

**NOYafa**<sup>®</sup>

*Your excellent helper in cable test!*

**MODEL: NF-8108**

# INSTRUCTION MANUAL

## Network Cable Tester



**ORIGINAL  
AUTHENTIC**

*Patented products,  
Counterfeiting not allowed.*

REV1.0



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

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## **Overview**

NF-8108 network cable tester with new functions researched and developed by our company. The equipment is composed of tester (NF-8108) and remote identifiers..It is especially designed to check and test network cable. Such as open, short, reserve. NF8108-M can also test cable length accurately. Thus, it becomes an available tool in communication field.

Main

## **Main Functions and features**

One person enough to complete cable continuity check.

Check wiring error in 5E, 6E, coaxial cable such as open, short, jumper wire, reverse connection .

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

Simple and easy use. Big screen to display result .

Portable unit with long battery life (wait-case 50 hours).

Automatically time-delay shut off.

Self-checking and automatically compensate any change in battery capacity or ambient temperature.

Single board computer software watchdog design and reliable operation.

**(5). Ambient temperature in work**

-10°C~+60°C

**(6). Tester Ports**

Tester RJ45 master port (M), tester LOOPBACK RJ45 port (L), Remote identifier RJ45 port ®

**(7). Length Measurement of Twin Twisted Cable**

Scope: 1~305 M ( 3 ~1000 ft)

Calibration accuracy: 3% (+/- 0.5M or +/- 1.5 ft) (calibrating cable > 10 M)

Shipment accuracy: 5% (+/- 0.5 M or +/- 1.5 ft). (AMP, AT&T Class 5 cable)

Display: M or ft.

**(8). Length Calibration:**

User can calibrate cable length by himself with a given length cable. The length of calibrating cable is more than 10 M.

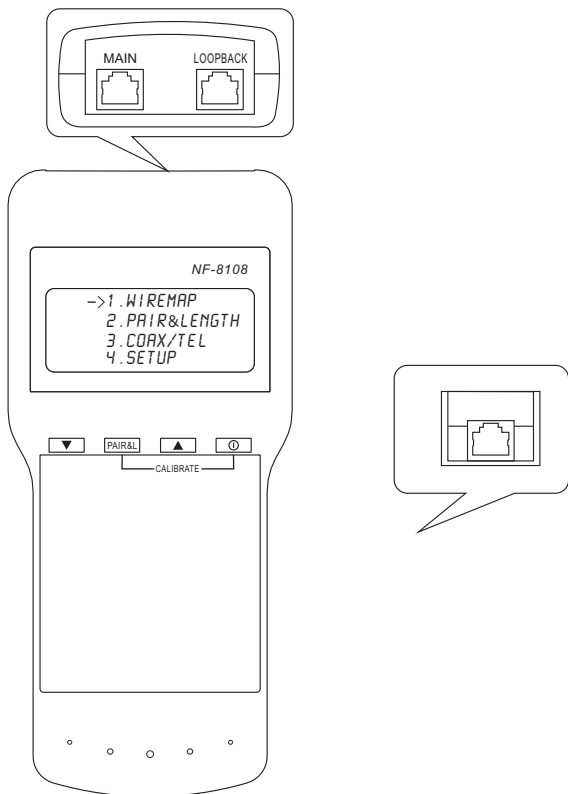
**(9). Wire Sequence and Locating Cable Error:**

Check errors such as open, short , reverse connection.

**(10). Automatic Time-delay Shut Off Time:**

The tester does not operate for 30 minutes.

## Product interface and keypad Introduction



Main

## Product operation methods

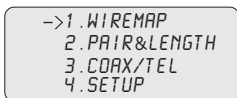
Start and display:

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



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

Main menu display:

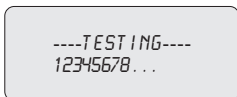


**There are four functions to be chosen on main menu.**

1. WireMap --- Wiring diagram measurement to check end-to-end continuity of cables M, L, R and locate error.
2. Pair & Length---Pair and measure length to verify cable length, open circuit, pairing .
3. Coax/Tel---Coaxial cable measurement to check continuity and indicate open and short circuit.
4. SETUP---Calibrate and length of cable.

### Wiring diagram (WIREFMAP) test function:

After entering the wiring diagram (WIREFMAP) test function, the tester shall carry out wiring diagram (WIREFMAP) test and displays as follows while checking is being undertaken:






### Test Result 1: Short circuit (SHORT)

It displays as follows if there is any short circuit in cable or terminal: (e.g. 12 short circuit in the sample)



```
SHORT :  
12
```

At the moment, push   key to restart testing or push  key to return main menu. Always eliminate short circuit error first and then start further measurement.




### Test Result 2:

**Neither remote unit (ID) nor cable inserts into local port (L) .**

The tester will automatically detect remote unit and connected, it will display as follows if the cable to be checked does not insert into the remote unit or if the cable does not into the local(L) in local test:

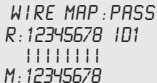


```
NO ADAPTER :
```

At the moment, push   key to restart testing or push  key to return main menu.

### Test Result 3: Normal wiring diagram (WIREFMAP) display




The tester will automatically detect remote unit or local port (L) cable and it will display wiring diagram (WIREFMAP) as follows if the remote unit (ID) or the cable to be checked is found:



```
WIREFMAP : PASS  
R : 12345678 ID1  
|||||||  
M : 12345678
```

"R:" means "Remote" tester.

"M:" means "Master" tester.

At the moment, push   key to restart testing or push  key to return main menu.

#### Test Result 4: Wiring diagram (WIREFMAP) display when there is an open circuit at the far-end of cable.

```
WIRE MAP : FAIL
R : 12X45678 101
  | | | | | | | |
M : 12345678
```

"R:" line "3" and "6" pin location display "x", it indicates an open circuit in far-end plug "3" and "6" pin and the open circuit is located nearby the far-end plug. (The open circuit should be located within 10% cable length if it is measured from the far-end plug)

Note: because the cable is made via paired cable cores, the open circuit at the far-end always displays in pair as shown above where there is one open circuit or all are open circuits in the far-end "3" and "6" pins. For identification, it is simple to move the tester to the far-end to have the measurement.

**Test Result 5:** Wiring diagram (WIREFMAP) display when there is an open circuit at the near-end of cable. It will display wiring diagram (WIREFMAP) as follows if there is an open circuit at the near-end plug of the cable:

```
WIRE MAP : FAIL
R : 12345678 101
  | | | | | | | |
M : 12X45678
```

"M:" line "3" pin location displays "x", it indicates an open circuit at near-end plug "3" pin and the open circuit is located nearby the near-end plug. (The open circuit should be located within 10% cable length if it is measured from the near-end plug)

**Test Result 6:** Wiring diagram (WIREFMAP) display when there is an open circuit in the middle of the cable.

```
WIRE MAP : FAIL
R : 12345678 101
  | | X | | | | |
M : 12345678
```

"|" line "3" pin location displays "x", it indicates an open circuit in the middle of "3" pin cable. (The open circuit should be located within 10%-90% cable length if it is measured from the near-end plug.) The pair and length function (PAIR & LENGTH) can make user know where the open point accurately is.

## Pair and length measurement (PAIR & LENGTH) function:

After entering into "PAIR & LENGTH" measurement, the tester shall have pair and length (PAIR & LENGTH) test and it will display as follows to indicate the measurement is being undertaken:

A rectangular display box with rounded corners containing the text: ---TESTING---  
12345678...

Note: In view of different technical parameters of different brand cables, the user should use "calibration" function before length measurement (Refer to the details herein).

### Test Result 1: Short circuit (SHORT)

It will display as follows if there is any short circuit in cable or terminal:  
(12 short circuit in the sample)

A rectangular display box with rounded corners containing the text: SHORT :  
12

(The tester is incapable to exactly locate short circuit.)

At the moment, push key to restart test or push **PAIR&L** key to return the main menu.

Always correct short circuit error first and then start further measurement.

### Test Result 2: Normal pair and length (PAIR & LENGTH) display

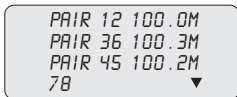
It will display as follows if pair and length (PAIR & LENGTH) measurement is in normal condition:

A rectangular display box with rounded corners containing the text: PAIR 12 100.0M  
PAIR 36 100.3M  
PAIR 45 100.2M  
PAIR 78 99.8M

At the moment, push key to restart test or push **PAIR&L** key to return the main menu.

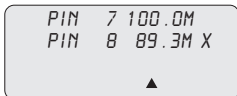
### Test Result 3: Abnormal pair and length (PAIR & LENGTH) display

It will display the paired lines first if there is unpaired lines and length (PAIR & LENGTH) measurement:



```
PAIR 12 100.0M
PAIR 36 100.3M
PAIR 45 100.2M
78 ▼
```

In which, the last line (78 ) indicates there is no pair is found in lines 7 and 8, at the moment, it will display the length of unpaired line number.



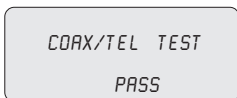
```
PIN 7 100.0M
PIN 8 89.3M X
▲
```

It will display "X" to indicate an open circuit if the length is less than 90% of other line pair length and the open circuit is located at around 89.3M from the tester. (The open circuit line number could be rechecked by WIREMAP function.)

At the moment, push key to go back previous picture and push key to show further unpaired line number length. (Or push key to return the main menu)

### Coaxial cable and telephone line measurement function:

After entering (Coax/Tel) function, the tester will show the test result as follows if the cable is normal::



```
COAX/TEL TEST
PASS
```

It shall display OPEN if there is any open circuit or the coaxial cable is not connected. It shall display SHORT .At the moment, push key to repeat the measurement or push key to return the main menu.

## Calibration and setup (SETUP) function:

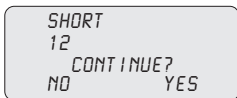
After entering into calibration and setup (SETUP) function, the tester shall display as follows:

```
----SETUP----  
->UNIT:METER  
CALIBRATION  
QUIT
```

Push  key to move cursor  indicator up and down to the desired item and then push  key to enter related setup function accordingly.

UNIT: It is used to set up length unit and shifts between meter (Meter) and feet (FT).

At the moment, push  key (No) to exit calibration function. Push  key (Yes) to repeat the measurement.



At the moment, push  key (No) to exit calibration function. Push  key (Yes) to repeat the measurement.

**Note:** If the tester is restarted, the tester will recover the standard calibration factor of Class UTP5 cable as the value set before.

## Diagram of series products



**NF-306**



**NF-868**



**NF-8208**



**NF-268**



**NF-806R**



**NF-816**



**NF-468L**



**NF-3468**



**NF8108-M**



**NF-388**



**NF-903**



**NF-906A**



*Your excellent helper in cable test!*

**SHENZHEN NOYafa ELECTRONIC CO.,LTD**