












**EELTRACK** 



*Electric Eel*®

## IMPORTANT NOTICES

-  **WARNING!** Failure to follow these warning could result in serious injury or death.
-  **WARNING!** Only persons qualified and trained to operate cable & pipe locators may operate this equipment.
-  **WARNING!** Follow appropriate safety procedure, your companies policies and applicable safety codes and/or laws.
-  **WARNING!** Do not connect to utilities, cables or pipes without authorization and training.
-  **WARNING!** Use tool only for intended purpose as described in this manual
-  **WARNING!** Do not expose tool to rain or moisture.
-  **WARNING!** Do not expose to hazardous chemicals, hazardous gas or explosive environment.
-  **WARNING!** SHOCK HAZARD - Lethal voltages may be present at the transmitter's output. Turn off transmitter before touching test lead or any un-insulated conductor. Make connection to ground and target conductor before turning on transmitter.
-  **WARNING!** SHOCK HAZARD - Do not connect to live voltage or active utility lines. De-energize any circuits in or around the work area.
-  **WARNING!** This tool is designed to detect electromagnetic field emitted from cables and buried metallic utilities. There are buried cables, pipes, and utilities this instrument CANNOT detect.
-  **WARNING!** LOCATING is not an exact science. The only certain way to be sure of the existence, location, or depth of buried utilities is to carefully expose (dig up) the utility.

## DISCLAIMER OF LIABILITY

Electric Eel Manufacturing shall not be liable to User, Distributor, Reseller, or any other person for any incidental, indirect, special, exemplary or consequential damages, or injury of any type whatsoever, and caused directly or indirectly by Products sold or supplied by Electric Eel Manufacturing.

## WARRANTY

THIS INSTRUMENT IS UNDER WARRANTY FOR ONE YEAR FROM THE DATE OF DELIVERY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP **(EXCEPT BATTERIES)**. WE WILL REPAIR OR REPLACE PRODUCTS THAT PROVE TO BE DEFECTIVE DURING WARRANTY PERIOD.

THIS WARRANTY IS VOID IF, AFTER HAVING RECEIVED THE INSTRUMENT IN GOOD CONDITION, IT IS SUBJECTED TO ABUSE, UNAUTHORIZED ALTERATIONS OR CASUAL REPAIR.

NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WE ARE NOT LIABLE FOR CONSEQUENTIAL DAMAGES.

## SERVICE

### PREPARE FOR USE

Locate the battery compartment on the back of the of the RECEIVER. Open the compartments using a Phillips screwdriver. If your unit is a rechargeable system, remove the terminal isolation paper to allow the battery spring to contact the battery terminal.

If the unit is configured for alkaline batteries, Install the six alkaline Duracell® "C" batteries as marked in the receiver and twelve Duracell® "D" batteries as marked in the TRANSMITTER.





Note: The battery type used must be selected in the programming menu of the transmitter and the receiver. For instructions on how to select please see section below.

### CHANGING PRESET FUNCTIONS, MODES & FREQUENCIES

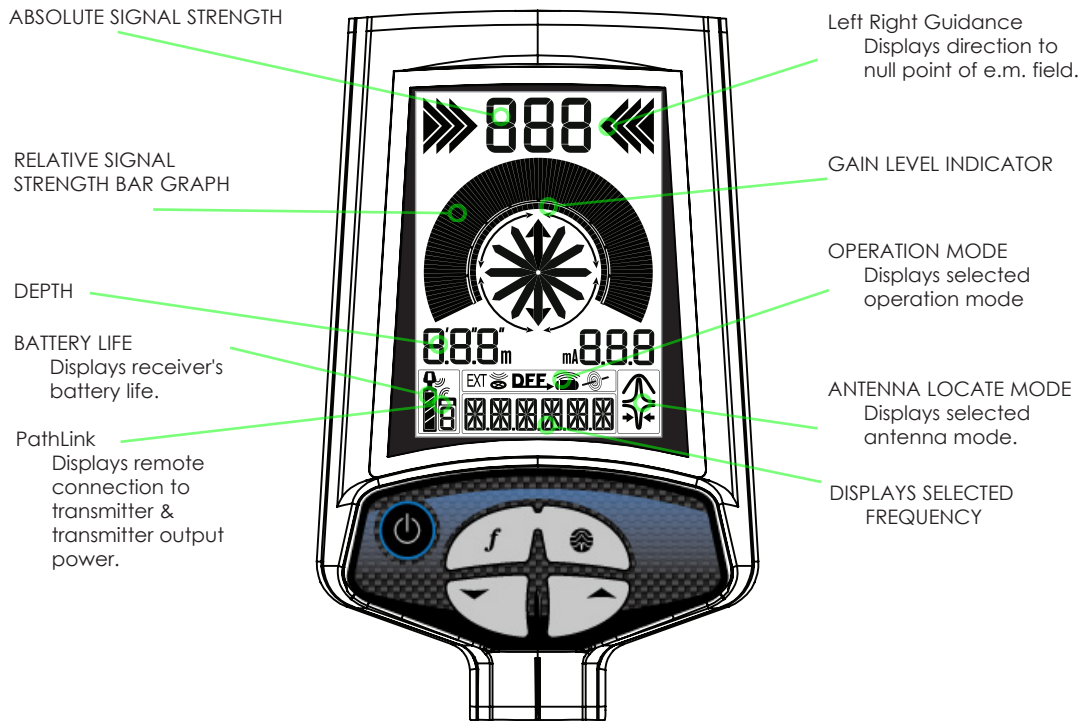
The locator operating modes, frequencies and other functions are user programmable and can be changed at anytime through a quick selection process in the programming menu.

#### RECEIVER

To select the programming options for **software versions 5.7 and greater**:

- With the unit on, press and hold the **POWER ON** button for 4 seconds. Once released "PRG" will be displayed at the top of the LCD. 
- To scroll through the main menu headings, press the **FREQUENCY KEY**. *f*
- To enter a selection's sub-menu press the **UP ARROW (GAIN UP)** key. 
- To browse a selection's menu, press the **FREQUENCY KEY**. *f*
- Once the desired option is selected, exiting the sub-menu will save the selection.
- To exit a selection's sub-menu use the **DOWN ARROW (GAIN DOWN)** button. 
- Exit the programming menu from the main menu by pressing the **POWER ON** button. This return to the normal operation mode. 

# EELTRACK RECEIVER CONTROLS & INDICATORS



## ON/OFF Button

This is a multi-use button that controls power on/off and enters the programming mode allowing the user to customize the operations of the system.

**Unit On/Off** - When off press once to turn the unit on. The unit will load settings from previous usage. Automatic shut off after 10 minute of no use.

**Programming Mode** - A long press of 3 seconds will enter the programming menu. A short press will exit the programming mode from the main menu.



**Frequency** - A short press of the Frequency/Function button toggles through available selected active and passive frequencies.

Note: Some frequencies are only available in certain modes and some modes will only be available with certain frequencies. The available selectable frequencies can be edited within the programing menu.



**Mode Select** - A short press will toggle through available modes. PEAK, PINPOINT PEAK, NULL, LEFT/RIGHT, and SONDE locating modes.

Note: The available selectable modes can be edited within the programing menu.



## GAIN Button (Up or Down)

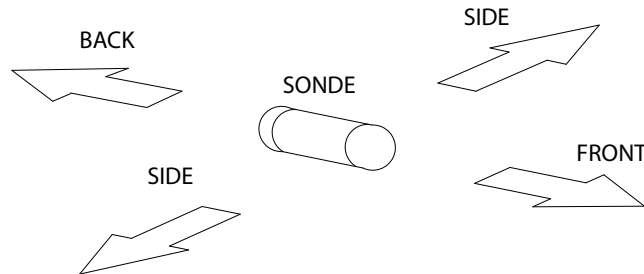
Adjusts the gain up or down. If the graph shows signal strength off scale, pressing the GAIN will automatically adjust to 50% on the scale display.

## LOCATING A SONDE OR CAMERA HEAD

Before you begin, you must choose a SONDE OR CAMERA HEAD that will match the same frequency as the RECEIVER. You will need a SONDE with a frequency of 512Hz, 640Hz, 815Hz or 33kHz to use with the EelTrack Locator Receiver.

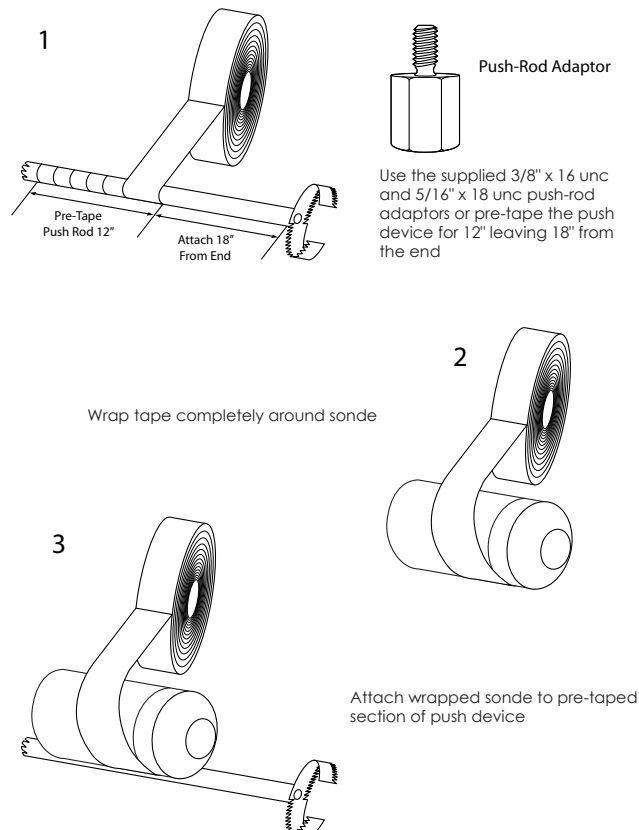
To select SONDE locating mode press and hold the MODE key for 5 seconds. When released the SONDE ICON will be displayed on the LCD. Once in SONDE mode the FREQUENCY button will select the available SONDE frequencies.

The key to SONDE locating success is practice and patience. Before going out on your first locate, it is a good idea to take your RECEIVER and SONDE out and try locating the SONDE and calculating the depth.



## ATTACHING A PUSH DEVICE TO THE SONDE

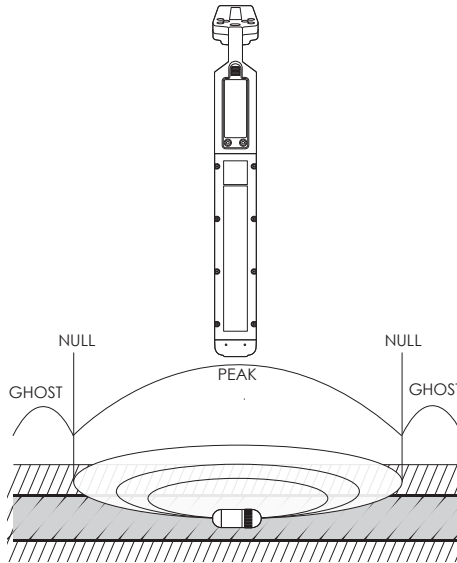
Attaching a push rod to the SONDE can be accomplished by using the coupling on the end of the SONDE. A spring coupling is recommended to allow the SONDE to move easier. Or, if you need to attach the SONDE to a sewer auger, it is recommended you use duct tape and apply as the shown in the figure below. If taping the SONDE on a metal pushing device, it is recommended to place the battery side of the SONDE closest to the device. This will allow for the best performance. Wrap the snake for approximately 1 foot in the location where the SONDE is going to be attached. Also attaching the SONDE 18 inches behind the cutting head is recommended. First, wrap the SONDE in the duct tape and then attach the SONDE to the snake using the duct tape.



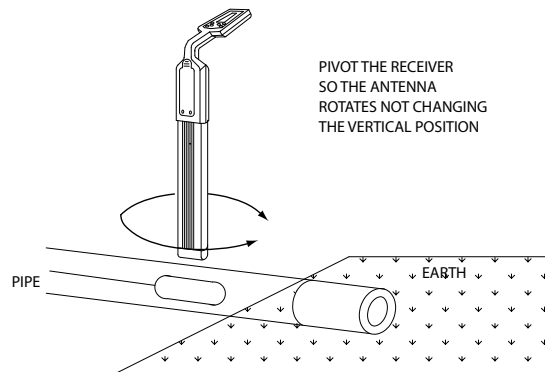
## LOCATING A SONDE

Hold the RECEIVER antenna directly above and in line with the SONDE, as shown below. The RECEIVER sensitivity needs to be adjusted for a meter reading indication between 60% to 80%.

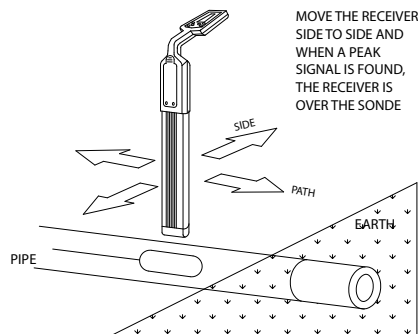
The radiation pattern of the SONDE is shown below. The PEAK signal is when the RECEIVER is held directly over the SONDE with the antenna in line with the SONDE. Both Ghost signals can be located behind and in front of the SONDE. By locating the ghost signals, the user is confirming the accuracy of the locate.



Start by following the suspected path of the pipe. Stop locating when the PEAK reading is found. Then rotate the RECEIVER as shown in the figure below. When pivoting the RECEIVER, do not change the vertical position. The RECEIVER will indicate a PEAK when the RECEIVER antenna is in line with the SONDE.



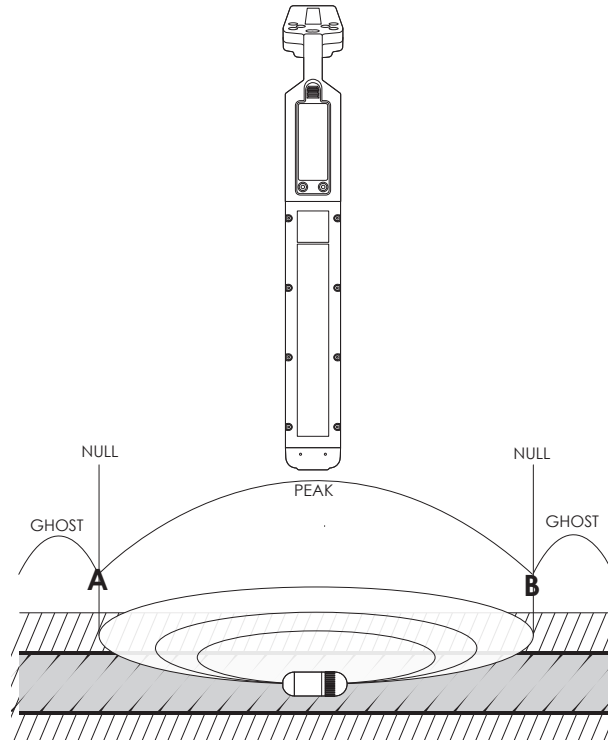
Now move the RECEIVER side to side (across the path of the pipe) as shown below. When the PEAK is found, the RECEIVER is directly over the SONDE. Mark this location. Next, check for ghost signals in front of and in back of the SONDE to confirm the location.



## DEPTH MEASUREMENT OF CAMERA HEAD OR SONDE

Once the LINE has been located, the depth can then be found. Refer to the figure below for a reference. Start by moving the RECEIVER along the path behind the SONDE with the antenna in line with the SONDE and find a NULL between the PEAK ghost signals. Mark this point (A). Then move the RECEIVER along the path in front of the SONDE and find another NULL. Mark this point (B). Next, measure the distance between these two points. The depth of the pipe is 0.7 times the distance between the two points.

DISTANCE BETWEEN **A** AND **B** TIMES 0.7 EQUALS DEPTH OF SONDE.





# EEL TRACK LOCATOR SPECIFICATIONS

## RECEIVER

<b>Operating Frequency</b>	200Hz - 480kHz • 50Hz 60Hz • RF
<b>Antenna Mode</b>	Null (vertical coil) • Peak (horizontal coil)
<b>Audio Indication</b>	Variable pitch audio
<b>Operating Temperature</b>	-4°F to 133° (-20°C to +55°C)
<b>Battery Type</b>	6 - "C" Duracell alkaline batteries
<b>Battery Life</b> Continuous Intermittent	40 hours 82 hours (10 minute auto shut off)
<b>Dimensions</b>	30.3" x 3.75" x 9.4"
<b>Weight</b>	3 pounds
<b>Signal Strength</b>	LCD bar graph Absolute Signal Strength readout 0-999
<b>Gain Control</b>	up/down button for automatic centering and manual control
<b>Dynamic Range</b>	126 dB
<b>Depth Measurement</b> Automatic Manual	Digital depth readout to 25 feet (feet/ inches & metric) Triangulation for verification of automatic readout in congested environments

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