

# Quick Start Guide

## AT-6000 Advanced Wire Tracer Series

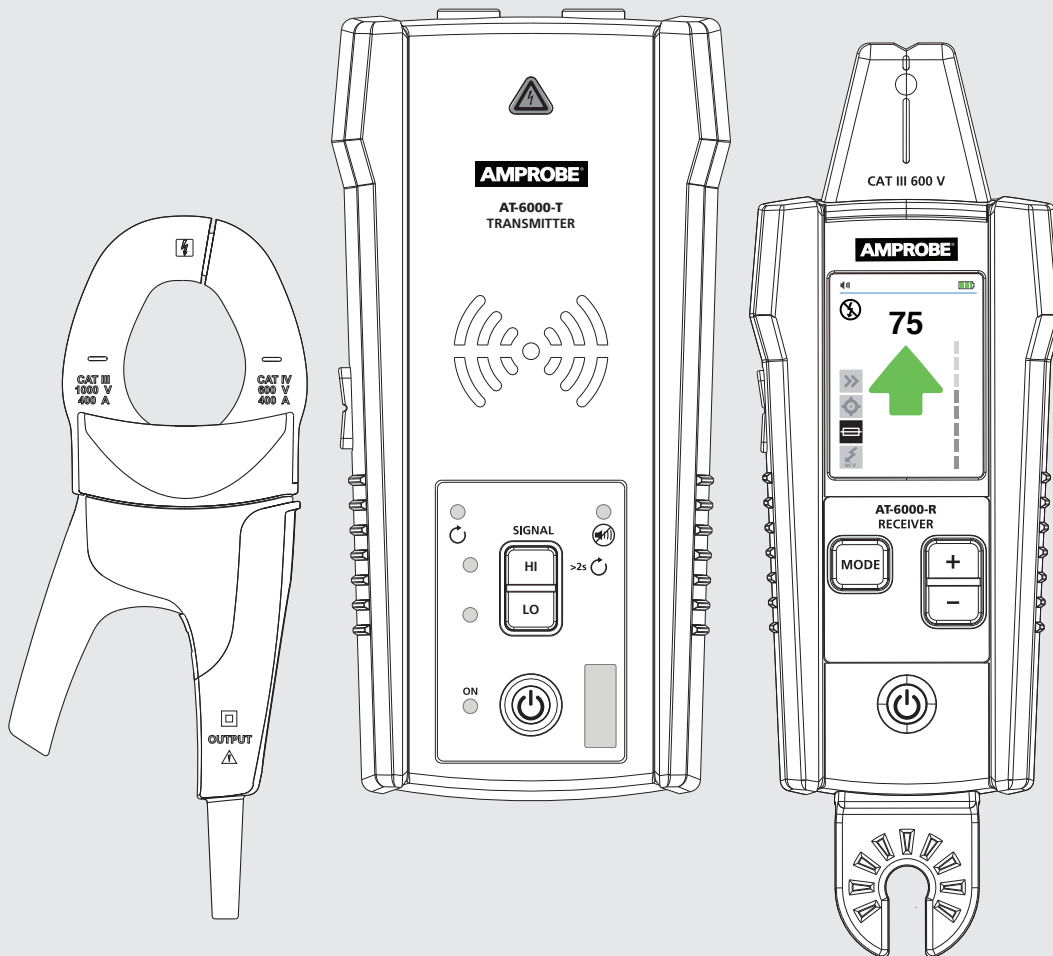
**Immediate, clear** breaker identification

**Tested by Fluke** and safety certified by 3rd party labs



**Intuitive transmitter** automatically senses whether the system is energized or de-energized

**Most accurate wire tracing** in its class with eight sensitivity modes



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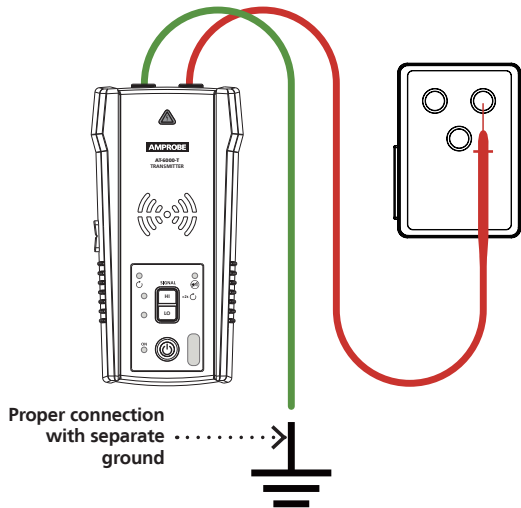
## AT-6000 Advanced Wire Tracer Special Applications:

- GFCI-protected circuit wire tracing
- Find breaks, openings, and shorts
- Trace wires in metal conduit
- Trace non-metallic pipes and conduits
- Trace shielded wires
- Trace underground wires
- Trace low voltage wires and data cables
- Sort bundled wires
- Map circuits using test leads connection
- Trace breakers on system with light dimmers
- CT-400 signal clamp (AT-6030 kit) to improve accuracy and performance when there is no access to bare conductors

See the user manual for further instructions regarding special applications.

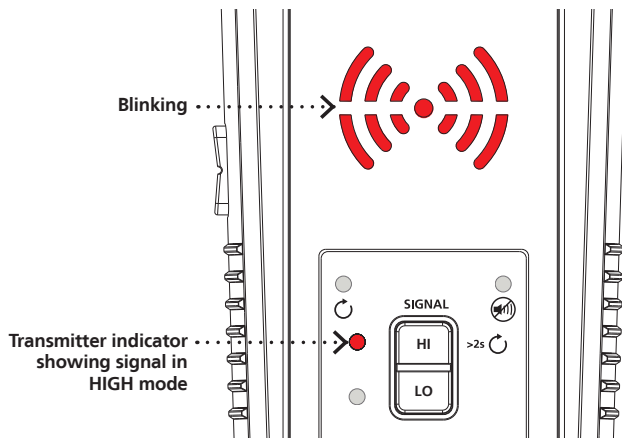
# Tracing Energized and De-energized Wires

## 1 Set-up: Test Leads



1. **Connect** the green and red test leads to the Transmitter.
2. **Plug** the socket adapter onto the receptacle and connect the red lead to the Energized hot wire. The signal will only be transmitted between the load-side to which the Transmitter is connected and the source of power.
3. **Connect** the green wire to a separate ground.

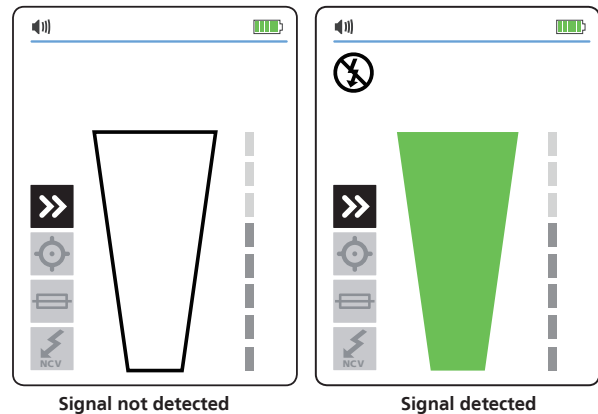
## 2 Set-up: Transmitter



1. **Turn on** the Transmitter.
2. **Verify** that the test leads are properly connected; the red LED voltage status light should be on for circuits with voltage above 30 V AC/DC, and it should be off for De-energized circuits below 30 V AC/DC.
3. **Select** HIGH signal mode by pressing HI, LED display will quickly begin to blink.

## Receiver: Quick Scan Mode

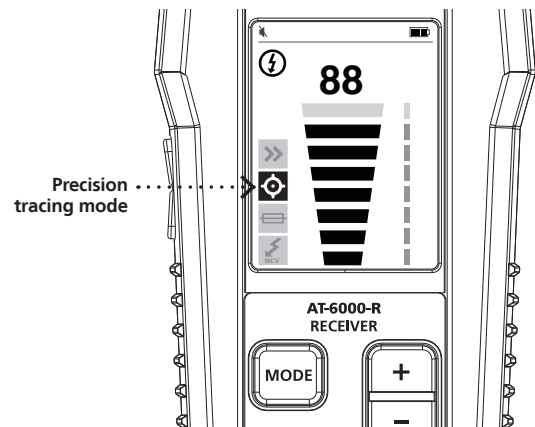
Use this mode to easily follow the direction of a wire.



1. **Turn on** the Receiver. It will automatically start in Quick Scan Mode.
2. **Scan** the target area with the Tip Sensor to find a signal, then begin tracing the detected wire. Increase or decrease sensitivity of the Receiver by pressing + or - on the keypad as necessary.

## Receiver: Precision Tracing Mode

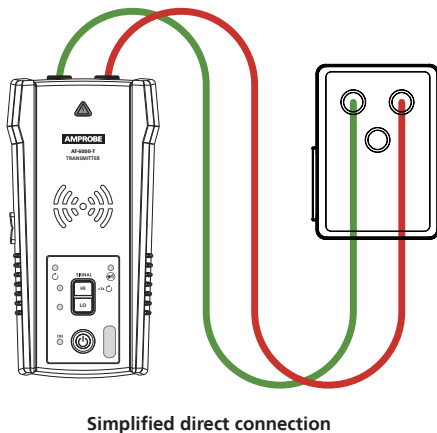
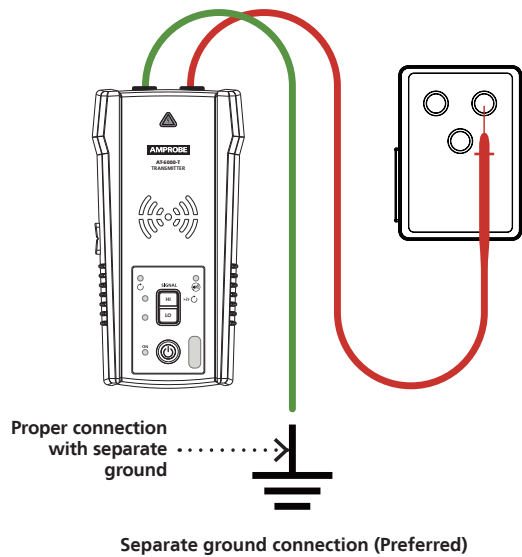
Use this mode to precisely pinpoint the wire, within 1" accuracy.



1. **Turn on** the Receiver. Press the MODE button until the Precision Tracing function is selected.
2. **Scan** the target area with the Tip Sensor to find the highest signal level. While tracing, periodically adjust sensitivity to keep the signal strength near 50. Increase or decrease sensitivity by pressing + or - on the keypad. If the signal is too strong for precise locating, change the Transmitter to LOW mode.

# Identifying Breakers and Fuses

## 1 Set-up: Test Leads



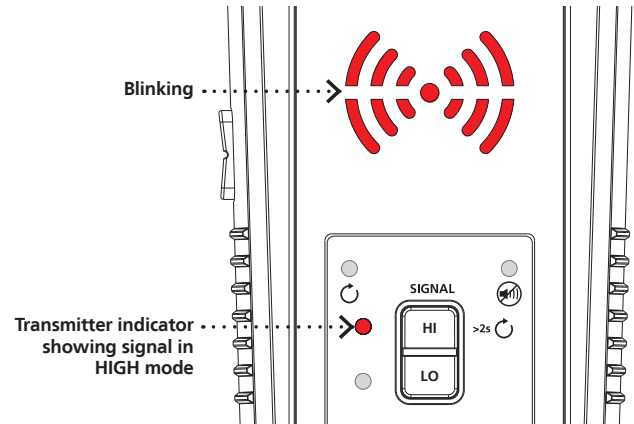
1. **Connect** the green and red test leads to the Transmitter using either simplified direct connection or separate ground connection.

**Separate ground connection** (preferred): first connect the red lead to the Energized hot wire on the load side of the system. The signal will ONLY be transmitted between the outlet to which the Transmitter is connected and the source of power.

**Simplified direct connection:** connect the test leads directly to the hot and neutral wires. While locating a breaker, wires will not be traceable as the signals will cancel each other out.

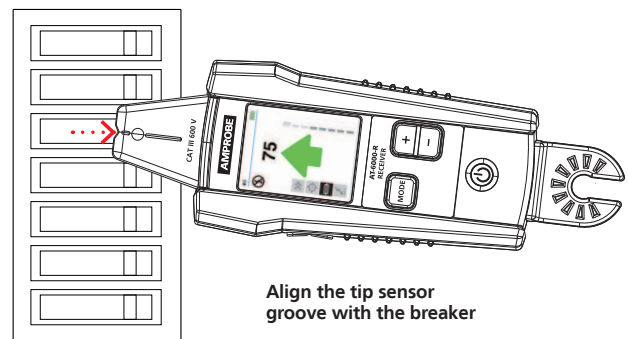
2. **Connect** the green lead to a separate ground.

## 2 Set-up: Transmitter



1. **Turn on** the Transmitter.
2. **Verify** that the test leads are properly connected; the red LED voltage status light should be on for circuits with voltage above 30 V AC/DC, and it should be off for De-energized circuits below 30 V AC/DC.
3. **Select** HIGH signal mode by pressing HI. LED display will quickly begin to blink.

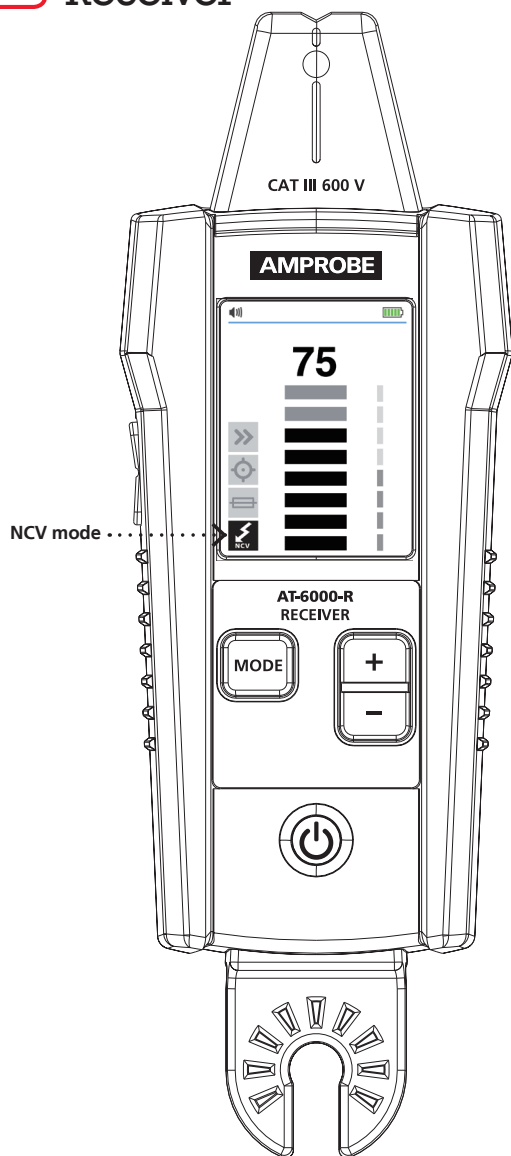
## Receiver: Breaker Tracing



1. **Turn on** the Receiver and continue pressing the MODE button until Breaker Locating mode is selected.
2. **Align** the groove on the Tip Sensor with the breaker lengthwise.
3. **Scan** all breakers in any order. Breakers can be scanned multiple times. It records the highest signal level and will automatically adjust sensitivity. The Receiver may beep and the green arrow may light up several times during this step.
4. **Locate** the breaker by scanning all breakers again; the Receiver should indicate only one breaker.

# Non-Contact Voltage (NCV) and Passive Tracing

## 1 Set-up: Receiver



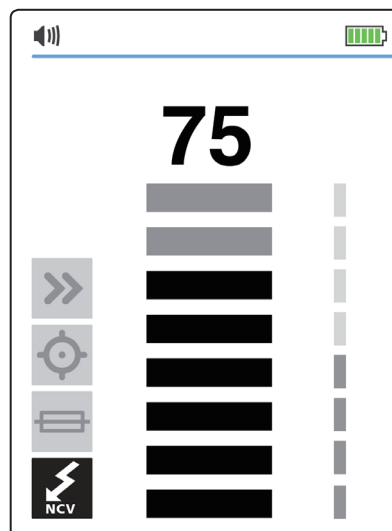
1. **Turn on** the Receiver.
2. **Continue** pressing MODE button until the Non-Contact Voltage (NCV) function is selected.

## Note: Transmitter

The Transmitter is not used in NCV mode.

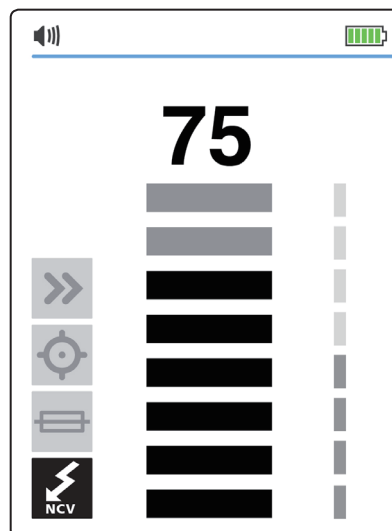
Use this mode to scan for any energized wires with passive tracing or to verify if a specific wire is energized.

## Receiver: Passive Tracing



1. **Scan** the target area with the Tip Sensor to find the highest signal level.
2. **While tracing**, periodically adjust the sensitivity to keep the signal strength near 50.
3. **Increase or decrease** sensitivity by pressing + or - on the keypad.

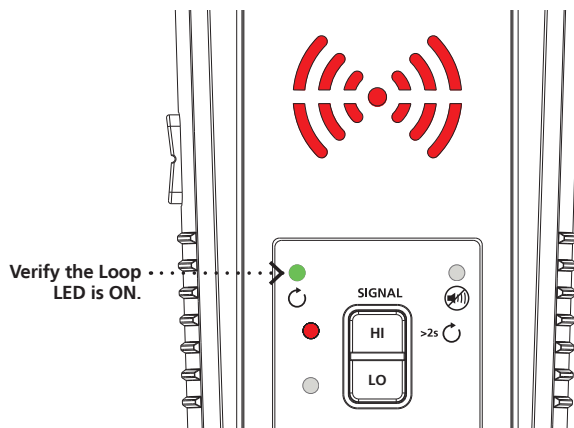
## Receiver: Verify if a wire is Energized



1. **Hold the Receiver** with the Tip Sensor against the wire.
2. **For precise pinpointing** of hot wire versus neutral wire, increase or decrease sensitivity by pressing + or - on the keypad.

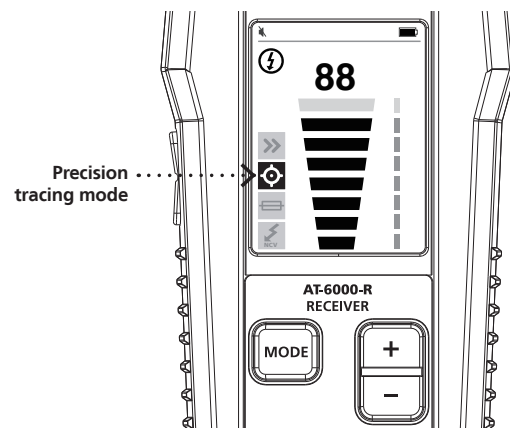
## Special Application: Finding Shorts

### 1 Set-up: Transmitter



1. **Connect** the Transmitter with the test leads to the circuit.
2. **Hold down** the HIGH button for two seconds to activate Loop mode.

### 2 Set-up: Receiver

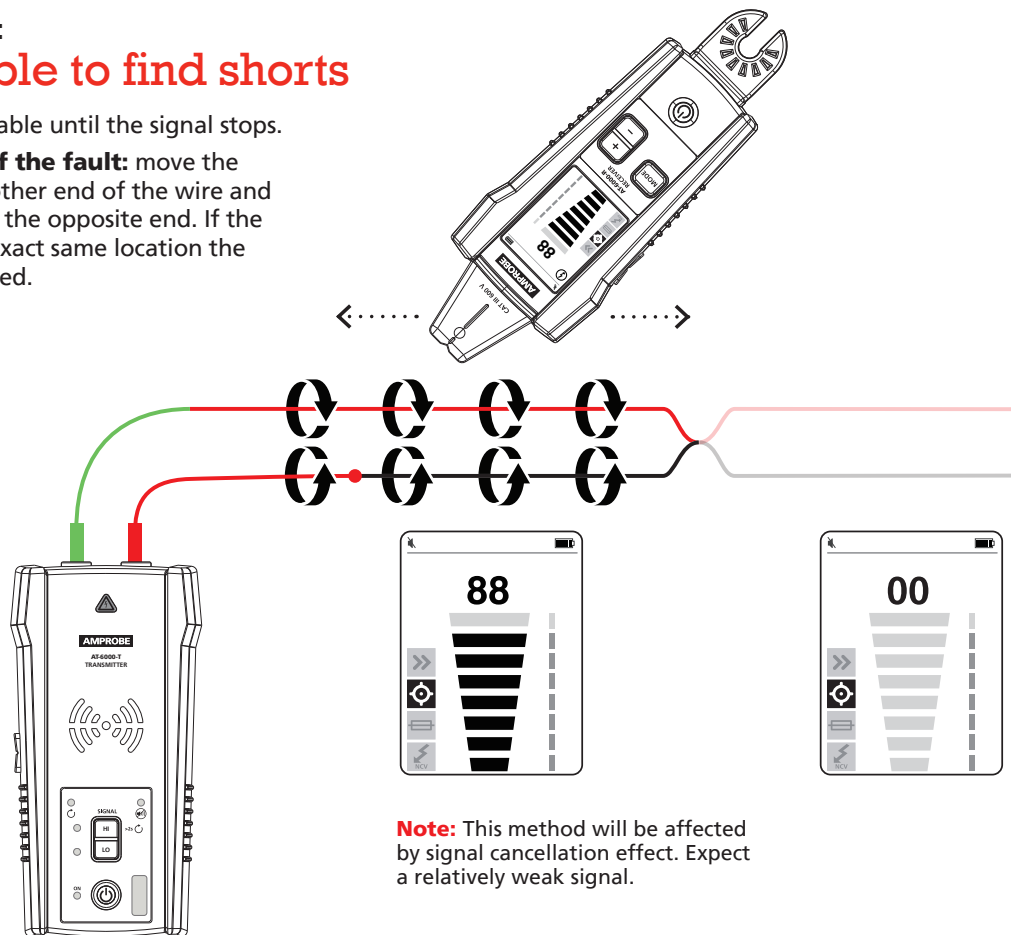


1. **Turn on** the Receiver
2. **Press** the MODE button to select a wire tracing mode (either Quick Scan or Precision Tracing).

Wire tracing mode:

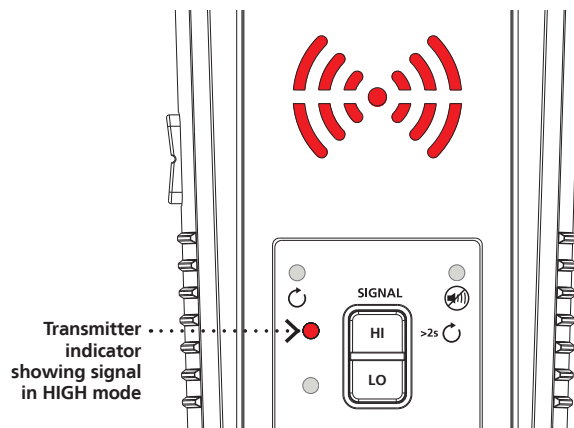
### Tracing a cable to find shorts

1. **Start tracing** the cable until the signal stops.
2. **Verify the place of the fault:** move the Transmitter to the other end of the wire and repeat tracing from the opposite end. If the signal stops at the exact same location the fault has been located.



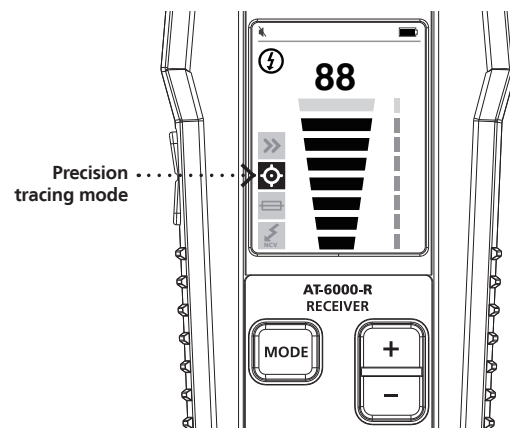
# Special Applications: Finding Breaks

## 1 Set-up: Transmitter



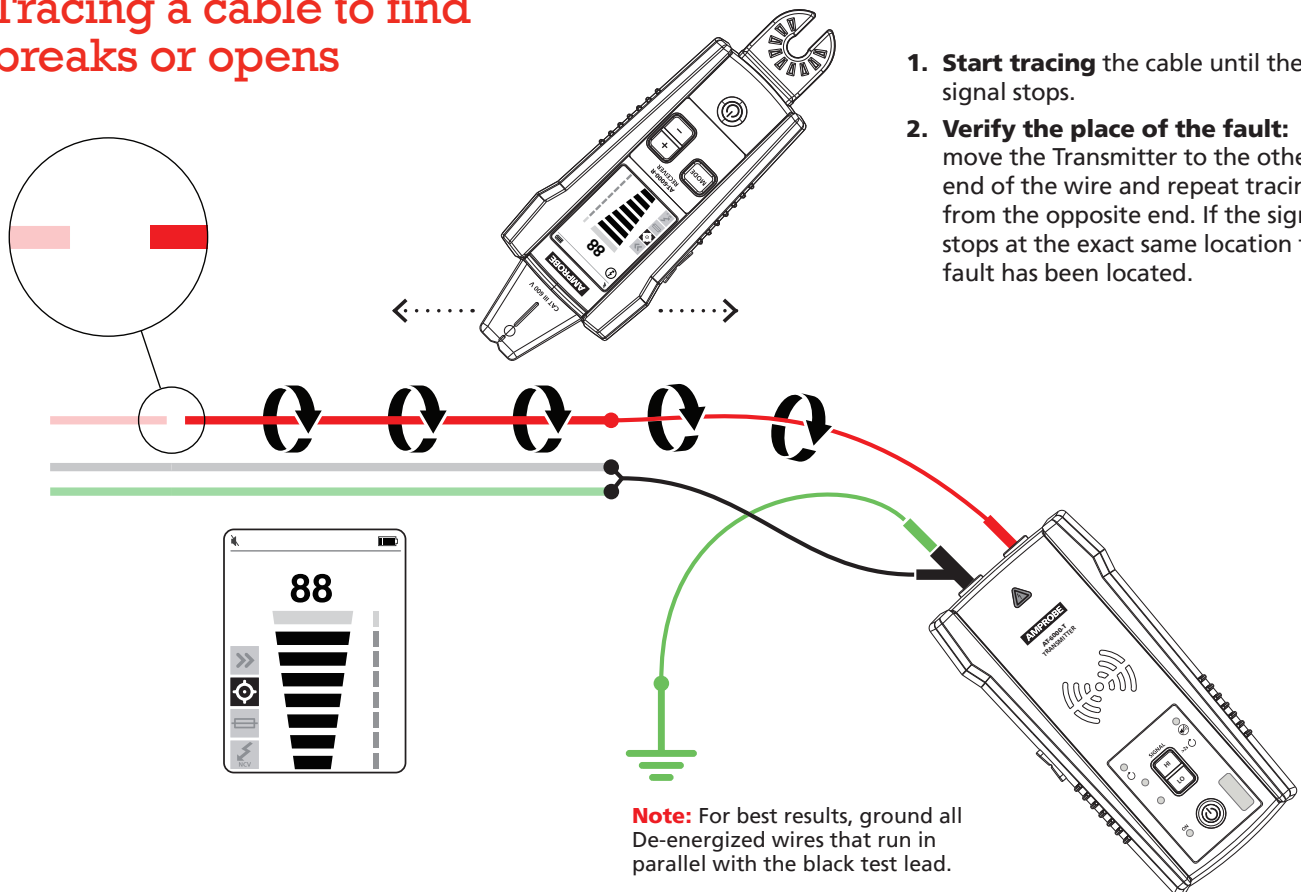
1. **Ensure** the wire is De-energized.
2. **Connect** the Transmitter with the test leads to the circuit.
3. **Select** HIGH signal mode by pressing HI.

## 2 Set-up: Receiver



1. **Turn on** the Receiver.
2. **Press** the MODE button until the Precision Tracing function is selected.

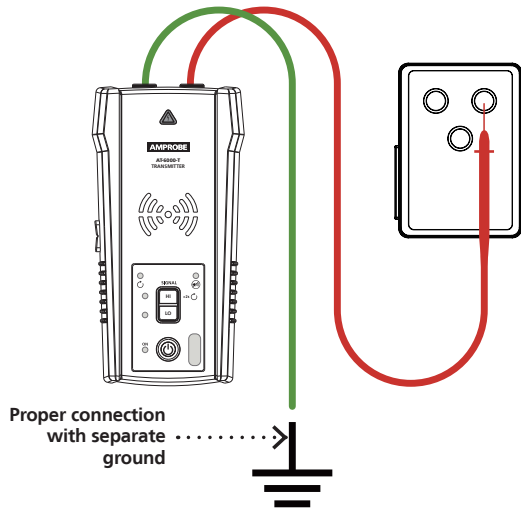
## Precision tracing mode: Tracing a cable to find breaks or opens



1. **Start tracing** the cable until the signal stops.
2. **Verify the place of the fault:** move the Transmitter to the other end of the wire and repeat tracing from the opposite end. If the signal stops at the exact same location the fault has been located.

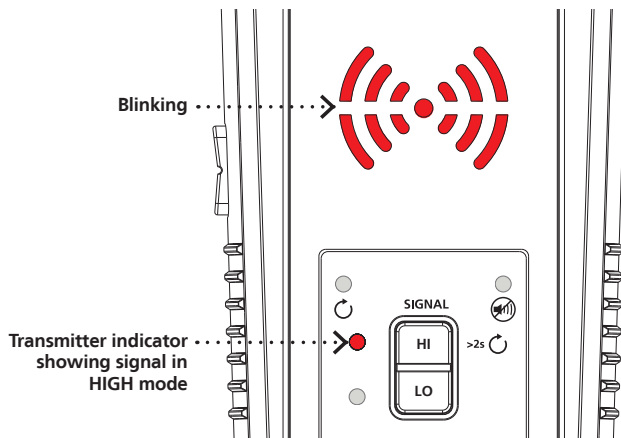
## Special Application: Metal Conduit

### 1 Set-up: Test Leads



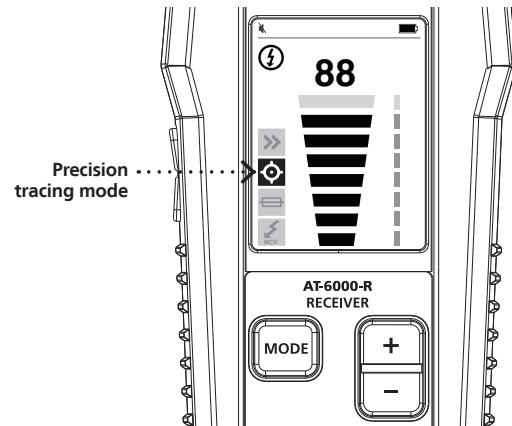
1. **Connect** the green and red test leads to the Transmitter.
2. **Plug** the socket adapter onto the receptacle and connect the red lead to the Energized hot wire. The signal will only be transmitted between the load-side to which the Transmitter is connected and the source of power.
3. **Connect** the green wire to a separate ground.

### 2 Set-up: Transmitter



1. **Turn on** the Transmitter.
2. **Verify** that the test leads are properly connected; the red LED voltage status light should be on for circuits with voltage above 30 V AC/DC, and it should be off for De-energized circuits below 30 V AC/DC.
3. **Select** HIGH signal mode by pressing HI, LED display will quickly begin to blink.

### 1 Set-up: Receiver



1. **Turn on** the Receiver. Press the MODE button to select a wire tracing mode (either Quick Scan or Precision Tracing). Tracing).

### Receiver: Tracing Wires in Metal Conduit

1. **Open** junction boxes and use the Receiver Tip Sensor to detect which wire in the junction box is carrying the signal.
2. **Move** from junction box to junction box to follow the path of the wire.



#### Important Notes:

Applying a signal directly to the conduit will send the signal through all the conduit branches, making tracing a particular conduit path impossible.

The Receiver is unable to pick up the signal from a wire through a metal conduit. The metal conduit will completely shield the tracing signal. The Receiver will be able to detect wires in a non-metallic conduit. For these applications follow general tracing guidelines.



## Specifications

	AT-6000-R Receiver	AT-6000-T Transmitter	CT-400 Signal Clamp
Display size	LCD 2.5 in (6.35 cm)	LEDs	—
Display dimensions (W x H)	1.45 x 1.93 in (36.72 x 48.96 mm)	—	—
Display resolution	240(RGB) x 320 pixels	—	—
Display type	TFT-LCD (262 K)	LEDs	—
Display color	True, 16bit/color	Operating mode LEDs: red Battery status LEDs: green, yellow, red	—
Booting time	< 3 sec	< 2 sec	—
Backlight	•	—	—
Operating temperature	-4 °F to 122 °F (-20 °C to 50 °C)		32 °F to 122 °F (0 °C to 50 °C)
Operating humidity	45%: -4 °F to <50 °F (-20 °C to <10 °C) 95%: 50 °F to <86 °F (10 °C to <30 °C) 75%: 86 °F to <104 °F (30 °C to <40 °C) 45%: 104 °F to 122 °F (40 °C to 50 °C)		95%: 50 °F to <86 °F (10 °C to <30 °C) 75%: 86 °F to <104 °F (30 °C to <40 °C) 45%: 104 °F to <122 °F (40 °C to <50 °C)
Storage temperature and humidity	-4 °F to 158 °F (-20 °C to 70 °C), <95% RH		
Operating altitude	0 to 6561 ft (2000 m)		
Transient protection	—	6.00 kV (1.2/50µS surge)	—
Pollution degree	2		
IP rating	IP 52	IP 40	
Drop test	3.28 ft (1 m)		
Power supply	4 x AA (alkaline or NiMH rechargeable)	8 x AA (alkaline or NiMH rechargeable)	—
Power consumption (typical)	110mA	Hi/Lo mode: 70 mA Loop mode with Clamp: 90 mA Consumption without signal transmission: 10 mA	—
Battery life	Approx. 16 h	Hi/Lo mode: approx. 25 h Loop mode: approx. 18 h	—
Low battery indication	•	•	—
Fuse	—	1.6 A, 700 V, fast-acting, Ø 6x32mm	—
Maximum conductor Size	—	—	1.26 in (32 mm)
Dimensions (L x W x H)	Approx. 7.2 x 2.95 x 1.69 in (183 x 75 x 43 mm)	Approx. 7.2 x 3.66 x 1.97 in (183 x 93 x 50 mm)	Approx. 5.9 x 2.75 x 1.18 in (150 x 70 x 30 mm)
Weight	Approx. 1.25 lb (0.57 kg)	Approx. 6.18 lb (2.8 kg)	Approx. 0.25 lb (0.114 kg)
Certifications			

NOTE: Refer to user manual for ADPTR-SCT and TL-6000 specifications.

## Included in Wire Tracer Kits

	AT-6020	AT-6030
AT-6000-R Receiver	•	•
AT-6000-T Transmitter	•	•
TL-6000 Test Lead and Accessory Kit	•	•
CC-6000 Hard Carrying Case	•	•
User Manual	•	•
12 - Rechargeable Batteries (not installed)	—	•
3 - Battery Chargers	—	•
CT-400 Signal Clamp	(Optional)	•
12 - 1.5 V AA (IEC R6) Batteries (not installed)	•	—

(charger and batteries are not available to order separately)



AT-6020



AT-6030



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