



Deep Tow 2000

Combined Seabed Survey System Specifications

Telemetry System

Power Requirements: 90–250 VAC, 50-60Hz, 500 W.
Power to tow vehicle 350 VDC \pm 3 VDC.
Telemetry Frequencies: 220-236 kHz (up)
430-446 kHz (down).
Max cable length: 10 km of 11 mm diameter armoured coaxial cable.
Cable: Rochester A302799 or equivalent.
Telemetry: High tolerance to cable attenuation and leakage. Greater reach and far more robust than competing digital links.
Safety features: Shutdown if greater than 2 mA leakage between screen and armour
Safety interlock.

Telemetry Interfaces

Side Scan Sonar: DC power and signal/trigger interface.
GeoChirp II: DC power and signal/trigger interface.
Motion Sensors: Depth, heading, pitch, roll.
Magnetometer: Isolated 32 VDC PSU and RS232.
Posidonia USBL: Isolated PSU, RS232 and trigger.

GeoChirp II

Max power output: 2 kW RMS max at 95% efficiency.
Max power input: 250 W average at full rep rate.
Pulse width: 16 or 32 ms (programmable).
Chirp Sweep: Programmable (up/down non-linear etc).
Penetration: up to 50 m, sediment dependent.
Frequency range: 1 kHz to 12 kHz.
Control: RS232 menu driven.
Rep rate: 8 per sec at 16 ms pulse width.
4 per sec at 32 ms pulse width.
Cable type: Single coax operation (A302799).
Towfish: Standard GeoAcoustics 136 fish.
Transmit transducers: 4 off 137C (600 m) or 138D (2000 m).
Hydrophone: Standard chirp hydrophone tail.

Receiver

Dynamic range: Gain: adjustable over 60dB range.
TVG: -20 to +20dB maximum.
AGC: -34dB maximum.
Output: Selectable signal envelope or amplitude modulated 12 kHz.
Key out: 0.6ms CMOS/TTL compatible.
Modes: 100 kHz and 500 kHz operation. Raw signal and processed signal.

Surface Equipment General

Temperature: Storage: -20 to 75°C
Operating: 0 to 50°C
Humidity: 10% to 95% RH, non-condensing.
Mounting: All units are suitable for either bench or rack mounting.

Transmitter

Frequency: 110/410 kHz \pm 1%.
Power output: 3.0 kW/2.5 kW pulse \pm 20%.
Pulse Length: 167 μ sec/88 μ sec \pm 1%.
Pulse repetition rate: 20 pulses per second maximum.
Protection: Open and short circuit protected.
Efficiency: Greater than 80%.

Side Scan Sonar

Power requirements: 110/240 VAC switchable,
50-60Hz, 50W.

Towfish Attitude Package

Heading Accuracy: \pm 0.5°
Heading Resolution: 0.1°
Pitch Accuracy: \pm 0.2°
Pitch Resolution: 0.1°
Roll Accuracy: \pm 0.2°
Roll Resolution: 0.1°
Depth Accuracy: \pm 1% of full scale or \pm 2m
Depth Resolution: 0.1 m

Towfish General

Weight: 265kg
Length: 1.4m
Height: 0.45m
Width: 0.45m

*Specification subject to change without notice
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