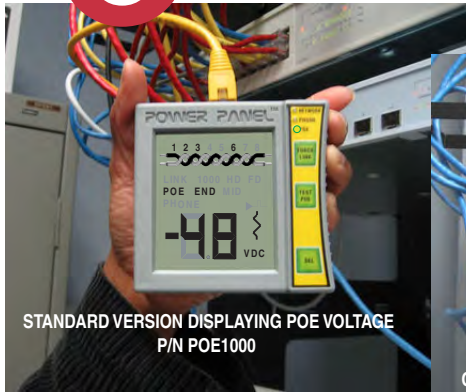# POWER PANEL™
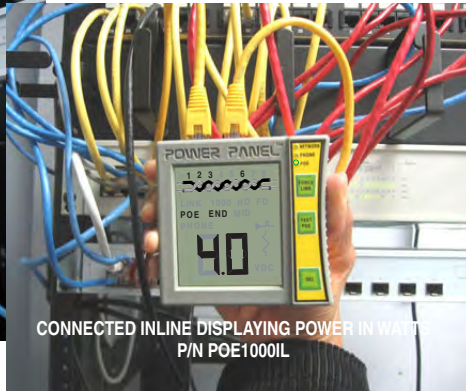
CAT5/6 DVM (JACK AND POE TESTER)
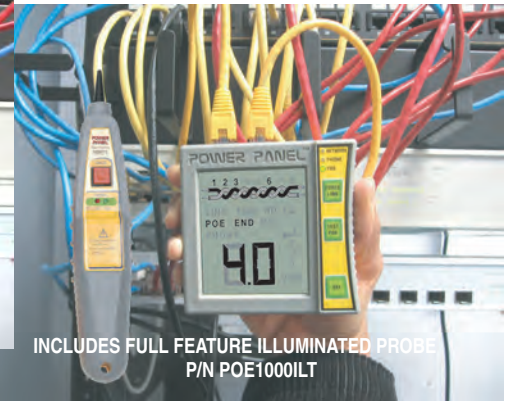
3 POWER PANEL DVM MODELS TO CHOOSE FROM!

STANDARD VERSION DISPLAYING POE VOLTAGE
P/N POE1000

MODEL POE1000
STANDARD POWER PANEL

CONNECTED INLINE DISPLAYING POWER IN WATTS
P/N POE1000IL

MODEL POE1000IL
POWER SENSING INLINE MODEL

INCLUDES FULL FEATURE ILLUMINATED PROBE
P/N POE1000ILT

MODEL POE1000ILT
POWER PANEL TONE STAR

STANDARD UNIT FEATURES
P/N POE1000
Scans pins and displays:
PoE power: Volts, watts, cable
  pair location, end / midspan.
Advertised data switch speed
  (10,100,1000 MB/s), duplex.
  Cable pair location.
Phones (digital, analog)
INTERACTIVE BUTTONS:
VoIP phone and IP camera
  load simulator.
Link pulse transmit button.
OTHER FEATURES:
Tone generation
Port beacon, Auto shutoff
9V battery (included).

INLINE FEATURES
P/N POE1000IL
All of the features of the
Standard model plus:
POWER PASS THRU
  Two jacks allow PoE power to
  be passed to the PoE device
  so it can be tested.
POWER MEASUREMENT
  Placed INLINE between two
  devices, the power draw of the
  device can be measured in
  watts. Too much power draw is
  the number one reason for
  IP/PoE network failure.

TONE STAR FEATURES
P/N POE1000ILT
All of the features of the
INLINE model plus:
AN ILLUMINATED PROBE
The Tone Star model includes
a full featured, filtered probe
for tracing tones (wire location).
The probe features an ultra-
bright LED lighted tip, filtering to
block fluorescent hum, volume
control, 2 status LEDs,
adapters for alarm wire, RJ11,
RJ45 and coax connectors.

**"The power panel lets you know
what's there before you plug in."**

**"If you install VoIP or camera systems
this will become your main tool."**

ByteBrothers™
Cable and Device Testers

7003 132nd Place SE, Newcastle, WA 98059 USA
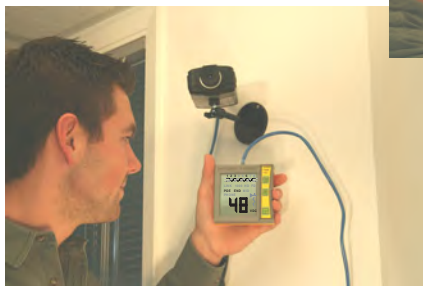+1.425.917.8380 ● FAX +1.425.917.8379 ● cs@bytebrothers.com

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THE OLD WAY OF TESTING FOR VOLTAGE AND POWER
TEDIOUS ● TASTELESS

THE NEW WAY OF TESTING FOR VOLTAGE AND POWER
SMART ● ACCURATE

TOP 30 TECHNOLOGY INNOVATIONS SECURITY SALES & INTEGRATION

TOP PRODUCTS Electrical 2009

Made in the USA
Patent pending
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Byte Brothers, Inc.

CABLE AND POWER KITS
Special pricing when you combine the
Power Panel with the Real World Certifier.

| CPK1000 | RWC1000K and POE1000 |
| CPK1000IL | RWC1000K and POE1000IL |

PHONE IS ON CABLE

Although not allowed by any standard, digital and analog phones and FAXs are on CAT5/6 cables. These high voltage devices can damage other devices if you are not aware of their presence. The Power Panel CAT5/6 DVM searches for them, lights the ALERT LED and displays the phones' voltages. Up to 4 phones can be displayed.
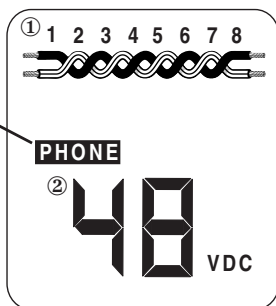
PHONE ALERT LED LIGHTS IF PRESENT
When a analog or digital phone or FAX machine is present, the PHONE LED lights. Press SEL to locate display.

PHONE DISPLAY
(available if LED lit)

① **Pairs with activity**
② **Amplitude of voltage**
48VDC is typical central office voltage

Up to 4 phone devices are displayed
LCD displays multiple phones automatically

① 1 2 3 4 5 6 7 8
PHONE
② 48 VDC

WARRANTY: The manufacturer warrants to the original consumer that this product is in good working order for a period of one year from the date of manufacture or date of purchase. During this period, the product will be repaired or replaced without charge for either parts or labor. Repair or replacement as provided under this warranty is the exclusive remedy of the purchaser.

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ByteBrothers™
Network Test and Repair Tools
7003 132nd Place SE, Newcastle, WA 98059 USA
+1.425.917.8380 ● FAX +1.425.917.8379 ● cs@bytebrothers.com

NETWORK DEVICE IS ON CABLE

The Network LED indicates a active network device is present (switch, a PC NIC card, access point, VoIP phone, IP security camera, etc.). The Power Panel detects the link pulses, lights the ALERT LED and displays the pair(s), speed and duplex.
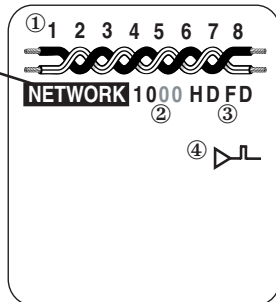
NETWORK ALERT LED LIGHTS IF PRESENT
When a VoIP phone, IP camera, switch or other network device is spotted, the NETWORK LED lights. Press SEL to locate display.

NETWORK DISPLAY
(available if LED is lit)

① **Pair(s) with activity**
② **Speed of the device**
(10,100,1000 MB/s). This is the "Advertised" speed of the device.
③ **Duplex of the device (half or full)**
④ **"FORCE LINK" button is pressed**

① 1 2 3 4 5 6 7 8
NETWORK 1000 HD FD
② ③
④ ▷L

FORCE LINK BUTTON Press if you suspect a network device is present but are receiving little or no link information (possibly an ALERT LED but no display). Some network devices refuse to "talk" unless prompted. The FORCE LINK button sends link pulses... prompting a dialog.

LINK BEACON: When the FORCE LINK button is latched, transmitted link pulses cause the link LED on the receiving device to blink. This helps locate ports in crowded panels. To "latch", hold the button for more than 5 seconds (link pulses will transmit for 30 minutes them timeout to save the battery). Press any button to unlatch. When latched, "Lb" displays on the LCD.

NETWORK POWER PANEL™
CAT5/6 DVM AND PoE TESTER + TONE
USER'S GUIDE

This is the perfect tool for detecting active network devices, power for VoIP phones, IP cameras and other devices on RJ45 jacks and cables. To trace cables or ports with the Locator Tone or Locator Port Beacon, see *Interactive buttons* at the bottom of the page.

① **POWER ON:** Press any button.
POWER OFF: Press and hold the SEL (select) button until off.
BATTERY SAVER: No activity for 5 minutes shuts the Power Panel OFF.

② **CONNECT THE POWER PANEL:** Connect the tester directly to the device you wish to test.

③ **WATCH ALERT LEDS.** They light if a network device is ON or if a phone or PoE voltage is present.

④ **SELECT A LCD DISPLAY.** Each lighted LED has a corresponding LCD display with information. Use the SEL button to move between displays.
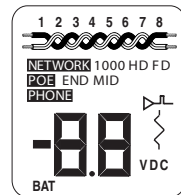
NETWORK LED. See page 2.
POWER LED. See page 3.
PHONE LED. See back cover.

Use the SEL button to select between displays.
Note: Display is available only if LED is lighted.

1 2 3 4 5 6 7 8
NETWORK 1000 HD FD
POE END MID
PHONE
-8.8 VDC
BAT

INTERACTIVE BUTTONS
LOCATOR TONE, PORT BEACON, FORCE LINK, TEST PoE

SEL — Turns Power Panel ON and OFF. Selects LCD displays. After tester is ON, hold for 4 secs to turn on **Locator Tone**.

FORCE LINK — Press to prompt devices to talk to you. Hold for 5 secs to turn on **Port Beacon**. See page 2.

TEST POE — Simulates a Power over Ethernet (PoE) device, prompting full PoE voltage. See page 3.

Go to www.bytebrothers.com for more information about the Power Panel CAT5/6 DVM.

POWER OVER ETHERNET (PoE) IS ON CABLE

The PoE LED indicates that PoE voltage is present on the cable. This lights the alert LED and displays the pair(s) and amplitude of the PoE voltage. Further, pressing TEST PoE prompts the full 48VDC voltage (see glossary below).
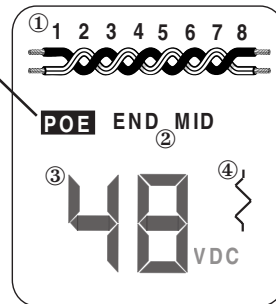
PoE ALERT LED LIGHTS IF PSE/PoE PRESENT
Press SEL to locate display.

PoE DISPLAY
(available if LED is lit)

① **Pairs where PoE exist**
② **Type of PoE device***
③ **PoE Voltage (DC)**
"Discovery voltage" is 5-15VDC.
Full PoE (48VDC). See below.
④ **"TEST POE" button depressed**

*A PSE at the end of a cable supplying power on 1,2 3,6 is an "endspan device" (typically a switch with built-in PoE). A PSE placed in the middle of a cable on pairs 4,5 7,8 is a "midspan device".

① 1 2 3 4 5 6 7 8
POE END MID
②
③ 48 VDC ④

NOTE ON POWER (WATTS): The Power Panel inline version (P/N POE1000IL) has 2 jacks. It can be inserted in between the PSE and PoE device to measure power draw.

TEST POE — Tests the operation of the PoE voltage source by applying a load in compliance with both IEEE and Cisco standards. This load should trigger the full 48VDC PoE voltage.

WHAT IS POE: Power supplied to network devices over a CAT5/6 cable (no separate AC power required). Many VoIP phones, IP cameras and access points are PoE devices.
WHAT IS PSE: Devices that supply PoE are "Power Sourcing Equipment". PoE capable switches and PoE injectors are examples of PSE devices.
PoE OPERATION: PoE standard IEEE 802.3af suggests that a PSE send a low power "discovery voltage" and when a proper load is sensed, apply the full voltage (48VDC).