PoE Checker

INSTRUCTION MANUAL

NF-488

PoE Checker
Power Over Ethernet Tester
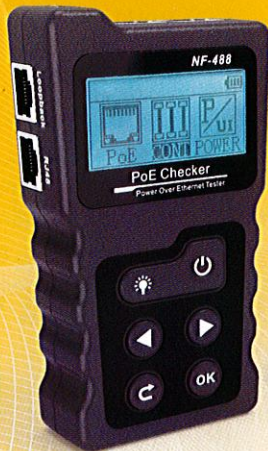
*VER: V2*

⚠ Read the precautions before your operation

●The main test terminal of this device is powered by three 1.5V dry batteries, and the remote end does not need to supply power.

● Please do not place the device in a location that is dusty, humid, or hot (above 40°C).

● Please use a battery that meets the specifications, otherwise the device may be damaged.

● Please do not disassemble the device. Repair and maintenance should be done by a professional staff.

● When not using the device for a long time, please remove the battery inside the test terminal to prevent the battery liquid from leaking out.

● Please do not use this device to detect live power lines (such as 220V power supply lines), the device may be damaged and personal safety may be influenced.

● Please do not perform related operations on the communication line during thunderstorms to prevent lightning strikes and personal safety.

Table of Contents

1、 Overview

The NF-488 PoE Checker is consists of two parts: an Emitter and a remote. It has functions such as standard and non-standard PoE equipment detection, PoE power online test, network cable continuity test, DC power test, switch loop-back test and other functions. Therefore, it is a practical tool for installation and maintenance of technical personnel in security monitoring, communication wires, integrated wiring and other weak current systems.
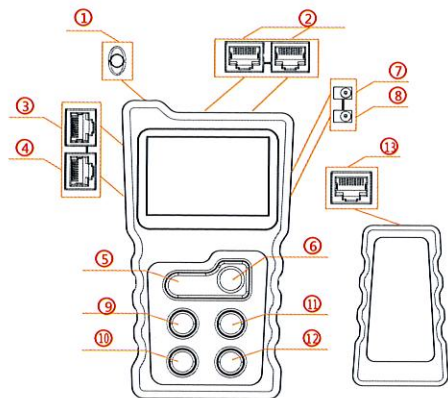
1.Lamp	6.Power	11. Right
2.PoE test	7.DC In	12.Ok
3.Loopback	8.DC Out	13.RJ45
4.Wiremap	9.left	
5.Light	10.Return	

2、 Main Functions and Features

● Test the information of standard/non-standard PoE device, such as voltage, polarity, midspan or endspan.
● Identify the type of PSE, it is af or at standard.
● Test of real-time power consumed by PD devices in PoE power supply systems.
● Test the open, short, cross status in the network cable.
● Test the power consumed by DC appliances.
● The loop test function of the switch.

3.Transmitter specification

Indictor	LCD 128x64 mm, with back light	
Continulity function	Cable types	STP UTP
	Max testing range	600m
	Wire mapping	Emitter +Remote
		Emitter + switch/routor
PoE function	Test range	DC5-60V POE switch
	Standard identify	802.3af/at (stand ard/non-standard)
	Test range power	0-18W
Power function	Voltage test range	DC0-60V
	Current test range	0-3A
	power test range	0-180W
Input voltage protection	DC48V 5mA	
Max working current	≤80mA	
Loopback	Compatible with 10M ,100M,1000M switch	
Power supply	3*AAA	
NF-488 Remote Specification		
Ports	RJ45	
Function	Wire mapping for network cable	
Input voltage protection	DC48V 5mA	

4、 Product Usage

Main menu explanation:

(1) POE...POE switch test and POE power test.
(2) CONT...Test open,short, and cross,ect.
(3) Power...Test voltage and current between the power adapter and the powered device, as well as calculate the power consumed by the powered device.
(4) Setting...Set up language, backlight time, auto power off time, contrast, and versions.
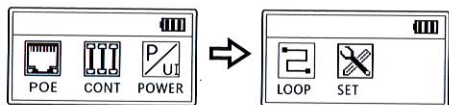

5. POE Test Function

5.1.PoE switch test:

Connect a lan cable with PoE switch and NF-488 (PoE port). After the correct connection, a fluctuating voltage value will display at the screen. At this time, press "Enter" to starting testing, and the result will display at the screen.
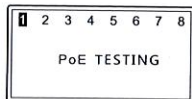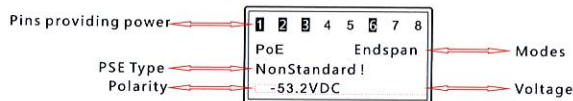

a. Standard PoE equipment:

If the tested PoE switch is standard one, the testing result will display as the following image.
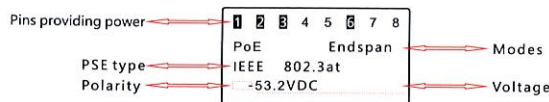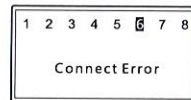

b. Non-standard PoE equipment:

If the tested PoE switch is non standard one, the testing result will display as the following image.
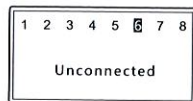

c. Error connection

If the test result display connect error, it means that the connection is not normal or other PoE devices are connected to the circuit. After reconnecting correctly, you can test again.

d. No connection

If the testing results is unconnected, it means the PoE equipment is not detected.

```
┌─────────────────────┐
│ 1  2  3  4  5  6  7  8 │
│                        │
│     Unconnected        │
└─────────────────────┘
```
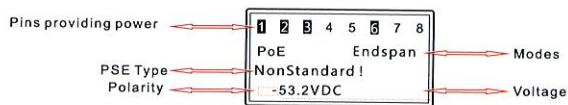
5.2. PoE power test:

In the PoE power test, a PoE power supply device and a PoE powered device (such as a PoE switch and a PoE camera) need to be connected to NF-488(PoE port).

After the correct connection, a fluctuating voltage value will display at the screen. A few seconds later, and it will automatically enter the power testing interface.The display information is like the following image.
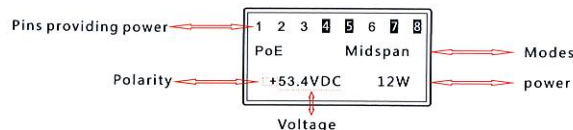
When the screen is displaying PoE power, press the Enter key to identify the type of PSE easily. If the "Non-standard" appears, it means the PoE power supply device does not comply with the PoE standard. If no new message appears, it indicates that the PoE power supply device complies with the PoE standard.

(PoE power is the power currently consumed by the PoE powered device.)u can use the PoE switch test function to test separately.

Pins providing power ← / PSE Type ← / Polarity ←

```
┌─────────────────────┐
│ 1  2  3  4  5  6  7  8 │
│ PoE          Endspan   │
│ NonStandard !          │
│ -53.2VDC               │
└─────────────────────┘
```
→ Modes / → Voltage
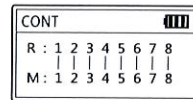
5.3.Special circumstances:

If a PoE device is connected to NF-488 and enters the power display interface directly like the following first image, it means that the PoE device is non-standard type. Under this condition, press the Enter key to see the screen prompt message as "Non-standard " like the following second image.
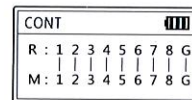
Pins providing power →
Polarity →

```
┌─────────────────────┐
│ 1  2  3  4  5  6  7  8 │
│ PoE          Midspan   │
│ +53.4VDC        12W    │
└─────────────────────┘
```
Voltage
→ Modes / → power

```
┌─────────────────────┐
│ 1  2  3  4  5  6  7  8 │
│ PoE          Midspan   │
│ NonStandard !          │
└─────────────────────┘
```
PSE type ← / → Pins providing power / → Modes

6. Wire mapping test

This part is to check cable short , open , and cross status.
The tested cable can be UTP 8-core network cable or STP 9-core network cable.
Good connection status:

```
┌─────────────────────┐   ┌─────────────────────┐
│ CONT         (IIII) │   │ CONT         (IIII) │
│ R : 1 2 3 4 5 6 7 8 │   │ R : 1 2 3 4 5 6 7 8 G │
│     │ │ │ │ │ │ │ │ │   │     │ │ │ │ │ │ │ │ │ │
│ M : 1 2 3 4 5 6 7 8 │   │ M : 1 2 3 4 5 6 7 8 G │
└─────────────────────┘   └─────────────────────┘
        ( 8pins )                 ( 9pins )
```
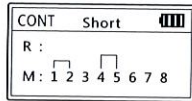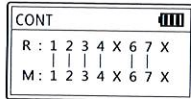
a. If there is only short circuit, or short & cross, open status exists together, the device would only display short circuit, not other status.
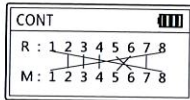
```
┌─────────────────────────┐
│ CONT    Short     ▢▢▢▢  │
│ R :      ┌─┐    ┌─┐      │
│ M : 1 2 3 4 5 6 7 8     │
└─────────────────────────┘
```

(:12, 45 pair is short circuit respectively)

b. Other status display.

```
┌─────────────────────────┐
│ CONT              ▢▢▢▢  │
│ R : 1 2 3 4 X 6 7 X     │
│     │ │ │ │   │ │        │
│ M : 1 2 3 4 X 6 7 X     │
└─────────────────────────┘
```

(Pin 5 & 8 is broken)

```
┌─────────────────────────┐
│ CONT              ▢▢▢▢  │
│ R : 1 2 3 4 5 6 7 8     │
│     │ │ │ │ ╲╳ │ ╲      │
│ M : 1 2 3 4 5 6 7 8     │
└─────────────────────────┘
```

(pin 5 &6 is cross, pin 1& 8 is cross)

```
┌─────────────────────────┐
│ CONT              ▢▢▢▢  │
│ R : 1 2 3 4 5 6 7 8     │
│     │ │ │ │ │ │ │ │      │
│ M : 1 2 3 4 5 6 7 8     │
└─────────────────────────┘
```
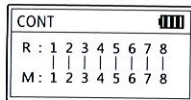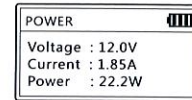
(Good condition)

c. If the test result is "Cable open", it might be these reasons,
  1. cable is indeed open,
  2. the cable is not connected to the emitter,
  3. disconnect the remote at the far end.

```
┌─────────────────────────┐
│ CONT              ▢▢▢▢  │
│                          │
│         Cable Open       │
│                          │
└─────────────────────────┘
```
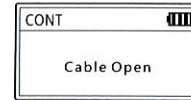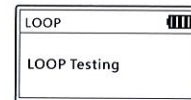
7. Power Test Function

This part is to test voltage , current and power between the power adapter and the powered device. Connect the power adaptor to device, Choose "power" at the menu, then the results will display immediately as below image.

```
┌─────────────────────────┐
│ POWER             ▢▢▢▢  │
│ Voltage  : 12.0V         │
│ Current  : 1.85A         │
│ Power    : 22.2W         │
└─────────────────────────┘
```

8. Loop-back Test

This part is to test whether the loopback of the network cable that connected to switch is working properly.
Connect the switch port to the loop-back port of NF-488 with a network cable. If the indicator is on, it means the loop is proper. If the indicator is off, it means that there are problems in the loop.
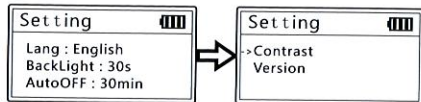
```
┌─────────────────────────┐
│ LOOP              ▢▢▢▢  │
│                          │
│ LOOP Testing             │
│                          │
└─────────────────────────┘
```

9. Lighting Function

In any cases, Press lighting key to turn on or turn off the light.

10. Setting

a. Language setting
Choose language: English or Chinese.

```
Setting        (IIII)
Lang : English
BackLight : 30s
AutoOFF : 30min
```
⟹
```
Setting        (IIII)
->Contrast
Version
```

b. Backlight setting
adjust the backlight time among 15s, 30s, 60s, long light, and off.

```
Setting        (IIII)
  Lang : English
-> BackLight : 30s
   AutoOFF : 15min
```
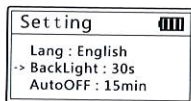
c. Auto-off time
adjust the backlight time among 15mins, 30mins, 1h, OFF.

```
Setting        (IIII)
   Lang : English
   BackLight : 30s
-> AutoOFF : 30min
```

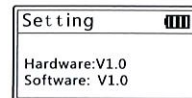### d. Contrast setting
Press the left and right keys to adjust the contrast until you select a suitable contrast..

```
Setting        (IIII)
     Contrast
       24
```
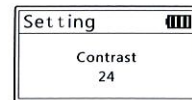
e. Version information
To check version information of software and hardware .

```
Setting        (IIII)
Hardware:V1.0
Software: V1.0
```

11. Accessories Included

Emmiter	1pc
Remote	1pc
AA battary	3pcs
Cable lead	1pc
User manual	1pc
Carry case	1pc
Gift box	1pc

Diagram of Series Products

NF-868	NF-268	NF-8601
NF-806B	NF-800	NF-820
NF-468L	NF-300	NF-2100
NF-708	NF-905	NF-911

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