

NETWORK CABLE TESTER WITH BREAKOUT BOX

USER'S MANUAL

PA-30R

This Network cable tester is designed for continuity testing of UTP and STP cables, and is perfect for installing and testing data and voice wiring. This tester comes in two modular units for remote testing of pre-installed premise wiring. When both units are used, the test results are observed on the remote unit. It is equipped with a breakout box intended for modifying the wiring in modular cords terminated with RJ45 plug. The upper nine position dip switch for open & close each pin and dual nine position socket (#1 #2) for inserting jumper wires to check pin configuration. The lower nine-position dipswitch and dual-nine position socket (#2 #3) to make a wiring change or shorts for modifying the wiring.

It can also be used to create loop backs with wire, resistors, diodes or other components, in order to function as a termination device.

The remote unit is also equipped with a line test jack to identify telephone line polarity, and a voltage detector LED, to help prevent accidental damage to the tester.

A. LOOPBACK TEST

1. Install a 9 volt alkaline battery.
2. Check that all pins on the lower and upper dip switches are in "ON" or closed position.
3. Plug one end of the test cable into the center RJ45 jack on the main tester and the other end into either the B/O A or the B/O B jack.
4. Observe the results on the LED display.

B. REMOTE TEST

1. Plug one end of the cable into either the Remote A or Remote B jack on the main tester.
2. Plug the other end of the cable into the RJ45 jack marked "Test" on the remote unit.
3. Read test results on the remote unit.

Reading Test Results:

● After you plug the cable in, the LEDs will light up green as follows:



If an LED lights up red, it indicates a reversed pair or cross over wiring.

If the LED does not light, it indicates an open pair.

If all 4 LEDs do not light, it indicates one of the pairs is short. Use the dip switch to find out which pair as follows: Using the upper dip switch, open the pins one by one. Once the pins corresponding to the short pair are open, the other LEDs will light.

Program the upper dip switch and plug the jumper wires into #1 #2 socket to check pin configuration.

NOTE: If the LED lights up green - it indicates straight through pinning (commonly used with data networks).

If it lights up red - it indicates crossed pinning (used for telephone systems).

BNC TEST: Use the optional RJ45 to BNC female adapters to connect the cable as described above under "Loop back Test" and "Remote Test".

Observe the test result on the pair 1 (1/2) LED. Light on - cable ok.
Unlit - cable bad

C. LINE TEST – Detects voltage on the center pair 4/5 and identifies telephone line polarity.

1. Detecting Voltage

Connect the cable to be tested to the Rj45 jack on the remote unit marked "Line Test", or use a patch cord to connect the "Line Test" jack to a wall jack or patch panel.

If the "Line Status" LED lights up then the circuit is live, meaning voltage is present on the middle pair at the other end of the cable. * Remove voltage source from the line before testing cable with any jack other than the Remote Tester's "Line Status" jack.

2. Polarity and A/C or D/C power check:

(1.) Green indicates normal polarity.

(2.) Red indicates reversed polarity.

(3.) Alternating red and green indicates presence of AC power.

If the LED does not light, the cable is most likely not connected or open.

D. FOR MODIFYING THE WIRING – to make a wiring change or shorts. (the tester does not need a battery to perform this function.)

First connect the tester, in series, to the cable whose wiring you wish to change. Do this via the B/O A and B/O B jacks on the main tester. (you will need an extra patch cord.)

1. Open the lines between the RJ45 jack by moving all pins on the upper dip switch to the off / open ↓ position.

(When the dip switch is in the on / ↑ position, the pins will be closed.)

(When the dip switch is in the on / ↓ position, the pins will be open.)

2. Wiring changes or shorts can be made by plugging the jumper wires into the appropriate holes in the #2 socket and #3 socket, then moving the corresponding pins on the lower dip switch to the off (open) ↓ position.

To short the lines, just plug the jumper wires into the socket. You do not need to move the dip switch to the open ↓ position.

NOTE: The shield of the RJ45 jack is connected to position 9 of the dip switch.

This can be used for shorting lines to the shield as needed.

E. THE TESTER ALSO CAN BE USED AS A TERMINATION DEVICE

1. Plug a patch cord into the "B/O A" jack on the main unit.

2. Plug the other end of the patch cord into the wall outlet or jack that is to be terminated.

Header sockets #2 and #3 can then be used to create loopbacks with wires, resistors, diodes or other components.

Remarks:

* The main unit runs on one 9V battery.

* Please make sure the battery power is sufficient. If the battery fails then the LEDs will dim, stop scanning, and / or go out.

* Please take out the battery if you are not going to use the tester for a long period.

F. PRODUCTION SPECIFICATION

1. Dimensions main: 4.9 X 2.7 X 1.0" (125 X 68 X 26)mm

remote: 5.1 X 1.3 X 1.0" (130 X 32 X 26)mm

2. Operating temp.: 0°C ~ 45°C

3. Weight : 0.37lb. 0.17kg

4. Power Req. : One DC 9V battery