NF-859GT (859G+8508 Transmitter)

The functions of the transmitter include alignment test, wire detection, port blinking, length test, PoE test, crimping test, optical power meter and red light functions.

Icons on UI

AUTO-OFF: Customers can see the icon " " on the left top of the screen when the function is ON, Customers can choose to turn it off in "Set".

Power Level: Show the battery power level of the device, it will turn to Green when charging, and stays white when in use.

Cable Continuity Test

Cable Tracking

Port Flash

Cable Length Measurement

PoE Test

QC Test

OPM

VFL

Set

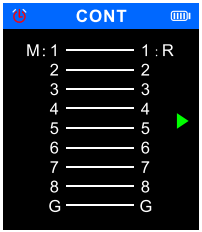
User Instructions

1. Alignment Test

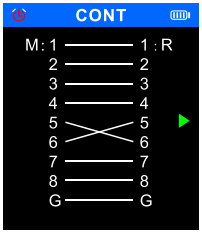
Alignment Test with Receiver: To test the cable continuity, cross and short circuit of the network line.

Local Alignment Test of Receiver: You can switch between fast alignment test and slow alignment test.

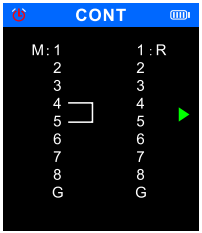
Take Alignment Test with Receiver as an example.
Insert one end of the cable into the line interface on the right side of the transmitter, and the other end into the "Remote Line A" port at the bottom of the receiver. Select "CONT" and press the " OK " button to start the test. The test results are as follows:



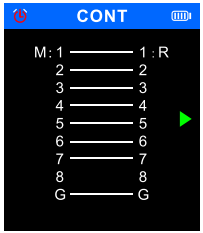
Test is normal



Cross of cores 5 and 6



Short-circuit of cores 4 and 5



Open-circuit of core 8

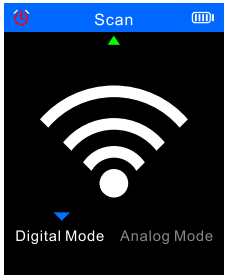
Note:
If an error occurs during the wiremap test, you can go to "Settings" > "Wiremap Calibration" to calibrate the device.
Please use a properly crimped network cable for calibration, and avoid using a faulty cable for calibration.

2. Wire Detection

Press the Up/Down key to switch between the two wire detection modes.

Anti-interference Wire Detection: Anti-interference and noise-free. This mode is recommended for the on-load wire detection of a gigabit switch.

Ordinary Wire Detection: With certain noise. The ordinary wire detection mode can be used to detect ordinary electric cables or for no-load wire detection.



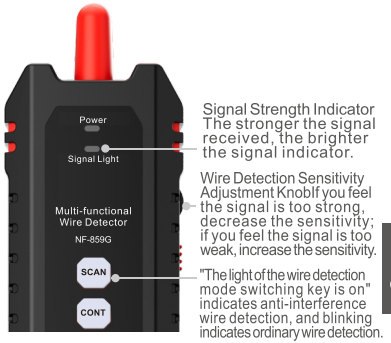
Digital Mode

Transmitter:
The default mode is the anti-interference wire detection mode. Press the Up/Down key to switch between the anti-interference wire detection mode and ordinary wire detection mode.

Receiver:
The default mode is the anti-interference wire detection mode. Press the Wire Detection key to switch between the anti-interference wire detection mode and ordinary wire detection mode. When the light of the Wire Detection key is on, it indicates the anti-interference wire detection mode; when the light of the Wire Detection key blinks, it indicates the ordinary wire detection mode.

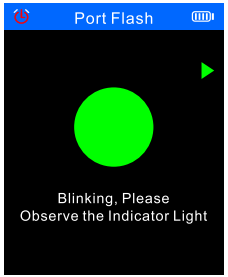
Notes:

1. The mode on the transmitter should be consistent with that on the receiver, otherwise, the receiver cannot detect any signal.
2. The knob on the receiver is used to adjust the sensitivity of wire detection. The maximum detection range is 10cm; the maximum wire detection distance is 600m for no-load wire detection or 1000m for on-load wire detection.
3. The stronger the signal received, the brighter the signal strength indicator.



3. Port Flashing

Once the test is successful, the green dots on the screen will flash in sync with the port indicator lights.

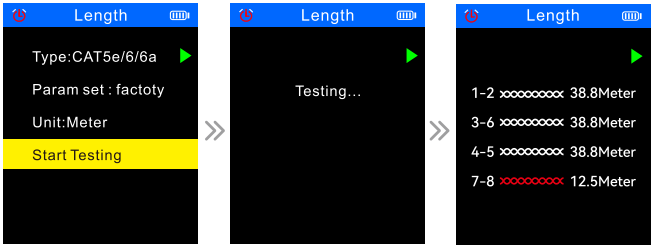


Port Flashing

4. Length Measurement Function

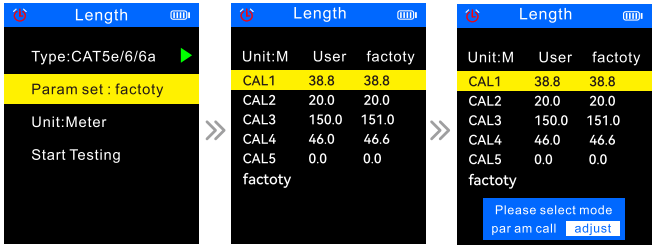
4. 1 Network Cable Length Test

Insert the network cable into the "Length Test" port on the right side of the transmitter, select the length test option, and the screen will automatically show the "Start Test" screen. Press " OK " to begin the test.
The device can test the cable length and breakpoints, with an optimal range of 5-350 meters.



4. 2 Parameter Settings

By default, the network cable length test uses factory settings.
If the test results are inaccurate or have significant errors, you can calibrate the device, and use the new calibration values for subsequent tests. For example, using Calibration Value 1:



① Press the "Up/Down" buttons to select "Parameter Settings", then press "OK" to enter the calibration value selection screen.

② Select Calibration 1 and press "OK" to enter the mode.

③ Press the "Up/Down" buttons to choose between "Parameter Retrieval" or "Parameter Calibration". If you select "Parameter Retrieval", it will jump to step ⑥; if you select "Parameter Calibration", proceed to step ④.

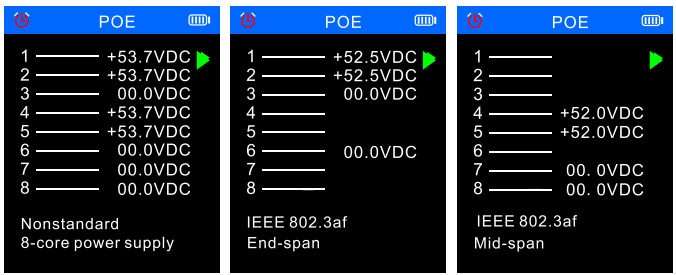
④ After calibration, the user value and factory value will appear. For example, if the actual cable length is 45 meters, press the "Up/Down" buttons to modify the user value to 45 meters.

⑤ After editing, press "OK" to choose whether to save the changes. Press "Back" to recalibrate, or press "OK" to proceed to step ⑥.

⑥ On the "Start Test" screen, press "OK" to begin testing.

5. PoE Test Function

When the detection is successful, the screen will display the detection data.



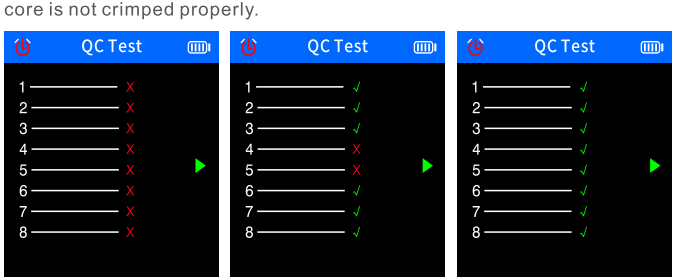
8-core power supply, 53.7V | End-span, 52.5V | Mid-span, 52.0V

PoE: 5~60V nonstandard/standard PoE can be tested. The AF/AT standard is identified automatically.

6. Crimping Test

This function is used to test whether the registered jack is crimped properly.

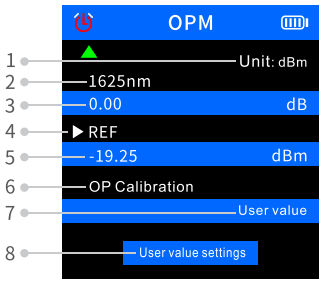
A tick indicates the wire core is crimped properly. A cross indicates the wire core is not crimped properly.



Cores 1-8 are all not through | Cores 4 and 5 are not through | The crimping is normal

7. Functions of the Optical Power Meter

This function can be used to test the optical power and light attenuation value. The unit, wave length, REF, optical output power calibration can be set, the white triangle cursor indicates current option.



7.1Unit setting: dBm or mW/uW/nW, the mW/uW/nW units can be automatically switched according to the current laser light intensity.
Press up/down button to move the cursor to this option, and then, press the button " OK " to switch units.

7.2Wavelength setting: 850/980/1270 /1300/1310/1490/1550/1577/1625/ 1650nm, press up/down button to move the cursor to this option, and then, press the button " OK " to switch wavelength.

7.3Optical output power: After setting the wavelength, insert the optical fiber to optical power joint at top of the instrument, the third line will indicate the value of optical output power.

7.4REF: Reference value it is used when the attenuation value of optical signal passing the optical fiber link is tested.

① After testing the optical output power, move the cursor to REF option, long press the button " OK " for 3 seconds, the optical power value will jump to line 5 from line 3 and become a reference value.

② Switch to the optical fiber link to be tested, at this time, line 3 will indicate the attenuation value of this optical fiber link (The test value after switching to the optical fiber link-the reference value before switching to the optical fiber link=Attenuation value of this optical fiber link).

③ Short press button " OK " to open/close REF mode, long press button " OK " for 3 seconds to re-set the reference value.

8 5 9 G T

7.5 Reference value: In case of non-REF mode, Line 3 indicates optical output power value, line 5 not indicates value.

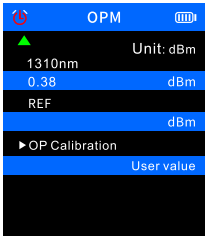
Notes:

1. In case of REF mode, Line 5 indicates the reference value, Line 3 indicates the attenuation value.
2. dBm is the unit indicating absolute power value.
3. dB is a relative number, which indicates increase or reduction of the signal strength.
4. In the optical fiber network, the optical power is often measured with dBm as the unit, while, the attenuation, consumption and insertion loss of optical fiber are expressed with dB.

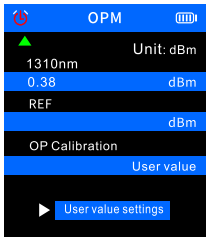
7.6 Optical power calibration: Factory value/user value can be selected.

Normally, you only need to select factor value, if the test error is large, you can select user value-user value setting for calibration.

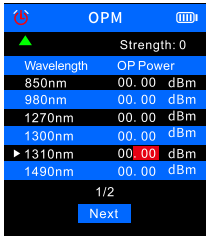
The following uses the 1310 wavelength as an example:



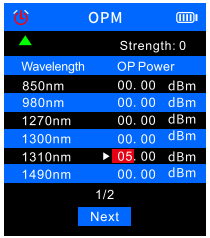
Select Optical Power Calibration Press the" OK " key to switch between the factory-set value/ user-defined value.



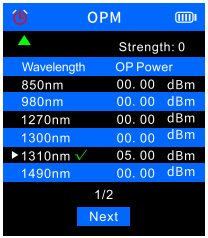
Select User-Defined Value SetupPress the " OK "key to enter the Setup interface.



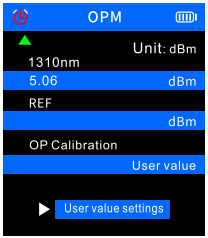
Press the" "keys and select the wavelength 1310. Then press the" OK "key to enter Parameter Setup.



Press the " OK " button to switch between integer and percentage. Press the" " keys to set the parameters. After the parameters are set, press the" " key.



The cursor is in front of 1310 again.Long press the " OK "key for 2 seconds. When √ appears, it indicates confirmation.



Press the" "key to return to the Test interface. Here, you can test the optical power again.

Notes:

- In Step Five above, be sure to long press the " OK " key for 2 seconds. When √ appears, it indicates that the data are confirmed; otherwise, the calibration will to take effect.
- In the aforementioned step six, calibration is done for the 1310 wavelength. When testing the 1310 wavelength under "User Value Setting" mode, the calibration data takes effect. For calibration in other wavelengths, follow steps three hundred and forty-five as described above.
- If the calibrated value is not used, switch back to the factory-set value according to Step One above.
- To remove the calibrated value, return to Menu — Setup — Factory Settings.

8. Red Light Function

Transmitter:

Select the " " function to turn on the red light. Press the " OK " key to switch between Fast Blinking, Slow Blinking and On.

Receiver:

Press the " VFL " key to turn on the red light. Press it again to switch between On, Blinking and Off.

9. Setup Function

The transmitter allows you to set the language, backlight brightness, backlight duration, auto power-off time, wiremap calibration, restore factory settings, and check the instrument's version number, among other options.

Product Specifications

Model		NF-8508	
Cable type		CAT5/CAT6	
Voltage protection		60V	
Battery		Type C charge	
Transmitter	CONT	Wiremap Port	RJ45
		STP/NTP	√
		Digital mode and Analog mode	√
	Scan	Frequency	455KHz
	Port Flash	√	
	Length	≤20M+/-1.6M, 20M~100M+/-2.4M, ≥100M+/-3.2M	
	PoE	Standard/Non standard	Automatic Identification
		End connection /Middle jumper / Powered by 8 cores	
		PoE Power supply	Voltage detection
	VFL	10mW	
	Power meter	850/980/1270 /1300/1310/1490/1550/1577/ 1625/1650nm(Wavelength)	
	Crimping	RJ45-8 Cores,Min length is ≥10cm	
	Lower voltage warning	< 3.5V ± 0.1V	
	Power supply	3.7V 1500mAh Polymer lithium battery	
	Transmitter size	148 X 70 X32 mm	
Recevier	Wire Detection Function	Anti-interference mode/ordinary mode (used with other models)	
	Alignment Test	Local alignment test and remote alignment test	
	Crimping Test	To test whether the registered jacks RJ11 and RJ45 are crimped properly	
	PoE Test	Power supply wire core, mid-span and end-span	
	VFL	10mW	
	NCV	√	
	LED Flashlight	√	
	Battery Indication	√	
	Power Supply	3.7V lithium polymer battery	
	Dimension of Receiver	200x52x33mm	