

NOYAFA NF-8209

NOYAFA NF-8209 Network Cable Tester User Manual

Model: NF-8209

Brand: NOYAFA

1. INTRODUCTION

The NOYAFA NF-8209 is a versatile multi-function network cable tester designed for professionals and DIY enthusiasts. It integrates various testing capabilities including network cable continuity, cable length measurement, tone tracing, Power over Ethernet (PoE) information detection, hub flashing, and Non-Contact Voltage (NCV) detection. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your NF-8209 tester to ensure optimal performance and accurate results.



Figure 1: Overview of the NOYAFA NF-8209 Network Cable Tester and its components.

2. PACKAGE CONTENTS

Upon opening the package, please verify that all the following items are included:

- NF-8209 Host (Emitter)
- NF-8209 Receiver
- NF-8209 Remote (Wiremap)
- USB-C Charging Cable (for Emitter)
- RJ45 Patch Cable
- RJ11 Patch Cable
- Alligator Clip Cable
- Earphones
- Carrying Pouch
- User Manual

Note: The NF-8209 Transmitter is USB-C rechargeable. The receiver requires a 9V battery, which is not included in the package due to logistics reasons. Please ensure you have a 9V battery for the receiver before use.

3. SETUP

1. **Powering On:** Press and hold the power button on both the Emitter and Receiver units to turn them on.
2. **Charging the Emitter:** Connect the provided USB-C cable to the Emitter's charging port and a suitable USB power source. The battery indicator on the screen will show charging status.
3. **Installing Receiver Battery:** Open the battery compartment on the back of the Receiver unit and insert a 9V battery, observing the correct polarity. Close the compartment securely.
4. **Connecting Cables:** Depending on the test function, connect the network cables to the appropriate RJ45 or RJ11 ports on the Emitter, Receiver, or Wiremap remote.

4. OPERATING MODES

The NF-8209 offers multiple testing modes to diagnose various network cable issues. Navigate through the modes using the arrow keys and confirm selections with the 'OK' button on the Emitter.

Video 1: A comprehensive demonstration of the NOYAFA NF-8209's various testing functions, including tone tracing, PoE testing, and cable length measurement.

4.1. Cable Continuity Testing (Wiremap)

This function checks for open circuits, short circuits, crossed wires, and other wiring faults in RJ45 (CAT5/5E/CAT6/6A) and RJ11 cables. It provides a visual wiremap on the Emitter's screen.

1. Connect one end of the network cable to the 'CONT' port on the Emitter.
2. Connect the other end of the cable to the 'RJ45 WIREMAP' remote unit.
3. On the Emitter, select the 'CONT' mode from the main menu and press 'OK'.
4. The screen will display the continuity status for each wire pair, indicating any faults.

Network Cable Testing

Continuity testing / CAT5e CAT6 CAT6a (STP&UTP) Cable length measurement

CONT	short	
R :	1 2 3 4 5 6 7 8	
M :	1 2 3 4 5 6 7 8	
Pin12, Pin45 are both shorted		

CONT		
R :	1 2 3 4 5 6 7 8	
M :	1 2 3 4 5 6 7 8	
Pin56, Pin18 are cross		

CONT		
R :	1 2 3 4 X 6 7 X	
M :	1 2 3 4 X 6 7 X	
Pin12, Pin45 are both shorted		

CONT		
R :	1 2 3 4 5 6 7 8	
M :	1 2 3 4 5 6 7 8	
Good condition		



Only if a cable exists short circuit, no matter it exists crossbreakage or not, the testing result will only display "Short" information. If it doesn't exist short circuit, then it would display what actually is.

Figure 2: Example of cable continuity test results displayed on the NF-8209 Emitter, showing different fault types.

4.2. Cable Length Measurement

The NF-8209 can accurately measure the length of network cables (2.5m-200m) and identify the distance to a fault if one exists.

1. Ensure the cable to be measured is de-energized and disconnected from all devices.
2. Connect one end of the cable to the 'Length/Flash' port on the Emitter. The other end should be open (not connected to anything).
3. On the Emitter, select the 'Length' mode and press 'OK'.
4. The screen will display the cable length in meters. If a fault is detected, it will show the distance to the fault.

EMITTER LITHIUM BATTERIES RECHARGEABLE VERSION

Accuracy : $\pm 1.6\text{m}$



From the image, it means there exists a problem at 12.1m. To make sure it is short or broke there, you can test its continuity to know details.

Kind reminds when measuring cable length

- 1. the LAN cable to be tested must be de-energized.
- 2. disconnect the cable at the far end, no remote, no other devices connected!
- 3. The range must be 2.5m~200m, otherwise, it would be displayed 0 meter
- 4. When measuring broken cables, if the broken point is too close to the empty end (less than 3% of the full length), due to technical reason, the device will show the full length of the cable, in that case customers were suggested to measure the length from the other end to locate the broken point.

2.5m  200m

2.5-200m

The transmitter is the USB C version, but the receiver requires a 9V battery, which is not included in the package for logistical reasons.

Figure 3: Cable length measurement in progress on the NF-8209 Emitter.

4.3. Tone Trace Cable (Digital, Analog, PoE Modes)

This feature helps locate and identify network cables among bundles of cables using an audible tone emitted by the Emitter and detected by the Receiver.

1. Connect the network cable to the 'SCAN' port on the Emitter.
2. On the Emitter, select the 'SCAN' mode. You can choose between three sub-modes:
 - **Digital Mode:** Suitable for tracing cables that are in good order and distance, providing a clear digital signal.
 - **Analog Mode:** Ideal for tracing cables among bundles of disorganized cables, offering a more robust signal for cluttered environments.
 - **PoE Mode:** Specifically designed for tracing cables connected to PoE devices.
3. Activate the Receiver unit and adjust its sensitivity ('SEN' switch) as needed.
4. Move the Receiver's probe along the suspected cables. The Receiver will emit an audible tone when it detects

the signal from the Emitter, indicating the correct cable.

Connect the cable to be tested to "SCAN" port of transmitter on the left side, enter "SCAN" on the main menu, press ok to choose scan mode you prefer.

Network Cable Tester



Figure 4: Selecting a tone trace mode on the NF-8209 Emitter.

4.4. PoE Information Testing

This function allows you to test standard PoE devices and gather information such as PoE voltage, power polarity, power mode, and the type of Power Sourcing Equipment (PSE) (AF or AT standard).

1. Connect the network cable from the PoE source (e.g., PoE switch) to the 'PoE' port on the Emitter.
2. On the Emitter, select the 'PoE' mode and press 'OK'.
3. The screen will display detailed PoE information, including voltage, pinout, and PSE type.

POE TEST/PORT BLINKING



Network Cables



Telephone Line



POE Testing

Withstand voltage **60V**

support:

802.3af / 802.3at

Power over Ethernet

It can test the information of standard PoE device, such as POE voltage, power supply polarity, power supply mode and also the type of PSE (af or at standard).

If the PoE device is non-standard, it can also test POE voltage, power supply polarity, power supply mode, but it can't tell the type of PSE, just display

"Non standard"

Identifies network port
10/100/1000 megabytes

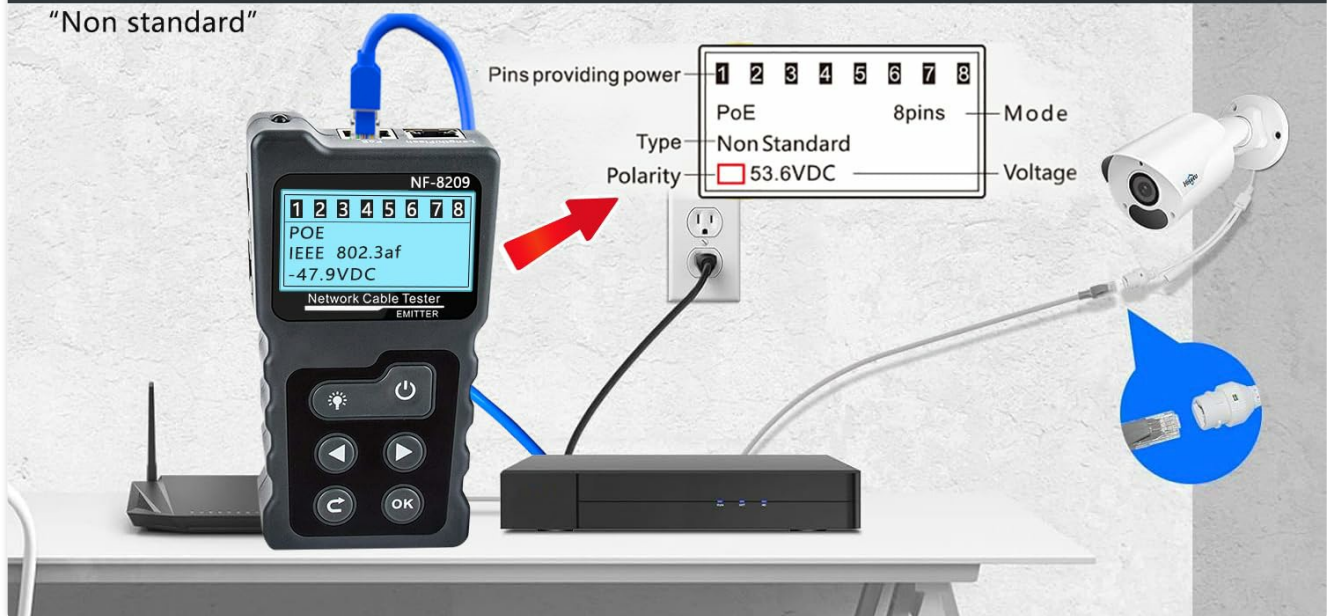


Figure 5: PoE information testing with the NF-8209 Emitter.

4.5. Hub Flashing

The Hub Flashing function helps quickly identify the network port on a hub or switch by causing its indicator light to blink. This is useful for 10M/100M/1000M hubs/switches.

1. Connect one end of the network cable to the 'Length/Flash' port on the Emitter.
2. Connect the other end of the cable to the desired port on the hub/switch.
3. On the Emitter, select the 'Flash' mode and press 'OK'.
4. The corresponding port indicator light on the connected hub/switch will begin to blink, allowing for easy identification.

PORT FLASH

Green light on POE switch blinks every 3 seconds



Figure 6: Using the Hub Flashing function to identify a network port.

4.6. NCV Voltage Detection

The Receiver unit features a Non-Contact Voltage (NCV) detector, allowing for safe and quick detection of AC voltage (50V-1000V) without direct contact.

1. Slide the 'NCV' switch on the side of the Receiver unit to the 'ON' position.
2. Place the tip of the Receiver near an AC voltage source (e.g., power outlet, live wire).
3. If AC voltage is detected, the Receiver's LED indicator will light up and an audible alarm will sound, with the frequency of beeps increasing as it gets closer to the voltage source.



Figure 7: NCV voltage detection in action with the NF-8209 Receiver.

5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Battery Replacement (Receiver):** When the low battery indicator appears on the Receiver, replace the 9V battery promptly to ensure accurate operation.
- **Charging (Emitter):** Recharge the Emitter unit when the battery level is low to maintain optimal performance. Avoid overcharging.
- **Storage:** Store the device in its carrying pouch in a cool, dry place away from direct sunlight and extreme temperatures when not in use.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Device does not power on.	Low or dead battery.	Charge the Emitter or replace the 9V battery in the Receiver.
Inaccurate cable length measurement.	Cable not fully disconnected; cable too short or too long for range.	Ensure cable is completely isolated. Verify cable length is within 2.5m-200m.
No tone detected during tracing.	Low battery; incorrect mode selected; high interference.	Check batteries. Ensure Emitter is in 'SCAN' mode (Digital/Analog/PoE). Adjust Receiver sensitivity. Try Analog mode in noisy environments.
PoE test shows 'Non Standard'.	Connected to a non-standard PoE device.	This is an informational message indicating the PSE is not IEEE 802.3af/at compliant. No action required unless standard PoE is expected.

7. SPECIFICATIONS

- **Model Number:** NF-8209
- **Package Dimensions:** 10.55 x 6.61 x 1.85 inches
- **Item Weight:** 14.88 Ounces
- **Power Source:** Battery Powered (Emitter: USB-C rechargeable; Receiver: 9V battery)
- **Cable Types Tested:** RJ45 (CAT5/5E/CAT6/6A), RJ11
- **Cable Length Measurement Range:** 2.5m - 200m (Accuracy: ±1.6m)
- **PoE Test:** Detects PoE voltage, power polarity, power mode, PSE type (AF/AT)
- **NCV Detection Range:** 50V - 1000V AC
- **Hub Flashing:** Supports 10M/100M/1000M hubs/switches

8. 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 on the official NOYafa website or the product packaging. Keep your purchase receipt as proof of purchase for warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question