

MODEL: LCT-300/400

LAN Cable Tester User's Guide

Welcome

Thankyou for purchasing this LAN Cable Tester Series product. Whether you are a contractor installing LAN cabling as a profession or simply a small office administrator caring for a LAN, we hope you find this product both useful and rewarding.

Specifications

- LCD Display: 2 lines by 12 characters with LED back light.
- Connectors: (2) RJ-45 (8P8C) jacks with shield.
- Control keys: (3) **MODE/SEL**, **ESC** and **ENTER** buttons.
- Power: (1) 9V dry cell battery.
- Size: 15.0(H) x 6.5(W) x 3.5(D)
- Weight: 180g net.

Recognised Wiring Schemes

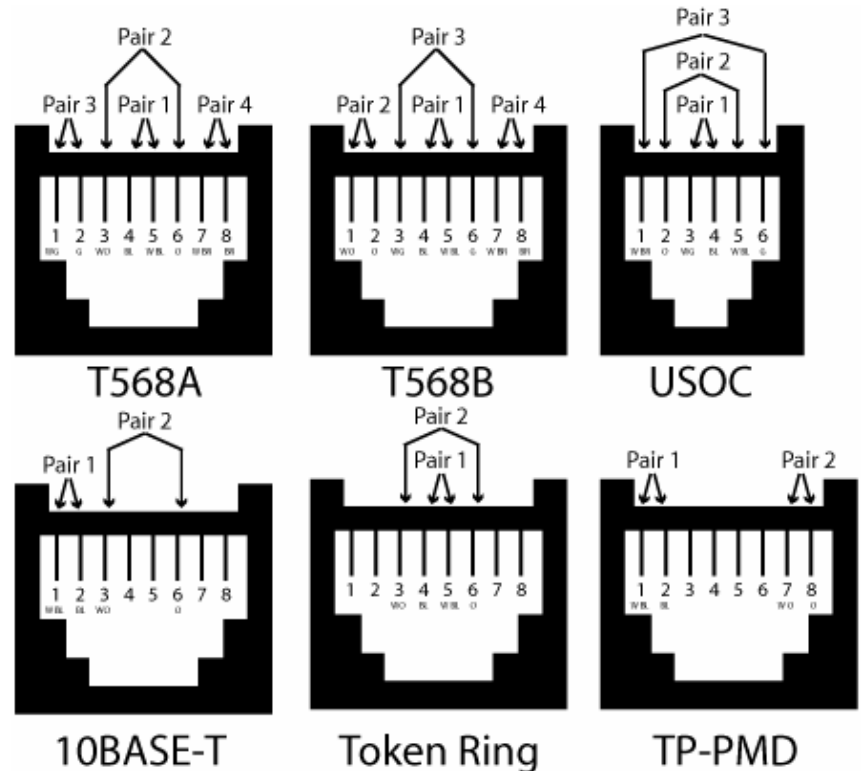
- 10(100) Base-T
- Token Ring
- TP-PMD
- plus 4 User Defined
- AT&T 258A
- EIA/TIA-568A/B
- USOC
- BNC/10Base-2
- 10(100) Base/HUB
- BNC/10Base-2

Cable Types

- Unshielded Twisted Pair (UTP 100Ω, Cat 3,4 & 5)
- Foil screened Twisted Pair (FTP 100 Ω, and 120Ω, Cat 3,4 & 5)
- Shielded Twisted Pair (STP 150Ω IBM Type 1 & 6)
- RG-58 Coaxial Cable (LCT-400 ONLY)

Features

- Hand-held and easy to operate.
- Easy to diagnose Rj-45 cables (and BNC types with LCT-400) with preset wiring schemes.
- Easy to read cable status, verify cable continuity: open short and mismatches.
- Scan pin assignment.
- Automatic cable identification (cable type search).



Cable Locator

Cable Location may be accomplished by using LCT-T terminators. The LCT-T locators incorporate factory set I.D numbers and are available in IDs from 1 to 16.

- Standard pin configurations and four (4) user defined cable wirings memorised in CPU.
- Can save user defined cable directly after testing.
- Tests for both shielded and unshielded cable types.
- Review the captured pin assignment and failure status.
- Maximum testing length is up to 3000 feet.
- Identify and trace the other's end ID (with up to 16 individual ID LCT-T).
- Battery low indicator.
- Auto power-off function.

Automatic Power Saving Features

The LCT-300/400 has built in power management features intended to extend battery life. By far, the LCD back light is the most power hungry component in the LCT-300/400. Use of the LCD back light should therefore be limited to low ambient light applications. The backlight may be toggled ON/OFF by simultaneously pressing the MODE/SEL and ESC function keys. If there is no further menu selection or function testing within thirty (30) seconds, the back light will be automatically extinguished. Additional power management options include both a "sleep" mode and an auto "power off" mode. If there is not any key activity for three (3) minutes, the unit will automatically enter "sleep" mode. All interface circuitry and the LCD display will be powered down. In this mode the unit draws very little power. Pressing any key will cause the unit to "wake up" to a full functioning state. However if there is no key activity for ten (10) minutes, the unit will automatically "power off". To recover from "power off" mode, the unit must have its power switched OFF and then ON. In the "power off" mode the power usage is close to nil. This feature is especially useful if the unit is inadvertently left powered on. The battery should be replaced when the power low icon on the LCD display becomes visible during normal use of the LCT-300/400. Additionally, if a low battery is swapped within 1 minute with a new one, the user defined memory contents will be retained. Just remember to turn the unit OFF before swapping the battery.

Operation

1) Connection The LCT-300/400 is capable of testing cables in any one of four modes.

Local Test mode is accomplished by connecting both ends of the cable under test to the LCT-300/400's OUT and LOOPBACK IN ports. Local unit displays an ID equal to zero.



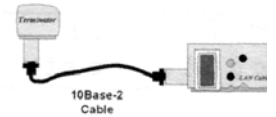
Terminator Loopback mode uses the terminator ID block connected at the remote end of the cable, while the other end of the cable is connected to the LCT-300/400's OUT.



Remote test mode uses two (2) LCT-300/400 units, with the cable connected between one unit's OUT and the other unit's LOOPBACK IN ports. Local unit displays an ID equal to zero.



10BASE-2 Test uses the supplied RJ-45 to BNC adaptors (LCT-400 only). The adaptors may both be placed in the LCT-400's OUT while the other is placed on the terminator for LOOPBACK testing.



2) ► **Turn Power Switch on:** Following initial power on of the LCT-300/400, the unit will display the start up logo with back light for 3 seconds, then will display the top menu for "cable test".

3) LCT-300/400 test menu

```
LAN CABLE
TESTER v X . X
```

4) LCT-300/400 test menu

```
MODE SEL
Cable test
```

Battery Low Icon

5) Press enter to test the cable

```
o 1 2 3 4 5 6 7 8 G
i 3 6 1 4 5 2 7 8
```

Pin Out
UTP, FTP or COAX

6) Results displayed

```
1 0 0 B A S E / H U B
U T P           i d : 1
```

Type Terminator ID No.

7) Use **MODE/SEL** to toggle between cable pin out screen and result display, press **ESC** back to test menu.

Cable testing: During any mode of cable testing, the first screen display will show the top line out and bottom line in of connections 1 through 8 plus G (shield) as they are scanned. Following this screen page will be the cable identification information. If at least one wire pair is not connected, the display will read "NO CONNECT". A shorted cable will read "SHORT". A question mark in the pin out indicates a short. An unknown is not in the standard known pin outs or in the user defined memory.

User Defined Cable: The **User Define** function allows you to describe your own custom cable pin out which will be entered into the cable identification database and saved in the CPU memory. This custom pin out will remain available as long as a fresh battery is in the unit. Two methods are available for defining a cable. The first method is manual entry, while the second uses an "UNKNOWN" cable as the pin out source. First the manual method. From the very top of the LCT-300/400 menu (just after power on is completed) select the USER DEF menu by pressing the **MODE/SEL** button (step no. 1 to 2). The **MODE/SEL** button will now move the cursor to select one of four user memory locations (step no. 3). Press **ENTER** to select the memory location that the cursor is on. The define cable display will show (step no. 4).

LCT-300/400 test menu

```
MODE SEL :
cable test
```

► **MODE/SEL**

LCT-300/400 user defined menu

```
MODE SEL :
user defined
```

► **ENTER**

LCT-300/400 user defined display

```
USER DEF :
# 1 / 2 / 3 / 4
```

► **MODE/SEL** to location 1~4.
► **ENTER**

LCT-300/400 Define cable display

```
o 1 2 3 4 5 6 7 8 G
i
```

Empty

Use the **ENTER** key to set digits 1 – 8, G or blank (not connected), then press **MODE/SEL** to move to the next space. When complete press **ESC** (step no. 5 to 6).

LCT-300/400 defined pin out

```
o 1 2 3 4 5 6 7 8 G
i 3 6 1 4 5 2 7 8
```

Defined Pin Out

LCT-300/400 Save to user defined Confirmation Display

```
SAVE TO USER
DEF. # 2 ?
```

To save your definition press ► **ENTER**. To exit without saving, press ► **ESC**. The alternate method is to save the "UNKNOWN" type.

Cable Fault Indication Examples:

```
MODE SEL :
cable test
```

► **ENTER**

```
o 1 2 3 4 5 6 7 8 G
i 1 1 3 4 5 6 7 8
```

→

```
CABLE SHORT
id : 1
```

In the above example, Pin 1 and Pin 2 were found to be shorted.

```
MODE SEL :
cable test
```

► **ENTER**

```
o 1 2 3 4 5 6 7 8 G
i
```

→

```
NO CONNECT
```

In the second example, if at least one pair of wires is not connected, the test result will show as "NO CONNECT".