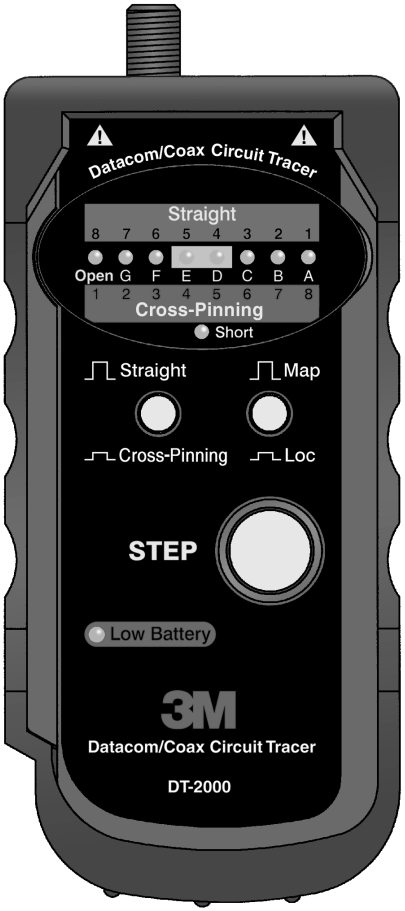
Instruction Manual

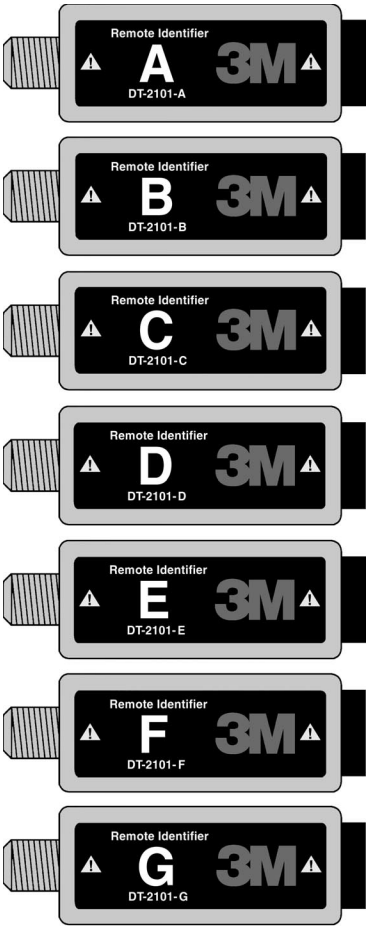
3M DT-Series Data Communications and Coax Cable Detection Instruments

Model DT-2000

ITEMS INCLUDED WITH MODEL DT-2000

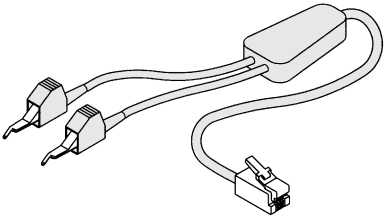


Datacom/Coax Circuit Tracer with Holster



Remote Identifiers (7)

Case



Telecom Alligator Clips

SPECIFICATIONS

CATEGORY OF CABLE

- Unshielded communication cable with RJ-11 and RJ-45 connectors.
- Ethernet 10 Base-T, Token Ring, EIA/TIA-568A/B, AT&T 258A, and USOC.
- 50 or 75Ω coaxial cable with F connectors.
- 50 or 75Ω coaxial cable with BNC connectors. Must use F to BNC adapters (not included).

Maximum testing length for all cable types is 1,000 feet.

MULTIPLE FUNCTIONS

- Testing cables before or after their installation.
- Identify up to 7 different cables (location).
- Mapping Function (identifies pin-to-pin configuration).
- Cable identification (straight or cross-pinning).
- Pair identification (straight or cross-pinning).
- Open/short wiring test.
- Low battery indicator
- Auto power-off function
  For Location Function - 2 min. / For Mapping Function - 30 sec.

DIMENSIONS

- **Cable Tracer:** 2.60" / 66mm (W) x 5.75" / 146mm (H) x 1.31" / 33.2 mm (D) (without holster)
- **Remote Identifier:** .83" / 21.1mm (W) x 2.44" / 62mm (H) x 0.87" / 22mm (D)

WEIGHT

- **Cable Tracer:** 4.5 oz. / 128 g. (without battery and holster)
- **Remote Identifier:** 0.68 oz. / 19.4 g.

ENVIRONMENTAL CONDITIONS

- **Indoor Use**
- **Altitude up to 2,000M**
- **Operating Temperature:** 5°C to 40°C / 41°F to 104°F
- **Storage Temperature:** -40°C to 60°C / -40°F to 140°F
- **Relative Humidity:** 0% to 90% (0°C / 32°F to 35°C / 95°F)
- **Pollution Degree:** 2
- **Class III Equipment**

BATTERY TYPE

- 9V, NEDA 1604 or 6F22 or 006P

⚠ CAUTION ⚠

DO NOT test cable connected to electric power. To avoid electric shock, disconnect the power to the cable under test. Connection to an active power cable can result in injury or even death.

INTRODUCTION

The DT-2000 Cable Tracer is a convenient instrument for testing different unshielded wiring schemed communication cable with RJ-11 and RJ-45 connectors and coax cable. This tracer can be used for testing and identifying cables before and/or after they are installed. The tracer offers easy operation. Testing status is indicated by multiple LEDs and an auto power-off function maximizes battery life. The DT-2000 Cable Tracer is manufactured in the United States.

WIRING SCHEMES

Ethernet
10Base-T

EIA/TIA-568A

EIA/TIA-568B
AT&T 258A

8-Position
Token Ring

USOC 8

USOC 4
(Prs. 1&2)

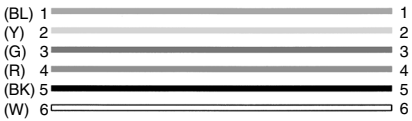
USOC 6
(Prs. 1,2 & 3)

RJ-11 (4-Wire) Straight-Pinning

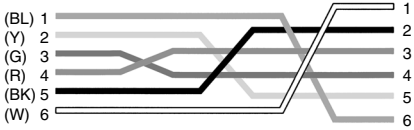
RJ-11 (4-Wire) Cross-Pinning

NOTE: Cross-pinning is for typical telephone use.

RJ-11 (6-Wire) Straight-Pinning

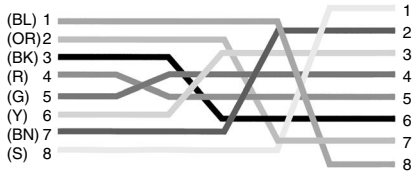


RJ-11 (6-Wire) Cross-Pinning



RJ-45 (8-Wire) Straight-Pinning

RJ-45 (8-Wire) Cross-Pinning



Configuration for Testing Communication Cable

Configuration for Testing Coaxial Cable

OPERATION INSTRUCTIONS

MAPPING FUNCTION

1. Map/Loc push button switch to the map (up) position.
2. Set the straight/cross-pinning push button switch to either position. **or**

Communication Cable

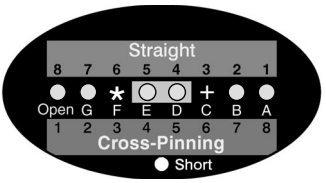
3. Connect one end of the cable to be tested to the remote identifier and the other end of any cable to the cable tracer.
4. Push the STEP button and read the result.

   Good Pair: One bi-color (green and red) and one single color (green or red) LEDs. The color of the second LED indicates a straight or cross-pinned wiring for the pair.

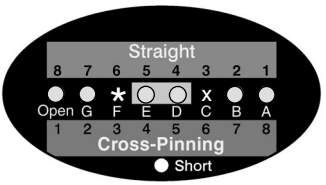
   Open Pair: Only one bi-color LED blinking.

   Short: Two or more bi-color LEDs or single color LEDs are blinking (two or more wires are shorted).

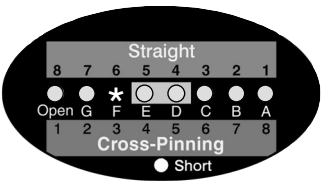
   ✱ = Bi-Color Blinking LED
   + = Green Blinking LED
   X = Red Blinking LED



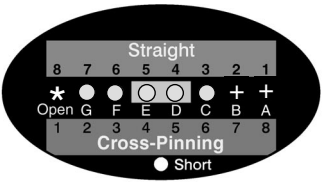
Good Pair (Straight)
3 & 6 Wires



Good Pair (Cross-Pinning)
3 & 6 Wires



Open Pair
Straight open wire #3
Cross-pinning open wire #6



Short
Straight cable short wires 1 & 2

5. Push the STEP button again and read the result for the next pair.

Coax Cable

6. Connect one end of the coax cable to be tested to the remote identifier and the other end of the cable to the cable tracer. For this testing, use the middle LEDs (boxed in as the gray color on the unit).
7. If you do not push the step button for 30 seconds, the cable tracer will automatically shut off.

IDENTIFICATION (LOCATION) FUNCTION

1. Set the Map/Loc push button switch to the Loc (down) position. ⌐¬
2. If you know what cable you are testing (straight or cross-pinned), set the straight/cross-pinning push button switch to the correct position (up ⌐¬ for straight cable, down ⌐¬ for cross-pinning). If you are not sure, set the switch to either position.
3. If no LEDs light up, push the STEP button and read the result. The position of the lit LED shows you what cable is being tested. If all 8 LEDs are blinking, change the straight/cross-pinning button to the opposite position and read the result.

   The tracer can test 7 cables with remote identifiers A, B, C, D, E, F, and G.

   For open 4 and 5 leads of the communication cable or an open coax cable, the open LED will light. For shorted 4 and 5 leads of the communication cable or a shorted coax cable, the short LED will light. Location is not possible under either of these conditions. Cable must be repaired first.
4. For locating the next cable, first remove the cable from the tracer and connect the free end of the new cable with remote identifier into the tracer.
5. If you do not push the step button for 2 minutes, the cable tracer will automatically shut off.

Note:

1. Testing of coax cable (good, open, or short) is possible for identification function of tracer.
2. For testing coax cables with BNC connectors, use standard F to BNC adapters.

MAINTENANCE

GENERAL MAINTENANCE

To clean, wipe the case with a damp cloth and detergent (do not use abrasives or solvents).

When the Low Battery LED lights up, you need to replace the battery.

BATTERY REPLACEMENT

The tracer is powered by a single 9V battery (NEDA 1604, 6F22, or 006P). Use the following procedure to replace the battery.

1. Disconnect the cables and remove the holster from the tracer.
2. Using a phillips screwdriver, remove the battery cover screw and open the battery cover.
3. Carefully remove the old battery and replace with a new battery.
4. Reinsert the battery into the case, dressing the battery leads so that they will not be pinched between the case and the battery cover.
5. Reinstall the battery cover, screw, and holster.

Warranty: Limited Remedy, Limited Liability. This product will be free from defects in material and manufacture for a period of one year from the date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product.

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