TW-82 TRANSMITTER

The Transmitter has two controls: ⏻ & POWER MODE.
The POWER MODE Button has a dual function:

1. When the Transmitter is powered on, POWER MODE switches the device between normal (1/4 watt) and high (1.0 watt) output.

2. With the Transmitter powered off:

   A. Press-and-hold POWER MODE to program the **Auto Power-Down** feature.

   Successive presses of ⏻ will show a flashing battery indicator, followed by a blank screen or the illuminated battery indicator.
   - An illuminated battery indicator means that **Auto Power-Down** is activated.
   - A blank screen means that **Auto Power-Down** is deactivated.

   B. After you release POWER MODE, the transmitter power will turn on.

   With the **Auto Power-Down** feature activated, the Transmitter will automatically turn off 60 minutes after the last key-pad press by the user. This is a battery saving feature. The Transmitter will warn of power-down by switching ON and OFF as described on the top of the following page.

Low Battery Power-Down Warning

When the Transmitter batteries are near the end of their useful life, the Transmitter will warn the operator before shutting down.

Five minutes before shutting down, the Transmitter will alternately stop and start transmitting at approximately one-second intervals. The operator using the Receiver, even at a distance from the Transmitter, will notice the signal turning on and off before the power turns off completely.

Accessory Output

1. Flip up the black protective cover to expose the Accessory Output Jack.
2. Connect the conductive tracing cable plug for conductive tracing.

When the conductive tracing cable is connected, Signal Current will be displayed. The Signal Current Bar Graph shows the quality of the connection.

Vertical Bars will illuminate to indicate the current as follows:

mA indication	1	2	4	8	15	25	50	100	200
Actual Range (mA)	0.5-1.4	1.5-2.9	3.0-5.9	6.0-12.9	13.0-18.9	20.0-39.9	40.0-74.9	74-149	150+

Automatic Load Impedance Matching adjusts output to provide full rated power over a wide range of loads (e.g. utility types and conditions). It is tolerant of both dry (high resistance) and shunted (low resistance) ground connections.

The Transmitter has a built-in antenna for inductive locating. When the Cable Jack is not connected, the inductive antenna automatically engages and begins transmitting. When locating inductively, the Signal Current Bar Graph will not be displayed, as there is no conductive trace load to be measured.

WARNING: Do not handle output leads unless power is off. **ELECTRIC SHOCK HAZARD:** Servicing to be performed by qualified personnel only.

NEVER connect conductive cables to an energized power line.

INDUCTIVE LOCATING

Inductive locating is most effective with the Transmitter straddling the utility as illustrated, with the utility perpendicular to the Transmitter's batteries.

If the utility direction is unknown, place Transmitter on the ground, power on, and sweep the Receiver a complete 360º around the Transmitter, keeping at least a 25-foot (8-meter) distance between the Transmitter and Receiver. If unsuccessful, move the Transmitter to another location. When located, the Receiver's azimuth indicator will show the direction of the utility.

In inductive mode, the Transmitter's LCD will not display Signal Current. When the conductive tracing cables are plugged in, the Signal Current display will illuminate.

CONDUCTIVE LOCATING

1. Turn Transmitter Off.
2. Connect the Conductive Tracing Cables to the Transmitter.
3. Push the Ground Rod into the earth at a 90º angle to the direction of the utility.
4. Connect the red clamp to the non-energized utility.
5. Connect the black clamp to the Ground Rod.
   Be sure not to place the wires over any other utility.
6. Turn Transmitter On.
7. Move at least 25 feet (8 meters) away from the connection point.
8. Sweep the Receiver in a circle around the connection point.
9. Using information provided on the display, find the areas that need to be traced and analyze the situation in more detail to find the buried utility.