IDEAL 61-955 SureTrace Circuit Tracers Instruction Manual

Contents

IDEAL 61-955 SureTrace Circuit Tracers

Read first: Safety Information
Understand and follow operating instructions carefully. Use the tracer only as specified in this manual otherwise, the protection provided by the tracer maybe impaired.

WARNING

To avoid electric shock, personal injury, or death, follow these instructions:

- Before using or connecting the tracer, visually inspect to ensure the cases are not cracked and back case is securely in place. Do not use if tracer appears damaged.
- Before using the test leads, inspect carefully for damaged insulation, exposed metal or cracked probes. Do not use leads if they appear damaged.
- This product is only to be used by persons trained and experienced in working with high voltages, and who are aware of the dangers and precautions to be taken when working in such environments. Observe lockout and tagout protocols where appropriate.
- Never use the tracer with a remote ground in patient care areas. Ground currents generated by the tracer may create a shock hazard for electrically susceptible patients.
- Always test the remote ground system to confirm that its resistance is less than 100 ohms from remote ground to circuit neutral.
- Always check circuits to verify that the hot, neutral and ground are wired correctly.
- Do not use tracer if it operates abnormally as protection maybe impaired.

- Do not use during electrical storms or in wet weather.
- Do not use around explosive gas, dust, or vapor.
- Do not apply more than the rated voltage to the tracer.
- Do not use without the batteries and the back case properly installed.
- Remove the test leads from the circuit prior to removing the battery cover.
- Do not attempt to repair this unit as it has no user-serviceable parts.
- Use only approved connecting leads. Do not use improvised connections that couldesent a safety hazard.
- Always ensure that test leads are secured so that they cannot be accidentally snagged or tripped over.
- When switching on the transmitter, always verify that the three indicator LEDS illuminate briefly on power up.
- The Line Energized feature provides an additional safety alert. If the findicator is not illuminated, always independently confirm the status of the line to bè absolutely sure.

CAUTION

To protect yourself, think “Safety First”:

- Voltages exceeding 30VAC or 60VDC pose a shock hazard so use caution.
- Use appropriate personal protective equipment such as safety glasses, face shields, insulating gloves, insulating boots, and/or insulating mats.
- Never ground yourself when working on an electrical circuit.
- Always make the ground or neutral connection first, and remove last when using clip leads or adaptor cord.

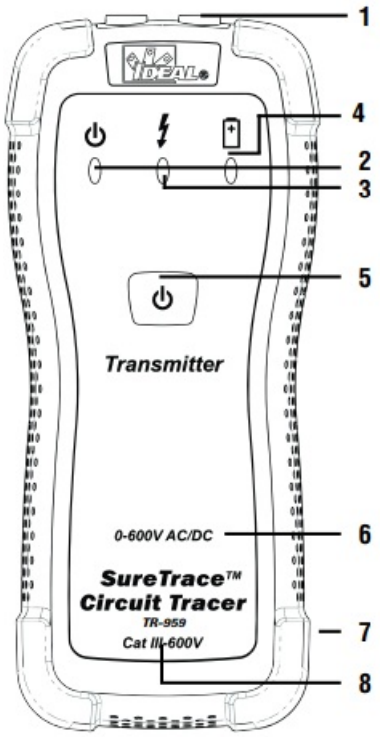
Introduction

- The SureTraceM Circuit Tracers are powertul, versatile, easy-to-use troubleshooting test tools for finding breakers and hidden wire problems in residential/commercial/industrial environments.
- These tracers work on closed (energized) and open (de-energized) circuits.
- They identitly circuit breakers, find opens and shorts, and trace wires behind walls.
- The tracers are available in three contigurations. Each kit contains the same transmitter (TR-955) and test lead k display, and a Hard Case (C-955). The 957 kit has a Receiver (RC-959) with a super-bright OLED display and a Hard Case (C-955). The 959 kit also has the high-end Receiver (RC-959), adds an Inductive Clamp (1C-958) with Battery Pack (BP-958), and a larger Hard Case (C-959).
  L-956). The 955 kit has a Receiver (RC-955)

Key Features

- Numeric value and variable audible torne for easy-to-understand tracing
- Super-bright display for easy-viewing
- Peak detecting bar graph for instantaneous signal strength indication
- Identifies breakers and fuses
- Pinpoints opens and shorts
- Traces wires behind walls
- Can be used on de-energized/energized circuits from 0-600V AC/DC ill not afect GFCIs or other sensitive equipment on the line
- Low battery indication
- Cat I1-600V safety rating

Transmitter Callout Features



1. **Output Jacks**
   Non-polarized, standard banana plug type.
2. **Power Indicator**
   When the transmitter is On, the ⏻ LED illuminates indicating that a signal is being produced
3. **Line Energized Indicator**
   The transmitter continuously monitors the voltage across its output terminals. If greater than 30 volts AC or 40 volts DC is present, the ϟ LED indicator illuminates. The transmitter also communicates the line voltage state to the receiver.
4. **Low Battery Indicator**
   When the batteries approach the 10% discharge point, the 🔋 LED lights. 0nce the batteries are depleted, the LED flashes. At this point, the batteries are fully exhausted, and the unit forces power down.
5. **Power Button**

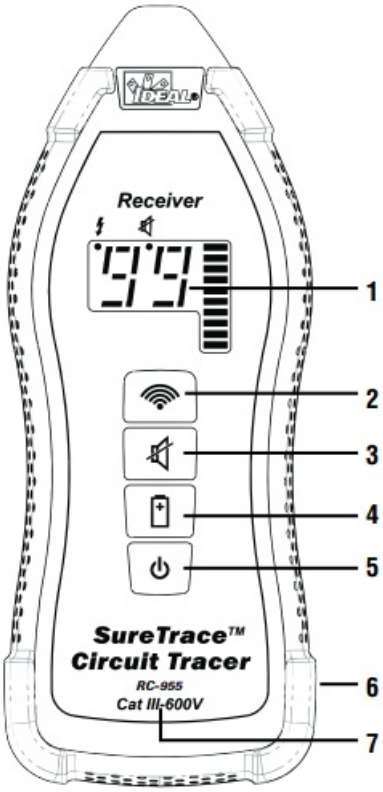
Depress the button to switch power on and enable the transmit function. Depress again to conserve battery power when not in use.

6. **Operating Voltage Range**
   Operates on energized/de-energized circuits from 0 to 600V AC/DC.
7. **Battery Compartment**
   Holds (4) AA batteries.
8. **Safety**
   Rated for use in Cat lll-600V environments. Incorporates a high-energy, fast-acting protection fuse.

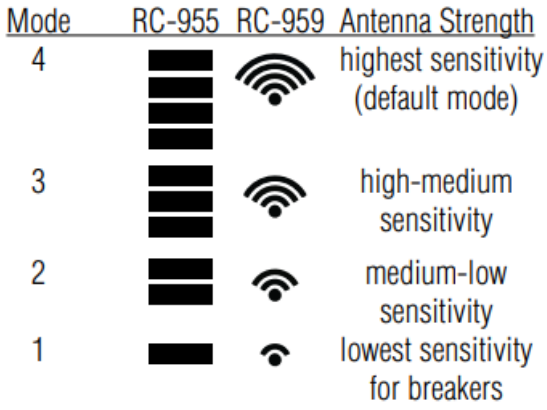
Additional Notes

- The transmitter's signal does not afect sensitive, electronic equipment on the circuit.
- In a closed circuit, because the transmitter generates a small test current, its signal can be detected upstream through the feeder panel and the distribution transformer.
- The strength of the signal is reduced as it passes through the transformer in inverse proportion to the turns ratio of the transformer. Can be used on GFCI protected circuits.

Receiver Callout Features



1. Super Bright Display See next page for features.
2. **Sensitivity Mode:**
   Depress this button to select the mode of sensitivity



Mode RC-955 RC-959 Antenna Strength

3. See Additional Notes on next page for guidelines on mode selection.
4. **Audible Indication**

   Depress this button to turn the sound On/0ff. Ii On is selected, a variable pitch/tone is produced- directly proportional to the signal strength..
5. **Battery Power**

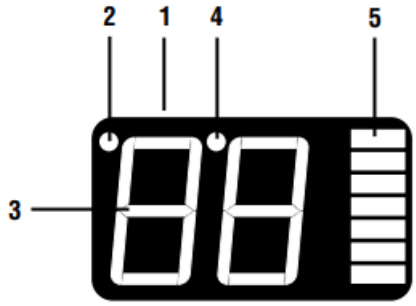
   On RC-955, depress this button at anytime to display the useful battery life remaining on the LED segments. On RC-959, battery life is continuously displayed on the main Screen. Batteries must be replaced when ai displays on main screen of RC-955 and appears on RC-959.
6. **Power Button**

   Depress to SWitch power on and enable operation. Depress again to conserve battery power when not in use.
7. **Battery Compartment**

   Holds (3) AA batteries.
8. **Safety**

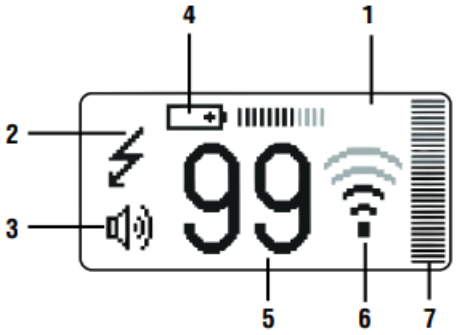
   Rated for use in Cat ll-600V environments.

RC-955 Display



1. Bright, 2-digit LED display. (180° Rotating)
2. Displays the powered line status received from the transmitter. “0-99” numeric indication of signal strength.
3. Indicator lights when audible tone is disabled.
4. Peak detector shows instantaneous changes in signal strength.

RC-959 Display



1. Super-bright OLED display (90° rotating)
2. Displays the powered line status received from the transmitter.
3. Indicates On/Off status of the audible tone.
4. Low Battery Indicator. Flashes when 10% battery life remains.
5. 0-99 numeric indication of signal strength.
6. Displays the sensitivity setting.
7. Peak detector shows instantaneous changes in signal strength.

Additional Notes

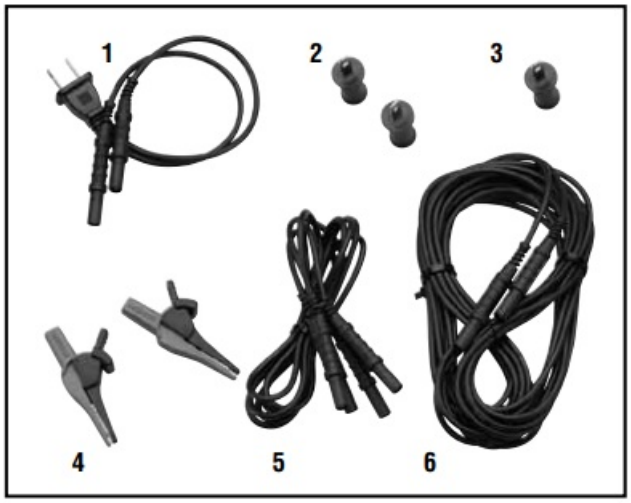
- Sensitivity mode selection general guidelines
  - Start out at maximum sensitivity until the receiver finds the circuit under test. If the receiver is too sensitive, then reduce the sensitivity using the button until the receiver's display does not peg at "99" continuously.
  - Use mode for tracing: (a) in closed circuits while using the outlet plug adapter (rather than the 25 lead and a remote return path setup). (b) in open circuits, (c) underground, (d) and anywhere else more signal detection is needed.
  - Use mode to reduce the level of sensitivity if the highest sensitivity range has signal saturation (display is pegging at "99" continuously).
  - Use mode for tracing (a) in closed circuits while using the 25 lead and a remote return path, (b) and when previous mode has signal saturation of "99.
  - Use Breaker mode for (a) identifying circuit breakers and fuses, (b) pinpointing individual wires from a bundle, (c) and when previous mode has signal saturation.
- Receiver Orientation
  - The indication of received signal intensity depends on how the receiver is pointed in relation to the source of the signal. If the receiver is pointed away from the signal source then there will be a loW value indicated on the receiver. If the receiver is rotated about the axis of main antenna sensitivity, the signal varies in strength as the antenna is pointed at and then away from the circuit being traced.
  - Therefore, rotate the receiver over the wire being traced until the highest reading is displayed. If during tracing, the signal is reduced, the wire may have changed directions (e.g. from horizontal travel across a wall to vertical travel upa wall).
  - Rotate the receiver to find the strongest signal again.
  - Use the back of the receiver to sweep the wall or floor and determine the circuit's general location. Use

the nose of the receiver to pinpoint its location.

- Steel conduit attenuates (weakens) the signal radiating from the wires inside the conduit. Aluminum conduit significantly atenuates the signal. So, the receiver should be set at a higher sensitivity and may need to be placed closer to the circuit to obtain a stronger signal detection.

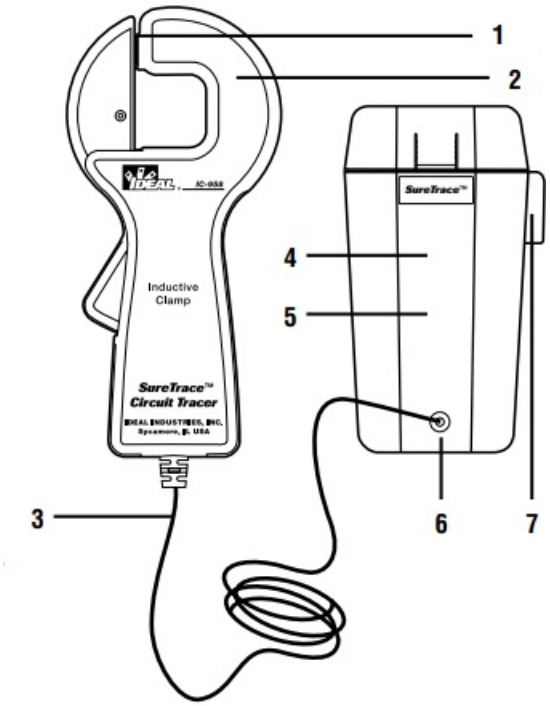
Test Lead Kit (TL-956)

A complete test lead kit is supplied for use with the transmitter:



1. TLOP-956 Outlet Plug Adapter for plugging into standard 120VAC outlets.
2. TLBP-956 (2) Blade Prongs for inserting into a separate outlet with a remote neutral Conductor as a return path.
3. TLGP-956 Ground Prong for inserting into a separate outlet with remote ground conductor as a return path.
4. TLAC-956 (2) Alligator Clips for connecting directly to bare wires and grounding points.
5. TLA1-956 (2) 3 Lead Adapters for use with above clips and prongs to connect to bare Wires and grounding po0ints.
6. TLA2-956 25″ Lead Adapter for use with above clips and prongs to connect to remote return paths.

Inductive Clamp (IC-958) with Battery Pack (BP-958) Callout Features



1. 1″ (25mm) Jaw Opening.
2. Powertul co1l induces a low voltage signal onto a closed circuit.
3. 6 cord attaches to the battery pack for power.
4. Protective case.
5. (8) C-cell batteries.
6. Input jack for clamp cord
7. Hang mount for magnetic strap.

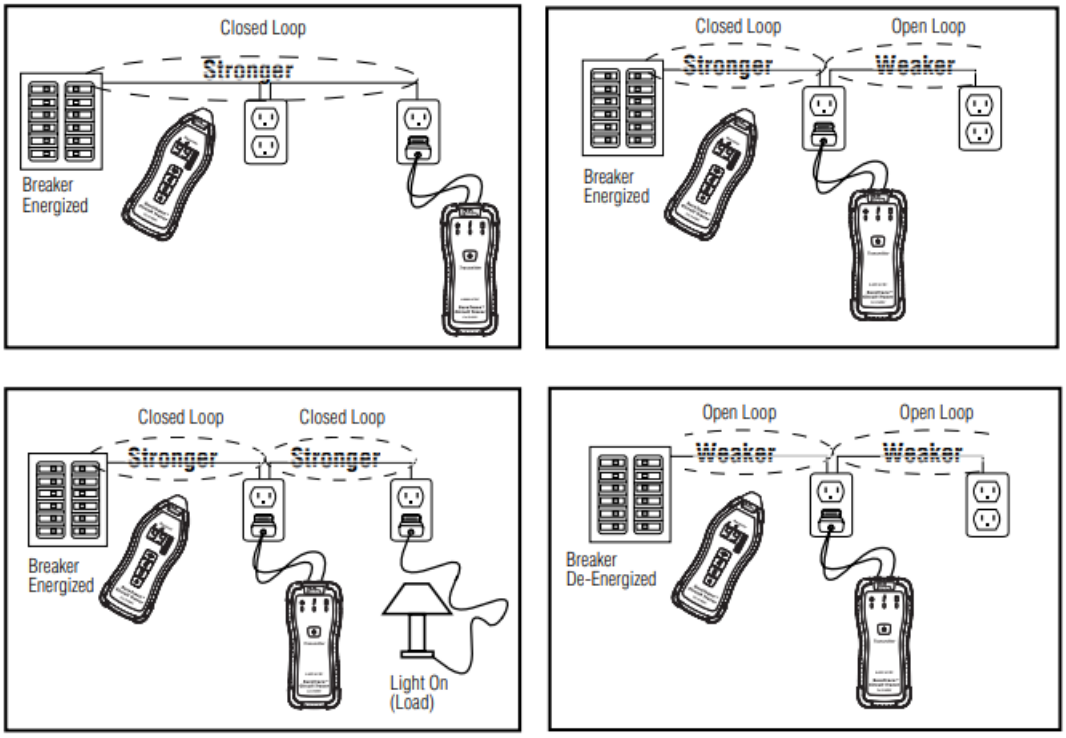
Magnetic Strap (not shown)

Hooks onto the battery pack. Magnet attaches to metal cabinets, panels, electrical boxes, etc. Velcro strap Wraps around and hangs from non-magnetic objects.

Theory of Operation

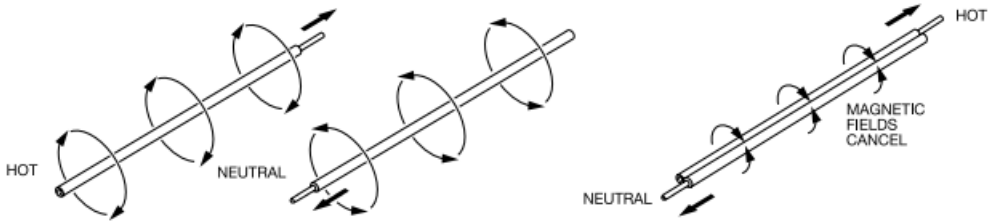
- The tracer consists of a transmitter and a receiver. The transmitter produces a unique signal onto the circuit to betraced. The receiver detects this unique signal when placed in the proper orientation to the wires being traced or breakers being identified. The receiver provides a numeric value and a variable pitch/tone that increase as the signal becomes stronger.
- The transmitter sends a 32 kilohertz, fixed-amplitude, time-modulated signal that injects a voltage onto the circuit to be traced, which then induces an electromagnetic field onto the circuit.
- Whether the circuit is open or closed greatly affects the strength of the electromagnetic field.
- In an open circuit, no current can floW, so the electromagnetic field produced is much weaker. However, in a closed circuit, the injected voltage induces a current iloW, which produces a much stronger electromagnetic field. This is the optimal method for tracing as this much stronger signal allows the receiver to detect it from a greater distance away from the circuit being traced.

Here are some examples of Open/Closed Circuits:

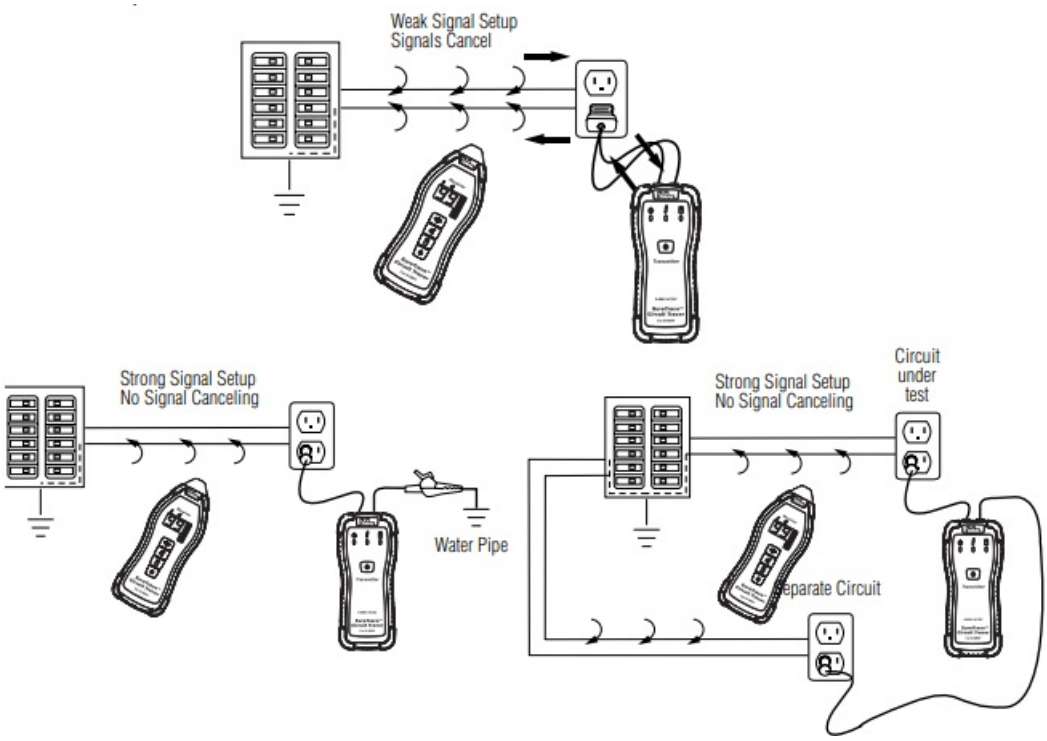


Remote Return Path

Electromagnetic fields radiate counter-clockwise in relation to the current flow. For example, curent flows out on a hot conductor and returns on the neutral. This change in opposite current flow also creates opposing magnetic fields. So, when these two opposing conductors are close together, the two magnetic fields tend to cancel each other out. This canceling efect diminishes the circuit's ability to radiate the transmitter's strong signal making it more difficult for the receiver to detect the signal.



- To avoid the canceling effect of the opposing magnetic fields and optimize the transmitted signal, the conductor to be traced should be separated from the returnconductor by utilizing a remote return path.
- The simplest method is to use the 25′ test lead to connect to a remote return path, suchas a neutral or ground from another circuit or a water pipe. When identifying breakers, the hot and neutral are already separated at the electrical panel so the use of the AC outlet adapter is sufficient.



If unsure that the remote return path chosen is a good one, use a multimeter to measure the resistance between the circuit neutral and the remote return path. If >100s2, a different return path should be selected.

Applications

Pre-test Operation

Prior to finding a breaker or tracing a circuit, it is good practice to test the receiver by holding it near the powered transmitter or inductive clamp. A numeric indication of “99 and strong audible sound ensures that it is working properly.

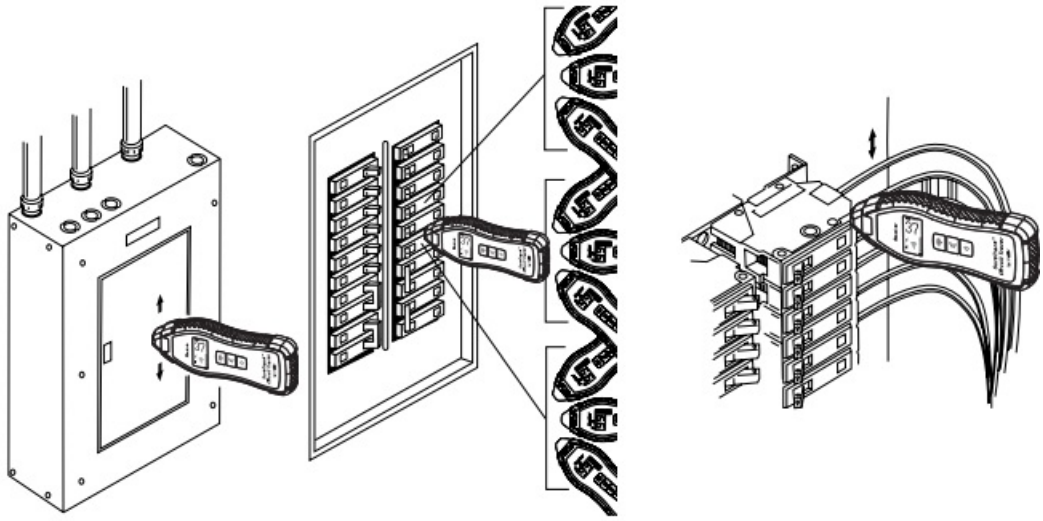
Locating Circuit Breakers and Fuses

Applications include identiftying the breaker that protects the circuit under test, finding the correct breaker to de-energize the circuit, and labeling a breaker panel.

1. Connect the transmitter to the circuit that needs to be identified and power it on. The procedure is the same whether the circuit is energized or de-energized. But, a much stronger signal is produced using an energized (closed) circuit.
2. Turn on the receiver and go to the panel.
    1. if more than one panel exists, set the receiver to mode and touch the nose to each panel cover until the panel with the strongest signal is identified.
    2. If the receiver is detecting more than one panel with a strong signal, reduce the sensitivity range and repeat the step above.
3. Open the panel cover, set the receiver to Breaker mode. The receiver should be positioned on its side to orientate the antenna properly.
4. Slide the nose of the receiver down each breaker in the panel. The breaker with the highest numeric reading is the correct breaker.
    1. If two or more breakers have the same numeric values, tip the nose of the receiver up and then down at

45° angles and note the numeric values on each of the questionable breakers. Only the correct breaker will show a strong signal in all positions. Or, pull the panel cover, and place the nose on each of the individual hot wires for a more certain determination.

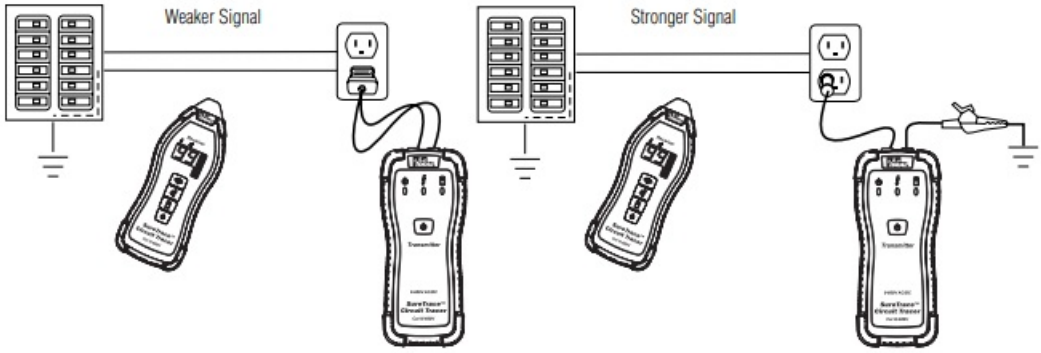
5. When the correct breaker is tripped (opened), the signal will drop significantly. And, the will disappear from the receiver's display. The LED on the transmitter will also turn off.



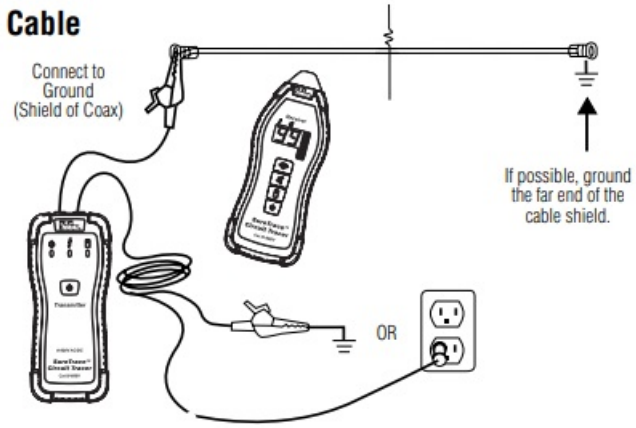
Tracing Wires

Applications include finding the locations of cable runs and identifying other devices and loads on the circuit

1. Connect the transmitter to the circuit to be traced and power it on.
    1. For optimal tracing, leave the circuit energized to create a closed loop.
    2. If the circuit is de-energized, then connect transmitter to the neutral and ground conductors to create a closed loop.
2. Turn on the receiver and use the default maximum sensitivity (
3. Starting several feet from the transmitter, use a sweeping motion and the back of thereceiver to find the strongest signal location behind the wall, above the ceiling, or under the floor.
    1. If the signal is too strong, reduce the sensitivity range.
    2. If the signal is too weak, utilize a remote return path for the transmitter. Then, reduce the sensitivity range on the receiver and repeat step #3.
4. Continue following the highest reading until the end of the circuit is found.



Tracing Low Voltage and Data Cable



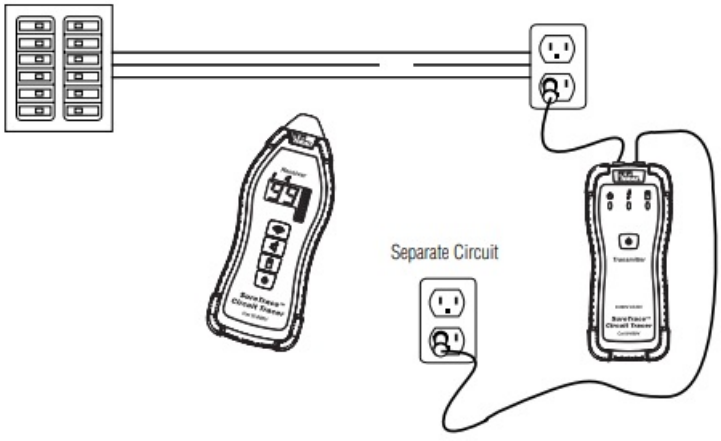
Applications include tracing coax, twisted pair, Cat 5, alarm and telephone wire.
Follow the instructions for Tracing Wires behind walls using the de-energized method and a remote ground for a return path.

Finding Opens

Applications include locating dead circuits, finding the source of an open (broken point) in a hot/neutral/ground conductor, and determining the end of a circuit run.

1. Connect the transmitter to the open circuit and power it on.
2. Turn on the receiver and use the default maximum sensitivity
3. Starting several feet from the transmitter, use a sweeping motion and the back of the receiver to find the strongest signal location behind the wall, above the ceiling or under the floor.
    1. If the signal is too strong, reduce the sensitivity range.
    2. If the signal is too weak, connect one lead of the transmitter into the open conductor and connect the other lead to a remote return path. Then, repeat step #3.
4. Continue following the highest reading until the signal starts to fall off. This is the location of the open. Reduce the sensitivity range and use the nose of the receiver to pinpoint the open on the circuit.

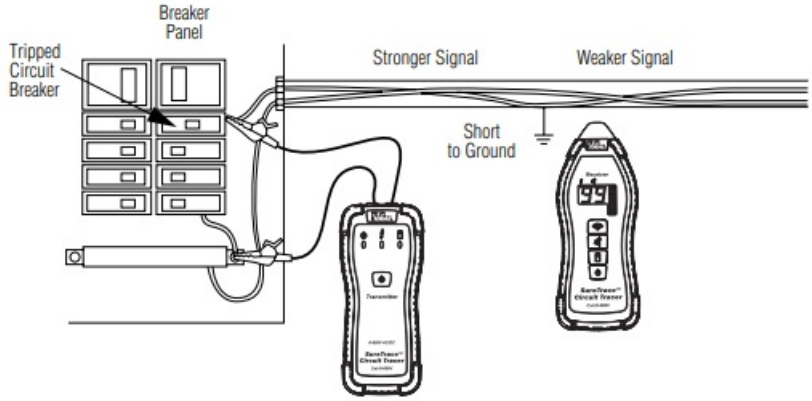
If the open is not found after tracing the length of the run, the conductor may be capacitively coupled. This condition causes a signal bleed-off onto the other adjacent conductors. To remove this effect, ground the adjacent conductors and minimize the distance between the transmitter connection and the open.



Finding Shorts

Applications include determining causes of breakers tripping, fuses blowing, and current leaking on the ground conductor. The tracer locates the origin of the ground fault or dead- short in these circuits.

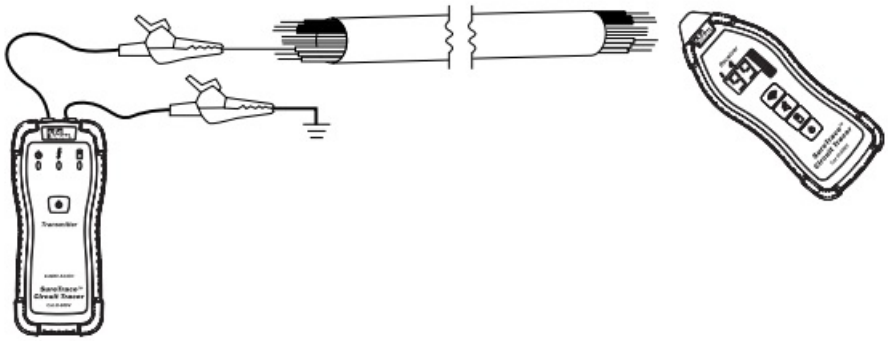
1. Connect the transmitter to the shorted circuit and power it on.
    1. One lead should be connected to the faulted conductor and the other lead to ground.
    2. If the ground fault is in metallic conduit, then the conduit is the ground.
    3. if possible, ground the adjacent conductors.
2. Turn on the receiver and use the default maximum sensitivity
3. Starting several feet from the transmitter, use a sweeping motion and the back of the receiver to find the strongest signal location behind the wall, above the ceiling, or under the floor.
    1. If the signal is too strong, reduce the sensitivity range.
    2. If the signal is too weak, connect one lead of the transmitter into the open conductor and connect the other lead to a remote return path. Then, repeat step #3.
4. Continue following the highest reading until the signal starts weakening. This is the point of the fault as the signal flows to ground instead of continuing strongly down the hot conductor. Heduce the sensitivity range and use the noSe of the receiver to pinpoint the source of the fault.



Sorting Bundled Wires

Applications include identifying a specific circuit amongst several circuits in a filed Conduit, sorting wires in a wire harness, identiying coax cable and twisted pair cable in a termination box.

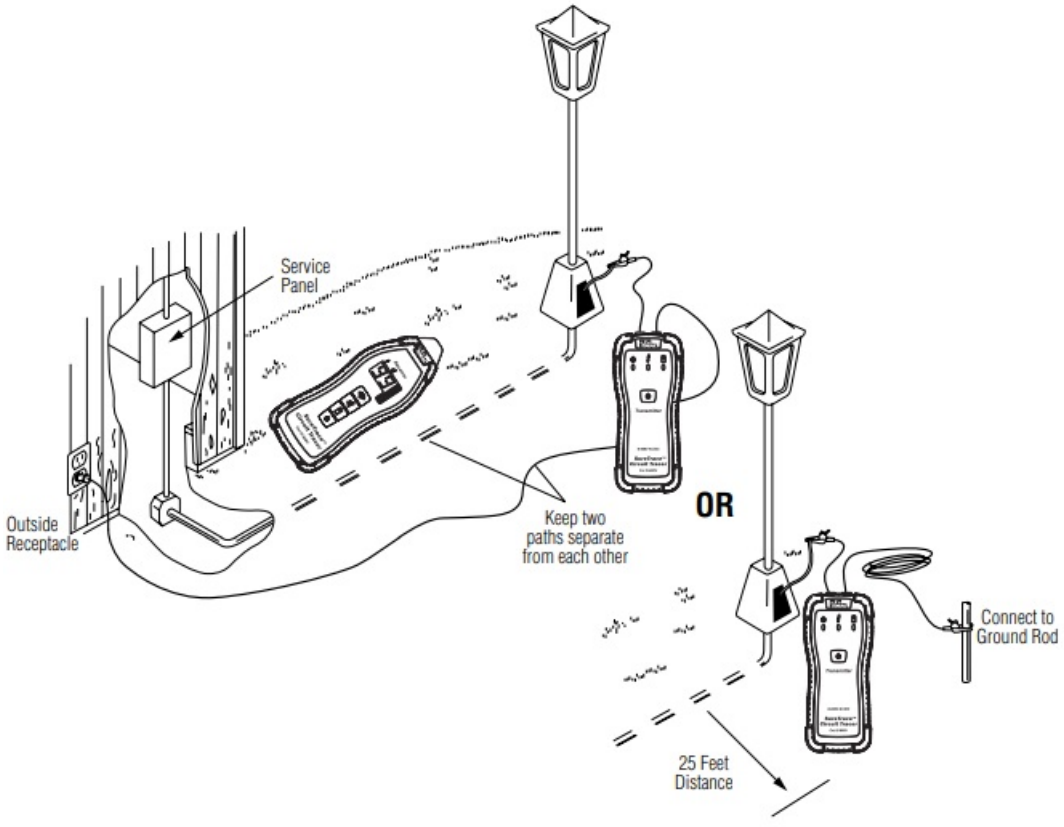
1. Connect the transmitter to the circuit to be traced and power it on.
    1. Clip one test lead to the known end of the wire to be traced or identified.
    2. Clip the other test lead to a remote return path.
2. Turn on the receiver and set it to the least sensitivity ( ).
3. Go to the other end of the wire run and sort out the individual wire using the nose of the receiver.
    1. If the signal is too strong, separate the wires more from the bundle when testing. If the signal is too weak, then increase the sensitivity range on the receiver and repeat step #3.
4. Continue sorting until the wire with the highest reading is identified.



Tracing Underground

These circuit tracers are not underground cable locators. But, in some environments they can be used to trace buried cables, conduit, or metal pipe.

1. Connect the transmitter to the circuit to be traced and power it on.
    1. If possible, create a closed circuit by grounding the other end.
    2. If possible, ground the adjacent conductors to eliminate capacitive-coupling effects that can cause signal bleed-over.
    3. Utilize a remote return path to maximize the signal produced.
2. Turn on the receiver and use the maximum sensitivity detault
3. Use a sweeping motion and the back of the receiver to find the strongest signal underground.
    1. If the signal is too strong, reduce the sensitivity range.
    2. if the signal is too weak, then check the quality of the ground connections (10092) and repeat step #3.
4. Continue following the highest reading until the end of the circuit is found.



Inductive Clamp Applications

WARNING: The clamp does not have any indicators to sense if a circuit is energized. The line energized feature (⚡) on the receiver only works with the transmitter (TR-955).

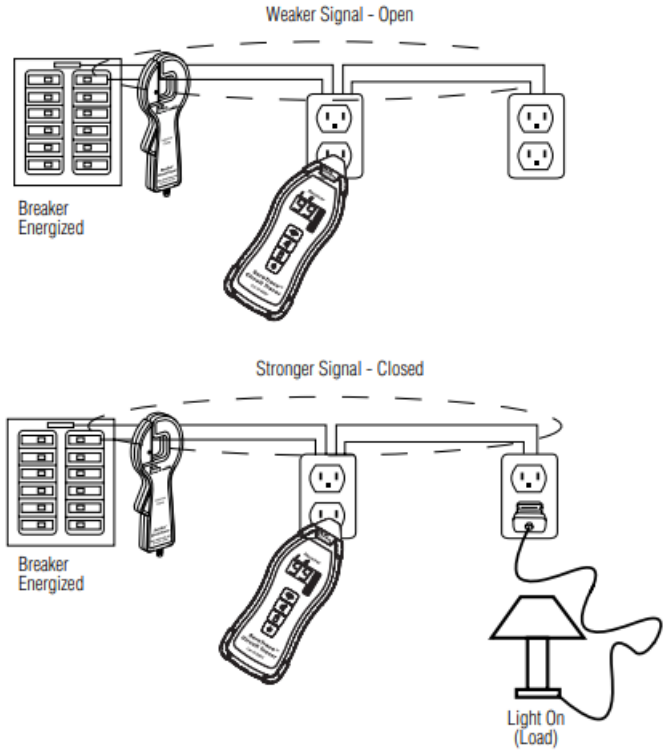
- The inductive clamp is powered solely by the battery pack. It generates its own specific, time modulated signal, and by transformer action, couples that signal onto the energized or de-energized circuit to be traced.
- Always disconnect the battery pack from the clamp when not in use to conserve battery power.
- For the clamp to propagate a signal onto the circuit to be traced, the circuit must be closed at the end where the clamp is applied, at a minimum. To maximize the signal produced, both ends of the circuit should be closed to create a complete l0op. Refer to the diagramstor proper setup.

Three typical applications where the inductive clamp may be used in replace of the transmitter

- Identifying downstream loads from a breaker
- Tracing conduit
- Tracing industrial control circuits

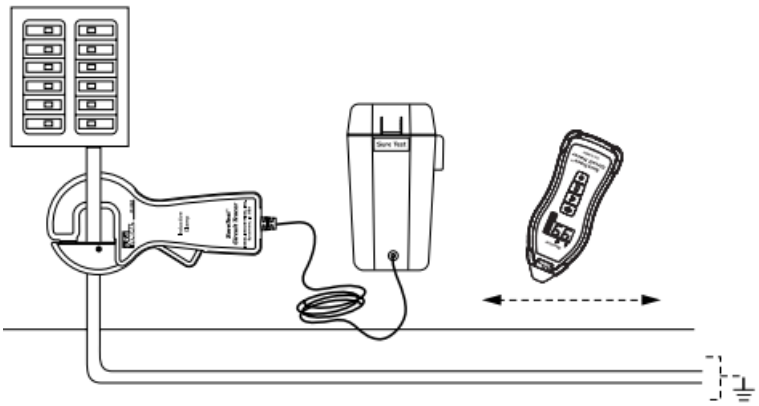
Identifying downstream loads from a breaker.

1. Remove the panel cover and clamp around the hot wire of the energized (closed) circuit.
    1. To maximize the signal, close the far end of the circuit by plugging in and turning on a work light or other load into the furthest outlet; hence, making a complete loop
2. Hang the battery pack onto the panel with the magnetic strap.
3. Plug the clamp into the battery pack.
4. Set the receiver to the highest sensitivity mode  and trace the circuit to the furthest Outlet while identitying all outlets and loads connected to the circuit. If the Receiver is saturated, reduce the sensitivity range.



Iracing Conduit

1. Clamp around the metallic conduit to be traced. If possible, ground the far end of the
    1. Conduit to close the loop. This can be created using the 25 lead and alligator clips to clip onto the end of the conduit or electrical box with one clip and a remote neutral or water pipe with the other alligator clip.
2. Hang the battery pack onto the panel or conduit with the magnetic strap.
3. Plug the clamp into the battery pack.
4. Set the receiver to the highest sensitivity ( ) mode and trace the conduit. If the Receiver is saturated, reduce the sensitivity range.

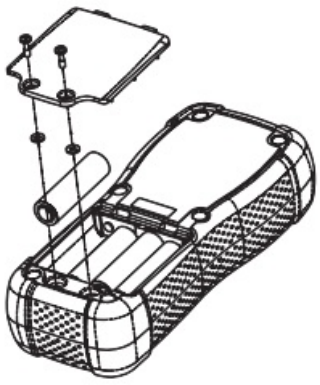


Tracing industrial control circuits.

- Ensure that the circuit is energized (closed at the panel) at a minimum. To maximize the signal, close the other end of the circuit by turning on a load, such as a motor or pump.
- Clamp around the hot wire of this energized (closed) circuit.
- Use the magnetic strap to hang the battery pack onto the panel or the motor control cabinet.
- Plug the clamp into the battery pack.
- Set the receiver to the highest sensitivity mode and trace the circuit to the other end. If the receiver is saturated, reduce the sensitivity mode.

Battery Replacement

Note: Use only good quality alkaline batteries for maximimum operating life.
Always replace with a complete set of new batteries of the same type
Remove batteries as soon as they become exhausted to avoid damage due to leakage.



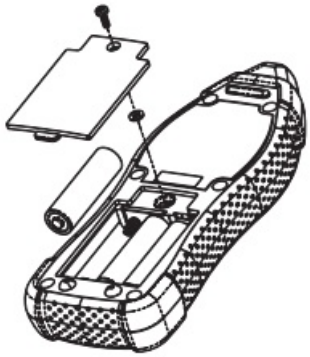
Transmitter:

Ensure that the test leads are removed from the output jacks and the circuit under test.

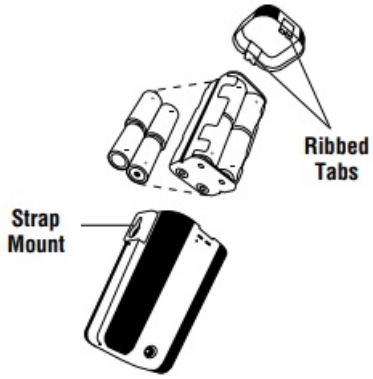
1. Remove the battery cap by loosening the screw.
2. Replace batteries with (4) new AA batteries.
3. Re-fit cap and re-tighten the screw.

Receiver:

- Remove the battery cap by loosening the screw.
- Replace batteries with (3) new AA batteries.
- Re-fit cap and re-tighten the screw.



Battery Pack for Inductive Clamp:
Ensure the clamp is unplugged from the battery pack.



1. Remove cap by squeezing the ribbed tabs on either side of the cap.
2. Remove the battery holder noting the orientation to the strap mount on the case.
3. Replace batteries with (8) new C-cell batteries.
4. Re-install battery holder into the case noting the orientation to the magnetic strap mount.
5. Snap cap back onto case.

Fuse Replacement (TR-955 only)

1. If the following symptoms are exhibited, the internal protection fuse should be checked and replaced:
2. The transmitter appears to power up normally but signal output is zero, or greatly diminished.
3. When connected to a live circuit, the ⚡ indicator does not light.

4. The receiver still indicates a strong reading when placed in close proximity to the transmitter.

WARNING
To avoid personal injury or damage to the transmitter, use only the IDEAL fuse specified in this manual.

Ensure that the test leads are removed from the output jacks and the circuit under test.

1. Remove the battery cap and batteries as described above.
2. Unscrew the (6) retaining screws from the rear section of the case and remove.
3. The fuse is located at the connector end. Replace with IDEAL part # F-956.
4. Replace the case rear section and sCrews, batteries and battery cap.

Maintenance

Clean the case with a damp cloth and mild detergent. Do not use abrasives or solvents.
Keep away from liquids and ensure the tracer is completely dry before use.

Service and Replacement Parts

This unit has no user-serviceable parts except for the fuse in the transmitter. For replacement parts or to inquire about service, contact IDEAL Technical Suppot at 877-201-9005 or visit our website, **www.idealindustries.com**.

Specifications

- Operating Frequency: 32.768 kHz, fixed-amplitude, time-modulated signal
- Current Output of Signal: 82 mA rms to 50 Ohms
- Voltage Output of Signal: 4V rms (330 mW)|
- Operating Voltage: 0-600V AC/DC
- Fuse: 1A/660V, Super-quick-acting FF (6mim x 32mm) – IDEAL # F-956
- Battery Power: 1.5V x (4) AA batteries (NEDA 15A, IEC LR6)
- Battery life: 25 hours open circuit testing/ 6 hours short circuit tracing.
- Indicators: On/0ff, Line energized, Low battery

Receiver

- Sensing: Magnetic
- Signal response: Numeric display and Audible beep
- Battery Power: 1.5V x (3) AA batteries (NEDA 15A, IEC LR6)
- Battery life: 20 hours minimum

Inductive Clamp with Battery Pack

- Operating Frequency 32.768 kHz, fixed-amplitude, time-modulated signal
- Current Output of Signal: 200mA p-pmax into 50 ohms
- Voltage Output of Signal: 30V nominal (2 watts)
- Operating Voltage: 0-600V AC/DC

- Battery Power: 1.5V x (8) C-cell batteries (NEDA 14A, IEC LA14)
- Battery life: 30 hours.

Circuit Tracer Kits

- Operating Temperature: 32F (0°C) to 122°F (50°C)
- Storage Temperature: -4°F (-20°C) to 140°F (60°C) (without batteries installed).
- Humidity (Operating): 95% R.H. max
- Dimensions (Wx HxD)
  - 61-955/957: 14.0x 11.3 x 3.3 in. (355 x 285 x83 mm)
  - 61-959: 18.5x 14.6x 3.5 in. (470 x 371 x 89 mm)
- Weight:
  - 61-955/957: 4.5 lbs. (2.1 kg)
  - 61-959: 7.9 lbs. (3.6 kg)
- Accessories Included: Keceiver, Iransmitter, test lead KIt, nard case, batteries, instruction manual.
- Safety: Complies with EN 61010-1, EN 61010-032, UL 61010-1, IEC 61010-2-032, IEC 61010-031 specifications, Cat III-600V.
- Other Regularity: FCC Part 15 compliant, FCC recognized device. Compliances

Double Insulation
Instrument has been evaluated and complies with insulation category ll (overvoltage category ll). Pollution degree 2 in accordance with IEC-644. Indoor use.

Dispose of waste electrical and electronic equipment

In order to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and rationally, the user should return unserviceable product to relevant facilities in accordance with statutory regulations. The crossed-out wheeled bin indicates the product needs to be disposed separately and not as municipal waste.

Disposal of used batteries/accumulators!

The user is legally obliged to return used batteries and accumulators. Disposing used batteries in the household waste is prohibited! Batteries/accumulators containing hazardous substances are marked with the crossed-out wheeled bin. The symbol indicates that the product is forbidden to be disposed via domestic refuse. The chemical symbols for the respective hazardous substances are Cd = Cadmium, Hg = Mercury, Pb = Lead.
You can return used batteries/accumulators free of charge to any collecting point of yourlocal authority, our stores, or where batteries/accumulators are sold. Consequently you comply with your legal obligations and contribute to environmental protection.

Warranty Statement

- This tester is warranted to the original purchaser against defects in material and workmanship for two years. During this warranty period, IDEAL INDUSTRIES, INC. will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction. This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.
- Any implied warranties arising out of the sale of an IDEAL product, including but not limited to implied

warranties of merchantability and fitness for a particular purpose, are limited to the above.

- The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential darnages, expenses, or economic loss, or for any claim orclaims for such damage, expenses or economic loss.
- State laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IDEAL INDUSTRIES, INC.
Sycamore, L 60178
Technical Hotline assistance technique: 877-201-9005
www.idealindustries.com
ND 7837-2
Made in U.S.A. of global components

Documents / Resources

	IDEAL 61-955 SureTrace Circuit Tracers [pdf] Instruction Manual 61-955 SureTrace Circuit Tracers, 61-955, SureTrace Circuit Tracers, Circuit Tracers, Tracers

References

- Home