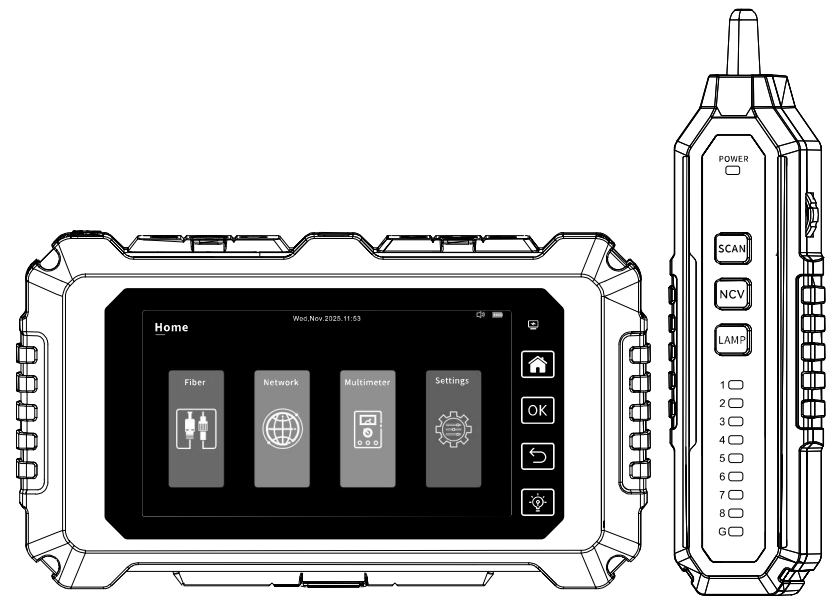


Multifunctional Optical Fiber Network Tester

NF-8607



Statement

About the manual

--The User manual was designed to help customers use our product correctly, All the pictures, images, icons etc are used to explain, which may have some difference from the real tester, Please refer to the actual product. We may renew the user manual for upgrading, if you need the latest version pls contact the supplier.

-- Precaution for using

-- Warning

-- Pls strictly follow the regulation of your region when installing and using our device, Do not allow the product to be damaged or subject to impact.

-- Pls contact the store or service center when you have some problem during using, DO NOT disassemble or repair the device in any way

Cautions

-- Avoid placing the product in environments with excessive vibration or impact, and keep it away from sources of cable interference.

-- Do not use the product in extremely humid, cold, or high-temperature environments. Refer to the product parameter table for specific temperature and humidity requirements. The device should be placed in a dry, non-corrosive gas environment and avoid direct sunlight.

-- The device should be placed in a dry, non-corrosive gas environment and avoid direct sunlight.

--The UTP test port is strictly prohibited from connecting to AC voltage equipment or non-standard PoE switch equipment exceeding DC 50V.

-- This product is an engineering testing device and is not suitable for entertainment purposes.

Note

-- Operators should possess fundamental knowledge and operational skills for low-voltage wiring and low-voltage electronic circuit connections, and be able to understand the contents of this manual

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1. Brief Introduction

--NF-8607 is a professional-grade integrated test terminal for fiber optic and network applications. It combines three core functional modules: OTDR fiber diagnosis, full-protocol network analysis, and multimeter measurement. Redefining the benchmark for "all-in-one" field efficiency, it delivers exceptional performance including:

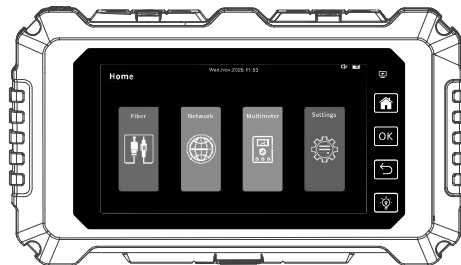
- $\pm 0.05\text{dB}$ accuracy for precise measurements
- Ultra-long distance testing up to 150km
- 60V anti-burnt interfaces for enhanced durability

Application

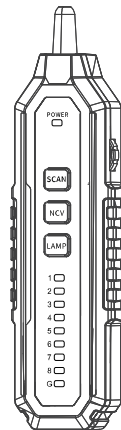
Scenario	Offer Solutions	Functions
FTTH	Loss measurement + VFL	OTDR 150km measurement + VFL
Data Center Network Management	Gigabit Ethernet Cable Quality Verification	PoE Testing + CAT5/6 Length Measurement
Network diagnose and repair	Fast Trouble shooting for problem	IP scan + Port Flash + OUI Lookup
Security System Installation	PoE power supply stability Verification	60v Anti-burnt interfaces + 8-Conductor Power Verification
CATV Network Acceptance	Fiber Link Loss Assessment	Reference Value Calibration + Loss Measurement

Design Details

Highly Efficient Interaction	5.5" Touchable Screen (1280*720 PWM dimmable)
Long Endurance	4000mAh Battery (7hour endurance) + Type C PD recharge
Engineering Protection	-10°C~ +50°C Working Time, IP5X anti-dust & Drop
Data Management	Intelligent rename OTDR result and comparison analyze.



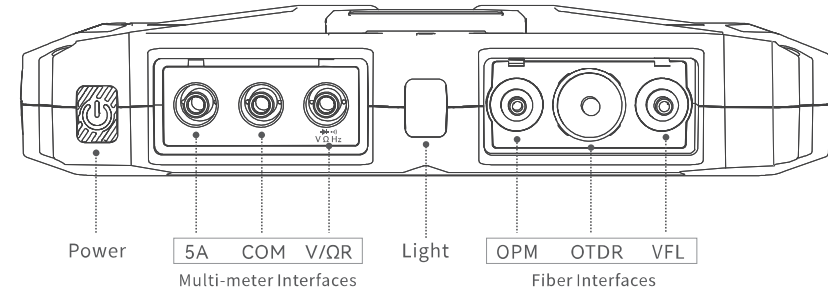
Transmitter



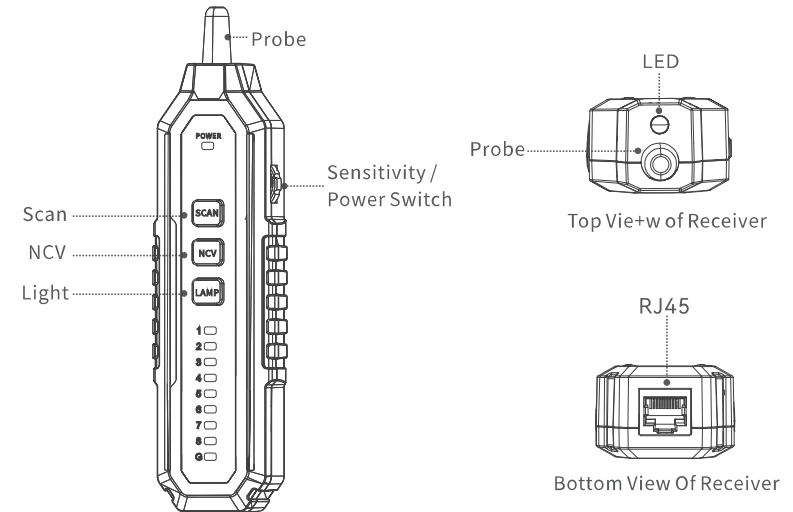
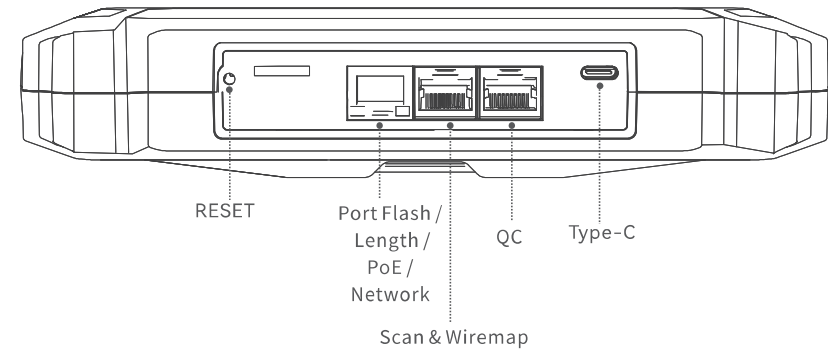
Receiver

2. Appearance and Interfaces

Top View Of Transmitter



Bottom View Of Transmitter



Interfaces illustration for receiver

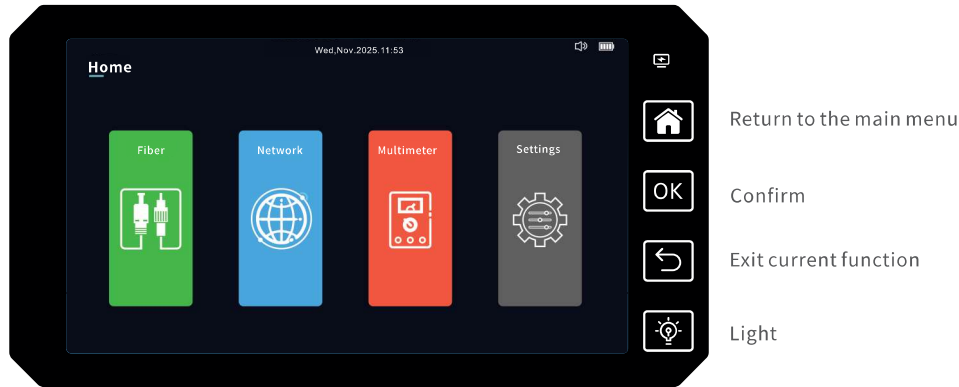
3. Buttons and Screen Menu

3.1 Buttons

Power Button: Long Press power button to turn on/off the device. Short press power button to turn on/off the screen;

RST : Short Press RST to reset the device to the initial setting

3.2 Touch Icon illustration



NF-8607 Transmitter Screen

3.3 Power Input and Indicator

Power Input: Type-C interface 5V-2A

Red

Status: The indicator will turn red when charging the device and turn off when the battery is full

Green

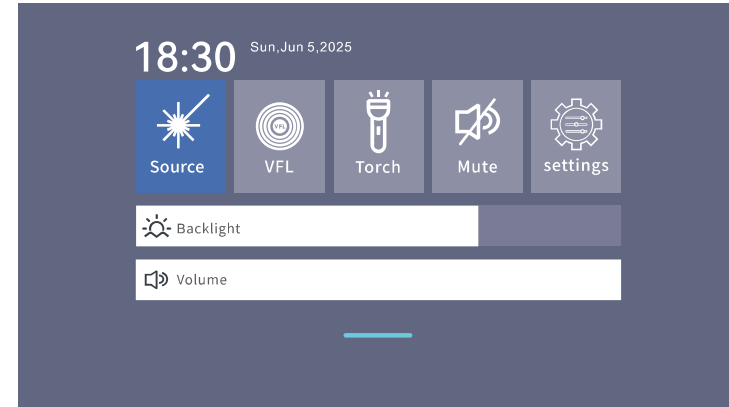
The indicator will turn off when the device is working and stay green when the screen is off

3.4 Status Bar

Status Bar hide on the top of the transmitter, include clock, auto-off, VFL, light source, light, audio level, battery level etc

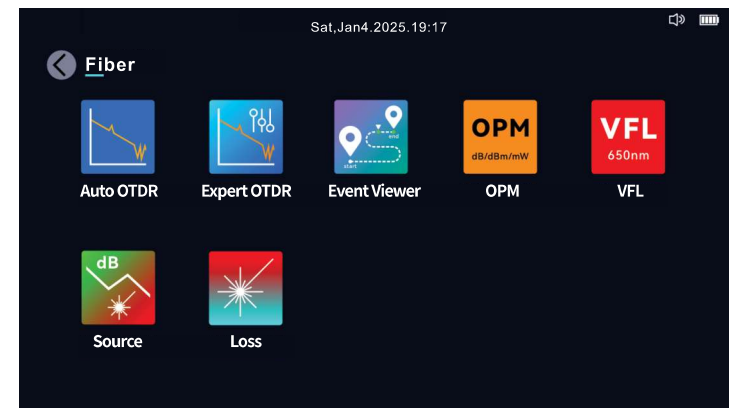
3.5 Drop-down Menu

Single click or slide the status bar from the top, customers can find the drop-down menu, you can click the sky blue line or click "☰" to exit the menu, the drop-down menu can be used to control the light source, VFL, torch, audio or setting.



4. Optical Fiber Test

Include Auto-OTDR, Expert OTDR, Event map, OPM, VFL, Source, Loss Test etc



4.1 OTDR

OTDR include Auto-OT, Expert OT and Event map

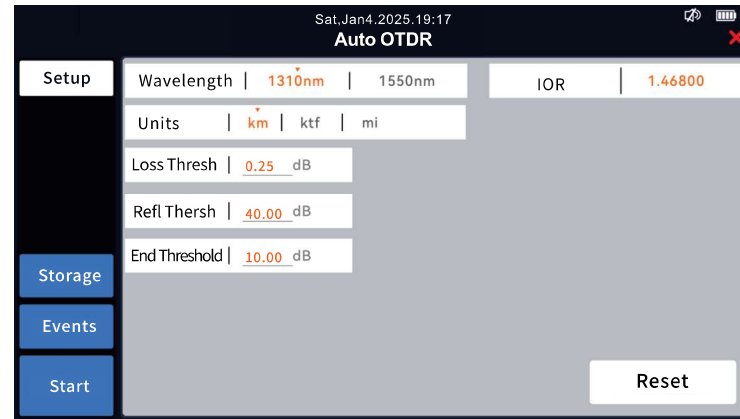
Connection: Insert the optical cable into the OTDR interface, customers can choose among SC-UPC/FC-UPC/ST-UPC adapters, DO NOT LOOK DIRECTLY TO THE LASER PORT (INVISIBLE LIGHT)



4.1.1 Parameter Settings

Measurement Wavelength:	Select single-mode fiber wavelength 1310 nm / 1550 nm
Refractive Index:	Default 1.46800; adjustable manually within 1.40000–1.50000
Measurement Mode:	Auto / Real-time / Average
Measurement Duration:	5 / 15 / 30 / 60 / 120 / 180 s
Unit:	km / kft / mi
Range:	0.5 / 1.25 / 2.5 / 5 / 10 / 20 / 40 / 80 / 125 / 150 km
Pulse Width:	3 / 5 / 10 / 20 / 30 / 50 / 80 / 100 / 200 / 300 / 500 / 1000 / 2000 / 3000 / 5000 / 8000 / 10000 / 20000 ns
Loss Threshold:	0.01–9.99 dB
Reflectance Threshold:	14.00–65.00 dB
Reflectance Limit:	1.00–99.00 dB

In Auto-OT mode, the parameter setting is simple, which is friendly to beginners



In Expert-OT mode, the parameter setting is complicated, suitable for professionals



4.1.2 Data Saving and Deleting

Following functions are supported in both Auto-OT and Expert-OT modes.

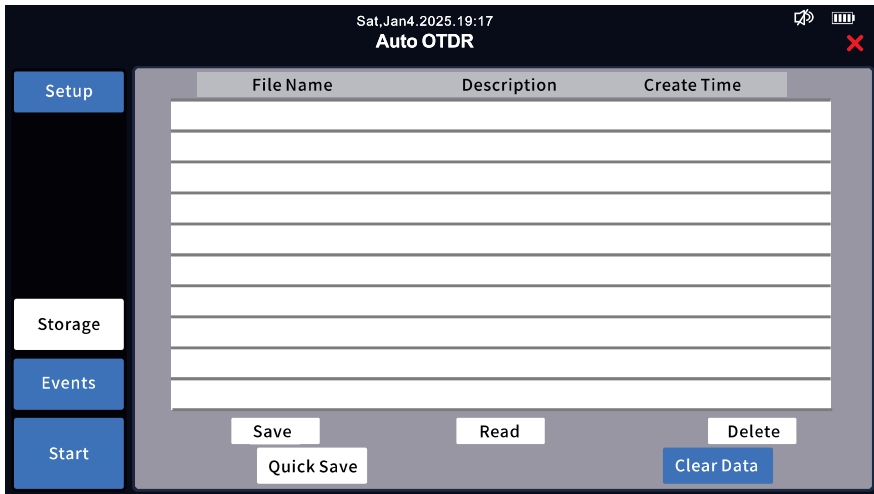
Save with Manual Naming: The file is stored to a user-specified location following manual naming. This option is enabled when test data is present.

Quick Save: The file is automatically named and saved to an available location. This function is enabled when test data is present.

Load: Opens the selected file for joystick operation

Delete: Delete the selected file

Clear Data: Deletes all recorded files.



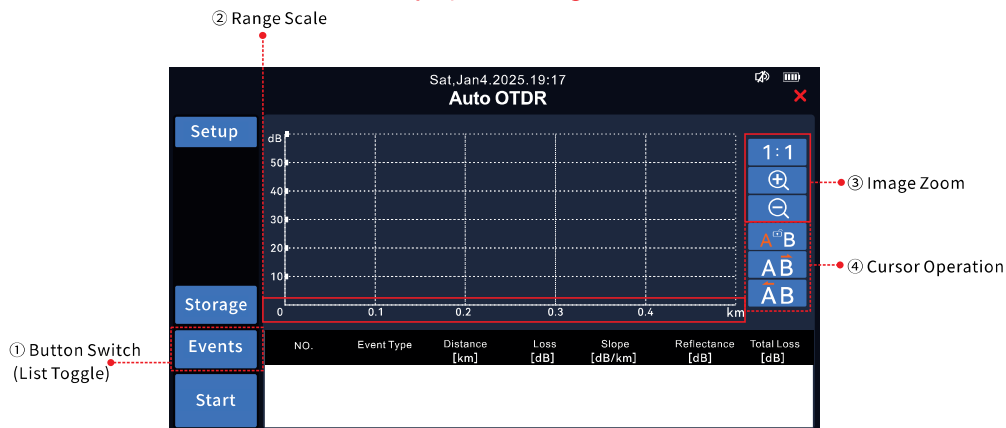
4.1.3 Image view and operation

Following functions are supported in both Auto-OT and Expert-OT modes

- ① Button Cycles: Event List / Parameters / A-B Marker / Connection Diagram
- ② Range changes along with the testing result / unit
- ③ Image Zoom Operations:
 - 1:1 (Actual Size): View the image at its original resolution.
 - Zoom In: Magnify the image up to 10x.
 - Zoom Out: Reduce the view of the image
- ④ Ruler: The ruler can be set to A, B, or AB mode and panned laterally. The X and Y coordinates for each ruler are displayed on it.

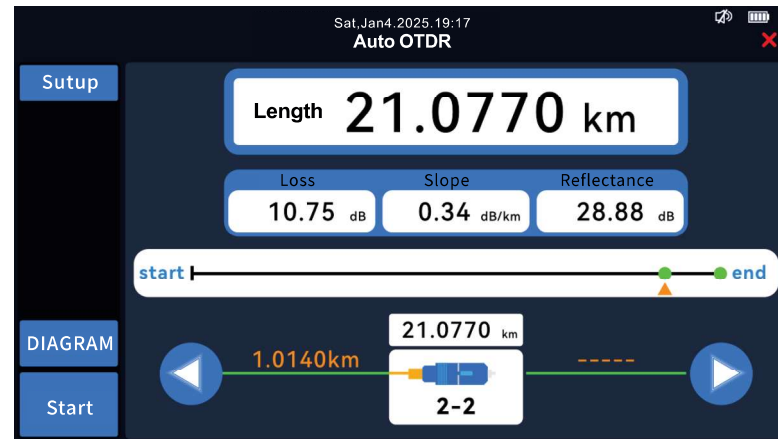
Note:

1. OTDR settings and data files are saved automatically.
2. Test data is cleared automatically upon exiting the function.



4.1.4 Event map view

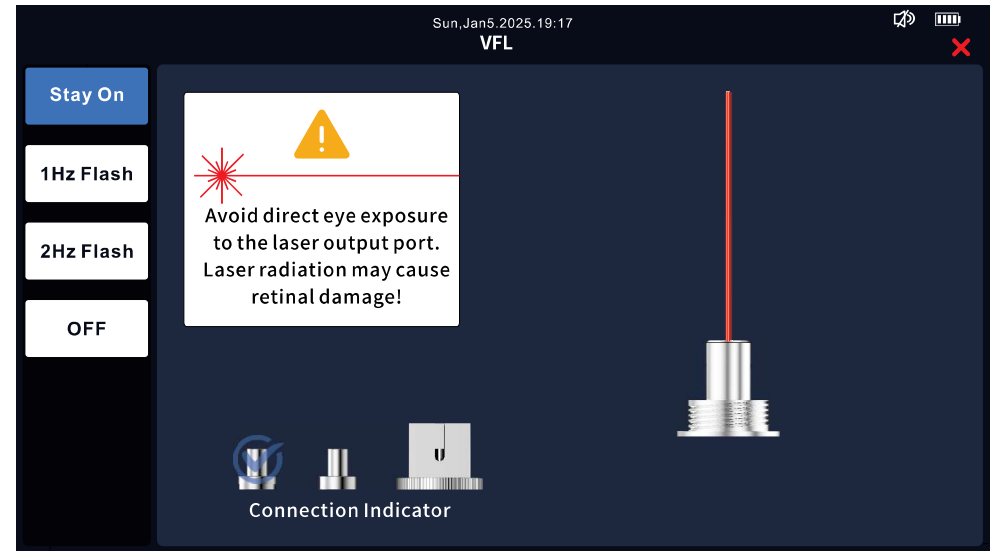
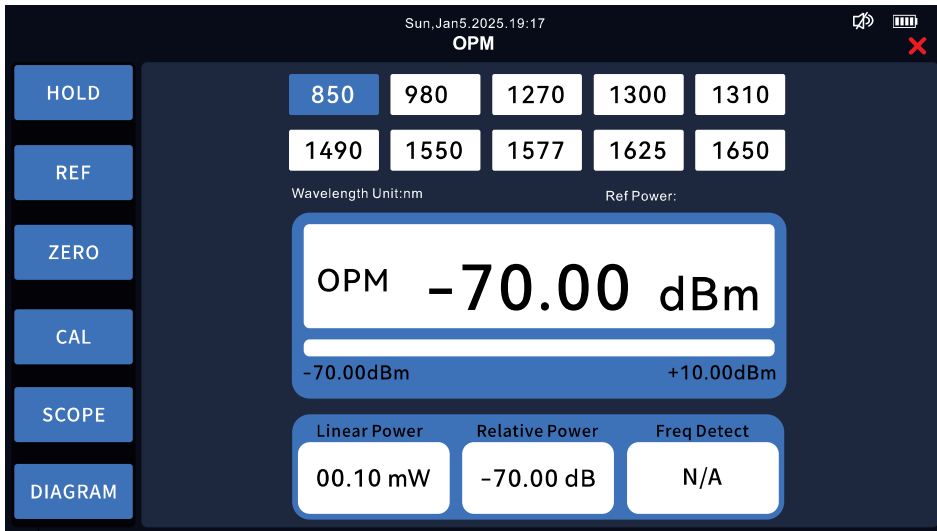
In event map mode, the testing method is the same as Auto-OT, users can switch between left and right to view the details of each event after testing.



4.2 Optical Power Meter

4.2.1 Optical Patch Connection

Insert the optical cable into OPM interface, This function displays optical power on a linear or logarithmic scale, enabling both direct power measurement and relative loss measurement for fiber optic links.

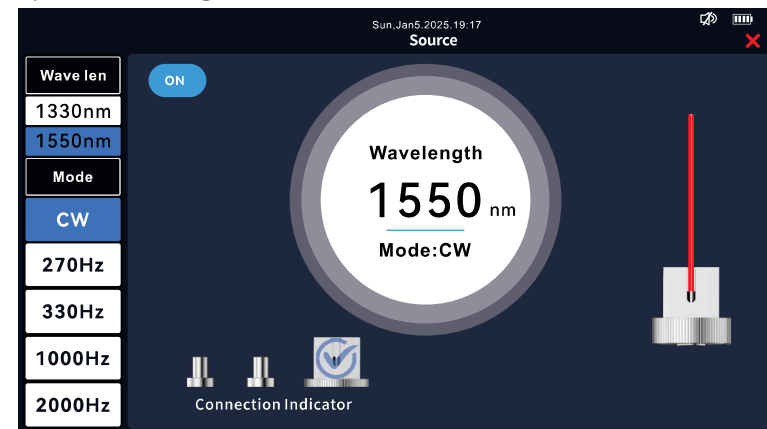


Mode Settings: CW / 1 Hz / 2 Hz

PS: Background Operation & Control: The function supports background operation. The dropdown menu control is set to "Always-On" by default. To switch modes, access the dedicated function interface.

4.4 Source

Insert the fiber patch into the OTDR interface, **DO NOT LOOK AT THE Laser port directly (Invisible Light)**



Wavelength Support: 1310nm / 1550nm

Frequency Support: CW / 270Hz/330Hz/ 1000Hz/ 2000Hz

PS: The system allows for background operation with the dropdown menu defaulting to 1310nm/CW mode. Changing this mode requires entering the

Parameters

Wave Length	850, 980, 1270, 1300, 1310, 1490, 1550, 1577, 1625, 1650
Wattage Range:	-70.00 ~ +10.00 dBm
Frequency Testing:	270 Hz / 330 Hz / 1000 Hz / 2000 Hz
Calibration	Support 10 wavelength calibration storage
HOLD Function:	Supported
REF Function:	Supported
Oscilloscope:	Check for Linearity: Quickly verify if the signal changes linearly on the oscilloscope

PS: REF value, auto-save the calibration value, users need to save the value with format as "-12.34" or "+01.23", value range is -70.00~+10.00

4.3 VFL

Fiber Connection: Insert the fiber patch into the VFL port, **DO NOT LOOK AT THE Laser port directly (Visible Light)**

4.5 Loss Test

Insert the fiber patch into the OTDR interface, DO NOT LOOK AT THE Laser port directly (Invisible Light)



4.5.1 Operation

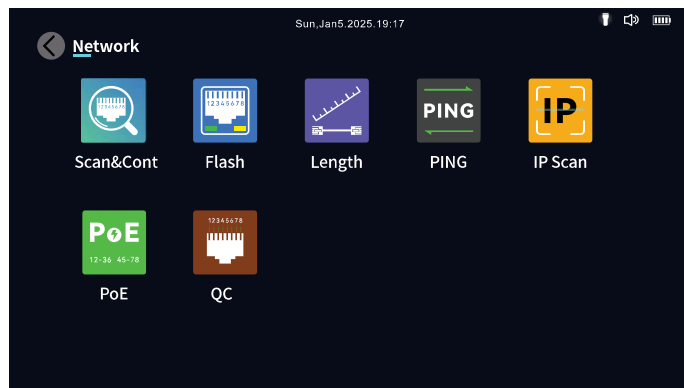
Calibration: Use a short patch cord to connect both OTDR and OPM port, press REF once the wattage is stable

Operation: After setting a reference value, connect the device under test to the OTDR and OPM interfaces. The optical loss can be read once the signal stabilizes.

Ps: Calibrating before each test is recommended for improved accuracy.

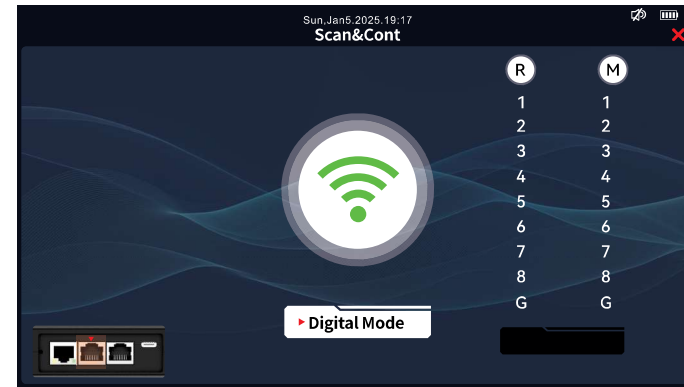
5. Network Test

Include: Scan & Cont / Flash / Length / Ping / IP Scan / PoE / QC



5.1 Scan & Cont

Insert the cable into the **SCAN/CONT** port of the device, the other end connect with the receiver or switch

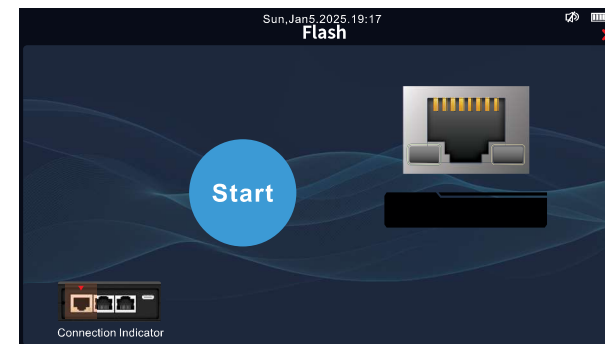


Users can use the transmitter and receiver to check wiremap for the cable, it can easily find problems like short circuit, break and also cross, the transmitter will automatically turn into digital scan mode when the other end is empty, customers can use the receiver to locate the target cable



5.2 Flash

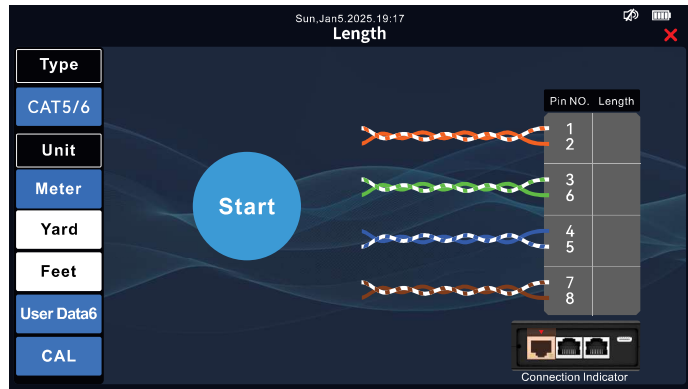
Insert the cable into the Length / Flash port of the device, the other end connect with the switch



Press Start on the screen to test, the led indicator in the switch and in the screen will blink at the same frequency

5.3 Length

Insert the cable into the Length / Flash port of the device, keep the other end empty

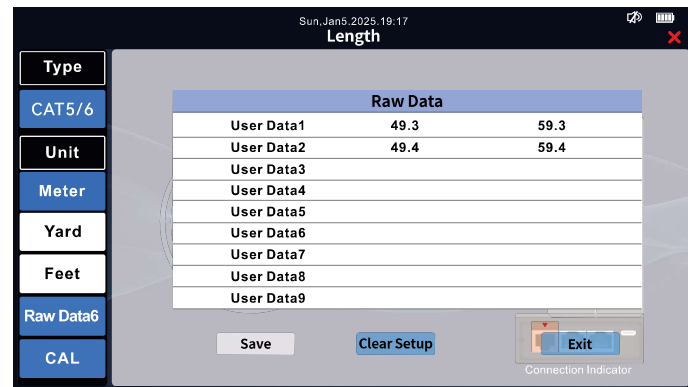


5.3.1 Function Description

Cable Type: CAT 5/ CAT 6

Unit: Users can change the unit among meter / yard / feet

Range: 5~350m, with length function users can find the break point in the cable



5.3.2 Length Calibration

Calibration Settings: Data Selection: Choose between User Calibration Data or Factory Calibration Data.

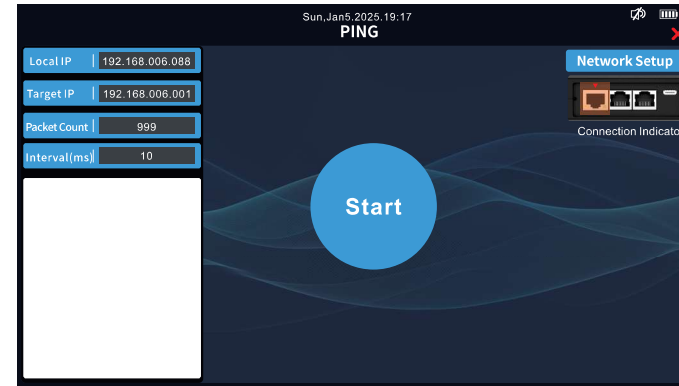
User Data Storage: The instrument can store up to nine user calibration profiles.

Data Management: All user calibration data can be cleared at once.

Calibration: Click the Testing button to calibrate. The resulting calibration value can then be adjusted and saved to the system for future use.

5.4. Functional Description

Insert the cable into the Length / Flash port of the device, the other end connect with the switch



5.4.1 Ping Test

Click the Start Test button to initiate the process. The system will then send query messages to the router at predefined intervals.

Active IP Address: If a device is present at the destination IP address, it will respond. This allows the system to determine that the IP address is in use. The system simultaneously logs and displays the number of packets sent, packets received, and packets lost, and calculates the packet loss rate.

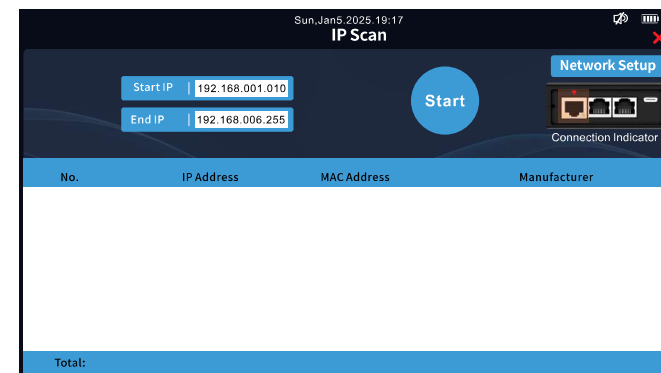
Inactive IP Address: If no device exists at the destination IP address, the sent packets will receive no response, resulting in packet loss.

Click the Network Settings button to quickly navigate to the configuration interface, where network parameters can be set.

Note: The address 255 is a broadcast address. When manually configuring a local IP address, avoid setting the network adapter to this broadcast address.

5.5 IP Scan

Insert the cable into the Length / Flash port of the device, the other end connect with the switch



Click Start Test. The system will automatically scan the specified IP address range for online devices. The IP address, MAC address, and manufacturer information of discovered devices will be displayed in the message list.

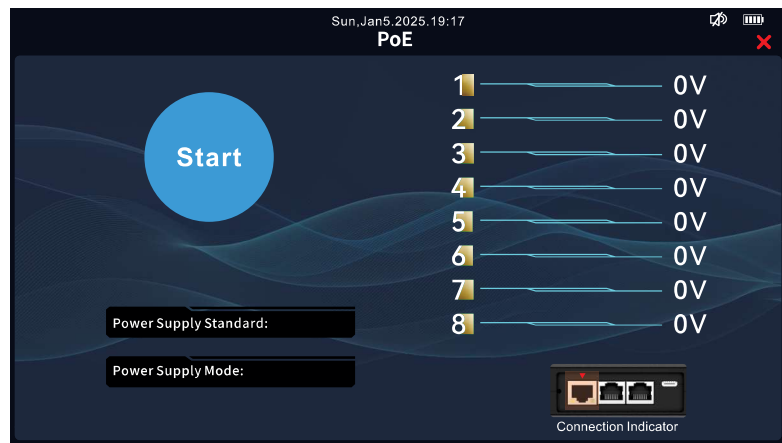
Notes:

Manufacturer information may not be available for all devices. This data can only be retrieved for devices whose MAC addresses are registered with the IEEE standard.

If the instrument's own IP address is not within the target scan range, the scan may fail to produce results.

5.6 POE Testing

Insert the cable into the Length / Flash port of the device, the other end connect with the switch



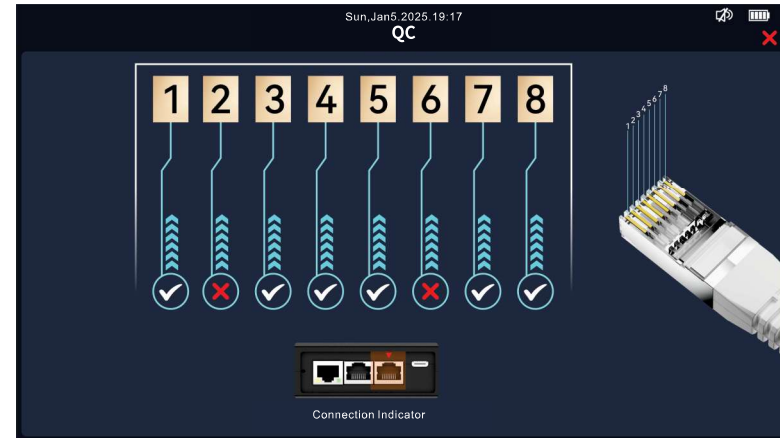
This function tests and validates Power over Ethernet (PoE) system performance, verifying that power and data transmission between Powered Devices (PDs) and Power Sourcing Equipment (PSE) is standards-compliant, stable, and reliable.

5.6.1 Parameters

Non-standard	Support
Power Supply Standard	IEEE 802.3 af / at / bt
Power Supply Mode	End-Span, Mid-Span, 4 Pair
Testing Range	DC5V ~ DC75V

5.7 QC Testing

Insert the cable into the QC port of the device



This function designed to test the crimping quality of RJ45 plug, there will be a ✓ on the well crimped pins, otherwise will be X

6. Multi-meter

Test Lead Connection: Insert one multi meter test lead into the V/Ω or 5A jack, and the other test lead into the COM jack



6.1 Gear Switch

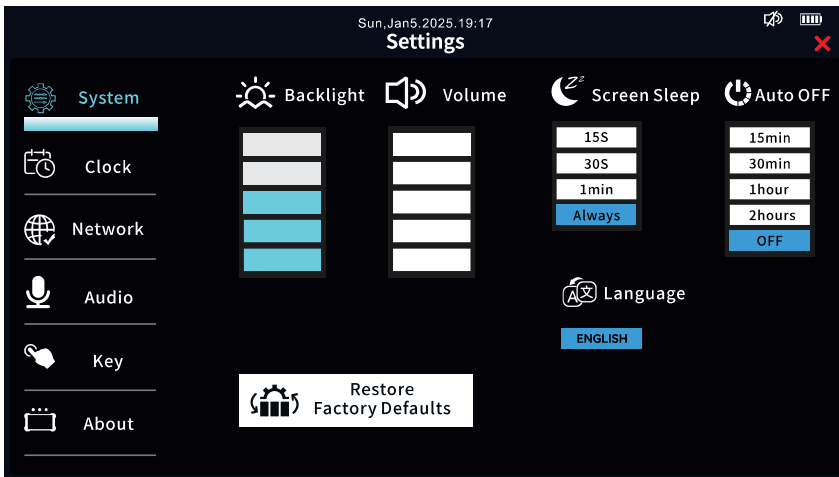
Gear Switch: DC Voltage/ AC Voltage / Current / Resistor/ Capacitor/ Conduct / Frequency

6.2 Measuring Type

DC Voltage	600.0mV/6.000V/60.00V/600.0V
DC Voltage	
DC Current	999.9mA/5.000A
DC Current	
Resistor	600.0Ω/6.000kΩ/60.00kΩ/600.0kΩ/6.000MΩ/60.00MΩ
Capacitor	6.000nF/60.00nF/600.0nF/6.000uF/60.00uF/600.0uF/6.000mF/60.00mF
Conduct	The tester will give out sound if the testing value is 50 Ω or lower, will show OL if the value is higher than 610 Ω
Frequency	6.000Hz/60.00Hz/600.0Hz/6.000kHz/60.00kHz/600.0kHz/6.000MHz

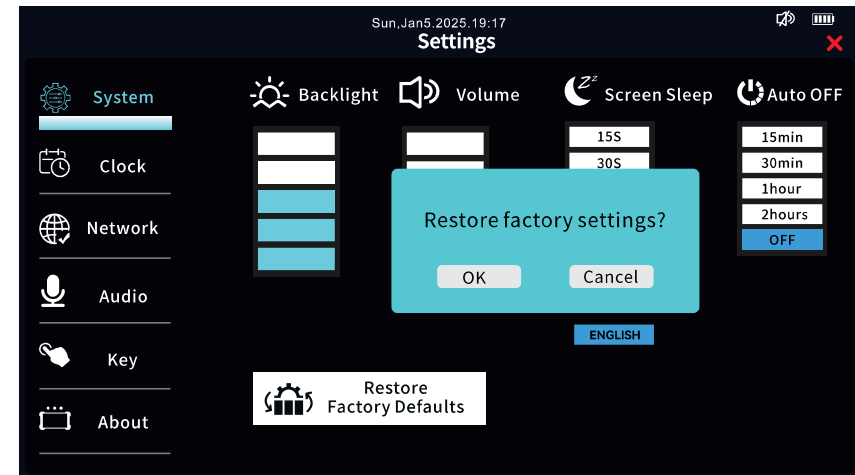
7.Set Option

Including: System / Clock / Network/ Audio / Button Mode / About



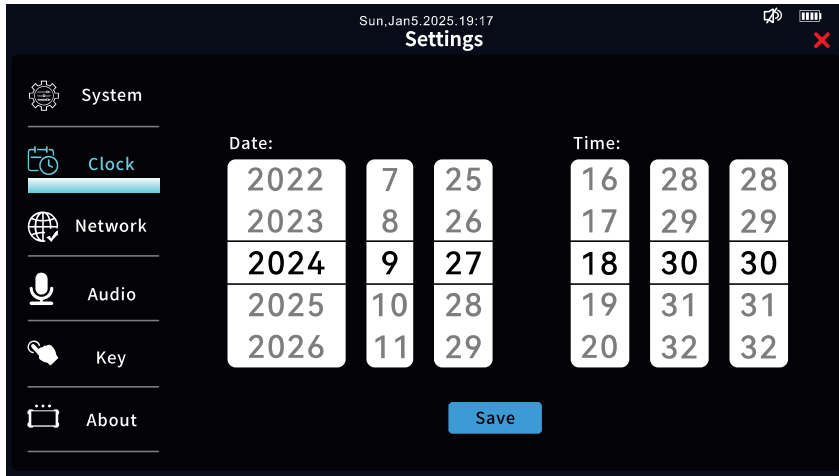
7.1 System Setting

Backlight	Click or slide to adjust the brightness from gear 0~5(0~100%)
Volume	Click or slide to adjust the volume from gear 0~5(0~100%)
Screen Sleep	15S/30S/60S/Always
Auto OFF	15min/30min/1h/2h/OFF
Language	English
Restore Factory Defaults	Long press to restore the factory settings



7.2 Clock

Support to set the clock from 2000/01/01 00:00 to 2099/12/31 23:59
Time will adjust automatically, manually settings need to be saved.

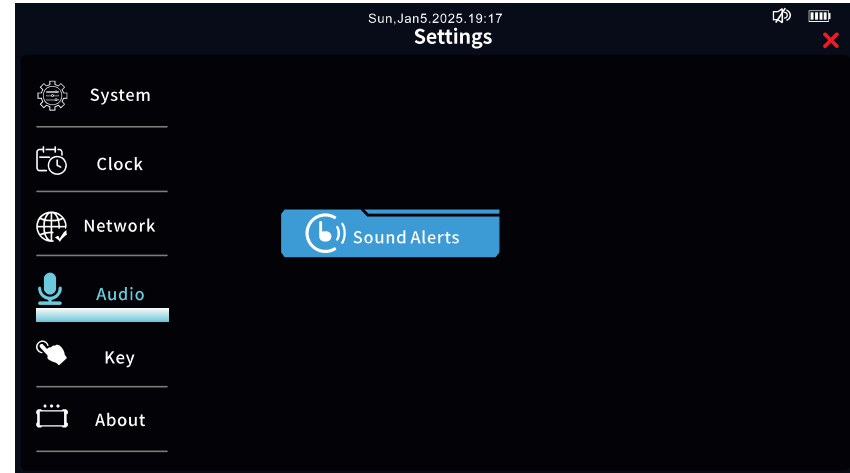


7.4 Volume Setting

Voice Settings support both voice prompts and sound prompts.

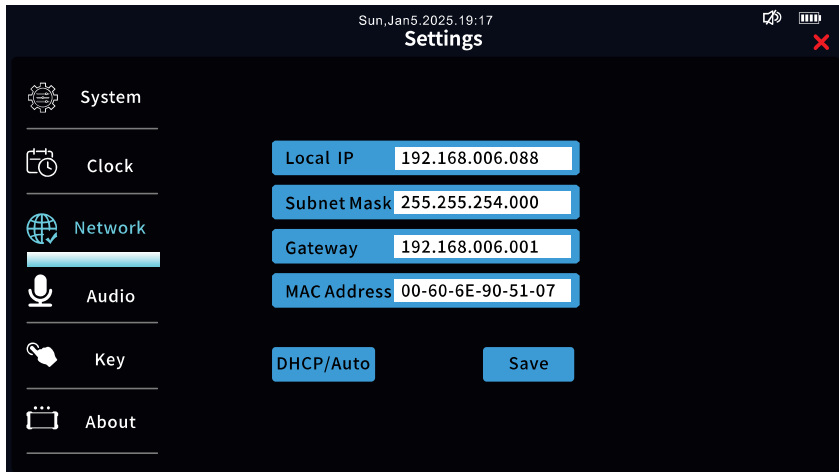
Sound Prompts Mode: This mode does not include Chinese voice announcements.

Voice Prompts Mode: In this mode, all voice interfaces are activated, including Chinese voice announcements and accompanying sound effects (such as button presses, switches, test success/error tones, etc.).



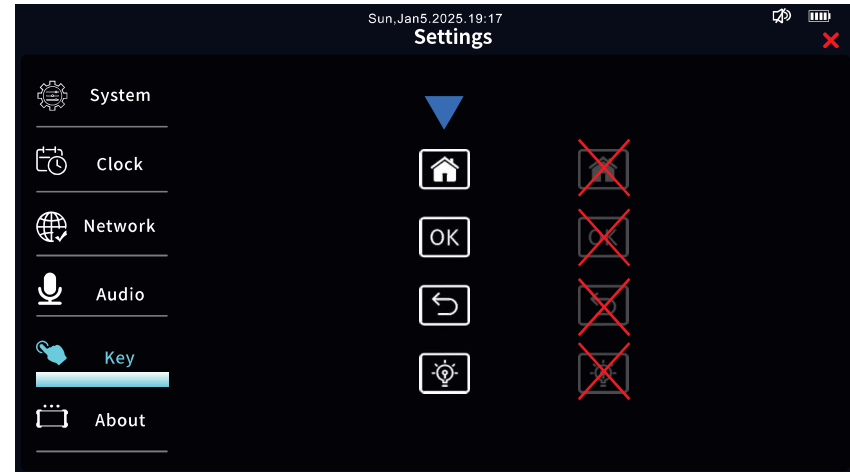
7.3 Network

Network Configuration supports both manual and dynamic (DHCP) settings. For automatic acquisition, connect the cable to the LAN port. Any new settings require manual saving, otherwise a pop-up reminder will appear



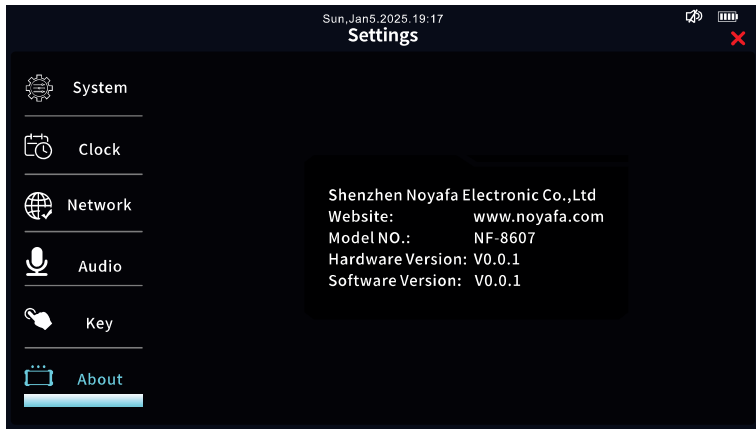
7.5 Key Mode

Enable / Disable the touch keys on the right side of the screen.



7.6 About

Inf about manufacturer / model NO. / Hardware Version/ Software Version



8.Receiver

Scan & Cont function need to be used with receiver

8.1 Power and indicator

①Indicator

Power indicator was designed with red/green dual color, different color indicate different status of the device as below:

- Device On: Indicator stays green
- Low Power : Indicator blink green
- When the device is off and being charged, the indicator will stay red and once the power is full it will stay green
- When the device is on and being charged, the indicator will stay red and green, once the power is full it will stay green

PS: Low Battery Advisory:

Instrument performance may be impaired when the battery level is critically low. Ensure the battery remains adequately charged to maintain optimal operation.

If the instrument will not be used for an extended period, recharge the battery at 6-month intervals to preserve battery health

② Sensitivity Indication: When adjusting the sensitivity knob, the 1-G indicator will light up in red to display the current sensitivity level.

③ Signal Strength Indication: In line tracing mode, the 1-G indicator will flash green to indicate the current signal strength.

④ Wire map Test Results:

- Normal: Steady green light.
- Short Circuit: Flashing red light.
- Cross: Steady red light.
- Open Circuit: No light.

8.2 Wire Mapping & Tracing Function ----- Scan & Cont

This function enables quick and efficient identification of target cables within complex wiring environments, switch panels, or bundles of messy cables.

- ① Connect one end of the target network cable to the SCAN/CONT port on the main unit and select the "Wire Mapping & Tracing" mode.
- ② Rotate the receiver's knob to power it on. Adjust the sensitivity (the red signal strength indicators light up; higher sensitivity activates more LEDs and expands the detection range). Bring the probe close to the target cable for detection. Upon receiving a signal, the receiver will emit a "beep" sound, and the red indicator(s) will turn green (the number of lit LEDs increases with signal strength), guiding you to the target cable.

Tracing Tip:

Start by setting the sensitivity to maximum to locate the general area, then reduce the sensitivity for precise cable identification.

Note: In tracing mode, inserting the other end of the network cable into the RJ45 port at the bottom of the receiver allows for immediate wire mapping (Receiver must be powered on). For mapping results, refer to Section 8.1, part ④ above.

8.3 NCV (Non-Contact Voltage) Function

After powering on, press the NCV button and bring the probe close to wires or cables. If an AC voltage signal is detected, the receiver will emit a rapid "beep-beep-beep" sound. The beeping rate increases as the probe gets closer to the voltage source.

8.4 Flashlight Function

After powering on, press the Flashlight button to turn the built-in illumination LED on or off.

9.Accessories

Transmitter	1pc	Testing Leads	2pcs
Lan Cable	1pc	SC/UPC Adapter	1pc
USB Cable	1pc	FC/UPC Adapter	1pc
Optical Connector Swabs	1pc	ST/UPC Adapter	1pc
QC Card	1pc	User Manual	1pc
Lithium Battery Precaution Card	1pc	Packing Box	1pc



10.Parameters

Model NO.	NF-8607
Product Name	Multifunctional Optical Fiber Network Tester
LCD Display	5.5" TFT HD Screen 1280*720
Screen Type	Touch Panel (Capacitor)
	OTDR
Testing Range(km)	0.5/1.25/2.5/5/10/20/40/80/125/150
Wave length(NM)	1310 / 1550 dual wavelength
Dynamic Range (dB)	30/28
Event Dead Zone (m)	≤1.6
Attenuation Dead Zone (m)	≤8
Pulse Width (ns)	3/5/10/20/30/50/80/100/200/300/500/1000/2000/3000/5000/8000/10000/20000
Measurement Accuracy	±1M+ Sampling Interval + 0.005% × Test Distance
Measurement Time	5~180
Minimum Distance Resolution (m)	0.05
Sample Points (k)	16~128
Reflection Accuracy (dB)	±3.0
Loss Resolution (dB)	±0.20
Interface Type	UPC
Laser Safety Class	Class II level
Fiber Type	G.652 SM Fiber
	OPM
Optical Sensor Type	InGaAs
Wavelength	850nm、980nm、1270nm、1300nm、1310nm、1490nm、1550nm、1577nm、1625nm、1650nm
Measurement Range	-70~10dBm
Design Accuracy	±0.5dB
Identification Frequency	270Hz / 330Hz / 1000Hz / 2000Hz
	VFL
Supported Power:10mW	Visible red light is emitted to detect faults in optical fiber lines, such as breaks, cracks, and bends.
	Network
Wire Length Measurement	5-350m
PoE Function	1.IEEE 802.3 af / at / bt 2.End-span / Mid-span / 8-core power 3.5~75V
Port Flash	Supported
Ping Test (ICMP+DHCP)	Supported
IP Scan (ARP)	Supported
Wire Crimping Test	Supported
Wire Mapping	Search and Pair Integration
	Multi-meter
DC Voltage	600.0mV/6.000V/60.00V/600.0V
AC Voltage	600.0mV/6.000V/60.00V/600.0V
DC Current	999.9mA/5.000A
AC Current	999.9mA/5.000A
Resistance	600.0Ω/6.000kΩ/60.00kΩ/600.0kΩ/6.000MΩ/60.00MΩ
Capacitance	6.000nF/60.00nF/600.0nF/6.000uF/60.00uF/600.0uF/6.000mF/60.00mF
Continuity Test	It beeps when the resistance is 50Ω or below, and displays "OL" when the resistance is 610Ω or above.
Frequency	6.000Hz/60.00Hz/600.0Hz/6.000kHz/60.00kHz/600.0kHz/6.000MHz
OTDR Interface	SC-UPC/FC-UPC/ST-UPC
Optical Power Interface	Supports FC / SC / ST universal interfaces
	Interface
Visual Fault Locator Interface	2.5 mm universal connector
Wire Mapping Port	RJ45
Length & Port Flash Test Port	RJ45
Wire Crimping Port	RJ45
Device Charging Port	Type-C / 5V-2A

power supply			
Battery Powered	3.7 V, 4000 mAh lithium battery	Working Temperature	-10°C~+50°C
Type-C Charging Port	Type-C	Working Humidity	≤95%
Charging Time	4hours	Storage Temperature	-40°C~+70°C
Operating Time	Around 7 hours	Led Light	Supported
voice prompt	Supports Chinese voice broadcast and operational sound effect prompts.		
Dimensions/Weight	206 × 116 × 40 mm ≤550 g (including battery)		
Receiver			
Digital Mode Scanning	Supported		
Sensitivity Adjustable	Supported		
NCV	AC80V~1000V 50/60Hz		
Audio prompt	Supported		
Led Light	Supported		
Battery Powered	3.7 V, 1400 mAh lithium battery		
Power Indicator	Power Indicator LED		
Auto Off	15minutes		
Low Power Alert	3.5V±0.1V		
Max Working Current	≤200mA		
Input Voltage Protection	The device is not recommended to operate during the 60V voltage withstand process.		
Wiremap Interface	RJ45		
Dimensions	193 × 50 × 32.5 mm		



精明鼠®

深圳市诺方舟电子有限公司

编号	201	202	301	302	303	304	305	比例:	1:1	品号:	304-D2401-0002
类目	塑胶件	五金类	镜片	PVC贴纸	不干胶贴	说明书	包装盒	单位:	mm		
选择						√		设计	ZJL	品名:	NF-8607说明书英文V1 20251206
306	307	308	309	310	311	312	313	核准			
彩卡	吸塑	工具包	PE袋	纸箱	宣传单	合格证	打印标签	标准:	√	文件类型:	大货文件
								定制:			
制作日期	2025.12.06			样式	骑马订		印刷材质	128g双铜纸封面封底过哑膜			
印刷要求	彩色印刷			页码	28P		变更记录				
尺寸大小	148*210mm			版本	V1						