

# **CEN-TECH™**

# **CABLE TRACKER**

**Model 94181**

## **ASSEMBLY AND OPERATION INSTRUCTIONS**



Due to continuing improvements, actual product may differ slightly from the product described herein.  
Transmitter includes a phone jack (RJ11) adapter that may not be shown in all illustrations.



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**TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND  
ALL WARNINGS AND INSTRUCTIONS BEFORE USE.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

## Specifications

Receiver:	Battery	9 VDC
	Dimensions	15-5/16 (H) x 1-5/8 (W) x 15/16 (D) inches
	Controls	On/Off Switch with sensitivity control; Test Button
Transmitter:	Battery	9 VDC
	Dimensions	2-11/16 (L) x 2-3/16 (W) x 13/16 (H) inches
	Controls	On/Off Switch, toggle: Off / Tone / LED
	Cables	Red/Blk., with clips, 24-9/16 (L) inches
Weight		0.7 lb. total

The Cable Tracker is designed to safely identify and trace wires or cable without damaging the insulation, and to check cable circuits for shorts and open circuits.

## Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

## Safety Warnings and Precautions

**WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.**

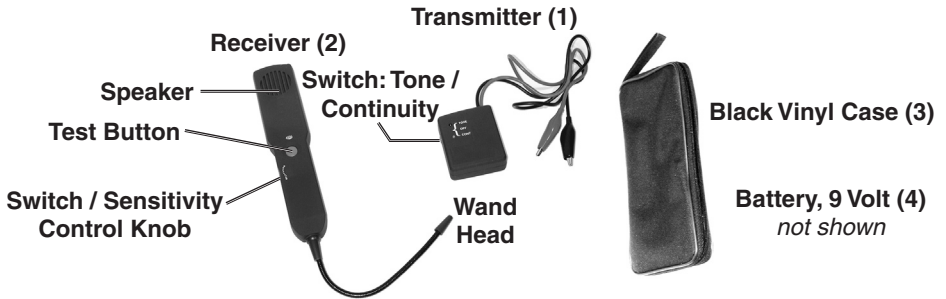
**Read all instructions before using this tool!**

- 1. Keep work area clean.** Cluttered areas invite injuries.
- 2. Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
- 3. Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
- 4. Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
- 5. Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
- 6. Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.

7. **Maintain tools with care.** Keep tools clean for better and safer performance. Periodically replace batteries. Inspect tool cables periodically and, if damaged, have them repaired by a qualified technician.
8. **Disconnect power.** Turn off Receiver and Transmitter Switches when not in use.
9. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
10. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Do not use the tool if any switch does not turn On and Off properly.
11. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures. Remove all power sources from cables being tracked.
12. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
13. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
14. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.
15. **The Cable Tracker is not recommended for use in tracking facility electrical cables where dangerous voltages may be present.**
16. **Before tracking cables, verify that all voltage has been removed from the circuit being tested.** Disconnect the cable from the appliance or application before testing.
17. **Do not use on vehicle components or circuits of the ignition system, or any system that uses more than 48 VDC.** This could damage the Cable Tracker.
18. **Warning: People with pacemakers should consult their physician(s) before using this product.** Electromagnetic fields in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker.
19. **Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur.** It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

**Note:** Performance of this tool may vary depending on variations in battery power.

## Unpacking



When unpacking, check to make sure the parts shown above are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.

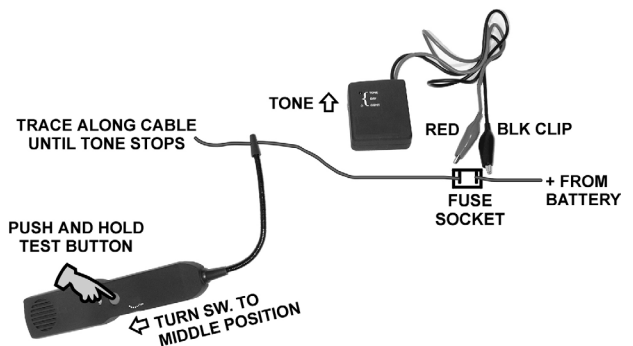
## Operation

The Cable Tracker is used to trace cables, and to isolate cable breaks. It can be used on cables in vehicles, and connections to alarms, telephone, computer, intercom, television, and thermostats.

**Warning: Live, facility electrical circuits can cause serious shocks, burns, and even death if the circuit is touched by hands or arms. If the Cable Tracker is used for this type of circuit, the circuit breaker or fuse must be removed from the main breaker box before tracking any electrical circuit. In this case, the cable tracking should be done by a licensed electrician.**

### Cable Tracing in Vehicles

1. Remove keys from the ignition.
2. Open the fuse box and pull out the fuse supplying power to the cable being traced.
3. Clip the Red Lead from the Transmitter (1) to the cable-tracing side of the fuse socket.



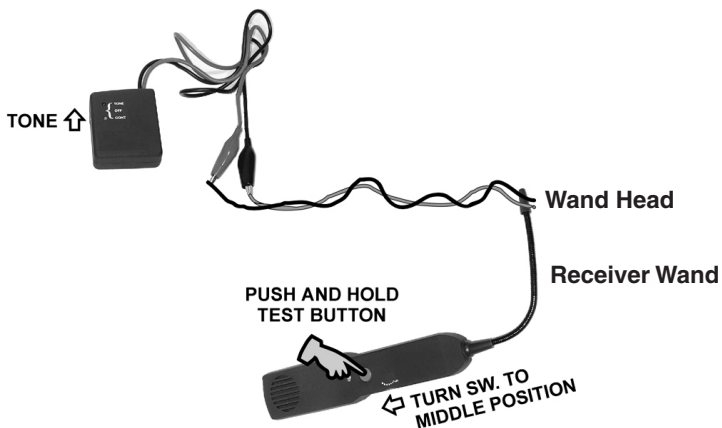
4. Clip the Black Lead from the Transmitter (1) to either the opposite side of fuse socket (+), or connect to chassis ground.

**Note:** The Transmitter can also be connected to the destination of any cable, and traced back to the source. The appropriate fuse for that circuit must be removed first.

5. Push the Transmitter Switch to the Tone position. See illustration on page 4. The red LED indicator will light. If it does not light, Battery (4) may need replacement.
6. Rotate the Switch on the Receiver (2) counterclockwise to turn it on. Turn the knob to mid point for medium sensitivity of the Receiver wand.
7. Press and hold the Test Button on the Receiver.
8. Position the wand head over the cable being traced (at a 90° angle), and move it along the cable route until the tone stops. If the tone is not heard from the start, rotate the Switch Sensitivity to maximum. When the tone stops during tracing, it indicates a break in the cable wire.
9. When finished with the Cable Tracker, push the Transmitter's Switch to the Off (center) position. Turn the Receiver's Switch clockwise until it clicks in the Off position.

### Wiring Tracing in other Applications

1. Disconnect the cable connections from the application device.
2. Connect the Transmitter (1) clip leads to each wire of the pair of cable. If there is only a single wire being traced, connect the black clip lead to ground.



3. At the destination of the cable bunch, spread the cable pairs apart.
4. Turn on the Receiver (2), press the Test Button, and place the wand head across each pair until the tone is heard.
5. When finished tracing, turn the Transmitter and Receiver Switches to the Off position.

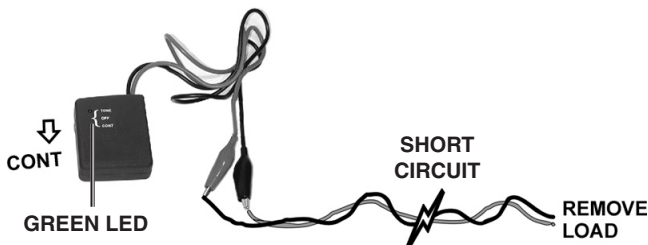
## Tracing Telephone Wires

1. These procedures use only the sender unit. Turn the switch to "OFF".
2. To identify Tip and Ring, Connect the red test lead to the side of one line and the black test lead to the side of another line.
  - a. The CONT indicator light is green when you connect the red test lead to the Ring (-) side.
  - b. The CONT indicator light is red when you connect the red test lead to the Tip (+) side.
3. To identify the state of a working telephone line, connect the phone jack (RJ11) connector into the socket on telephone, and refer to chart below.

When CONT light is	Meaning
Green	Clear line
Red	Polarities reversed
Unlit	Busy line
Faintly Glowing	
Flickering Yellow	Ringing line (Change switch to CONT position to hang up.)

## Checking for Open / Closed Circuits

1. Disconnect the cable connections from the application device (remote load) and any power source.
2. Connect the Transmitter (1) clip leads to each exposed wire of the pair of cable.

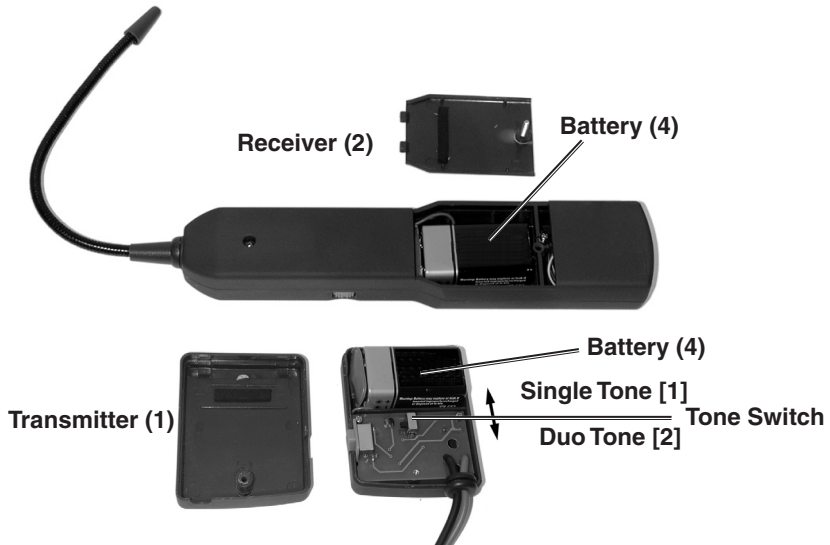


3. Press the Transmitter Switch to the CONT (continuity) position. A short (closed) circuit (less than 10K Ohms) is indicated on the Transmitter by the lighting of the green LED. An open circuit will not light the green LED.
4. When finished, turn the Transmitter Switch to the Off (center) position.

## Maintenance

1. Turn the Transmitter (1) and Receiver (2) Switches to the Off position before storing the units in the Black Vinyl Case.
2. Remove the 9 VDC Batteries (4) from each unit before storing for long periods.
3. Store in a clean and dry location.

### Battery Replacement



1. Unscrew the Back Cover of the unit and carefully pull it up and off.
2. Carefully pry out the 9 VDC Battery (4), and unclip it from the cable.
3. Replace the used Battery with a high quality type, and push it back into the housing.
4. Replace the Back Cover.

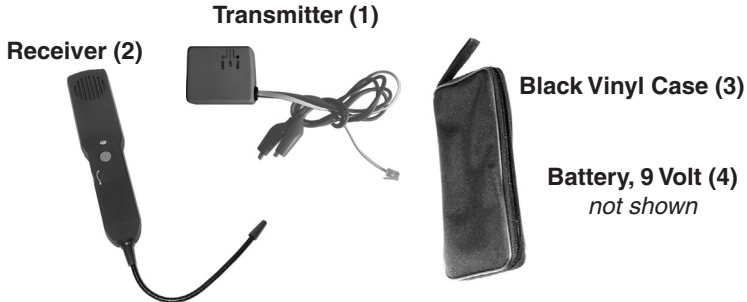
### Tone Adjustment

1. Unscrew the Back Cover of the Transmitter (1) and carefully pull it up and off.
2. Slide the Tone Switch to position [1] to hear a single tone from the Receiver (2), or to position [2] for a duo tone.
3. Replace the Back Cover.

## Parts List

Item	Description	Qty
1	Transmitter	1
2	Receiver	1
3	Vinyl Case, Black	1
4	Battery, 9 VDC	2

## Parts Photo



**Note:** Some parts are listed and shown for illustration purposes only and may not be available individually as replacement parts.

### PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THEREO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THEREO.