Your excellent helper in cable test!

INSTRUCTION MANUAL

LCD Network Length Tester

WIREMAP

ORIGINAL AUTHENTIC

VER: V2

Contents

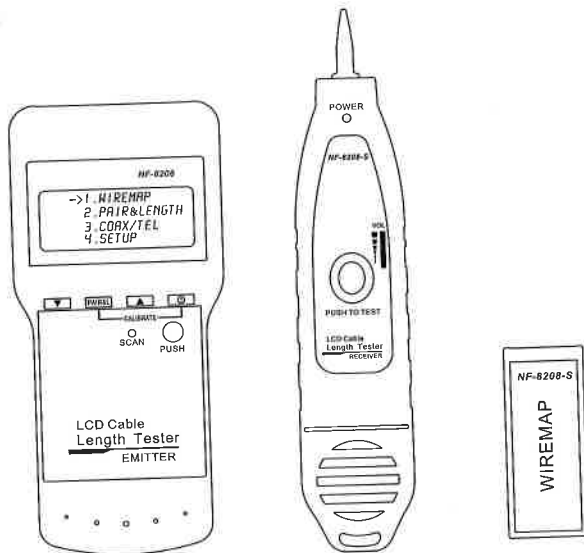## IMPORTANT SAFETY INFORMATION

Please read these instructions carefully before use and retain for future reference.

- When using electrical appliances basic safety precautions should always be followed.
- Do not expose the equipment to dust, high humidity or high temperature (above 40°C).
- There are no user serviceable parts in this product. Refer servicing to qualified personnel.
- Use the battery according to the specification, otherwise it may result in damage to the equipment.
- Remove the battery from the equipment if it is not going to be used for a long period of time.
- Never use the Cable Length Tester to test a live connection, such as a power supply circuit of 220V, as it may result in damage to the equipment or person.
- Do not conduct related operation of communication lines in a thunderstorm, in order to prevent lightning strike.

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

PRODUCT FEATURES

※ Check cable errors such as open circuit, short circuit,
   reverse connection, cross-over.
※ Measure Network cable length can arrive 1000 meter (3200ft).
※ Type of cable tested for STP/UTP twin twisted and 5e, 6e cables.
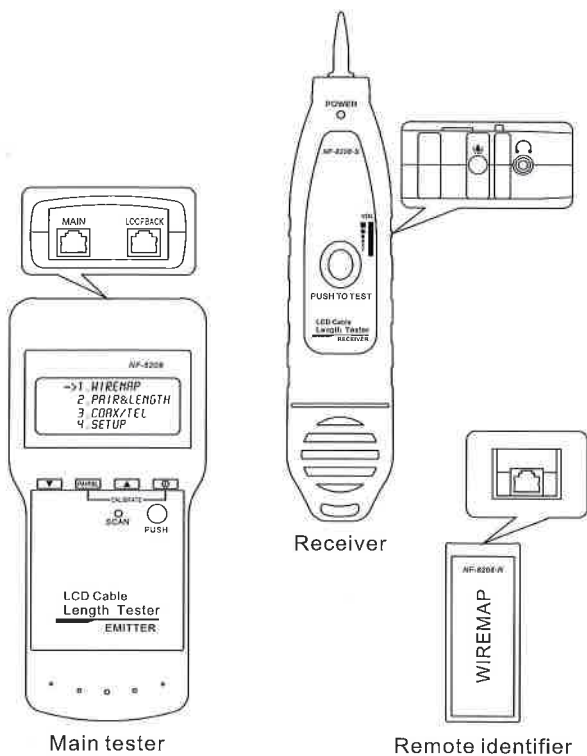※ The length of calibrating cable is more than 10m.
※ Display: m or ft.

ACCESSORIES

1. RJ45 adaptor cable
2. Cable clips
3. Earphone
4. Instruction manual
5. Pouch bag

TECHNICAL SPECIFICATION

Overall dimensions	◆ Main tester: 180 x 80 x 40mm ◆ Receiver: 218 x 46 x 29mm ◆ Remote Identifier: 77 x 31 x 21mm
Overall dimensions	◆ Main tester uses 6V DC for power supply ◆ Receiver uses 9V battery for power supply
Display	Special 4 x 16 character big screen LCD
Type of cable tested	STP/UTP twin twisted cable
Type of cable detected	5e, 6e
Ambient temperature in work	-10°C to +60°C
Tester Port	◆ Tester RJ45 master port (M), tester Loopback RJ45 port (L) ◆ Remote Identifier RJ45 port (R) ◆ The extra BNC and RJ11 converters are used to measure and check the continuity of coaxial cable and telephone cables
Length measurement of twin twisted cable	◆ Scope: 1 to 1000m (1 to 3200ft) ◆ Calibration accuracy: 3% (± 0.5m or ± 1.5ft) (calibrating cable > 10m) ◆ Shipment accuracy: 5% (± 0.5m or ± 1.5ft) ◆ Display: m or ft
Length calibration	◆ User can set the calibration factor with a given length cable ◆ The length of calibrating cable is more than 10m
Wire sequence and locating cable error	Check errors such as open circuit, short circuit, reverse connection, cross-over
Automatic time-delay shut off time	The tester does not operate for 30 minutes

PRODUCT INTERFACE

Receiver

Main tester

Remote identifier

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).

```
   NETWORK
-----------------
 CABLE TESTER
```

Wait for five seconds or press any key to display the main.

```
->1.WIREMAP
  2.PAIR&LENGTH
  3.COAX/TEL
  4.SETUP
```

There are four functions to be chosen on main menu

1. WireMap --- Wiring diagram measurement to check end-to-end con-tinuity of cables M, L, R and locate error,(when verify network cable breaking point , should wire map locally can identify the breakpoint, don't connect with remote).
2. Pair & Length---Pair and measure length to verify cable length, open circuit distance and pairing.
3. Coax/Tel---Coaxial cable and telephone line measurement.
4. SETUP---Calibrate.

Caution: When testing cable for wiremap with remote, do not connect over 60V.

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

Test Result 1: Short circuit (SHORT)

If there is any short circuit in the cable or terminal, the display will read as shown to the right (e.g. shows short circuit between 1 and 2).

```
SHORT :
12
```

The tester is incapable of identifying the exact location of the short circuit. Press the "▼▲" key to restart testing or press the " PAIR&L " key to return to the main menu. Always correct short circuit errors first before beginning further measurements.

Test Result 2:

If the far-end of the cable to be checked does not insert into the far-end matcher (ID), or the local (L) in local test, the display will read as shown (right).
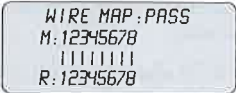
```
NO ADAPTER :
```

Press the ▼▲ key to restart testing or press the PAIR&L key to return to the main menu.

Test Result 3: Normal wiring diagram (WIREMAP) display

When you enter "**WIREMAP**" menu, you should connect "**MAIN**" port on the main tester, and the other end to the remote. If you connect "**LOOPBACK**" with the remote, it will show you "**NO Adapter**" that means you have a wrong operation step.

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

```
No Adapter
```

When you want wire map the cable on the main tester-Namely, locally. Please insert the cable end into "**MAIN**" and the other end to "**LOOPBACK**" , then choose "**WIREMAP**" that menu.

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

```
WIRE MAP:FAIL
M:12345678
  11111111
R:12X45X78
```

"R" The "3" and "6" pins' location display "X". This indicates an open circuit in the far-end plug, "3" and "6" pins, and that the open circuit is located near to the far-end plug. (The open circuit should be located within 10% of the cable length if it is measured from the far-end plug.)

Note: As the network cable is made of pair cores, if there is open circuit, it will show the faults in pairs, just as in the image at the bottom of page 4, which means an open circuit exists in either number "3" or number "6" pin, or in both.

Test Result 5:
The wiring diagram (WIREMAP) will display when there is an open circuit at the near-end of the cable.
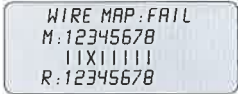
```
WIRE MAP:FAIL
M:12X45678
  11111111
R:12345678
```

It will display the wiring diagram (WIREMAP) as shown (right) if there is an open circuit at the near-end plug of the cable.

"M" The "3" pin location displays "X", which indicates an open circuit at the near- end plug - "3" pin, and that the open circuit is located close to the near-end plug. (The open circuit should be located within 10% of cable length if it is measured from the near-end plug.)

Test Result 6: Open circuit in the middle of cable

If there is an open circuit in the middle of the cable, it will display the
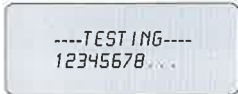wiring diagram (WIREMAP) as shown.

```
WIRE MAP:FAIL
M:12345678
 IIXIIIII
R:12345678
```

"|" The "3" pin location displays "X", which indicates an open circuit in
the middle of the "3" pin cable.

The open circuit should be located within 10%-90% of cable length if
it is measured from the near-end plug.

For further locating an open circuit, the function (PAIR & LENGTH) of
the tester could be used as detailed in the section below.

The display will be as shown (right), indicating that the measurement
is being undertaken.

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

When you measure the cable length, please insert the cable into
"MAIN" on the main tester, and choose "Pair&Length" that menu,
but you should note that the other cable end should keep empty
that keep the result more accurate.

Test Result 7: Normal pair and length (PAIR &LENGTH) display

If pair and length measurement is conducted in normal conditions, it will display as shown (down).
When testing cable length, just connect one end of the cable with the main tester. There is no need for the remote unit.

```
PAIR 12 100.0M
PAIR 36 100.3M
PAIR 45 100.2M
PAIR 78  99.8M
```

Press the ▼▲ key to restart testing or press the PAIR&L key to return to the main menu.

Test Result 8: Abnormal pair and length (PAIR &LENGTH) display

If there is unpaired lines in the pair and length measurement, it will display the paired lines first (down).

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

The last line (78▼) indicates there is no pair in lines 7and 8.
It will display the length of unpaired line numbers as shown (down).

```
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 the other line pair length and the open circuit is located around 89.3m from the tester. (The open circuit line number could be rechecked by WIREMAP function.)

Note: Cannot check the wiremap of coax cable and telephone cable directly as it will require an RJ11 cable adaptor and BNC cable adaptor.

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CALIBRATION AND SETUP

After entering into calibration and setup function, the tester shall display
as shown (down).

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

A quick way to enter into dynamic calibration is to hold the "PAIR&L" key
while starting the tester.
For an accurate measurement of cable length, the calibration operation
should be completed as follows:
After entering into the dynamic calibration function, the display (down)
will be shown on the tester.

```
CALIBRATION?
NO      YES
```

Insert the same type of cable of a given length into port "M".
You do not need to connect the receiver.
Press the ▲ key (yes) to undertake measurement and display the
measured length (down).

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

Press and hold the ▼ and ▲ key (-/+) to display the length to be adjusted
to the actual given length and then press the "PAIR&L" key to reserve
calibration factor and exit calibration function.

If the cable length being measured is too short (<10m) the display will remind you to change to a longer cable for calibration.

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

Press the ▼ key (No) to exit calibration function. Press the ▲ key (Yes) to repeat the measurement.

Note: If the tester is restarted after it turns off, it will recover the standard calibration factor of class UTP5 cable as set up in manufacturing.

CABLE TRACING FUNCTION

Firstly, after connect the cable into main tester for "**LOOPBACK**", and then press "**PUSH**" button on the main tester, at that time, "**SCAN**" lights flashing all the time and the LCD display will show .

```
Scanning...
```

And the other side can hear a loud voice from the receiver when it closes to the target cables. What's more, you should adjust the volume to "**VOL**" and press "**PUSH TO TEST**" button all the time.

USAGE OF RECEIVER

Install the 9V battery in the receiver, hold the "PUSH" button before moving the probe close to the cables; the transmitter will sound. When the probe is close to a cable, which exhibits the loudest tone, it means the cable is the targeted one.

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

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