



SSR, Inc.

Science & Technology in a Marine Environment

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Edgetech DT-2 Combined SSS/SBP System

In response to the growing deepwater market, SSR has developed its DT-2 Deeptow Seafloor Mapping System which is capable of acquiring combined side scan sonar and sub-bottom profiler data in water depths up to 3000m. The DT-2 system belongs to the family of Edgetech's deeptow systems and has been specifically designed for deepwater geophysical route surveys for cables and pipelines as well as search and survey operations for downed vessels / airplanes in deepwater environments.



SSR's DTSMS 3000m rated Deeptow System with Depressor Wing

SSR's DT-2 system has a built in Sonardyne 7970 minibeacon for acoustic tracking as well as built in motion and gyro-sensors for attitude determination in the water column. The system has up to 2 inputs for external sensors including a SeaSpy magnetometer.

SSR's offers a variety of sonar winches with varying cable lengths and types that the DT-2 system can interface to including the following:

- DT-7500 winch with 7500m of .68" UNOLS Rochester single coax cable for operation in water depths up to 3000m.
- DT-3000 winch with 3000m of .45" UNOLS Rochester single coax cable for operation in water depths up to 1000m

DT-2 Equipment Specifications

Tow Fish Body

- Dimensions 10ft length x 16 inch diameter
- Tow fish Weight 500 lbs in air
- Depressor Wing 300 lbs in air / 15 degree inclination
- Depth Rating: 3,000 meters
- Tow Cable: 7,500 meters of 0.68" Rochester coaxial
- Power Requirements: 115 VAC, 60 Hz, 1 phi, 15A

Edgetech Side Scan Sonar

- Modulation: Full Spectrum Chirp Frequency Modulated Pulse
Amplitude and phase weighting
- Dual Frequency Settings: 100 and 410 kHz
- Vertical Beam Width: 70°

Frequency Specific	100 kHz	410 kHz
Pulse Bandwidth:	100 kHz	410 kHz
Pulse Length:	13 ms	2.4 ms
Range Scale Selection:	50-1250 m per side	12.5-100 m per side
Maximum Ping Rate:	15 pps	60 pps
Range Resolution:	7 cm	1.8 cm
Horizontal:	3 dB	3 dB
Beam Width:	0.6°	0.375°
Transmit Power:	200 Watts	160 Watts
Peak Source Level:	210 dB	216 dB
Receiver Sensitivity:	190 dB	196 dB

Edgetech Sub Bottom Profiler

- Frequency Band – 2 to 16 kHz
- Source Level 200 dB @1 µPa @ 1 meter
- Transmit Power 200 Watts
- Beamwidth 15° to 25°
- Pulse Selections (2 - 16 kHz/20 ms), (2 - 12 kHz/20 ms) (2 - 10 kHz/20 ms)
- Resolution 6 to 10 cm
- Receiver Variable Gain 38 to 105 dB, automatic or manual control

Operating / Processing Software

- Edgetech Discover SSS/SBP
- Delph Map / Triton ISIS
- Triton SB-Interpreter
- Mosaic Real Time
- Survey Office

Sensors

- USBL Transponder/Responder – Sonardyne Type 7970
- Depth – Falmouth Scientific CTD , 0.5 m accuracy
- Motion Sensor – TSS CMS2-25, pitch and roll accuracy: 0.25°
- Heading – PNI magneto-Inductive compass, 0.5° heading accuracy