

The AT-2000-A series consists of individual components with unique capabilities. This label describes the capabilities of the complete system (AT-2005-A). Any other system in this series can be upgraded to include all of these capabilities by simply purchasing the additional components.

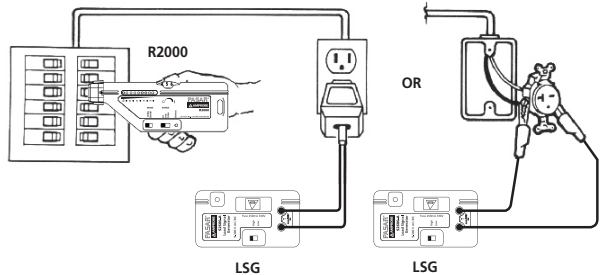
**CAUTION: Always verify that the voltage presence is not beyond the range of the instrument. 300V Max**

## Identifying Circuit Breakers

Use R2000 & S2600-A (LSGs)

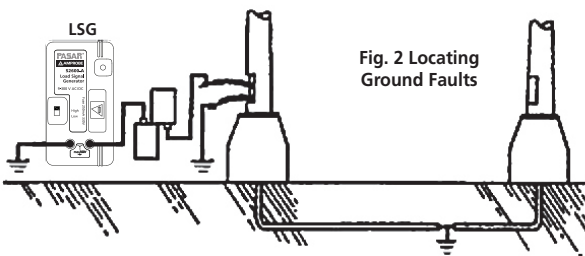
1. For 110V receptacle, connect pigtail cordset to LSG and plug into receptacle; for other voltages or connections, use the Alligator-clip cordset.
2. The light will blink if connection is correct.
3. Set the R2000's range to x1; mode to 'SHORT', and thumbwheel to around 5.
4. Hold R2000 near LSG to verify its operation.
5. At the breaker panel, pass the R2000 over the load side of each breaker, always reducing the sensitivity when more than 9 LEDs are lit.
6. The strongest signal indicates the proper breaker.

**Fig. 1 Identifying Circuit Breakers**



## Locating Ground Faults

A ground fault is a direct connection of the conductor to ground. A typical ground fault may cause a tripped circuit breaker or a blown fuse (in contrast to an 'open', which passes no current). In this situation, the B2024 battery can be used as the current source. The high voltage from the B2024 will overcome a high resistance fault and will produce a stronger signal. Also, you can use line voltage as the power source by connecting the S2600-A across the breaker.



**Fig. 2 Locating Ground Faults**

Use R2000 & S2600-A (LSGs)

1. Plug the alligator clip cordset into the LSG and connect one clip to ground.
2. Connect the other clip to one terminal of a battery (at least 9V).
3. Using a separate jumper, connect the other battery terminal to the faulted wire.
4. Set the R2000 to the 'SHORT' mode and adjust the sensitivity and range switch until 8-9 LEDs are displayed.
5. Trace the wire. The fault will be at the point where you begin to lose the signal.

## Locating Opens

Use the R2000 & T2200

1. Plug the alligator clip cordset into the T2200 and attach one clip to a separate ground and the other to the wire.
2. Where possible, ground any adjacent wires.
3. Set the T2200 to 'HIGH'.
4. Set the R2000 to the 'OPEN' mode (use the 'SHORT' mode if wire is in moist soil). Adjust the sensitivity and range switch until 8-9 LEDs are displayed.
5. Trace the wire. The open will be at the point where you begin to lose the signal.

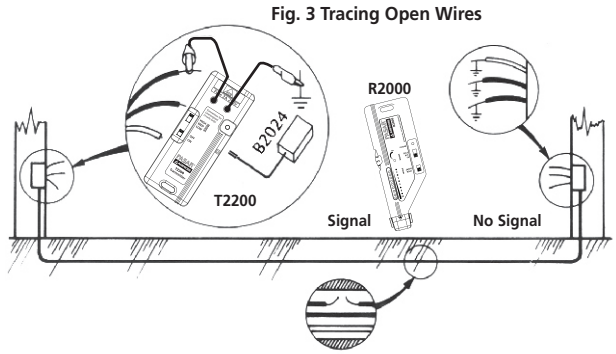
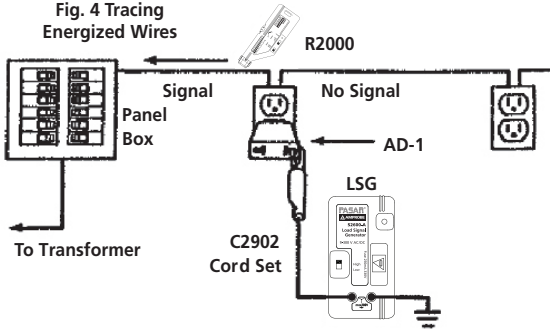


Fig. 3 Tracing Open Wires

Fig. 4 Tracing Energized Wires



## Tracing Energized Wires from a Load to the Panel

Use R2000 & S2600-A (LSGs).

1. Plug the alligator clip cordset into the LSG.
2. Connect one clip to the ground separate from the wire to be traced (the 'HOT' wire).
3. Connect the other clip to the 'HOT' wire (at a 110V outlet, you can use the AD-1 adapter).
4. Set the R2000 to the 'SHORT' mode and adjust the sensitivity and range switch until 8-9 LEDs are displayed.
5. Trace the wire.

## Tracing Energized Wires from the Panel to a Load

Use R2000, T2200, A2201, B2024 (optional).

1. Plug the A2201 and the B2024 into the T2200.
2. Set the T2200 to 'HIGH'.
3. Set the R2000 to 'OPEN' mode and adjust the sensitivity and range switch until 8-9 LEDs are displayed.
4. Place the clamp around the energized wire. Make sure it's the 'HOT' wire only.
5. Trace the wire to identify the loads. You may alternate between 'OPEN' and 'SHORT' mode and adjust the sensitivity and range switch, as needed, to improve signal detection.

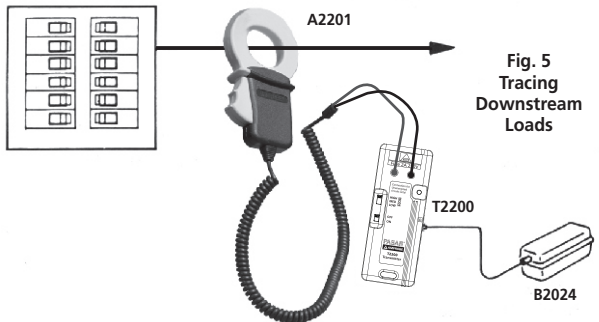


Fig. 5 Tracing Downstream Loads

## Locating Shorts

Use R2000 & T2200

1. Plug the alligator clip cordset into the T2200. Set the T2200 to 'LOW' mode.
2. Attach one clip to one of the shorted wires and the other clip to the other wire.
3. Turn T2200 'ON'.
4. Set the R2000 to the 'SHORT' mode and adjust the sensitivity and range switch until 8-9 LEDs are displayed.
5. Trace the wire. The short will be at the point where you begin to lose the signal.

## Identifying Wires in a Bundle

For energized wires, follow procedure under 'Tracing Energized Wires'. At the bundle, separate the individual wires from each other with your fingers to determine which wire is producing the signal.

For non-energized wires, follow the procedure under 'Locating Opens', and proceed as above.