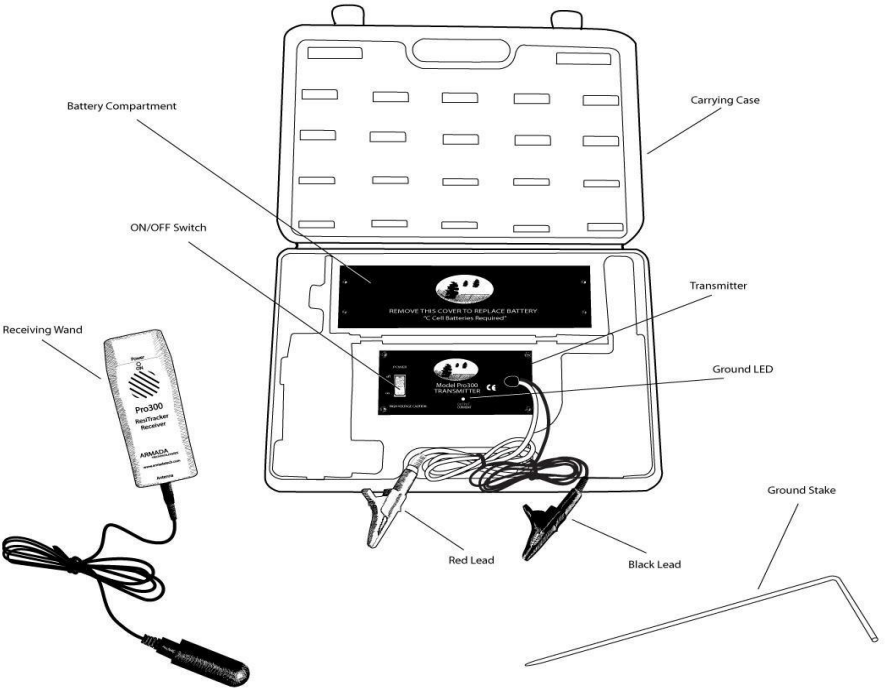
Armada Technologies Pro290™ Wire and Cable Locator Operating Instructions

Description

The Armada Technologies Pro290™ wire and cable locator is designed to find lost or broken wires, and trace their paths. The complete Pro290™ kit consists of;

- (1) Pro290R Receiving Wand and Antenna.
- (1) Pro290T Transmitter and Carrying Case and Leads.
- (1) ProGS1 Ground Stake.
- (1) Operating Manual

Please be sure that all items are included before operating the Pro290™.



Battery Installation

The Pro290™ transmitter requires 8 “C” cell batteries. The Pro290™ receiver requires one 9v battery. To install the batteries in the Pro290™ transmitter, open the transmitter case and remove the 3 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 Pro290T using the red on/off rocker switch. Connect the red and black alligator clips together. The red LED on the transmitter will now blink brightly indicating the batteries and unit are ready for operation. If no blinking light is seen, try adjusting the batteries to insure good connection. If the blinking is dim, be sure the batteries are good and fresh.

The Pro290™ receiver battery compartment is located on the backside of the Pro290R unit. Remove the battery compartment cover and install the 9 volt battery. Replace the cover.

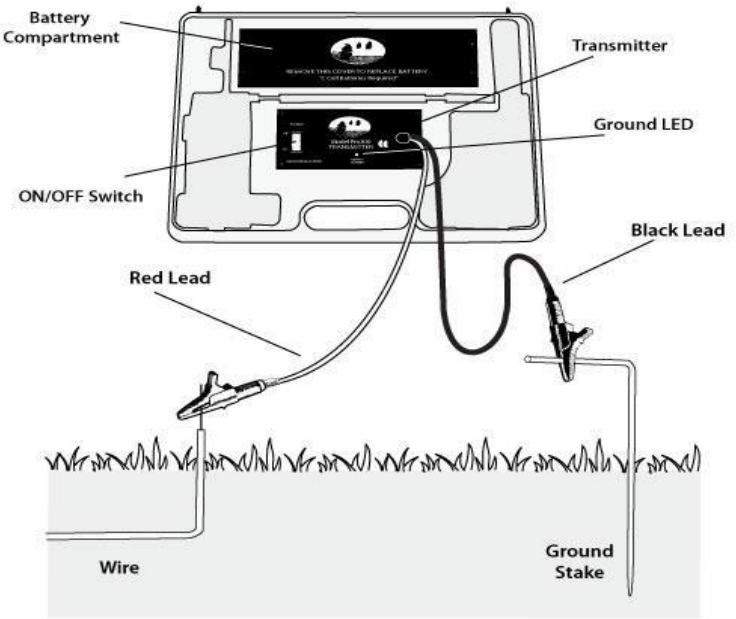
Setting up the Transmitter

Disconnect and de-energize the wire that you want to trace. With the transmitter off, connect the red lead to the wire you want to trace and the black lead to the included ground stake. Insert the ground stake into the soil. Do not use common grounds if possible as these may give false indications. It is important that the ground stake be in the soil and independent from common ground for best results.

Turn the Pro290™ transmitter on. The LED located on the Pro290™ 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. The Pro290™ sets up a tracing circuit that travels down the wire, thru the ground, and back to the ground stake. It is important to note that the better the ground connection (indicated by a brightly blinking red LED), the better and easier the locate will be. A good ground is crucial for optimum operation.

Soil conditions can also affect the ground connection. In general, the wetter the ground, the better the ground connection. Dry climates are more difficult to achieve good grounding. If the

ground is dry, you may wish to moisten the grounding area with a cup of water, etc.



Tracing Wire

After the Pro290™ transmitter has been properly connected and verified to have a good ground and power, insert the receiver antenna into the female jack on the bottom of the yellow receiver box. Turn the Pro290™ receiver on by turning the volume knob located on the side of the yellow receiver. Place the receiver near the operating Pro290™ transmitter. With the antenna near the transmitter and the transmitter on, 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.

The Pro290™ receiver uses a NULL signal tracing method. That means that when the antenna on the receiver is pointed directly at the cable, you will hear virtually nothing. However, by moving the antenna a few inches to the left or right, a signal can be heard. This is called NULL and it points directly to the path of the wire.

Move along the path of the wire swinging the antenna, following the course of the loudest signal. From the beginning to the end of the cable, the cable location is the path that emits the loudest signal outside the NULL boundaries (to the immediate left and right side).

Finding Broken Wire

Breaks in wires can be found with the Pro290™. The setup 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 Pro290™ as not enough signal is dropped to notice a difference in response.

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.

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 slack loops, 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 or abrupt depth changes, 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 and moisture make a difference in the performance of the Pro290™. Be sure your ground stake is secure, 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. Dry, sandy 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 Pro290™ 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.

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