

Mag 3 System

Quick Start Guide



Underground Magnetics

www.undergroundmagnetics.com

Quick Start Guide: Mag 3 System

Thank you for purchasing the Mag 3 System!



This Quick Start Guide will walk you through the process of starting your new system and preparing to drill. Please read this over and if you have any questions contact our 24/7 customer service at **515-505-0960**.

Note: This question mark and textbox tells you the page in the Operator's Manual where you can find more detailed information on the corresponding topic.



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When you receive your Mag 3 system:

-  The receiver and transmitter will be paired and ready to drill.
-  The transmitter has been unlocked, preprogrammed at 19 kHz, and calibrated with the receiver at the factory.

➤ Always check calibration before drilling.



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-  The receiver and display have been paired and are set to channel 1.

Choosing the Correct Frequency

The Echo 1 transmitter has 3 separate frequency bands:

- 4 kHz is most appropriate when encountering passive interference.
 - Examples of objects that cause passive interference are rebar, wire mesh, and metal fences.
- 19 kHz is the midrange band and will be the frequency used in most drilling situations.
- 30 kHz responds better in high active interference situations.
 - To check for active interference before drilling, use the depth



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Receiver: Mag 3

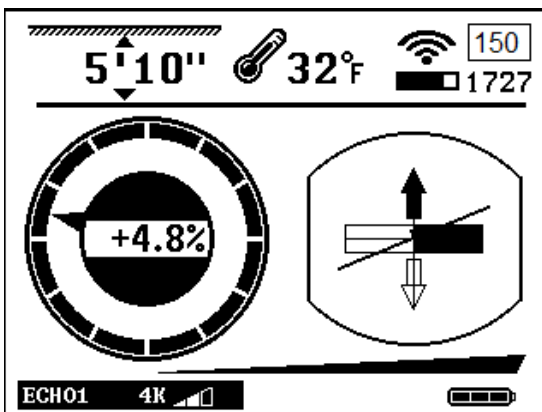
Display: Mag D

Transmitter: Echo 1
Echo 1 19k
Echo 1 30k
Echo ST





Steps for Use

1. Install batteries into the transmitter positive side down and install the battery cap with the provided battery cap tool.
 - It is recommended that a double C lithium cell battery be used if operating in adverse soil conditions (like rock). This will prevent battery chatter, which can greatly reduce the life of normal C cell batteries. One double C lithium cell battery is included in your Mag 3 System.
2. Turn on receiver by holding the power  button down until the Mag 3 logo is visible on the screen. Once the receiver is on, the screen will display the information being sent from the transmitter.
 - The transmitter model and frequency will be in the lower left hand of the screen.
 - The distance from receiver to transmitter, transmitter temperature, transmitter signal strength, and signal to noise ratio will be displayed across the top of the screen.



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3. Turn on display by holding the power button  down until the Mag 3 logo is visible on the screen. The screen will display the information being sent from the receiver.
4. Install the transmitter into the housing. Check calibration by:
 - Place the receiver 10ft away from the housing, measured from inside edge of receiver to center of housing.
 - If the distance on the receiver's screen reads 10ft then no calibration is required.
 - If the distance does not read 10ft, then calibration should be performed.  Manual page 13

Locating Basics

Before installing the housing on the drill rig, familiarize yourself with locating while the housing is on the ground. If you are unfamiliar with locating with an HDD locating system please refer to the Locating Methods section of the operator's manual, contact your UM dealer, or call our customer service at **515-505-0960** or email us at **support@undergroundmagnetics.com**.



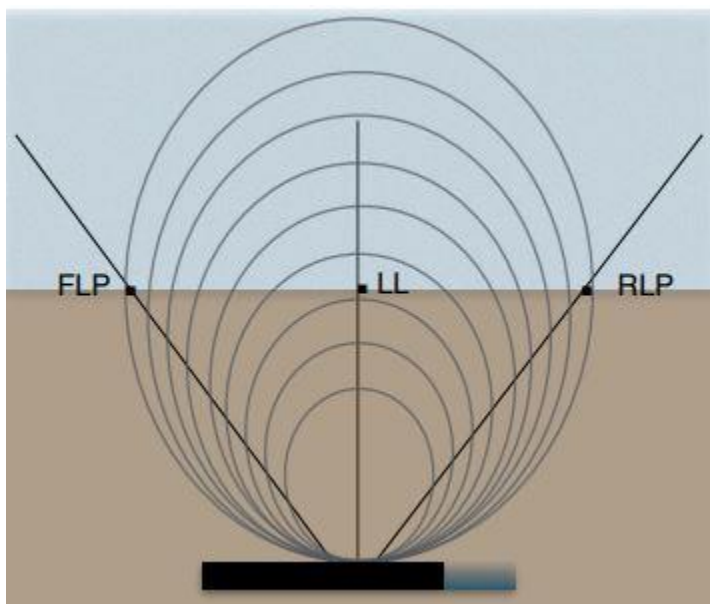
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Following are basic locating instructions for determining the location and depth of your Echo 1 transmitter in the ground.

Understanding How the Receiver Locates the Transmitter

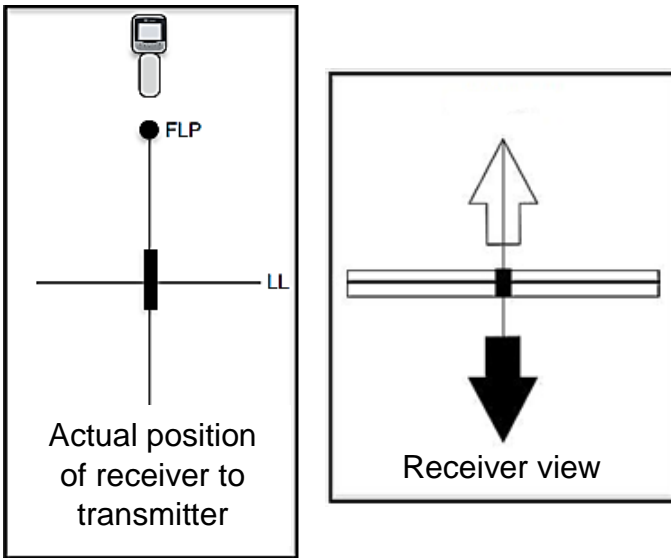
The Mag 3 System uses the “3 locate point” pattern to pinpoint the location and depth of the transmitter.

- Front Locate Point (FLP)
- Locate Line (LL)
- Rear Locate Point (RLP)

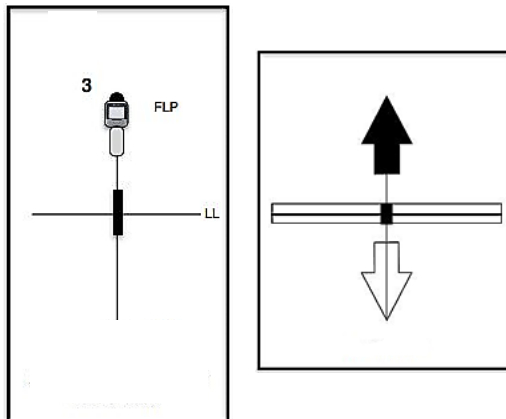


This section of the Quick Start Guide will walk you through the most common method of locating the FLP and then the LL over the head.

1. Place the housing that contains the Echo 1 transmitter on the ground away from any active interference. Stand 3ft in front of and in-line with the housing. This guide assumes that you are facing away from the drill. You will notice on the screen that the highlighted arrow is pointing back toward the housing. This means that the closest locate point, the FLP, is behind you.

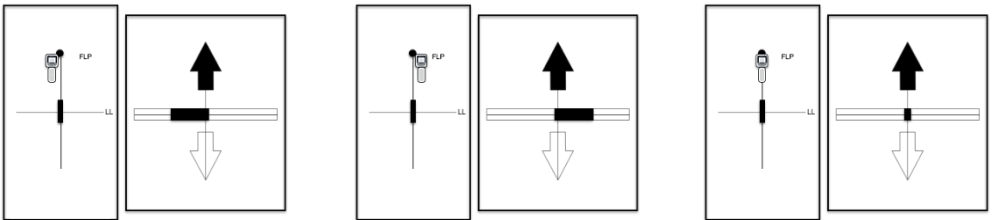


2. Simply move the receiver back toward the housing until the arrow flips and shows the FLP in front of you.

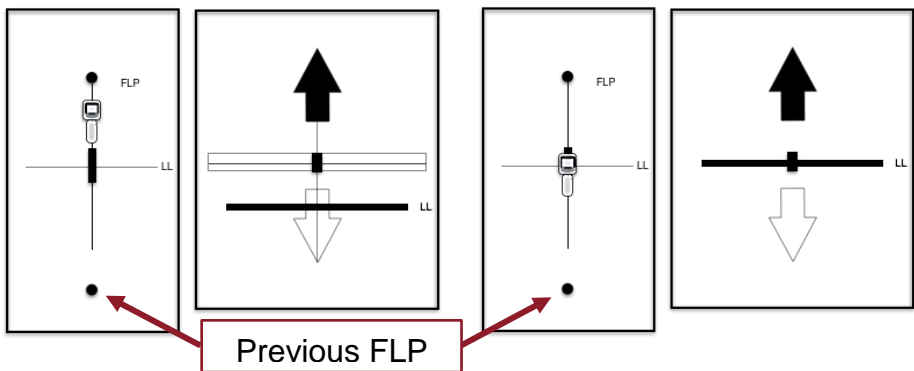


3. You have just crossed the FLP.
4. Now simply move the receiver left and right until you pinpoint the FLP with the left-right bar. Mark the pinpointed FLP point on the ground with a small dot of locating paint.

➤ Think of this point as the end of a rifle barrel that points toward your target (down the bore path).



5. Now, move back toward the housing and in line with your FLP until the locate line centers. You are now over the head. The distance in the upper left-hand corner of the screen is now your true depth over the head. This is how you will locate moving forward.



For video tutorials of locating procedures and other operating tips visit our website at

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