

3300

HULL MOUNT SUB-BOTTOM PROFILING SYSTEM

FEATURES

- Superior Sub-bottom images
- Wideband Full Spectrum CHIRP sub-bottom technology that provides a 20-30 dB improvement in SNR over conventional systems
- Multiple configuration options for transmit and receive
- New low frequency transducers and optional PVDF receiver
- Enhanced pulse libraries provide increased penetration and higher resolution
- Option for dual frequency pulse transmission
- Full ocean depth capabilities with the capability to have multiple pulses in the water column
- Analytic signal data that preserves the phase information for advanced post-processing

APPLICATIONS

- EEZ coastal planning and resource development
- Geo-technical surveys
- Geohazard Surveys
- Environmental site investigations
- Geological studies
- Sediment classification
- Geophysical surveys



The EdgeTech 3300 hull mount sub-bottom profiling system is a versatile wideband Frequency Modulated (FM) sonar that generates cross-sectional images of the seabed and collects digital normal incidence reflection data over many frequency ranges. EdgeTech's Full Spectrum® Technology has several distinct advantages over conventional sub-bottom systems, including increased penetration and higher resolution.

Because the FM pulse is generated by a digital to analog converter with a wide dynamic range, the energy, amplitude and phase characteristics of the acoustic pulse can be precisely controlled. This precision produces the high repeatability and signal definition required for sediment classification. The tapered waveform spectrum, results in images that have virtually constant resolution with depth. Another Full Spectrum advantage is the reduction of side lobes in the effective transducer aperture. The wide bandwidth of the sweep frequency has an effect of smearing the side lobes of the transducer. The result is a beam pattern with almost no side lobes.

The frequency range of operation is determined by the acoustic characteristics of the transmitter and receiver mounted on the vessel. Depending on the array size the system can transmit acoustic pulses with different center frequencies and bandwidths. The selection of the pulse is made by the operator while profiling to achieve the best imagery.

For more information please visit EdgeTech.com

info@EdgeTech.com | USA 1.508.291.0057

3300

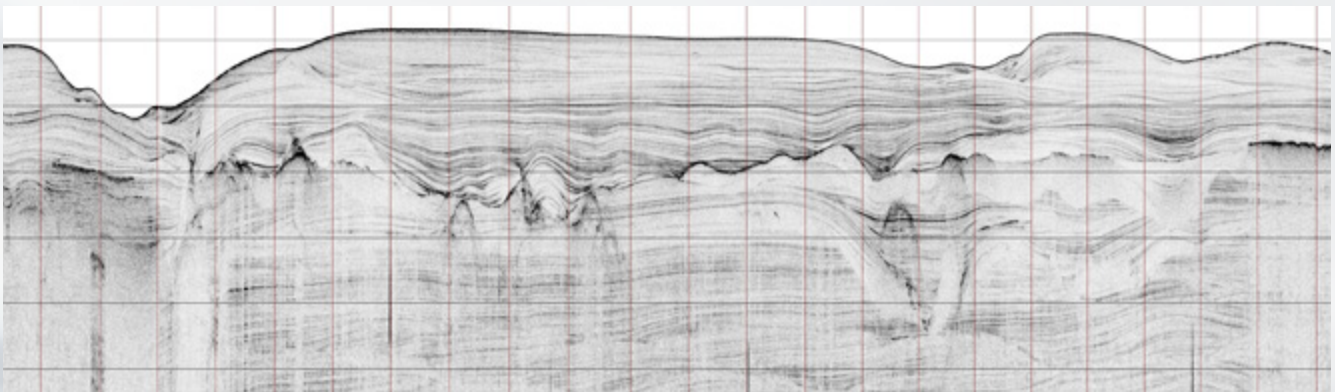
HULL MOUNT SUB-BOTTOM PROFILING SYSTEM

KEY SPECIFICATIONS

TRANSDUCER ARRAY	BEAMWIDTH	MAX. RECOMMENDED OPERATING DEPTH	RESOLUTION	PENETRATION
4 of 2-16 kHz (2x2)	40° at 4.5 kHz	300 m	6 to 10 cm	6 m in coarse sand 80 m in clay
9 of 2-16 kHz (3x3)	30° at 4.5 kHz	1500 m		
16 of 2-16 kHz (4x4)	24° at 4.5 kHz	3000 m		
25 of 2-16 kHz (5x5)	20° at 4.5 kHz	5000 m	15 -25 cm	15 m in coarse sand 150 m in clay
3 of 1-10 kHz (triangle)	30° at 4 kHz	1500 m		
5 of 1-10 kHz ("dice 5")	20° at 4 kHz	3000 m		
7 of 1-10 kHz (hexagonal)	16° at 4 kHz	5000 m		

RECEIVE	
Standard	The standard receive option is to transmit and receive on all the same transducers.
Switchable Arrays (option)	A switch box is used so transducers can be set to transmit only, receive only, or transmit and receive on the same transducer. Using some transducers for transmit only and some for receive only allows longer pulses to be used in shallow water operations.
PVDF Hydrophone panels (option)	Using a separate PVDF hydrophone panel for receive also allows longer pulses to be used in shallow water operations. Custom sizes and configurations allow for beamwidth shaping, and even Variable aperture configurations can be accommodated.

TOPSIDE PROCESSOR	
Hardware	Standard 19" rack
Amplifier Output	Up to 8 kW depending on array configuration
Receive A/D	19 bit resolution, 200 kHz max. sampling rate
File Formats	.jsf, .xtf and SEG-Y file format options available



For more information please visit EdgeTech.com

info@EdgeTech.com | USA 1.508.291.0057