

## User Manual



### TVR1G

LAN Network Tester (10, 100, 1000 MB/s)



## ***Introduction***

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Congratulations on your purchase of the Triplet TVR1G LAN (Local Area Network) Ethernet Tester. Twisted pair cable is the standard for local area networks (LANs). Its popularity stems from its ease of use, cost, speed and maybe, most importantly, adaptability. A 10 Base-T device, installed years ago, communicates with a new gigabit switch (1000 Base-T) because the standard that defines Ethernet LANs requires negotiation to a common speed and duplex. For instance, a 100 Base-T, half duplex PC connected to a 1000 Base-T, full duplex switch forces the switch to negotiate "down" to 100 Base T, half duplex mode. Verify this by connecting the TVR1G inline" between the two devices and display the negotiated result. This inline capability is remarkable and only available on other testers that cost over 7 times the price of the TVR1G. It also tests single LAN ports; cables; tones cables; and detects Power over Ethernet (PoE). But the inline test is one of its most popular.

## ***Safety***

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### **WARNINGS**

- Read understand and follow safety rules and operating instructions in the manual before using this tester.
- The detection function of the tester may not be able to solve the user's needs if not used in accordance with the manufacturer's instructions.
- Do not operate tester if Low Battery warning occurs. Replace batteries immediately.
- Please check the network cable type before using the tester to ensure that it meets the requirements.
- Do not use if the tester appears damaged or if it is not operating properly. If in doubt, replace the tester.
- Comply with all applicable safety codes. 

• **Please take care not to plug the cable test jack into a PoE source or .damage may occur!**

- Do not expose tester to extremes in temperature or high humidity.

**NOTE: Before testing the PC network, you should first set up the corresponding Ethernet card attributes, turn off the "energy-saving Ethernet circuit" "Flow control" and then perform the test, otherwise it will affect the test results. Please note that this is very important! ! The setting method is as follows:**

**[Settings]–[Network & Internet]–[Ethernet]–[Change adapter options]–[Right mouse button local connection]–[Properties]–[Configuration]–[Advanced]–[Energy-saving Ethernet]–[OFF]–[Flow control]–[OFF]–[OK]**

#### **INTERNATIONAL SAFETY SYMBOLS**

Potential danger. Indicates the user must refer to the manual for important safety information.

Indicates hazardous voltages may be present.

Equipment is protected by double or reinforced insulation.

##### **International Safety Symbols**



This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.



This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present



Caution Symbol (No PoE)

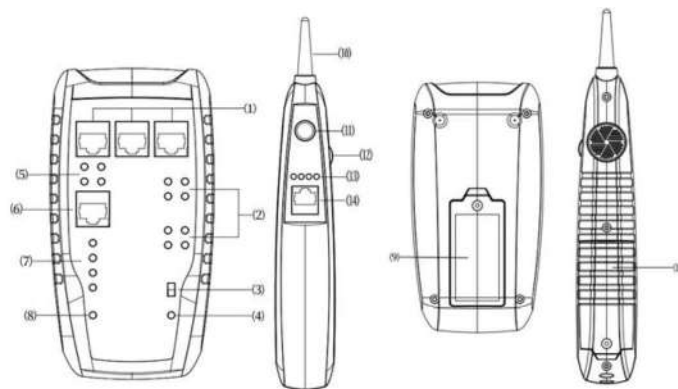


Double Insulation

## ***Description***

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### **METER DESCRIPTION**



1. LAN Test Port
2. LAN Speed and Type Display
3. Power Switch
4. Power LED
5. Test Mode LED
6. Cable Test Port (Main Unit)
7. Cable Test LED (Main Unit)
8. PoE LED
9. Battery Cover (Main Unit)
10. Tester Probe
11. Test Button (Probe)
12. Speaker Volume Adjust Knob
13. Cable Test LED (Probe)
14. Cable Test Port (Probe)
15. Battery Cover (Probe)

## **Operation**

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### **LAN Speed and Type Verification**

The tester has three ports for LAN testing, the left port and the middle port are straight-through connections, and the right port is cross-connected to the other two ports. When performing a single-port test, the left port and the middle port are commonly used choices. When performing an inline mode test, select the left port and the middle port to establish a direct connection between the two devices, select the left port and the right port to establish a cross connection between the two devices.

### **Single Port Test**

All three LAN test ports can perform single-port test. Insert the LAN device into the port, LINK will display whether the received data is from HUB or PC. PC indicates that the device is transmitting on pins 1 and 2, and HUB indicates that the device is transmitting on pins 3 and 6. It should be noted that: If it is connected to a cross port, the actual situation of the device will be opposite to the displayed result.

SPEED VERIFICATION has four gears (10/100/1000/10000 MB/s) which will display the network speed and type of the device. The LED shows red to indicate that the LAN type is half-duplex, and the LED shows green to indicate that the LAN type is full-duplex.

For example: the 100-level LED is displayed as two greens, indicating that the LAN device network type is 100MB/s full-duplex.

### **Inline Mode Test**

Connect two LAN devices into the tester by inline method. Before connecting two devices in series, you should use a single port to test a single device, make sure that one of the LED in both columns is lit, and make sure that there are no problems with the cable and the device. , if only one column of LED is lit, there is a problem with the test.

After the check is correct, connect the two LAN devices in series, the tester will detect the communication speed and mode of the two devices, negotiate the final result according to the conditions of the two devices and display it through the LED, and the DATA display indicates that the device is inside In connection mode, SPEED VERIFICATION will display the speed and type of connection between two LAN devices.

For example: A 1000 Base-T full-duplex switch is connected to a 100 Base-T half-duplex PC. Due to the Ethernet LAN standard, the switch will be

forced to negotiate to 100Base-T half-duplex mode, and the final result displayed by the tester is 100Base-T half-duplex.

### **POE Test**

If the POE is provided by a switch that supports POE, when the power pairs are on 1, 2 and 3, 6, this power supply method is called "POE endspeed". At this time, use a tester to test, the POE LED will be green, when the power supply For 4,5 and 7,8, this power supply method is called "POE midspan". At this time, use a tester to test, and the POE LED is displayed in red.

### **Cable test**

When the remote probe is not used, and only the main device is used for cable testing, insert the cable into the cable test port to test whether there is a LAN device at the other end of the cable. If the LED is on, it means that the corresponding wire pair is connected to the device. (for example: LED "1,2" and "4,5" are lit, indicating that the pair "1, 2" and "4, 5" are connected to the device.)

If you connect the cable to the cable test port of the main tester and the remote probe, you can observe the LED display to determine whether the cable pair is connected, whether there is a wrong connection, the cable is a straight-through cable or a crossover cable.

### **Cable Tracing**

Connect one end of the cable to the cable test port of the main tester, and use the remote probe to approach the cable will make a tone. If all four pairs of the cable are wired, the tone will be more stable. The fewer pairs of cables, The shorter the tone response time. Use this function to detect the location of the required cable when the cable is bundled or the cable cannot be determined.

### **Low Battery Indication**

- If the power supply voltage is between 7.3v and 6.8v, the power LED will flash continuously and slowly, and the instrument will enter the low voltage mode.
- when the battery power of the tester is lower than 6.8v and cannot work reliably, the power LED of the tester will flash ten times quickly and then turn off. All LEDs are off and the tester cannot perform the test.
- Replace the battery to resume operation.

### **Auto Power Off (APO)**

- To extend battery life, the tester will automatically shut down after approximately 10 minutes of inactivity.
- When the power is turned off, the LED on the display panel will go out and the test cannot be performed. If you need to test, please restart the tester.

### **Battery Replacement**

1. Carefully unscrew the battery cover screw on the back of the tester and open the battery cover.
2. Replace the battery with a 9V battery.
3. Carefully close the battery cover.
4. Screw the screw on the battery cover until it feels tight. Don't use excessive force.
5. Use the tester to verify the speed and duplex mode of the LAN according to the operating instructions.
6. If the battery power of the equipment is too low, please replace the battery as soon as possible, otherwise the accuracy of the measurement results may be affected.

Note: When inserting the battery for the first time, please remove the white rectangular safety bar before installing the battery.

## **Specifications**

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### **General Specifications**

|                               |                             |
|-------------------------------|-----------------------------|
| Detect LAN Speed Range        | 10,100, and 1000 MB/s       |
| Detect The Duplex Type of LAN | Full duplex and Half duplex |
| Network Device Type           | HUB/Switch/PC               |
| POE Voltage Detection Range   | 48V                         |
| Network Cable Wiring Plan     | EIA(TIA)568A/EIA(TIA)568B   |
| Battery                       | 9V Battery                  |
| Operating Temperature         | 0 to 50°C (32 to 122°F)     |
| Storage Temperature           | -10 to 60°C (14 to 140°F)   |
| Humidity                      | 80% max                     |
| Altitude                      | 2000 meters                 |
| Pollution Degree              | 2                           |

## ***Warranty***

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Triplett / Jewell Instruments extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries are not covered by this warranty

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