WANLUTECH MOT-73

WANLUTECH MOT-73 Optical Fiber Tester User Manual

Model: MOT-73

1. Introduction

The WANLUTECH MOT-73 is a versatile optical fiber tester designed for comprehensive network and fiber optic analysis. It integrates multiple functions including OTDR, Optical Power Meter (OPM), Visual Fault Locator (VFL), Light Source (LS), Optical Loss Test (OLT), RJ45 Cable Tester, and various network tools. This manual provides detailed instructions for the proper setup, operation, and maintenance of your device.

2. Safety Information

Please read and understand all safety warnings before operating the device to prevent injury or damage. Keep this manual for future reference.

- **Laser Safety:** The Visual Fault Locator (VFL) and Light Source (LS) emit visible and invisible laser radiation.**DO NOT look directly into the optical output port or into the fiber end when the VFL or LS is active.** Direct exposure to laser light can cause severe eye damage.
- **Battery Safety:** The device contains a Lithium-Ion battery. Do not disassemble, puncture, or expose the battery to extreme temperatures or fire. Use only the provided charger.
- **Environmental Conditions:** Operate the device within specified temperature and humidity ranges. Avoid exposure to water, dust, or corrosive substances.
- **Maintenance:** Refer all servicing to qualified personnel. Do not attempt to repair the device yourself.

3. Setup

3.1 Package Contents

Verify that all items are present in the package:

- WANLUTECH MOT-73 OTDR Multi-function Tester
- Tool Bag
- OTDR Test Report
- FC/UPC-FC/APC Cable
- Li-ion Battery (pre-installed)

- RJ45 to BNC Connector
- BNC Alligator Clip Cable
- Charger
- SC/UPC male to SC/APC female adapter
- Cable Tracer
- Safety Card
- SC, FC, ST, LC Connectors
- FC to FC Connector
- FC to SC Connector
- FC (male) - LC (female) adapter

Image: Included accessories and the MOT-73 tester.

3.2 Initial Battery Preparation

Before first use, open the battery cover and remove the paper piece isolating the battery. This ensures proper electrical contact for operation and charging.

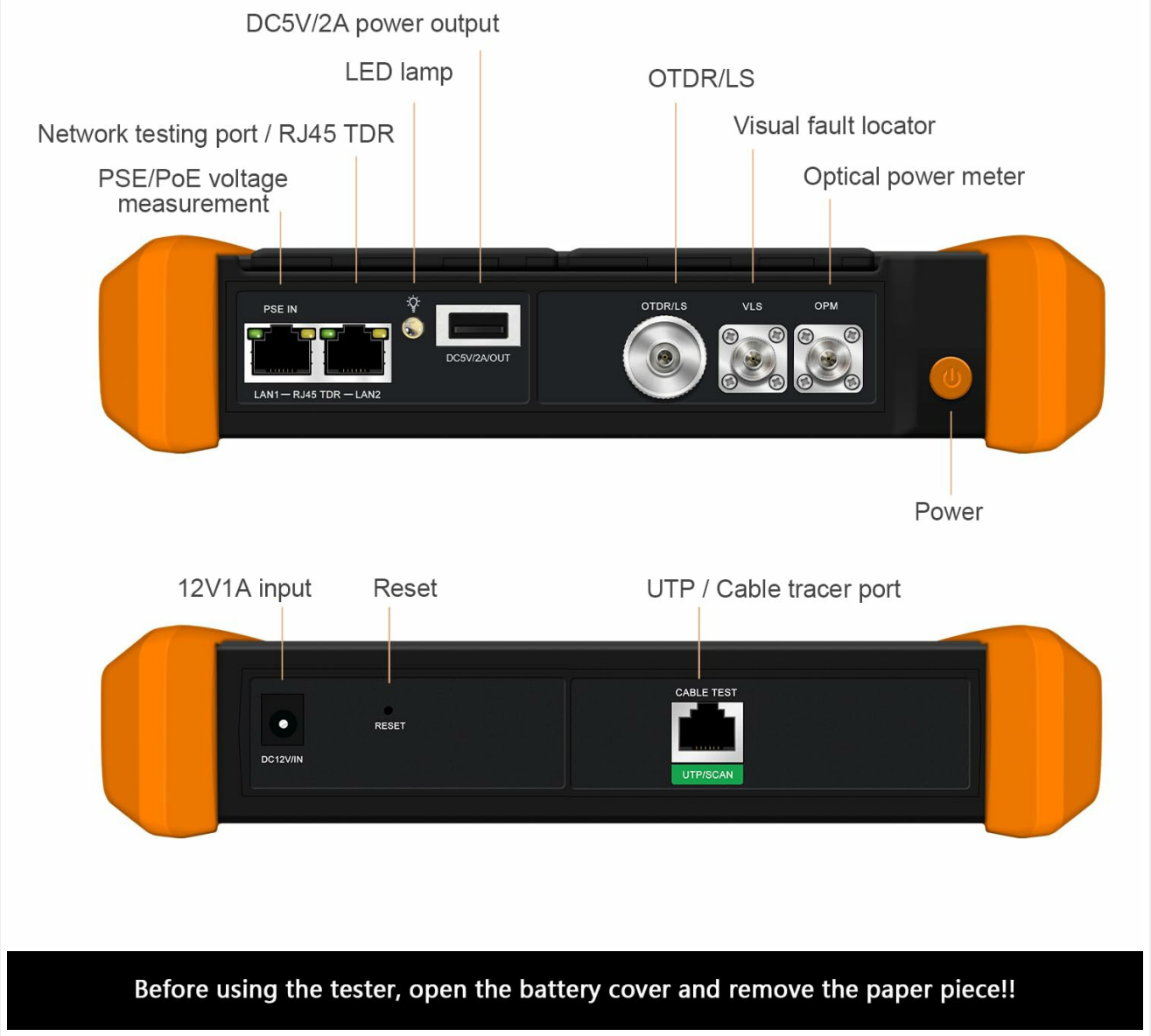


Image: Rear view of the MOT-73 tester highlighting the battery compartment and the instruction to remove the paper piece.

3.3 Device Overview

Familiarize yourself with the ports and controls of the MOT-73 tester:

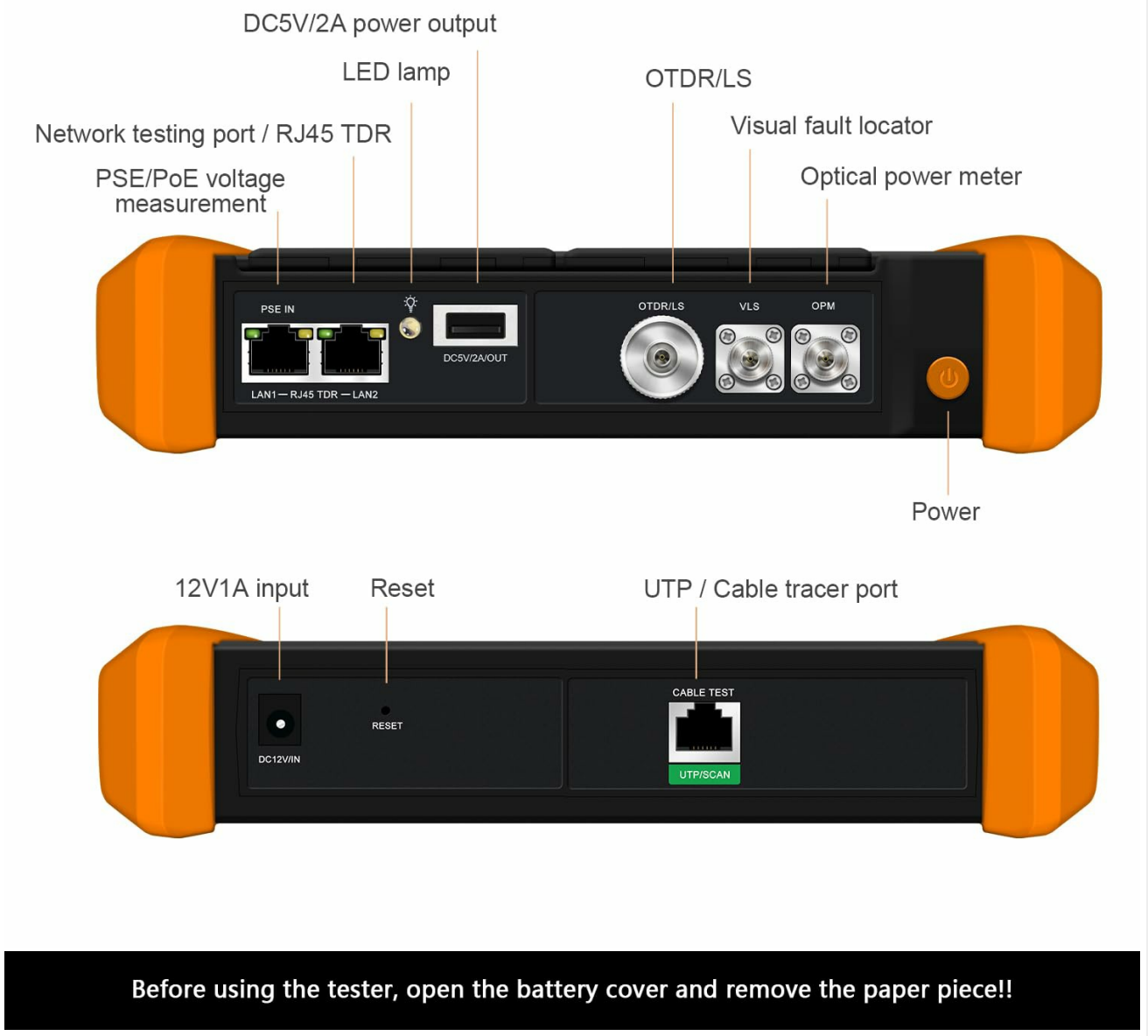


Image: Detailed view of the top and bottom panels of the MOT-73, indicating ports such as Network testing port/RJ45 TDR, PSE/PoE voltage measurement, DC5V/2A power output, LED lamp, OTDR/LS, Visual Fault Locator, Optical Power Meter, Power button, 12V/1A input, Reset, and UTP/Cable tracer port.

- **Top Panel:** Network testing port / RJ45 TDR, PSE/PoE voltage measurement, DC5V/2A power output, LED lamp, OTDR/LS port, Visual Fault Locator (VFL) port, Optical Power Meter (OPM) port, Power button.
- **Bottom Panel:** 12V/1A input, Reset button, UTP / Cable tracer port.

4. Operating Instructions

4.1 General Navigation

The MOT-73 features a 7-inch IPS touchscreen for intuitive operation. Navigate through the various functions by tapping the corresponding icons on the main screen.

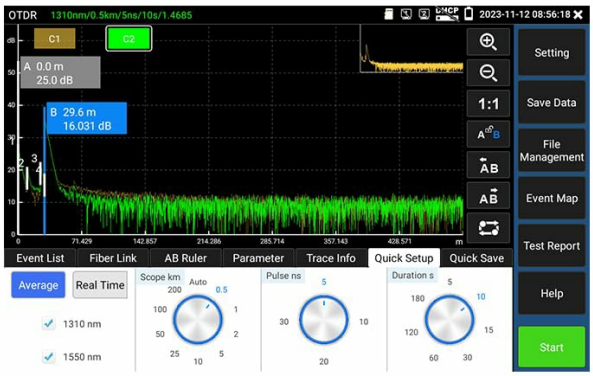
Image: The main screen of the WANLUTECH MOT-73 showing various application icons for different testing functions.

4.2 OTDR Test

The OTDR (Optical Time Domain Reflectometer) function is used to characterize optical fibers. It supports 1310nm/1550nm wavelengths with a dynamic range of 28dB/26dB. **Note: This model cannot test live fiber.**

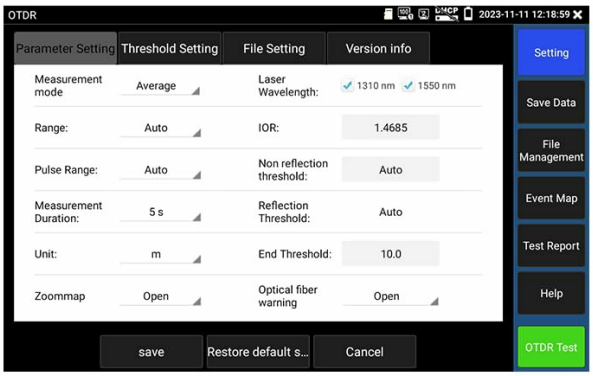
Quick Setup

Quickly set wavelength, distance range, pulse width and measurement duration;



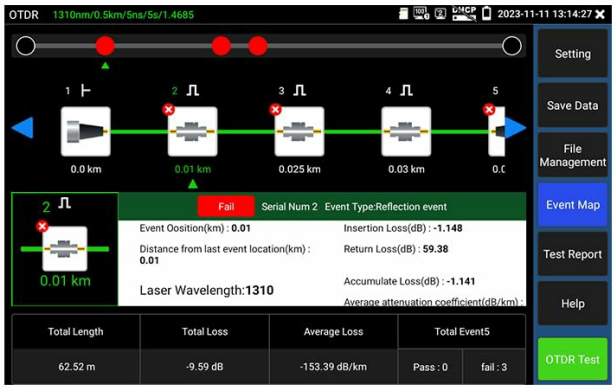
Parameters Set mode

Professional technicians can set the wavelength, distance range, pulse width, measurement mode, IOR, non-reflection threshold, end threshold and other parameters before testing, which will get more accurate curve results



Event Map

Visualise the results of fibre optic link inspections. Information such as the length of the fibre optic link, type of connector, fusion point or break point is presented in a graphical form that is easier to understand. Save and view the testing curves, support zoom and move curves, view details. (Event Blind Zone ≤1.6m, Attenuation Blind Zone≤8m.)



Initial Event: The starting point of link.

Reflection Event: Connector, reflection event is shown as peak signal.

Non-reflection Event: Fusion point or optical fiber bending, non-reflection event is shown as drop of optical power.

End Event: The terminal of fiber, the end event with reflection peak is the normal end.

End Event: Optical fiber bending, the end event with non-reflection peak is the fracture

Image: Screenshots illustrating the 'Quick Setup' mode for rapid configuration and 'Parameters Set' mode for detailed, professional OTDR test parameter adjustments.

- **Quick Setup Mode:** Allows for fast configuration of wavelength, distance range, pulse width, and measurement duration.
- **Parameters Set Mode:** For professional technicians, this mode enables detailed adjustment of wavelength, distance range, pulse width, measurement mode, IOR, non-reflection threshold, end threshold, and other parameters for more accurate curve results.

4.2.1 Event Map

The Event Map visualizes fiber optic link inspections, presenting information like fiber length, connector type, fusion points, or breakpoints in an easy-to-understand graphical format. It supports saving, viewing, zooming, and moving curves for detailed analysis. Event Blind Zone is less than 1.6m, and Attenuation Blind Zone is less than 8m.

Image: The Event Map interface showing graphical representation of fiber events and the Threshold Setting menu for defining pass/fail criteria.

4.2.2 Multi-track Analysis

The device supports displaying up to four OTDR curves simultaneously for comprehensive analysis, allowing for comparison of different tests or wavelengths.

Image: The multi-track analysis screen displaying four different OTDR curves for comparative evaluation.

4.3 Optical Power Meter (OPM)

The OPM measures optical power linearly or non-linearly. It is calibrated for wavelengths 850/1300/1310/1490/1550/1625nm with a measurement range of -70 to +10 dBm.

Image: The Optical Power Meter interface showing a power reading and selectable calibrated wavelengths.

4.4 Visual Fault Locator (VFL)

The VFL helps determine fiber continuity and locate faults. It operates at a 650nm wavelength with a maximum test range of 8 KM. **Warning: Visible light source. Do not look directly at the light to avoid eye contact.**

Image: The Visual Fault Locator interface displaying a warning about laser light and options for steady or modulated output.

4.5 Light Source (LS)

The LS function provides a stable light source for engineering and maintenance of optical fiber communication and CATV fiber parameter setting. It supports CW/270 Hz/330 Hz/1 kHz/2 kHz modulation modes at 1310nm/1550nm.

Image: The Light Source interface showing wavelength selection, mode options (CW, 270Hz, 330Hz, 1kHz, 2kHz), and power adjustment.

4.6 Optical Loss Test (OLT)

The OLT function is used to test the insertion loss of optical passive devices. Connect the OTDR/LS port and OPM port with short fiber optic patch cables. After the power stabilizes, click "Set Parameter" and then connect the device under test.

Image: The Optical Loss Test interface displaying optical power meter readings and relative power, with options to set parameters and view connection diagrams.

4.7 Cable Tracer & Cable Tester

The Cable Tracer function helps locate BNC, network, and telephone cables within cluttered bundles, including shielded cables. The Cable Tester function checks UTP cable connection status and displays near-end, mid-end, and far-end fault points.

Image: Illustrations of the Cable Tracer in use for identifying cables and the Cable Tester interface showing connection status and fault locations.

4.8 RJ45 Cable TDR Test

This function tests cable pair status, length (up to 180 meters), attenuation (for network cables exceeding 10 meters), reflectivity, impedance, and skew.

Image: The RJ45 Cable TDR Test interface displaying cable pair status, length, and advanced test results for reflectivity, impedance, and skew.

4.9 Cable Length Test

Measure the breakpoint position (open circuit status) for BNC cables, RJ45 network cables, and RJ11 cables, with a maximum test length of 3000 meters. Note that short-circuit status will not display cable length.

Image: The Cable Length Test interface showing graphical representation of cable pairs and their measured lengths.

4.10 Network Tools

The MOT-73 includes various network testing tools:

- **Ping Test:** Tests connectivity and response time to IP cameras or other network devices.
- **IP Scan:** Quickly finds IP addresses, MAC addresses, and camera manufacturers of devices connected to the tester.
- **FTP Serve:** Allows copying and editing files from the SD card without using an SD card reader.
- **LLDP:** Detects capabilities, management IP addresses, device info, port info, and other switch information (requires LLDP protocol support on the switch).
- **Port Flashing:** Connects to the LAN port to flash the port LED on a switch, helping to quickly identify connected cables.
- **PPPOE:** Used to detect if broadband PPPOE dialing is normal.
- **Link Monitor:** Monitors network link status.

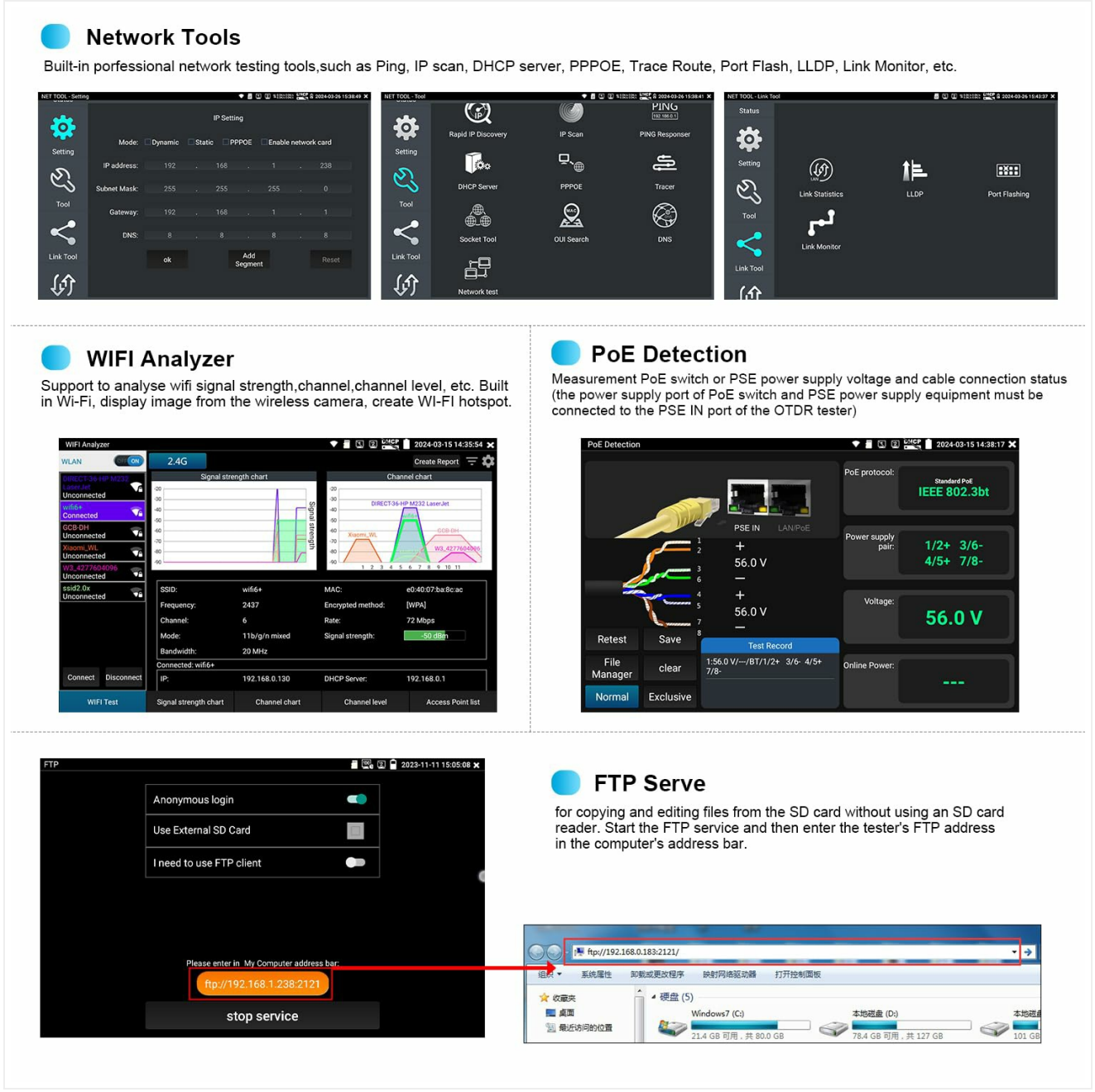


Image: Screenshots of various network tools including Ping, IP Scan, FTP Serve, LLDP, Port Flashing, and PPPOE.

4.11 WiFi Analyzer

Supports analysis of WiFi signal strength, channel, and level. It can also create a WiFi hotspot.

Image: The WiFi Analyzer interface showing signal strength and channel charts, alongside the PoE Detection interface.

4.12 PoE Detection

Measures PoE switch or PSE power supply voltage and cable connection status. The power supply port of the PoE switch or PSE power supply equipment must be connected to the PSE In port of the OTDR tester.

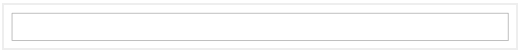


Image: The PoE Detection interface displaying power supply voltage and cable connection status for PoE devices.

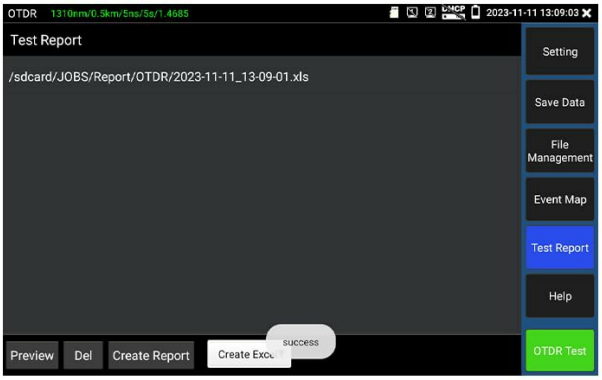
4.13 File Management & Test Reports

The device allows saving test curves and event lists. Test reports can be generated in EXCEL and PDF formats, including

curve trajectory graphs, parameter settings, fiber event information, and fiber link information. The SOR standard file format is supported.

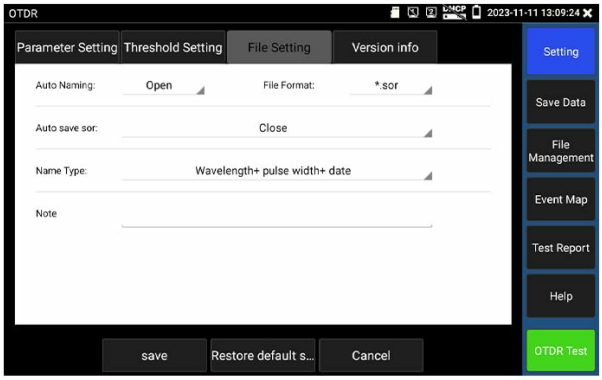
Test Report

Save one or more curve trajectories and the list of events, parameters, fibre chains and rulers corresponding to the curves. Test reports are available in EXCEL and FDF formats.



File setting:

Enable or disable file automatic naming, select the file format (otdr or sor) and file name type



File Management

Open the selected the curve file, 4 curve files can be simultaneously selected

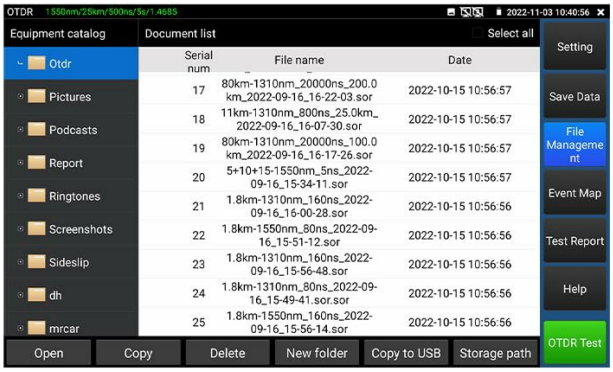


Image: Screenshots showing the Test Report generation, File Setting options for automatic naming and format, and the File Management interface for viewing and organizing saved test data.

4.14 TesterPlay (Screen Projection)

The "TesterPlay" app supports displaying the tester's screen on a PC or mobile phone simultaneously. Install the "TesterPlay" app on Android mobile phones or VLC player on PC to receive real-time screen information from the tester. The RTSP stream can be accessed at rtsp://192.168.0.130:554/v0 (IP address may vary).

Image: The TesterPlay feature demonstrating screen projection from the MOT-73 to a PC and an Android mobile phone.

5. Maintenance

Proper maintenance ensures the longevity and accuracy of your WANLUTECH MOT-73 tester.

- **Cleaning:** Use a soft, dry cloth to clean the device's exterior. For the touchscreen, use a screen-specific cleaning solution and a microfiber cloth. Keep optical ports clean using appropriate fiber optic cleaning tools.
- **Storage:** Store the device in its protective tool bag in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** For long-term storage, charge the battery to approximately 50% and recharge every 3-6 months to prevent deep discharge.
- **Software Updates:** Check the manufacturer's website periodically for firmware updates to ensure optimal performance and access to new features.

6. Troubleshooting

This section addresses common issues you might encounter with your MOT-73 tester.

Problem	Possible Cause	Solution
Device does not power on.	Battery not charged or paper insulator still present.	Ensure battery is charged. Remove the paper insulator from the battery compartment.
OTDR test results are inaccurate.	Incorrect parameters set or dirty optical connectors.	Verify OTDR parameters in 'Parameters Set Mode'. Clean all optical connectors thoroughly.
VFL/LS light is weak or absent.	Dirty optical port or device malfunction.	Clean the VFL/LS optical port. If the issue persists, contact support.
Cable Tester shows incorrect results.	Poor cable connection or damaged cable.	Ensure cables are properly seated. Inspect cables for damage.
Network tools not functioning.	Incorrect network configuration or cable connection.	Verify network cable connections. Check IP settings and ensure target devices are online.

7. Specifications

Key technical specifications for the WANLUTECH MOT-73 Optical Fiber Tester:

- **Model Number:** MOT-73
- **OTDR Wavelength:** 1310nm/1550nm
- **OTDR Dynamic Range:** 28dB/26dB
- **Event Blind Zone:** <1.6 m
- **Attenuation Blind Zone:** <8 m
- **Optical Power Meter Calibrated Wavelengths:** 850/1300/1310/1490/1550/1625nm
- **VFL Wavelength:** 650nm
- **VFL Max Test Range:** 8 KM
- **Light Source Modes:** CW/270 Hz/330 Hz/1 kHz/2 kHz
- **Display:** 7-inch IPS Touch Screen
- **Battery:** 7.4V 7800 mAh Lithium Ion (included)
- **Ethernet Ports:** Dual Gigabit (10/100/1000Mbps adaptive)

- **WiFi:** Built-in 2.4G, 150M speeds, WiFi analyzer
- **PoE Detection:** Yes
- **Power Input:** DC12V/1A
- **Power Output:** DC5V/2A
- **RJ45 Cable TDR Test Length:** Max 180 meters
- **Cable Length Test (BNC, RJ45, RJ11):** Max 3000 meters
- **Processor:** 1.6GHz 4-cores CPU
- **Memory:** 1GB RAM, 8GB FLASH (eMMC)
- **Package Dimensions:** 11.22 x 9.45 x 3.74 inches
- **Item Weight:** 3.97 Pounds

Image: The 7-inch touchscreen display and internal hardware specifications including CPU, RAM, and Flash memory.

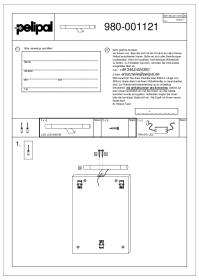
8. Warranty and Support

WANLUTECH is committed to providing quality products and customer support.

- **Manufacturer:** GUANGZHOU WANGLU TECHNOLOGY CO.,LTD
- **Support:** For any questions or technical assistance, please contact WANLUTECH customer support. You can typically find support options through your purchase platform or the official WANLUTECH website.
- **Contacting Support:** If purchased via Amazon, you can find your order on your Amazon account, view order details, and click 'get product support' to message the seller. Alternatively, locate 'WANGLU TESTER' on the product detail page and use the messaging option.

Related Documents - MOT-73

	WANLUTECH Multi-function Tester Quick Guide Comprehensive quick guide for the WANLUTECH Multi-function Tester, covering OTDR functions, IP camera testing, laser source, optical power meter, visual fault locator, and various cable tests. Includes detailed operation, settings, specifications, and safety information for professional fiber optic and network technicians.

	Pelipal Spiegelkabinett Montageanleitung Finden Sie detaillierte Montage- und Installationsanleitungen für Pelipal Spiegelkabinette in diesem umfassenden Handbuch. Es enthält wichtige Informationen zur sicheren elektrischen Installation, zum Austausch von Komponenten und zur korrekten Aufhängung, um die Langlebigkeit und Funktionalität Ihres Pelipal Badezimmermöbels zu gewährleisten. Die Anleitung ist in mehreren Sprachen verfügbar und richtet sich sowohl an Endverbraucher als auch an Fachleute. Sie finden hier Schritt-für-Schritt-Anleitungen, Sicherheitshinweise und Details zur Teileidentifikation, um einen reibungslosen Aufbau zu ermöglichen.
	Milwaukee BOLTTM Full Face Shield User Instructions and Safety Guide Comprehensive user instructions, safety warnings, specifications, and assembly guide for the Milwaukee BOLTTM Full Face Shield, designed for impact protection with compatible Milwaukee helmets.
	Guía de Montaje y Mantenimiento de Cadena para Motosierra Truper Instrucciones detalladas para el montaje, mantenimiento, afilado y tensado seguro de cadenas para motosierras de gasolina Truper®. Incluye advertencias sobre contragolpes y especificaciones técnicas de modelos.
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