



**AQUA - TRONICS, INC.**

*SETTING THE STANDARD FOR SERVICE*

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## CABLE I.D.

### On Secondary Power, telephone, and cable T.V.

Identifying one cable out of a bundle can be very easy to do if the correct tools are used.

Two inductive couplers and one cable locator that has the ability of using an inductive coupler as a receiving antenna will do the job.

Unlike direct output that places an equal amount of signal on every conductor that is electrically connected to each other, the transmitting inductive coupler has a unique characteristic that other methods of signal injection do not have. The signal a coupler places on a cable will divide down on other conductors if it sees them before it sees a ground.

Regardless of how the signal is placed on a telephone or cable T.V. cable, the signal is placed on the sheath. The sheath is a good shield and will not allow signal on the inner conductor to radiate out to where the cable-locating receiver can pick it up.

#### A TRANSMITTING INDUCTIVE COUPLER

1. To place signal on any conductor, that conductor must be grounded at both ends.
2. Signal will divide at a cable connection if the cable connection is before the ground rod connection.

Notice in Figure A, the transmitting inductive coupler is placed on the conduit of a pole. This will place signal on the cable sheath. The signal wants to travel to the ground rod inside the pedestal so over the entire route of the cable, there is an equal amount of signal. At the sheath bond connection in the pedestal, the signal will see other conducting sheaths and will divide down. In Figure A, three other cables and a ground rod are shown. This is equivalent to four other cables and as a result, the signal will divide down to around 25% on each of the other four conductors.

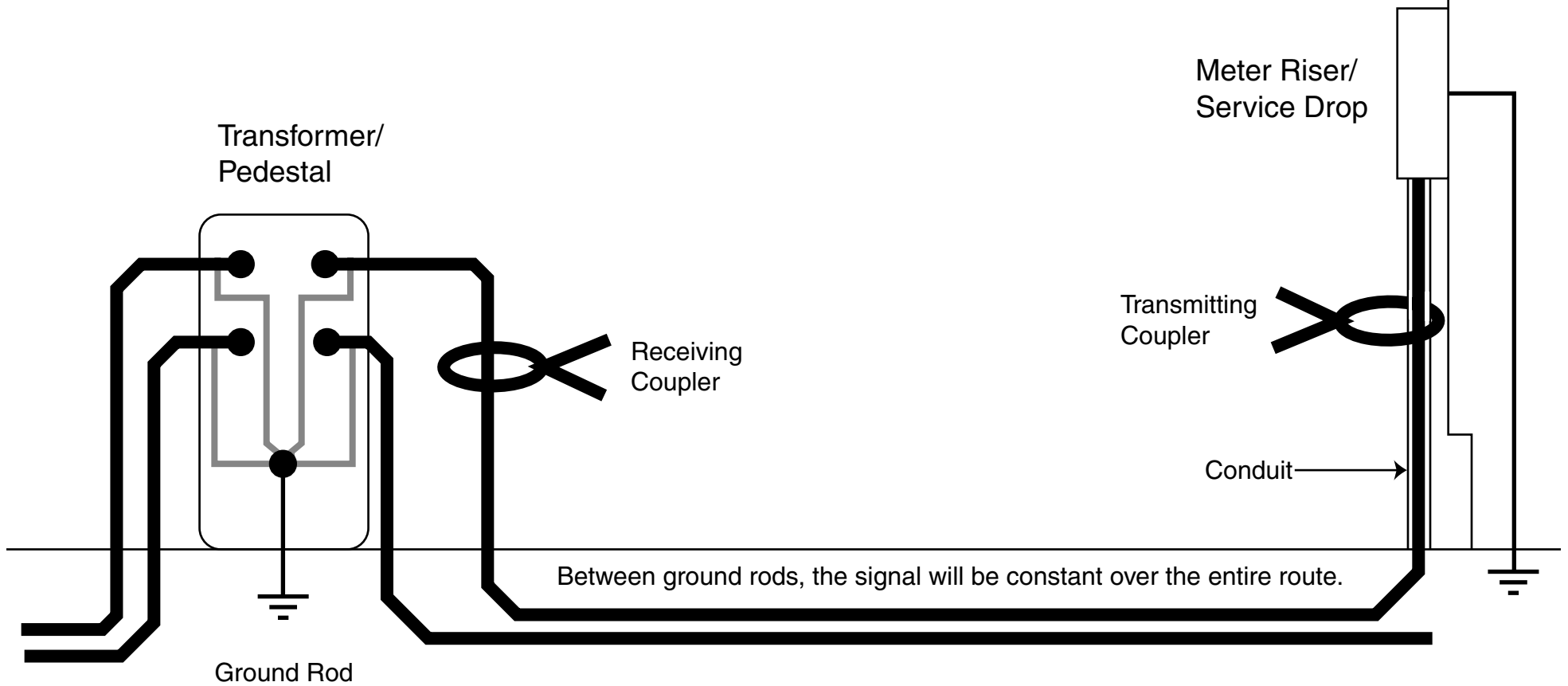
If an inductive coupler is plugged into the cable locating receiver to be used as a receiving antenna, clipping the coupler around each of the cables – one at a time – will allow the operator to identify the cable the transmitting inductive coupler is on. It will have all of the signal where the other cables will have a reduced amount of signal.



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**NOTE: Not all inductive couplers are the same**  
*"The receiving inductive coupler must have both sides of the core material wound, or your readings may not always be true depending on where the cable is within the loop"*

**THE I.C.-49 INDUCTIVE COUPLER FROM IS WOUND ON BOTH SIDES**



**Figure A.**