

- Single Point Locating
- Bore Logger
- Multi Frequency
- Bore-to Function
- Cable Transmitter
- 110 m Depth Range
- Housing Suitability Check
- On Screen Predicted Depth
- Special Series Tx without Temp Dot
- Downhole Power Backup up to 120 Hrs
- Downhole Switch over Frequency & Power



 Underground Magnetics



Grab  
the  
Power



 Underground Magnetics

## Stronger against interference

High performance DSP

High Precision, strong against interference, Faraday shield, 3D Antenna

Antenna Signal Conditioning Module



Antenna Signal Conditioning module

High Precision, strong against interference, Faraday shield, 3d Antenna



## Dual Antenna System



### Mag Receiver

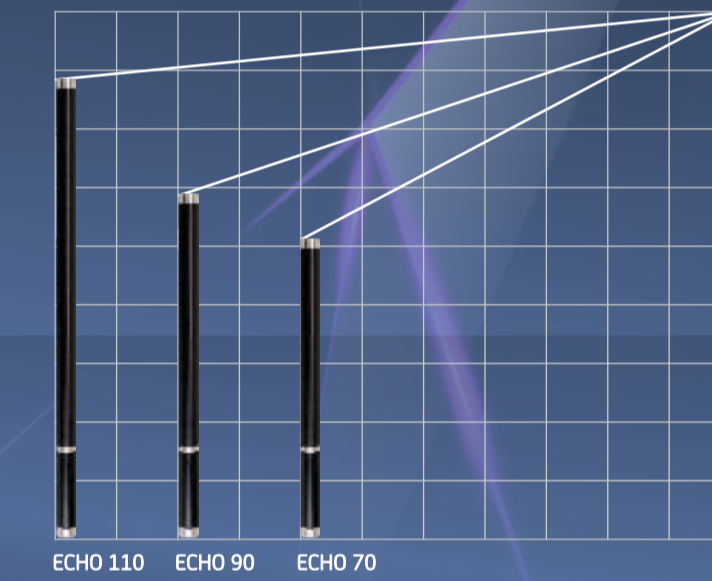
System	Mag 8	Mag 7
System Frequency	10 Frequencies, 4 kHz ~ 31 kHz	3 Frequencies, 4 kHz, 19 kHz, 30 kHz
Compatible Transmitter	Echo50/Echo60/Echo70/Echo90/Echo110	Echo2S/Echo3
Temperature Range	-20°Celsius to 60°Celsius	-20°Celsius to 60°Celsius
Radio Frequency	433 MHz	433 MHz
Telemetry	4 Radio Channels with Range up to 900 m*	4 Radio Channels with Range up to 900 m*
Power	Rechargeable Lithium Battery 12.5v	Rechargeable Lithium Battery 12.5v
Battery Life	Up to 50 hours	Up to 50 hours
Dimensions	68.5cm x 13cm x 30cm	68.5cm x 13cm x 30cm
Weight	3 kg	3 kg
Water Proof	IP65	IP65

Telemetry	4 Radio Channels with Range up to 900 m*
Power	Rechargeable Lithium Battery 12.5v
Temperature Range	-20° Celsius to 60° Celsius
Dimensions	19cm x 13cm x 19cm
Battery Life	Up to 50 hours
Radio Frequency	433 MHz
Weight	1.5 kg
Water Proof	IP65

### Housing Suitability Check for Echo 70 / Echo 90 / Echo 110

V. BAT	Transmitter battery voltage
V. ANT	Transmitter Antenna voltage Normal Range 95% - 105%
P. ANT	Normal Mode 500 mW - 800 mW High Power Mode 2000 mW - 3000 mW

Note : Place the Transmitter inside the Housing for Suitability Check



## System Specifications

## Transmitter Specifications

Transmitter	Echo 2S	Echo 3	Echo 50
<b>Frequency</b>	3 Frequencies 4kHz, 19kHz, 30kHz	3 Frequencies 4kHz, 19kHz, 30kHz	10 Frequencies 4kHz ~ 31kHz
<b>Battery Type</b>	18650 x 1 Rechargeable Lithium Battery 261020 x 1 Lithium Battery (Super Cell)	18650 x 2 Rechargeable Lithium Battery 261020 x 2 Lithium Battery (Super Cell)	18650 x 1 Rechargeable Lithium Battery 261020 x 1 Lithium Battery (Super Cell)
<b>Battery Life</b>	18650 (3.7v): 20 hrs - Normal Mode 5 hrs - High Power Mode 261020 (3.7v): 60 hrs - Normal Mode 15 hrs - High Power Mode	18650 (3.7v): 50 hrs - Normal Mode 12 hrs - High Power Mode 261020 (3.7v): 160 hrs - Normal Mode 40 hrs - High Power Mode	18650 (3.7v): 20 hrs - Normal Mode 5 hrs - High Power Mode 261020 (3.7v): 60 hrs - Normal Mode 15 hrs - High Power Mode
<b>Depth Range</b>	40 m (131 Ft) - Normal Mode 50 m (164 Ft) - High Power Mode	40 m (131 Ft) - Normal Mode 60 m (196 Ft) - High Power Mode	40 m (131 Ft) - Normal Mode 50 m (164 Ft) - High Power Mode
<b>Temperature</b>	<121° Celsius	<121° Celsius	<121° Celsius
<b>Roll</b>	24 Clock Position	24 Clock Position	24 Clock Position
<b>Pitch</b>	0.1% Resolution	0.1% Resolution	0.1% Resolution
<b>V.BAT</b>	2.8v ~ 4.2v	5.6v ~ 8.4v	2.8v ~ 4.2v
<b>Dimensions</b>	3.2 cm x 38 cm / 1.25 in x 15 in	3.2 cm x 48 cm / 1.25 in x 19 in	3.2 cm x 38 cm / 1.25 in x 15 in
<b>Water Proof</b>	IP67	IP67	IP67

Echo 60	Echo 70	Echo 90	Echo 110
<b>Frequency</b>	10 Frequencies 4kHz ~ 31kHz	10 Frequencies 4kHz ~ 31kHz	10 Frequencies 4kHz ~ 31kHz
<b>Battery Type</b>	18650 x 2 Rechargeable Lithium Battery 261020 x 2 Lithium Battery (Super Cell)	18650 x 3 Rechargeable Lithium Battery	18650 B2 x 2 Rechargeable Lithium Battery
<b>Battery Life</b>	18650 (3.7v): 50 hrs - Normal Mode 12 hrs - High Power Mode 261020 (3.7v): 160 hrs - Normal Mode 40 hrs - High Power Mode	18650 (3.7v): 60 hrs - Normal Mode 15 hrs - High Power Mode	18650 B2 (3.7v): 80 hrs - Normal Mode 20 hrs - High Power Mode
<b>Depth Range</b>	40 m (131 Ft) - Normal Mode 60 m (196 Ft) - High Power Mode	50 m (164 Ft) - Normal Mode 70 m (230 Ft) - High Power Mode	70 m (230 Ft) - Normal Mode 90 m (295 Ft) - High Power Mode
<b>Temperature</b>	<121° Celsius	<121° Celsius	<121° Celsius
<b>Roll</b>	24 Clock Position	24 Clock Position	24 Clock Position
<b>Pitch</b>	0.1% Resolution	0.1% Resolution	0.1% Resolution
<b>V.BAT</b>	5.6v ~ 8.4v	8.4v ~ 12.6v	5.6v ~ 8.4v
<b>Dimensions</b>	3.2 cm x 48 cm / 1.25 in x 19 in	3.6 cm x 39.3 cm / 1.42 in x 15.48 in	3.6 cm x 45.5 cm / 1.42 in x 17.92 in
<b>Water Proof</b>	IP67	IP67	IP67