

**NOYafa**<sup>®</sup>

Your excellent helper in cable test!

**MODEL: NF-8208**

# INSTRUCTION MANUAL

## LCD Network Length Tester



**ORIGINAL  
AUTHENTIC**

*Patented products,  
Counterfeiting not allowed*

REV1.0



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

Main testerr uses 6V DC for power supply; Receiver 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 maintenance 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.

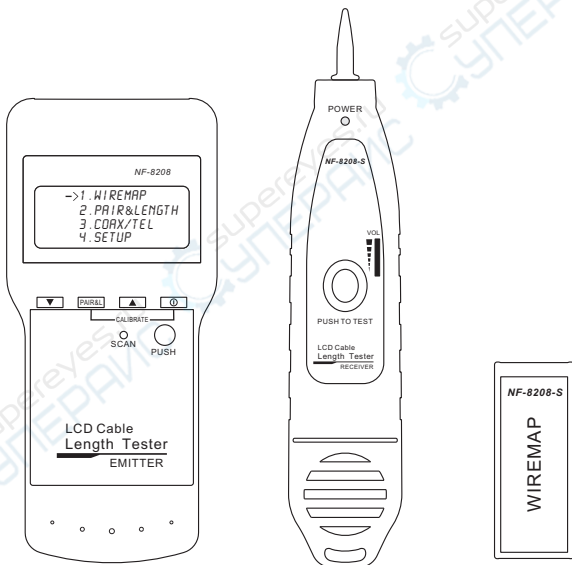
Never conduct related operation of communication line in thunderstorm weather so as to prevent lightning stroke and impact on personal safety.

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## Overview

LCD cable tester NF-8208 is an updated item after NF-8108. It is composed of Main tester , Receiver and Remote identifier. Compared to NF-8108, it can not only wiremap network cable, measure the length of network cable, but it can also trace cables with its receiver, which makes it a more popular tool in network and telecommunication field.



Main tester(NF-8208)

Receiver(NF-8208-S)

Remote identifier

## Main Functions and features

One person enough to complete cable continuity check.

The function of probing the audio and tracing the cable.

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

Measure the length of network cable, and locate the open and short point.

Simple and easy use. Big screen to display test result clear.

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

Automatically time-delay shut off.

Measure length and pair with or without far-end recognizer.

Remote recognizer is with prompting voice.

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

Single board computer software watchdog design and reliable operation.

## Technical indexes

### (1). Overall dimension

Main tester: 180×80×40mm; receiver: 218×46×29mm;

Remote identifier: 77×31×21mm.

### (2). Power

Main tester uses 6V DC for power supply; Receiver uses 9V battery for power supply .

### (3). Display

Special 4 x 16 character big screen LCD lattice  
(valid visual field 61.6 x 25.2 mm).

### (4). Type of cable tested

STP/UTP twin twisted cable. telephone cable, coaxial cable, ect.

**(5). Type of cable detected**

5E, 6E

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

-10°C~+60°C

**(7). Tester Port**

Tester RJ45 master port (M), tester LOOPBACK RJ45 port (L),  
hunting RJ45 port(SCAN);

Remote identifier RJ45 port (R)

The extra BNC and RJ11 converters are used to measure and check  
the continuity of coaxial cable and telephone line.

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

Scope: 1~350 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.

**(9). Length Calibration:**

User can set calibration factor by himself with a given length cable.

The length of calibrating cable is more than 10 M.

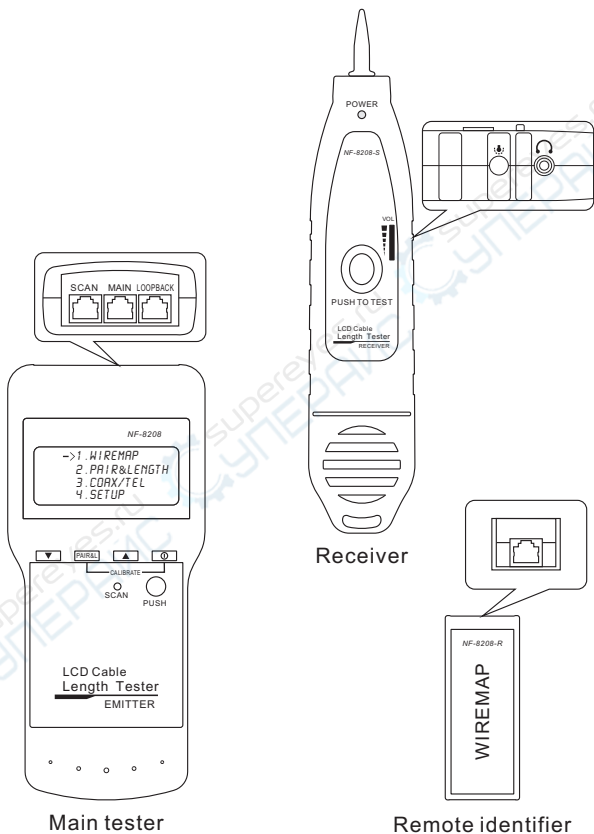
**(10). Wire Sequence and Locating Cable Error:**

Check errors such as open circuit, short circuit, reverse connection,  
cross-over

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

The tester does not operate for 30 minutes.

## Product interface and keypad Introduction



## Product operation methods

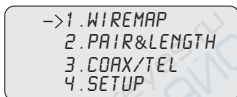
Start and display:

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



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

Main menu display:

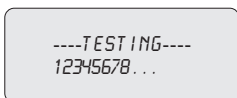


### There are four functions to be chosen on main menu.

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 distance, pairing .
3. Coax/Tel---Coaxial cable and telephone line measurement.
4. SETUP---Calibrate

### Wiring diagram (WIREMAP) test function:

After entering the wiring diagram (WIREMAP) test function, the tester shall carry out wiring diagram (WIREMAP) 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 **PAIR&L** key to return main menu. Always correct short circuit error first and then start further measurement.

**Test Result 2:** it will display as follows if the far-end of cable to be checked does not insert into the far-end matcher (ID) 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 **PAIR&L** key to return main menu.

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

it will display wiring diagram (WIREMAP) as follows if it is found the far-end matcher (ID) or the local port (L) on the far-end of cable to be checked:

```
WIRE MAP : PASS  
R: 12345678 ID1  
|||||||  
M: 12345678
```

"R" means Remote unit "M" means Mian tester

At the moment, push   key to restart testing or push **PAIR&L** 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 : 12X45X78 101
  | | | | | | |
M : 12345678
```

"R:" line "3" and "6" pins location display "x", it indicates an open circuit in far-end plug "3" and "6" pins 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 network cable is made of pair cores, if there is open circuit, it will show faults in pairs, just as above "3" & "6". It means either "3" pin or "6" pin exists an open circuit, or both "3" and "6" exist an open circuit.

#### 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: Open circuit in the middle of cable

It will display wiring diagram (WIREMAP) as follows if there is an open circuit in the middle of the cable:

```
WIRE MAP: FAIL  
R:12345678 101  
  11X11111  
M:12345678
```

"1" 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.) For further locating open circuit, the function (PAIR & LENGTH) of the tester could be used as detailed hereinafter.

it will display as follows to indicate the measurement is being undertaken:

```
----TESTING----  
12345678...
```



Note: In view of different technical parameters in various brand cables, the user should apply the tester dynamic 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)

```
SHORT :  
12
```



(The tester is incapable to know the exact location of short circuit.)

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

Always eliminate short circuit 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:

```
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 in the pair 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 in lines 7 and 8, at the moment, it will display the length of unpaired line number (as shown below):

```
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.)

**Note:** NF-8208 can not check the wiremap of coax cable and telephone cable directly, it needs RJ11 cable adaptor and BNC cable adaptor.

## Calibration and setup (SETUP) function:

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

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

Dynamic calibration (CALIBRATION) function:

(Another way to quickly enter into dynamic calibration: hold **PAIR&L** key while start the tester)




For an accurate measurement of cable length, the calibration operation should be done as follows.

After entering into dynamic calibration function, the tester shall display as follows:

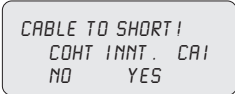
```
CALIBRATION?  
NO YES
```

Insert same type cable of given length into " M " port, do not need insert far-end recognizer, push **OK** key (Yes) to undertake measurement and display the measured length (as shown below):



```
PLEASE ADJUST?  
20.0M  
- OK +
```

At the moment, hold  and  key (-/+) to display the length to be adjusted to actual given length and then push  key to reserve calibration factor and exit calibration function.

It will display as follows if the cable length being measured is too short (<10M) to remind the user to change a longer cable for calibration:





```
CABLE TO SHORT!  
COHT INMT. CAI  
NO YES
```

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



```
SHORT  
12  
CONTINUE?  
NO YES
```

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

**Note:** If the tester is restarted after it shuts off, the tester will recover the standard calibration factor of Class UTP5 cable as setup before shipment.

## Start up or shut down AF hunting function

(1). Press PUSH key, the hunting indicator light (SCAN) flashes, which indicates that audio frequency transmission of main tester is normal, insert wire to be hunted into RJ45 port hold the receiver to trace the targeted cable (the usage of receiver is shown in the following).

## Usage of the receiver

Install 9V battery in the receiver, press the "PUSH" button to get close to cables with probe. the transmitter will "beep, beep, beep", when the probe is close to a cable which makes the tone is loudest, it means the cable is the targeted one.

## 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**



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