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NOYAFA NF-8518

NOYAFA NF-8518 Multifunction Network Cable Tester User Manual

Model: NF-8518

1. Introduction

Thank you for choosing the NOYAFA NF-8518 Multifunction Network Cable Tester. This device is an essential tool for network installation, troubleshooting, and maintenance. It integrates nine practical functions to help IT professionals, network engineers, and technicians efficiently identify cable faults and ensure stable network operation.

The NF-8518 combines an Ethernet Cable Tester, RJ45 CAT5 CAT6 Tracker, PoE Test, NCV Detection, Port Flicker, Cable Length Test, Optical Power Meter, and VFL Fiber Locator into a single, portable unit.



Figure 1: NOYAFA NF-8518 Main Unit and Receiver. This image displays the primary components of the NF-8518 kit, showcasing the main tester unit with its color display and the separate receiver for cable tracing.

2. What's in the Box

Please check the contents of your package to ensure all items are present:

- NF-8518 Network Cable Tester Kit (includes main unit and receiver)

3. Product Features

The NOYAFA NF-8518 offers a comprehensive suite of testing capabilities:

- **Multifunctional Network Cable Tester:** Integrates cable continuity testing, cable tracing, port flashing, cable length measurement, PoE testing, optical power meter, VFL, and NCV detection.
- **Optical Power Meter & Fiber Testing:** Supports multiple wavelengths (850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm) with a measurement range of -70dBm to +10dBm. Compatible with FC/SC/ST fiber interfaces (adapters sold separately).

- **PoE Testing & Port Flashing Detection:** Detects voltage, polarity, and power supply status of PoE switches up to 60V DC. Port flashing identifies connected ports and displays network speed status.
- **VFL Fiber Fault Locator & Cable Length Measurement:** Built-in 650nm Visual Fault Locator identifies fiber breaks and faults. Measures RJ45 network cables, telephone lines, and BNC cables from 2.5m to 200m.
- **Rechargeable Battery, Flashlight & NCV Detection:** Equipped with a 1500mAh rechargeable lithium battery for up to 10 hours of operation. Features a built-in flashlight and NCV (Non-Contact Voltage) detection for safety.



Figure 2: Key Functions Overview. This image illustrates the VFL (Visual Fault Locator), Continuity Testing, Quality Inspection, and Optical Power Meter capabilities of the NF-8518.

4. Device Layout

Familiarize yourself with the main components and ports of the NF-8518 tester and receiver.



Figure 3: Product Buttons and Ports. This diagram labels the various buttons, ports, and indicators on both the main transmitter unit and the receiver unit of the NF-8518.

Transmitter Unit (Main Tester)

- **OPM Port:** Optical Power Meter input.
- **SCAN/CONT Port:** For cable scanning and continuity testing.
- **VFL Port:** Visual Fault Locator output.
- **Length/Flash Port:** RJ45 port for cable length measurement and port flashing.
- **QC Port:** For Quality Control testing of RJ45 connectors.
- **USB Type-C:** Charging port.
- **Display Screen:** Shows test results and menu options.
- **Navigation Buttons (Left, Right, Back, OK):** For menu navigation and selection.
- **Power On/Off Button:** To turn the device on or off.

Receiver Unit

- **Anti-jamming Probe:** For accurate cable tracing.
- **LED Light:** For illumination in dark areas.
- **Power Light:** Indicates power status.
- **Scan Light:** Indicates scanning mode.
- **NCV Light:** Indicates Non-Contact Voltage detection.
- **SCAN Button:** Activates cable scanning.
- **NCV Button:** Activates Non-Contact Voltage detection.
- **Power On/Off Button:** To turn the receiver on or off.
- **RJ45 Port:** For connecting network cables.

5. Setup

5.1 Charging the Device

The NF-8518 transmitter unit is equipped with a built-in 1500mAh rechargeable lithium battery. The receiver unit also has a rechargeable battery.

1. Connect the provided USB Type-C cable to the charging port on the transmitter unit.
2. Connect the other end of the USB cable to a standard USB power adapter (not included) or a computer USB port.
3. The battery indicator on the screen will show charging status. Charge until the battery icon indicates full charge.

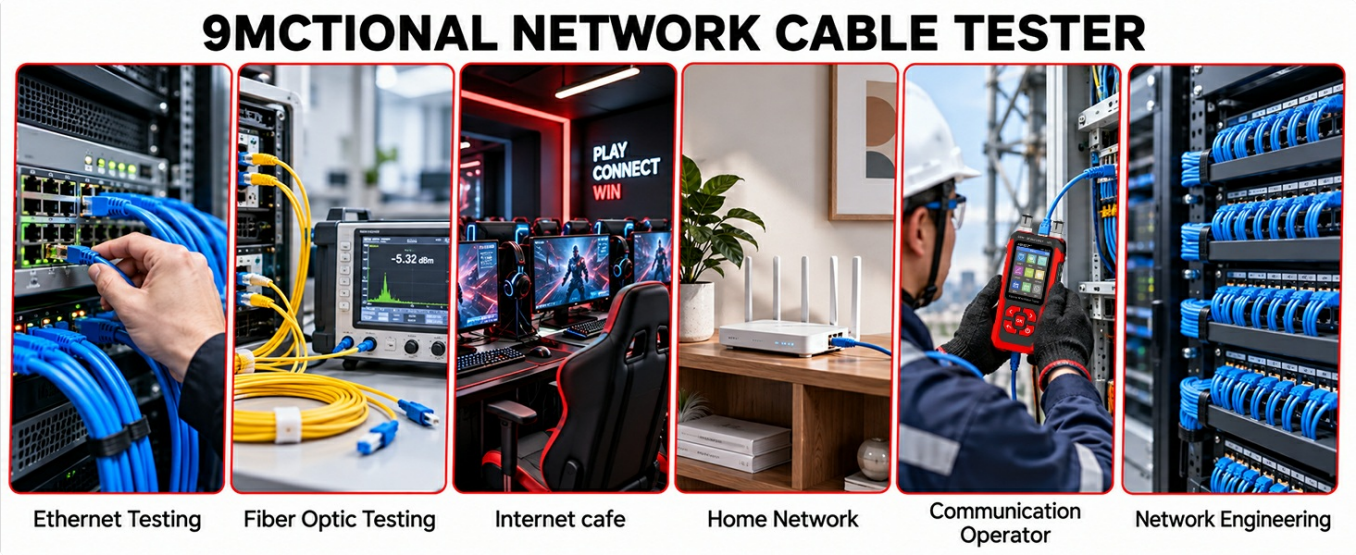


Figure 4: Charging the Tester. This image demonstrates the USB Type-C charging capability for both the transmitter and receiver units, highlighting their rechargeable battery features.

5.2 Powering On/Off

- **To Power On:** Press and hold the Power On/Off button on both the transmitter and receiver units until the screen or indicator lights turn on.
- **To Power Off:** Press and hold the Power On/Off button on both units until the screen or indicator lights turn off.

6. Operating Instructions

Navigate the main menu using the Left/Right buttons and select functions with the OK button.

6.1 Cable Continuity Testing (CONT)

This function tests for open circuits, short circuits, and cross-connections in network cables.

1. Connect one end of the RJ45 cable to the **SCAN/CONT** port on the transmitter.
2. Connect the other end of the RJ45 cable to the RJ45 port on the receiver.
3. Select the **CONT** function from the main menu on the transmitter.
4. The screen will display the wiring status (e.g., 1-1, 2-2 for good connection, or indicate faults).



Figure 5: Continuous Cable Testing. This image demonstrates the NF-8518's ability to perform continuous testing for short circuits, open circuits, and crossover faults in UTP/STP cables.

6.2 Cable Tracing (SCAN)

Locate target cables quickly from a bundle of cables.

1. Connect one end of the cable (RJ45, BNC, or telephone line) to the appropriate port on the transmitter (e.g., **SCAN/CONT** for RJ45).
2. Select the **TEST** (Scan) function from the main menu on the transmitter.
3. Turn on the receiver unit and press the **SCAN** button.
4. Move the receiver's probe along the cable bundle. The receiver will emit an audible tone, which will be loudest when it detects the target cable.



Figure 6: Cable Scanning in Progress. This image shows the NF-8518 transmitter and receiver actively engaged in cable scanning, indicating its use for fast tracking of UTP/STP cables.

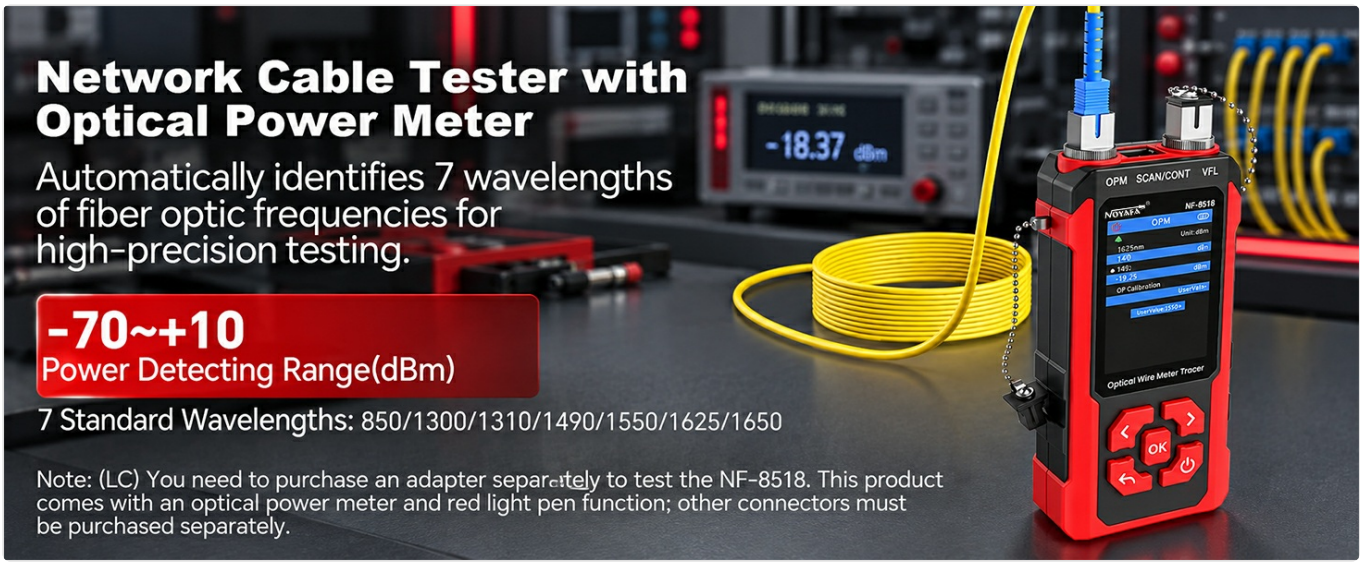


Figure 7: Cable Tracer Function. This image highlights the cable tracing capability for various cable types, including telephone, metal, and

network cables, emphasizing its ability to reject noise.

6.3 Port Flashing (FLASH)

Quickly locate the target network port on a switch or router.

1. Connect one end of the RJ45 cable to the **Length/Flash** port on the transmitter.
2. Connect the other end of the RJ45 cable to a port on the network switch/router.
3. Select the **FLASH** function from the main menu on the transmitter.
4. The corresponding port indicator light on the switch/router will flash, allowing you to identify the connected port.

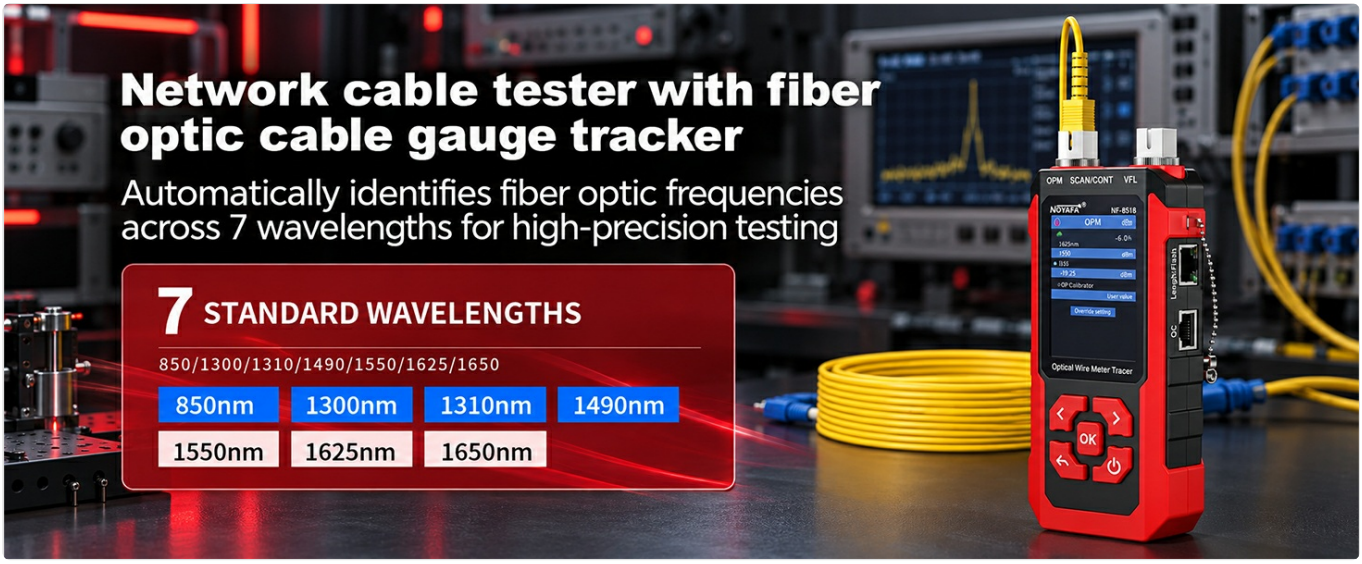


Figure 8: Port Flashing in Action. This image shows the NF-8518 connected to a managed switch, demonstrating how the port flashing function helps quickly locate the target network port.

6.4 Cable Length Measurement (LENGTH)

Measure the length of RJ45 network cables, telephone lines, and BNC cables.

1. Ensure the cable to be measured is disconnected from all devices.
2. Connect one end of the cable to the **Length/Flash** port on the transmitter.
3. Select the **LENGTH** function from the main menu.
4. The screen will display the cable length in meters or feet.



Figure 9: Cable Length Measurement. This image displays the NF-8518's interface for measuring cable length, indicating support for RJ11/RJ45 network cables (Cat5/5e/6/6a) and a range of 5-350m.



Figure 10: Cable Length Measurement Interface. A closer look at the cable length measurement function, showing the display of cable

type and unit settings.

6.5 PoE Testing (PoE)

Test Power over Ethernet (PoE) devices and power supply status.

1. Connect the RJ45 cable from the PoE source (e.g., PoE switch) to the **Length**/**Flash** port on the transmitter.
2. Select the **PoE** function from the main menu.
3. The screen will display PoE voltage, polarity, and power supply mode (e.g., IEEE 802.3af/at).



Figure 11: PoE Testing Display. This image shows the NF-8518 displaying PoE test results, including voltage per pair and IEEE standard compliance, along with network speed information.

6.6 Optical Power Meter (OPM)

Measure the optical power of fiber optic signals.

1. Connect the fiber optic cable to the **OPM** port on the transmitter. Ensure you have the correct adapter (FC/SC/ST, sold separately) if needed.
2. Select the **OPM** function from the main menu.
3. The device will automatically identify the wavelength and display the optical power in dBm. You can cycle through supported wavelengths if necessary.



Figure 12: Optical Power Meter Interface. This image shows the NF-8518 displaying an optical power measurement, indicating the wavelength (1625nm) and power level (-19.25 dBm), along with the supported power detecting range and standard wavelengths.



Figure 13: Optical Power Meter Wavelengths. This image highlights the 7 standard wavelengths supported by the built-in optical power meter for high-precision testing.

6.7 Visual Fault Locator (VFL)

Locate breaks, bends, and poor connections in fiber optic cables using a visible red laser.

1. Connect the fiber optic cable to the **VFL** port on the transmitter.
2. Select the **VFL** function from the main menu.
3. The VFL will emit a red laser light. Observe the fiber cable for light leakage, which indicates a fault.

6.8 NCV Detection (NCV)

Detect AC voltage without contact for safety during cable tracing or electrical troubleshooting.

1. Turn on the receiver unit.
2. Press the **NCV** button on the receiver.
3. Move the top of the receiver near the wire or electrical outlet. If AC voltage is detected, the NCV light will illuminate, and an audible alert may sound.



Figure 14: NCV Functionality. This image illustrates the Non-Contact Voltage (NCV) detection feature of the receiver unit, showing it safely detecting voltage in household wires.

6.9 Quality Control Test (QC Test)

Verifies the correct functioning of RJ45 cable connectors.

1. Connect one end of the RJ45 cable to the**QC** port on the transmitter.
2. Select the **QC Test** function from the main menu.
3. The display will show the status of each pin. A green checkmark indicates normal function, while a red 'X' indicates a malfunction.



Figure 15: Quality Control Test. This image demonstrates the QC Test function, verifying RJ45 connector functionality with clear visual indicators for normal operation or malfunction.

7. Maintenance

7.1 Cleaning

- Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Keep the ports free from dust and debris. Use compressed air if necessary.

7.2 Battery Care

- Recharge the battery when the low battery indicator appears to prolong battery life.

- If storing the device for an extended period, charge it to about 50% and recharge every few months.

8. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on	Low battery; Device fault	Charge the device fully; Contact support if problem persists
Inaccurate cable length measurement	Cable not fully disconnected; Cable type mismatch	Ensure cable is disconnected from all devices; Select correct cable type in settings
No signal during cable tracing	Receiver not on; Low battery in receiver; Transmitter not in SCAN mode	Turn on receiver; Charge receiver; Ensure transmitter is in SCAN mode
Optical Power Meter shows '---'	No fiber connected; Dirty fiber connector; Wavelength mismatch	Connect fiber properly; Clean fiber connectors; Ensure correct wavelength is selected or auto-detected

9. Specifications

Feature	Specification
Brand	NOYAFA
Model	NF-8518
Power Source	Rechargeable Lithium Battery (1500mAh)
Color	Red
Item Weight	8 ounces
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Measurement Type	Cable Length, Continuity, Miswire Detection, Open Circuit, Short Circuit, Wire Map
Compatible Devices	Cat5 Cable, Cat5e Cable, Cat6 Cable, RJ11 Telephone Cable, RJ45 Ethernet Cable
Cable Length Test Range	2.5m to 200m
Optical Power Meter Wavelengths	850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm
Optical Power Meter Range	-70dBm to +10dBm
VFL Wavelength	650nm
PoE Test Voltage Range	Up to 60V DC
Item Dimensions	6.5 x 3 x 2 inches

10. Safety Information

- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Avoid dropping or subjecting the device to severe impact.
- Do not attempt to open or repair the device yourself. Refer all servicing to qualified personnel.
- Exercise caution when using the VFL function; do not look directly into the laser output as it can cause eye damage.
- Use the NCV function as a preliminary check; always verify voltage with a dedicated voltage tester before working on electrical circuits.

11. Warranty and Support

NOYAFA products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official NOYAFA website or contact your local distributor. Please retain your proof of purchase for warranty claims.

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