CONTENTS

TC-NT1 Network Cable Tester
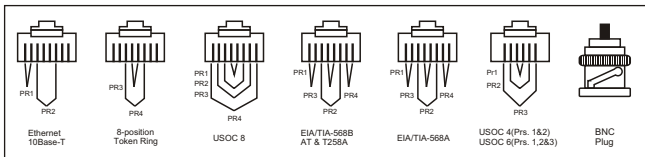*(Includes master box and remote unit)*

INTRODUCTION

The TC-NT1 Network Cable Tester is an innovative, practical tester that can easily read the correct pin configuration of 10BASE-T, 10BASE-2, RJ45/RJ11 modular, 258A, TIA-568A/568B and Token Ring cables by comparing one transmitting end to the corresponding receiving end. The included remote terminator allows the user to test installed cable either at a wall jack or a patch panel. Verifying continuity and testing for faults such as open, shorted and crossed pairs has never been easier and more affordable.

FEATURES

* Displays the actual pin configuration of 10BASE-T and 10BASE-2 Ethernet, RJ45/RJ11 modular, 258A, TIA-568A/568B and Token Ring cables
* Provides easy to read continuity and fault status display
* Checks for continuity, open wire, shorted pair and crossed pair faults
* Allows for remote testing of installed cables from wall jack or patch panel
* Tests shield wire integrity
* Auto or manual scanning

(Diagram 1)

| Ethernet 10Base-T | 8-position Token Ring | USOC 8 | EIA/TIA-568B AT & T258A | EIA/TIA-568A | USOC 4(Prs. 1&2) USOC 6(Prs. 1,2&3) | BNC Plug |

PACKAGE CONTENTS

1. TC-NT1 Master Unit
2. TC-NT1 Remote Unit
3. RJ45 Male to BNC Male Adapter Cable (Qty. 2)
4. RJ45 UTP Patch Cable
5. BNC Female/Female Coupler
6. RJ45/RJ11 Jack Size Adapter (Qty. 2)

PRODUCT PROFILE

(Diagram 2)
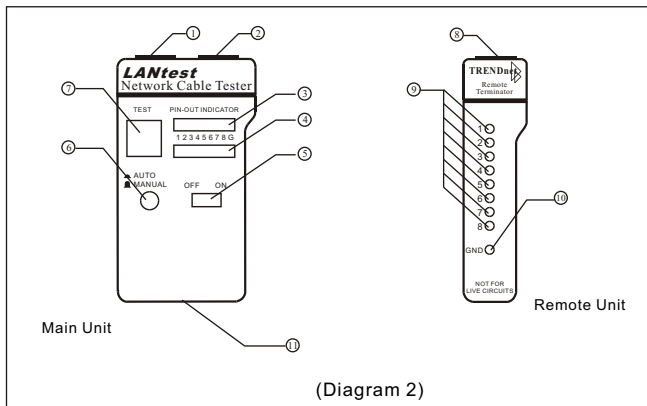
1. RJ45 JACK
2. RJ45 JACK
3. LED DISPLAY FOR SOURCING END (JACK 1)
4. LED DISPLAY FOR RECEIVING END (JACK 2)
5. POWER SWITCH
6. LED SCANNING MODE SWITCH
7. TEST SWITCH FOR MANUAL SCAN
8. RJ45 JACK
9. LED DISPLAY FOR RECEIVING END
   (SAME AS JACK 2)
10. GROUND LED FOR RECEIVING END
11. BATTERY COMPARTMENT (9V)

OPERATION

I. Loopback Test

1. 10Base-T Test

1.1 Plug one end of the tested cable into the transmitting RJ45 jack on the master unit marked with a ']' and the other end of the cable into the remaining receiving RJ45 jack.

1.2 Slide power switch on. The upper row of LEDs will start to scan in sequence if the Auto/Manual button is set on "Auto" mode. The LED for pin 1 will light up if the button is in "Manual" mode.

1.3 Switch back and forth from Auto or Manual scanning mode by pressing the Auto/Manual button on the side of the master testing unit.

1.4 Once both ends of the cable are plugged in properly, the second row of LEDs will illuminate according to the corresponding LEDs in the top row.

1.5 Read the results of the LED display for the pin configuration status of the tested cable. If you fail to read the results the first time in Auto mode, you may wait for the second LED scan, or simply switch to Manual mode for pin by pin testing. In Manual mode, pressing the square "Test" button will advance testing to the next pin.
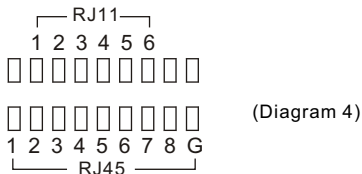

Note: Make sure the battery power is sufficient. Insufficient battery power will lead to dimmed LEDs and incorrect results.
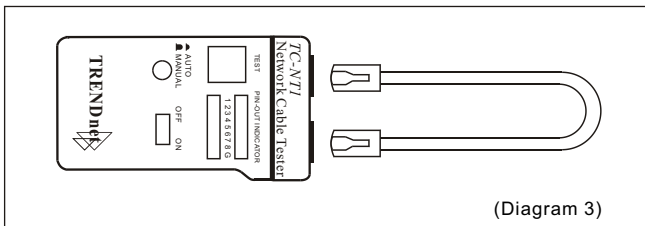
(Diagram 3)

Loopback Test

2. RJ11 Modular Cable Test

2.1 Please follow directions for the UTP/STP Cable Test and refer to Diagram 4 for the correct LED pin out display

┌── RJ11 ──┐
1 2 3 4 5 6
□ □ □ □ □ □ □ □

□ □ □ □ □ □ □ □   (Diagram 4)
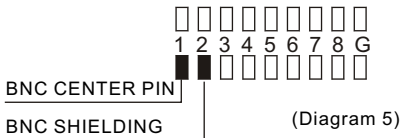1 2 3 4 5 6 7 8 G
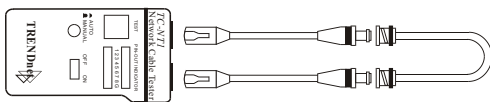└────── RJ45 ──────┘

3. Coaxial Cable Test

3.1 Plug the two attached BNC adapter cables on both RJ45 jacks. Then connect the tested cable to each end of the BNC adapter cables

3.2 For the remaining testing procedures, please refer to steps 1.2 to 1.5

Note: 1. The center pin of BNC should be read on LED 2. Please refer to diagram 5.

□ □ □ □ □ □ □ □
1 2 3 4 5 6 7 8 G
■   ■ □ □ □ □ □ □
BNC CENTER PIN

BNC SHIELDING   (Diagram 5)

2. As Coaxial cable has only two wires, we suggest you read the result of the LED scan using Manual mode.

(Diagram 6)

II. Remote Test

1. Plug one end of the tested cable to the transmitting RJ45 jack on the master unit marked with a 'I' and plug the other end into the remote terminator. If the tested cable is installed in a patch panel or wall plate, you may use the included patch cable to solve the connector gender problem. Please refer to Diagram 7 & 8.

2. Now, set the Auto/Manual switch to Auto mode for one-person testing.

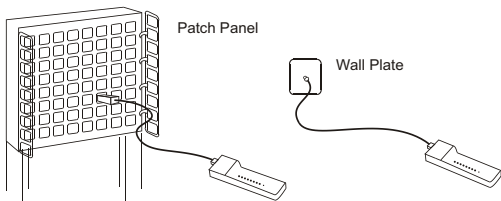3. Read the test results from the LED display on remote terminator.

Note: The LED display on the remote unit will scan in sequence corresponding to the transmitting end of the master unit.

(Diagram 7)   Remote Test
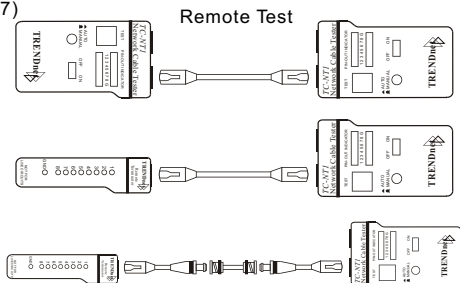
Remote Test

(Diagram 8)

Patch Panel

Wall Plate

Test Results

1. Continuity: □ ▉ □ □ □ □ □ □ □
        1 2 3 4 5 6 7 8 G
        □ ▉ □ □ □ □ □ □ □   Pin 2 has continuity

2. Open: □ ▉ □ □ □ □ □ □ □
        1 2 3 4 5 6 7 8 G
        □ □ □ □ □ □ □ □ □   Pin 2 is opened

3. Short: □ ▉ ▉ □ □ □ □ □ □
        1 2 3 4 5 6 7 8 G
        □ ▉ ▉ □ □ □ □ □ □   Pin 2 and Pin 3 are shorted

4. Miswire: □ □ ▉ □ □ □ □ □ □
        1 2 3 4 5 6 7 8 G
        □ □ □ □ □ ▉ □ □ □   Pin 3 and Pin 6 are miswired

Caution:

1. Operating the tester in live circuits may damage the tester

2. Leaving the battery in the tester for long periods of time without use could drain power from the battery