ERMENRICH NL70 NetGeeks Cable Length Tester User Manual

Contents

ERMENRICH

ERMENRICH NL70 NetGeeks Cable Length Tester

Product Information

Specifications:

- **Brand:** Ermenrich
- **Model:** NetGeeks NL70
- **Product Type:** Cable Length Tester
- **Power Source:** Rechargeable Lithium Batteries
- **Components:** Transmitter, Receiver, 8 Remote Units, RJ11 Patch Cord, RJ45 Patch Cord, Wire with Alligator Clips, MicroUSB Cable, DC Cable, Carry Bag, User Manual, Warranty

Product Usage Instructions

Charging the Device:

The transmitter and receiver use rechargeable lithium batteries. Follow these steps to charge the device:

1. Connect the microUSB cable to the device.
2. Connect the DC adapter via a USB plug.
3. Connect the DC adapter to the AC power supply.

Getting Started:

- **Transmitter:** Press and hold the Power button (10) for 3 seconds to turn the transmitter on/off.
- **Receiver:** Press and hold the Power button (7) for 3 seconds to turn the receiver on/off. The operation status indicator (3) shall light on.

Frequently Asked Questions (FAQ)

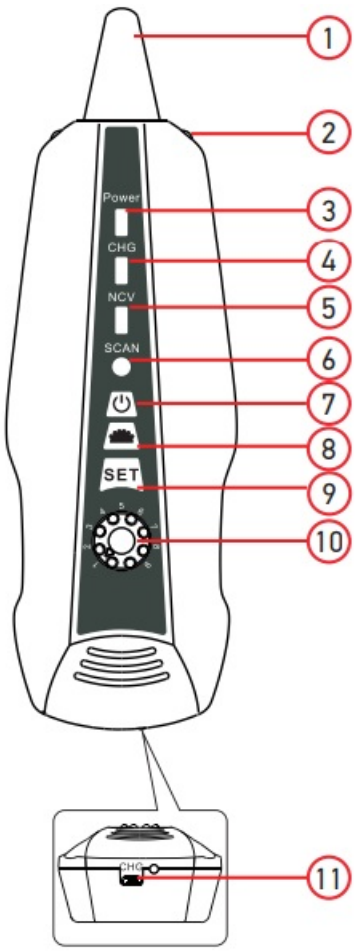
- **How do I know when the device is fully charged?**
  The charging indicator on the receiver will show when the device is fully charged.
- **Can I use the device without connecting it to a power source?**
  No, the device needs to be charged before use. It operates on rechargeable lithium batteries.

PRODUCT OVERVIEW

Transmitter

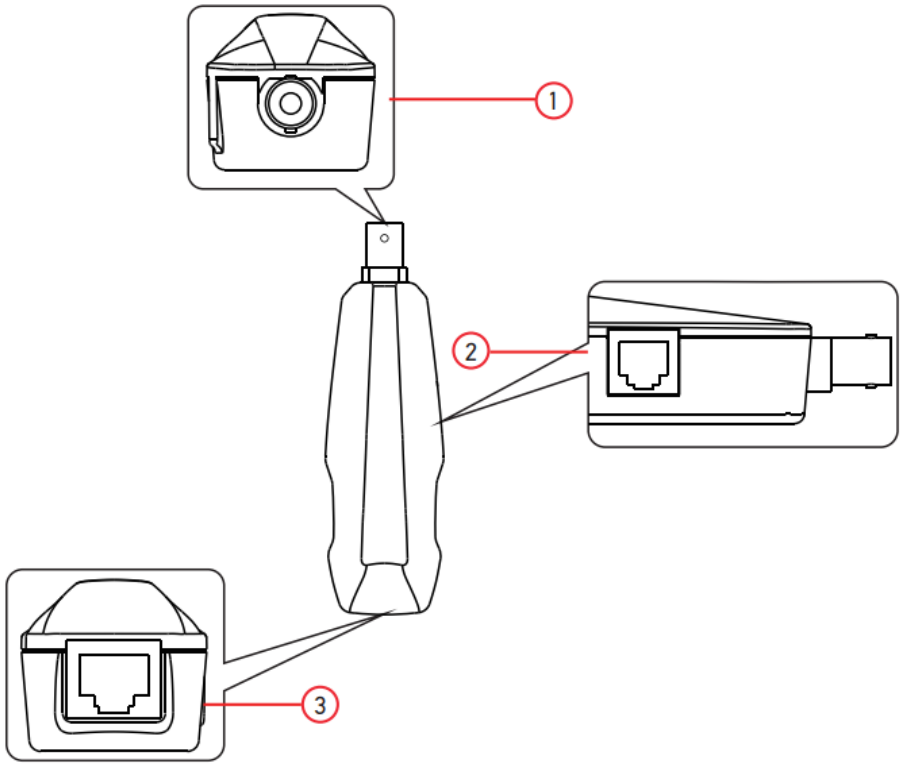
1. BNC connector
2. RJ11 port
3. RJ45 MAIN port
4. Power input
5. microSD card slot
6. PoE/Ping port
7. RJ45 SCAN port
8. OK button
9. Reset button
10. Power button

Receiver



1. Sensor
2. Flashlight
3. Operation status indicator
4. Charging indicator
5. NCV indicator
6. Scan mode indicator
7. Power button
8. Flashlight button
9. SET button
10. Sensitivity adjustment knob
11. Power input

Remote unit



1. BNC connector
2. RJ11 port
3. RJ45 port

Please carefully read the safety instructions and the user manual before using this product. Keep away from children. Use the device only as specified in the user manual.
The kit includes: transmitter, receiver, 8 remote units, RJ11 patch cord, RJ45 patch cord, wire with alligator clips, microUSB cable, DC cable, carry bag, user manual, and warranty.

Charging the device

The transmitter and the receiver use rechargeable lithium batteries. Connect the microUSB cable (included) to the device and the DC adapter (not included) via a USB plug and connect it to the AC power supply to charge the device.

Getting started

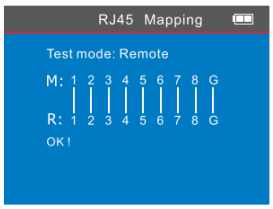
Transmitter
Press and hold the Power button (10) for 3 seconds to turn the transmitter on/off.

Receiver
Press and hold the Power button (7) for 3 seconds to turn the receiver on/off. The operation status indicator (3) shall light on.

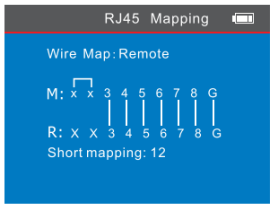
Wire mapping

- This function is used to check if the wires within the cable are connected correctly.
- To test the network cable,
    - plug one end of the cable into the RJ45 MAIN port (3) and the other end into the RJ45 SCAN port (7) on the transmitter; or
    - plug one end of the cable into the RJ45 MAIN port (3) on the transmitter and the other end into the RJ45 port (3) on the remote unit. To test the telephone cable, plug one end of the cable into the RJ11 port (2) on the transmitter and the other end into the RJ11 port (2) on the remote unit.
- To test the coaxial cable, connect one end of the cable to the BNC connector (1) on the transmitter and the other end to the BNC connector (1) on the remote unit.
- Select Mapping in the main menu and press the OK button (8). Choose the required cable type (RJ45, CAT6, RJ11, or BNC) and then select Start to test.
- Possible outcomes are shown below:

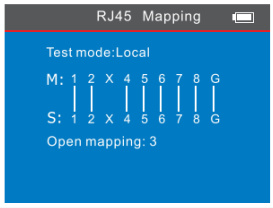
Normal



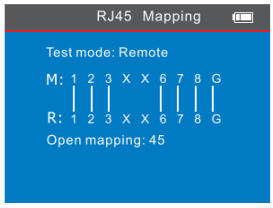
Short



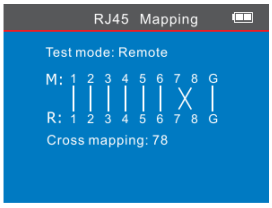
Open (testing with transmitter)



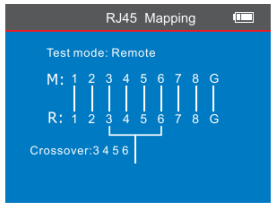
Open: pin 4 and/or pin 5 is open (testing with transmitter and remote unit)



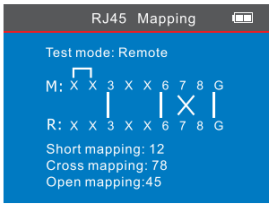
Cross



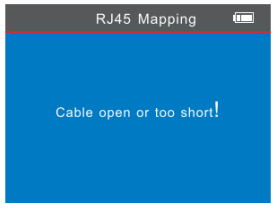
Split (crossover pins will flicker on the display)



Many faults in the cable



Cable disconnected or not connected well



Cable length measurement

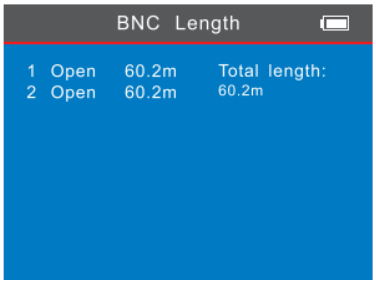
This function is used to measure the length of a cable and also the distance to a short circuit if there is one.

Calibration
Plug one end of the cable (min. 10m) with a known length into a corresponding port on the transmitter (RJ45 MAIN port for a network cable) and leave the other end of the cable disconnected. Select Length on the main page and press the OK button (8). Choose the required cable type and then select Calibration. Adjust the result if needed using the ▲ and ▼ buttons and press the OK button (8) to save the data.
For more precise results, it is recommended to calibrate the device on a cable with a known length from the same manufacturer.

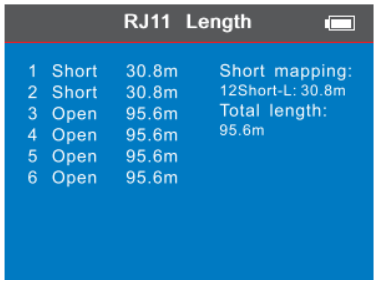
Usage

- Plug one end of a tested cable into a corresponding port on the transmitter and leave the other end of the cable disconnected. Select Length, choose the required cable type and then select Load data. Choose the calibration result that you need from the list and press the OK button (8) to load it. Press the Back button (9) to return to the main menu.
- Select Length and choose the required cable type. Select Cable length and press the OK button (8) to test.
- Possible outcomes are shown below:

Normal (coaxial cable)



Short (telephone cable)

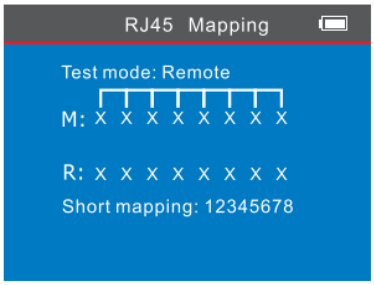


If the results for each pin differ noticeably, consider the result for pin 3 to be the reference value for the network cable length (the pin 4 result for a telephone cable and the pin 2 result for a coaxial cable respectively).

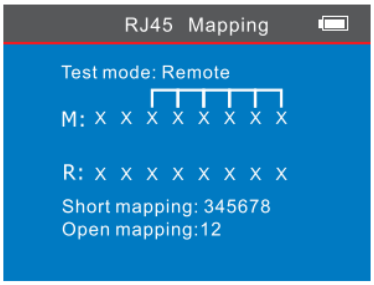
Network connection test

- This function is used to check if the cable connection and the network equipment operate correctly. Plug one end of the RJ45 patch cord (included) into the RJ45 MAIN port (3) on the transmitter and the other end into the wall socket or to the network switch directly. Select Mapping, choose the RJ45 cable type, and select Start to test.
- Possible outcomes are shown below:

Network connection is correct

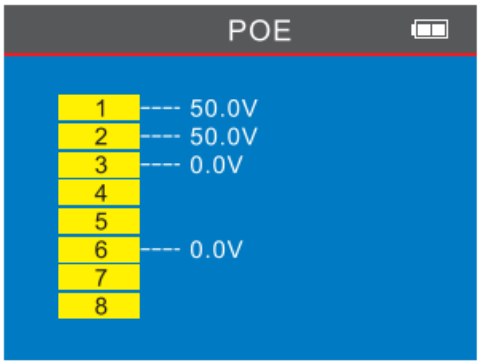


Breakage on pins 1, 2



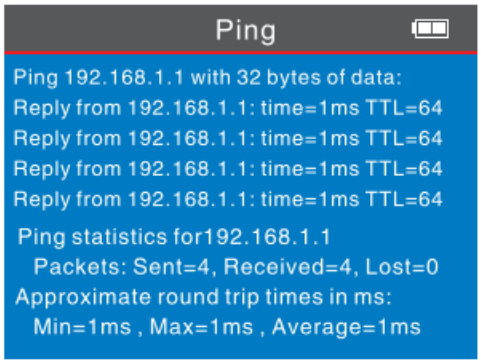
PoE test

- This function is used to identify the pins that provide PoE and to measure PoE voltage. Plug one end of the cable or the RJ45 patch cord (included) into the PoE/Ping port (6) on the transmitter and the other end into the PoE source equipment (such as network switch, router etc.). Select PoE in the main menu, and then select Start to measure the PoE voltage.
- Possible outcome is shown below:



Ping test

- This function is used to test data transmission. Plug one end of the cable or the RJ45 patch cord (included) into the PoE/Ping port (6) on the transmitter and the other end into the PoE source equipment (such as a network switch, router etc.). Select Ping in the main menu, and then select Configure before starting the test. There you can setup the IP address, the local IP address and the data packet setting or let the device obtain it automatically.
- Press the Back button (9) to return to the previous menu and select Ping, then select Start to test. Possible outcome is shown below:



Port Flash function

This function is used to locate the exact port on the PoE switch or router to which the cable is connected. Plug the loose end of the cable into the PoE/Ping port (6) on the transmitter (the other end is connected to a PoE source equipment) and select Flash Port in the main menu. The circle on the display and LEDs under the PoE/Ping port (6) will flash with the same frequency as the LED of the target port on a PoE switch or router.

Cable tracing

- This function is used to locate the target cable in a cable bundle. Plug the loose end of the cable into a corresponding port on the transmitter (RJ45 SCAN port for a network cable) and select Scan in the main menu.

You can choose between three modes: “Low frequency”, “High frequency”, and “PoE switch”.
Select the “PoE switch” mode if you want to trace the cable that is connected to the PoE source equipment or if you want to trace an electric cable.

- Press the SET button (9) on the receiver so that the scan mode indicator (6) lights up red. Press the same button again so that the indicator changes to deep blue. When the indicator is red, it means that the receiver is in the “Low frequency” or “PoE switch” mode. When it is deep blue, it means that the receiver is in the “High frequency” mode.
  Scan modes on the transmitter and receiver must match for correct operation.
- After completing the setup on the transmitter and receiver, place the receiver near the cable bundle and move the receiver along the cable to trace it. To detect the cable more accurately, lower the sensitivity. When the sensor is in the close proximity to the target cable, the receiver will emit a beeping sound. The closer the device is to the object, the louder the signal.

NCV (non-contact voltage detection) function

This function is used to detect voltage without having to touch the cables. Press the SET button (9) on the receiver and hold it for 3 seconds so that the NCV indicator (5) lights up. Put the sensor (1) up to a wire, socket or any surface with hidden wiring. The receiver will obtain the signal and emit a warning sound. The closer the device is to the object, the louder the signal.

History record

You can save the data in the .txt format on the microSD card (not included) by selecting Data upload.

Specifications

Testing cable types	STP/UTP (CAT5E, CAT6E) network cable, telephone cable, coaxial cable, common wires
Max. distance of cable tracing	2000m
Wire mapping	+
Cable length measurement range	1–1000m
Units of measurement	m, in, yd
Min. cable length for calibration	10m
PoE test	+
Ping test	+
DC voltage measurement range	5–60V
NCV (non-contact voltage detection) function	+
Port Flash function	+
Screen brightness	3 levels
Backlight	15s, 30s, 1min, OFF
Auto-off	15min, 30min, 1h, 2h, OFF
Operating temperature range	–10… +60°C / +14… +140°F (operating/storage)
Power supply	transmitter: 3.7V 1800mA.h rechargeable lithium battery receiver: 3.7V 1800mA.h rechargeable lithium battery (5V 1A DC adapter)
Battery life	transmitter: 20h receiver: 50h

Care and maintenance

- Do not use the device in a high voltage environment (e. g. 220V AC electric power supply). Do not use the device if it is not working properly.
- Protect the device from sudden impact and excessive mechanical force. Store the device in a dry cool place. Please note that the parameters of the power supply must comply with the technical characteristics of the device. Do not touch any bare conductor with your hand or skin. Do not try to disassemble the device on your own for any reason. For repairs and cleaning of any kind, please contact your local specialized service center. Only use accessories and spare parts for this device that comply with the technical specifications. Never attempt to operate a damaged device or a device with damaged electrical parts! If a part of the device or battery is swallowed, seek medical attention immediately.

Battery safety instructions

Always purchase the correct size and grade of battery most suitable for the intended use. Always replace the whole set of batteries at one time; taking care not to mix old and new ones, or batteries of different types. Clean the battery contacts and also those of the device prior to battery installation. Make sure the batteries are installed correctly with regard to polarity (+ and –). Remove batteries from equipment that is not to be used for an extended

period of time. Remove used batteries promptly. Never short-circuit batteries as this may lead to high temperatures, leakage, or explosion. Never heat batteries in order to revive them. Do not disassemble batteries. Remember to switch off devices after use. Keep batteries out of the reach of children, to avoid risk of ingestion, suffocation, or poisoning. Utilize used batteries as prescribed by your country's laws.

Levenhuk International Warranty

- Levenhuk products, except for their accessories, carry a 5-year warranty against defects in materials and workmanship. All Levenhuk accessories are warranted to be free of defects in materials and workmanship for six months from the purchase date. The warranty entitles you to the free repair or replacement of the Levenhuk product in any country where a Levenhuk office is located if all the warranty conditions are met.
- For further details, please visit: levenhuk.com/warranty
- If warranty problems arise, or if you need assistance in using your product, contact the local Levenhuk branch.

ABOUT COMPANY

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Documents / Resources

	ERMENRICH NL70 NetGeeks Cable Length Tester [pdf] User Manual NL70 NetGeeks Cable Length Tester, NL70, NetGeeks Cable Length Tester, Cable Length Tester, Length Tester, Tester

References

- Доживотна гаранция на Levenhuk – Официален уебсайт на Levenhuk в България
- Doživotní záruka společnosti Levenhuk – Oficiální webové stránky Levenhuk pro Českou republiku
- Levenhuk Lebenslange Garantie – Die offizielle Website von Levenhuk in Deutschland

- Garantía internacional de por vida Levenhuk – Web oficial de Levenhuk en España
- Levenhuk Lifetime Warranty – Levenhuk’s official website in USA
- A Levenhuk élettartamra szóló szavatossága – A Levenhuk hivatalos magyarországi weboldala
- Levenhuk Limited Warranty – Levenhuk’s official website in USA
- Поддержка - Гарантийное обслуживание Левенгук - Levenhuk Russia
- Gwarancja bezterminowa Levenhuk – Oficjalna witryna internetowa Levenhuk w Polsce
- Levenhuk’s official website in USA
- User Manual