INSTRUCTION MANUAL

Wire Fault Locator

Your excellent helper in cable test!

Pair	12	21.6 m
Pair	36	21.6 m
Pair	45	21.6 m
Pair	78	21.6 m

NOYAFA   NF-308S

STATUS

PAIR&L   SCAN   OFF

Wire Fault Locator
EMITTER

NF-308-R
WIREMAP

POWER

NF-308-S

VOL

PUSH TO TEST

Wire Fault Locator
RECEIVER

VER: V1.1

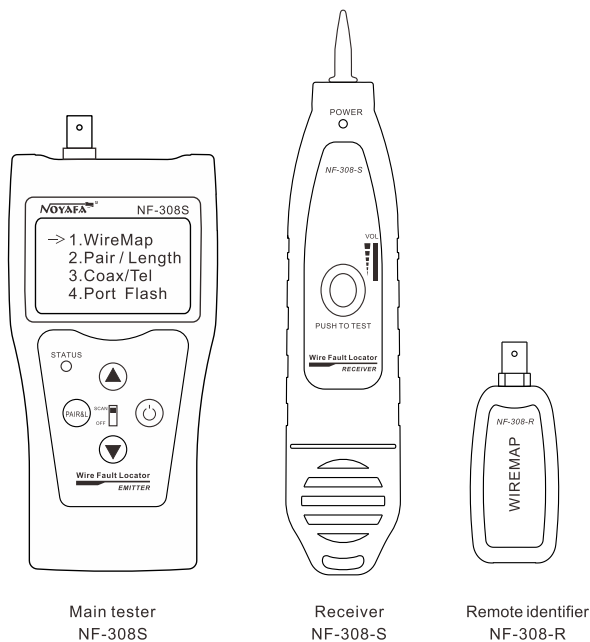## ⚠ Please read and learn safety instructions before use or maintain the equipment

●The tester uses 9V battery for power supply .

●Never put the equipment in the place with much dust, humidity and high temperature (over 40℃).

●Please use battery according to the specification; otherwise, it may result in damage to equipment.

●Please never dismount the equipment arbitrarily. The mainten-ance and care shall be conducted by professional personnel.

●The tester will shut off automatically if it does not work for 30 minutes in succession.

●Please take out the battery in launcher and receiver if the equipment is not used for a long time so as to prevent that the battery liquid is leaked in future.

●Never use the equipment to detect power cord with electricity (such as power supply circuit of 220V), other wise, it may result in damage to equipment and personal injury.

●Never conduct related operation of communication line in thunderstorm weather so as to prevent lightning stroke and impact on personal safety.

Contents

1、Overview

NF-308S is a practical cable test & inspection instrument with lots of new functions researched and developed by our company, which is composed of tester (NF-308S), receiver (NF-308S-R) and remote identifier. It owns three great functions of wire hunting, wire sorting and circuit status testing quickly and accurately. thus, it becomes available tool for technicians in installation and maintenance of weak current system, such as, communication line, comprehensive wiring circuit, etc. It is widely applicable to telephone system, computer network and other fields.

POWER

NF-308-S

NOYAFA   NF-308S

-> 1.WireMap
   2.Pair / Length
   3.Coax/Tel
   4.Port Flash

VOL

STATUS

PUSH TO TEST

Wire Fault Locator
RECEIVER

PAIR&L   SCAN
          OFF

NF-308-R

WIREMAP

Wire Fault Locator
EMITTER

Main tester	Receiver	Remote identifier
NF-308S	NF-308-S	NF-308-R

2、Main Functions and features

① Check 5E, 6E and Coaxial Cable continuity, such as open circuit，short circuit, cross circuit，reverse connection.

② Measure network cable length and determine the distance of open and short circuit is.

③ Directly locate 5E， 6E，telephone cable，coaxial cable，USB cable and other cables.

④ Port Flashing function helps to find the 5E 6E network cable which connected to the switch easily.

⑤ Locate wiring or connection error.

⑥ Dynamically calibrate cable length and make the cable length measurement as accurate as 98%.

⑦ Simple and easy use. Big screen to display the test result clearly.

⑧ The main tester (≤7V) has a low voltage alert function.

⑨ Portable unit with long battery lifte (wait case 50 hours) .

⑩ Automatically time- delay shut off and backlight display function.

3、Technical indexes

① **Overall Dimension**
Main tester: 185x 105x 50mm;
Receiver: 218x46x29mm
Remote identifier: 84x34x27mm.

② **Display**
Big LCD screen: Special 128 x 64 character(valid visual field 64 x 32 mm).

③ **Power**
Two laminated batteries of 9V.

③ **Type of cable tested**
STP/UTP twin twisted cable, RJ11,coaxial cable ,USB cable and other metal wires.

⑤ Type of cable detected
STP/UTP 5E, 6E, telephone wire, coaxial cable, USB cable and other metal wires.

⑥ Display
Working temperature/humidity -10℃ ~ +60℃ /20% ~ 70%

⑦ Tester Port
Master: RJ45 main port, Port Flash, RJ45 Scan, RJ11 scan, USB Scan，BNC port and power port.
Remote Identifier: RJ45 port(R) , BNC Port.
Receiver: Earphone port

⑧ Length Measurement of RJ45
Measuring range: 5~350 M (3 ~1148 ft)
Calibration accuracy: 2% (+/- 0.5M or +/- 1.5 ft)(calibrating cable > 10 M)
Measuring accuracy: 5% (+/- 0.5 M or +/- 1.5 ft).(AMP, AT&T Class 5 cable)
Display Unit: M or ft.

⑨ Length Measurement of RJ45
User can set calibration coefficients by himself with a given length cable.
The length of calibrating cable is more than 10 M.

⑩ Wire Sequence and Locating Cable Error
Check errors such as open circuit, short circuit, reverse connection, cross-over.

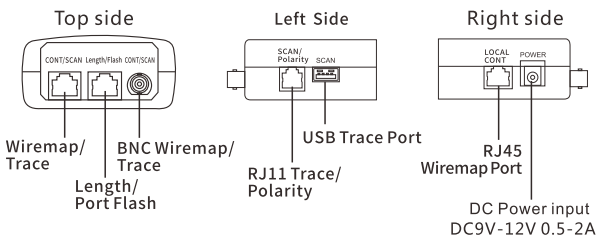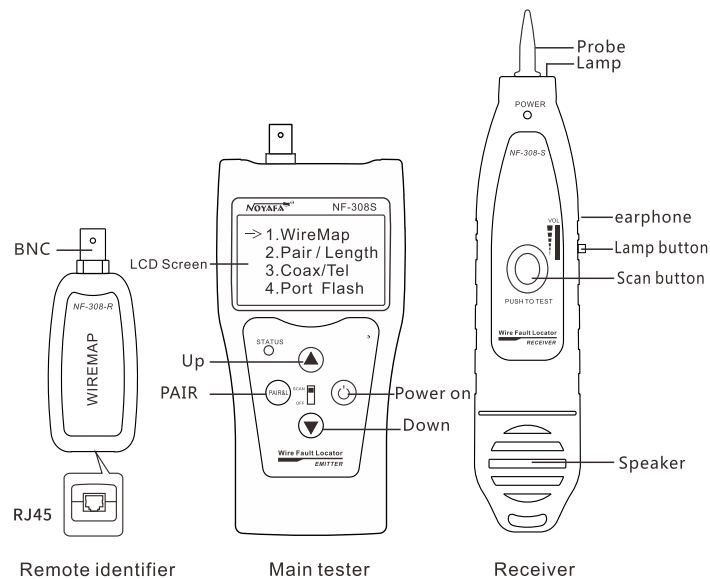## ⑪ Positive and negative judgment
The main tester can polarity testing by clipping wires.

⑫ Port Flash
Insert one end of the network cable into the "port flash" port on the main tester, another end to the switch.
It will help to find the target cable easily (network cable condition must be good) .

4、 Product interface and keypad introduction

Probe
Lamp

POWER
NF-308-S

VOL

earphone
Lamp button
Scan button

PUSH TO TEST

Wire Fault Locator
RECEIVER

Speaker

BNC

LCD Screen

NF-308-R

WIREMAP

RJ45

NOYAFA   NF-308S

→ 1.WireMap
2.Pair / Length
3.Coax/Tel
4.Port Flash

STATUS

Up

PAIR   PAIR   SCAN   Off

Power on

Down

Wire Fault Locator
EMITTER

Remote identifier   Main tester   Receiver

Top side

CONT/SCAN Length/Flash CONT/SCAN

Wiremap/
Trace   BNC Wiremap/
Trace

Length/
Port Flash

Left Side

SCAN/
Polarity   SCAN

USB Trace Port

RJ11 Trace/
Polarity

Right side

LOCAL
CONT   POWER

RJ45
Wiremap Port

DC Power input
DC9V-12V 0.5-2A

5、Product operation methods

Boot Screen

Carry out self-checking at the same time (The dotted line dynamically displays the course of self-checking from left to right):

```
      Welcome
 to choose noyafa
     NF-308S
```

Wait 5 seconds or push any arbitrary key to display main menu.
Main menu display:

```
   1.WireMap
   2.Pair / Length
—> 3.Coax/Tel
   4.Port  Flash
```
▯▯▶
```
   3.Coax/Tel
   4.Port  Flash
—> 5.Polar Test
   6.Setup
```

### There are six functions to be chosen on main menu.

① WireMap——Wiring diagram measurement to check end-to-end continuity of cables in M, R and locate errors.

② Pair & Length——Pair and measure length to know open, short, points, verify cable length, open circuit distance.

③ Coax/Tel —— Coaxial cable and telephone line.

④ Port Flash ——Insert the cable into port flash , it will help find the target cable which connected to the switch easily.

⑤ Polar Test——help find the positive and negative power.

⑥ SETUP——Calibrate and set up the tester (Refer to description hereinafter).

### Note
Never put a telephone cable into RJ45 Port especially a charged one, for fear of burnout to the tester.

## 5.1、Wiremapping
After entering the wiring diagram (WIREMAP), the tester shall carry out wiring diagram (WIREMAP) test and displays as follows.

```
—> 1.WireMap
   2.Pair / Length
   3.Coax/Tel
   4.Port Flash
```
▯▯▶
```
———Identify———
   ▯▯▯▯▯▯▯▯
```
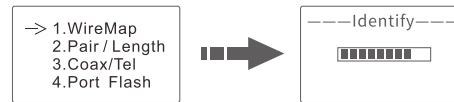
① **Test Result : Short circuit (SHORT)**
It displays as follows if there is any short circuit in cable or terminal: (e.g.3 6 short circuit in the sample)

```
SHORT
  1 2 3 4 5 6 7 8 G
      ▭
```

At the moment, press "▲▼" key to restart testing or press "PAIR&L" key to retutn main menu.

② **Test Result : It will display as follows if the cable to be checked does**
Not insert into the far-end matcher (ID) or the cable does no insert into the local port.

```
⚠ Cable open or
   too short !
```

At the moment, press "▲▼" key to restart testing or press "PAIR & L" key to return main menu.

③ **Test Result : Good condition (eg, STP cable)**

Local test mode: One end to "MAIN" port, the other end to "RJ45 SCAN" port of transmitter. The result is as below.

```
Wire Map: PASS
 S:  1 2 3 4 5 6 7 8 G
     | | | | | | | | |
 M:  1 2 3 4 5 6 7 8 G
```

Remote test mode: One end to "MAIN" port of transmitter, the other end to "RJ45" port of remote. The result is as below.

Attention:

"R" is short for "Remote".

"S" is short for "SCAN".

"M" is short for "Main" side.

"G" means the cable is STP cable.

At the moment, press "▼▲" key to restart testing or press "PAIR&L" key to return main menu.

④ **Test Result : Cross condition(eg,4 5 cross in the sample)**

It displays as follows if there is any cross in cable or terminal:

```
Wire Map: CROSS
 S:  1 2 3 5 4 6 7 8 G
     | | | | | | | | |
 M:  1 2 3 4 5 6 7 8 G
```

⑤ **Test Result 5: Open circuit in the middle**

In the above two test modes, pin 3 is open around at the middle of the cable.

```
Wire Map: OPEN          Wire Map: OPEN
 S:  1 2 X 4 5 6 7 8      R:  1 2 X 4 5 6 7 8
     | | | | | | |            | | | | | | |
 M:  1 2 X 4 5 6 7 8      M:  1 2 X 4 5 6 7 8
```
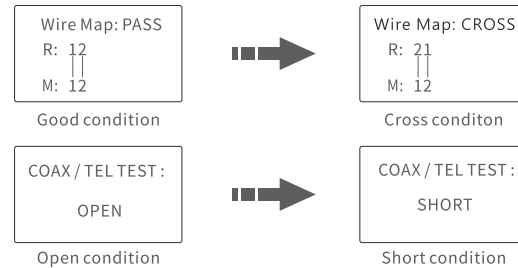　　Local wiremap　　　　　　　Remote wiremap

⑥ **Test Result 6: Coaxial cable continuity testing**

After entering into coaxial cable measurement(Coax/Tel)function,the tester shall start to test and show the test result as follows:

```
Wire Map: PASS                 Wire Map: CROSS
 R:  1 2                        R:  2 1
     | |                            | |
 M:  1 2                        M:  1 2
```
　　Good condition　　　　　　　　　　　　　　Cross conditon

```
COAX / TEL TEST :              COAX / TEL TEST :

      OPEN                           SHORT
```
　　Open condition　　　　　　　　　　　　　　Short condition

It shall display "OPEN" if there is any open circuit or the coaxial cable is not connected.It shall display "SHORT" if there is any short circuit.

At the moment, press "▼▲" key to restart testing or press "PAIR&L" key to return main menu.

5.2、Measuring length for RJ45

Pair and length measurement (PAIR & LENGTH) function:
When testing cable length, just connect one end of cable with
Main tester (Length/flash port), no need the remote unit.
After entering into "PAIR & LENGTH" function, it will display as follows to
indicate the measurement is being undertaken:

```
    1.WireMap
 => 2.Pair / Length
    3.Coax/Tel
    4.Port Flash
```

———Identify———
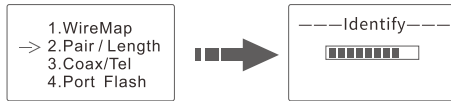
Note: In view of different technical parameters in various brand cables,the user
should calibrate the cable length before length measurement(Refer to the details
herein).

Test Result :

Normal pair and length (PAIR &L ENGTH) display It will display as follows if pair
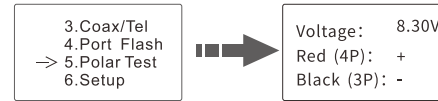and length(PAIR & LENGTH) measurement is in normal condition:

```
Pair  12   105.3m
Pair  36   105.3m
Pair  45   105.3m
Pair  78   105.3m
```

5.3、Polarity test

Firstly, insert into RJ11/SCAN port with the standard alligator clips.Secondly,
choose "polar Test" from the main menu when you have clamped the
battery polarity with the clips.

Thirdly, you can see the result shown on the screen: Voltage of the battery, Red &
Black tells you the polarity. ("+" means anode , "-" means cathode).
ATTENTION: whenever you connect anode or cathode for the red & black clips, it's
doesn't matter for the result.

```
    3.Coax/Tel
    4.Port  Flash
 => 5.Polar Test
    6.Setup
```

```
Voltage:     8.30V
Red (4P):    +
Black (3P):  -
```

5.4、Port-flash testing:(Only used to tracing RJ45 cable)

Choose "Port flash" function in the menu,take one side of the RJ45 cable insert into
"Length/flash" Port,the other side connects with switch/router,press" Pair&L" to
enter port-flash testing,and the screen display ◯ if the cable continuity is well,the
Lcd will display ◉ ,and the flash frequency is same as the LED light of the port on
switch/router. it will help find the target cable which connected to the switch easily.

```
    3.Coax/Tel
    4.Port  Flash
 => 5.Polar Test
    6.Setup
```

———Identify———

◯

———Identify———

◉
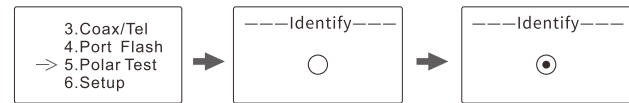
5.5   Low battery alert

When the battery of the main tester is less than 7V,
LCD screen display a flash icon " 🔋 "

5.6   Start up or shut down and hunting function

① Press PUSH key,the hunting indicator light (SCAN) flashes,which indicates that
audio frequency transmission of main tester is normal , insert the cable to be
tested into RJ45 SCAN Port . then hold the receiver to trace cable needed (the
usage of receiver is shown in the following). RJ11/BNC/ USB cable is located when
inserted into its corresponding port.

```
Scanning...
```

```
———POE switch———
Scanning...
```
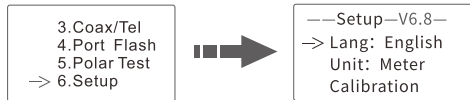
② **Usage of the receiver**

Install 9V battery ,press "PUSH" key, then approach the cable with probe and find targeted one among lots of cables. When the probe is near target wire, the "beep, beep and beep" sound will come out and the signal indicator light "POWER" will be on. When loudest "beep" and brightest indicator means that is the required cable.

a. The user can turn volume switch to control the volume.

b. The lamp function helps the users operate in dark environment.

c. Earphone helps avoid external interference in noisy environment.

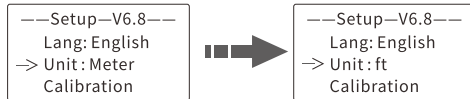d. The tester can not measure cable length and wire faults when it is operated to trace cable.

6. Setting function

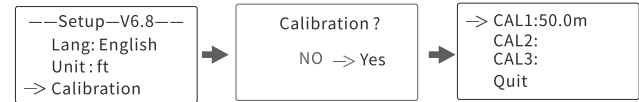Choose "Set" function in the menu,press "Pair&L" enter the setting menu,press "⧨⧨" to choose term:

① Language setting: press "Pair&L" to switch Chinese/English.

```
  3.Coax/Tel
  4.Port  Flash
  5.Polar Test
-> 6.Setup
```
➡
```
——Setup—V6.8—
-> Lang: English
   Unit: Meter
   Calibration
```

② Unit setting: press "Pair&L" to switch m/feet.

```
——Setup—V6.8——
   Lang: English
-> Unit : Meter
   Calibration
```
➡
```
——Setup—V6.8——
   Lang: English
-> Unit : ft
   Calibration
```

③ Calibration: Take a given length cable,one side insert into "Length/flash" port,the other side is empty.

```
——Setup—V6.8——
   Lang: English
   Unit : ft
-> Calibration
```
➡
```
   Calibration ?

   NO  -> Yes
```
➡
```
-> CAL1:50.0m
   CAL2:
   CAL3:
   Quit
```
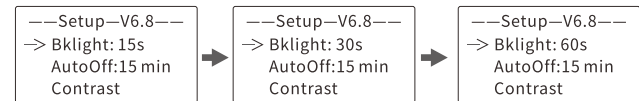
Press "Pair&L" to test the length result,press "⧨⧨" to adjust the data is same with the given length cable.

Press "Pair&L" to save the data to "Calibration 1/2/....." ,choose return to menu.

④ Load data: press "Pair&L" to enter and choose the Calibration data.

```
——Setup—V6.8——
   Unit : Meter
   Calibration
-> Load Data
```
➡
```
-> CAL1:50.0m
   CAL2:
   CAL3:
   Quit
```
➡
```
   Load !
   CAL1: 50.0m
```
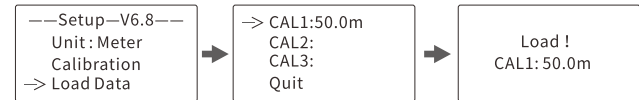
⑤ Backlight time set:press "Pair&L" to set backlight time 15s/30s/60s.

```
——Setup—V6.8——
-> Bklight: 15s
   AutoOff:15 min
   Contrast
```
➡
```
——Setup—V6.8——
-> Bklight: 30s
   AutoOff:15 min
   Contrast
```
➡
```
——Setup—V6.8——
-> Bklight: 60s
   AutoOff:15 min
   Contrast
```

⑥ Auto-off time set: press "Pair&L" to set auto-off time 15nin/3min/1h/2h/OFF.

```
——Setup—V6.8——
   Bklight: 15s
-> AutoOff:15 min
   Contrast
```
➡
```
——Setup—V6.8——
   Bklight: 15s
-> AutoOff:30 min
   Contrast
```
➡
```
——Setup—V6.8——
   Bklight: 15s
-> AutoOff:1 h
   Contrast
```

7. Accessories list

308S Main Tester	1pc	Alligator clips	1pc
308S Receiver	1pc	RH23 adapter	1pc
308S Remote	1pc	User manual	1pc
Earphone	1pc	Carry bag	1pc
Telephone line adapter	1pc	Color box	1pc
Certification Card	1pc		

Diagram of series products

NF-868

NF-268

NF-8601

NF-806B

NF-800

NF-816

NF-468L

NF-820

NF-2100

NF-708

NF-905

NF-911

设 计	品名		样式	印刷要求
HZL	NF-308S说明书英文-V1.1		骑马钉	彩色
日期	品号		页码	
2022.09.16			18P	
样品	尺寸		材质	
	105x145mm		128g 铜版纸	
变更记录	V1.1较V1版本，更新测长范围			