

Pro300 Residential Wire and Valve Locator Operating Instructions

WARNING – Read and understand the instructions before operating this unit. Failure to do so could lead to injury or death.

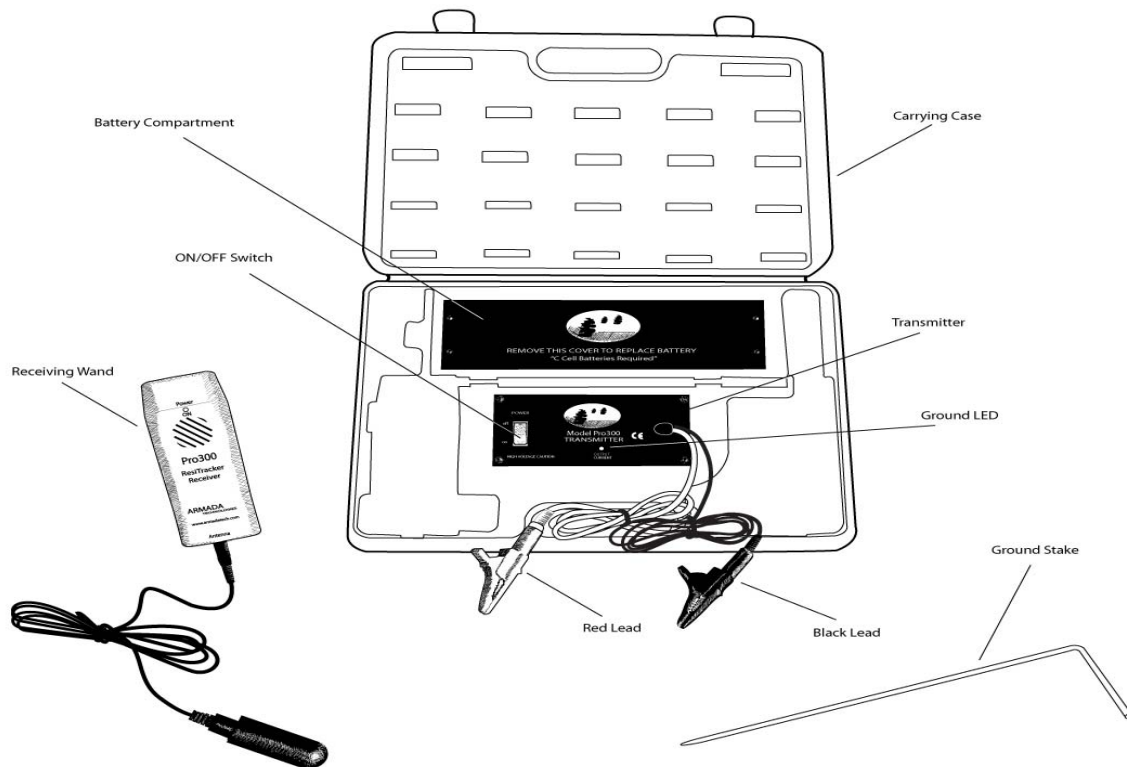
Pro300 wire and valve locator designed to find lost valves and broken or severely damaged wires, and trace their paths. The complete Pro300 kit consists of;

- (1) Pro300R Receiving Wand.
- (1) Pro300T Transmitter and Carrying Case and Leads.
- (1) ProGS Ground Stake.
- (1) Operating Manual

Please be sure that all items are included before operating the Pro300.



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Battery Installation - The Pro300 transmitter requires 8 “C” cell batteries. The Pro300 receiver requires one 9v battery. To install the batteries in the Pro300 transmitter, open the transmitter case and remove the 5 holding screws on the battery compartment located at the upper center of the unit. Place the batteries in the holder, orienting them in accordance with positive and negative poles. Turn on the Pro300T using the red on/off rocker switch. The red LED on the transmitter will now blink dimly indicating the batteries and unit are ready for operation. If no response is seen, try adjusting the batteries to insure good connection. If still no response, be sure the batteries are good and fresh.

The Pro300 receiver battery compartment is located on the backside of the Pro300R unit. Remove the battery compartment cover and install the 9 volt battery. Replace the cover.

Tracking Irrigation Wiring – Disconnect the common wire and the station wire to the valve that you want to trace. With the transmitter off, connect the red lead to the wire you want to trace (common or station) and the black lead to the included ground stake. Do not connect to the clock as signal may cause damage if the clock is not voltage protected. Insert the ground stake into the soil. Do not use common grounds such as pipes or electrical grounds. It is important that the ground stake be in the soil and independent for the Pro300 to work properly.

Turn the Pro300 transmitter on. The LED located on the Pro300 transmitter should now blink brightly. This LED is an indicator of how good the grounded connection is. The better the ground connection, the brighter the light. It is important to note that the better the ground connection and LED, the better and easier the locate will be. A good ground is crucial for optimum operation. Soil conditions can also affect this and you may wish to moisten the grounding area.

Tracking Lighting or Invisible Fencing Wire – Connect one alligator clip to the wire to be traced and the other to the ground stake inserted directly in the ground. All other operation is the same.

Tracing Wire - After the Pro300 transmitter has been properly connected and verified to have a good ground and power, turn on the Pro300 receiver by turning the volume knob on the side of the receiver. Place the receiver near the operating Pro300 transmitter. A beeping sound should be heard indicating that the receiver is working properly. A high pitched tone could indicate that you are too close to the receiver or your batteries are low. A fading signal indicates low battery.

The volume control on the side of the receiver regulates the loudness of the receiver. After connecting and turning on the transmitter and turning on the receiver, point the receiver toward the ground and listen for the beeping signal. The closer you are to the cable, the louder the signal should be except for directly over the cable. Directly over the cable, the Pro300 works on the NULL principle. This means that the signal nulls or stops when the receiver is DIRECTLY over the cable. If you are a little to the left or right, the signal will be loud but DIRECTLY pointing the receiver at the cable produces virtually no signal. In this way, the user will know the exact location of the wire or cable being traced.

If the volume control is too high, this will overpower the null signal. If you are not getting a null directly over the wire, try turning the volume control down.

Finding Faults – Breaks or severe wire damage can be found with the Pro300. The set up of the unit is the same as when tracing wire. The difference comes in the reception. Whereas the traced wire continues to emit a signal along the path of the cable, a break will cause the signal to stop at the point of break. Severe damage will cause the signal drop to a lower level but not necessarily end. Minor damage cannot be located with the Pro300 as not enough signal is dropped to notice a difference in response. This is an art and small faults are sometimes difficult to locate. Practice and experience will help immensely in this task.

Be sure the cable or wire you are tracking is grounded. THIS IS A MUST. The signal needs a path to return to the ground stake and without it, you will not get a good locate. A bad ground is indicated on the transmitter by observing a weak or

no light on the LED. In many cases, a direct buried cable fault will provide this grounding and allow a locate.

Finding Solenoids and Valves – Finding solenoids and the attached valves is easy to do. If you want to find a particular valve, connect the red lead of the transmitter to the station wire leading to that valve and the black to ground as described above. Connect the Pro300 as above and begin your locate. When you reach the point where a valve/solenoid is located, the signal will expand into a large (approx 2-4ft) diameter area of signal. This is your indication that you are over a valve or solenoid. Additionally, the signal should not continue past this point unless the station wire leads to further valves. You may wish to continue past the first valve located to determine if other valves are also located on this wire.

Helpful Hints – Increases in signal strength and/or the size of the area it is occurring from usually indicates some type of anomaly in the cabling. Things that could cause this are valves (as described above), nicks, cuts, bad splices, or cut wires. Good condition cable does not normally change the tone or strength, other than a very gradual loss of reception over distance, but it is possible. Slack loops (extra wire coiled and buried) left in the ground at installation are an example of a condition that would cause an increase of signal and yet have no problem.

Also, ground condition makes a huge difference in the performance of cable locators. Basically, a path is being created from the transmitter, through the cable, out through the ground and back to the ground stake. Any mistake in any of these links will cause the locator to not work properly. Be sure your ground stake is secure and in the dirt and that the transmitter is connected to the cable you want to track.

In addition, the more conductive the soil, the better. As moisture is a good conductor, the wetter the better. Dry sandy desert soil is not a good transmitter of signal and you will experience better results in moist soil. If you are in the desert, a little water at the ground stake may help.

The best way to really learn the Pro300 is to use it. Set up a test site at your home or office and get used to how it works. There is no substitute for experience in the art of locating. Good luck!