

ES-224

Dual-Frequency Echo Sounder

Data Specifications

Frequency	High: 200kHz	Low: 24kHz
Maximum Transmitting Power	400W@200kHz	1200W@24kHz
Depth Range	0.15~300m/1.0~900 ft.@200kHz 0.8~2000m/2.4~6000 ft.@24kHz	
Accuracy	0.01m/0.1 ft. +/- 0.1% of depth @200kHz 0.10m/0.30 ft. +/- 0.1% of depth @24kHz	
Resolution	0.01m/0.10 ft @200kHz 0.10m/0.30 ft @24kHz	
Sound Velocity	1370~1700m/s	
Ping Rate	Maximum 30Hz	
Output Data Format	Standard NMEA 0183, DESO 25, ODOM, Knudsen, Bathy, Echotrac	
Screen	17inches; Resolution: 1280 x 1024@60Hz	
CPU	1.92GHz, Quad-core (windows 7)	
RAM	2GB	
Storage	128GB SSD	
Interfaces	RS-232*3, USB*4, Power Port*1, Transducer Port*1, VGA*1	
Input Power	10~30 VDC or 220 VAC	
Consumption	80 watts	
Operating Temperature	-20°C ~70°C	
Weight	9.5 kg(20lbs)	
Dimensions	480mm(18.8 in)H×360mm(14.1 in)W×110mm(4.3 in)D	
Material of Shell	High strength ASA	
Certification	CE, EN 60945	

*Description and specification are subject to change without any further notice.

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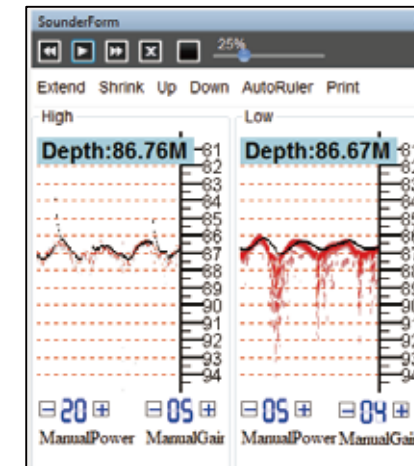


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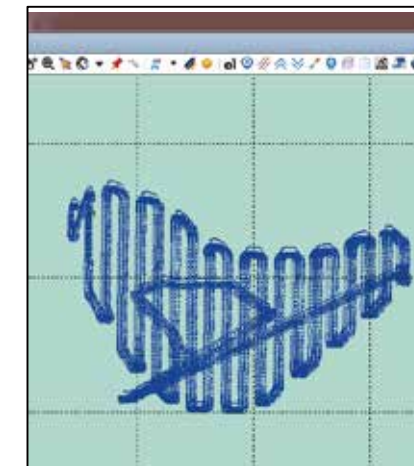
ES-224 dual-frequency echo sounder is widely used in sediment measurement for dredging and other water depth measurement projects in shallow water, deep water, and high sandy water. The full-featured SLHydro Sounder hydrographic software integrates bathymetry, navigation, and post-processing. Equipped with a 17" large screen and industrial computer platform, ES-224 offers a set of reliable solutions for hydrographic offices around the world with a robust dual-frequency transducer and a user-friendly survey pole.



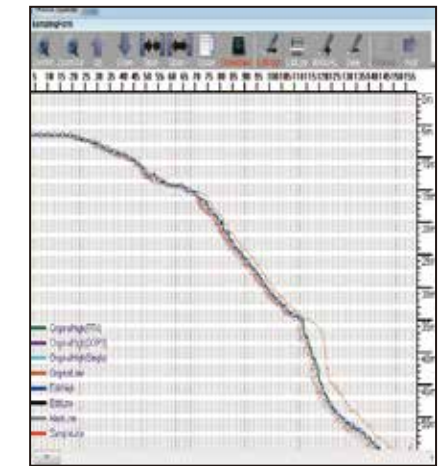
- Dual-frequency
- The Full-featured SLHydro Sounder Software
- Rugged Industrial Platform
- CE and EN 60945 Certification
- New Processing Circuit
- Frequency Span Available for Special Projects
- Multiple I/O Interfaces
- 17-inch Large Tempered Glass Screen
- Shortcut Buttons
- Window 7 Operating System
- 128 GB Internal Data Storage



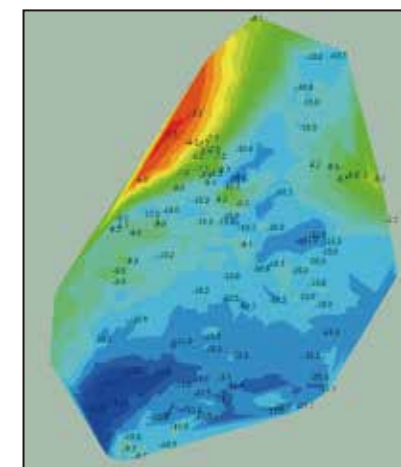
Surveying



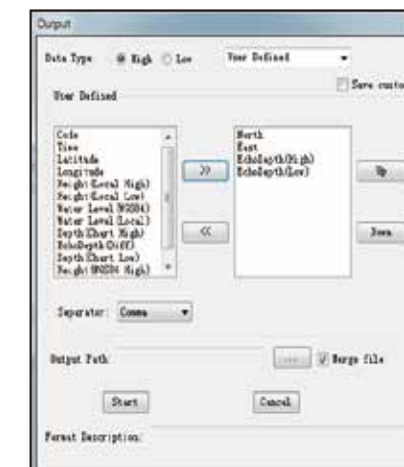
Track



Process



Result Preview



User-defined Export



External Sensor

The Combination of High and Low Frequency

ES-224 features the simultaneous operation of both high and low frequencies, making it a good performer in both shallow and deep water. High frequency brings good accuracy, accurately measuring the depth of shallow water. Low frequency has large emission energy and strong capacity of penetration, with no fear of complex deep water. Moreover, SLHydro Sounder software uses the different propagation characteristics of high and low frequencies to output the real-time difference of water depth value between the low and high frequencies, which is the thickness of the sediment under the water.

The Full-featured SLHydro Sounder Software

Powerful SLHydro Sounder hydrographic software integrates bathymetry, navigation and post-processing. SLHydro Sounder displays, processes and export dual frequency data. At the same time, SLHydro Sounder supports access to standard NMEA data from any receiver to provide accurate GNSS coordinates for your bathymetry data. For more surveying scenarios, SLHydro Sounder also supports third-party sensors of attitude, surge, rosette, sound speed, combined navigation, water level meter, etc.

APPLICATIONS

- Tracking of the Seabed
- Turbid Water with High Sand Content
- Sediment Measurement for Dredging
- Measurement at High Speed

