



INSTRUCTION MANUAL

MTC35

MULTI-PURPOSE WIRE TRACKER



1. SAFETY INFORMATION

1.1. Warning

To prevent electric shock, damage to equipment and personal injury:

- **DO NOT** trace cables carrying strong currents.
- **DO NOT** use the MTC35 during thunderstorms.

1.2. Cautions

To prevent damage to the MTC35 and to ensure safety, adhere to the following instructions:

- Avoid using the cable order verifying function on live cables.
- Remove batteries if the instrument will not be used for an extended period to prevent battery leakage and ensure proper contact and the integrity of the battery terminals.
- Refrain from dismantling the device. Repairs may only be conducted by authorized technicians.

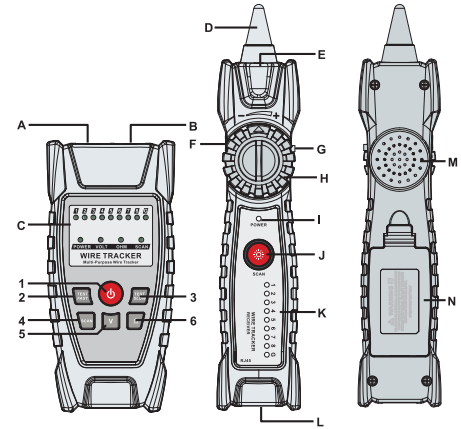
2. INTRODUCTION

The MTC35 is a sophisticated network cable inspection device tailored for professionals, offering essential functions such as precise wire tracing, meticulous cable order verification, and thorough inspection of wiring faults. Built to meet rigorous standards, it provides robust capabilities crucial for ensuring efficient network maintenance and troubleshooting tasks. The MTC35 is equipped with the following functions:

1. Chargeable and resistant to interference.
2. Capable of long-distance wire tracing.
3. Verifies wiring order and termination of data/network cables.
4. Checks wiring voltage.
5. Checks wiring voltage polarity.
6. Inspects wiring for shorts/opens.
7. Indicates low battery status.
8. Adjustment for tracing sensitivity/volume.
9. Earphone(AUX) jack.
10. Includes an integrated flashlight

3. INSTRUMENT LAYOUT

- | | |
|-------------------------------------|--|
| A - RJ45 Jack | I - Receiver/Power Indicator Light |
| B - RJ11 Jack | J - Scan Cable (Tracing Button) |
| C - Wiring Order/Function Indicator | K - Wiring Order Verification Indicators |
| D - Signal Tracing Sensor | L - RJ45 Receiver Jack |
| E - Flashlight | M - Audio Output Speaker |
| F - Earphone Jack | N - Battery Compartment Door |
| G - Flashlight Switch | |
| H - Volume Control Wheel | |



3.1 Buttons

- 1 - **Power** : Power button
- 2 - **TEST FAST**: Fast wiring order verification button
- 3 - **TEST SLOW**: Slow wiring order verification button
- 4 - **SCAN**: SCAN mode button
- 5 - **V** : Line Voltage mode button
- 6 - **Ω** : Cable shorts/ opens mode button

4. OPERATION INSTRUCTIONS

4.1. Power on/off (POWER)

Press the power button to turn on the meter; the power light will indicate it's on. Press the power button again to turn off.

4.2. Line scanning function (SCAN)

The scanning function quickly identifies the required line pair (such as network lines, telephone lines, or video signal lines) among multiple pairs. When in scanning mode, the SCAN indicator light is on. Connect one end of the line to be tested directly or through the alligator clip into the RJ11/ RJ45 connector of the transmitter.

The scan signal sent by the instrument is transmitted through the inserted line. Press the power button on the receiver and listen at the other end of the line to be tested (e.g., line terminal, telephone system distribution frame, terminal box, or hub side of the computer network). The receiver will beep. Compare the volume of the "beep" sound; the line pair with the loudest "beep" sound is the one you are tracing. In a noisy

environment, if the "beep" sound is not clear, you can increase the volume or insert wired earphones for a clearer sound. When measured at full power, the effective measurement distance of the MTC35 is greater than 1000 meters. Ensure there is no connector in the cable under test.

4.3. Testing function (TEST)

The testing function allows you to quickly assess basic physical characteristics of connected lines such as open circuit, short circuit, and line order for the following types of cables:

- Standard UTP computer network cables such as IEEE 10Base-T, EIA/TIA 568A, EIA/EIA 568B, AT&T 258A, and Token-Ring.
- 2-core, 4-core, and other telephone lines.
- Any other metal cables.

Press either TEST key(FAST/SLOW) to enter the testing mode; the OHM indicator will light up, and the SCAN indicator will flash. Connect one end of the test line to the transmitter's RJ45 socket and the other end to the receiver's RJ45 socket.

Determine the line's condition based on the eight line indicators (1, 2, 3, 4, 5, 6, 7, 8) on the transmitter and receiver. If the connection is normal, the corresponding indicators will light up one by one. The testing function can also determine whether the shield line (G) is good or bad, indicated by the 9th indicator. This product supports two testing modes: fast line testing and slow line testing.

4.4. Line voltage test (V)

The voltage testing function of the instrument can perform qualitative measurements on some of the basic conditions of the tested line, including the presence of line voltage and the positive or negative polarity of the detected voltage. The voltage test can be conducted using only the transmitter, without the need for the receiver. Press the V button to enter the line voltage testing mode, then the "VOLT" indicator will light up indicating that this mode is active. Plug one end of the alligator clip adapter into the RJ11 socket of the transmitter. Clamp the red and black clips onto the line under test, or plug the telephone line with the RJ11 connector directly into the RJ11 socket. If the telephone line has voltage, the OHM or SCAN indicator on the instrument will light up. If the SCAN indicator lights up, the red alligator clip is positive; if the OHM indicator lights up, the red alligator clip is negative. This function is primarily for testing the weak current and/or voltage of telephone lines. Do not use the product to measure other more robust lines/sources of voltage or current, as it may damage the instrument and pose a risk of electric shock, damage to the installation, or electrocution.

4.5. Shorts circuit test (Ω)

The short circuit test is used to determine if a telephone line (a telephone line that is not connected to the network) has a short circuit. Press the Ω button to enter the short circuit testing mode, and the OHM indicator will light up indicating that this mode is active. Plug the RJ11 end of the alligator clip adapter into the RJ11 socket of the transmitter, and clamp the red and black clips onto the line under test. If the line is shorted, the SCAN indicator will light up. For a telephone line with a registered jack, plugging it directly into the transmitter's RJ11 port will suffice. This function can also test for short circuits in other lines.

5. WIRING INSTRUCTIONS

1. **Alligator Clip Adapter Line**: Plug one end into the RJ11 port. Use the other end of the clip to clamp onto the object.
2. **RJ45 Registered Jack Line**: Plug one end into the RJ45 port of the transmitter, and the other end into the network cable port of the RJ45 socket on the wall.
3. **RJ11 Registered Jack Line**: Plug one end into the RJ11 port of the transmitter, and the other end into the telephone line port of the RJ11 socket on the wall.

6. LOW BATTERY INDICATION

The low power prompt function of the transmitter and receiver: The power indicator LEDs of both the transmitter and receiver will flash once a second, this indicates that the battery is in need of replacement. Please replace the battery.

7. SPECIFICATIONS

| Function | Transmitter | Receiver |
|-----------------------|-------------------------------|-----------------|
| Signal Tracing | ≤1000m | |
| Transmission Range | | |
| Operating Temperature | -10°C to 40°C (14°F to 104°F) | |
| Operating Humidity | 10 to 95%RH | |
| Storage Temperature | -10°C to 40°C (14°F to 104°F) | |
| Batteries | 3 x 1.5V AAA | 1 x 6F22 9V |
| Dimensions | 63 x 134 x 31mm | 40 x 200 x 32mm |
| Weight | 138g | 120g |

Specific Declarations:

Major Tech disclaims any responsibility arising from the use of the output from this product as direct or indirect evidence. We reserve the right to modify product design and specifications without prior notice.

7. WARRANTY

Warranty Coverage

Major Tech warrants its test instruments to be free from defects in materials or workmanship under normal use and service for a period of two (2) years from the date of shipment. This warranty is extended exclusively to the original purchaser, provided the online Product Registration has been completed on either www.major-tech.com or www.majortech.com.au, depending on which country the product was purchased. This warranty is non-transferable.

Exclusions

This warranty does not cover:

- Disposable batteries and fuses
- Damage caused by leaking batteries (damaging the meter and components)
- Normal wear and tear of mechanical components
- Failures caused by use outside the product's specifications
- Any product which, in the opinion of Major Tech, has been misused, contaminated, or damaged due to neglect.

Check Procedure

Prior to contacting Major Tech or a distributor regarding a warranty claim, please check the following:

- Batteries are installed correctly
- Battery condition – either replace disposable batteries or ensure rechargeable batteries are charged where applicable
- Test leads are inserted in the correct terminals and are fully inserted, no damage to test leads.

Contact Information

For any warranty claims or inquiries, please contact either Major Tech or the distributor from whom the product was purchased.

MAJOR TECH (PTY) LTD

South Africa

www.major-tech.com

sales@major-tech.com

Australia

www.majortech.com.au

info@majortech.com.au

