 AWG Impedance: 75 ohms

O.D.: .230

Length	Pkg.	Cat. No.
100 ft.	Spool	14-990-2H41
250 ft.	Spool	14-990-2H51



#### RG-6/U

Non-UL

Specifications:

Conductor (AWG)/Type: 18 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Foil; 46% Aluminum Braid

Nominal Impedance: 75 Ohms

Dielectric Material/Nominal O.D.: Polyethylene

Foam/0.180"

Jacket Material/Nominal O.D.: Black PVC/0.270" Nominal Velocity of Propagation: 78%

Nominal Capacitance: 17.3 (pF/ft.) Nominal Attenuation per 100 ft.:

> 50 MHz 1.5 dB 100 MHz 2.1 dB 200 MHz 3.2 dB

400 MHz 5.2 dB 900 MHz 7.2 dB

Applications:

FM Broadcast, Local Area Network, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
1000 ft.	Black	Spool	14-926-9H81



#### **RG-6 Quad Shield**

Dual Rated: UL NEC Type CL2/CATV/AWM 1354

Specifications:

Conductor (AWG)/Type: 18 gauge Solid Bare Copper Covered Steel

% of Braid: 100% Foil; 60% Aluminum Braid,

100% Foil, 48% Aluminum Braid **Nominal Impedance:** 75 ohm

Dielectric Material/Nominal O.D.: Polyethylene

Foam/0.180"

Jacket Material/Nominal O.D.: Black PVC/0.275"

Nominal Velocity of Propagation: 78% Nominal Capacitance: 17.3 (pF/ft.) Nominal Attenuation per 100 ft.:

50 MHz 1.5 dB 100 MHz 2.1 dB 200 MHz 3.2 dB 400 MHz 6.2 dB 900 MHz 7.2 dB

#### Applications:

CATV, FM Broadcast, Internal Class 2 Circuits Wiring, Local Area Network, MATV, RF Signal Transmission

Length	Color	Pkg.	Cat. No.
1000 ft.	Black	Spool	14-918-1H81





## TELEPHONE/COMMUNICATION WIRE

#### CAT 5 100 MHz UTP Cable-Solid/Patch

UL/CSA Listed: ANSI/TIA/EIA 568A Complaint

PVC = CMR/Plenum = CMP

Specifications:

Conductor: 24 AWG Bare Copper Insulation: HDPE,FRPE,100% FEP

(patch: FRPE,HDPE) Jacket Material: FRPVC

Jacket Colors: Grey PVC & Blue Plenum -

ripcord under jacket

LAN cable UTP 4 pr. solid PVC. jacket for general communications/datacom needs.

Length		Color Pkg.		Cat. No.	
	500 ft.	Grey	Reel/Box	14-555-8L68	
	1000 ft.	Grey	Reel/Box	14-555-8L88	

Unshielded:

Nominal Impedance: 100+/-15 ohms Mutual Capacitance (max nf/1000 ft.): 17.1 Capacitance Unbalance (pair to ground):

330pt/100m max

DC Resistance (max.ohms/1000 ft.): 28.6 DC Resistance Unbalance of a Pair: 5% max Propagation Delay Skew: 25 nS/100M Normal Velocity of Propagation:

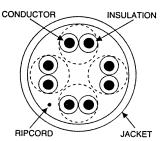
Plenum FEP insulated 69% Non-Plenum insulated 66%

Nominal O.D.: .190 Patch O.D.: .220

LAN cable UTP stranded PVC for use with jumper cables, work area outlet to PCs, terminals, workstations, data equipment and telecommunications, and for connecting hub equipment to patch panel.

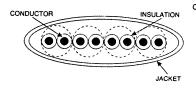
Length	Color	Pkg.	Cat. No.
1000 ft.	Grey	Reel/Box	14-554-8B88

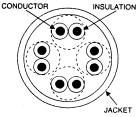




LAN cable 4 pr. solid plenum for use in commercial buildings.

Length	Color	Pkg.	Cat. No.
1000 ft.	Blue Plenum	Reel/Box	14-9555-8L86







#### CAT 5 Enhanced Level 6 350MHz UTP

UL/CSA Listed: CMR,CMP -ANSI/TIA/EIA 568A Complaint

PVC = CMR/Plenum = CMP

Specifications:

Conductor: 24 AWG Bare Copper &

Bare Stranded Copper

Insulation: HDPE,FRPE,100% FEP

Jacket Material: FRPVC

Jacket Colors: Grey PVC & Grey or Blue Plenum -

ripcord under jacket (bare solid copper)

Unshielded:

Nominal Impedance: 100+/-15 ohms Mutual Capacitance (max nf/1000 ft.): 17.1 Attenuation-to-Crosstalk Ratio: 100MHz min. =

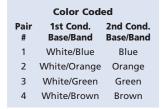
12.2dB, typical 18.2dB

DC Resistance (max.ohms/1000 ft): 28.6 Propagation Delay Skew: 25 nS/100M Normal Velocity of Propagation: Plenum FEP insulated 69% Non-Plenum insulated 66% Enhanced High Performance CAT 5 UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems.

Length Color		Color Pkg.		Cat. No.		
	1000 ft.	Grey PVC	Reel/Box	14-350-8L89		
	1000 ft.	Grey or Blue	Reel/Box	14-9350-8L89		
		Plenum				









#### 22 AWG Twisted Pair Phone Wire CAT 3



UL Listed: CMR rated 2 & 3 pair

Specifications:

Conductor: 22 AWG Solid Bare Copper Conductor O.D.: .0253 Insulation Nominal Thickness: Polyethylene .008

Jacket: PVC – Beige Nominal Jacket O.D.: .018

DC Resistance: 18.0 ohms/1000 ft. max. Impedance: 1.0-16.0 MHz - 100 ohms +/- 15% Structural Return Loss (dB): 1.0-10.0 MHz = 12

Attenuation	(dP/motors	2+	2000	١
Attenuation	(a <i>B/meters</i>	аτ	20°C	ľ

256Khz 1.3dB 772KHz 2.2dB 1.0MHz 2.6dB 4.0 5.6dB 8.0 8.5dB 9.0 9.7dB

Length	Color	Rating	Nom. O.D.	Pkg.	Pairs	Cat. No.
1000 ft.	Beige	CMR	.180	Pull-Out Box	2	14-622-4L89
1000 ft.	Beige	CMR	.200	Pull-Out Box	3	14-622-6L89



# Pair 1st Cond. 2nd Cond. Base/Band Blue 2 White/Orange Orange 3 White/Brown Brown

### 24 AWG Twisted Pair Phone Wire CAT 3



UL Listed: CMR rated 2,3,4,6 pair

Specifications:

Conductor: 24 AWG Solid Bare Copper Conductor O.D.: .0201 Insulation Nominal Thickness: Polyethylene .008

Jacket: PVC - Beige Nominal Jacket O.D.: .018

DC Resistance: 28.06 ohms/1000 ft. max. Impedance: 1.0-16.0 MHz - 100 ohms +/- 15% Structural Return Loss (dB): 1.0-10.0 MHz = 12

#### Attenuation (dB/meters at 20°C):

256Khz 1.3dB 772KHz 2.2dB 1.0MHz 2.6dB 4.0 5.6dB 8.0 8.5dB 9.0 9.7dB

Length	Color	Rating	Nom. O.D.	Pkg.	Pairs	Cat. No.
1000 ft.	Beige	CMR	.140	Pull-Out Box	2	14-624-4L89
1000 ft.	Beige	CMR	.160	Pull-Out Box	3	14-624-6L89
1000 ft.	Beige	CMR	-	Pull-Out Box	4	14-624-8L89
1000 ft.	Beige	CMR	-	Pull-Out Box	6	14-624-9L89
100 ft.	Beige	CMR	.140	Hank	3	30-9973







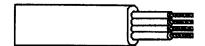
### 22 AWG Solid Telephone Station Wire

Beige-jacketed hook-up wire with color-coded wires within.

		•	
Cat. No.	Pkg.	Conductor	Length
30-9902	Hank	4	25 ft.
30-9900	Hank	4	50 ft.
30-9901	Hank	4	100 ft.
30-9905	Knockout Carton	4	500 ft.
30-9959	Knockout Carton	4	1000 ft.
30-9953	Pullout Box	4	1000 ft.
**30-9960	Spool	4	5000 ft.
*30-9979	Knockout Carton	4	1000 ft.
30-9969	Hank	6	100 ft.
30-9970	Knockout Carton	6	500 ft.
30-9971	Knockout Carton	6	1000 ft.
**30-9972	Spool	6	3000 ft.

<sup>\*</sup>UL Listed: CMX

 $<sup>\</sup>hbox{$^*$*Non-stock. Made to order only items.}$ 



#### 26 AWG Stranded Flat Modular Line Cord

Jacketed line cord with color coded wires. Use with telephone modular plugs.

Length	Conductor	Color	Pkg.	Cat. No.
500 ft.	4	Grey	Knockout Carton	30-9906
50 ft.	4	Grey	Hank	30-9907
100 ft.	4	Grey	Hank	30-9908
50 ft.	4	Ivory	Hank	30-9920
100 ft.	4	Ivory	Hank	30-9922
500 ft.	4	Ivory	Knockout Carton	30-9924
5000 ft.	4	Grey	Spool	**30-9961
1000 ft.	4	Grey	Spool	30-9962
1000 ft.	4	Ivory	Spool	30-9963
5000 ft.	4	Ivory	Spool	**30-9964
100 ft.	6	Grey	Hank	30-9932
100 ft.	6	Ivory	Hank	30-9933
500 ft.	6	Grey	Knockout Carton	30-9934
1000 ft.	6	Grey	Spool	30-9965
1000 ft.	6	Ivory	Spool	30-9966
4000 ft.	6	Grey	Spool	**30-9967
4000 ft.	6	Ivory	Spool	**30-9968
500 ft.	8	Grey	Spool	30-9945
1000 ft.	8	Grey	Spool	30-9940
3000 ft.	8	Grey	Spool	30-9988

<sup>\*\*</sup>Non-stock. Made to order only items.



### 24 AWG Solid Telephone Station Wire

Beige-jacketed hook-up wire with color-coded wires within.

Length	Conductor	Pkg.	Cat. No.
100 ft.	4	Hank	30-9956
100ft.	4	Hank	*30-9903
500 ft.	4	Knockout Carton	30-9957
1000 ft.	4	Knockout Carton	30-9958
1000 ft.	4	Pullout Box	30-9952
5000 ft.	4	Spool	**30-9980
1000 ft.	4	Knockout Carton	*30-9978
1000 ft.	6	Knockout Carton	30-9976
4000 ft.	6	Spool	**30-9982

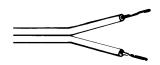
<sup>\*</sup>UL Listed: CMX

<sup>\*\*</sup>Non-stock. Made to order only items.





### SPEAKER WIRE



Two conductor FLAT PARALLEL WIRE for loudspeaker connection and other low voltage applications such as alarm, signal and telephone circuits. Temperature range: -20° to +60°C. White identification polarity stripe.

#### 24 Gauge (2-Conductor)

Specifications:

Conductor AWG: 24 gauge

Stranding: 7/32

Insulation Nominal Wall Thickness: .016"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .055" x .110"

Applications:

Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
25 ft.	Clear	Spool	14-224-2B13
50 ft.	Clear	Spool	14-224-2B23
100 ft.	Clear	Spool	14-224-2B43
500 ft.	Clear	Spool	14-224-2B63
1000 ft.	Clear	Spool	14-224-2B83
50 ft.	Clear	Hank	30-586
100 ft.	Clear	Hank	30-588

#### 22 Gauge (2-Conductor)

Specifications:

Conductor AWG: 22 gauge

Stranding: 7/30

Insulation Nominal Wall Thickness: .020"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .070" x .140"

Applications:

Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
25 ft.	Clear	Spool	14-222-2C13
50 ft.	Clear	Spool	14-222-2C23
100 ft.	Clear	Spool	14-222-2C43
500 ft.	Clear	Spool	14-222-2C63
1000 ft.	Clear	Spool	14-222-2C83

#### 20 Gauge (2-Conductor)

Specifications:

Conductor AWG: 20 gauge

Stranding: 7/28

Insulation Nominal Wall Thickness: .025"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .085" x .170"

Applications:

Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
25 ft.	Clear	Spool	14-220-2D13
50 ft.	Clear	Spool	14-220-2D23
100 ft.	Clear	Spool	14-220-2D43
500 ft.	Clear	Spool	14-220-2D63
1000 ft.	Clear	Spool	14-220-2D83
50 ft.	Clear	Hank	30-553

#### 18 Gauge (2-Conductor)

Specifications:

Conductor AWG: 18 gauge

Stranding: 16/30

Insulation Nominal Wall Thickness: .025"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .100" x .200"

Applications:

Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
25 ft.	Clear	Spool	14-218-2E13
50 ft.	Clear	Spool	14-218-2E23
100 ft.	Clear	Spool	14-218-2E43
250 ft.	Clear	Spool	14-218-2E53
500 ft.	Clear	Spool	14-218-2E63
1000 ft.	Clear	Spool	14-218-2E83
50 ft.	Clear	Hank	30-584
100 ft.	Clear	Hank	30-554

#### 16 Gauge (2-Conductor)

Specifications:

Conductor AWG:16 gauge

Stranding: 19/29

Insulation Nominal Wall Thickness: .025"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .105" x .205"

Applications:

Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
25 ft.	Clear	Spool	14-216-2F13
50 ft.	Clear	Spool	14-216-2F23
100 ft.	Clear	Spool	14-216-2F43
250 ft.	Clear	Spool	14-216-2F53
500 ft.	Clear	Spool	14-216-2F63
1000 ft.	Clear	Spool	14-216-2F83

#### 14 Gauge (2-Conductor)

Specifications:

Conductor AWG: 14 gauge

Stranding: 19/27

Insulation Nominal Wall Thickness: .025"

Voltage: 300V

Temperature Rating: -20°C to +60°C Construction: Bare Copper Conductors; Clear PVC; 1 Conductor Identified for Polarity

Nominal O.D.: .120" x .240"

Applications:

.. Automotive Speaker Wire, Juke Boxes,

Stereo Speaker Wire

Length	Color	Pkg.	Cat. No.
50 ft.	Clear	Spool	14-214-2Q23
100 ft.	Clear	Spool	14-214-2Q43
500 ft.	Clear	Spool	14-214-2Q63







#### Speaker Wire (2-Conductor) 16 AWG/14 AWG

For in-wall installations. 2-conductor stranded bare

copper wire. Each conductor is insulated with an overall jacket.

Specifications for 14 Gauge: Conductor AWG: 14 gauge

Stranding: 19/27 Insulation Nominal Wall Thickness: .015

Voltage: 300V

**Temperature Rating:** Flame Retardant PVC Jacket - 75°C

Construction: Bare Copper Conductors; Semi-Rigid PVC Insulation;

Conductors Cabled
Jacket Nominal O.D.: .025
Nominal O.D.: .248"
UL Rated: .NEC Type MP
Specifications for 16 Gauge:
Conductor AWG: 16 gauge

Stranding: 19/29

Insulation Nominal Wall Thickness: .010

Voltage: 300V

Temperature Rating: Flame Retardant PVC Jacket - 75°C

**Construction:** Bare Copper Conductors; Semi-Rigid PVC Insulation;

Conductors Cabled Jacket Nominal O.D.: .025 Nominal O.D.: .176" UL Rated: .NEC Type MP

Applications:

Intercom Systems, Interconnecting Cables, Public Address Systems, Remote Control Circuits, Class 2 & 3 Circuits, Installation in Wet/Dry Locations

Length	Color	Pkg.	Cat. No.
1000 ft.	Grey	Spool	14-214-2Q89
1000 ft.	Grey	Spool	14-216-2F89



#### Speaker Wire (4-Conductor)16 AWG

**UL Rated: NEC Type MP** 

For in-wall installations. 4-conductor stranded bare copper wire. Each conductor is insulated with an overall jacket.

Specifications:

Conductor AWG: 16 gauge

Stranding: 19/29

Insulation Nominal Wall Thickness: .010

Voltage: 300V

Temperature Rating: Flame Retardant PVC Jacket - 75°C

Construction: Bare Copper Conductors; Simi-Rigid PVC Insulation;

Conductors Cabled Jacket Nominal O.D.: .025 Nominal O.D.: .236

Applications:

Intercom Systems, Interconnecting Cables, Public Address Systems, Remote Control Circuits

Length	Color	Pkg.	Cat. No.
1000 ft.	Grey	Spool	14-216-4F89



#### Power-Flex<sup>™</sup> Speaker Cable (2-Conductor)

Specifications:

**Conductor AWG:** 10 gauge **Stranding:** 413/36

Insulation Nominal Wall Thickness: .070

Voltage: 300V

Temperature Rating: -20°C to + 60°C

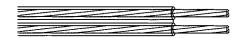
Construction: Bare Oxygen Free Copper Conductors; Flexible PVC Insulation and Rope Lay; Surface Print for Identification & Polarity

Nominal O.D.: .270 x .540

#### Applications:

Low capacitance cable for use in high definition speaker systems. Rope lay designed to increase the conductive surface, reduce "skin effect", and maximum flexibility. Low capacitance, resistance, and inductance of these cables transfer music signals from amplifier to speakers with high clarity and definition.

Length	Color	Pkg.	Cat. No.
100 ft.	Clear	Spool	14-210-9H43
250 ft.	Clear	Spool	14-210-9H53
500 ft.	Clear	Spool	14-210-9H63
25 ft.	Clear	Hank	30-581



#### Power-Flex<sup>™</sup> Speaker Cable (2-Conductor)

Specifications:

Conductor AWG: 12 gauge

**Stranding:** 259/36

Insulation Nominal Wall Thickness: .055

Voltage: 300V

Temperature Rating: -20°C to + 60°C

**Construction:** Bare Oxygen Free Copper Conductors; Extra Flexible PVC Insulation and Rope Lay; Surface Print for Identification & Polarity

Nominal O.D.: .205 x .415

#### Applications:

Low capacitance cable for use in high definition speaker systems. Rope lay designed to increase the conductive surface, reduce "skin effect", and maximum flexibility. Low capacitance, resistance, and inductance of these cables transfer music signals from amplifier to speakers with high clarity and definition.

Length	Color	Pkg.	Cat. No.
100 ft.	Clear	Spool	14-212-9H43
250 ft.	Clear	Spool	14-212-9H53
500 ft.	Clear	Spool	14-212-9H63
25 ft.	Clear	Hank	30-583



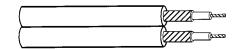


# **AUDIO WIRE**

#### **Coaxial Audio Cable**

This shielded audio cable is ideal for custom audio connections. The superior quality of this cable can be used in car and home installations. Insulated dual 26 AWG, with copper center conductor; PVC insulation with spiral copper shield.

500 ft. O.D. 2.6mmx5.2mm Cat. No. 14-219-9H63



# **HOOKUP & LEAD WIRE**

#### 26 Gauge

Specifications:

Stranding: 7/34

Insulation Thickness: .010" (Stranded) .009" (Solid) .010"

Insulation Material: Semi-Rigid PVC Nominal O.D.: .039" (Stranded) .036" (Solid)

Max. Rating: 300V Amps Rating: 4 Amps

#### Stranded

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-426-1H10	14-426-1H40	14-426-1H80
Black	14-426-1H11	14-426-1H41	14-426-1H81
Brown	14-426-1H12	14-426-1H42	14-426-1H82
Orange	14-426-1H13	14-426-1H43	14-426-1H83
Off-White	14-426-1H14	14-426-1H44	14-426-1H84
Violet	14-426-1H15	14-426-1H45	14-426-1H85
Red	14-426-1H16	14-426-1H46	14-426-1H86
Green	14-426-1H17	14-426-1H47	14-426-1H87
Yellow	14-426-1H18	14-426-1H48	14-426-1H88
Light Blue	14-426-1H19	14-426-1H49	14-426-1H89
	-	-	

#### Solid

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-426-1K10	14-426-1K40	14-426-1K80
Black	14-426-1K11	14-426-1K41	14-426-1K81
Brown	14-426-1K12	14-426-1K42	14-426-1K82
Orange	14-426-1K13	14-426-1K43	14-426-1K83
Off-White	14-426-1K14	14-426-1K44	14-426-1K84
Violet	14-426-1K15	14-426-1K45	14-426-1K85
Red	14-426-1K16	14-426-1K46	14-426-1K86
Green	14-426-1K17	14-426-1K47	14-426-1K87
Yellow	14-426-1K18	14-426-1K48	14-426-1K88
Light Blue	14-426-1K19	14-426-1K49	14-426-1K89

<sup>\*\*</sup>Non-stock. Made to order.

#### 24 Gauge

Specifications: Stranding: 7/32

Insulation Thickness: .010" Insulation Material: Semi-Rigid PVC Nominal O.D.: .044 (Stranded) .040" (Solid)

Max. Rating: 300V Amps Rating: 6 Amps

#### Stranded

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-424-1B10	14-424-1B40	14-424-1B80
Black	14-424-1B11	14-424-1B41	14-424-1B81
Brown	14-424-1B12	14-424-1B42	14-424-1B82
Orange	14-424-1B13	14-424-1B43	14-424-1B83
Off-White	14-424-1B14	14-424-1B44	14-424-1B84
Violet	14-424-1B15	14-424-1B45	14-424-1B85
Red	14-424-1B16	14-424-1B46	14-424-1B86
Green	14-424-1B17	14-424-1B47	14-424-1B87
Yellow	14-424-1B18	14-424-1B48	14-424-1B88
Light Blue	14-424-1B19	14-424-1B49	14-424-1B89

#### Solid

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-424-1L10	14-424-1L40	14-424-1L80
Black	14-424-1L11	14-424-1L41	14-424-1L81
Brown	14-424-1L12	14-424-1L42	14-424-1L82
Orange	14-424-1L13	14-424-1L43	14-424-1L83
Off-White	14-424-1L14	14-424-1L44	14-424-1L84
Violet	14-424-1L15	14-424-1L45	14-424-1L85
Red	14-424-1L16	14-424-1L46	14-424-1L86
Green	14-424-1L17	14-424-1L47	14-424-1L87
Yellow	14-424-1L18	14-424-1L48	14-424-1L88
Light Blue	14-424-1L19	14-424-1L49	14-424-1L89

<sup>\*\*</sup>Non-stock. Made to order.







#### 22 Gauge



Nominal O.D.: .050" (Stranded) .045" (Solid)

Insulation Thickness: .010" Max. Rating: 300V Insulation Material: Semi-Rigid PVC Amps Rating: 8 Amps

#### Stranded

Stranueu			
Color	25 ft.	100 ft.	**1000 ft.
Grey	14-422-1C10	14-422-1C40	14-422-1C80
Black	14-422-1C11	14-422-1C41	14-422-1C81
Brown	14-422-1C12	14-422-1C42	14-422-1C82
Orange	14-422-1C13	14-422-1C43	14-422-1C83
Off-White	14-422-1C14	14-422-1C44	14-422-1C84
Violet	14-422-1C15	14-422-1C45	14-422-1C85
Red	14-422-1C16	14-422-1C46	14-422-1C86
Green	14-422-1C17	14-422-1C47	14-422-1C87
Yellow	14-422-1C18	14-422-1C48	14-422-1C88
Light Blue	14-422-1C19	14-422-1C49	14-422-1C89

#### Solid

50114			
Color	25 ft.	100 ft.	**1000 ft.
Grey	14-422-1M10	14-422-1M40	14-422-1M80
Black	14-422-1M11	14-422-1M41	14-422-1M81
Brown	14-422-1M12	14-422-1M42	14-422-1M82
Orange	14-422-1M13	14-422-1M43	14-422-1M83
Off-White	14-422-1M14	14-422-1M44	14-422-1M84
Violet	14-422-1M15	14-422-1M45	14-422-1M85
Red	14-422-1M16	14-422-1M46	14-422-1M86
Green	14-422-1M17	14-422-1M47	14-422-1M87
Yellow	14-422-1M18	14-422-1M48	14-422-1M88
Light Blue	14-422-1M19	14-422-1M49	14-422-1M89

<sup>\*\*</sup>Non-stock. Made to order.

#### 20 Gauge

Specifications: Stranding: 7/28

Nominal O.D.: .058" (Stranded) .052" (Solid) Insulation Thickness: .010" Max. Rating: 300V Insulation Material: Semi-Rigid PVC Amp Rating: 10 Amps

#### **Stranded**

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-420-1D10	14-420-1D40	14-420-1D80
Black	14-420-1D11	14-420-1D41	14-420-1D81
Brown	14-420-1D12	14-420-1D42	14-420-1D82
Orange	14-420-1D13	14-420-1D43	14-420-1D83
Off-White	14-420-1D14	14-420-1D44	14-420-1D84
Violet	14-420-1D15	14-420-1D45	14-420-1D85
Red	14-420-1D16	14-420-1D46	14-420-1D86
Green	14-420-1D17	14-420-1D47	14-420-1D87
Yellow	14-420-1D18	14-420-1D48	14-420-1D88
Light Blue	14-420-1D19	14-420-1D49	14-420-1D89

#### Solid

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-420-1010	14-420-1040	14-420-1080
Black	14-420-1011	14-420-1041	14-420-1081
Brown	14-420-1012	14-420-1042	14-420-1082
Orange	14-420-1013	14-420-1043	14-420-1083
Off-White	14-420-1014	14-420-1044	14-420-1084
Violet	14-420-1015	14-420-1045	14-420-1085
Red	14-420-1016	14-420-1046	14-420-1086
Green	14-420-1017	14-420-1047	14-420-1087
Yellow	14-420-1018	14-420-1048	14-420-1088
Light Blue	14-420-1019	14-420-1049	14-420-1089

<sup>\*\*</sup>Non-stock. Made to order.

#### 18 Gauge





Specifications: Stranding: 19/.0092 Nominal O.D.: .066" (Stranded) .060" (Solid)

Insulation Thickness: .010" Max. Rating: 300V Amps Rating: 15 Amps Insulation Material: Semi-Rigid PVC

#### Stranded

Juliaca			
Color	25 ft.	100 ft.	**1000 ft.
Grey	14-418-1E10	14-418-1E40	14-418-1E80
Black	14-418-1E11	14-418-1E41	14-418-1E81
Brown	14-418-1E12	14-418-1E42	14-418-1E82
Orange	14-418-1E13	14-418-1E43	14-418-1E83
Off-White	14-418-1E14	14-418-1E44	14-418-1E84
Violet	14-418-1E15	14-418-1E45	14-418-1E85
Red	14-418-1E16	14-418-1E46	14-418-1E86
Green	14-418-1E17	14-418-1E47	14-418-1E87
Yellow	14-418-1E18	14-418-1E48	14-418-1E88
Light Blue	14-418-1E19	14-418-1E49	14-418-1E89

#### Solid

Color	25 ft.	100 ft.	**1000 ft.
Grey	14-418-1P10	14-418-1P40	14-418-1P80
Black	14-418-1P11	14-418-1P41	14-418-1P81
Brown	14-418-1P12	14-418-1P42	14-418-1P82
Orange	14-418-1P13	14-418-1P43	14-418-1P83
Off-White	14-418-1P14	14-418-1P44	14-418-1P84
Violet	14-418-1P15	14-418-1P45	14-418-1P85
Red	14-418-1P16	14-418-1P46	14-418-1P86
Green	14-418-1P17	14-418-1P47	14-418-1P87
Yellow	14-418-1P18	14-418-1P48	14-418-1P88
Light Blue	14-418-1P19	14-418-1P49	14-418-1P89

<sup>\*\*</sup>Non-stock. Made to order.



#### **Magnet Wire**

Insulated with polyurethane and nylon. Perfect for winding coils and transformers.

NEMA Temp Rating: 155°C/730°F NEMA Spec: MW – 80°C Heat Shock Test: 175°C

Applications: Lighting, Ballasts, Relays & Timers,

Motor Applications, Auto Devices

Nom. Bare Dia.	Length	Gauge	Resist.ohms/ 1000;@20°C	Cat.No.
.0285	50 ft.	21 AWG	12.768	L3-610
.0201	100 ft.	24 AWG	25.796	L3-612
.0125	200 ft.	28 AWG	65.325	L3-614
.0080	400 ft.	32 AWG	162.05	L3-616





### ANTENNA WIRE



#### Twin Lead - 22 Gauge - Flat

Specifications:

Conductor AWG/Type: 22 gauge-Flat/Bare

Copper Conductors **Stranding:** 7/30

Insulation & Jacket Material: Polyethylene

Nominal O.D.: .068" x .450" Nominal Impedance: 300 Ohms

Temperature Rating: -20°C to 60°C; Resistant to

Ultraviolet Rays

Nominal Attenuation per 100 ft.:

100 MHz 1.1 dB 200 MHz 1.7 dB 300 MHz 2.2 dB 500 MHz 3.1 dB 900 MHz 4.5 dB

Applications:

FM & TV Transmission Lines. Designed for use with color or black/white TV, as well as FM multiplex

Length	Color	Pkg.	Cat. No.
50 ft.	Black	Hank*	14-322-2C22
75 ft.	Black	Hank*	14-322-2C32
100 ft.	Black	Hank*	14-322-2C42
500 ft.	Black	Spool	14-322-2C62

<sup>\*</sup>Hang tab package



#### Twin Lead - 20 Gauge - Foam-Filled

Specifications:

Conductor AWG/Type: 20 Foam-Filled

Stranding: 7/28

Insulation Thickness: .50"

Insulation Jacket Material: Polyethylene

Nominal O.D.: .145" x .400"
Condutor Material: Bare Copper
Nominal Velocity Impedance: 300 Ohms
Temperature Rating: -20° to 60°C
Nominal Attenuation per 100 ft.:

100 MHz 1.2 dB 300 MHz 2.6 dB 700 MHz 4.3 dB 900 MHz 4.8 dB

#### Applications:

FM & TV Transmission Lines. Designed for use with color or black/white TV, as well as FM multiplex

Length	Color	Pkg.	Cat. No.
50 ft.	Black	Hank*	14-520-2N21
75 ft.	Black	Hank*	14-520-2N31
100 ft.	Black	Hank*	14-520-2N41

<sup>\*</sup>Hang tab package



#### **Rotor Wire**

Specifications:

Conductor/Gauge: 3 conductor Round/20 gauge

Stranding: 7/28

Insulation Wall Thickness: .010"

Jacket Wall: .020" Insulation Material: PVC Jacket Material: Black PVC Nominal O.D.: .162" Voltage: 200V

Temperature Rating: -20°C to +60°C Conductor. Material: Stranded Bare Copper 3-Conductor Color Code: 1C = Black, 2C =

White, 3C = Red

100 ft.

Cat. No. 14-620-3C41

1000 ft.

Cat. No. 14-620-3C81

# **INSTALLATION TOOLS**



#### Cable Tie Gun

Lightweight, molded plastic cable tie installation tool. User controls tension and cuts tie with 180° rotation of tool. Will work with our Cat. No. 34-438-C through No. 34-468-C cable ties.

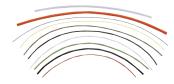
Cat. No. 12-472



#### Spaghetti Assortment

An assortment of insulating tubing. Assorted sizes and colors. 9" lengths.

Pkg. of 25 Cat. No. 550



#### **Teflon Tubing Assortment**

Assortment of high quality Teflon tubing in a variety of diameters. Withstands temperatures to 500°F. 9" lengths.

Pkg. of 25 Cat. No. H3-461



#### Heat Shrinkable Tubing Assortment

Shrinks to half its original size when heated. Use it for insulating terminals, connectors, tool handles and wire splices. Use heat gun, oven or barrel of soldering iron. Assorted sizes and colors. 6"lengths.

Pkg. of 7 **Cat. No. H3-462** 



#### Heat Gun

UL Listed, 115V AC

A dual range heat gun for use in heating shrink tube and drying coatings, adhesives, etc. Low temperature range setting produces a nominal 700°F (2,000 BTU's), high range 975°F (4,000 BTU's). Maximum setting draws 10 Amps, low heat draws 5 Amps. A light weight design that is easy to handle. Designed so that it may be put down to cool without a special holder.

Cat. No. 12-997







#### Flexible Heat Shrinkable PVC Tubing

Fungus-resistant and non-corrosive PVC tubing. Application of heat (250°F) shrinks tubing to 50% of original diameter. Recommended for tightly sealing connectors, weather proofing repaired sections in insulated wire or cable, etc. Meets UL requirements, ASTM D-922, Mil, spec. MIL-1-631 Grade C and MIL-1-23053 Grade 5b.

Specifications:

Recovery Temperature: 250°F Tensile Strength: 1800 PSI min.

Flammability: Less than 15 seconds (ASTM D-876)

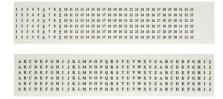
**Dielectric Strength:** 800V/MIL **Dielectric Constant:** 7.0 1 kHz

Material: PVC, Class A (105°C) shrinkdown,

packaged in 6" lengths

Pieces Per Bag	Diameter Expanded	Diameter Recovered	Cat. No.
35	.062"	.031"	12-1040
32	.093"	.046"	12-1042
30	.125"	.062"	12-1044
27	.187"	.093"	12-1046
23	.250	.125"	12-1048
19	.375"	.187"	12-1052
27	.125"	.078"	12-1062
23	Assorte	12-1080	
19	Assorte	12-1082*	

\*N.S.N. 5970-01-051-4708



#### Wire & Cable Markers

Letters or numbers for identification of wiring and component location. Permanent, legible, foolproof. Made of durable, vinyl cloth markers with plastic coating. Adhesion to steel. Resistant to oil, water, abrasions. Service Temperature Rating: 40°F to +250°F Pre-cut to exact size. Self-adhesive backed.

Numbers 1-33

Cat. No. 12-2210

Numbers 34-66

Cat. No. 12-2211

Numbers 67-99

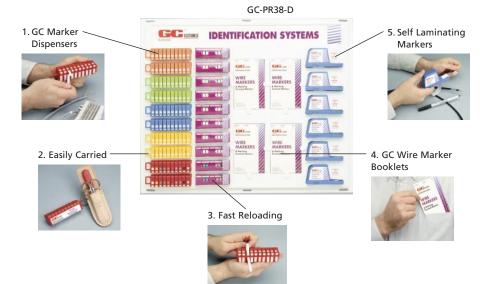
Cat. No. 12-2212

Letters A-Z

Cat. No. 12-2213

Kit: 3 Strips of 33, Numbers 1-99

Cat. No. 12-9229



#### Wire/Cable ID System

Portable wire marker system. Each dispenser contains 76 of each numeral or NEMA colors. Markers have an acrylic adhesive resistant to oil or water and can be used from -40°F to +250°F. Lightweight and compact in size. The dispenser can safely be hooked onto a tool belt or carried in a shirt pocket or tool box. Refill you dispenser the way you want it. 0-9 colors or Nema colors. There is no need for serrated edges or blades, because each marker is pre-cut and non-conductive.

Loaded Dispenser 0-9

Cat. No. GC-KMM-0-9

Loaded Dispenser NEMA colors Cat. No. GC-KMM-NEMA

Refill (0-9)

Cat. No. GC-TMM-0-9

Refill NEMA colors

Cat. No. GC-TMM-NEMA

#### Wire/Cable ID System

Wire marker booklets are convenient pocket size packages of tape wire markers. Each booklet contains 10 pages of 1-1/4" pre-cut wire markers, plus terminal identification containing a comination of numbers or NEMA colors.

Wire Marker Book 0-9 Cat. No. GC-ZTB-1

Wire Marker Book A-Z,0-15,+,-,/
Cat. No. GC-ZTB-2

Wire Marker Book 1-45

Cat. No. GC-ZTB-3 Wire Marker Book 46-90 Cat. No. GC-ZTB-8

#### Wire/Cable ID System

Self-laminating markers available in 2 sizes. RW13 measure 3/4"W x 3"L with a 3/4" square write on area (90 markers). RW52 measure 3/4"W x 1-7/8"L with a 3/4" x 1/2" write on area (150 markers).

Write-on Dispenser Cat. No. GC-RW13 Write-on Dispenser Cat. No. GC-RW52



I. Write your own legend on white area



 Pull backing tape down to dispense marker



3. Place written portion on wire or cable . . .



4. . . . wrap transparent portion around for full protection



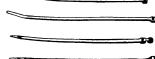


# CABLE TIES & CLAMPS

#### Self-Locking Cable Ties

Manufactured of 100% non-corrosive nylon. Bent-tip design for ease of handling installation. Easy to use permanent lock. Strong one-piece construction. UL Recognized.\*

Serviceable: to 185°F (85°C) Material: Nylon 6/6, RMS-01 Color: Natural & Black; UV stabilized Nylon 6/6, RMS-46



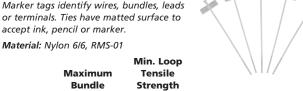




Length	Maximum Bundle Diameter	Min. Loop Tensile Strength Pounds	Color	Cat. No.
4"	3/4"	18	Black	34-450-C
4"	3/16"	18	Natural	34-451-C
6"	1-3/8"	30	Black	34-452-C
6"	1-3/8"	30	Natural	34-453-C
8"	2"	45	Black	34-454-C
8"	2"	45	Natural	34-455-C
8"	2"	75	Black	34-456-C
11"	3"	75	Black	34-458-C
11"	3"	75	Natural	34-459-C
15"	4"	120	Black	34-469-C
15"	4"	120	Natural	34-468-C

#### **Identification Tie**

Marker tags identify wires, bundles, leads or terminals. Ties have matted surface to accept ink, pencil or marker.



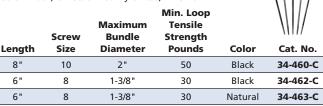
	Maximum Bundle	Tensile Strength	\\\/		
Length	Diameter	Pounds	Color	Cat. No.	
4-1/2"	3/4"	18	Natural	34-477-C	

### **Cable Ties with Screw Mount**

Screw mount ties eliminate the need for mounting device.

Material: Nylon 6/6, RMS-01

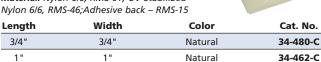
Color: Black; UV Stabilized Nylon 6/6, RMS-46



#### Flat Adhesive Backed Tie Mounts

Multi-directional; tie can be used from any side. Double adhesive tape with release tab.

Material: Nylon 6/6, RMS-01; UV Stabilized Nylon 6/6, RMS-46; Adhesive back - RMS-15



#### **Nylon Cable Clamps**

Clamps are designed for normal industrial and commercial application. Strong flexible nylon. Resistant to most chemicals. Bulk boxes of 100 clamps

Material: RMS-01 Color: Natural

Cable		
Holding Dia.	Туре	Cat. No.
1/4	Nylon	34-378-C
3/8	Nylon	34-316-C
1/2	Nylon	34-394-C
5/8	Nylon	34-402-C

#### Adjustable Adhesive Mounted Cable Clips

Handles dozens of routing jobs. Reduces inventory because 4 sizes adjust to any holding diameter from 5/16" to 1" (7.9mm to 25.4mm). Locks securely and can be easily reopened for routing changes. Adhesive backing material RMS-15. Bulk boxes of 100 clips.

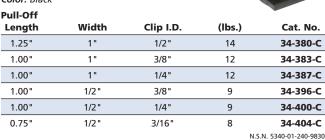
Material: Nylon 6/6, RMS-01 Color: Natural

Bundle Dia. Range	Length	Width	Clip Dia.	Clip Width	Cat. No.
5/16" to 13/32"	1"	3/4"	7/8"	.40	34-381-C
15/32" to 9/16"	1-1/4"	3/4"	1-3/32"	.40	34.382-C
37/64" to 3/4"	1-1/2"	3/4"	1-1/4"	.50	34-384-C
7/8" to 1"	2"	1"	1-3/4"	.50	34-385-C

#### Adhesive Mounted Locking Cable Clips

Exclusively patented lock-release design. Average pull-off strength is 12 pounds. Made of highimpact, sable PVC with a temperature range of -20°F to +180°F (best adhesion from +70° to +180°F). Bulk boxes of 100 clips.

Color: Black









# YELLOW JACKET® CONTRACTOR GRADE

Guaranteed for Life — Tough. Super Flexible Power Cords with Power Indicator Light



#### Yellow Jacket® Power Cords

Woods' exclusive Yellow Jacket® compound is more flexible and abrasion resistant at any temperature than standard vinyl compounds. (Don't confuse Woods' unique high-gloss super flexible Yellow Jacket® wire with yellow cords made of regular SJTW or SJEOW compounds.) Yellow Jacket® cords are three times as abrasion resistant as standard vinyl, making these cords the toughest on the job site. PowerLite indicator plugs glow when the cord has power. Extra heavy, clear molded plugs are rugged and durable.





WD-2884

Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack	
WD-2886	14/3	SJTW	25'	yellow	15A	12	
WD-2887	14/3	SJTW	50'	yellow	15A	6	
WD-2888	14/3	SJTW	100'	yellow	13A	3	
WD-2883	12/3	SJTW	25'	yellow	15A	6	
WD-2884	12/3	SJTW	50'	yellow	15A	4	
Individually packaged in easy-to-carry corrugated display box.							
WD-2885	12/3	SJTW	100'	yellow	15A	2	
WD-2805	10/3	SJTW	50'	yellow	15A	2	
WD-2806	10/3	SJTW	100'	yellow	15A	2	

### Yellow Jacket® with LOCK-JAW™ Locking Plug

Woods' patented LOCK-JAW™ locking plug keeps tools plugged in eliminating the frustration of tools coming unplugged. LOCK-JAW™ locking plug works with any tool.



WD-82734

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-82734	14/3	SJTW	50'	yellow	15A	7
WD-2737	12/3	SJTW	50'	yellow	15A	4
WD-2738	12/3	SJTW	100'	yellow	15A	2

#### Yellow Jacket® Power Cords with T-Blade Plug

#### The one-product solution for the contractor!

T-Blade female plug accepts tools with 15 amp and 20 amp plugs. No need for two cords with different female plug configurations. T-Blade on female plug only. Individually packaged in easy-to-carry corrugated display box.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-2991	10/3	SJTW	50'	yellow	20A	2
WD-2992	10/3	SJTW	100'	yellow	20A	2

Woods' T-Blade Female Plug





15A, 2-wire 15A, 3-wire



**14 WIRE** 

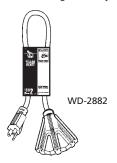






#### Yellow Jacket® Power Blocks

Yellow Jacket® Power Block three-outlet adapters with exclusive high-gloss, extra durable, super flexible wire. Solid molded power block head stands up to heat, cold and rough use on job sites.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack	
WD-2827	12/3	SJTW	50'	yellow	15A	4	
WD-2820	12/3	SJTW	100'	yellow	15A	2	
Extra heavy duty 600V insulated wire.							
WD-2882	12/3	STW	2'	yellow	15A	10	

#### Yellow Jacket® with Ground Fault Circuit Interrupters

Yellow Jacket® GFCI cords have either a male plug or an in-line ground fault circuit interrupter. Provides maximum safety. Manual test/reset buttons. Powerlite™ plugs glow when the cord has power.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack				
WD-2879	14/3	SJTW	6'	yellow	15A	6				
WD-2877	12/3	SJTW	2'	yellow	15A	10				
With 3-outlet power block.										
WD-2814	12/3	SJTW	2'	yellow	15A	10				
With 3-outlet b	lack molded powe	r block. Without	PowerLite.							
WD-2848	12/3	SJTW	2'	yellow	15A	6				
PowerBlock con	nvenience. In-line (	GFCI								
WD-82816	12/3	SJTW	2'	yellow	15A	6				
In-line GFCI.										
WD-82817	12/3	SJTW	2'	yellow	15A	6				

#### Yellow Jacket® GFCI Power Stations

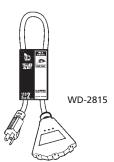
New Quad and Duplex GFCI protected power stations feature angled outlets allowing water to run-off for a safer electrical connection. A self-hinged door protects each set of outlets.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack	
Duplex Box – 15 AMP							
WD-2517	12/3	SJTW	6'	yellow	15A	6	
Quad Box – 15	AMP						
WD-2518	12/3	SJTW	6'	yellow	15A	4	
Quad Box – 20	AMP						
WD-2526	12/3	SJTW	6'	yellow	20A	4	

#### Yellow Jacket® with Circuit Analyzer Power Block

Yellow Jacket® exclusive circuit analyzer cord checks the outlet's circuit for ground and polarity as required in OSHA standard 1910.304. 600 Volt jacket.



						STANDARDS
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	Cord Color	125V Rating	Std Pack
WD-2815	12/3	STW	2'	yellow	15A	10







#### Yellow Jacket® Work Light with Protective Guard

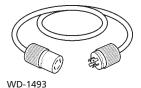
Features exclusive high-gloss Yellow Jacket® super flexible wire, high heat-resistant bulb collar, grounded metal guard, 13 amp grounded receptacle in handle and dual hooks. Hex shape cage helps direct light where needed. Coated wire cage keeps hot reflector from skin or upholstery. 100 watt bulb rating.



					_	STANDANDS
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-2893	16/3	TLS	25'	yellow	13A	12
WD-2948	16/3	SJT	50'	yellow	13A	4

#### Yellow Jacket® Generator Cords

Yellow Jacket® generator cords are the best solution for your temporary power needs. The 6' length is affordable and convenient. The added twist-to-lock feature ensures a locked connection.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
30 AMP powe	r cord with twist-to	-lock male and fe	male plugs.			
WD-1493	10/4	SJEOW	6'	yellow	30A	3

ACDelco

#### **AC Delco Pro-Series Retractable Cord Reels**

Products designed for the garage and workshop pro. New cord reels, oil-resistant power cords, drop lights and cool-burning fluorescent lights. Improved features and easy to install hardware.





Cat #	Gauge/ Cond	Wire Type	Cord Length	Cord Color	Bulb Rating	125V Rating	Std Pack
Red, metal, ret	ractable cord r	eel with flexib	le SVT cord and	drop light.			
WD-28000	18/3	SVT	50'	black	100W	10A	3
Red, metal, ret	ractable cord r	eel with conve	nience of a three	e outlet banana	plug.		
WD-28001	14/3	SJT	30'	black		15A	3
Red, metal, ret (ballast in hand		eel with flexib	le SVT cord and c	ool-burning 13	watt fluorescent	light. New flash	light type end

WD-28002	16/3	SVT	40'	black	13W	13A	3			
Red, metal, retractable cord reel with patented locking plug allows for easy switch-over of accessories.										
WD-28003	16/3	SJT	30'	black		13A	3			
WD-28004	14/3	SJT	30'	black		15A	3			









#### **AC Delco DIY Series Retractable Cord Reels**

Retractable cord reels include flexible SVT cord and black plastic housing. Includes mounting hardware integrated into the base.



	Gauge/	Wire	Cord	Cord	Bulb	125V				
Cat #	Cond	Type	Length	Color	Rating	Rating	Std Pack			
Retractable dro	p light with o	utlet, a circuit	breaker and met	al cage.						
WD-28020	18/3	SVT	20'	black	100W	7A	3			
Retractable flu	orescent light	with flashlight	type end (ballas	t in handle w/c	outlet).					
WD-28021	18/2	SVT	20'	black	13W	10A	3			
Retractable con	Retractable cord reel with single plug. Match with accessories.									
WD-28022	16/3	SVT	20'	black		13A	3			

#### **AC Delco Accessories**

Mix and match cord reel attachments.





Gauge/	Wire	Cord	Cord	Bulb	125V	
Cond	Type	Length	Color	Rating	Rating	Std Pack
360 degree co	oated wire cag	ge for increased s	afety. With out	tlet.		
16/3	SJT	2'	black	100W	13A	6
plastic reflect	or and guard.					
18/2	SJT	2'	black	75W	_	8
outlet Banana I	Plug.					
16/3	SJT	2'	black		13A	8
luorescent ligh	t with new fla	shlight type end	(ballast in han	dle w/outlet).		
16/3	SJT	2'	black	13W	13A	6
luorescent ligh	t with new fla	shlight type end	(ballast in han	dle).		
18/2	SJT	18"	black	13W	10A	6
	Cond 16/3 1 plastic reflect 18/2 16/3 16/3 10orescent ligh 16/3 10orescent ligh	Cond Type  a 360 degree coated wire cag  16/3 SJT  a plastic reflector and guard.  18/2 SJT  outlet Banana Plug.  16/3 SJT  duorescent light with new flat  uorescent light with new flat	Cond Type Length  a 360 degree coated wire cage for increased s  16/3 SJT 2'  a plastic reflector and guard.  18/2 SJT 2'  butlet Banana Plug.  16/3 SJT 2'  cluorescent light with new flashlight type end  16/3 SJT 2'  cluorescent light with new flashlight type end	Cond Type Length Color  a 360 degree coated wire cage for increased safety. With out  16/3 SJT 2' black  a plastic reflector and guard.  18/2 SJT 2' black  butlet Banana Plug.  16/3 SJT 2' black  currescent light with new flashlight type end (ballast in hand)  16/3 SJT 2' black  currescent light with new flashlight type end (ballast in hand)	Cond Type Length Color Rating a 360 degree coated wire cage for increased safety. With outlet.  16/3 SJT 2' black 100W a plastic reflector and guard.  18/2 SJT 2' black 75W autlet Banana Plug.  16/3 SJT 2' black uorescent light with new flashlight type end (ballast in handle w/outlet).  16/3 SJT 2' black 13W autorescent light with new flashlight type end (ballast in handle).	Cond Type Length Color Rating Rating  a 360 degree coated wire cage for increased safety. With outlet.  16/3 SJT 2' black 100W 13A  a plastic reflector and guard.  18/2 SJT 2' black 75W —  outlet Banana Plug.  16/3 SJT 2' black 13A  duorescent light with new flashlight type end (ballast in handle w/outlet).  16/3 SJT 2' black 13W 13A  duorescent light with new flashlight type end (ballast in handle).

#### **AC Delco Fluorescent Lights**

NEW Fluorescent Work Lights feature ballasts in handle and handy flashlight type endcap.



	Gauge/	Wire	Cord	Cord	Bulb	125V					
Cat #	Cond	Туре	Length	Color	Rating	Rating	Std Pack				
Cool burning fl	Cool burning fluorescent light with ballast in handle and flashlight type endcap.										
WD-828066	18/2	SJT	20'	black	13W	_	6				
Cool burning fl	Cool burning fluorescent light with ballast and outlet in handle, flashlight type endcap.										
WD-828067	16/3	SJT	25'	black	13W	_	6				
Full length refle	ector for more	light over the	workbench or e	ngine. Not avai	lable with flashlig	ght endcap.					
WD-828068	18/2	SJT	25'	black	15W	_	6				
Cool burning fl	Cool burning fluorescent light with ballast and outlet in handle, flashlight type endcap.										
WD-828069	16/3	SJT	6'	black	13W	_	6				

#### **AC Delco Oil-Resistant Power Cords**

Oil resistant cords resist oil and fuel and are perfect for use in the garage or workshop. Oil resistent cords stay flexible and durable even in prolonged oily environments.



	Gauge/	Wire	Cord	Cord	125V	
Cat #	Cond	Type	Length	Color	Rating	Std Pack
WD-828086	12/3	SJTOW	25'	black	15A	4
WD-828088	14/3	SJTOW	40'	black		4
Power Block with	three convenient	outlets.				
WD-828085	12/3	STOW	2'	black	15A	8
WD-828087	14/3	SJTOW	25'	black	15A	5







#### **AC Delco Drop Lights**

Quality drop lights for safety on the road or in the garage.



	Gauge/	Wire	Cord	Cord	Bulb	125V				
Cat #	Cond	Type	Length	Color	Rating	Rating	Std Pack			
Keep this drop	light in your t	runk for emerg	gencies. Low-vol	tage, clips to yo	our car battery.					
WD-828115	18/2	SPT-2	20'	black	50W	12Volt	6			
Drop light with 360 degree coated wire cage for increased safety. The oil resistent cord is perfect for the auto mechanic's garage. 100 watt bulb rating with outlet.										
WD-828135	16/3	SJTOW	25'	black	100W	13A	6			
Plastic guard with wwitch. No outlet.										
WD-828136	18/2	SJTW	25'	black	75W	_	6			

# **OUTDOOR - ROUND VINYL**

#### **Extension Cords**

Woods' outdoor cords are manufactured with stranded and cabled copper conductors and solid molded plugs for longer life. Outer jacket won't mark floors or walls. Woods' SJTW-A cords resist deterioration from moisture and abrasion and have a 300 Volt rating. All sides of the packages repeat selling copy to help consumers select the right cord for the job.







Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0257	16/2	SJTW	8'	black	13A	15
WD-0258	16/2	SJTW	15'	black	13A	15
WD-0720	16/2	SJTW	8'	orange	13A	15
WD-0721	16/2	SJTW	15'	orange	13A	15
WD-0722	16/2	SJTW	25'	orange	13A	12
WD-0723	16/2	SJTW	50'	orange	13A	12
WD-0725	16/2	SJTW	75'	orange	10A	6
WD-0724	16/2	SJTW	100'	orange	10A	6



WD-0517





**3-Conductor** 

3-Conductor						
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0260	16/3	SJTW	8'	black	13A	15
WD-0261	16/3	SJTW	15'	black	13A	12
WD-2356	16/3	SJTW	8'	white	13A	15
WD-2222	16/3	SJTW	20'	white	13A	12
WD-0265	16/3	SJTW	8'	orange	13A	15
WD-0266	16/3	SJTW	15'	orange	13A	12
WD-0267	16/3	SJTW	25'	orange	13A	12
WD-0268	16/3	SJTW	50'	orange	13A	12
WD-0269	16/3	SJTW	100'	orange	10A	6
WD-8229	16/3	SJTW	150'	orange	10A	4
WD-0625	14/3	SJTW	25'	orange	15A	12
WD-0626	14/3	SJTW	50'	orange	15A	6
WD-0627	14/3	SJTW	100'	orange	13A	3
WD-0528	12/3	SJTW	25'	orange	15A	6
WD-0529	12/3	SJTW	50'	orange	15A	4
WD-0530	12/3	SJTW	100'	orange	15A	2
10 guage, extra	heavy duty. Clear	molded PowerLi	te™ plugs. 20 AMP	capacity.		
WD-0517	10/3	SJTW	50'	orange	20A	2
WD-0518	10/3	SJTW	100'	orange	20A	2
Double-thick ou	iter jacket for long	er life. 600V rate	d. Corrugated carto	n.		
WD-0629	12/3	STW	50'	orange	15A	2
WD-0630	12/3	STW	100'	orange	15A	2







#### **High Visibility Safety Cords**

Black and yellow, red and black or blue and black striped cord designed for high visibility on the job site or at home.



Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
14/3	SJTW	50'	black/yellow	15A	6
14/3	SJTW	100'	black/yellow	13A	3
12/3	SJTW	50'	blue/black	15A	4
12/3	SJTW	100'	blue/black	15A	2
12/3	SJTW	50'	red/black	15A	4
12/3	SJTW	100'	red/black	15A	2
	14/3 14/3 12/3 12/3 12/3	14/3 SJTW 14/3 SJTW 12/3 SJTW 12/3 SJTW 12/3 SJTW	14/3 SJTW 50' 14/3 SJTW 100' 12/3 SJTW 50' 12/3 SJTW 100' 12/3 SJTW 50' 12/3 SJTW 50'	14/3         SJTW         50'         black/yellow           14/3         SJTW         100'         black/yellow           12/3         SJTW         50'         blue/black           12/3         SJTW         100'         blue/black           12/3         SJTW         50'         red/black	14/3         SJTW         50'         black/yellow         15A           14/3         SJTW         100'         black/yellow         13A           12/3         SJTW         50'         blue/black         15A           12/3         SJTW         100'         blue/black         15A           12/3         SJTW         50'         red/black         15A

#### YardMates® Landscape Cords

Green cord blends with outdoors. For use with lighting, bug zappers, rotisseries, spas, etc. Great for holiday lighting, too. Cross-merchandise with outdoor living products.



					$\sim$	STANDARDS			
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	Cord Color	125V Rating	Std Pack			
WD-0234	16/2	SJTW	40'	green	13A	12			
WD-0235	16/2	SJTW	80'	green	10A	6			
WD-0393	16/3	SJTW	40'	green	13A	12			
WD-0394	16/3	SJTW	80'	green	10A	6			
Power block on female plug with three grounded outlets.									
WD-8412	16/3	SJTW	35'	green	13A	9			

#### **DeckMates® Deck Cords**

Soft beige cord color won't detract from the beauty of decking or mulch. White cords are perfect for today's decor on the patio or inside the home. For outdoor living appliances, decorative lighting, and holiday lighting. In full-color, lifestyle packaging.



Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack			
WD-2387	16/3	SJTW	20'	beige	13A	12			
WD-0385	16/3	SJTW	40'	beige	13A	12			
WD-8386	16/3	SJTW	80'	beige	10A	6			
WD-2383	16/3	SJTW	20'	white	13A	12			
WD-2382	16/3	SJTW	40'	white	13A	12			
Power Block on female plug with three grounded outlets.									
WD-2389	16/3	SJTW	25'	beige	13A	12			
WD-0389	14/3	SJTW	25'	beige	15A	12			

#### **YardStake™**

Power stake with three outlets provides outdoor power where you need it. The rotating head moves as you work around the yard.





Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-2429	16/3	SJTW	25'	green	120V/150W	4







#### Super Flexible All-Season Cords

#### Features PowerLite Plug and Full Lifetime Guarantee!

Woods' super flexible cords are the best yard and home cords. Neon light embedded in a solid, clear female outlet assures consumers that they have power. Durable outer jacket is more flexible at any temperature than standard vinyl compounds. Bright, full-color packaging.



Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-2900	16/3	SJTW	25'	yellow	13A	6
WD-2897	16/3	SJTW	50'	yellow	13A	6
WD-2898	16/3	SJTW	100'	yellow	10A	4

WD-2900

#### **Tool Saver Circuit Breaker Cords**

Woods' tool saver circuit breaker cords protect valuable tools from damaging overload. Each cord has a reset button built into the male plug. Circuit breakers matched to cord's capacity. Drummer award-winning brilliant red packaging sells the consumer at retail.



					_	OTANDANDO				
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack				
WD-2401	16/3	SJTW	25'	black	13A	12				
WD-2402	16/3	SJTW	50'	black	13A	12				
WD-2403	16/3	SJTW	100'	black	10A	6				
WD-2404	14/3	SJTW	25'	black	15A	12				
WD-2405	14/3	SJTW	50'	black	15A	6				
WD-2406	14/3	SJTW	100'	black	13A	3				
WD-2407	12/3	SJTW	50'	black	15A	4				
WD-2408	12/3	SJTW	100'	black	15A	2				
Power block v	Power block version with solid molded three-outlet female. 600V jacket.									
WD-2414	12/3	STW-A	2'	black	15A	10				

#### **3-Outlet Power Blocks**

Power blocks are made with solid molded three-outlet plugs. Convenient three-outlet plug saves the cost and clutter of running two or three cords for tools and appliances around the home or job site. 300 volt rating.



					_	011111111111111111111111111111111111111			
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack			
WD-0825	14/3	SJTW	25'	orange	15A	12			
WD-0826	14/3	SJTW	50'	orange	15A	6			
WD-0827	14/3	SJTW	100'	orange	13A	4			
WD-0819	12/3	SJTW	50'	orange	15A	3			
WD-0820	12/3	SJTW	100'	orange	15A	2			
Three-conductor, extra heavy duty 600V insulated wire.									
WD-0824	12/3	STW	2'	orange	15A	10			







# **OUTDOOR - COLD FLEX**

### **Extension Cords**

### Now more flexible at colder temperatures!

Woods' cold flex cords are designed for use in cold environments. They stay flexible down to -58°F. Manufactured with molded solid plugs. The outer jacket resists deterioration from moisture, abrasion, and extended exposure to sunlight.





WD-0663

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-0655	16/3	SJTW	15'	blue	13A	12
WD-0656	16/3	SJTW	25'	blue	13A	12
WD-0657	16/3	SJTW	50'	blue	13A	12
WD-0658	16/3	SJTW	100'	blue	10A	6
WD-0662	14/3	SJTW	25'	blue	15A	12
WD-0663	14/3	SJTW	50'	blue	15A	6
WD-0664	14/3	SJTW	100'	blue	13A	3
WD-0668	12/3	SJTW	25'	blue	15A	12
WD-0669	12/3	SJTW	50'	blue	15A	6
WD-0670	12/3	SJTW	100'	blue	15A	3

### **Cold Flex 3-Outlet Power Blocks**

Power blocks save the cost and clutter of running two or three cords for tools and appliances around the home or job site.





Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-0675	12/3	SJTW	50'	blue	15A	5
WD-0676	12/3	SJTW	100'	blue	15A	3

WD-0675

## OutDoor - Cold Flex now with Lighted Plugs

Woods' improved cold flex cords are now available with PowerLite™ indicator plugs.





WD-2628

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-2434	16/3	SJTW	25'	blue	13A	12
WD-2435	16/3	SJTW	50'	blue	13A	12
WD-2436	16/3	SJTW	100'	blue	13A	12
WD-2627	14/3	SJTW	25'	blue	15A	6
WD-2628	14/3	SJTW	50'	blue	15A	6
WD-2629	14/3	SJTW	100'	blue	13A	3
WD-2437	12/3	SJTW	25'	blue	15A	12
WD-2438	12/3	SJTW	50'	blue	15A	6
WD-2439	12/3	SJTW	100'	blue	15A	3

# **Cord Master - Coiled Safety Cord**

Plugs into your extension cord, clips snugly to your belt and keeps cord out of the way. Retracts to 9" and stretches to 60". Ideal for hedge trimmers, lawn mowers, sanders, etc.



Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0441	16/3	SJEW	60"	black	13A	6







**OSHA** 

# **OIL & FUEL RESISTANT**

## AGRI-PRO™ Farm-Tough Cords

Woods' AGRI-PRO™ outdoor extension cords are oil and fuel resistant and stand up to common farm, ranch and industrial chemicals. These cords are designed specifically for farm environments and remain flexible in all temperatures. Regular SJT cords absorb oil and become brittle and swell.





						OTANDANDO
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-2452	14/3	SJTOW	50'	black	15A	6
WD-2457	12/3	SJTOW	50'	black	15A	4
WD-2458	12/3	SJTOW	100'	black	15A	3
Power Block w	rith three convenier	nt outlets.				
WD-2451	14/3	SJTOW	25'	black	15A	12

WD-245

### **Oil Resistant Cords**

Woods' oil resistant cords resist oil and fuel and are perfect for use in the garage or workshop. Oil resistant cords stay flexible and durable even in prolonged exposure to sunlight. New package.





Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack		
WD-82477	12/3	SJTOW	15'	black	15A	4		
WD-82478	12/3	SJTOW	50'	black	15A	6		
WD-82479	12/3	SJTOW	100'	black	15A	3		
Power block w	Power block with three convenient outlets.							
WD-82471	14/3	SJTOW	25'	black	15A	5		
WD-82471	14/3	SIIOW	25'	black	15A	5		

**22 WIRE** 

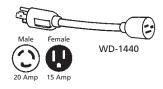


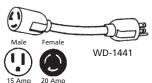




### **Twist-To-Lock**

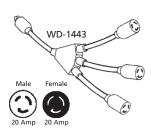
Woods' Twist-To-Lock program is designed to serve the needs of contractor customers. Manufactured with stranded copper conductors, double thick 600 volt insulation, bright yellow jackets and solid molded plugs for longer life. **Not Yellow Jacket™ compound.** 



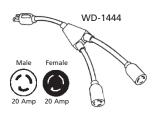


13 Allip	20 Allip	
Male 20 Amp	Female 15 Amp	IlliMode'
	WD-1442	

					(nr) C	DE TO MEET DSHA ANDARDS
Adapters Cat #	Description	Length	Gauge/ Cond	Cord Color	125V Rating	Std Pack
WD-1440	Twist-to-lock outdoor power cord adapter converts a twist-to-lock 20 Amp receptacle to an outlet that accepts 15A or 20A male plugs.	9"	12/3	yellow	20A	6
WD-1441	Twist-to-lock outdoor power cord adapter converts a standard 15 Amp grounded receptacle to a Twist-to-lock 20 Amp receptacle.	9"	12/3	yellow	15A	6
WD-1442	Twist-to-lock outdoor power block adapter converts a single Twist-to-lock cord into 3 grounded, standard 15 Amp outlets.	2'	12/3	yellow	15A	6



"W" Ada	pters		Gauge/	Cord	125V	Std
Cat #	Description	Length	Cond	Color	Rating	Pack
WD-1443	Twist-to-lock outdoor "W" adapter converts a single twist-to-lock cord into 3 individual twist-to-lock outlets.	20"	12/3	yellow	20A	6



"Y" Adap	iters		Gauge/	Cord	125V	Std
Cat #	Description	Length	Cond	Color	Rating	Pack
WD-1444	Twist-to-lock outdoor "Y" adapter converts a single twist-to-lock cord into 2 individual twist-to-lock outlets.	20"	12/3	yellow	20A	6



WD-1445

Extra Hea	vy Duty Power Cords		Gauge/	Cord	125V	Std
Cat #	Description	Length	Cond	Color	Rating	Pack
WD-1445	Twist-to-lock outdoor power cord extra heavy duty. Individually packaged in easy-to-carry corrugated display box.	50'	12/3	yellow	20A	2
WD-1446	Twist-to-lock outdoor power cord extra heavy duty. Individually packaged in easy-to-carry corrugated display box.	100'	12/3	yellow	15A	2







# INDOOR UTILITY

### Extension Cords - Flat Vinyl

Woods' utility cords are designed for general purpose indoor use. All feature solid molded plugs and stranded all-copper conductors. Made with tough vinyl insulation that won't mark walls or floors and resists deterioration from moisture and abrasion.



WD-0592





WD-0834

Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0591	16/2	SPT-2	25'	yellow	13A	15
WD-0592	16/2	SPT-2	50'	yellow	13A	12
WD-0593	16/2	SPT-2	100'	yellow	10A	10
Not UL listed. I	Manufactured to inc	dustry standards.	UL will currently not	list 3-conductor SI	T cordsets over 10 f	eet in length.
WD-0831	16/3	SPT-2	25'	yellow	13A	12
WD-0832	16/3	SPT-2	50'	yellow	13A	12
WD-0833	16/3	SPT-2	100'	yellow	10A	6
WD-0834	14/3	SPT-3	25'	yellow	15A	12
WD-0835	14/3	SPT-3	50'	yellow	15A	6
WD-0836	14/3	SPT-3	100'	yellow	13A	6
WD-0837	12/3	SPT-3	25'	yellow	15A	12
WD-0838	12/3	SPT-3	50'	yellow	15A	6
WD-0839	12/3	SPT-3	100'	vellow	15A	3

## 3-Outlet Power Tap Extension Cords

Solid molded power taps give you the convenience of three outlets in a compact design. For outdoor use, choose three-outlet power blocks on page 20.





IIIWoods'
Triple Outlet Cord
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
MEDIUM DUTY
10 ft.
WD 83866

WD-82866

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-0814	16/3	SPT-2	3'	orange	13A	12
WD-0864	16/3	SJTW	9'	green	13A	12
WD-2864	16/3	SJTW	9'	orange	13A	12
WD-2865	16/3	SJTW	10'	beige	13A	12
WD-82867	16/3	SJTW	20'	grey	13A	6
WD-0859	16/3	SJTW	20'	green	13A	12
WD-0863	14/3	SPT-3	3'	yellow	15A	12
WD-8872	14/3	SJTW	9'	orange	15A	12
With in-line on/off switch.						
WD-82866	16/3	SJTW	10'	beige w/switch	10A	10

# **HOME DESIGN™**

Woods' Home Design™ program offers indoor extension cords with problem-solving designs, decorator colors and designer packaging. This program provides many indoor cord space-saving and safety solutions.

# Slimline™ Household Extension Cords

Thin male plugs keep cord close to the wall. Lets customers safely place furniture against the baseboard. Plug does not block other outlet. Soft strap makes it easy to pull plug from the wall. Three-foot cords are perfect for countertops, work surfaces, shelving, and stereo cabinets.





WD-2235

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-2235	16/2	SPT-2	3'	white	13A	12
WD-2236	16/2	SPT-2	7'	white	13A	12
WD-2237	16/2	SPT-2	13'	white	13A	12
WD-2238	16/2	SPT-2	3'	black	13A	12
WD-2239	16/2	SPT-2	7'	tan	13A	12
WD-2240	16/2	SPT-2	13'	tan	13A	12
WD-2241	16/3	SPT-2	8'	white	13A	6
WD-82243	16/3	SPT-2	8'	black	13A	8
WD-2232	16/3	SPT-2	13'	white	13A	6







125V Rating

10A 10A

10A

Std Pack

10 10

## PivotPlug™ Household Extension Cords

The PivotPlug<sup>TM</sup> is the only right angle slim design extension cord plug that allows the consumer to direct the cord left, right or up the wall. The thin plug allows furniture and appliances to be close to the wall. The right angle design allows the cord to neatly hug the wall. Many outlets are installed upside-down, so a polarized Slimline<sup>TM</sup> cord would have to be inserted with the cord curling up the wall. With PivotPlug, TM the cord goes where you want.



Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-2766	16/2	SPT-2	8'	white	13A	6
WD-2772	16/2	SPT-2	8'	black	13A	6
WD-2774	16/3	SPT-2	8'	white	13A	6
WD-2776	16/3	SPT-2	8'	black	13A	6

WD-2766

## EasySwitch™ Household Extension Cords

The EasySwitch™ provides the convenience of an on/off switch that can be placed for easy access. To use, plug the EasySwitch™ into an outlet, then plug a lamp, fan or other appliance into the unique piggyback plug. Extend the switch to a convenient location for easy power control.



Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	Cord Color
WD-0359	16/2	SPT-2	15'	brown
WD-0359W	16/2	SPT-2	15'	white
WD-0359H	16/2	SPT-2	15'	hunter green

## Tri-WayCord™

 $The \textit{Tri-WayCord}^{\intercal} \textit{m rounds out the Home Design}^{\intercal} \textit{program as the big brother to the traditional cube tap. It features three conductors and three outlets.}$ 



Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0608	16/3	SPT-2	8'	brown	13A	10
WD-0609	16/3	SPT-2	8'	white	13A	10
WD-2610	16/3	SPT-2	8'	beige	13A	10
WD-2611	16/3	SPT-2	8'	black	13A	10

WD-0608







# **OFFICE PRODUCTS**

## **Office Cords**

Woods' extension cords are manufactured with three polarized outlets in a solid molded plug for convenient use indoors. Each cord comes with a safety cover attached so unused outlets may be covered.





WD-5607

Cat # Gauge/Cond Wire Type **Cord Length Cord Color** 125V Rating **Std Pack** 2 Conductor, Triple Outlet WD-5606 SJTW 10' 13A 25 grey 3 Conductor, Single Outlet WD-5601 16/3 SJTW 25' black 13A 12 WD-2606 16/3 SJTW 40' black 13A 12 3 Conductor, Triple Outlet WD-5607 16/3 SJTW 10' grey 13A 10 WD-5754 16/3 SJTW 20' 12 13A grey

### **Cord Covers**

With Woods' cord covers, customers can run cords and cables where they need them. The flat side lies against the floor, counter or wall. The top is rounded to reduce the likelihood of tripping.



Cat #	Description	Color	Std Pack
WD-5610	6', 1/2" Cord Channel	putty	6
WD-5612	6', 1/2" Cord Channel	black	6

# INDOOR CORDS

## **Household Extension Cords (Cube Taps)**

Woods' Household extension cords are manufactured with three polarized outlets in a solid molded plug for convenient use indoors. Each cord comes with a safety cover attached so unused outlets may be covered.





						_
Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	125V Rating	Std Pack
WD-0600	16/2	SPT-2	6'	brown	13A	25
WD-0600W	16/2	SPT-2	6'	white	13A	25
WD-0601	16/2	SPT-2	9'	brown	13A	25
WD-0601W	16/2	SPT-2	9'	white	13A	25
WD-0602	16/2	SPT-2	12'	brown	13A	25
WD-0602W	16/2	SPT-2	12'	white	13A	25
WD-0603	16/2	SPT-2	15'	brown	13A	25
WD-0603W	16/2	SPT-2	15'	white	13A	25

Holiday Cord Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-0870	16/2	SPT-2	15'	green	13A	25







### **Christmas Tree Cord**

Three 3-outlet taps in-line for a total of nine outlets. With switch and fused male plug. Available August through December only. For use only with indoor decorative light strings.



WD-2189

Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	Cord Color	125V Rating	Std Pack
WD-2189	16/2	SPT-2	15'	green	7A	25

# **Household Appliance Cords**

Woods' assortment of household appliance cords includes the most popular cords for vacuum cleaners, irons and other small electrical appliances. With a range of plug configurations.







WD-0293





WD-0291







WD-0292

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
inely strande Not UL listed.	d, very flexible cord	l. For use with po	larized vacuum clea	ners, office equipn	nent, floor polishers	, etc.
WD-0540	18/2	SVT	20'	grey	10A	15
Slotted miniat between conta		coffee makers, f	rypans and other sn	nall kitchen appliai	nces with 1/2" spacio	ng (U
WD-0293	18/2	HPN	2'	black	10A	10
WD-0294	18/2	HPN	6'	black	10A	10
Fits all standar	rd brand roasters, b	roilers and deep	fryers using pin spac	ing of 1-1/16".		
WD-0290	16/2	HPN	6'	black	15A	10
Fits all kitchen	appliances using 1	1/16" spacing bet	ween contacts such	as waffle irons, gr	ills, and bottle warn	ners.
WD-0291	18/2	HPN	6'	black	10A	10
or use with poetween conta	• •	n such as mixers,	electric knives, warr	ning trays and cald	culators using 5/16"	spacing
WD-0295	18/2	SPT-2	6'	brown	7A	10
Polarized for h	neat-producing app	liances.				
WD-0292	16/2	HPN	6'	black	15A	10
Replacement o	ord for non-polariz	ed irons and app	liances.			
WD-0288	16/2	HPN	7'	black	15A	10







125V Rating

15A

15A

15A

15A

15A

### **Major Appliance Cords**

Woods' major appliance cords for air conditioners, ranges and dryers feature heavy duty vinyl insulation and right angle plugs.

Gauge/Cond

14/3

14/3

14/3

14/3

14/3

Air Conditioner/Refrigerator

Cat #

WD-0043

WD-0044

WD-0045

WD-0046\*

WD-0047\*



**Std Pack** 

15

15

15

12

12



WD-0568









Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	<b>Cord Color</b>	250V Rating	Std Pack
WD-88447	14/3	SPT-3	6'	beige	15A	10
WD-0568	12/3	SPT-3	9'	grey	20A	12
WD-0448	12/3	SPT-3	9'	grey	15A	12

**Cord Length** 

3'

6'

9'

12'

15'

**Cord Color** 

beige

beige

beige

beige

beige

Wire Type

SPT-3

SPT-3

SPT-3

SPT-3

SPT-3

## **Power Supply Replacement Cords**

Woods' replacement cords are designed for use on appliances, power tools, lamps, water coolers, air conditioners, dryers, ranges and garbage disposals. Includes instructions for replacing worn or damaged cords.





### Range, 3-Conductor with Strain Relief

Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	250V Rating	Std Pack
WD-0984	6/2 & 8/1	SRDT	4'	grey	50A	6
WD-0985	6/2 & 8/1	SRDT	5'	grey	50A	6
WD-0986	6/2 & 8/1	SRDT	6'	grey	50A	6

### Range, 4-Conductor with strain relief

WD-0761	6/2 & 8/2	SRDT	4'	grey	45A	12

### Dryer, 3-Conductor with strain relief

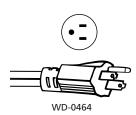
WD-0974	10/3	SRDT	4'	grey	30A	6
WD-0975	10/3	SRDT	5'	grey	30A	6
WD-0976	10/3	SRDT	6'	grey	30A	6

## **Dryer, 4-Conductor with strain relief**

WD-0768	10/4	SRDT	4'	black	30A	12
WD-88769	10/4	SRDT	6'	black	30A	5

### **General Purpose**

Cat #	Gauge/Cond	Wire Type	<b>Cord Length</b>	Cord Color	125V Rating	Std Pack					
Right angle ma	ale cap. Packaged bu	ulk. Appliance en	nd slit 1-1/4", insulati	on stripped 3/8".							
WD-88570	16/3	SPT-3	3'	grey	13A	20					
WD-0573	16/3	SPT-3	6'	grey	13A	50					
Straight angle	Straight angle male cap. Packaged bulk. Appliance end slit 1-1/4", insulation stripped 3/8".										
WD-0464	16/3	SPT-3	6'	grey	13A	50					

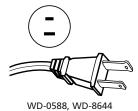


<sup>\*</sup>Not UL listed. UL will currently not list 3-conductor SPT cordsets over 10 feet in length.



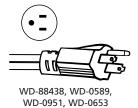








Cat #	Gauge/Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
Vinyl for power	er tools or appliance	es. Tool end slit 1	-1/4", insulation stri	oped 3/8".		
WD-0588	16/2	SJTW	8'	black	13A	25
WD-88438	16/3	SJTW	6'	black	13A	25
WD-0589	16/3	SJTW	8'	black	13A	25
More flexible	and durable in very	cold or hot envir	onments. TPE jacket	:		
WD-0951	16/3	SJTW	10'	black	13A	25
WD-0953	14/3	SJTW	10'	black	15A	25



### **Small Appliance**

Vinyl for small a	ppliances. Applia	ance end slit 1-1/4",	insulation stripp	ed 3/8".		
WD-8644	18/2	SPT-1	9'	brown	10A	40

### **Air Conditioner**

Right angle male	cap. Packaged	bulk. Appliance end	slit 1-1/4", insula	tion stripped 3/8".		
WD-88549	14/3	SPT-3	6'	grey	15A	25

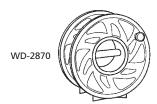
# **CORD MANAGEMENT**

## **Cord Management**

This program features a great assortment of products from a traditional cord reel to the latest design in tangle-free cord holders, straps and wall brackets. Your customers will find the right products in colorful, descriptive packaging.





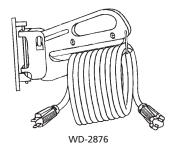




Cat #	Description	Color	Package	Std Pack
WD-2801	PowerCaddy + 25' 16/3 black extension cord included, 4 grounded outlets, 10 Amp circuit breaker, convenient slotted holes on the bottom for wall mounting.	black/yellow	hang tag	3
WD-2849	Detachable Cord Reel with Stand 13" reel, easy-release lock allows the cord reel to separate from the stand.	black/yellow	hang tag	3
WD-2870	Cord Reel 13" reel holds 150' of 16/3 extension cord.	black/yellow	hang tag	3
WD-2804	Twin Cleat™ Cord Lock Tough and durable with no loose parts, no screws or adjustments, works with 16 and 14 gauge cords. The only UL approved cord lock. Doesn't put strain on plug.	yellow	carded	12
WD-2803	Cord Caddy Built-in carry handle, rugged one-piece construction.	black	carded	12
WD-2802	Carry Strap One-piece construction, holds up to 150' of 16/3 cord.	black	carded	12
WD-2876	Cord Controller with Wall Bracket Adjusts to hold 18 to 12 gauge cord. Wall bracket stores cord tangle-free, pivots left and right and flips up for out-of-the-way storage.	black	blistercard	6













# TASK LIGHTING

# Work Lights - Round Vinyl

Meets OSHA Specifications for temporary lighting. All work lights feature our unique patented DUAL HOOK SYSTEM which permits hanging the work light by either its guard or handle. Rugged heat-resistant housing stays cool even with short neck bulbs. The round orange vinyl jacket is flexible, easy to see and won't mark floors or walls. All 3-conductor lights are UL rated for 100 watt bulbs.





						$\sim$	STANDARDS
Cat #	Gauge/ Cond	Wire Type	Cord Length	Cord Color	Bulb Rating	125V Rating	Std Pack
Plastic Guard w	ith switch, no o	utlet					
WD-0200	18/2	SJTW	15'	orange	75W	_	12
WD-0201	18/2	SJTW	25'	orange	75W	_	12
Metal grounde	d guard with sw	vitch and groun	ded outlet.				
WD-8199	18/3	SJTW	6'	orange	100W	10A	12
WD-0680	18/3	SJTW	15'	orange	100W	10A	12
WD-0681	18/3	SJTW	25'	orange	100W	10A	12
WD-0682	18/3	SJTW	50'	orange	100W	10A	6
WD-0691	16/3	SJTW	25'	orange	100W	13A	12
WD-0692	16/3	SJTW	50'	orange	100W	13A	6
Metal grounde	d guard, built-in	Circuit Breaker	, switch and grou	ınded outlet.			
WD-0649	16/3	SJTW	25'	orange	100W	13A	12
Super flexible	wire, 13 amp red	eptacle in hand	le and coated wi	re cage keeps ho	ot reflector from	skin.	
WD-2893	16/3	SJTW	25'	yellow	100W	13A	12
WD-2948	16/3	SJTW	50'	yellow	100W	13A	4

## Flood & Clamp Lamps

Woods' selection of quality clamp lamps has many uses around the home, office or shop. All lamps are made with tough, heat-resistant sockets in accordance with UL. Most are made with vented aluminum reflectors, push-through switches, and strong double-swivel clamps with vinyl grips.

SPT-2













WD-82839



C-1 #	Gauge/	Wire	Cord	Cord	Reflector	125V	Std				
Cat #	Cond	Туре	Length	Color	Diameter	Rating	Pack				
WD-0160	18/2	SPT-2	6'	white	5-1/2"	60W	12				
WD-0151	18/2	SPT-2	6'	white	8-1/2"	150W	12				
Porcelain socket clamp without switch.											
WD-0328	18/2	SPT-2	6'	white	_	150W	12				
With bulb prot	ector, sturdy an	odized wire con	struction. Porcela	in socket.							
WD-0324	18/2	SPT-2	6'	white	_	150W	12				
Without clamp	Not UL listed.										
WD-0135	18/2	SPT-2	9'	white	_	150W	20				
Cold Flex TPE c	Cold Flex TPE cord stays flexible in cold environment.										
WD-0149	18/2	SJEW-A	15'	black	8-1/2"	150W	12				
Tight Grip™ he	avy duty clamp	with extra hold	ling power. Uniqu	ue clamp desigi	grips pipe, lumb	er and more.					

black

8-1/2"

150W

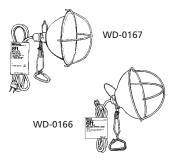






### **Brooder & Heat Lamps**

Woods' brooder and heat lamps feature insulated porcelain sockets, heavy gauge aluminum reflectors, hang-up hooks and bulb guards that snap on the reflector, two-conductor, polarized male plugs. Ideal for pig and chicken brooders or as a temporary heat source. Not UL listed.



	Gauge/	Wire	Cord	Cord	Reflector	125V	Std				
Cat #	Cond	Type	Length	Color	Diameter	Rating	Pack				
Cold Flex TPE c	ord stays flexibl	e in cold enviro	nment.								
WD-0163	18/2	SJEW	8'	black	10-1/2"	250W	6				
Same as above, but with a sturdy clamp with vinyl coated grips.											
WD-0167	18/2	SJEW	8'	black	10-1/2"	250W	6				
Durable vinyl c	ord.										
WD-0165	18/2	SJTW	6'	black	10-1/2"	250W	12				
Same as above	, but with a stur	dy clamp with	vinyl coated grips								
WD-0166	18/2	SJTW	6'	black	10-1/2"	250W	12				

### **Repair Parts**

Woods' quality repair parts for work lights and clamp lamps. All items packed bulk.



WD-0336



ork			

Cat #	Description	Rating	Std Pack
WD-0336	Handle, 3 cond. w/switch & outlet	_	10
WD-0309	Guard, metal, swing open	_	10

### **Clamp Lamp and Brooder Light Socket**

Cat #	Description	Rating	Std Pack
WD-0110	Socket, porcelain	660W	20



# **Home Lighting Controls**

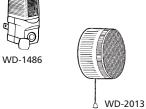
Woods' home controls offer security, safety and convenience throughout the home. A popular line of timers, sensor controls and night lights in full-color packaging.



WD-1472







euc n	Description.	
Photoelectric	<b>Security Lighti</b>	ng Socket
In full color day	mchall nackaging	Automotica

at dusk off at da

in tuii-coior ciams	n tull-color clamsnell packaging. Automatically on at dusk, off at dawn.										
WD-1472	Outdoor Photoelectric Light Socket. Incandescent only.	120V/300W	6								

## **Landscape Accessories**

High impact fixtures resist weather and wear. With wall mount and ground stake.

WD-0430	Floodlight Holder-Bagged	120V/150W	6
WD-0430B	Indoor/Outdoor Floodlight Kit with bulb. In full-color box.	120V/150W	6
WD-2429	Power Stake. 3 grounded outlets, 25' cord.	120V/150W	4

### Night/Guide/Closet Lights

WD-1486	Incandescent Photoelectric Night Light (Mini-Clam)	120V/7W	5
WD-1494A	2 Incandescent Photoelectric Night Lights (Twin Pack - Blisterpacked)	120V/7W	12
WD-2013	Closet Light (Blisterpacked)	2-D Cells	6

Rating

**Std Pack** 



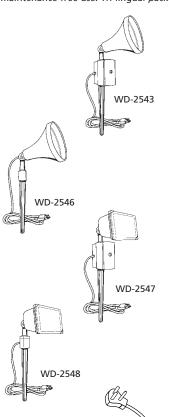




# LANDSCAPE LIGHTING

# YardMates® Outdoor Lighting

YardMates® features architectural quality lighting and plug-in convenience without the high cost of hardwiring. The lights can be connected together to create a customized lighting system for landscaping, security or recreational applications. Pre-assembled die-cast aluminum lights mean years of maintenance-free use. Tri-lingual packaging.



WD-2001

kaging.						ال	
Cat #	Description	Gauge/ Cond	Wire Type	Cord Length	Cord Color	125V Rating	Std Pack
WD-2543	Flood Light with Photoelectric Eye Photoelectric eye turns light on automatically at dusk and off at dawn. Uses 150 Watt, par 38 bulb (not included).	16/3	SJTW	6'	green	13A	4
WD-2546	Flood Light Uses 150 Watt, Par 38 bulb (not included).	16/3	SJTW	6'	green	13A	4
WD-2547	Halogen Light with Photoelectric Eye Photoelectric eye automatically turns light on at dusk and off at dawn. 100 Watt bulb included in the fixture.	16/3	SJTW	6'	green	13A	4
WD-2548	Halogen Light 100 Watt bulb included in the fixture.	16/3	SJTW	6'	green	13A	4
WD-2001	Outdoor Lighting Timer Photoelectric eye automatically turns your YardMates® system on at dusk. 2-8 hours set-back feature. Rated 8A/125V, 1000W.	_	_	_	green	8A	6







# **BULK WIRE - HOME IMPROVEMENT**

### **Lamp Cord**

Description: Thermoplastic jacket. Not for hard usage in accordance with NEC, 16 AWG through 18 AWG, -20°C to 60°C, 300 Volt rating

Applications: Lamps, small appliances, radios

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: PVC Class 43

Jacket: N/A

Industry Approvals: UL62, UL1581



Cat No.	Description	AWG	Cond	Strand	Nom Insul	Nom Jckt	Nom O.D.	Amp Cap	Length	Pkg	Std Color	Std Pack	Wt	Cube	UPC
WD-0132	SPT-2	16	3	65/34	0.045	N/A	.160 x .385	10A/300V	250′	spool	brown	1	19.0	0.52	078693001321
WD-0136	SPT-2	16	3	65/34	0.045	N/A	.160 x .385	10A/300V	250′	spool	white	1	19.0	0.52	078693001369
WD-0888	SPT-2	16	2	65/30	0.045	N/A	.148 x .286	13A/300V	250′	spool	brown	2	18.5	0.38	078693008887
WD-0889	SPT-2	16	2	65/30	0.045	N/A	.148 x .286	13A/300V	250′	spool	white	2	18.8	0.38	078693008894
WD-0890	SPT-2	16	2	65/30	0.045	N/A	.148 x .286	13A/300V	250′	spool	black	2	18.6	0.38	078693008900
WD-0477	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	brown	2	11.0	0.27	078693004773
WD-0478	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	white	2	11.0	0.27	078693004780
WD-0479	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	black	2	11.0	0.27	078693004797
WD-0480	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	gold	2	11.0	0.27	078693004803
WD-0481	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	silver	2	10.0	0.27	078693004810
WD-0482	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	250′	spool	clear	2	11.0	0.27	078693004827
WD-0800	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	25′	ss pack	brown	12	6.6	0.27	078693008009
WD-0801	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	25′	ss pack	white	12	6.4	0.27	078693008016
WD-0802	SPT-1	18	2	41/34	0.034	N/A	.110 x .201	10A/300V	25′	ss pack	gold	12	6.0	0.27	078693008023

### **Chandelier Wire**

**Description:** Bare stranded flexible copper wire used for grounding purposes,

18 AWG, single conductor

**Applications:** Grounding (electrical)

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: None Jacket: None

Industry Approvals: UL



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0893	BARE COPPER	18	1	7/26	N/A	N/A	N/A	N/A	500′	spool	bare	1	3.4	0.21	078693008931

### **Bell Wire**

Description: Type CL2 low voltage cable using thermoplastic insulated solid conductors. Resistant to the spread of fire in accordance with NEC. Not for riser, plenum, or tray uses. 75°C (-20°C), 300 Volt rating, in-wall installation per UL

Applications: Thermostat control, burglar alarms, intercoms, door bells

Conductor: Soft annealed solid copper per ASTM B3-90

Insulation: PVC Jacket: N/A

Industry Approvals: UL13 for power limited circuit cable for other than plenum, riser, or tray uses

					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-5408	BELL WIRE	18	3	1/18	0.015	0.020	N/A	300V	500′	spool	red/white/green	2	20.4	0.38	078693054082
WD-5407	BELL WIRE	18	2	1/18	0.015	0.020	N/A	300V	500′	spool	red/white	2	7.4	0.27	078693054075
WD-0330	BELL WIRE	18	2	1/18	0.015	0.020	N/A	300V	100′	ss pack	red/white	5	7.4	0.53	078693003301
WD-0450	BELL WIRE	24	2	1/24	0.015	0.020	N/A	300V	500′	spool	red/white	2	5.6	0.27	078693004506
WD-0453	BELL WIRE	24	2	1/24	0.015	0.020	N/A	300V	50′	ss pack	red/white	10	7.2	0.27	078693004537

Stranded Copper

Conductor



Thermoplastic

Insulation







Thermoplastic Jacket

### Thermostat Wire

**Description:** Type CL2 low voltage cable using thermoplastic insulated conductors and jacket. Resistant to the spread of fire in accordance with NEC. 18 AWG, 75°C, 300 Volt rating

**Applications:** Thermostat controls, heating and air conditioning installations, burglar alarm systems, intercom systems, door bells

Conductor: Soft annealed solid copper per ASTM B3-90

Insulation: PVC
Jacket: N/A



Industry Approvals: UL13 for power limited circuit cable for other than plenum, riser, or tray uses, UL1581

					Nom	Nom	Nom	Amp			Std	Std			
Cat No. Des	cription AW	NG Co	nd	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
<b>WD-5405</b> TYP	PE CL2 18	8	7	1/18	0.015	0.0235	N/A	300V	250′	spool	brown	1	16.0	0.38	078693054051
<b>WD-5403</b> TYP	PE CL2 18	8	5	1/18	0.015	0.0235	N/A	300V	250′	spool	brown	1	11.2	0.53	078693054037
<b>WD-5401</b> TYP	PE CL2 18	8	3	1/18	0.015	0.0235	N/A	300V	500′	spool	brown	1	16.0	0.38	078693054013
<b>WD-5400</b> TYP	PE CL2 18	8	2	1/18	0.015	0.0235	N/A	300V	500′	spool	brown	1	11.5	0.49	078693054006
<b>WD-5402</b> TYP	PE CL2 18	8	4	1/18	0.015	0.0235	N/A	300V	250′	spool	brown	1	10.8	0.53	078693054020

## Low Voltage Lighting Wire

**Description:** Thermoplastic jacketed parallel constructed service cord. Not for hard usage in accordance with NEC. 16 AWG through 12 AWG, -20°C to 60°C, 300 Volt rating

Applications: Outdoor low voltage lighting systems

(Note: #0357, #0358, #0348, #0349, #0304 and #0311 are suitable for direct burial.)

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: PVC Class 43

Jacket: N/A

Industry Approvals: UL62, UL1581



Thermoplastic

Insulation

Solid Copper Conductor

					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0188	SPT-3	12	2	65/30	0.095	N/A	.285 X .510	25A/300V	500′	spool	black	1	36.0	1.07	078693001888
WD-0311	SPT-3	12	2	65/30	0.095	N/A	.285 x .510	25A/300V	200'	ss pack	black	2	46.8	1.68	078693003110
WD-0304	SPT-3	12	2	65/30	0.095	N/A	.285 x .510	25A/300V	100′	ss pack	black	3	57.0	1.63	078693003042
WD-0339	SPT-3	14	2	41/30	0.080	N/A	.235 X .440	18A/300V	500′	spool	black	1	36.3	1.07	078693003394
WD-0349	SPT-3	14	2	41/30	0.080	N/A	.235 X .440	18A/300V	100′	ss pack	black	5	36.0	1.58	078693003493
WD-0348	SPT-3	14	2	41/30	0.080	N/A	.235 X .440	18A/300V	50′	ss pack	black	10	37.3	1.12	078693003486
WD-0338	SPT-3	16	2	26/30	0.060	N/A	.185 X .365	13A/300V	500′	spool	black	1	15.0	0.53	078693003387
WD-0358	SPT-3	16	2	26/30	0.060	N/A	.185 X .365	13A/300V	100′	ss pack	black	5	23.8	1.03	078693003585
WD-0357	SPT-3	16	2	26/30	0.060	N/A	.185 X .365	13A/300V	50′	ss pack	black	10	27.4	1.12	078693003578

## Sprinkler Wire

Description: 18 AWG, 4 to 10 solid bare conductors, 75°C

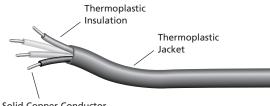
Applications: Sprinkler control systems

**Conductor:** Soft annealed solid copper per ASTM B3-90

Insulation: PVC

Jacket: PVC 75°C

Industry Approvals: UL



Solid Copper Conductor

					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	0.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0887	SPRINKLER WIRE	18	7	1/18	0.025	0.025	N/A	300V	250′	spool	green	1	23.2	0.53	078693008870
WD-0111	SPRINKLER WIRE	18	5	1/18	0.025	0.025	N/A	300V	250′	spool	green	1	11.0	0.52	078693001116
WD-0886	SPRINKLER WIRE	18	4	1/18	0.025	0.025	N/A	300V	250′	spool	green	1	13.8	0.53	078693008863







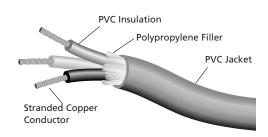
### **Round Service Cord Vinyl**

**Description:** Thermoplastic insulated conductors and an overall thermoplastic jacket. For hard usage applications in accordance with NEC. 12 AWG through 16 AWG, -50°C to 60°C, 300 Volt rating

**Applications:** Portable tools and lights **Conductor:** Soft annealed stranded copper

Insulation: PVC Class 43

Jacket: Weather resistant PVC Class 43
Industry Approvals: UL62, UL1581, CSA



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0738	SJTW	12	3	65/30	0.032	0.045	0.425	20A/300V	250′	spool	orange	1	34.0	1.07	078693007385
WD-0735	SJTW	14	3	41/30	0.035	0.045	0.380	15A/300V	250′	spool	orange	1	25.6	0.45	078693007354
WD-0733	SJTW	16	3	26/30	0.030	0.032	0.324	10A/300V	250′	spool	orange	1	17.9	0.53	078693007330
WD-0749	SJTW	16	3	26/30	0.030	0.032	0.324	10A/300V	250′	spool	white	1	18.0	0.53	078693007491
WD-0732	SJTW	16	2	26/30	0.030	0.032	0.305	13A/300V	250′	spool	orange	1	14.2	0.53	078693007323

### **Round Service Cord SVT**

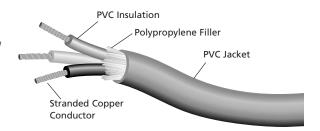
**Description:** Thermoplastic insulated conductors and overall thermoplastic jacket. For not hard usage applications in accordance with NEC. 18 AWG, 90°C, 300 Volt rating

Applications: Vacuum cleaners, office equipment, food mixers Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: PVC Class 43

Jacket: PVC Class 43

Industry Approvals: UL62, UL1581, CSA



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0131	SVT	18	3	41/34	0.030	0.030	0.302	7A/300V	250′	spool	white	1	18.0	0.52	078693001314
WD-0491	SVT	18	2	41/34	0.016	0.030	0.233	10A/300V	250′	spool	grey	1	8.6	0.53	078693004919
WD-0130	SVT	18	2	41/34	0.016	0.030	0.233	10A/300V	250′	spool	white	1	8.6	0.49	078693001307

# Round Service Cord Yellow Jacket®

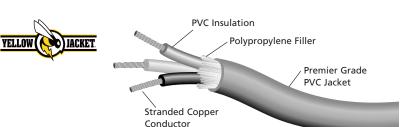
**Description:** Extremely flexible and abrasion resistant. Premier grade Thermoplastic insulation/jacket for hard usage applications in accordance with NEC. Water resistant. 10 AWG through 14 AWG, -50°C to 60°C, 300 Volt rating

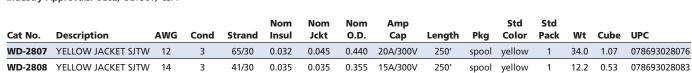
**Applications:** Portable tools and lamps, motors, lawn equipment **Conductor:** Soft annealed stranded copper per ASTM B3-90

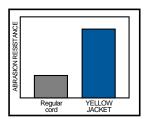
Insulation: PVC Class 43

Jacket: PVC Class 43, weather resistant, VW-1 flame rating

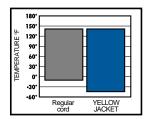
Industry Approvals: UL62, UL1581, CSA



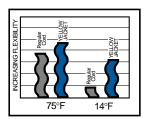




LONGER LIFE Three times greater resistance to abrasion.



MORE WEATHER RESISTANT Won't crack in cold to -58°F. Won't deform in heat up to 140°F.



SUPERIOR FLEXIBILITY 30-50% more flexible than regular cords.







### **Round Service Cord Cold Flex**

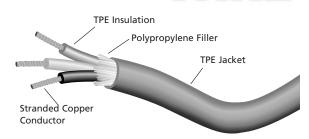
**Description:** For hard usage applications in accordance with NEC. 10 AWG through 18 AWG, -50°C to 105°C (TPE), -50°C to 60°C (PVC), 300 Volt rating **Applications:** Portable tools and lamps, pumps, portable farm equipment

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: TPE, PVC (#0772B, #0488B)

Jacket: TPE, PVC (#0772B, #0488B)

Industry Approvals: UL 62, UL1581, CSA



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0775	SJEW RUBBER	10	3	104/30	0.045	0.070	0.600	25A/300V	250′	spool	black	1	51.3	1.36	078693007750
WD-0779	SJEW RUBBER	10	3	104/30	0.045	0.070	0.600	25A/300V	100′	spool	black	1	21.3	0.53	078693007798
WD-0774	SJEW RUBBER	12	3	65/30	0.032	0.045	0.440	20A/300V	250′	spool	black	1	29.1	1.07	078693007743
WD-0772	SJEW RUBBER	14	3	41/30	0.035	0.035	0.355	15A/300V	250′	spool	black	1	19.0	0.47	078693007729
WD-0771	SJEW RUBBER	14	2	41/30	0.035	0.040	0.340	18A/300V	250′	spool	black	1	14.9	0.53	078693007712
WD-0488	SJEW RUBBER	16	3	26/30	0.030	0.032	0.324	10A/300V	250′	spool	black	1	6.0	0.47	078693004889
WD-0487	SJEW RUBBER	16	2	26/30	0.030	0.032	0.305	13A/300V	250′	spool	black	1	12.0	0.38	078693004872
WD-0486	SJEW RUBBER	18	3	16/30	0.030	0.035	0.302	7A/300V	250′	spool	black	1	9.8	0.38	078693004865
WD-0485	SJEW RUBBER	18	2	16/30	0.030	0.035	0.285	10A/300V	250′	spool	black	1	9.1	0.38	078693004858

### Round Service Cord Oil Resistant - TPE rubber

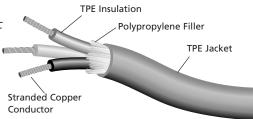
Description: Extra hard usage per NEC. Resists most acids. 10 AWG through 18 AWG, 60°C to 105°C

**Applications:** Garages, portable tools and lights, battery chargers, weather resistant for outdoor applications, dish washers, refrigerators, 3-phase equipment (4 conductor)

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: TPE Class 36, Rubber

Jacket: TPE Weather Resistant Class 36, Rubber Industry Approvals: UL62, UL1581, CSA



				Nom	Nom	Nom	Amp			Std	Std			
Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
SJ RUBBER	10	3	104/30	0.045	0.060	0.565	25A/300V	100′	spool	black	1	26.8	0.52	078693028533
SJ RUBBER	12	3	65/30	0.030	0.045	0.425	20A/300V	250′	spool	black	1	37.0	0.70	078693028540
SJ RUBBER	14	3	41/30	0.030	0.030	0.360	15A/300V	250′	spool	black	1	27.0	1.17	078693028564
SJ RUBBER	14	2	41/30	0.030	0.030	0.335	18A/300V	250′	spool	black	1	14.9	0.49	078693028557
SJ RUBBER	16	2	26/30	0.030	0.030	0.305	13A/300V	250′	spool	black	1	16.0	0.38	078693028571
SJ RUBBER	18	3	16/30	0.030	0.030	0.300	7A/300V	250′	spool	black	1	16.0	0.38	078693028601
SJ RUBBER	18	2	16/30	0.030	0.030	0.280	10A/300V	250′	spool	black	1	13.8	0.38	078693028595
SJEOW TPE	10	4	104/30	0.045	0.070	0.640	25A/300V	250′	spool	yellow	1	73.2	2.83	078693001857
SJEOW TPE	10	3	104/30	0.045	0.060	0.565	25A/300V	250′	spool	yellow	1	55.4	1.07	078693008825
SJEOW TPE	12	4	65/30	0.032	0.045	0.475	20A/300V	250′	spool	yellow	1	45.0	3.00	078693001840
SJEOW TPE	12	3	65/30	0.030	0.045	0.425	20A/300V	250′	spool	yellow	1	30.0	1.07	078693008849
SJEOW TPE	12	2	65/30	0.030	0.045	0.405	25A/300V	250′	spool	yellow	1	22.0	1.07	078693008832
SJEOW TPE	14	4	41/30	0.035	0.040	0.450	15A/300V	250′	spool	yellow	1	100.0	2.75	078693001772
SJEOW TPE	14	3	41/30	0.030	0.030	0.360	15A/300V	250′	spool	yellow	1	21.0	0.53	078693008856
SEOW TPE	10	4	104/30	0.045	0.100	0.765	25A/600V	200′	spool	black	1	51.0	3.00	078693001871
SEOW TPE	10	3	104/30	0.045	0.105	0.680	25A/600V	250′	spool	black	1	70.6	2.82	078693001642
SEOW TPE	12	4	65/30	0.048	0.105	0.695	20A/600V	250′	spool	black	1	30.0	3.00	078693001864
SEOW TPE	12	3	65/30	0.048	0.105	0.600	20A/600V	250′	spool	black	1	48.2	1.07	078693001574
SEOW TPE	14	3	41/30	0.045	0.080	0.530	15A/600V	250′	spool	black	1	19.0	1.07	078693001505
	SJ RUBBER SJEOW TPE SSEOW TPE SEOW TPE SEOW TPE SEOW TPE	SJ RUBBER 10 SJ RUBBER 12 SJ RUBBER 14 SJ RUBBER 14 SJ RUBBER 16 SJ RUBBER 16 SJ RUBBER 18 SJ RUBBER 18 SJEOW TPE 10 SJEOW TPE 10 SJEOW TPE 12 SJEOW TPE 12 SJEOW TPE 12 SJEOW TPE 14 SJEOW TPE 14 SSEOW TPE 10 SEOW TPE 10	SJ RUBBER 10 3 SJ RUBBER 12 3 SJ RUBBER 14 3 SJ RUBBER 14 2 SJ RUBBER 16 2 SJ RUBBER 16 2 SJ RUBBER 18 3 SJ RUBBER 18 2 SJEOW TPE 10 4 SJEOW TPE 10 3 SJEOW TPE 12 4 SJEOW TPE 12 2 SJEOW TPE 12 2 SJEOW TPE 14 4 SJEOW TPE 14 3 SEOW TPE 10 4 SEOW TPE 10 3 SEOW TPE 10 4 SEOW TPE 10 3 SEOW TPE 10 4 SEOW TPE 10 3	SJ RUBBER         10         3         104/30           SJ RUBBER         12         3         65/30           SJ RUBBER         14         3         41/30           SJ RUBBER         14         2         41/30           SJ RUBBER         16         2         26/30           SJ RUBBER         18         3         16/30           SJ RUBBER         18         2         16/30           SJEOW TPE         10         4         104/30           SJEOW TPE         10         3         104/30           SJEOW TPE         12         4         65/30           SJEOW TPE         12         2         65/30           SJEOW TPE         14         4         41/30           SJEOW TPE         14         3         41/30           SJEOW TPE         14         3         41/30           SEOW TPE         10         4         104/30           SEOW TPE         10         3         104/30           SEOW TPE         12         4         65/30           SEOW TPE         12         3         65/30	Description         AWG         Cond         Strand         Insulation           SJ RUBBER         10         3         104/30         0.045           SJ RUBBER         12         3         65/30         0.030           SJ RUBBER         14         3         41/30         0.030           SJ RUBBER         14         2         41/30         0.030           SJ RUBBER         16         2         26/30         0.030           SJ RUBBER         18         3         16/30         0.030           SJ RUBBER         18         2         16/30         0.030           SJEOW TPE         10         4         104/30         0.045           SJEOW TPE         10         3         104/30         0.032           SJEOW TPE         12         4         65/30         0.030           SJEOW TPE         12         2         65/30         0.030           SJEOW TPE         14         4         41/30         0.035           SJEOW TPE         14         3         41/30         0.030           SJEOW TPE         14         3         41/30         0.045           SEOW TPE         10         <	Description         AWG         Cond         Strand         Insul         Jckt           SJ RUBBER         10         3         104/30         0.045         0.060           SJ RUBBER         12         3         65/30         0.030         0.045           SJ RUBBER         14         3         41/30         0.030         0.030           SJ RUBBER         14         2         41/30         0.030         0.030           SJ RUBBER         16         2         26/30         0.030         0.030           SJ RUBBER         18         3         16/30         0.030         0.030           SJ RUBBER         18         2         16/30         0.030         0.030           SJ RUBBER         18         2         16/30         0.030         0.030           SJEOW TPE         10         4         104/30         0.045         0.070           SJEOW TPE         12         4         65/30         0.032         0.045           SJEOW TPE         12         2         65/30         0.030         0.045           SJEOW TPE         14         4         41/30         0.035         0.040           SJEOW TPE <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.           SJ RUBBER         10         3         104/30         0.045         0.060         0.565           SJ RUBBER         12         3         65/30         0.030         0.045         0.425           SJ RUBBER         14         3         41/30         0.030         0.030         0.360           SJ RUBBER         14         2         41/30         0.030         0.030         0.335           SJ RUBBER         16         2         26/30         0.030         0.030         0.305           SJ RUBBER         18         3         16/30         0.030         0.030         0.300           SJ RUBBER         18         2         16/30         0.030         0.030         0.300           SJ RUBBER         18         2         16/30         0.030         0.030         0.280           SJEOW TPE         10         4         104/30         0.045         0.070         0.640           SJEOW TPE         12         4         65/30         0.032         0.045         0.475           SJEOW TPE         12         2         65/</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V           SJ RUBBER         14         3         41/30         0.030         0.030         0.360         15A/300V           SJ RUBBER         16         2         26/30         0.030         0.030         0.355         18A/300V           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V           SJ RUBBER         18         2         16/30         0.030         0.030         0.300         7A/300V           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V           SJEOW TPE         10         3         104/30         0.045         0.070         0.640         25A/300V</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250′           SJ RUBBER         14         3         41/30         0.030         0.030         0.360         15A/300V         250′           SJ RUBBER         14         2         41/30         0.030         0.030         0.335         18A/300V         250′           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250′           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250′           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V         250′           SJEOW TPE         10         3         104/30         0.045         0.070         0.640         25A/300V         250′</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′         spool           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250′         spool           SJ RUBBER         14         3         41/30         0.030         0.030         15A/300V         250′         spool           SJ RUBBER         16         2         26/30         0.030         0.030         13A/300V         250′         spool           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250′         spool           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250′         spool           SJEOW TPE         10         4         104/30         0.045         0.070         0.640         25A/300V         250′         spool           SJEOW TPE         12         4         65/30</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′         spool         black           SJ RUBBER         12         3         65/30         0.030         0.030         0.360         15A/300V         250′         spool         black           SJ RUBBER         14         2         41/30         0.030         0.030         0.335         18A/300V         250′         spool         black           SJ RUBBER         16         2         26/30         0.030         0.030         0.335         18A/300V         250′         spool         black           SJ RUBBER         16         2         26/30         0.030         0.030         0.300         7A/300V         250′         spool         black           SJ RUBBER         18         2         16/30         0.030         0.030         0.300         7A/300V         250′         spool         black           SJ RUBBER         18         2         16/30         0.030         0.030</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color         Pack           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1           SJ RUBBER         12         3         65/30         0.030         0.035         0.360         15A/300V         250'         spool         black         1           SJ RUBBER         14         2         41/30         0.030         0.030         0.355         18A/300V         250'         spool         black         1           SJ RUBBER         16         2         26/30         0.030         0.335         18A/300V         250'         spool         black         1           SJ RUBBER         16         2         26/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1           SJ RUBBER</th> <th>Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color         Pack         Wt           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1         26.8           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250'         spool         black         1         37.0           SJ RUBBER         14         2         41/30         0.030         0.300         15A/300V         250'         spool         black         1         14.9           SJ RUBBER         16         2         26/30         0.030         0.305         13A/300V         250'         spool         black         1         16.0           SJ RUBBER         18         3         16/30         0.030         0.300         0.300         250'         spool         black         1         16.0           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V         250'         spool</th> <th>Description         AWG         Cond         Strand         Insul         Jekt         O.D.         Cap         Length         Pkg         Color         Pack         Wt         Cube           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1         26.8         0.52           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250'         spool         black         1         37.0         0.70           SJ RUBBER         14         3         41/30         0.030         0.030         0.355         18A/300V         250'         spool         black         1         14.9         0.49           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250'         spool         black         1         16.0         0.38           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1         16.0         0.38           SJ RUBBER</th>	Description         AWG         Cond         Strand         Insul         Jckt         O.D.           SJ RUBBER         10         3         104/30         0.045         0.060         0.565           SJ RUBBER         12         3         65/30         0.030         0.045         0.425           SJ RUBBER         14         3         41/30         0.030         0.030         0.360           SJ RUBBER         14         2         41/30         0.030         0.030         0.335           SJ RUBBER         16         2         26/30         0.030         0.030         0.305           SJ RUBBER         18         3         16/30         0.030         0.030         0.300           SJ RUBBER         18         2         16/30         0.030         0.030         0.300           SJ RUBBER         18         2         16/30         0.030         0.030         0.280           SJEOW TPE         10         4         104/30         0.045         0.070         0.640           SJEOW TPE         12         4         65/30         0.032         0.045         0.475           SJEOW TPE         12         2         65/	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V           SJ RUBBER         14         3         41/30         0.030         0.030         0.360         15A/300V           SJ RUBBER         16         2         26/30         0.030         0.030         0.355         18A/300V           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V           SJ RUBBER         18         2         16/30         0.030         0.030         0.300         7A/300V           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V           SJEOW TPE         10         3         104/30         0.045         0.070         0.640         25A/300V	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250′           SJ RUBBER         14         3         41/30         0.030         0.030         0.360         15A/300V         250′           SJ RUBBER         14         2         41/30         0.030         0.030         0.335         18A/300V         250′           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250′           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250′           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V         250′           SJEOW TPE         10         3         104/30         0.045         0.070         0.640         25A/300V         250′	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′         spool           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250′         spool           SJ RUBBER         14         3         41/30         0.030         0.030         15A/300V         250′         spool           SJ RUBBER         16         2         26/30         0.030         0.030         13A/300V         250′         spool           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250′         spool           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250′         spool           SJEOW TPE         10         4         104/30         0.045         0.070         0.640         25A/300V         250′         spool           SJEOW TPE         12         4         65/30	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100′         spool         black           SJ RUBBER         12         3         65/30         0.030         0.030         0.360         15A/300V         250′         spool         black           SJ RUBBER         14         2         41/30         0.030         0.030         0.335         18A/300V         250′         spool         black           SJ RUBBER         16         2         26/30         0.030         0.030         0.335         18A/300V         250′         spool         black           SJ RUBBER         16         2         26/30         0.030         0.030         0.300         7A/300V         250′         spool         black           SJ RUBBER         18         2         16/30         0.030         0.030         0.300         7A/300V         250′         spool         black           SJ RUBBER         18         2         16/30         0.030         0.030	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color         Pack           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1           SJ RUBBER         12         3         65/30         0.030         0.035         0.360         15A/300V         250'         spool         black         1           SJ RUBBER         14         2         41/30         0.030         0.030         0.355         18A/300V         250'         spool         black         1           SJ RUBBER         16         2         26/30         0.030         0.335         18A/300V         250'         spool         black         1           SJ RUBBER         16         2         26/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1           SJ RUBBER	Description         AWG         Cond         Strand         Insul         Jckt         O.D.         Cap         Length         Pkg         Color         Pack         Wt           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1         26.8           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250'         spool         black         1         37.0           SJ RUBBER         14         2         41/30         0.030         0.300         15A/300V         250'         spool         black         1         14.9           SJ RUBBER         16         2         26/30         0.030         0.305         13A/300V         250'         spool         black         1         16.0           SJ RUBBER         18         3         16/30         0.030         0.300         0.300         250'         spool         black         1         16.0           SJ RUBBER         18         2         16/30         0.030         0.030         0.280         10A/300V         250'         spool	Description         AWG         Cond         Strand         Insul         Jekt         O.D.         Cap         Length         Pkg         Color         Pack         Wt         Cube           SJ RUBBER         10         3         104/30         0.045         0.060         0.565         25A/300V         100'         spool         black         1         26.8         0.52           SJ RUBBER         12         3         65/30         0.030         0.045         0.425         20A/300V         250'         spool         black         1         37.0         0.70           SJ RUBBER         14         3         41/30         0.030         0.030         0.355         18A/300V         250'         spool         black         1         14.9         0.49           SJ RUBBER         16         2         26/30         0.030         0.030         0.305         13A/300V         250'         spool         black         1         16.0         0.38           SJ RUBBER         18         3         16/30         0.030         0.030         0.300         7A/300V         250'         spool         black         1         16.0         0.38           SJ RUBBER







# **BULK WIRE - HOME ENTERTAINMENT**

### Speaker Wire

Description: Parallel wire, power limited circuit cable, 24 AWG through

12 AWG stranded copper wire, -20°C to 105°C

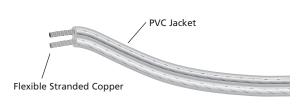
Applications: Stereo and hi-fi systems, home theater sound systems, lamps, radios

**Conductor:** Soft annealed copper per ASTM B3-90

Insulation: PVC Class 43

Jacket: N/A

Industry Approvals: UL Type CL2, UL1581, UL13, UL62



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0180	TYPE CL2	12	2	65/30	0.028	N/A	.150 x .305	300V	250′	spool	clear	2	30.0	0.38	078693001802
WD-0181	TYPE CL2	14	2	41/30	0.028	N/A	.130 x .260	300V	250′	spool	clear	2	33.3	0.27	078693001819
WD-0182	TYPE CL2	16	2	26/30	0.028	N/A	.115 x .225	300V	250′	spool	clear	2	38.5	0.27	078693001826
WD-0332	TYPE CL2	16	2	26/30	0.020	N/A	.115 x .225	300V	100′	ss pack	clear	6	13.0	0.56	078693003325
WD-0331	TYPE CL2	16	2	26/30	0.020	N/A	.115 x .225	300V	50′	ss pack	clear	12	19.0	0.53	078693003318
WD-0783	TYPE CL2	18	2	16/30	0.020	N/A	.100 x .190	300V	250′	spool	clear	2	10.0	0.27	078693007835
WD-0804	TYPE CL2	18	2	16/30	0.020	N/A	.100 x .190	300V	25′	ss pack	clear	12	6.0	0.26	078693008047
WD-0782	TYPE CL2	24	2	7/32	0.020	N/A	.080 x .160	300V	1000′	spool	clear	2	10.0	0.38	078693007828
WD-0784	TYPE CL2	24	2	7/32	0.020	N/A	.080 x .160	300V	500′	spool	clear	2	10.0	0.27	078693019166
WD-0781	TYPE CL2	24	2	7/32	0.020	N/A	.080 x .160	300V	100′	ss pack	clear	12	5.7	0.53	078693007811
WD-0780	TYPE CL2	24	2	7/32	0.020	N/A	.080 x .160	300V	50′	ss pack	clear	12	3.3	0.27	078693007804

## **Gizzmo™ Speaker Wire**

**Description:** Low capacitance, Type CL2 (commercial), UL VW-1 Flame Test, 12 AWG through 16 AWG stranded copper, -20°C to 60°C, 300 Volt rating

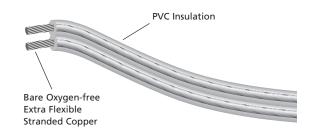
Applications: Premium sound systems, stereo and home theater systems

Conductor: Bare oxygen-free copper, extra flexible

Insulation: PVC, extra flexible

Jacket: N/A

Industry Approvals: UL, NEC Article 725 Type CL2 Class 2



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-5838	CL2 OFC	12	2	259/36	0.055	N/A	.205 x .415	300V	500′	spool	clear	1	38.0	0.97	078693058387
WD-5829	CL2 OFC	12	2	259/36	0.055	N/A	.205 x .415	300V	100′	spool	clear	2	15.0	0.34	078693058295
WD-5828	CL2 OFC	12	2	259/36	0.055	N/A	.205 x .415	300V	50′	spool	clear	4	15.0	0.37	078693058288
WD-5837	CL2 OFC	14	2	168/36	0.045	N/A	.170 x .350	300V	500′	spool	clear	1	25.9	0.60	078693058370
WD-5827	CL2 OFC	14	2	168/36	0.045	N/A	.170 x .350	300V	100′	spool	clear	2	10.5	0.23	078693058271
WD-5826	CL2 OFC	14	2	168/36	0.045	N/A	.170 x .350	300V	50′	spool	clear	4	11.5	0.29	078693058264
WD-5825	CL2 OFC	16	2	105/36	0.040	N/A	.145 x .295	300V	100′	spool	clear	4	14.3	0.29	078693058257
WD-5824	CL2 OFC	16	2	105/36	0.040	N/A	.145 x .295	300V	50′	spool	clear	10	17.5	0.32	078693058247







### Gizzmo™ Speaker Wire In-Wall

Description: Multi-conductor, power limited circuit cable (#5832), Audio/Control & Instrumentation cables (#5835), 16 AWG stranded copper, 80°C (#5835), 105°C (#5832),

300 Volt rating

Applications: Intercom systems, speakers, public address systems, volume controls, remote control circuits (#5835), Class 2 & 3 circuits-wet/dry locations (#5832)

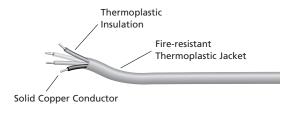
Conductor: Tinned copper

Insulation: PVC

Jacket: Flame retardant PVC

Industry Approvals: UL1581, NEC Article 725 Class 2 & 3 Power Limited Circuits (#5832),

UL444 Type CM, MP & UL2464 (#5835), UL13



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-5832	CL3	16	4	19/29	0.015	0.030	0.271	300V	500′	po box	pink	1	28.6	0.73	078693058325
WD-5835	CL3	16	2	19/29	0.010	0.030	0.219	300V	500′	po box	purple	1	15.4	0.63	078693058356

### TV/FM Antenna Hookup

Description: Twin Lead TV hook-up wire with Thermoplastic insulation,

20 AWG through 22 AWG, 300 Ohm

Applications: Connecting antennas to color and B/W televisions with

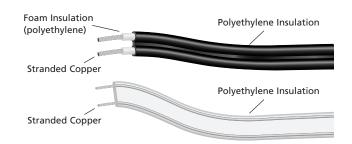
UHF, VHF, and FM signals

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: Weather and UV resistant polyethylene, foamed x-tra insulation around each conductor for signal enhancement (#0342, #0364, #0365)

Jacket: N/A

Industry Approvals: None



					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0342	FOAM TWIN LEAD	20	2	7/28	0.028	0.025	.153 x .400	N/A	500′	spool	black	1	9.4	0.38	078693003424
WD-0340	FLAT TWIN LEAD	22	2	7/30	N/A	0.025	.076 x .395	N/A	500′	spool	brown	1	8.5	0.49	078693003400
WD-0341	FLAT TWIN LEAD	22	2	7/30	N/A	0.025	.076 x .395	N/A	500′	spool	clear	1	6.9	0.53	078693003417
WD-0360	FLAT TWIN LEAD	22	2	7/30	N/A	0.025	.076 x .395	N/A	50′	ss pack	brown	10	7.8	1.35	078693003608

### **Coaxial Cable**

Description: 18 AWG through 22 AWG single conductor, 75 Ohm Applications: CATV, MATV, Class 2 circuits internal wiring, local area

networks, RF signal transmission

Conductor: Solid bare copper-covered steel

Insulation: Foamed polyethylene

Jacket: PVC

Industry Approvals: UL Type CL2/CATV, UL Style 1354 (Note: #0344 and #0344W are not UL listed)





RG6/U COA	ĸ				Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0351	100% FOIL, 60% ALUM BRAID	18	1	1/18	0.070	0.045	0.270	N/A	500′	spool	black	1	17.0	0.54	078693003516
WD-0351W	100% FOIL, 60% ALUM BRAID	18	1	1/18	0.070	0.045	0.270	N/A	500′	spool	white	1	17.0	0.50	078693013517
WD-0315	QUAD SHIELD, 100% FOIL, 60% ALUM BRAID + 100% FOIL, 60% ALUM BRAID	18	1	1/18	0.070	0.057	0.295	N/A	500′	spool	black	1	19.4	0.63	078693003158
WD-0390	100% FOIL, 92% ALUM BRAID	18	1	1/18	0.070	0.045	0.270	N/A	500′	spool	black	1	17.8	0.54	078693003905

RG59/U CO	AX				Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0354	100% FOIL, 40% ALUM BRAID	22	1	1/22	0.060	0.047	0.240	N/A	500′	spool	black	1	13.6	0.50	078693003547
WD-0355	100% FOIL, 40% ALUM BRAID	22	1	1/22	0.060	0.047	0.240	N/A	500′	spool	white	1	13.1	0.50	078693003554
WD-0344	RG59/U	22	1	1/22	0.060	0.044	0.235	N/A	500′	spool	black	1	11.6	0.46	078693003448
WD-0344W	RG59/U	22	1	1/22	0.060	0.044	0.235	N/A	500′	spool	white	1	15.0	0.53	078693013447







# **BULK WIRE – HOME COMMUNICATIONS**

### Telephone Wire Base Cord

**Description:** Thermoplastic insulated 4-conductor telephone hook-up cable, 60°C

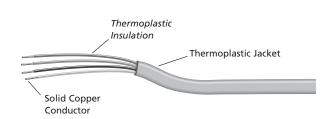
Applications: Hookup from wall jack to telephone, answering machines, etc.,

handset connection

Conductor: Soft annealed stranded copper per ASTM B3-90

Insulation: PVC Jacket: N/A

Industry Approvals: UL (#0932, #0932W)



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c		

					Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0932	BASE CORD	26	4	6/38	0.015	N/A	.097 x .193	N/A	500′	spool	almond	1	6.4	0.20	078693009327
WD-0932W	BASE CORD	26	4	6/38	0.015	N/A	.097 x .193	N/A	500′	spool	white	1	6.2	0.21	078693019320
WD-0930	BASE CORD	26	4	6/38	0.015	N/A	.097 x .193	N/A	50′	spool	almond	6	3.9	0.22	078693009303

## **Telephone Station Wire Single Phone Lines**

**Description:** Thermoplastic insulated general purpose communication

wire, single line telephone station wire. 24 AWG

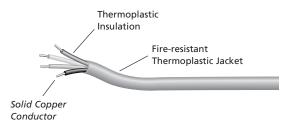
**Applications:** In-wall installations (#0345), single line telephone systems, intercoms Not recommended for riser or plenum applications

**Conductor:** Soft annealed solid copper per ASTM B3-90

Insulation: Thermoplastic

Jacket: Fire-resistant PVC

Industry Approvals: UL Type CM Station Wire, NEC Article 725 Type CM





					Nom	Nom	Nom	Amp			Std	Std			$\bigcirc$
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0345	PHONE WIRE	24	4	1/24	0.015	0.0235	N/A	300V	500′	spool	beige	1	8.4	0.21	078693003455
WD-0347	PHONE WIRE	24	4	1/24	0.015	0.0235	N/A	300V	100′	ss pack	beige	10	16.6	1.12	078693003479
WD-0346	PHONE WIRE	24	4	1/24	0.015	0.0235	N/A	300V	50′	ss pack	beige	6	3.8	0.22	078693003462

Nom

O.D.

350

3001

250'

spool

Nom

Insul

.016

1/22

Nom

Jckt

.036

### **Direct Burial Telephone Multi-Line Wire**

Description: 6-conductor (3-pair) direct burial telephone cable.

22 AWG, 60°C, 300 Volt rating

Applications: Audio and communications, suitable for direct burial,

outdoor uses where total isolation of signal is required

Conductor: Soft annealed solid copper wire per ASTM B3-90

AWG

22

**Insulation:** Thermoplastic

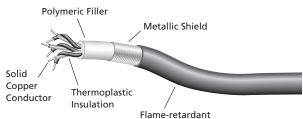
Cat No.

WD-0353

Jacket: Flame-retardant thermoplastic Industry Approvals: UL/Bellcore

Description

3-PAIR





beige

0.53

18.0

078693003530







### Voice/Data Multi-Line Wire

**Description:** Twisted pair (3 pair to 6 pair). 24 AWG, 60°C, 150°C (#2989), 300 Volt rating **Applications:** Communication network hookup, multi-line telephone hookup, fax machines

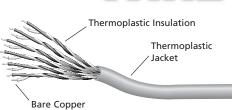
Conductor: 24 AWG bare copper

Insulation: Semirigid PVC

Jacket: PVC-low smoke

Industry Approvals: UL Listed type CM/MP or CMR/MPR

(except #2989), 60°C 300 Volt, UL444 ICEA S-80-576, EIA/TIA 568, NEC Article 800



Conductor



CATEGORY	3 COMPLIAN	Γ - SPEC	:		Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-0352	6-PAIR	24	12	1/24	0.006	0.015	0.015	300V	500′	spool	beige	1	13.8	0.49	078693003523
WD-2986	3-PAIR	24	6	1/24	0.006	0.015	0.015	300V	1000′	po box	beige	1	14.0	0.70	078693029868
WD-0894	3-PAIR	24	6	1/24	0.006	0.015	0.015	300V	500′	spool	beige	1	7.4	0.21	078693008948
CATEGORY	3 - SPEC				Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	0.D.	Cap	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-2988	PVC 4-PAIR	24	8	1/24	0.006	0.015	0.170	300V	1000′	po box	beige	1	20.0	0.81	078693029882
WD-82961	PVC 4-PAIR	24	8	1/24	0.006	0.015	0.170	300V	100′	ss pack	beige	6	10.0	0.58	078693029615
WD-82960	PVC 4-PAIR	24	8	1/24	0.006	0.015	0.170	300V	50′	ss pack	beige	10	10.0	0.58	078693029608
CATEGORY	5 - SPEC				Nom	Nom	Nom	Amp			Std	Std			
Cat No.	Description	AWG	Cond	Strand	Insul	Jckt	O.D.	Сар	Length	Pkg	Color	Pack	Wt	Cube	UPC
WD-5839	4-PAIR	24	8	1/24	0.008	0.024	0.205	300V	1000′	po box	blue	1	tbd	tbd	078693058394

6-PAIR

Category 3: Unshielded twisted pair with at least 4 pairs that can support voice and data networks up to 16MHz. Category 5: Unshielded twisted pair with at least 4 pairs that can support voice and data networks up to 100MHz.





# **GLOSSARY**

### AMPERES OR AMPS

The unit of current. One ampere is the current flowing through one ohm of resistance at one volt potential

### ALTERNATING CURRENT

Electric current that continually reverses its polarity. It is expressed in hertz or Hz.

Power loss in an electrical system. Applied to coaxial cables, the power drop or signal loss in a circuit, expressed in decibels, db. It is also the decrease in amplitude of a wave with distance in the direction of the wave propagation when the amplitude at any given place is constant in time or the decrease in amplitude with time at a given place. Attenuation is generally expressed in db per unit, usually 100 ft., and is indicative of the power loss.

### AWG

Abbreviation for American Wire Gauge.

### **AWM**

Designation for Appliance Wiring Material.

### BARE CONDUCTOR

A conductor not covered with insulation.

### BRAID

Woven bare metallic or tinned copper wire used as shielding for wires and cables and as ground wire for batteries or heavy industrial equipment. Also a woven fibrous protective outer covering over a conductor or cable

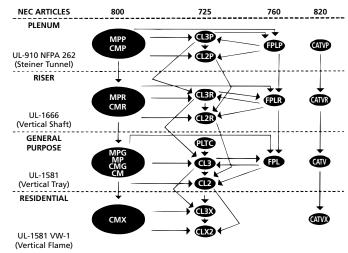
### **BURIED CABLE**

A cable installed directly in the earth without use of underground conduit. Also called "direct burial cable"

An insulated conductor, or group of individually insulated conductors in twisted or parallel configuration.

### CABLE SUBSTITUTION CHART PER NEC

All UL rated wire.



→ Cables indicated can be substituted.

Types: MPP, MPR, MPG, MP

Types: CMP, CMR, CMG, CM, CMX
Types: CL3P, CL3R, CL3, CL3X,
CL2P, CL2R, CL2, CL2X Types: FPLP, FPLR, FPL

Types: CATVP, CATVR, CATV, CATVX

Types: PLTC

= Multipurpose Cables

= Communication Cables = Class 2 and Class 3 Remote Control, Signaling, and Power Limited Cables Power Limited Fire Alarm Cables

= Community Antenna Television and Radio Distribution Cables

= Power Limited Tray Cables

# CATV

Acronym for community antenna television.

## CAPACITANCE (CAPACITY).

That property of a system of conductors and dielectrics which permits the storage of electricity when potential difference exists between the conductors. Its value is expressed as the ratio of a quantity of electricity to a potential difference. A capacitance value is always positive. The alternating current phenomena associated with electrical capacitance is important in wire and cable. At most commercial voltages and frequencies used in power distribution, the capacitance effects are negligible. At relatively high voltages, the current due to capacitance may reach sufficient value to effect the circuit, and insulation for such applications is designed for moderately low dielectric constant. In communication work, the capacitance effect is pronounced and of great importance. Among other effects, the capacitance of the wire determines the maximum length of the line over which the signal may be transmitted without excessive attenuation. It is important that insulations are designed with low dielectric constant in the communica tion field.

Acronym for closed-circuit television

### CIRCUIT

A complete path over which electrons can flow from the negative terminals of a voltage source through parts and wires to the positive terminals of the same voltage source

A UL Listed Class 2 power-limited type cable for general use applications. NEC Article 725; cable passes a 70,000 BTU flame test.

### CL2P

A UL Listed Class 2 power-limited cable which is suitable for use in plenums in accordance with NEC Article 725. The cable meets the requirements of UL 910, the Steiner Tunnel test which classifies fire and smoke characteristics.

A UL Listed Class 2 power-limited cable which is suitable for use in riser shafts between floors in accordance with NEC Article 725. These cables meet the UL 1066 flame test.

A UL Listed general application communications cable in accordance with NEC Article 800. Meets the 70,000 BTU flame test.

### CMP

A UL Listed communications cable that is suitable for use in plenums in accordance with NEC Article 800, UL 910 and Steiner Tunnel test.

A UL Listed communications cable which is suitable for use in riser shafts between floors in accordance with NFC Article 800

### COAXIAL CABLE

A cable consisting of two cylindrical conductors with a common axis separated by a

### **COLOR CODES**

14-624-Series & 14-622-Series

Pair	Tip		Ring	J		
Number	Insulation Color	Band Color	Insulation Color	Band Color		
1	White	Blue	Blue	White		
2	White	Orange	Orange	White		
3	White	Green	Green	White		
4	White	Brown	Brown	White		
5	White	Slate	Slate	White		
6	Red	Blue	Blue	Red		

### **COLOR CODE FOR TELEPHONE WIRE**

4C = Black, Red, Green, Yellow 6C = White, Black, Red, Green, Yellow, Blue

8C = White, Brown, Yellow, Green, Red, Black, Orange, Blue

The measured ability of a conductor that allows electrons to flow. The ratio of the current flow to the potential difference causing the flow. The reciprocal of the resistance.

## CONDUCTIVITY

The capability of a material to carry electrical current usually expressed as a percentage of copper conductivity (copper being 100%).

## CONDUCTOR

An uninsulated or insulated wire suitable to carry electrical current.

### CONDUCTOR RESISTANCE

The resistance to flow of the electrical current along a conductor. Expressed in ohms/1000 feet. (Usually referenced to 20(C).

# **COPPER-COVERED STEEL WIRE**

A wire having a steel core to which is fused an outer shell of copper.

### CROSSTALK

Signal interference between nearby conductors caused by pickup of stray energy.

Abbreviation for Canadian Standards Association, a non-profit, independent organization which operates a listing service for electrical and electronic materials and equipment. The Canadian counterpart of the Underwriters Laboratories.

### CURRENT

A movement or flow of electrons. Also the measure of this flow, expressed in amperes.

### **CURRENT CARRYING CAPACITY**

The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations

### **CURRENT RATING**

The maximum continuous electrical flow of current for which a device is designed to conduct for a specified time at a specified operation temperature. Usually expressed in

### **DB LOSS**

The loss of a signal in a conductor expressed in decibels.

### **DC (DIRECT CURRENT)**

An electric current which flows in only one direction.

1) Any insulating medium which intervenes between two conductors and permits electrostatic attraction and repulsion to take place across it. 2) A material having the property that energy required to establish an electric field is recoverable in whole or in part, as electric energy





### **DIELECTRIC STRENGTH**

The voltage which an insulation can withstand before breakdown occurs. Usually expressed as a voltage gradient (such as volts per mil).

In a cable, the uninsulated wire laid over the component or components and used as a around connection.

Like concentricity, a measure of the center of a conductor's location with respect to the circular cross section of the insulation. Expressed as a percentage of displacement of one

Fixture wire, flexible, rubber insulated, single conductor, 300V, 60(C).

### FF-2

Same as FF-1 with 600V rating.

### **FLAT BRAID**

A braid shield composed of flat strands.

### **FLAT CABLE**

A cable with two smooth or corrugated but essentially flat surfaces.

## **FLAT CONDUCTOR**

A wire having a rectangular cross section as opposed to round or square conductors.

### **FLAT CONDUCTOR CABLE**

A cable with a plurality of flat conductors.

### FLAME RESISTANCE

The ability of a material not to propagate flame once the heat source is removed.

Power Limited Fire Protection; general use, NEC 760, UL Subject 1424.

### **FPLP**

Plenum rated Power Limited Fire Protection; NEC 760, UL Subject 1424.

### **FPLR**

For use between floors (Riser) Power Limited Fire Protection; NEC 760, UL Subject 1424.

### **GAUGE**

A term used to denote the physical size of a wire.

A term replacing cycles per-second as an indication of frequency.

### **HOOK-UP WIRE**

A wire used for low current, low voltage (under 1000 volts) applications within enclosed electronic equipment.

The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency. It is a combination of resistance R and reactance X, measured in ohms.

### INSULATION RESISTANCE

The ratio of the applied voltage to the total current between two electrodes in contact with a specific insulation, usually expressed in megohms-M feet.

### **JACKET**

An outer non-metallic protective covering applied over an insulated wire or cable.

A test to determine the length of time before failure in a controlled, usually accelerated, environment.

A two wire cord terminated in a two-prong plug at one end used to connect equipment or appliance to a power outlet.

# LOCAL AREA NETWORK (LAN)

A baseband or broadband interactive bi-directional communication system for information exchange on a common transmission line.

Insulated wire intended for use in windings on a motor, transformer, and other coils for electro-magnetic devices.

### **NEC (NATIONAL ELECTRIC CODE)**

A set of regulations governing construction and installation of electrical wiring etc.

## **NEC ARTICLE 725**

Covers remote control, signal and communication power limited circuits that are not an integral part of the device or appliance.

# **NEC ARTICLE 760**

Covers the fire and burglar alarms installation of wire and equipment operating at 600V or less.

### **NEC ARTICLE 800**

Covers telephone, telegraph as well as outside wiring for fire and burglar alarms.

### **OD (OVERALL DIAMETER)**

Finished diameter over wire or cable.

A unit of electrical resistance equal to that of a conductor in which a current of one ampere is produced by a potential of 1 volt across its terminals.

Cable approved by a recognized agency such as UL for installation in plenums without the need for conduit.

### **POLYETHYLENE**

A thermoplastic material with excellent electrical properties.

### **PVC (POLYVINYL CHLORIDE)**

A polymer compound used as wire insulation.

### **OUAD**

A four conductor cable or four shields in a cable.

### RATED TEMPERATURE

The maximum temperature at which an electric component can operate for extended periods without loss of its basic properties.

### RATED VOLTAGE

The maximum voltage at which an electric component can operate for extended periods without undue degradation or safety hazard.

A measure of the difficulty in moving electrical current through a medium when voltage is applied. It is measured in ohms.

### RESISTIVITY

The ability of a material to resist passage of electrical current either through its bulk or on a surface. The unit of volume of resistivity is the ohm-millimeter/meter @ 60(F) of

### RG/U

"RG" is the military designation for coaxial, and "U" stands for general utility.

### **ROPE LAY**

A conductor composed of a central core surrounded by one or more layers of helically laid groups of wires.

In cables, a metallic layer placed around a conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires and external fields.

### **STRAND**

A single uninsulated wire (a unit of a conductor).

### STRANDED CONDUCTOR

A conductor composed of groups of wires twisted together.

### TC

Tinned copper. (also TDCU)

### TEMPERATURE RATING

The maximum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.

### TENSILE STRENGTH

The pull stress required to break a given specimen.

When more than one color coding stripe is required, the first, or widest, stripe is the base stripe; the other, usually narrower stripes, being termed tracer stripes

### **TWIN LINE**

A type of transmission line which has a solid insulating material, in which the two conductors are placed in parallel to each other and whose impedance is determined by the diameter and spacing of the conductors and the insulating material. Also known as twin lead.

### **TWISTED PAIR**

A cable composed of two small insulated conductors, twisted together without a common covering.

Abbreviation for Underwriters Laboratories, a nonprofit, independent organization, which operates a listing service for electrical and electronic materials and equipment.

# **VELOCITY OF PROPAGATION**

The speed of an electrical signal down a length of cable compared to speed in free space expressed as a percent. It is the reciprocal of the square root of the dielectric constant of the cable insulation.

### **VOLTAGE**

The term most often used in place of electromotive force, potential, potential difference, or voltage drop to designate the electric pressure that exists between two points and is capable of producing a current when a closed circuit is connected between two

### **VOLTAGE RATING**

The highest voltage that may be continuously applied to a conformance with standards or specifications.

### VW-1

A flammability rating established by Underwriters Laboratories for wires and cables that pass a specially designed vertical flame test.

Unit of power or work done at rate of one joule per second or rate of work represented by current of one ampere under a pressure of one volt (volt-ampere).

## **WAVE LENGTH**

The distance, measure in the direction of propagation, of a repetitive electrical pulse or waveform between two successive points that are characterized by the same phase of

### WICKING

The longitudinal flow of a liquid in a wire or cable due to capillary action.

### WIRE

A conductor, either bare or insulated.