

# SURETRACE™ CIRCUIT TRACER

YOUR IDEAL TROUBLESHOOTING SOLUTION.  
DESIGNED TO FIND EVERYTHING, WHILE  
SAVING YOU TIME AND MONEY.

## FINDS...

- BREAKERS AND FUSES
- SPLICE ERRORS
- DEAD SHORTS
- WIRES IN WALLS, CEILINGS,  
AND FLOORS
- BURIED CONDUCTORS

Scan here for more  
details and  
informational videos



THE ELECTRICIAN'S

**CHAMPION™**



# BREAKERS OR FUSES FIND IT

## STEP 1: VERIFY POWER AND SIGNAL ON CIRCUIT

Plug Transmitter into an outlet and power on.



Hold the Receiver near the Transmitter to verify connection, confirmed by the lightning bolt symbol.

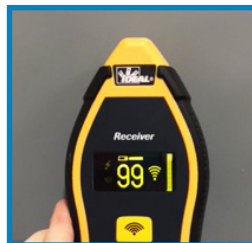


## STEP 2: SCAN EACH PANEL FOR THE HIGHEST READING

Set Receiver to the highest sensitivity mode (Receiver defaults to this).



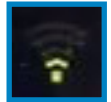
Place Receiver flat on the front near the top of each panel until the highest reading is reached. This is the correct panel.



If two panels read 99 or are close in values, press the sensitivity button once to reduce the receiver sensitivity one level and rescan.

## STEP 3: SCAN EACH BREAKER FOR HIGHEST READING

Set Receiver to the lowest sensitivity mode (also known as Breaker mode).



Scan each breaker and look for the highest reading. This is the correct breaker.



### TIPS FOR HIGHEST ACCURACY:

- Perform two slow scans around breakers to start.
- Hold Receiver at a right angle to the breaker and level with the floor.
- Once highest reading is found, tilt Receiver up and down at a 45° angle to confirm consistent high numeric reading.

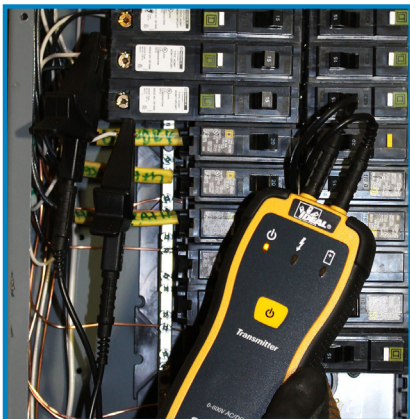


# COMMON SPLICE ERROR FIND IT

## STEP 1: ATTACH CLIPS

# 1

1. Confirm branch circuits are de-energized
2. Use a continuity check to determine which conductors are affected
3. Attach Transmitter alligator clips to the affected breaker neutrals.(The two neutrals of the AFCI/GFCI/Combo Breakers that are nuisance tripping)



## STEP 2: SCAN

# 2

Scan each electrical location (switch, outlet, light fixture, etc.) with the Receiver in the 3rd sensitivity mode setting until you identify the highest numeric reading on the Receiver.

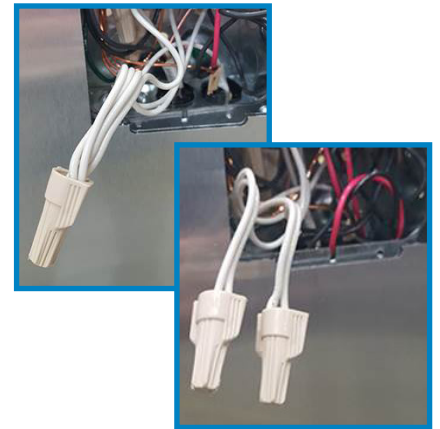
The highest numerical value on the Receiver indicates the likely location of the incorrectly spliced conductors.



## STEP 3: SEPARATE NEUTRALS

# 3

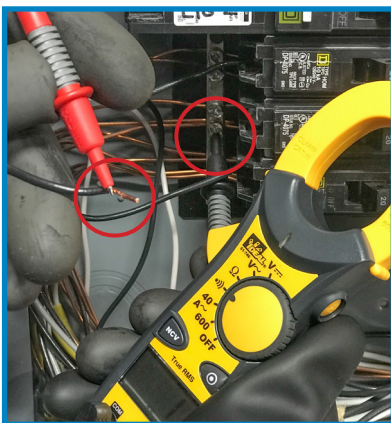
Identify the incorrect splice, separate each circuit's neutral conductors, and re-splice each neutral circuit's connections.



# DEAD SHORT FIND IT

## STEP 1: DETERMINE THE SHORTED CONDITION

1. Confirm branch circuit is de-energized
2. Unplug all items connected to the affected branch circuit
3. Verify the fault is in the affected branch circuit
4. Use a continuity check to determine which conductors are affected



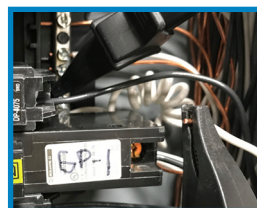
## STEP 2: ATTACH CLIPS AND SET RECEIVER'S SENSITIVITY

Set Receiver to the first, or highest, sensitivity mode.



Note: Sensitivity levels may need to be adjusted in various situations

### FOR A NEUTRAL TO GROUND CONDITION WITH AFCI/GFCI/COMBO BREAKERS



Attach alligator clips to the breaker's neutral wire and ground wire.

### FOR STANDARD BREAKERS

Attach alligator clips to the neutral/ground bar and breaker's hot wire.



## STEP 3: SCAN

# 3

### METAL CONDUIT



**DEAD SHORT FOUND IN CONNECTING CONDUIT**

Since metal conduit cannot be traced through, simply trace over the outlets in a circuit. The outlet where the reading starts to drop means that the short is between that outlet and the previously traced outlet.

### PVC CONDUIT/UNDERGROUND

Hold the Receiver flat on the conduit/ground and trace along until the reading drops to zero. This is the location of the short.



# WIRES IN WALLS, CEILINGS AND FLOORS FIND IT

## 1 STEP 1: PLUG ADAPTER INTO CIRCUIT

Plug the transmitter into a wall outlet using the outlet plug adapter provided with the circuit tracer.



Hold the receiver near the transmitter to verify signal strength. The lightning bolt indicates power is present on the circuit.



## 2 STEP 2: SET RECEIVER TO HIGHEST SENSITIVITY MODE AND SCAN

Set the receiver to the highest sensitivity mode.



Start several feet away from the transmitter, then scan the area while holding the back of the receiver flat.



Rotate the receiver to find the highest numerical reading. This is necessary to follow bends and signal strength while tracing due to bends, twists and conductors that run deeper or shallower along their path, signal strength variations occur and may require constant adjustment to the angle of the receiver to trace.

## 3 STEP 3: MAINTAIN ORIENTATION AND TRACE

Adjust the signal strength on the receiver if needed. If the reading is too high, reduce the strength. If the reading is too weak, utilize the remote return path method for the transmitter, then repeat step 2.



To assist in tracing, use a small piece of tape to pinpoint the location of the cable.



Continue tracing while following the highest reading until the end of the cable is found.

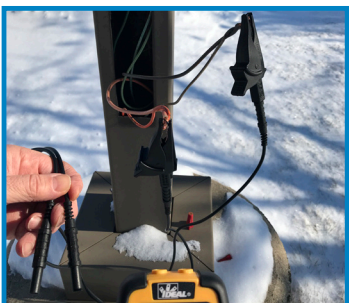
# BURIED CONDUCTORS FIND IT

## STEP 1: ATTACH ALLIGATOR CLIPS

Use appropriate methods and LO/TO to ensure the conductors are de-energized and locked out before proceeding.

Verify that you de-energized the correct conductors before proceeding when possible. Reenergize after the transmitter is attached.

Using appropriate safety methods, attach the alligator clips with 3 foot leads to the Hot and Neutral conductors on the supply side of the branch circuit.



## STEP 2: PLUG LEADS INTO TRANSMITTER AND TURN IT ON



## STEP 3: TURN ON RECEIVER AND TRACE

The orientation of the receiver to the wiring affects the displayed signal strength. Simply adjust the orientation of the Receiver relative to the buried conductor to maximize the displayed signal strength.



Begin tracing the wires buried in the ground by following the strongest signal, and adjusting the sensitivity to obtain readings in the 60's to 80's.

Note: The strongest tracing signal will always be accomplished by connecting to a closed loop energized circuit with an active load.

Note: The circuit in these pictures has been de-energized and locked out in accordance with NFPA 70E.

# KIT OPTIONS AND PARTS



## Receiver: RC-959 or RC-955

Provides a numeric value and variable pitch that increases as the signal becomes stronger on the wires being traced or breakers being identified.



## Transmitter: TR-955

Sends a 32 kHz, fixed- amplitude, time-modulated signal onto the circuit to be traced, which then induces an electromagnetic field onto the circuit. Will work on a de-energized circuit and won't affect GFCIs and sensitive equipment on an energized circuit.



## Inductive Clamp: IC-958

1" jaw opening with a powerful coil that induces a low voltage signal onto the cable without affecting the low voltage signals on the circuit.

## Battery Pack & Strap: BP-958

Provides power for the inductive clamp and attaches to the inductive clamp with a 6" cord.



## Tracer Test Lead Set: TL-956

Complete test lead kit includes:

- TLOP-956 outlet plug adapter
- TLBP-956 (2) blade prongs
- TLGP-956 ground prong
- TLAC-956 (2) alligator clips
- TLA1-956 (2) 3' lead adapters
- TLA2-956 25' lead adapter



## Cradle: CR-959\*

Threaded for use on standard extension pole. Compatible with receivers for all kits.

\*Optionally available for the 61-955, 61-957 and 61-959 receivers

# TWO RECEIVER OPTIONS RC-955 OR RC-959

The receiver provides a numeric value and variable pitch that increases as the signal becomes stronger.

Both receivers are equipped with CertainCircuit™ detection, a peak detecting bar graph to show signal strength and a "0-99" numeric indication of signal strength.



**Energized**



**De-energized**



## Revolutionary technology

in the RC-959 rotates the display in 90° increments so that you always receive an upright reading. Even when the receiver is pointing down, you can keep up.

## RC-955 (Included in 61-955 Kit)

- Red LED display
- Rotating display (in 180° increments)
- Displays battery life remaining on the LED segments after pressing the battery icon
- Has small indicator lights on the main screen under the icons on the body of the receiver to show sensitivity setting, audible tone status, and status of transmitter connection



## RC-959 (Included in 61-957 and 61-959 Kits)

- Super bright, green OLED display for easy viewing in bright outdoor conditions.
- Rotating display (in 90° increments)
- Displays battery life remaining at all times with easy to read battery icon
- OLED display allows visible icons on the main screen such as the sensitivity setting, audible tone status, and status of transmitter connection



