

Manual



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Transmitter

Introduction

The transmitter provides drill head temperature, clock position pitch, battery status and locating signal. The transmitter will enter a "sleep" mode after 15 minutes without rotation. It takes 10 seconds to "wakeup" once the transmitter is rotated.

Note: If drilling in adverse soil conditions (i.e. rock), normal cell batteries will experience battery chatter. This can greatly reduce battery life. To prevent this, use your provided double lithium or UM Rechargeable Echo Cell Kit.



Dimensions	Φ3.2cm x 38 cm
Frequency	9925Hz~41375Hz
Depth Range	Normal Power: 131ft High Power: 164ft
Power	Echo Cell Kit (21700) or Lithium Battery (261020)
21700 (4.2v)	Normal Power: 50 hours High Power: 12 hours
261020 (3.7v)	Normal Power: 60 hours High Power: 15 hours
Temperature	Under 220° F (104° C)

Digital Information

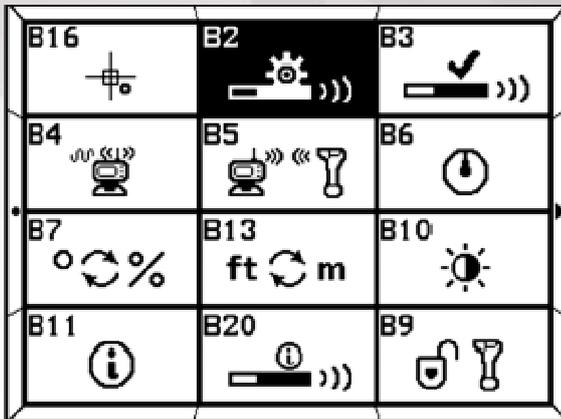
- **Pitch:** From 100% to +100% with 0.1% resolution within the range of -45% to +45% and 1.0% resolution outside of that range.
- **Roll:** 24 transmitter roll positions.
- **Battery:** Install batteries positive side down and install battery cap with provided battery cap tool.
 - **Lithium:** Echo Power Cell will show full until completely dead.
 - **Echo Cell Kit:** Rechargeable Lithium Echo Cell Kit will meter battery life while discharging.
- **Temperature:** when the transmitter is overheating, temperature indication in the receiver, display flashes. If temperature reaches over 190. transmitter may be permanently damaged.

Transmitter Maintenance

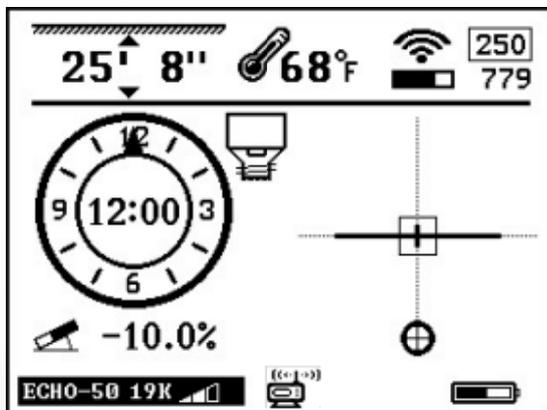
- Do not place the transmitter near excessive temperature over 190.
 - Do not apply excessive pressure, shock or vibration on the transmitter.
 - Take the battery out of the transmitter after use.
 - Clean the spring and cap on the battery compartment when necessary.
 - Regularly check the sealing ring on the battery cover. Replace if necessary.

Transmitter settings

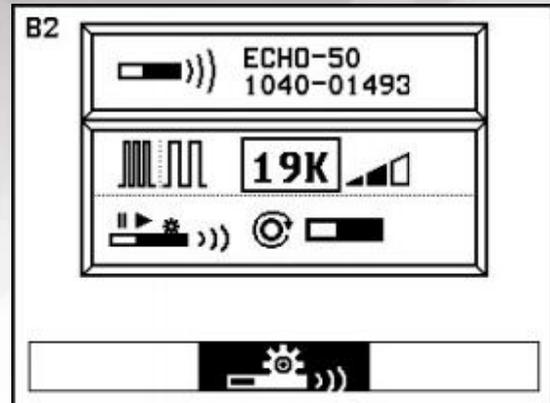
(Settings need to be made through the receiver)
 (Process must be started within 60 minutes after the batteries have been placed in the transmitter)



1. Press and hold to enter setup Page and to select B2 icon.



3. Tap to return to Main Page.



2. Tap to enter Transmitter settings Page. The receiver and Echo transmitter will automatically pair. Then tap or and to select frequency and power level. Tap to highlight wake Up Mode and tap to enter. Then tap or to select desired mode as described below.

- Instant**
 (rotate the transmitter 4 degrees or change the pitch by 1 degree)
- 360 degrees**
 (rotate the transmitter a full 360° several times)
- Always on**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure requirement set forth for an uncontrolled environment. The transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Underground Magnetics



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