

Armada Technologies Pro700 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.

The Armada Technologies Pro700 wire and valve locator designed to find lost valves and broken or severely damaged wires, and trace their paths. The complete Pro700 kit consists of;

- (1) Pro700R Receiving Wand
- (1) Pro700T Transmitter and Carrying Case
- (1) ProH1 Mono Headset
- (1) ProGS Ground Stake
- (1) Set of Black/Red Connecting Leads
- (1) Operating Manual

Please be sure that all items are included before operating the Pro700.

Battery Installation - The Pro700 transmitter requires 8 “D” cell batteries. The Pro700 receiver requires one 9v battery. To install the batteries in the Pro700 transmitter, open the case and remove the 2 holding screws on the battery compartment located on the right side of the unit. Place the batteries in the holder, orienting them in accordance with positive and negative poles. Turn on the Pro700T and push the red battery test button. A good reading of 8 or higher on the analog meter while depressing the battery test button indicates a successful battery install. 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 Pro700 receiver battery compartment is located on the underside of the Pro700R unit. Remove the 2 screws and the battery compartment cover. Install the 9 volt battery and replace the cover and screws. Turn the unit on and depress the battery test button located on the backside of the Pro700R receiver. The analog needle should peg to the right. If not, try a new battery.

WARNING – Do not touch the red and black clips that connect the transmitter to the cable when the power is on. There is danger of injury or death should this occur.

Operation – 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 or earth ground. 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 Pro700 to work properly.

Turn the Pro700 transmitter on. Adjust the power output knob and increase the power until a reading between 4 and 8 is achieved. **If you cannot achieve a reading of 4, turn the unit off and retry your grounding operation above.** A good ground is crucial for optimum operation. Soil conditions can also affect this and you may wish to moisten the grounding area. Also, re-check batteries for proper connection and operation.

Tracing Wire - After the Pro700 transmitter has been properly connected and verified to have a good ground and power, turn on the Pro700 receiver by turning the volume knob on the front of the receiver. Place the receiver near the operating Pro700 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 front of the receiver regulates the loudness of the receiver, both headphones and external speaker. Additionally, the analog meter on the front of the receiver will indicate the reception power level visually. 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 Pro700 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.

Finding Faults – Breaks or severe wire damage can be found with the Pro700. 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. A nick or damage will cause the signal

drop to a lower level but not necessarily end. Either the speaker or the analog meter on the receiver will indicate this drop.

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 analog meter when the needle cannot achieve a4 or better even at full power. In many cases, a direct buried cable fault will provide this grounding and allow a locate.

Do not let the receiver level go above 10. You are looking for a drop in signal and you may not see it if the analog meter is pegged to the right.

The greater the damage, the greater the drop off in signal. Conversely, minimal damage or weak grounding will show little change. This is an art and small faults are sometimes difficult to locate. Practice and experience will help immensely in this task.

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 Pro700 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.

There may be more than one valve on the cable being traced. 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 of extra wire 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 Pro700 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!

Warranty – Armada Technologies warranties all products for 12 months from manufacturing defects from the date of retail purchase. Armada Technologies will repair or replace any component that is returned to Armada Technologies within 12 months of purchase and does not exhibit signs of abuse or misuse. It is Armada Technologies sole discretion to determine this condition. Armada Technologies also reserves the right to require a proof of purchase in order to determine date and validity of purchase.

Armada Technologies Equipment Inc.
10701 Whispering Waters
Caledonia, MI 49316 USA
1-616-536-2038
www.armadatech.com