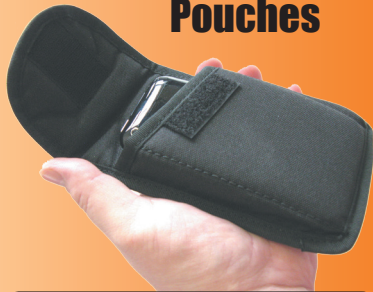


## World's *Toughest* Smartphone Pouches



From \$16.95 Page 18

VOLUME 45 - APRIL 2016

# World's Best Telecom Products *...and more...*



sandman.com

- Telephone Repair Parts
- Installation & Repair Tools
- Unique Problem Solving Devices
- Custom Telecom Engineering & Manufacturing

## STAY LEVEL.....



Level  
Template  
and More  
Professional  
Installation  
Tools...

\$9.95 Page 12

## Catalog Launch Special!

Get 5% OFF\* your order  
\*excluding shipping

**Mention Code:**

"**Holy cow! It's a new  
sandman.com catalog**"

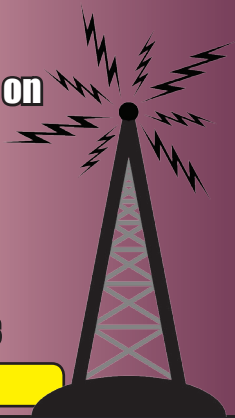
Valid Through 5/15/2016

## YES...

You *CAN* fix RF on  
Headsets,  
Handsets  
and Phones!

**RF Eliminators**

Page 5



**25 Pair  
Cables  
and Accessories**

From \$16.50 Page 6 - 7

## We manufacture the largest selection of handsets *in the world!*

- Replacement handsets
- Amplified, Noise Canceling, Push-To-Talk (or mute)
- Kiosk Handsets, Prison Visitation, Armored Cables
- Fast Prototypes and Fast Delivery
- See Page 14 Inside for More...



Order **Risk Free** with the  
sandman.com **30-day  
money back guarantee!**

See Page 2 for More Details

Our Telecom Support Experts are Available:

**By Phone:** 630-980-7710

**By Email:** sales@sandman.com



**Sales & Support  
630-980-7710**

25 Years of Unique Telecom Products and Advice

<http://www.sandman.com>



# Table of Contents

## Fixing Phone Line & Station Problems Pages 3 - 5

About Us / Troubleshooting Resources .....	3
Unique Problem Solving Devices for Phones / Lines .....	4
Radio Frequency Elimination / Lightning Protection .....	5

## Voice and Data Installation and Tools Pages 6 - 13

25 Pair Cables & Accessories .....	6 - 7
Keystone Jacks, Faceplates & Inserts.....	8
Patch Panels & Patch Cords .....	9
66 Blocks & Accessories .....	10
Cable Mounting & Installation.....	11
Installation & Repair Tools.....	12
Power Over Ethernet (PoE) Equipment .....	13

## Telephone and Networking Equipment Pages 14 - 17

Telephone / Kiosk Handsets & Accessories .....	14
Handset / Line Cords & Modular Plugs.....	15
Telephones, Dialers & Door Boxes.....	16
Recording, Simulators, Relays & Cleaning Kits.....	17

## Other "World's Best" Products Page 18

Cellular / Cordless Phone Pouches .....	18
World's Best Toilet Seat .....	18
World's Best Music Holders & Digital Signage.....	18



**Self-Serve Online Ordering for many of our products at:**

<http://www.phoneman.com>

If you know exactly what you need and prefer to order online, or need to place an order when our office is closed, you can order many of our products at <http://www.phoneman.com>

## Ordering Terms and Conditions



All of our products except for custom build orders, closeouts and bidets come with a 30-day money back guarantee. We don't refund shipping in either direction.

To return products, call us for an RMA number and return shipping instructions. Items must be returned clean and in new condition or a restocking fee may apply.

Orders for in-stock items placed by 2:30 PM Chicago time (CST) usually ship the same day.

Our office is open 8:30 AM to 5 PM CST, Monday - Friday (excluding major holidays).

We accept all major credit cards and orders are charged at the time they are placed.

We can ship UPS, FedEx and Priority Mail. International shipping is available.

Every effort has been made to ensure the accuracy and pricing in this catalog, but prices do change and mistakes can happen.

## Advertising Space Available

**Reach tens of thousands of phone, network and cable installers.**

Ad space available in our next quarterly catalog. For info, email: [chuck@sandman.com](mailto:chuck@sandman.com)

## Don't see what you're looking for?

Consider our printed catalog as a "best-seller" list of our most popular and unique items. It only contains a small portion of our products. Our full catalog is available online at: [www.sandman.com](http://www.sandman.com)

Throughout this catalog there are links to pages on our website that have more detailed technical specifications, installation instructions and product photos. Look for our logo next to these links, and if you're viewing this as a PDF you can click the link or logo to go to our site.

# About Us / Troubleshooting Resources

**sandman.com, Inc.** (formerly Mike Sandman Enterprises) was started by Mike Sandman (Chicago's Telecom Expert...) in 1990. Through the years we've developed hundreds of unique problem solving devices that make life easier for phone men (and women) and IT and security professionals.



Our expert staff has been in the industry for **decades** and there aren't too many problems we haven't heard of (and found a solution for). We also custom engineer handsets and other electronics as necessary.

Most orders placed by 2:30 PM Chicago Time (CST) ship the same day. Most of our products come with a **30-day money back guarantee** so you can return them if they don't solve your problem. Check out the ordering terms and conditions on page 2 for more details on our ordering and return policies.

Sometimes figuring out where to start is the hardest part. Our online knowledgebase contains technical bulletins and tech blog entries that will help. Highlights of our most popular articles are listed below, followed by the links on our site where you can find them all. Many have downloadable reference sheets.

- **How To Successfully Implement VoIP Lines**  
A list of all of the quirks you'll run into making VoIP work... *Read it now, or live it later!*
- **VoIP Phone Line Checklist**  
A quick checklist for both homes and businesses considering switching to VoIP
- **Echo Elimination, DTMF & Modem Problems**  
All the things you can try to eliminate echo, help DTMF recognition, and fix modem problems
- **Caller ID Tech Bulletin**  
Fix Caller ID problems. Includes things to check when it works on a cheap box but not the system
- **RF Tech Bulletin and Troubleshooting Flow Chart**  
Eliminate Radio Interference on phone/data lines
- **AC Power and Grounding**  
Bad power/grounding can cause all kinds of strange problems or surges that can damage equipment
- **Telephone Line Diagnostic Table** *(inside of back cover!)*  
Fill this out **first** to know where to start diagnosing and **fixing strange problems!**
- **Loop Current & Circuit Loss Bulletin**  
**Fix "Unfixable" Problems** caused by circuit loss or low/high Loop Current
- **Ring Voltage Tech Bulletin**  
How to measure AC Ring Voltage with a digital volt meter
- **Alarm Systems Trouble Alarm Bulletin**  
How to fix intermittent alarm system trouble alarms caused by low voltage
- **Troubleshooting Basics**  
Save yourself hours of chasing your tail!
- **Lightning Protection Blog**  
Do you install Lightning Protection immediately or wait for damage then add protection?



**View all sandman.com Tech Bulletins:**

<http://www.sandman.com/bulletin.html>



**View the sandman.com Tech Blog:**

<http://www.sandman.com/TechBlog.html>

## Stay Current

*Our emails go out about once a month!*

**NO SPAM!**

**Get catalog updates, specials and new Tech Tips delivered via email!**

Visit: <http://www.sandman.com/catalog.asp> or we can add you to the list when you order!

# Unique Problem Solving Devices

## Loop Current Booster™ Plus



- Increases Loop Current to a regulated 27ma
- Increases the On-Hook Talk Battery by 24VDC
- Line In-Use LED

**3+ @\$89.95**

Toggle switch for Loop Current Boost Mode / Battery Boost Mode

Modular Loop Current Booster™ Plus includes 110VAC power cube (do not substitute!) 220VAC international power cubes are available.

### Modular Loop Current Booster (shown)

Part #KIT8L \$99.95

### 25 Line Loop Current Booster™ Plus 1 Line Card

Part #PAP2D<sup>1</sup> \$84.95

## Ring Voltage Booster II™



- Increases Ring Voltage to 90VAC RMS at 20 cycles
- Increases Ringing Current to 7.5 REN
- Make anything ring!

**3+ @\$118.00**

25 line version available  
Call for details!

A lot of modern telecom devices do a poor job of emulating a real phone line and have bad ringing!

Ring Voltage Booster II™ Boosts Ringing On:

- Telephone lines
- Analog Station and ISDN Ports
- T1 Channel Bank Ports
- VoIP Adapter Analog Ports
- **Any Device** that provides a port for an analog telephone

### Modular Ring Voltage Booster II™ (shown)

Part #KIT8R \$124.95

### Modular Ring Voltage Booster™ Grounded Ringing

Part #KIT8M \$144.95

### 25 Line Ring Voltage Booster™ Chassis

Part #DSI90 \$899.95

### 25 Line Ring Generator Module

Part #DSI9P \$54.95

### 25 Line Ring Voltage Booster Module

Part #DSI9Q \$62.95

## Loop Current Regulator™

The Loop Current Regulator™ *automatically* keeps the Loop Current on a line at **25ma - no matter what!**

No switches, no meter, just plug it in! If the Loop Current changes later, the Loop Current Regulator™ *automatically* adjusts.

Symptoms of high loop current include:

- Burned out Key, PBX and Data equipment
- Cut-offs and squealing on lines
- Crosstalk, echo or hollow sounds
- Off premise equipment problems
- Garbled data and connection problems

### Loop Current Tester™

Line-Powered  
ONE Button  
Loop Current Readings

Just connect the modular plug anywhere on the line!



### Loop Current Tester™

Part #TOH70 \$39.95



**3+ @\$38.95**

### Modular 1-Line (shown)

Part #WAL5S \$39.95

### Modular 2-Line

Part #WAL5T \$49.95

### 66 Block Version

Part #MIS1S \$35.50

### 25 Line Regulator - 1 Line Card

Part #PAP2E<sup>1</sup> \$38.95

## Echo Stopper™ - Adjustable Impedance Matcher

Matches telephone equipment to the phone line to reduce echo and fix DTMF recognition problem

Makes up for impedance mismatches between the phone line and trunk card's transformer.

**Stops Echo on VoIP Phone Systems!**

Changing impedance can correct problems such as:

- DTMF Recognition Problems
- Volume and Distortion Problems
- Echo Problems
- Modem Speed and Connection Problems
- Cellular to POTS Adapter Problems



**10+ @\$45.95**

### Modular 1-Line (shown)

Part #WAL5F \$49.95

## 125 Line Telephony Chassis™

Populate in 5-line increments



### Holds 25:

- Loop Current Booster™ PLUS Line Cards
- Loop Current Regulator™ Line Cards
- Echo Stopper™ Line Cards
- Custom Made Line Cards - **Just Call Us!**

**Compatibility:** All Versions of the Line Cards work with CPC (Calling Party Control, or Open Loop Disconnect), Caller ID, Message Waiting, Distinctive Ringing, Call Waiting, Call Transfer and 3-Way Calling.

### Chassis and Line Cards work on:

- Telephone lines
- Analog Station and ISDN Ports
- T1 Channel Bank Ports
- VoIP Adapter Analog Ports
- **Any Device** that provides a port for an analog telephone

View Our Tech Bulletins online at:  
<http://www.sandman.com/bulletin.html>

### 25 Line Telephony Chassis™

Part #PAP2A \$899.95



For more unique troubleshooting devices for phone systems, visit:

<http://www.sandman.com/loop.html>



# Radio Frequency (RF) Elimination



Modular RF Filters

## World's Best RF Filters!

Engineered for maximum rejection of unwanted frequencies. Hand made in the USA!

Our filters have a **99% success rate!** Works with audio, data and telephone applications. Won't interfere with regular device operations.

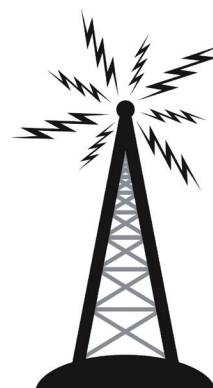
1 pair — \$20.25/each		2 pair — \$24.25/each		Handset — \$24.25/each	
Freq	Part #	Freq	Part #	Freq	Part #
AM .5 to 3mhz	"WAL1G	AM .5 to 3mhz	"WAL1A	AM .5 to 3mhz	"WAL1D
CB 3 to 30mhz	"WAL1H	CB 3 to 30mhz	"WAL1B	CB 3 to 30mhz	"WAL1E
Ham 26 to 60mhz	"WAL1O	Ham 26 to 60mhz	"WAL1N	Ham 26 to 60mhz	"WAL1M
FM 60 to 150mhz	"WAL1I	FM 60 to 150mhz	"WAL1C	FM 60 to 150mhz	"WAL1F

Ethernet (RJ45) RF Filters		2 pair RJ45 — \$39.95/ea		4 pair RJ45 — \$56.50/ea	
Freq	Part #	Freq	Part #	Freq	Part #
AM .5 to 3mhz	"WAL2R	AM .5 to 3mhz	"WAL3K	AM .5 to 3mhz	"WAL3K
CB 3 to 30mhz	"WAL3I	CB 3 to 30mhz	"WAL3M	CB 3 to 30mhz	"WAL3M
Ham 26 to 60mhz	"WAL3J	Ham 26 to 60mhz	"WAL3O	Ham 26 to 60mhz	"WAL3O
FM 60 to 150mhz	"WAL2S	FM 60 to 150mhz	"WAL3L	FM 60 to 150mhz	"WAL3L



**YES...**  
You **CAN** fix RF  
on Headsets,  
Handsets  
and phones!

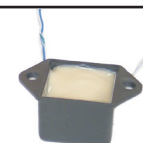


## RF Tech Bulletin & Flowchart

<http://www.sandman.com/rfbull.html>

## Hardwire — \$14.65/each

Freq	Part #
AM .5 to 3mhz	"WAL1K
CB 3 to 30mhz	"WAL1L
Ham 26 to 60mhz	"WAL1Q
FM 60 to 150mhz	"WAL1R

Hardwire  
RF Filters

**\$14.65**

# Maximum Lightning Protection™

66 Block Maximum  
Lightning Protectors

\*Modular and  
Screw Terminal Versions  
also available!

## Maximum Lightning Protection™ Features:

- **Dual Stage Protection...** for Over Current and Over Voltage, that **resets Automatically!**
- **Solid State Circuit** automatically clamps surges to 10-15 volts.
- **Our Telephone Line Protector Module** handles up to **twice the current** of any other protector!
- **Electronic Resettable Fuse** opens above 150ma for protection against AC line crosses, and **closes automatically.**
- Our **T1, T3 and 100Base-T Protectors** stop damaging **common** mode surges that others don't!
- Each **Protector** has **Test Points** to allow a quick check for dial tone with a Butt-Set.
- Our **Ground Bus** allows easy insertion and removal of one protector on a 66 block without removing others.
- Our **Test Shoe** lets you test a line by removing only ONE protector.

More details at: <http://www.sandman.com/Surge.html>

66 Block Test Shoe		
Part #	MIS1T	\$29.95
66 Block Protection for:	Part #	Price
1 CO Line	"KIT1O	\$22.95
1 Pair Digital Extension	"KIT4H	\$20.95
12/24V 1 Pair Data	"KIT1Q	\$20.95
14V 1 Pair Data/Audio	"KIT2S	\$20.95
T1 / E1 1 Pair	"KIT1K	\$24.95
T3 / E3 1 Pair	"KIT1L	\$27.95
10/100 BASE-T 1 Pair	"KIT1R	\$24.95

## 10' AC Ground Plug

**This is as  
easy as  
it gets!**



10 gauge wire.

## 10' AC Ground Plug

Part #KIT1M \$11.99

## Universal Ground Bus w/Cover

Zinc Plated. Two  
lugs for mounting  
to a wall or backboard.



Paintable plastic cover.

## Universal Ground Bus w/Cover

Part #PAP4G \$7.99

## 66 Block Ground Bus w/ Lug

Part #KIT1N \$11.99

You need one  
Ground Bus & Lug  
for each 66 Block with Maximum Lightning Protection™.



**Lightning Protectors won't do anything  
without a GOOD GROUND!**

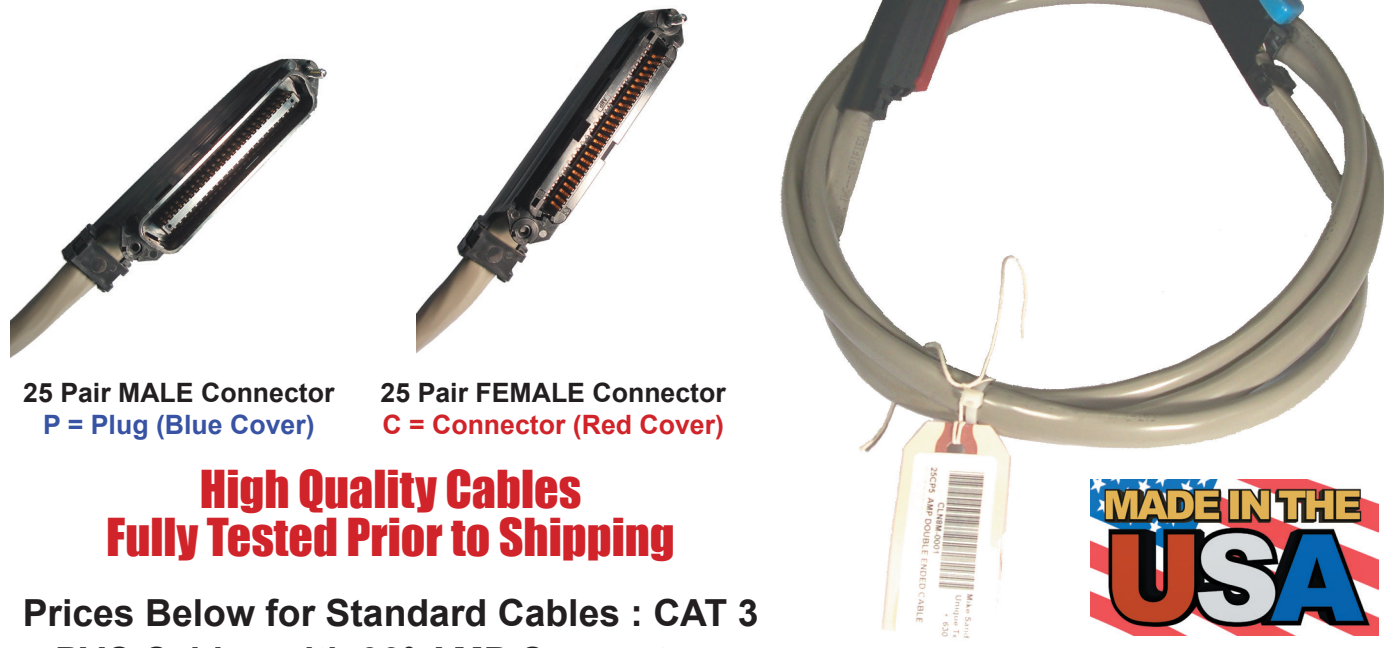


## Electrical Grounding Tech Bulletin

<http://www.sandman.com/GroundingBull.html>

# 25 Pair Connectorized Cable Assemblies

Our Connectorized Cables are assembled from **US made** Telephone Gray Cable, and **US made** AMP connectors!



25 Pair MALE Connector  
P = Plug (Blue Cover)

25 Pair FEMALE Connector  
C = Connector (Red Cover)

**High Quality Cables  
Fully Tested Prior to Shipping**

Prices Below for Standard Cables : CAT 3  
PVC Cables with 90° AMP Connectors

Female to Male		
Length	Part #	Price
3'	#CLN8L	\$22.50
5'	#CLN8M	\$25.50
10'	#CLN8N	\$33.00
15'	#CLN8O	\$40.50
25'	#CLN8P	\$55.50
50'	#CLN8Q	\$93.00
100'	#CLN8R	\$168.00
150'	#CLN8S	\$243.00
200'	#CLN8T	\$318.00

Female to Female		
Length	Part #	Price
6" Goof	#DSI4S	\$22.50
5'	#DSI4E	\$25.50
10'	#CLN7J	\$33.00
15'	#CLN7K	\$40.50
25'	#CLN7L	\$55.50

Male to Male		
Length	Part #	Price
6" Goof	#DSI4T	\$22.50
5'	#DSI4F	\$25.50
10'	#CLN7M	\$33.00
15'	#CLN7N	\$40.50
25'	#CLN7O	\$55.50

Female to Blunt		
Length	Part #	Price
5'	#CLN8A	\$16.50
10'	#CLN8B	\$24.00
15'	#CLN8C	\$31.50
25'	#CLN8D	\$46.50

Male to Blunt		
Length	Part #	Price
5'	#CLN8G	\$16.50
10'	#CLN8H	\$24.00
15'	#CLN8I	\$31.50
25'	#CLN8J	\$46.50

**WE MAKE  
CUSTOM CABLES!**

Need a non-standard cable? We make custom cables - usually in 2-3 days. Give us a call for a quote on:

- Plenum, CAT5e Cables
- Custom Length Cables
- 32, 50, 100 Pair Cables
- Bail Lock / Latch Lock
- 180° Connectors
- Bulk Cables

## 25 Pair Cable Accessories

### QWIK Cables™ - These make installations go *fast*!



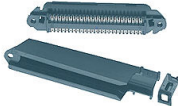

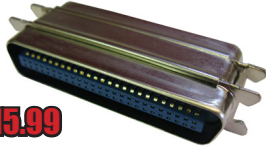

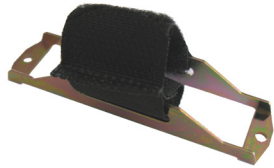
- Samsung Officeserv / Avaya IP Office
- Toshiba CIX40
- Toshiba DK-24, DK-56, DK-96, DK-280, DK-424(i)
- Toshiba 100, 670 CTX
- NEC DS2000, DSX-40/80/160
- Panasonic 624/824
- Mitel 3300 Analog Chassis
- Vertical SBX IP 320 and AT&T Partner
- Shoretel SG30/50/90

**Keep a few in your truck!**

**Call for Pricing  
and Availability!**



More QWIK Cable™ options and cable diagrams at:  
<http://www.sandman.com/25pair.html>

25 Pair "Y" Adapters	25 Pair Solder Connectors	25 Pair AMP Connectors
 <p>About 1 foot of cable to each connector. <i>Custom lengths available.</i></p>	 <p>Each pin has a small solder cup for a wire</p>	 <p>Works with AMP &amp; Cinch Brand Tools</p>
	<b>90° Male Connector</b> Part #MMA4L \$5.95	<b>90° Male AMP Connector</b> Part #SER6A \$7.99
	<b>90° Female Connector</b> Part #MMA4M \$5.95	<b>90° Female AMP Connector</b> Part #SER6B \$7.99
<b>Female - Male - Female (CPC)</b> Part #CLN7R \$44.95	<b>180° Male Connector</b> Part #MMA4N \$6.95	<b>180° Male AMP Connector</b> Part #SER6Q \$9.95
<b>Male - Female - Male (PCP)</b> Part #CLN5P \$44.95	<b>180° Female Connector</b> Part #MMA4O \$6.95	<b>180° Female AMP Connector</b> Part #SER6R \$9.95
Octopus Cables	Goof Cables & Plugs	Velcro for AMP Connectors
 <p>6' Modular Cables to an AMP Connector <b>Octopus / Hydra Cables Starting at \$38.95</b></p>	 <p><b>\$15.99</b> Male to Male Goof Plug #MMA4P Female to Female Goof Plug #MMA4Q <b>What are you going to do when you mess up?</b></p>  <p><b>\$22.50</b> F-F Goof Cable #DSI4S M-M Goof Cable #DSI4T</p>	 <p>Use screws to hold a 90° or 110° connectorized cable in place. <b>YES, you absolutely need this to hold the connector in!</b></p>
		<b>Velcro Bracket for AMP</b> Part #MSC9C \$4.49



# Keystone Jacks, Faceplates & Inserts

CAT6



\$4.10/each  
20+ @ \$3.89

CAT5e



\$2.69/each  
20+ @ \$2.49

CAT3 (USOC)



\$2.29/each  
20+ @ \$2.05



Fluke Jack Rapid Tool

Part #DSI1C \$99.95

CAT 6 Rapidjacks™

Color	Part #
Blue	#DSI1M
Orange	#DSI1N
Red	#DSI1O
White	#DSI1P
Ivory	#DSI1Q
Black	#DSI2M
Yellow	#DSI2O

CAT 5e Rapidjacks™

Color	Part #
Blue	#MSA1F
Orange	#MSA1G
Red	#MSA1H
White	#MSA1I
Ivory	#MSA1J
Black	#MSA1K
Gray	#MSA1L
Almond	#MSA1M
Green	#MSA1N
Yellow	#MSA1O

CAT 3 Rapidjacks™

Color	Part #
White	#DSI1J
Ivory	#DSI1K
Almond	#DSI1I
Black	#DSI1L

**Rapidjacks™**

The *easiest* and *quickest* ways to terminate a Leviton® or Rapidjack™.

\*Does not work on Leviton CAT6+ Jacks (different shape)

Get it  
**FREE**

with an order of 300 or more Rapidjacks™!



sandman.com Rapidjack™ Crimp Tool

Part #DSI1S \$59.95

## Keystone Faceplates



99¢ each - 20+ @ 89¢

Hole Flush Mount Keystone Faceplates

Ports	Ivory	White	Almond
1	#DSI3F	#DSI3A	#DSI3K
2	#DSI3G	#DSI3B	#DSI3L
3	#DSI3H	#DSI3C	#DSI3M
4	#DSI3I	#DSI3D	#DSI3N
6	#DSI3J	#DSI3E	#DSI3O

*Stainless & Brushed Brass Faceplates Also Available!*

## Specialty Keystone Inserts



3.5mm

Part #CHM7E  
\$5.95



Coax

Part #CHM5P  
\$1.69



S-Video

Part #MIS5E  
\$3.95



RCA

Part #MIS5P  
\$3.59



USB 3.0

Part #CHM7C  
\$9.95



HDMI

Part #CHM7D  
\$9.95



BNC

Part #CHM5N  
\$3.59



3/8" Hole

Part #CHM5S  
59 ¢

Photos and part numbers for **WHITE** inserts shown.

*Call or view the web page below for all color options and part numbers.*

See more photos and network installation products at:

<http://www.sandman.com/cat5-6.html>





# Patch Panels and Patch Cords

## 19" Patch Panels



Description	Part #	Price
12 Port 1U 19" CAT5e	#CHM9B	\$27.95
12 Port 1U 19" CAT6	#TOH8B	\$42.95
24 Port 1U 19" CAT5e	#CHM9E	\$38.95
24 Port 1U 19" CAT6	#TOH8C	\$69.95
48 Port 2U 19" CAT5e	#CHM9F	\$74.95
48 Port 2U 19" CAT6	#TOH8D	\$119.95
96 Port 4U 19" CAT5e	#CHM9C	\$149.95
96 Port 4U 19" CAT6	#TOH8E	\$209.95

## 19" Rack Mount Brackets



4" Deep Hinged Brackets  
Style may vary. More sizes available.

Description	Part #	Price
1U Hinged 4" deep	#CHM9M	\$15.95
2U Hinged 4" deep	#CHM9N	\$20.95
4U Hinged 4" deep	#MIS8D	\$47.95
6U Hinged 4" deep	#MIS8E	\$49.95

## Surge Protector

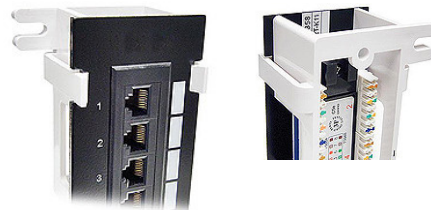


6 Outlets on Front, 6 on Rear  
**1800 Joules of surge suppression**

### 1U Rack Mount Surge Protector

Part #MIS8I \$69.95

## 66 Style Patch Panel and Bracket



### 12 Port CAT5e 66 Style Patch Panel

Part #CHM9A \$27.95

### 12 Port CAT6 66 Style Patch Panel

Part #TOH8A \$42.95

19" Rack Mount Wire Managers



### 1.75" 1U Wire Manager

Part #CHM9O \$13.95

### 3.5" 2U Wire Manager

Part #CHM9P \$18.99

## CAT5e / CAT6 Patch Cords



### CAT6 Patch Cords

Length	Price	Blue	White	Gray	Red	Black	Yellow
1'	\$1.14	#CAP6A	-	#CAP6B	#CAP6C	-	-
2'	\$1.50	#CAP4A	#CAP4E	#CAP4C	#CAP4D	#CAP4B	#CAP4F
3'	\$1.74	#CAP4H	#CAP4L	#CAP4J	#CAP4K	#CAP4I	#CAP4M
5'	\$2.16	#CAP4O	#CAP4S	#CAP4Q	#CAP4R	#CAP4P	#CAP4T
7'	\$2.67	#CAP5A	#CAP5E	#CAP5C	#CAP5D	#CAP5B	#CAP5F
10'	\$3.31	#CAP5H	#CAP5L	#CAP5J	#CAP5K	#CAP5I	#CAP5M
14'	\$4.08	#CAP5O	#CAP5S	#CAP5Q	#CAP5R	#CAP5P	#CAP5T
25'	\$5.76	#CAP6E	-	#CAP6F	#CAP6G	#CAP6H	-

### CAT5e Patch Cords

Length	Price	Blue	White	Gray	Red	Black	Yellow
1'	89¢	#CAP3A	-	#CAP3B	#CAP3C	-	-
2'	98¢	#CAP1A	#CAP1E	#CAP1C	#CAP1D	#CAP1B	#CAP1F
3'	\$1.08	#CAP1H	#CAP1L	#CAP1J	#CAP1K	#CAP1I	#CAP1M
5'	\$1.26	#CAP1O	#CAP1S	#CAP1Q	#CAP1R	#CAP1P	#CAP1T
7'	\$1.75	#CAP2A	#CAP2E	#CAP2C	#CAP2D	#CAP2B	#CAP2F
10'	\$2.32	#CAP2H	#CAP2L	#CAP2J	#CAP2K	#CAP2I	#CAP2M
14'	\$3.15	#CAP2O	#CAP2S	#CAP2Q	#CAP2R	#CAP2P	#CAP2T
25'	\$4.45	#CAP3E	-	#CAP3F	#CAP3G	#CAP3H	-

## LONG RUN CORDS





White cords won't be as noticeable going up and down the wall!

Description	Part #	Price
50' CAT5e	#CAP3I	\$9.75
100' CAT5e	#CAP3K	\$18.75
50' CAT6	#CAP6I	\$11.10
100' CAT6	#CAP6K	\$18.75

# 66 Blocks & Accessories

## 66M Blocks



Description		Part #	Price
66M Split 50 Pair Block CAT5 White		#CLN9H	\$7.95
66M Split 50 Pair Block CAT5 White + Cover		#CLN9E	\$8.95
66M Split 50 Pair Block CAT5 Blue + Cover		#CLN9F	\$9.49
66M Non-Split 25 Pair CAT3 White		#CLN9G	\$11.99
1/2 66M Split 24 Pair Block White		#CLN7P	\$18.95
<b>66M Desi Strip</b> 25 lines on White Plastic Desi Strip. Write what you need with a Sharpie.	 <b>66 Punching Doubler</b> <i>Never punch more than one wire per pin!</i>	 <b>Bridge Clips</b> <i>You need 2 per pair!</i>	
<b>66M Desi Strip</b>	<b>66 Punching Doubler</b>	<b>Bag of 100</b>	
Part #CLN9T 63¢	Part #CLN7B 95¢	Part #SWI6D \$10.99	



**Hinged 66M Block Covers**  
 Protect your blocks from service calls!  
**20+ @\$2.19**

Color	Part #	Price
Orange (shown)	#CLN6O	\$2.49
Blue	#CLN9K	\$2.49
Gray	#CLN6N	\$2.49
Green	#CLN6P	\$2.49
White	#CLN6Q	\$2.49
Red	#CLN9N	\$2.49
Clear	#CLN6R	\$2.49
Violet	#CLN9M	\$2.49
Yellow	#CLN9L	\$2.49
1/2 Block Orange	#CLN5S	\$2.39
1/2 Block Gray	#CLN5T	\$2.39



## 66M Block Brackets

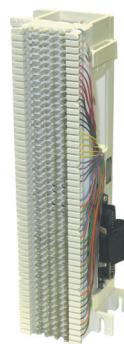
Description	Part #	Price
89D Bracket (shown)	#CLN9B	\$1.65
89B Bracket	#CLN9A	\$1.39
1/2 Block 89E Bracket	#CLN7Q	\$4.29



**66 Block Wire Removal Tool**

**66 Block Wire Tool**

Part #TOO7B \$19.95



## 66M Blocks with AMP Connector(s)

Each Connectorized 66 Block we make is tested by humans on a sophisticated electronic cable tester that checks each pin!

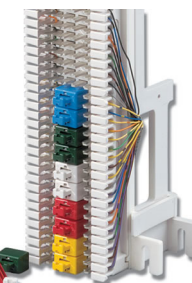
**Special configurations available on special order!**

Description	Part #	Price
66M Split 50 Pair 1 Female AMP and Bracket	#SER6F	\$39.50
66M Split 50 Pair 1 Male AMP and Bracket	#SER6G	\$39.50
66M Split Block 2 Female AMP and Bracket	#SER6I	\$47.95
66M Split Block 2 Male AMP and Bracket	#SER6H	\$47.95

## 1 Pair Colored Bridge Clips

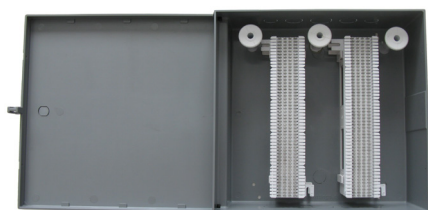
Color	Part #
Red	#MIS3B
White	#MSA8P
Yellow	#MSA8Q
Blue	#PAP3F
Green	#PAP3G
Violet	#PAP3H

*You need 1 per pair!*



**95¢/ea**

**20+ @ 89¢**



## 12" x 12" x 4" Plastic Utility Box

*Holds up to 3 66M Blocks and Mushrooms!*

Hinged cover can be removed with two screws. Cover can be closed (by friction), screwed closed, locked with a small padlock (not included) or with Cam Lock with 2 keys for \$5.95 extra.

## 12x12x4 Deep Hinged Plastic Box

Part #PAP2P \$22.50

## Cam Lock w/2 Keys

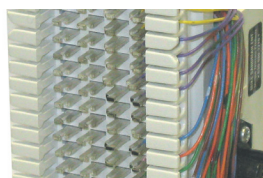
Part #PAP2O \$5.95

## 66M Blocks with RJ-45 Modular Jacks

Description	Part #	Price
66M Split Block, 6 RJ-45 WECO/568B Jacks + Bracket	#SER6M	\$48.95
66M Split Block, 12 RJ-45 WECO/568B Jacks + Bracket	#SER6N	\$62.95
66M Split Block, 12 RJ-14 (USOC) Jacks + Bracket	#SER6P	\$47.95

## RJ-71C Special 66M Split Block and Shorting Plug

12 Pair Network Interface block for building entrance and other special applications where the phone lines pass through the equipment, like Door Entry Systems, Intercoms, Security Systems, Apartment Entry, etc.



## RJ-71C 12 Pair Network Interface Block

Part #MSC9D \$52.95

## Replacement Shorting Plug Only

Part #MSC9E \$13.50

# Cable Mounting & Installation



## Distribution Rings (D-Rings)

*Don't use Plastic... They break!*



## J-Hook Cable Supports

- Support for delicate cable
- Has holes for tie wraps
- 30 lb load rating

## The Pulling Elbow™

- 6" Radius allows one man to pull cables around a corner, while protecting CAT5 and CAT6 cables.

- 2" Smooth Pulling Tunnel for running cables with slot so the cable can be removed after you round the corner.

- 11.5" x 11.5" "L" Shaped Heavy Duty ABS Plastic tool.

- Holds up to 25 CAT5/6 Cables or up to 5 25 Pair Cables.



Description	Part #	Price
1/2 Open 4"	#KIT9T	\$1.49
3/4 Open 4"	#KIT9R	\$1.69
3" (2" inside) (shown)	#KIT9P	\$2.10
4" (3" inside)	#KIT9S	\$2.49
6" (5" inside)	#KIT9Q	\$2.99
Backboard 100 Pair	#MSC5R	\$1.79
Backboard 200 Pair	#MSC5S	\$2.09
Backboard 400 Pair	#MSC5T	\$2.19

Description	Part #	Price
1.5" Wide J-Hook	#KIT4N	\$1.69
2" Wide J-Hook	#KIT4O	\$2.49
4" Wide J-Hook	#KIT4P	\$6.49

**The Pulling Elbow™**  
allows you to pull cable  
safely around corners!

**Patented  
Time-Saving Tool!**

The Pulling Elbow™	
Part #TOH40	\$25.95

**3+ @ \$24.95**



## Bridle Rings

2" Plastic  
Bridle Ring  
Saddle for Data Cables



#PAP2L \$1.69

Description	Part #	Price
1" Wood (shown)	#KIT9H	\$1.19
1 1/2" Wood	#KIT9I	\$1.29
2" Wood	#PAP2K	\$1.39
2" 1/4-20 Threaded	#KIT9J	\$1.19
4" 1/4-20 Threaded	#KIT9K	\$1.59
4" Threaded + Saddle	#PAP2J	\$4.99

## TIE WRAPS!

Description	Part #	Price
5" Natural Small 1/8" x 100	#SER4K	\$3.19
5" Black Small 1/8" x 100	#SER4J	\$3.19
8" Telephone Gray x 100	#SWI4P	\$3.60
8" Black x 100	#SWI4H	\$3.60
8" Natural x 100	#SWI4D	\$3.60
14" Natural x 100	#SWI4R	\$6.19
11" Thin Telephone Gray x 100	#SWI2D	\$6.19
18" Heavy Duty Black x 100	#MSC3J	\$17.95
8" Natural Color/Mounting Hole	#SWI4F	\$5.50
8" Teflon Tie Wrap x 100	#SWI4E	\$57.50
11" Teflon Tie Wrap x 100	#SWI2T	\$76.95



## Velcro Tie Wraps

8" Rolls of 10  
**\$6.79 or 10+ @ \$6.59**

Color	Part #
Black	#SER8E
Red	#SER8F
Orange	#SER8G
Yellow	#SER8H
Blue	#SER8I
Violet	#SER8J
Gray	#SER8K
White	#SER8L



## 66M to Modular Adapters

*Available in 2, 4, 6,  
8 Pins*

Description	Part #	Price
66M to 2 Pin Adapter	#TOO6B	\$13.95
66M to 4 Pin Adapter	#TOO6C	\$13.95
66M to 6 Pin Adapter	#TOO6D	\$19.95
66M to 8 Pin WECO	#TOO6F	\$15.99



## 4 Pair Modular Butt-Set Adapter

*Breaks out all 8 pins of  
any modular jack!*  
\*Color may vary

Part #TOO6G \$18.95

## Tunnel Type Tie Wrap Mounts

*The fastest and easiest to use! Sold in bags of 100.*

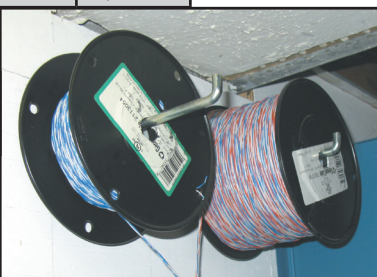
Description	Part #	Price
Tunnel Type Tie Wrap Mount 100x Natural	#SWI4Q	\$6.99
Tunnel Type Tie Wrap Mount 100x Black	#SER8N	\$9.95



## Cross Connect (Jumper) Wire

Description	Part #	Price
1 Pair White/Blue 1000'	#SER6C	\$47.95

*2 Pair, 3 Pair and Alternate  
Color Jumper Wire Available.  
Call for pricing and availability.*



## Cross Connect Wire Holder

Part #HND3S \$9.95



# Installation and Repair Tools

## Level Template and Low Voltage Mounting Plates

**Stop mounting your low voltage cutouts crooked!**



Level Template Only (shown)	
Part #CHM30	\$9.95
Level Template w/Tape Measure	
Part #CHM3I	\$15.95



40+ @ \$1.08

Arms swing & tighten into place to hold the cutout as you turn the screws

**FREE Level Template with 100+**



Double Gang for Keypads, Bells & Strobes

40+ @ \$1.59

Goes STRAIGHT up or down a wall!  
Fastest and easiest way to fish an insulated wall!

15' - 1/4" Fish Tape
Part #CID8D \$69.95

### Fish Chain & Magnetic Retriever

10 foot long chain, fish up and down walls. Tangle proof, super strong, slithers through almost anything!  
Use the flexible magnetic retriever to pull it out.

18" Flexible Magnetic Retriever	World's Best Noodle Fish Chain
Part #TOO2N \$13.95	Part #TOO2C \$7.95

### Orange Sticks... PVC Coated Fish Rod Kit

Five 6' sections screw together to go 30 feet!  
3/16" Diameter PVC Coated Rods Resist fiberglass splintering  
Orange Stick Accessory Kit (shown left).  
Glow in the Dark Eggbeater Head (shown below)

**3+ @ \$74.50**

30' Orange Stick Fish Rod Kit	
Part #CID8A	\$76.95
Orange Stick Accessory Kit	
Part #CID8B	\$29.95
Glow in the Dark Eggbeater Head	
Part #CID8K	\$12.95

**16' Extended! Just 2 Pounds! Only 2' 3" Collapsed!**

*The smallest extending pole you've ever seen!*

Collapses to just over 2' so it fits in a tool bag!

Non-conductive fiberglass. Locks into place with friction.

16' Extending Pole	26' Extending Pole
Part #CID8Q \$94.99	Part #CID8P \$109.95

### 3 Prong AC Outlet Tester

Just plug in and read!

If something strange is happening this is the first thing to check!

**Use it for every piece of equipment that plugs into AC!**

AC Outlet Tester
Part #TOH3I \$8.95

### Phone Man's Scissors

With 24 Gauge / 22 Gauge Stripping Notches

**Strips Insulation but won't notch the wire!**

**ERGONOMIC Scissors**

With 24 Gauge / 22 Gauge Stripping Notches

**Strips Insulation but won't notch the wire!**

Phone Man's Scissors
Part #HND1A \$11.95
Ergo Stripping Scissors
Part #HND4T \$13.95

### Fluke TS52 Pro Speakerphone Butt-Set

**The World's Most Sophisticated Butt-Set!**

- Lighted LCD for Caller ID, Loop Current, Talk Battery Polarity Indication, Volume, Number Dialed, DTMF Decoder
- Ringer, Last Number Redial, 10 Speed Dial Numbers
- Weatherproof Design Withstands 20 Foot Drop Test
- Over-Current & Over-Voltage Protection... **and much more...**

Weights 1.7 lbs

Fluke TS52 Pro Speakerphone Butt-Set
Part #TOH3R \$369.95

### Basic Installation 2 Training Video

Watch Mike Sandman install 4 KSUs! You should be able to go out and install a phone system after watching this video! Learn about:

- 66 Blocks • 110 Blocks • Cross Connects
- Patch Panels • Octopus Cables • Harmonicas
- Splicing Cables • Music on Hold • MDFs
- Installing a Door Station
- Testing and Cutover

**... and many more tips and tricks!**



# Power Over Ethernet (PoE) Equipment

**Add PoE WITHOUT a Major Network Overhaul!**  
**Save Time & Money on Your Next Install**



**PoE Tech Bulletin & More Product Information at:**  
<http://www.sandman.com/PoE.html>



#TLS6L

## Ethernet Power Infusers

Infuse power into Ethernet devices.  
 Data passes through unaffected. Power supply not included (options available below).



#TLS6K



#TLS6M

**Don't Forget a Power Supply!**

24V and 48V Versions Available (shown left)

PoE Infusers	Part #	Price
8 Port 10/100 Infuser	#TLS6K	\$23.95
12 Port 1U 10/100 Infuser	#TLS6L	\$54.95
6 Port Gigabit PoE Infuser	#TLS6M	\$44.95
PoE Power Supplies	Part #	Price
24V 60W Power Supply	#TLS6Q	\$27.95
24V 120W Power Supply	#TLS6R	\$52.95
48V 60W Power Supply	#TLS6S	\$27.95
48V 120W Power Supply	#TLS6T	\$52.95



**12 Port 1U Rack Mountable Gigabit PoE Infuser with 48V 120W Power Supply**

Infuse power into 12 Gigabit Ethernet devices. Supports Mode A and/or Mode B PoE. Data passes through unaffected. Includes 48V 120W power supply.

12 Port Gigabit PoE Infuser with 48V 120W Power Supply	Part #	Price
	#TLS6N	\$159.95

## World's Best Sounding Ringer!

- Easily adjustable ring (slow to fast warble).
- 2 volume settings (and off)
- Includes modular cord and jack

**3+ @ \$32.95**



Vari-Tone Ringer	Part #	Price
	#WAL5N	\$34.95

## All-In-One Cable Tester with Tone

Modular Cable Tester for:  
 568B (WECO),  
 568A & USOC

LEDs light for each pair during testing.

Sends tone on all pairs to verify the cable.



All-In-One Cable Tester w/Tone	Part #	Price
	#TOH3E	\$149.95

## Diagnose PoE Problems With ONE Tester

- Measures Amps/Volts/Watts
- Works for Mode A and B PoE
- Can act as stand-alone PoE Infuser
- 10/100/Gigabit Compatible



PoE Tester	Part #	Price
	#TLS6J	\$43.95



**7 Port 10/100 PoE Switch w/Uplink**  
 (8 total ports)

Easily add up to 7 new PoE powered devices to your existing network

PoE Power Supply Required. Rack Mount Kit Available.

7 Port 10/100 PoE Switch w/Uplink	Part #	Price
	#TLS6O	\$64.95

## World's Best Punch Tool

*Twist To Release Blades*



Uses industry standard 814 Type Blades (replacement blades below)

Blue / Gray 814 Tool w/66 & 110 Blades			
Part #HND9D		\$37.95	
Blue / Gray 814 Tool w/66 Blade			
Part #HND9E		\$32.95	
66 Blade Replacement		110 Blade Replacement	
Part #HND9F	\$9.95	Part #HND9G	\$9.95
Economy Krone Blade		Krone Blade Replacement	
Part #HND5E	\$9.95	Part #HND5I	\$66.95
Eversharp 66 Blade		Eversharp 110 Blade	
Part #TLS4B	\$34.95	Part #TLS4C	\$34.95

Much Louder than most other toners. Makes finding CAT5 cables easy!

Includes pouch with belt loop!



## World's Best Toner & Probe

**Find Unmarked Cables Fast!**



Toner & Probe	Part #	Price
	#MMA3A	\$99.95

# Telephone/Kiosk Handsets & Accessories

**We manufacture the largest selection of Handsets in the world!**

Our handset production database has build information for over 1,500 makes and models of business phones. Whether you just need a replacement handset or more advanced features such as amplified or noise canceling, give us a call and we'll let you know right away if we can build it.

## Handset Features



## We make Handsets for:

- AT&T / Lucent / Avaya / G3 / Definity / Partner / Merlin
- Northern Telecom / NT / Nortel / Norstar / Meridian
- Toshiba • Panasonic • ESI / Estech • Samsung
- NEC / Nitsuko / TIE • Vodavi / Vertical
- Comdial / Stromberg Carlson • ITT / Cortelco
- Atlas / Key System US • Inter-tel / Mitel

**...and LOTS more!**

## Custom Kiosk Handsets

We make many special application handsets for Kiosks, PCs, Prison Visitation with armored cables for added security and durability.



## Kiosk Handsets Info:

<http://www.sandman.com/KioskHandsets.html>

## Common applications include:

- Kiosks
- Pay Phones
- Intercoms
- Trading Turrets
- 911 Dispatch Consoles
- Prison Handsets



The Orator III has a modular cord that plugs into a phone line and lets you monitor conversations on the line.

**Nice Loud Speaker with Volume Control!**

**Great for training!**



## Orator III Desktop Monitor Speaker / Amplifier

Part #SER7E \$94.99

## Orator Handset Kit

Part #SER40 \$9.99

## We Custom Engineer Handsets!

Have a special application? We custom engineer handsets all the time and usually have the parts in stock to get you a prototype **FAST**. Give us a call with your project requirements and we'll let you know if we can help. 630-980-7710.



Handset Y-Adapter

Part #KIT11

**\$7.99**

## Call for Pricing!

There are **WAY** too many options to have pricing in our printed catalog. Give us a call and we can give you pricing on the exact build you need!



## In-Line Handset Amplifier

- Raises volume on any handset by 18db
- Install in under a minute on just about any phone!
- Slide the volume control to adjust volume

## 9V Battery Powered

Black #XMT9A - Ash #XMT9B \$27.95

## AC Powered (w/Cube)

Black #XMT9C - Ash #XMT9D \$35.95



Our Solid Nose Handset Cord UnTwister™ will work with any phone handset **without** a recessed jack.

**NOTE:** This is not like the cheap white ones on the market that don't spin (so they're useless!)

## Handset Cord UnTwister™

Part #HST3N \$6.45



**STOP Interruptions!**

**Bright Red Large LED Glows when you're talking!**

Includes AC Power Cube

## In-Use Indicator w/Amplifier

Part #HST4T \$74.95

# Handset/Line Cords & Modular Plugs

 <h2>Modular Handset Cords</h2>		 <h2>Modular Telephone Line Cords</h2>		<h2>Universal Ratcheting Crimp Tool</h2>  <p>All-in-One Ratcheting Crimp Tool Doesn't release until crimp is complete</p> <ul style="list-style-type: none"><li>• Handset (RJ22, RJ10, RJ9)</li><li>• 6 Pin (RJ11, RJ14, RJ12 Type 2-4-6)</li><li>• 8 PIN (RJ45/Ethernet) Mod Plugs</li></ul> <p>Heavy duty metal with comfort grip</p>		
Straight Modular Handset Cords				Universal Modular Crimp Tool		
5" Black	9" Silver Satin	5" Silver Satin	5" Black	Part #TOO5G	\$44.95	
Part #TLS5S 75¢	Part #ASY9B 85¢	Part #SER4I 75¢	Part #TLS5T 75¢	<h2>Solid Wire Cords</h2>  <p>Keep some in your truck! It's not worth making yourself!</p> <p>Wired straight through (both ends the same) Custom lengths available! (Call for pricing)</p>		
9" Black	18" Black	8.5" Black	18" Black			
Part #ASY9A 85¢	Part #PAP9D 89¢	Part #TLS5R 85¢	Part #PAP9C 89¢			
7' Gray	14' Gray	7' Silver Satin 2 Conductor	7' Black 4 Conductor			
Part #CHM5C \$1.89	Part #CHM5D \$2.49	Part #SER4T \$1.99	Part #MSC3R \$1.99	15' 2 Pair CAT3 Solid Wire Telephone Gray		
 <p>The <b>best handset cords</b> we can find! Won't tangle as easily as cheaper cords.</p> <p>Ask about our solid nose Handset Cord UnTwister™!</p>		14' Black 4 Conductor	25' Black 4 Conductor	Part #SWI3A \$3.95		
		Part #MSC3S \$2.49	Part #MSC3T \$3.29	15' 3 Pair CAT3 Solid Wire Cord		
		7' Silver Satin 4 Conductor	7' Silver Satin 6 Conductor	Part #SWI3B \$4.89		
		Part #SER3A \$1.39	Part #SER3D \$1.84	15' 4 Pair CAT3 Solid Wire Cord		
Coiled Modular Handset Cords		14' Silver Satin 4 Conductor	14' Silver Satin 6 Conductor	Part #SWI3C \$6.25		
7' Black	7' Charcoal Gray	Part #SER3B \$1.84	Part #SER3E \$2.55	Modular Plugs (in bags of 100)		
Part #MON6A \$1.39	Part #MON7A \$1.39	25' Silver Satin 4 Conductor	25' Silver Satin 6 Conductor	 Handset		
12' Black	12' Charcoal Gray	Part #SER3C \$2.79	Part #SER3F \$4.49	 6 Conductor		
Part #MON6B \$1.89	Part #MON7B \$1.89	 <h2>1000 ft Line Cord Rolls</h2>		 8 Conductor (CAT5)		
25' Black	25' Charcoal Gray					
Part #MON6C \$2.89	Part #MON7C \$2.89					
7' Avaya Euro Gray	7' Light Gray					
Part #HST1D \$1.79	Part #MON7D \$1.39	1,000 Foot Silver Satin 4 Conductor Line Cord		Modular Handset Cord Plugs (x100)		
12' Avaya Euro Gray	12' Light Gray	Part #SER4B \$82.95	Part #XMT1R \$7.95			
Part #HST1E \$2.79	Part #MON7E \$1.89	1,000 Foot Silver Satin 6 Conductor Line Cord	4 Conductor Mod Plug Solid & Stranded (x100)			
25' Avaya Euro Gray	25' Light Gray	Part #SER4D \$119.95	Part #XMT9S \$10.00			
Part #HST1F \$4.99	Part #MON7F \$2.89	1,000 Foot Black 4 Conductor Line Cord	6 Conductor Mod Plug Solid & Stranded (x100)			
7' Off-White	7' Ash	Part #SER4H \$82.95	Part #XMT1T \$11.50			
Part #MON6F \$1.39	Part #MON6I \$1.39	 <h2>Cloth Covered Handset/Line Cords</h2> <p>Great for antique phones or unique looks!</p>		8 Conductor CAT5 Solid & Stranded (x100)		
12' Off-White	12' Ash			Part #XMT1E \$14.95		
Part #MON6G \$1.89	Part #MON6J \$1.89			 <h2>Blue Universal</h2> <p>2-4-6-8 Pin Modular Plug</p> <p>#T0050 - 71¢/ea</p>		
25' Off-White	25' Ash					
Part #MON6H \$2.89	Part #MON6K \$2.69					
7' White	7' Almond					
Part #MON6O \$1.39	Part #MON7M \$1.49					
12' White	12' Almond					
Part #MON6P \$1.89	Part #MON7N \$2.19	3.5' Brown Cloth 2 Conductor Receiver Cord		Part #HST1R \$7.95		
25' White	25' Almond	Part #HST3A \$13.95		4 Conductor Mod Plug Solid & Stranded (x100)		
Part #MON6Q \$2.89	Part #MON7O \$3.98	4.5' Brown Cloth Modular Handset Cord		Part #XMT9S \$10.00		
7' Ivory	<h2>We Make Custom Handset Cords</h2> <p>Call for pricing!</p>	Part #HST3B \$10.99		6 Conductor Mod Plug Solid & Stranded (x100)		
Part #MON6L \$1.49		4.5' Black Cloth Modular Handset Cord		Part #XMT1T \$11.50		
12' Ivory		Part #HST3I \$10.99		8 Conductor CAT5 Solid & Stranded (x100)		
Part #MON6M \$2.69		7' Modular Base Cords		Part #XMT1E \$14.95		
25' Ivory		Brown: #HST3E or Black: #HST3G \$10.95				
Part #MON6N \$3.98		14' Modular Base Cords				
		Brown: #HST3F or Black: #HST3H \$17.95				
		Custom Lengths Available!				



# Telephones, Dialers & Door Boxes



2554 No-Dial  
Wall Sets

Color	Part #
Red	"MSC1O
Black	"MSC1N
Ivory	"MSC1P

**\$34.95 each**  
**3+ @ \$33.95**



2500 No-Dial Desk Phones

Color	Part #
Red	"CLN6T
Black	"CLN6J
Ivory	"CLN6S

**\$49.95 each**  
**10+ @ \$45.00**



Trimline

Color	Part #
White	"MIS9L
Black	"MIS9K

**\$32.95 each**  
**3+ @ \$29.95**

**Mini HotDialer™ — Small enough to fit INSIDE most phones!**  
**For phones that only make outgoing calls.**

Comes with programming instructions, or we'll program it for you for another \$10. Fits *inside* all of our no-dial phones! (shown to the left)



Mini HotDialer™

Part #MSC2L \$58.95

**Super Tiny Dialer™ — World's Best Autodialer!**

**Small enough to fit in many phones.**

Comes with programming instructions, or we'll pre-program it for you for \$10.



Can be used as a hot dialer (auto dialer) if desired.

Super Tiny Dialer™

Part #MSC2C \$69.95



New 2500 Desk Sets  
With Amplified Handset

Ivory 2500 w/ Amplified Handset

Part #CLN6A \$23.95

Ivory w/ Amplified Handset w/Neon Message Waiting

Part #CLN6B \$23.95

Black 2500 w/ Amplified Handset

Part #MSC3O \$39.95

Red 2500 w/ Amplified Handset

Part #MSC3P \$39.95



New 2554  
Wall Phones

**3+ @ \$28.95**

Black 2554 Wall Phone

Part #MSC1K \$29.95

Red 2554 Wall Phone

Part #MSC1L \$29.95

Ivory 2554 Wall Phone

Part #MSC1M \$29.95



Trimline

Black Trimline Phone

Part #MSC2P \$18.95

White Trimline Phone

Part #MSC2Q \$18.95



Feature Phone  
with Speaker & Memory

Designed for hotels and motels!  
6 speed dial buttons.

Feature Phone w/Speaker & Memory

Part #MSC2O \$27.95

## World's Best Doorbox

Easy to sell, easy to install, easy to use!

- You don't need a working phone line in the house!
- Doorbox call button rings phones with a distinctive ring
- Supports call-waiting if your customer is on the phone
- Combine with Door Strike Controller to open door/gate
- Connect 2 boxes to a single controller to save money
- Full Duplex Operation
- Call OUT to the door
- Many Styles Available

**FREE Installation Training Video**  
**With purchase of 3+ controllers**



Slim Surface Mount Doorboxes

- Solves a lot of installation problems!
- Made of Aluminum Alloy
- Fits most narrow door frames

Surface Mount Slim Doorbox

Black #CLN6K - Silver #CLN6L \$54.95



Door Box Controller

- The heart of the Door Box System
- Installs in Minutes
- AC Power Cube Included

Part #CLN5O \$122.95 3+ @ \$116.95

Door Strike (Lock) Controller

- Press \* to activate 3 second closure

Part #CLN5R \$49.95



**Regular: \$119.95**  
**Elongated \$149.95**



Regular Flush Mount Doorboxes

Brass #PAP2Q	Brass Bell #CLN2S
Alum. #PAP2R	Alum. Bell #CLN2T
Black #PAP2S	Black Bell #MMA4B
Bronze #PAP2T	Bronze Bell #MMA4A



Off-White Surface  
Mount w/Awning

Surface Mount Off-White

Part #CLN5Q \$49.95

Black Metal Awning

Part #CID1P \$26.95



More on the World's Best Doorbox at:

<http://www.sandman.com/DoorBox.html>



# Other Telephone Accessories

 <p><b>Line In Use / Ring Relays</b> <i>Make just about anything happen when the line is in use (or rings)!</i></p> <p>2 form C contacts (DPDT) on a 6P6C modular jack (RJ-12)</p> <p>LED to indicate relay status</p>		 <p><b>TKM-6 Transfer Switches</b></p>  <p><i>Schematic</i></p> <p>Left Tip Common Tip Right Tip Left Ring Common Ring Right Ring</p> <p>Other Configurations Available</p>	
<b>Line In-Use Relay</b>	<b>Modular Ring Relay</b>	<b>Black - Front Switch</b>	<b>Ivory - Front Switch</b>
Part #CID2N \$26.95	Part #CID2L \$26.95	Part #MSC8C \$14.95	Part #MSC8D \$14.95
 <p><b>Deluxe Handset Recording Adapter</b></p> <ul style="list-style-type: none"> <li>Record conversations from your phone to your PC or recorder</li> <li>Just plug in between handset cord and the phone.</li> </ul> <p><b>10+ @ \$32.95</b> Custom / Private Label versions available!</p>		<p><b>Telephone Line Simulators</b></p> <p><i>As close to the real thing as you can get!</i></p> <ul style="list-style-type: none"> <li>LED In-Use Indicators (front)</li> <li>Supports CallerID</li> <li>28VDC Talk Battery</li> <li>90V 20 Cycle REN Ringing</li> <li>E911 - great for practice 911 calls</li> <li>Includes Power Cube</li> </ul>	
<p><b>Deluxe Handset Recording Adapter</b></p> <p>Part #KIT90 \$36.95</p>		 <p><b>Ring-It 2 Port Line Simulator</b></p> <p>Part #WAL6A \$369.95</p>	
 <p><b>More Recording &amp; Playback Solutions at:</b> <a href="http://www.sandman.com/Record.html">http://www.sandman.com/Record.html</a></p>		 <p><b>Party-Line 6 Port Line Simulator</b></p> <p>Part #WAL6B \$449.95</p>	
<p><b>Handset Audio Feeder™</b></p> <p>Play audio from your PC or MP3 Player to your phone's handset. <i>Great for sales pitches!</i></p> <p>Custom / Private Label Available</p>		<p><b>Telephone &amp; Computer Cleaning Kit - <i>Make it look new again!</i></b></p> <p><i>Cleans 50 to 100 Phones or Computers!</i></p> <p><b>Contains 4 cleaners and a MAGIC Brush:</b></p> <ul style="list-style-type: none"> <li>Glazit Telephone Polish (7 oz)</li> <li>General Telephone Cleaner (16 oz)</li> <li>Lemon Tape &amp; Label Remover (16 oz)</li> <li>MAGIC Glass &amp; Utility Cleaner (18 oz)</li> <li>The MAGIC Cleaning Brush</li> </ul> <p><b>Non-Toxic "No Headache" Formula - Use it all day!</b></p>	
<p><b>Handset Audio Feeder™</b></p> <p>Part #MSC3M \$49.95 <b>3+ @ \$46.95</b></p>		 <p><b>Telephone/Computer Cleaning Kit with Brush</b></p> <p>Part #CLN2J \$42.95</p>	
<p><b>Network Meter™ DVOM (Digital Volt Ohm Meter)</b></p> <p><b>3+ @ \$84.95</b></p> <p><i>Really easy to use! Great for phone men. Includes zipper case.</i></p> <ul style="list-style-type: none"> <li>AC/DC Volts</li> <li>AC and DC Current (Loop Current)</li> <li>Ohms &amp; Continuity w/Beeper</li> <li>Large Numbers on LCD Display</li> <li>Includes Heavy Duty 9V Battery</li> </ul>		<p><b>In-Line Mod Swapper</b></p> <p>Swaps Pairs 1 &amp; 2. Custom versions available!</p> <p><b>10+ @ \$4.79</b></p>	
 <p><b>Network Meter™ DVOM</b></p> <p>Part #TOH3A \$89.95</p>		<p><b>Digital Message on Hold Player with USB Thumb Drive</b></p> <p>This box does it all! Use it as an on-hold player or as a message repeater. Plays from the beginning with a Dry Closure.</p> <p>Comes with a 128 MB thumb drive which holds about 4 hours of audio. You can use 16 gig drive.</p>	
<p><b>Universal CPC Generator™</b></p> <p><i>Make a station port hang up! Line Powered.</i> Great for voice mail, answering machines, paging.</p>		<p><b>Digital Message on Hold w/USB Drive</b></p> <p>Part #DSI7A \$169.95</p>	
 <p><b>CPC Generator</b></p> <p>Part #DSI6A \$74.95</p>		<p>Change the messages as often as you like by updating the MP3 files on the USB drive!</p> <p>Includes power cube.</p>	

# Other World's Best Products



From \$16.95

## World's Best Cell Phone Pouches

- Heavy Duty Cordura
- **Won't fall off your belt!**
- Great for:  
Smart Phones  
Cordless Phones  
Instruments / Meters
- Inner dimensions shown in the size chart to the right

#51 - 5" x 2.8" x 0.7"	Clip: #KIT4Q - \$24.95	Loop: #DES1A - \$23.95	<i>iPhone 6 (reg), Galaxy S</i>
#52 - 6" x 3.5" x 0.8"	Clip: #KIT4S - \$26.95	Loop: #DES1B - \$25.95	<i>iPhone 6+, Galaxy Note</i>
#54 - 6" x 3.75" x 0.8"	Clip: #KIT5E - \$26.95	Loop: #DES1D - \$25.95	<i>iPhone 6+, Galaxy Note</i>
#55 - 6" x 3.75" x 1.25"	Clip: #KIT5H - \$31.99	Loop: #DES1E - \$30.99	<i>iPhone 6+, Galaxy Note</i>
#53 - 6" x 3.5" x 0.8"*	Clip: #KIT5N - \$34.95	Loop: #DES1C - \$32.95	<i>*Double Pouch (2 phone)</i>
#19 - 2" x 2.5" x 0.75"	Clip: #KIT3G - \$16.95	<i>Super Tiny Phones</i>	<i>Bluetooth Headsets</i>
#20 - 3" x 1.75" x 0.75"	Clip: #KIT3H - \$16.95	<i>Super Tiny Phones</i>	<i>Bluetooth Headsets</i>
#16 - 5" x 2" x 1.75"	Clip: #KIT3E - \$16.95	Loop: #DES1F - \$15.95	<i>Most Cordless Phones</i>
#13 - 6" x 2.5" x 2"	Part #KIT3B - \$16.95	<i>Fits Cordless Phones,</i>	<i>Instruments, Meters</i>
#14 - 6" x 3" x 2"	Part #KIT3C - \$16.95	<i>Fits Cordless Phones,</i>	<i>Instruments, Meters</i>
#15 - 4.5" x 3" x 1.5"	Clip: #KIT3D - \$16.95	 <b>Online Ordering for Pouches and many other products at:</b> <a href="http://www.phoneman.com">http://www.phoneman.com</a>	
#27 - 4" x 3.25" x 1.25"	Clip: #KIT4M - \$16.95		
#17 - 4.5" x 2.25" x 1"	Part #KIT3F - \$16.95		
#21 - 2.5" x 2" x 1"	Part #KIT3A - \$16.95		
#22 - 4" x 2.25" x 0.6"	Clip: #KIT3S - \$16.95		

## World's Best Toilet Seat / Bidet



From \$449.95!

## STAY FRESH!

### Our Bidets Feature:

- Heated Seat
- Heated Water
- Automatic Shut-Off



Many Models Available... Pictures and specs at:

<http://www.sandman.com/Intimst.html>

## WARNING!

Problem found with use of electronic bidets! After frequent use, users find it difficult to use a bathroom **without** an electronic bidet.

## World's Best Digital Signage Solution

## COMING SOON!

- **Make your menus come alive with digital signage.**
- Low cost, small form factor PC with support for 2x 1080p HDMI screens.
- Easy to use menu designer and editor, get up and running in no time!
- Stand-Alone system with no recurring subscriptions or fees
- Great Add-On product when your other installs are complete!

To reserve yours, or for more information, email: [chuck@sandman.com](mailto:chuck@sandman.com)



## World's Best Music Stand Clips

Transparent, durable clips that fit almost any music stand. Keeps your music organized and in-place, **not Gone With the Wind...**



- Professional Look
- Easy Page Transitions
- Won't Crack or Break
- Includes 2 Clips + Carrying Bag

### Music Stand Clips w/Carrying Bag

Part #MIS7H

\$25.00

### Musician's Gig Bag

- Carries everything you need
- Durable Nylon / Canvas
- Measures 15"W x 19"H x 7"D

### Musician's Gig Bag

Part #MIS7I

\$59.95





Reading Type	Normal Values						
On-Hook DCV	24 to 50VDC						
Off-Hook DCV	5 to 15VDC						
Loop Current <sup>1</sup> DCma	23 to 35ma						
On-Hook ACV <sup>2</sup> T to R	< .5VAC						
On-Hook ACV <sup>2</sup> T to Ground	< .5VAC						
On-Hook ACV <sup>2</sup> R to Ground	< .5VAC						
AC Ring Voltage	> 75VACRMS						
AC Ring Current <sup>3</sup>	8.5 to 45maAC						
Open Loop going Off-Hook <sup>4</sup>	< 20ms						
CPC Open Loop Duration <sup>4</sup>	500ms						
Circuit Loss <sup>5</sup> -db Using 1KC Tone (MW) Test #	-5.5 to -8.5db						

### Instructions:

The only way to diagnose many problems on phone lines is to take voltage, current and circuit loss readings. When you have a problem, take readings on all of the phone lines at a premise. Compare the results to those at other premises with no problems and the cause of the problem should jump out at you. Always take readings at premises where you aren't having problems first, so you have a basis of comparison, and a comfort level with your readings. **Never use a tester for the first time at a premise with a problem!**

If you ask the telco to take these readings, they'll simply say, "they're fine." They don't care. They don't have to. It's your customer and your problem. Once you have the readings that point to the cause of the symptoms, going to battle with the phone company is easier. Even with these readings, you may have to escalate the case, since the repair people at the phone company may not know what these readings mean.

<sup>1</sup>The phone company doesn't have to bring the Loop Current on a phone line down unless it's over 110maDC. Since problems start occurring above 35ma (sometimes over 27ma), you'll have to reduce the Loop Current yourself. If the current is below 23ma, it's the phone company's responsibility to get the current up over 23ma (except at **true** Rural phone companies).

<sup>2</sup>The phone company doesn't have to bring the AC on a phone line down unless it's over 50VAC (for safety reasons). Since problems start occurring on telephone systems above .5VAC, you'll have to reduce the AC yourself.

<sup>3</sup>AC Ringing Current can be too low to make a ringer ring (less than 1 REN?), or too high which could burn up components on a trunk card (common on Nortel). A **Loop Current Regulator™** also regulates AC ringing current. High AC ringing current can follow high loop current.

<sup>4</sup>Some phone lines give a brief open loop (0VDC) when the line first goes off-hook, or right after the last digit is dialed. This can cause a cut-off if the CPC (Open Loop Timer) in the phone system is set too low. The CPC signal is normally 550 to 850ms at 0 volts, so the CPC or Open Loop Disconnect timer on a phone system should be set to 500ms (or shorter than the measured CPC signal).

<sup>5</sup>When taking Circuit Loss readings for a "Can't Hear" / "Can't be Heard" problem you **must** use the 1KC (milliwatt) tone for the **local CO** the lines are working from. If the lines are from a CLEC or on portability, you **must** find the 1KC tone number located at the CO these lines originate from. Using another 1KC number will give you incorrect circuit loss readings and be meaningless. There is **always** an unknown amount of loss between COs.

If there are three or more phone lines at a premise and you have a **1KC Tone Generator**, you can do a "**Loop Around**" test, sending tone on one line, and receiving it on the others. Doing some math, you can get within about 10% of the actual circuit loss on the lines.

If there is more than 8.5db of loss on a line, the phone company has to bring it up over -8.5db (except at **true** Rural phone companies, where they can do anything they want to get your dial tone). Since "Can't Hear" problems start at around -7.5db, you'll have to change the line to a trunk (with a minimum -5.5db spec), or find a way to amplify the line yourself (pretty much impossible).

\*Echo problems that don't change are often caused by an impedance mismatch between the trunk and station equipment. Since there is no easy way to measure the impedance of the phone line or phone in the field, the only way to check is to change the impedance to see if the problem clears (using a 600 to 900 ohm **Echo Stopper™** Impedance Matcher).



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**Page 12**

**Unique Problem Solving Devices  
for Phone Lines**

- Loop Current Regulator, Booster, Tester
- Ring Voltage Booster™
- Echo Stopper™
- Maximum Lightning Protection™
- See Page 4 and 5 Inside



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**66 Blocks & Accessories - Page 10**  
**Cable Mounting & Installation - Page 11**  
**Phones & Accessories - Page 16-17**