NOYAFA NF-8518

NOYAFA NF-8518 Network Cable Tester User Manual

Model: NF-8518

1. INTRODUCTION

The NOYAFA NF-8518 is a multifunctional network cable tester designed for comprehensive network and fiber optic testing. It integrates nine core functions to assist with various cabling projects, network troubleshooting, and equipment maintenance. This device is suitable for network engineers, IT professionals, and maintenance personnel, offering precise cable scanning, fault localization, and power measurement capabilities.

2. KEY FEATURES

- **Multifunctional Testing:** Includes cable continuity testing, cable scanning, port flashing, length measurement, PoE power supply testing, optical power meter, and NCV functionality.

- **Optical Power Meter:** Supports precise multi-wavelength measurements (850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm) with a power detection range of -70 dBm to +10 dBm. Compatible with FC/SC/ST connectors (adapters may require separate purchase).

- **PoE Port Blinking Test:** Accurately detects power polarity, voltage, and power supply status of PoE network switches, supporting 10M/100M/1000M modes and up to 60VDC.

- **Visual Fault Locator (VFL):** High-efficiency function for identifying fiber optic breaks, poor connections, bends, or cracks with 650nm wavelength.

- **Port Blinking & Cable Length Testing:** Quickly locates network cables and ports, displays operating speed and duplex mode. Measures network, telephone, and BNC cable lengths up to 200 meters with an accuracy of ±1.6 meters.

- **LED Lighting & Non-Contact Voltage (NCV):** Features a built-in flashlight for low-light environments and NCV testing for household wiring.

- **Long Battery Life:** Built-in 1500mAh 3.7V lithium battery provides up to 10 hours of operation and supports Type-C charging.

3. PRODUCT COMPONENTS & OVERVIEW

The NF-8518 kit includes the main transmitter unit and a receiver unit, along with necessary accessories. Below is an overview of the main unit's buttons and ports.

Figure 3.1: NOYAFA NF-8518 Transmitter and Receiver Overview

What's in the Box:

- NOYAFA NF-8518 Network Cable Tester Transmitter

- NOYAFA NF-8518 Network Cable Tester Receiver

- User Manual

- Type-C Charging Cable

- RJ11 Adapter Line

- RJ45 Adapter Line

- Cable Adapters

- Tool Bag

4. SETUP

4.1 Charging the Device

Before initial use, ensure both the transmitter and receiver units are fully charged. Connect the provided Type-C charging cable to the charging port on each unit and a suitable USB power adapter. The battery indicator on the display will show the charging status.
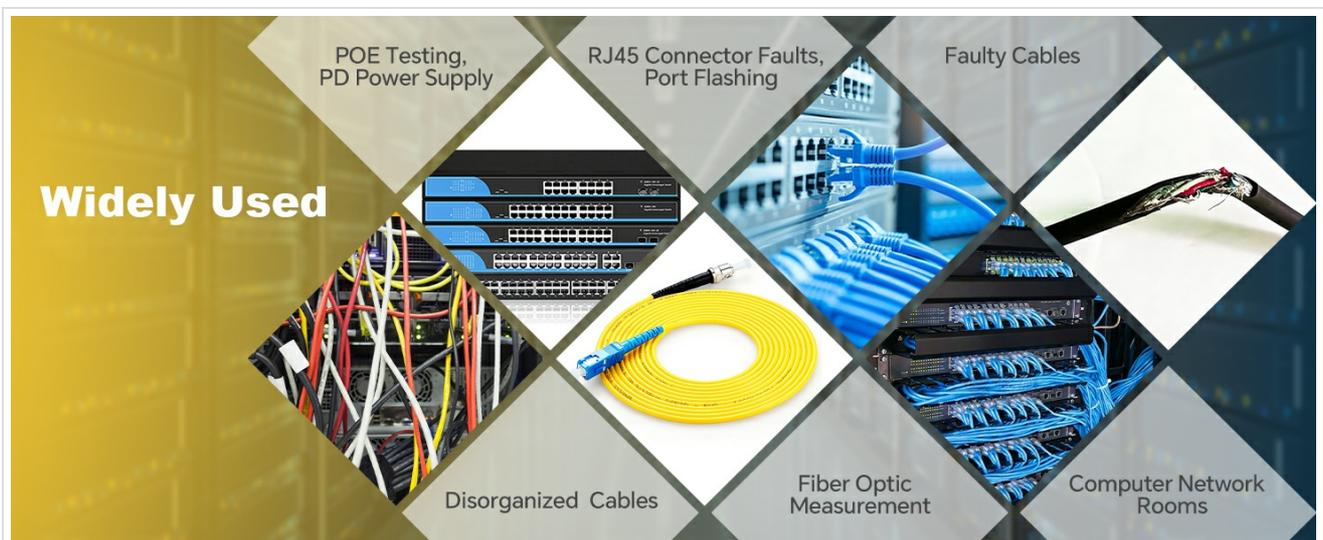

Figure 4.1: Charging the NF-8518 Units

4.2 Powering On/Off

Press and hold the power button on each unit to turn it on or off. The main unit features a color LCD display, while the receiver has LED indicators.

5. OPERATING INSTRUCTIONS

The NF-8518 offers various testing modes accessible via the main unit's menu. Use the navigation buttons (Up, Down, Left, Right, OK) to select functions.

5.1 Cable Tracking (SCAN/TEST)

This function helps locate target cables within bundles. Connect the cable to be traced to the main unit's SCAN/CONT port. Select the 'TEST' or 'SCAN' function from the menu. Use the receiver to scan the cables; it will emit audible beeps and show visual signals when near the target cable. Adjust sensitivity for precise localization.

Your browser does not support the video tag. This video demonstrates the cable tracking function of the NOYAFA NF-8518, showing how to locate a specific cable within a bundle using the receiver unit.
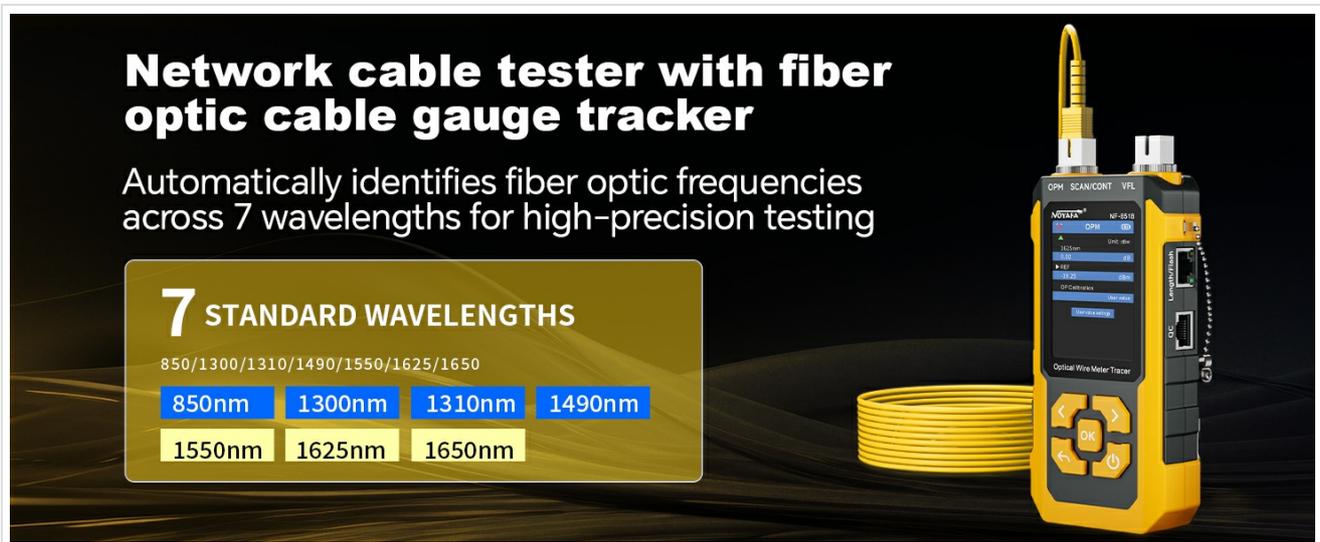
Video 5.1: Cable Tracking Demonstration

Figure 5.1: Cable Tracer in Use

5.2 Cable Continuity Testing (CONT)

This function checks for short circuits, open circuits, and crossovers in network cables. Connect one end of the cable to the main unit's SCAN/CONT port and the other end to the receiver's RJ45 port. Select 'CONT' from the menu. The display will show the wiring status, indicating any faults.

Figure 5.2: Continuous Cable Testing

5.3 Port Flashing (FLASH)

To quickly identify a network port on a switch or router, connect the cable to the transmitter's 'Length/Flash' port. Select the 'Flash' function from the main menu. The indicator light on the corresponding port of the network device will blink, allowing for easy identification. This function supports 10M/100M/1000M speeds.

Figure 5.3: Port Flashing Function

5.4 Cable Length Measurement (LENGTH)

Measure the length of network cables, telephone lines, and BNC cables. Connect one end of the cable to the main unit's 'Length/Flash' port. Select the 'Length' function and initiate the test. The device will display the cable length and identify any breaks within a 200-meter range.
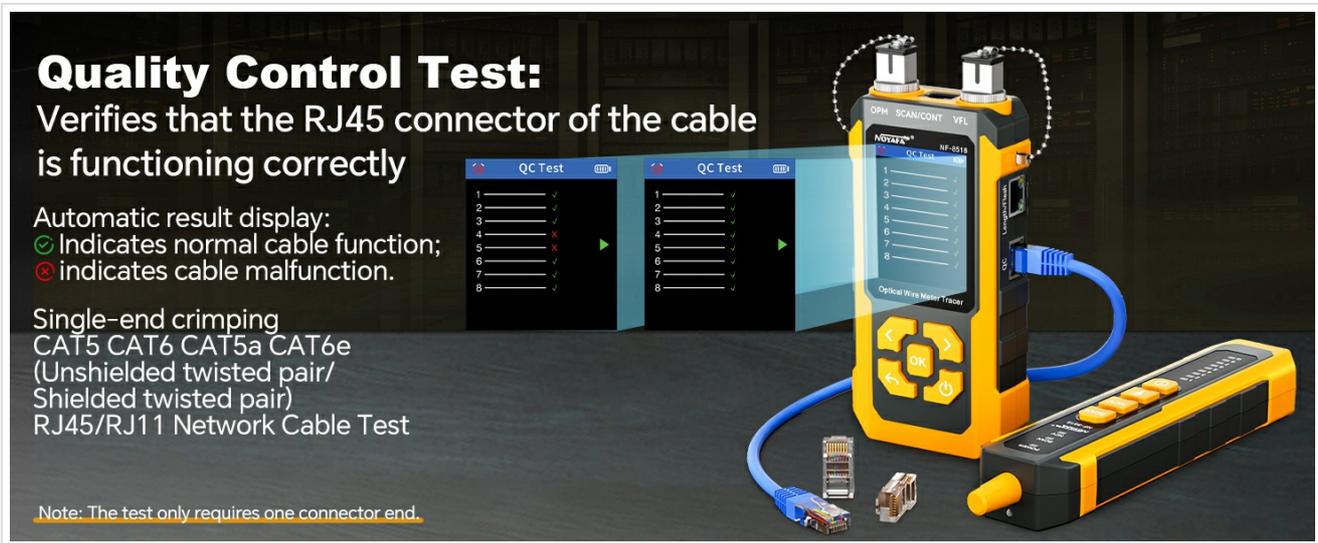
Figure 5.4: Cable Length Measurement

5.5 PoE Testing (POE)

Test Power over Ethernet (PoE) devices and switches. Connect the network cable from the PoE source to the main unit's 'Length/Flash' port. Select the 'PoE' function. The device will display the power polarity, voltage, and power supply status (standard/non-standard, Endspan/Midspan).
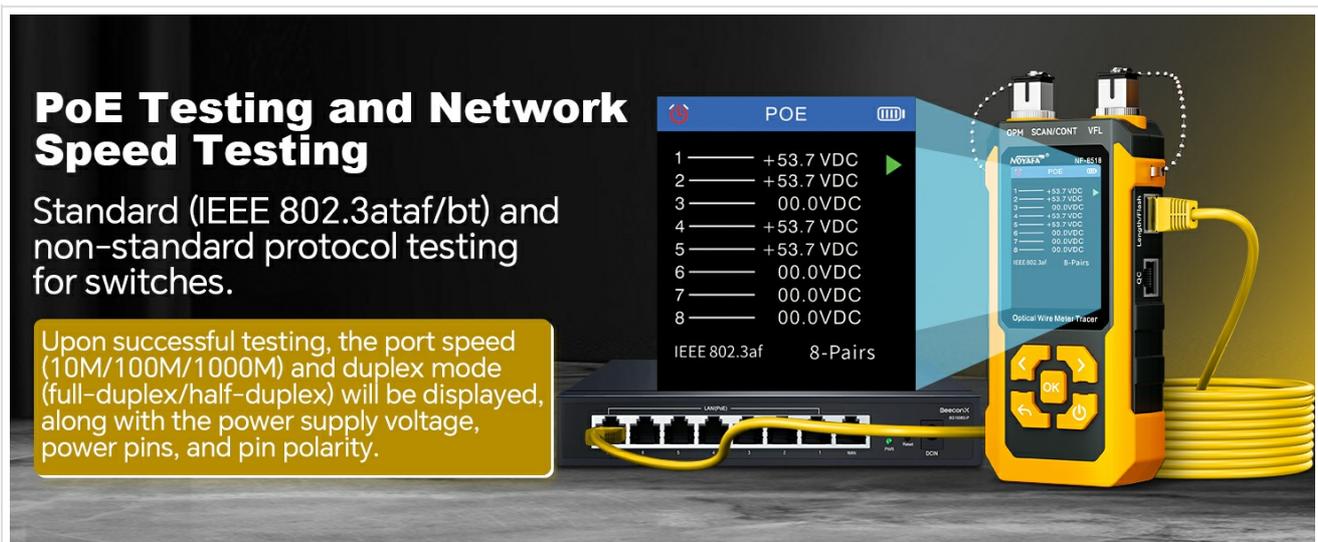

Figure 5.5: PoE Testing Interface

5.6 QC Test (RJ45 Connector Quality Control)

This function verifies the correct functioning of RJ45 connectors. Insert the RJ45 connector into the 'QC' port on the side of the main unit. Select 'QC Test' from the menu. The display will show whether each pin connection is normal or faulty.
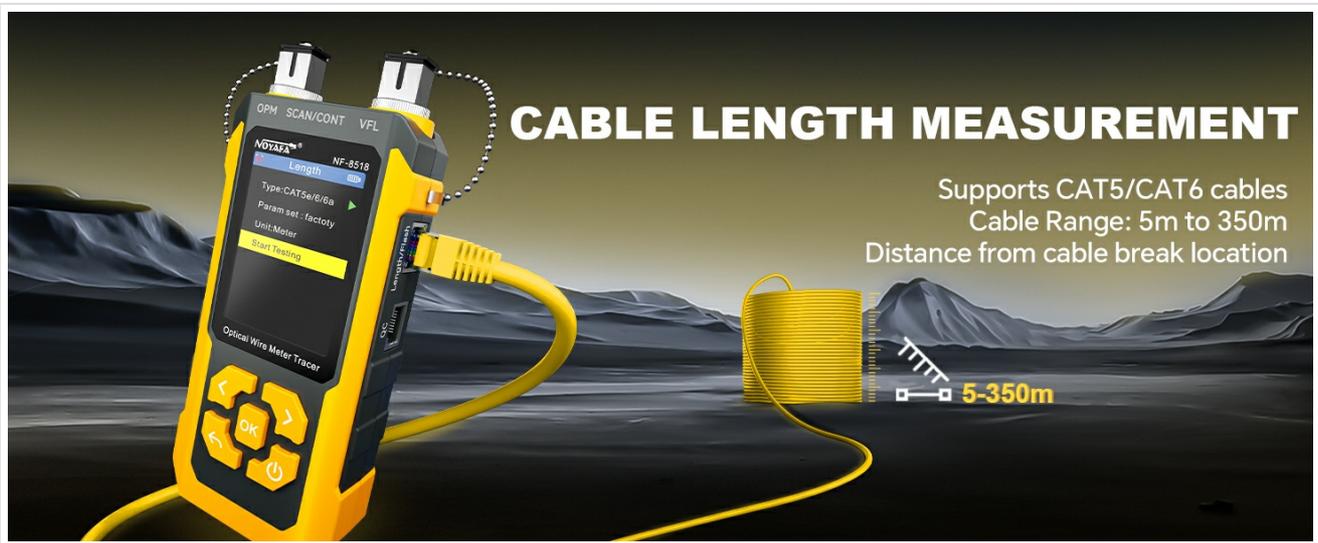
Figure 5.6: RJ45 QC Test

5.7 Visual Fault Locator (VFL)

The VFL function helps identify faults in fiber optic cables. Remove the protective cap from the VFL port (located near the OPM port) and connect the fiber optic cable. Select 'VFL' from the menu. A visible red laser light will be emitted. Observe the fiber for light leakage, which indicates breaks or damage. The VFL supports fast flashing, slow flashing, and continuous illumination modes.

Figure 5.7: Visual Fault Locator in Action

5.8 Optical Power Meter (OPM)

Measure the optical power of fiber optic signals. Connect the fiber optic cable to the OPM port. Select 'OPM' from the menu. The device will automatically identify the fiber optic frequency and display the power measurement in dBm across various wavelengths (850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm, 1650nm).

Figure 5.8: Optical Power Meter Interface

5.9 Non-Contact Voltage (NCV)

The receiver unit features a Non-Contact Voltage (NCV) detection function. Press the NCV button on the receiver and bring the tip close to household wiring or power outlets. The NCV light will illuminate and an audible alert will sound if voltage is detected, allowing for safe identification of live wires.
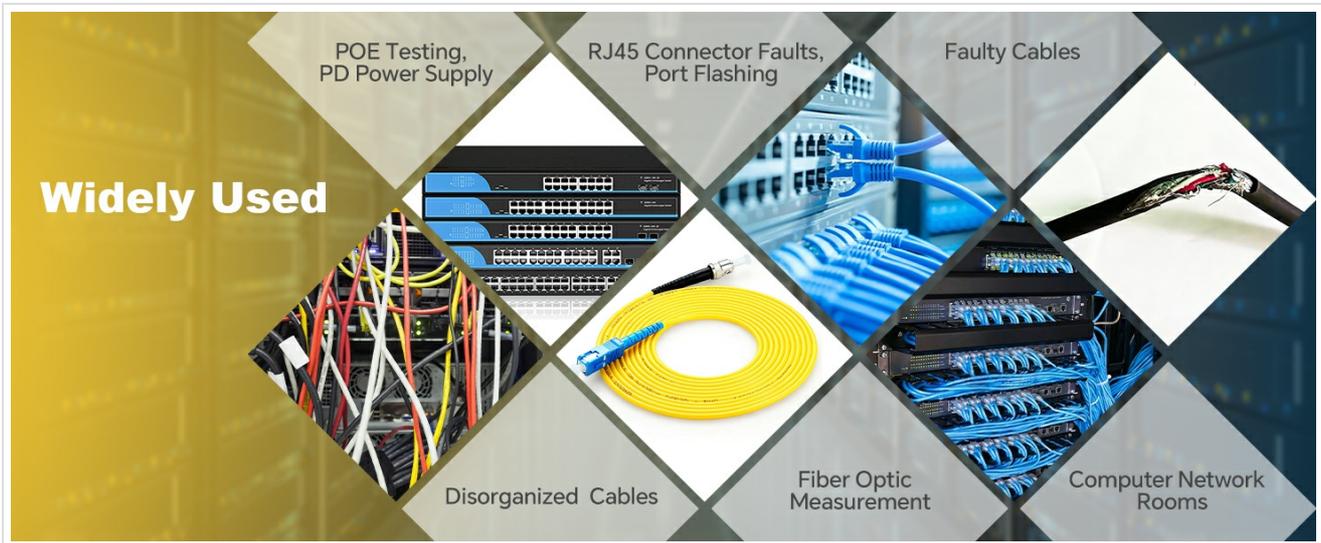
Figure 5.9: NCV Function

5.10 LED Lighting Function

The receiver unit includes an LED flashlight for working in dimly lit environments. Press the dedicated LED button on the receiver to turn the flashlight on or off.

Your browser does not support the video tag. This video demonstrates various functions of the NOYAFA NF-8518, including cable tracking, continuity testing, port flashing, length measurement, PoE testing, QC test, VFL, and OPM. It also shows the LED lighting function.

Video 5.2: Comprehensive Function Overview

6. Maintenance

6.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure ports are free of dust and debris, especially optical ports, to maintain measurement accuracy.

6.2 Battery Care

Recharge the device regularly, even if not in frequent use, to prolong battery life. Avoid fully discharging the battery for extended periods. Store the device in a cool, dry place.

6.3 Storage

When not in use, store the NF-8518 in its protective case to prevent damage from impacts or environmental factors.

7. Troubleshooting

- **Device not powering on:** Ensure the battery is charged. Connect the Type-C cable and attempt to power on while charging.
- **Inaccurate cable length measurement:** Verify the cable type setting is correct. Ensure the cable is properly connected and not damaged.
- **No signal during cable tracking:** Check if the cable is securely connected to the transmitter. Ensure the receiver is in SCAN mode and its sensitivity is adjusted appropriately.
- **VFL not emitting light:** Check if the VFL port is clean and the fiber optic cable is properly connected. Ensure the VFL function is selected and activated.

- **OPM readings are unstable:** Clean the OPM port and the fiber optic connector. Ensure the correct wavelength is selected if not automatically detected.

8. SPECIFICATIONS

Feature	Specification
Model	NF-8518
Optical Power Meter (OPM) Wavelengths	850nm, 980nm, 1270nm, 1300nm, 1310nm, 1490nm, 1550nm, 1577nm, 1625nm, 1650nm
OPM Range	-70 to +6dBm
OPM Accuracy	±0.5dB
VFL Power	10mW
Cable Length Measurement Range	5 - 350m
PoE Power Supply Agreement	IEEE802.3 at/af, Non-Standard
PoE Power Supply Method	End Span/Mid Span/8-pin power connector
Port Flash	Yes
SCAN/CONT/Flash Port	RJ45 (Anti-burnt 60V)
Transmitter Battery	3.7V 1500mAh Polymer Lithium battery
Charging Port	Type-C
Transmitter Dimensions	164 x 71 x 34mm
Receiver Dimensions	198 x 45 x 28mm
Item Weight	1.28 pounds (total package)

9. WARRANTY AND SUPPORT

NOYAFA products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the contact details provided with your purchase or visit the official NOYAFA website. Keep your purchase receipt for warranty claims.