Gigabit inline PoE tester and detector

PoE INPUT

DC2.1

http://poe-world.com

PoE Tester V7

FC RoHS CE

PoE OUTPUT   Passive Active   DC2.1

- **Data compatibility**:
  - **10/100 and gigabit** data rates
  - Data passes **without modification** thru the tester
  - An RF transformer separates the power and data from all 4 pairs on the input, measures the values and re-inserts power onto the output data
  - Measure **power without interruption** of data.
  - Works with managed or unmanaged Ethernet switches, or injectors
  - Works with midspan or endspan PoE systems.

- **Power compatibility**: **All PoE modes** and also DC voltages from 3.5 volts to 57 volts

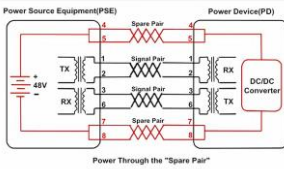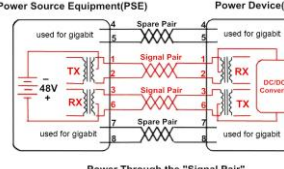- **PoE Device simulation**: force a PoE switch to activate

- **2.1 x 5.5mm input/output for PSU testing**
  Use the included 2.1mm jumper cable for inline testing

- **One Volt and Ammeter.** The DC input and PoE inputs share the same measurement tool. PoE voltages will be output on both DC connectors so do not mix DC and PoE testing

- **4 Display Modes**
  - **Mode A** – shows the status of pins 1,2 and 3,6 from the RJ45 In to RJ45 Out
  - **Mode B** - shows the status of pins 4,5 and 7,8 from the RJ45 In to RJ45 Out
  - **DC testing** shows the status from the 2.1mm DC plug In to DC plug Out
  - **802.3af simulation** causes an 802.3af or 802.3at switch to activate. Note – only 802.3af mode will be activated

Connect the the PoE tester **Top** input o your switch or injector.

Connect the the PoE tester **Bottom** output to your load (or leave it open).   Activate PoE switches with the 802.3af switch

802.3af Mode A vs Mode B

Power Through the "Spare Pair"	Mode B uses pins 4,5 for + voltage and 7,8 for return
Power Through the "Signal Pair"	Mode A uses pins 1,2 and 3,6 for power and Data, either polarity is allowed since EIA 568A and 568B are mixed in the real world.

- **Voltage Range – 2% accuracy**
  - 802.3af simulation – 44 to 56 volts
  - Mode A passive – 4 to 56 volts
  - Mode B passive – 4 to 56 volts
  - DC connector – 3.5 to 57 volts

- **Amps measured- 2% accuracy**
  - Mode A and Mode B – 0 to 1500 ma
  - DC connector – 0 to 5 amps

- **No Fuse protection**
  There are no fuses inside – please do not exceed the rated values

- **Battery Free operation**
  - The Tester requires just 200 mW for operation, taking power from the PoE source. 4 mA at 48v, 8 mA at 24v

- **Reverse Power warning**
  - Mode A input can be either polarity. Note – the output polarity will be converted to pins 3,6 + and 1,2 minus
  - Mode B will only work if pins 4,5 are +. Use the WS-CS-RJ45 adapter for reverse passive polarity injectors
  - DC mode is center positive. Reverse polarity will damage the Tester

- **Output Voltage warning**
  - The tester operates as a splitter, therefore up to 48 volts can be output on both DC jacks. Don't mix PoE testing and DC supply testing
  - The RJ45 output voltage is rectified and will be .5 volts lower than the input voltage, this offset is greater at high loads,

OLED Display top

The OLD display has 3 sections.

A) Top Line is the mode status, it shows the method that the PoE switch or injector uses:

Mode A, Mode B or Mode A+B

Note: many low cost PoE switches that are mode A, will display as mode A+B. This tester cannot 100% detect if a switch if mode A only

B) Middle Line indicates if the 802.3af simulation switch is ON / Off. This line DOES NOT indicate if the injector / switch is 802.3af, it only indicates that the switch is left or right. Passive means the switch is off, 802.3af means the switch is on.

OLED Display bottom

The bottom line operates either scrolling with volts, amps and watts, or static if there is no load.

A) No load: If there is no load – then only the voltage is displayed.   The text also shows the message: No PD (no powered device)

B) Load attached: If there is a load – then the display will scroll to the left with Volts, Amps and Watts in rotation

802.3af simulation switch

802.3af Pass-Thru Mode – Set the 802.3af switch to OFF. If the source is an 802.3af or 802.3at switch, then there should be will be no display until a compatible load device is connected. Connect your PoE switch to the input RJ45. Once a 802.3af or 802.3at device is connected to the bottom, the display will start to show Volts, Amps,

Watts.   If the display is active with no 802.3af load – then your source is a passive injector.

802.3af Simulate Mode - Set the 802.3af switch to ON. If the source is an 802.3af switch, then the display will show the voltage even without a load. Once any load (active or passive or on the DC connector) is connected, the display will start to show Volts, Amps, Watts. Note, this operation enables a non-PoE device to receive power from a PoE switch, caution is advised.

802.3at and 802.3bt switches will only activate in 802.3af class 3 mode.   4 pair PoE switches will not activate all pairs.

The internal load is 300 mw.

DC connector – A power supply can be tested with this device. Connect the 2.1mm Source connector to the PoE tester, the voltage will be displayed. Connect the load side to the device to be powered.

2.1mm jumper - a 7.5 inch 2.1mm jumper is included for testing DC power supplies.

**See also our multi port gigabit
PoE injectors and switches**