

# **TRIPLETT**

## **WireMaster**

# **Coax**

*Instruction Manual*



 **TRIPLETT**

84-868  
11/05

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## **Features**

- 8 way Mapper
- 8 numbered BNC Remotes included (can connect directly to BNC cables)
- Male to Male BNC Adaptor included
- Tests for Opens and Shorts
- Audible and Visual Continuity Test
- AC/DC Overvoltage Warning LED and Beeper
- 120VAC Line Cross Protection and Warning
- Realtime test helps identify intermittents
- Maps lengths over 20,000 ft (RG-6/U, 7.4 Ohms per 1000ft)
- Identifies individual Remotes through Power Passive splitters
- Battery Test
- Uses common 9 volt battery (not included)
- Power Latch Function Switch to prevent accidental turn-ons
- Use to identify coaxial cables in CCTV Security and Surveillance systems, Broadcast TV, Residential Video systems, and Cable TV (using appropriate adaptors).
- With appropriate adapters, use to identify any pair of wires (shielded or unshielded) such as audio, video, telephone, etc.
- Carrying Case included
- One Year Warranty

## **Introduction**

The Triplet **Wiremaster Coax** is an 8 way Cable Mapper, with built-in Continuity beeper, and 120VAC line cross protection. BNC connectors on the Main Unit and the Remotes allow the user to attach to BNC cables or outlets, and due to the variety of off-the-shelf BNC adapters, to numerous other connector families.

## **Warnings and Cautions**

- The **WireMaster Coax** is not intended for use as a voltage detector. It only detects voltage in order to perform its intended function, and to prevent accidental damage to the product. i.e. while the **WireMaster Coax** detects the presence of 120VAC, it is not safe while doing so. The product and its connectors are not appropriately insulated.
- In some situations, unconnected wires can “float up” to potentially dangerous voltages and cause user injury. Treat any unknown wires as having dangerous voltage present, and take the appropriate precautions.
- The overvoltage detection feature does not work with a low or dead battery. Consequently, if the battery is low or dead, the **WireMaster Coax** will not warn the user that a potentially dangerous voltage (i.e. 120VAC) is present. The **WireMaster Coax** is not intended for use as a voltage detector.

## **Specifications**

- Identifies 8 individual Remotes by measuring their precision resistance
- AC and DC test detects voltages above 3 volts
- Display: Bright Red and Green LEDs indicate the test results
- Protected against damage up to 120 volts AC/DC (no fuse required)
- Minimum cable length: no minimum
- Maximum cable length: any length whose total DC resistance is less than 200 Ohms (see table)
- Cables / Wires Tested: Any pair whose total DC resistance is less than 200 Ohms, and is unconnected to other equipment or circuitry
- Continuity: Continuity (SHORT) is indicated for resistances of 500 Ohms or less
- OPEN Test: OPEN is indicated for resistances of 10,000 Ohms or more
- Battery: 9 volt
- Battery Life: approx 20 hours continuous use (alkaline battery)
- Size: Main Unit: 2.45" W x 4.5" H (to top of BNC) x 1.25" T (to top of switch)  
Remote: 0.5" W x 1.25" H
- Weight: Main Unit (with battery): 4.6 oz.  
Complete Kit: 11.8 oz.

### **Note:**

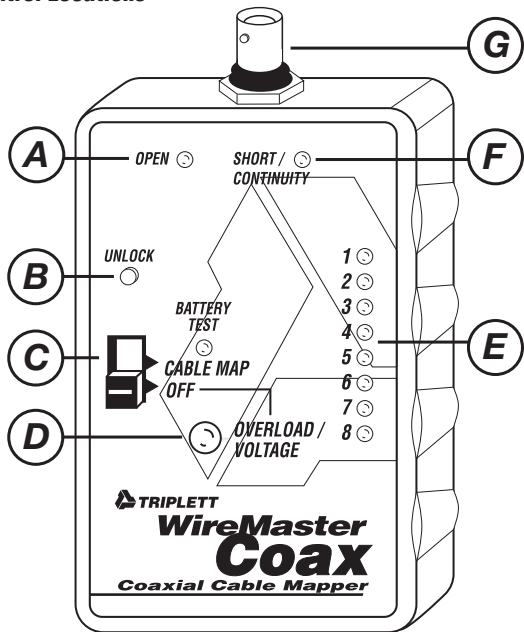
The **WireMaster Coax** will not map cables if any of the following devices are in use:

- Amplifiers
- Attenuators
- Baluns
- DC Blockers
- Directional Taps
- Electronic Switches
- Matching Transformers
- Modulators
- Power Dividers
- Splitters (non power passive)

## ***Some Typical Cable/Wire Resistances***

| <b><i>Cable Type</i></b>                           | <b><i>Ohms per 1000 Ft.</i></b> | <b><i>Max Test Length</i></b> |
|--|---------------------------------|-------------------------------|
| <b><i>RG-6/U<br/>Belden 1694A</i></b>              | <b><i>7.4 Ohms</i></b>          | <b><i>27,000 ft</i></b>       |
| <b><i>RG-6/U<br/>Belden 1152A</i></b>              | <b><i>30 Ohms</i></b>           | <b><i>6,600 ft</i></b>        |
| <b><i>RG-58/U<br/>Belden 7806A</i></b>             | <b><i>11.8 Ohms</i></b>         | <b><i>17,000 ft</i></b>       |
| <b><i>RG-58A/U<br/>Belden 9311</i></b>             | <b><i>26 Ohms</i></b>           | <b><i>7,700 ft</i></b>        |
| <b><i>RG-59/U<br/>Belden 8241</i></b>              | <b><i>51.6 Ohms</i></b>         | <b><i>3,900 ft</i></b>        |
| <b><i>RG-59/U<br/>Belden 9659</i></b>              | <b><i>17.6 Ohms</i></b>         | <b><i>11,300 ft</i></b>       |
| <b><i>Mini Coax<br/>Belden 9221</i></b>            | <b><i>111 Ohms</i></b>          | <b><i>1,800 ft</i></b>        |
| <b><i>Telephone (CAT 3)<br/>Belden 1227A1</i></b>  | <b><i>56 Ohms</i></b>           | <b><i>3,600 ft</i></b>        |
| <b><i>Telephone (CAT 3)<br/>Belden 1245A2</i></b>  | <b><i>19 Ohms</i></b>           | <b><i>10,500 ft</i></b>       |
| <b><i>LAN (CAT 5e)<br/>Belden 11700A</i></b>       | <b><i>18 Ohms</i></b>           | <b><i>11,100 ft</i></b>       |
| <b><i>LAN (CAT 6)<br/>Belden 11872A</i></b>        | <b><i>18 Ohms</i></b>           | <b><i>11,100 ft</i></b>       |
| <b><i>12 ga. Speaker Wire<br/>Belden 1860A</i></b> | <b><i>3.2 Ohms</i></b>          | <b><i>58,800 ft</i></b>       |
| <b><i>16 ga. Speaker Wire<br/>Belden 1862A</i></b> | <b><i>8.4 Ohms</i></b>          | <b><i>23,800 ft</i></b>       |

## Control Locations



**A:** Open LED  
**B:** Unlock Button  
**C:** Function Switch  
**D:** Overload / Voltage LED

**E:** 1 thru 8 ID LED's  
**F:** Short/Continuity LED  
**G:** BNC Connector

## **Getting Started**

### **Installing / Replacing Battery**

To install or replace the 9 volt battery, remove the single screw from the back of the case. Gently remove the front of the case to gain access to the battery compartment. Sometimes it helps to press lightly on the numbered LEDs to remove the front. With the front removed, install/replace battery. Replace front, aligning LEDs in their respective holes, and replace screw.

### **Power Latch**

The **WireMaster Coax** Function switch incorporates a Power Latch feature to prevent the product from accidentally being turned on, which could result in a dead battery. Note that the Function switch is locked into the OFF: OVERLOAD / VOLTAGE position. To turn the product on, the UNLOCK button must be pressed, and while the button is pressed, the Function switch is moved to the CABLE MAP position, at which time the UNLOCK button may be released. When the Function switch is returned to the OFF: OVERLOAD / VOLTAGE position, the switch will lock in this position, requiring the user to once again press the UNLOCK button to turn the product on.

### **Battery Test**

Press the UNLOCK button and set the Function switch to the CABLE MAP position. The green BATTERY TEST LED must flash. If the BATTERY TEST LED does not flash, the battery should be replaced. If it is weak, it may produce erroneous results in the CABLE MAP mode.

**Note:** The BATTERY TEST LED does not stay on. It only tests the battery when the product is first turned on. To test the battery again, turn the product off and back on.

### **Verifying Product Operation**

After turning the product on, connect the provided BNC to BNC adaptor to the BNC on the **WireMaster Coax**. Experimentally connect different numbered Remotes to the adaptor, noting that the number on the Remote agrees with the LED that lights on the **WireMaster Coax**. In use, thousands of feet of wire may be between the Remote and the **WireMaster Coax**, and the Remote will cause the appropriate LED to light.

## **Detailed Operation**

### **Identifying Cables (Mapping)**

The **WireMaster Coax** will not work if AC or DC voltage is present. Some coaxial cables have AC or DC voltage on them to operate amplifiers, preamplifiers, LNB's, etc. The OFF: OVERLOAD / VOLTAGE test position of the Function switch tests the connected cable for the presence of AC or DC voltage.

The **WireMaster Coax** is intended for use on un-terminated cables . . . that is, cables without any devices connected to them.

Before connecting any Remotes to cables, connect the **WireMaster Coax**, with its Function switch set to OFF: OVERLOAD / VOLTAGE, to each of the cables to be mapped. If there is an AC or DC (plus) voltage present, the OVERLOAD / VOLTAGE indicator LED will light and the warning beeper will sound intermittently. If this occurs, the cable(s) cannot be Mapped / Identified (ID'ed) with the **WireMaster Coax**.

When it has been determined that no AC or DC voltage is present, connect the various Remotes to the cables to be ID'ed

Press the UNLOCK button and set the Function switch to the CABLE MAP position. The green BATTERY TEST LED must flash. The OPEN LED must light. If the OPEN LED does not light, there may be a defect in the **WireMaster Coax** that will prevent it from correctly ID'ing a cable. Check or replace the battery before proceeding.

At the ends of the target cables opposite the Remotes, connect the **WireMaster Coax**, in succession, to each cable, noting the ID number of the LED that lights.

If upon connecting the **WireMaster Coax** to a cable, the OPEN LED remains lit, the cable may not have a Remote at its opposite end, an open fault may be present in the cable, or a splitter may be present in the cable. The **WireMaster Coax** will not work through splitters, amplifiers, or any other DC blocking devices.

If the SHORT / CONTINUITY LED lights and the beeper sounds, the cable may be shorted, or some device is connected to the cable that appears as a short to the **WireMaster Coax**.



*If the OVERLOAD / VOLTAGE LED lights and the beeper sounds, at any time, the cable being tested has voltage on it and cannot be ID'ed.*

*If a number of ID LEDs light simultaneously, a stray voltage may be present that will prevent the cable from being ID'ed.*

### **Mapping Cables with Different Connectors or Cables without Connectors**

*Most non-faulted cables containing 2 conductors or more can be mapped. Even single conductors can be mapped if a low resistance ground or return path is available.*

*Almost any off-the-shelf BNC adaptor can be used with the **WireMaster Coax**. They are often available through electronic supply houses or Do-It-Yourself outlets. Using these adaptors, the BNC connectors on the **WireMaster Coax** can be adapted to most coaxial connectors (F, TNC, SMA, RCA Phono, 1/8" and 1/4" phone jack, PL-259, etc.) Even adaptors from BNC to RJ-11 or RJ-45 are available, but not as common as other types. With BNC test cables terminated in alligator clips, wires without connectors can be tested. Just clip the alligators onto the pair of wires to be ID'ed at the Remote and at the **WireMaster Coax**.*

*If a low resistance ground or return path is available at both the Remote location and at the **WireMaster Coax** location, single wires can be ID'ed. Connect one alligator clip at both locations to the ground. Connect the other clip to the wire(s) to be ID'ed. ID the wires at the **WireMaster Coax** by connecting the remaining alligator clip to each wire and noting the displayed ID.*

**Note:** *If the ground or return path has too much resistance, or has AC or DC current flowing in it, incorrect ID's may be obtained.*

## **Mapping Cables through a Splitter**

The **WireMaster Coax** will map individual Remotes through a fully power passive splitter. Most splitters, like those used in CATV (Cable Television) are **not** power passive. Some splitters are not power passive through all of their ports (partially passive). Satellite splitters and high quality splitters are often power passive, but not necessarily through all of the ports.

For distribution systems using fully power passive splitters, the **WireMaster Coax** will map individual Remotes through the splitters. Only one Remote at a time can be mapped. Connecting more than one Remote at a time to the system will cause an incorrect ID on the **WireMaster Coax**. Some equipment connected to the outputs of the splitters may cause the **WireMaster Coax** to produce an incorrect ID. If in doubt, disconnect the equipment.

Most consumer satellite distribution systems which use splitters are equipped with F connectors, so several BNC to F adaptors are needed. Since only one Remote can be mapped at a time, only two adaptors are needed . . . one for the chosen Remote, and one for the **WireMaster Coax**.

Splitters are bi-directional . . . meaning that signals pass through them in both directions. Because of this behavior, the Remote can be connected to any port on the splitter, and it can be “seen” on any other port.

A typical test would be to connect the chosen Remote to the input of the system, and test at each outlet with the **WireMaster Coax** for the presence of the Remote’s ID. If the correct ID is displayed, the system’s input is connected to the tested outlet. If OPEN or SHORT is displayed, there may be no connection to the Remote, power passive splitters are not being used, or equipment connected to the splitters is interfering with the ID.

**Note:** The **WireMaster Coax** will not test through active devices (amplifiers, switches, modulators, etc.) or DC Blocks, Matching Transformers, or any other device that will not pass the DC test signal or alters the characteristics of the signal.

## **Continuity Testing**

The **WireMaster Coax** can be used as an audible and visual Continuity tester. To use this feature, the user will need to purchase or make a simple BNC / Clip Lead adaptor. (Triplett PN: 79-792)

Connect the adaptor cable to the BNC on the **WireMaster Coax**. When a circuit with Continuity is connected between the adaptor's clip leads, the product's SHORT / CONTINUITY LED will light and the beeper will sound.

## **Intermittent Connections**

The **WireMaster Coax** performs tests in real-time. That is, it is continuously testing the target cable for the presence of a Remote (some products only perform a momentary test). When a cable is suspected of having an intermittent connection, a Remote can be connected to one end of the cable, and the **WireMaster Coax** connected to the opposite end of the cable. The appropriate numbered ID LED should light on the **WireMaster Coax**. Flex the cable at its connectors and along its length (may require 2 people) while observing the ID LED on the **WireMaster Coax**. If an intermittent connection is found, the ID LED will flicker or change value (like to SHORT or OPEN).

## **Included Items**

The following items are included with the **WireMaster Coax**

|                                      |                      |
|--------------------------------------|----------------------|
| Remote 1 .....                       | Triplett PN: 3274-1  |
| Remote 2 .....                       | Triplett PN: 3274-2  |
| Remote 3 .....                       | Triplett PN: 3274-3  |
| Remote 4 .....                       | Triplett PN: 3274-4  |
| Remote 5 .....                       | Triplett PN: 3274-5  |
| Remote 6 .....                       | Triplett PN: 3274-6  |
| Remote 7 .....                       | Triplett PN: 3274-7  |
| Remote 8 .....                       | Triplett PN: 3274-8  |
| Carrying Case with Foam Insert ..... | Triplett PN: 10-4293 |
| Male BNC to BNC Adaptor .....        | Triplett PN: 13838   |

Also Available:

|                                  |                     |
|----------------------------------|---------------------|
| BNC to Alligator Clip Lead ..... | Triplett PN: 79-792 |
|----------------------------------|---------------------|

## **Maintenance**

*No regular maintenance of the WireMaster Coax is required. In the event the product is defective or is damaged, please contact TTT for repair information.*

### **TRIPLETT PRODUCT RETURN INSTRUCTIONS**

*In the unlikely event that you must return your Triplet equipment for repair, the following steps must be taken.*

- 1) Call 1-800-TRIPLETT to obtain a Return Material Authorization (RMA) number from Customer Service.*
- 2) Enclose a copy of the original sales receipt showing date of purchase.*
- 3) Clearly print the RMA number on the outside of the shipping container.*
- 4) Return to:*  
*Triplet Corporation*  
*One Triplet Drive*  
*Bluffton, OH 45817*  
*ATTN: Repair Dept.*

## ***Triplett One Year Limited Warranty***

The Triplett Corporation warrants instruments and test equipment manufactured by it to be free from defective material or workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge within one year of the date of original purchase for parts and labor. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing, or making refund on any instrument or test equipment which proves to be defective within one year from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way 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 and fuses, not of our manufacture used with this product are not covered by this warranty.

To register a claim under the provisions of this warranty, contact Triplett Corporation's Customer Service Department for a Return Authorization Number (RMA) and return instructions. **No returned product will be accepted without an RMA number.** Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett Corporation may have, including incidental or consequential damages.

Some states (USA ONLY) do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett Corporation or any other person is authorized to extend the liability of Triplett Corporation in connection with the sale of its products beyond the terms hereof.

Triplett Corporation reserves the right to discontinue models at any time, or change specifications, price or design, without notice and without incurring any obligation.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.



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