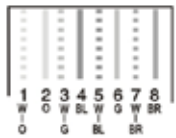
NETWORK CABLE TESTER

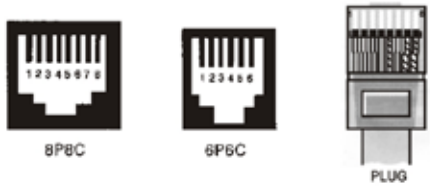
EXPERT IN NETWORK TEST

Operation Manual for user

LPCT015

Contents





Warning!

- This tester can not be used to test network cable or telephone cable, when it is connected with working device, otherwise the tester will be damaged.
- Please replace the LR03 AM4 AAA 1.5V battery when the voltage is lower.
- Please don't use if RJ45 plug is incorrect, otherwise the port will be damaged.

Brief Introduction

1. Main Tester
2. Power Switching
3. Enter Key
4. Function Key
5. Loop back Socket
6. Main Socket
7. Liquid Crystal Display (LCD)
8. Distant Adapter & Commutator
9. ID Socket

Using this manual

Welcome to use 'TL-828-A' multiple function computer network cable tester. The 'TL-828-A' type is an expert tester designed according to the rapid development of global network. It can be used to test UTP, STP twisted-pair, coaxial cable, telephone cable etc. Please read the detail information provided in this manual before using, and use the tester according to instruction.

Please keep the manual appropriately against unexpected needs

Safety considerations

MA,VDC or VAC is forbidden while using this tester because input voltage will cause danger to this tester .

Maintenance

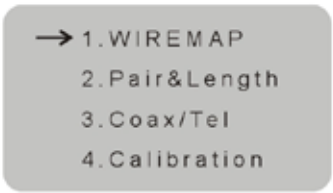
- **Please don't dismantle the tester by yourself, otherwise any failure or damage will be caused.**
- **Please prevent the tester from sunshine, moisture, dust, high temperature or low temperature. If use it under the temperature brim, any abnormal case shall not be regarded as failure or error.**
- **Please read the operation manual carefully before using the tester and make sure that you are fully understand the safety considerations. The tester should be prevented from collision.**
- **LR03 AM4 batteries which supply 16ma DC are needed. Please take them out if it will not be used for long term.**

Main Function

- > **Can be used to test the open circuit, short circuit, across butt joint, separate butt joint and reverse butt joint for 5E/6EUTP/STP twisted-pair, coaxial-cable and telephone wire.**
- > **Position the error of connecting wires**
- > **Test the connectivity of cable separately**
- > **The Meter in calibration mode can be replaced by Foot**
- > **The testing precision of length is up to 98%**
- > **Measure the length of cable and determine the point of open circuit**
- > **Easy to be operated, low power-consuming, standby time is up to 50 hours.**
- > Automatically shutdown in 10 minutes if without operation.
- > **Can conduct pairing measuring and length measuring separately**
- > **Can position cable separately**
- > The calibrated data can be saved

Basic Operation Manual

You should read and fully understand the *Safety Considerations* before using the tester. After loading the batteries, you can press ON/OFF to turn on the tester, and then the system will enter into main interface.
Example: Fig.



After connecting all testing cables and using side ▲▼function key to choose one of the fore main menus: 1. Connection wire testing; 2. Conduct pairing measuring and length measuring; 3. Test coaxial-cable and telephone cable; 4 Calibration mode; and then press *Enter* to enter into main menu or conduct testing.

WIREMAP: wire connection test

Press ENTER to start testing after selecting ' WIREMAP' testing function, the following picture will be on show:

PASS: proper wire-connection

If the wire connection is totally away of any failure, 'G' will be shown on the right hand(4 pairs, 8 wires), and 'PASS' will be shown on the right upper hand.

Example:

In this picture, the first row of figures represent the port of 'RJ45', 'ID=1' represents the number of distant adapter & commutator. ' I' represents the connection line of distant port and main port, the second row of figures represent the port of main' RJ45'.

Press ▲▼to renew the test or press 'ENTER' to return to main menu.

The cable is circuit-opened in a long distance

While testing a faulty cable, if 'OPEN' is shown on the right upper side with 4, 6 in the first figure row is shown as ' ×'. It represents that any error occurs with the port of the distant adapter & commutator. Please check whether the port has been properly pressed.

Example: Fig.

Press ▲▼ on the side to renew the test, and press 'ENTER to enter into main menu。

The cable is circuit-opened in a short distance

While testing a faulty cable, if 'OPEN' is shown on the right upper side with 4, 6 in the second figure row is shown as ' ×'. It represents that any error occurs with the port of ' MAIN' in a short distance. Please check whether the port has been properly pressed.

Example: Fig.

‘SHORT’

‘short’ will be shown on the display if any failure is being tested on the cable or the port (example: 1-2 short). The figure will be flickering constantly, and several pairs of numbers will be flickering in rotation.
Example:

Note: the test must be conducted after obviating failures.

If the cables are not properly connected, the following picture will be on shown.

Press ▲▼to renew the test; Or press ‘ENTER’ to return to main menu.

‘CROSS’

While testing a faulty cable, if ‘CROSS’ is shown on the right upper side, it presents that any wires are across in the first figure row and the wire-connection is reverse.

Example: reverse wire-connection of 3-6

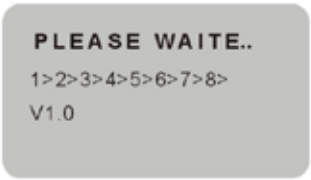
Example: reverse wire-connection of 3-7

‘PAIR & LENGTH’ testing

> **While testing pairing and length of the cable, the port of distant adapter & commutator or the port of adjacent ‘LOOPBACK’ shall not be connected, otherwise the precision will be influenced.**

> **If any open circuit is tested in ‘WIREMAP’ wire-connection testing menu, and the place of open circuit is unable to be tested by using ‘PAIR & LENGTH’ function, the tester shall be tested by the other port, and the proper place of open circuit can be tested.**

> **Press ‘ENTER’ to start testing after selecting ‘ PAIR & LENGTH’, the following picture will show the testing.**



Note: As the technical data of different brands are discrepant, the calibration mode in the main menu of this tester must be adopted to test the correctness of the testing cable(See page 14 for detailed operation method).

‘SHORT’

While testing pair & length, if short circuit occurs with cable or port, ‘SHORT’ will be shown on the right upper hand of the display.

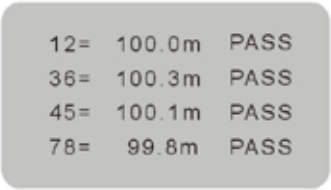
(Example: 1-2 short)

Press ‘ENTER’ to renew the test or press ▲▼ key to return to main menu, select ‘QUIT’ and press ‘ENTER’.

Note: If the place of short is unable to be known, the trouble should be obviated before testing!

‘PAIR & LENGTH’

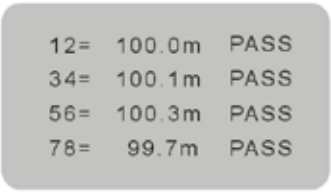
If cables are connected according to T568A or T568B and ‘PAIR & LENGTH’ is tested, the test method is proper.



In this figure, ‘ 12=’ is the number of the pairing cable, ‘ 100.0m’ is the length of the cable, and ‘PASS’ means a proper test method.

Improper pairing

If the cables are not connected according to T568A or T568B, then multiple pairing type will be tested.
(Example: 1-2, 3-4, 5-6,7-8)



Test the place of 'OPEN'

If open circuit occurs with the cable of 110 meters length, the place of open circuit shall be tested by ' PAIR & LENGTH' function.
(Example: 4-5 open circuit)

Press ▼ to enter into the next picture.

In this picture, the place of 'OPEN' is being tested and the place is around 10 meters from the 'MAIN' port of main tester.

Press ▼ to renew the test or press ▲ to return to the previous picture or press ENTER to return to main menu.

‘COAX/TEL’ (coaxial-cable and tel-cable)

Select COAX/TEL’, namely coaxial-cable and tel-cable testing function and press ‘ENTER’ to start testing, and the following fig. will be shown on the display:

Note: This function will be realized by matching with BNC coaxial-cable and RJLL adapter & commutator. The usage is as follows: To test coaxial-cable, insert BNC adapter & commutator into the port socket of MAIN or ID distant adapter & commutator; To test telephone cable, insert RJ11 adapter & commutator into the port socket of MAIN or ID distant adapter & commutator; By using USB adapter & commutator, the USB cable can be tested.

‘PASS’

‘PASS’ will be shown on the display if no failure is being tested.

Press ‘ ENTER’ to renew the test; or press ▲▼to return to main menu, and then select ‘QUIT’ and press ‘ENTER’.

‘OPEN’

‘OPEN’ will be shown on the display if any failure is being tested.

‘SHORT’

‘short’ will be shown on the display if any failure is being tested.

‘CALIBRATION’ mode

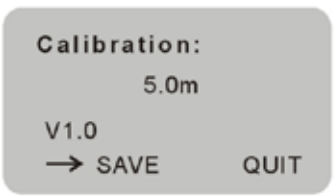
1. The length of the cable to be calibrated is at least 16 feet(5 meters) or above. If the length is less than 16 feet(5 meters), ‘ FAULT’ will be shown on the LCD.

2. Insert cables of the same type(the length is known) into ‘ MAIN’ port socket, press ‘ ENTER’ to enter into calibration mode after selecting ‘ CALIBRATION’ function.

Example: Fig.

3. The unit of length can be changed from METER to FT. Press ▲▼ on the side to select METER or FT, and then press ENTER to test the length of the known cable. If the tested length is not equal to the known length, press ▲▼(+/-) on the side to adjust it to the known length. After that, press ENTER to store the calibration or to exit.

Example: Fig.



4. Press ▲▼to select ' SAVE' to store the test and then press 'ENTER' to confirm the saving operation. After that, the system will return to 'PAIR & LENGTH' function in main menu automatically. The length of cable and the place of open circuit can be tested and calibrated here after you press 'ENTER'.
5. if short circuit is being tested, 'short' will be shown on the display. The short circuit must be replaced by a normal cable:

Press 'ENTER' to renew the test or press ▲▼to quit the calibration mode; After selecting 'QUIT' function, press 'ENTER' to return to main menu.

Battery

If the voltage of the battery is low, an icon of battery will be shown on the right upper hand of the display. Please replace the battery.

If no key has been pressed within 10 minutes, the tester will shutdown automatically.

Technical specifications:

Size:

- **Main Tester: 12.5cm × 7 cm × 2.5cm (4.9inch ×2.8 inch ×1 inch)**
- **Distant Adapter & Commutator: 7.5cm × 4cm × 2.5cm (3 inch ×1.6 inch ×1 inch)**
- **BNC Cable Commutator: 7cm × 1.8 cm × 2.3cm (2.8 inch ×0.7 inch ×0.9 inch)**
- **USB-A Cable Commutator: 6 cm × 1.8 cm × 2.3cm (2.4 inch ×0.7 inch ×0.9 inch)**
- **USB-B Cable Commutator: 6 cm × 1.8 cm × 2.3cm (2.4 inch ×0.7 inch ×0.9 inch)**
- **Telephone Connection Wire:20 cm (7.9 inch)**
- **RJ45(8P8C) Shield Connection Wire (7.9 inch)**
- **RJ45 to RJ11 Shield Connection Wire (7.9 inch)**

Calibration

Calibrate the lower limit of cable length to 5 meters (16 inches) according to the known length of cable.

Precision:

±1% or ±3.5 inches(whichever is big), any uncertainty is additional error.

Length:

Testing length: 1 meter—450 meters(3 feet —1500 feet)

Cable positioning:

It can be adapted to distant adapter & commutator: ID1-ID15.

Wire-order cable failure positioning:

Test the failure, open circuit, short circuit, reverses, across and separation of cable.

Shutdown:

The tester will be automatically shutdown if no operation is conducted within 10 minutes.

Power:

4 × 24 A Lr03 Size 3A 1.5V alkaline battery

Weight:

Main Tester: 129 g(0.35 pound)

Distant Adapter & Commutator: 30 g(0.07 pound)

Display:

Custom-built LCD

Size: 4.2 cm × 2.5 cm (1.65 inch × 1 inch)

Keys:

2 instant contact keys, 1 side ▲▼function key

Environment:

Operation Temperature: -20° C——+ 70° C

Storage Temperature: -30° C——+ 80° C

Testing Cable:

5E/6E UTP/STP Twisted-pair, coaxial-cable and telephone cable, etc.

Contents of the Tool Kit

☐	Multiple-function computer network cable tester	1
☐	Distant adapter & commutator	1
☐	BNC commutator	2
☐	USB-A commutator	2
☐	USB-B commutator	2
☐	Telephone cable commutator	2
☐	RJ45(8P8C) shield jumper	2
☐	RJ45 to RJLL jumper	2
☐	LR03 AM4 AAA. 1.5V alkaline battery	4
☐	Chain	2
☐	Manual for user	1

NETWORK
CABLE TESTER