

NF-838

Multipurpose LCD Display Cable Test & Inspection Instrument

INSTRUCTION MANUAL



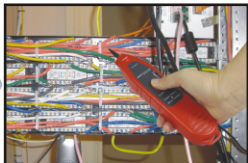
Find target wire required from numerous telephone wires and LAN cables

Example I

Hunt cable in telephone exchanger



Connect launcher and telephone wire port to be hunted in right way



Hunt at the other end with receiver

Example II

Hunt cable in distribution frame



Connect launcher and LAN cable port to be hunted in right way



Hunt at the other end with receiver



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

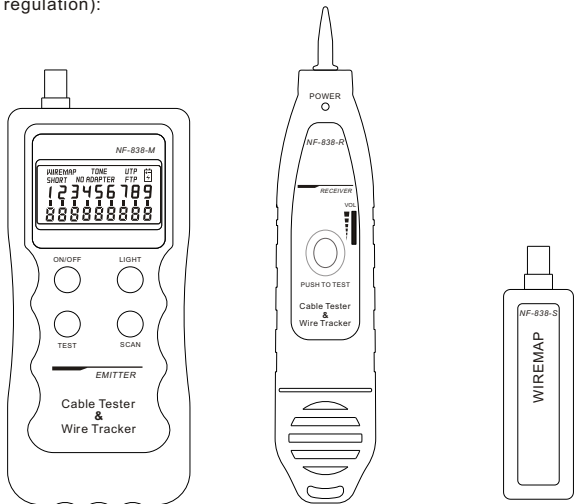
- Never expose the equipment directly in the sun.
- Never put the equipment in the place with much dust, humidity and high temperature (over 40°C).
- Please use battery according to the specification; otherwise, it may result in damage to equipment.
- Please never dismount the equipment arbitrarily. The maintenance and care shall be conducted by professional personnel.
- 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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Brief Introduction

The service manual for user here covers all products of NF-838 (all instructions are suitable for all products as shown in figure below unless there is another regulation):



Emitter(NF-838-M)

Receiver(NF-838-R) Remote identifier(NF-838-S)

Overview

NF-838 multipurpose LCD cable test & inspection instrument is the latest inspection instruction with a number of new functions researched and developed by our company. The product is composed of emitter (NF-838-M) briefly called launcher, receiver (NF-838-R) called receiver and remote identifier (NF-838-S) called remote identifier. The new instrument is provided with fluent appearance, excellent hand feel and considerate human-centered design. It owns three great functions of hunting, wire sorting and circuit status testing and the features of quickness and accuracy, 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, other metal wire circuit and other fields.

Product features:

- LCD, the display effect is more direct, more visual and clearer.
- The wire can be hunted directly in connection with Ethernet switch/ router /PC terminal of different models in startup.
- Test 5E, 6E, telephone wire, coaxial cable, USB cable, 1394 line and other cables for troubleshooting.
- Test 5E, 6E, telephone wire, coaxial cable, USB cable, 1394 line and other cables for troubleshooting.
- RJ45/RJ11/BNC/USB/1394 and other ports are included and the complex switch is not required.
- Select startup/shutdown function and backlight display function.
- Sound hint function of different circuit status
- 9V battery for power supply and low-voltage hint function

Technical indexes

(1) Overall dimension

Emitter: 185x80x32mm; receiver: 218x46x29mm;
Remote identifier: 107x30x24mm

(2) Power

Two laminated batteries of 9V

(3) Display

Large screen LCD segmented display (effective visual area 54x26mm)

(4) Type of cable tested

RJ 45/RJ11/BNC/USB/1394 and other different types

(5) Type of cable detected

RJ 45/RJ11/BNC/USB/1394 and other metal wires

(6) Ambient temperature in work

-10°C~+60°C

(7) Signal transmission distance

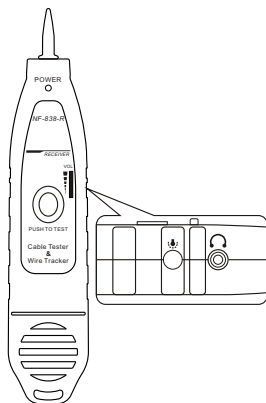
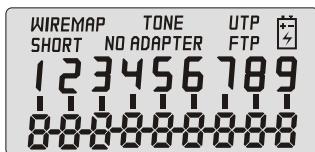
More than 3 km

(8) Location of wire order and cable failure

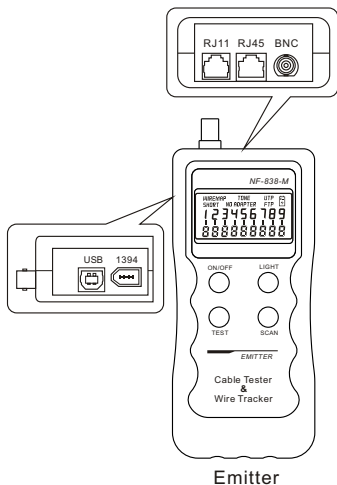
Failure test, open circuit, short circuit, reversed position, crossing and series winding

Product Interface and Keypad Introduction

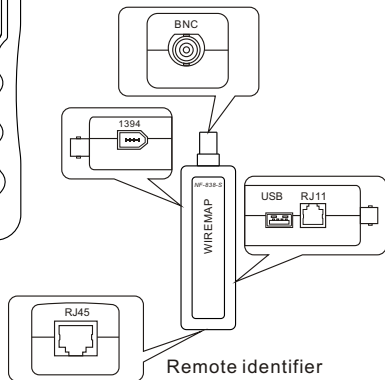
Instructions for LCD Display



Receiver



Emitter



Remote identifier

Instructions for product

Press "ON/OFF" key of emitter, the equipment is started with a long sound. Meanwhile, the default of system is wire order test, LCD "TEST" will flashes for a while and LCD display is as follows if the cable is not connected.



WIREMAP
NO ADAPTER

Wire order test (Take RJ45 as an example)

Open battery cover, install DC 9V battery in launcher, cover the battery cover, press "ON/OFF" key, and the emitter is started up. One end of RJ45 wire to be tested of which the plug is pressed shall be connected to RJ45 port of emitter and the other end is connected to RJ45 port of remote identifier. Slightly touch "wire sorting" key to test wire order. If the cable has shielding wire (or earthing wire), LCD will display "STP"; if the cable never has shielding wire (or earthing wire), LCD will display "UTP"; press "Backlight" key to make backlight source on in dim test environment. Several test results as follows may occur.

Test Result1: Short circuit (SHORT)

If there is short circuit of cable or terminal, the emitter may give three short "tick, tick and tick" sound. Meanwhile, LCD display the picture below: (take 34-short circuit as example)



WIREMAP
SHORT

34

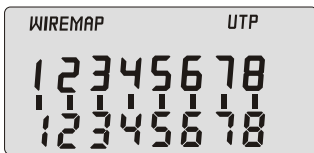
At this moment, press "wire sorting" key to conduct test again. If the short circuit still occurs, please conduct troubleshooting before measuring.

Test Result 2: The remote identifier or cable is not inserted to the emitter, the launcher gives a “tick” and LCD displays the picture below in the meanwhile:

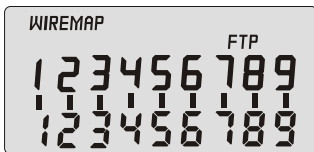


Test Result 3: Normal wiring map (WIREMAP)

The instrument may conduct automatic detect emitter and remote identifier RJ45 cable. If the wiring is right, the launcher will give a long “tick” and LCD displays the picture below in the meanwhile.



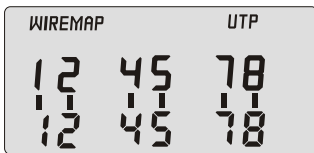
RJ45 cable without shielding wire



RJ45 cable with shielding wire

Test Result 4: When there is open circuit of cable

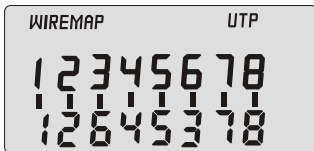
The emitter will give a long "tick" sound and LCD displays the picture below in the meanwhile:



The picture indicates that "3" "6" line of RJ45 cable is in open circuit.

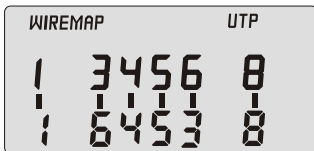
Test Result 5: When the cable is crossed /disorder

The emitter will give two short "tick, tick" sound and LCD displays the picture below in the meanwhile:



The picture indicates that "3" "6" line of RJ45 cable is in crossing.

Test Result 6: When the cable is in crossing/disorder and in open circuit in the meanwhile, The emitter will give two short "tick, tick" sound and LCD displays picture below in the meanwhile:



The picture indicates that "3" "6" line of RJ 45 cable is in crossing and "2" "7" lines are in open circuit.

Test of different cable orders

The normal test result of RJ45 cable order is shown as below:

WIREMAP	UTP
12345678	11111111
12345678	12345678

The normal test result of RJ11 Cable order is shown as below:

WIREMAP	UTP
123456	111111
123456	123456

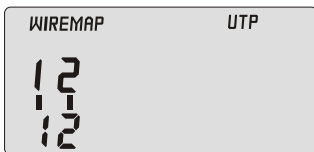
The normal test result of 1394 line order is shown as below:

WIREMAP	UTP
123456	111111
125634	1234

The normal test result of USB cable order is shown as below:

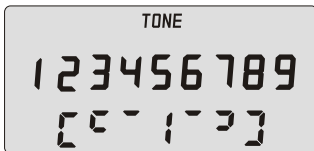
WIREMAP	UTP
1234	1111
1234	1234

Normal test result of BNC line is shown as below:



Hunting test

Press "ON/OFF" key of the emitter, the equipment is started up with a long sound. Slightly touch "hunting" key and enter hunting mode, LCD screen displays the following in flashing:




Dismount battery cover of the emitter, install the battery of 9V, cover the battery cover and press "ON/OFF" key, then the emitter will start working. Connect cable to be hunted to corresponding port of the emitter (RJ45, RJ11, USB, BNC, 1394 and others), slightly touch "SCAN" key, enter signal hunting mode and select corresponding frequency according to the requirement (there are 9 kinds of frequency can be selected, one kind of frequency signal will be changed when "SCAN" is pressed for once and the signal frequency type is switched from 1~9 in circulation); then open battery cover of the receiver, install battery of 9V, cover the battery cover and take the receiver to hunt target wire (the usage of receiver is shown in the following). Press "backlight" key to make backlight source is on when the test is conducted in dim environment.

Usage of the receiver

Dismount the battery cover, install battery of 9V, take the receiver with thumb pressing "PUSH" key, then approach the cable with probe and find target wire required in numerous cables. When the probe is near target wire, the "beep, beep and beep" sound may occur and the signal indicator light "POWER" will turn on. Compare volume of "beep, beep and beep" and luminance of signal indicator light, the wire of which the sound is the loudest and the signal indicator light is the brightest is target wire required.

Other functions

(1) Low-voltage hint function

When the battery voltage is low, the low-voltage hint sign “” on LCD will flash and the user shall have the battery replaced at this moment.

(2) Earphone function

The earphone can be worn in noisy environment for operation so as to avoid external interference.

(3) Volume adjustment function

Turn volume adjustment switch on the receiver in hunting to adjust the volume to the appropriate degree.

(4) Floodlight function

The side floodlight can be started at night or in darkness environment. The floodlight turns on so as to facilitate your normal operation.

(5) Keypad sound start and stop function

If the user needs to stop keypad sound in test, the user can slightly touch “wire sorting” and hunting key, the keypad sound is stopped; if the keypad sound is about to started again, the operations above shall be repeated so that the keypad sound is started.

Packing list

1. Emitter	1PCS	7. Alligator clip adaptation line	1PCS
2. Receiver	1PCS	8. RL45 adaptation line	1PCS
3. Remote adapter	2PCS	9. Service manual	1PCS
4. Laminated battery of 9V	2PCS	10. Kit	1PCS
5. Earphone	1PCS	11. Color box	1PCS
6. RJ11 Adapter line	1PCS	12. Quality certificate	1PCS

Diagram of Series Products



NF-308



NF-838



NF-8208



NF-806B



NF-866



NF-801R



NF-902



NF-906A



NF-3468

