

Teledyne RESON

SeaBat® 7111

Multibeam Echosounder System



The SeaBat 7111 produces bathymetry data suitable for the generation of high resolution hydrographic charts exceeding international standards in water depths from 3 to 1000m. Operating at 100kHz, the system forms 101, 201 high-density, equi-angle or 301 equi-distant beams to cover a total receive sector of 150°.

The SeaBat 7111 transducer array is comprised of a cylindrical receive array and a linear transmitter array, mounted together on a support cradle that provides mounting points to the vessel. Lightweight and portable, the array can be installed temporarily over the side of a vessel of opportunity a first for a system in this frequency range.

The SeaBat 7111 is controlled by a high performance sonar processor that manages data flow and signal processing using a state-of-the-art FPGA architecture. The sonar processor provides a Windows®-based GUI user interface, allowing system configuration, control, data output, storage and built-in test environment (BITE) displays to assist the operator.

Equi-distant or equi-angular beam spacing across the entire swath is selectable by the operator to provide uniform sounding density and maximize usable outer swath. Data outputs include bathymetry, sidescan, snippets & beamformed water column data.

FEATURES

INSTALLATION

Unique portable system

MOUNTING

Suitable for vessel over-the-side, bow or hull mounting

FREQUENCY

100kHz frequency

BEAMS

101, 201 EA / 301 ED focused beams
SWATH150° swath coverage (7.5X depth)

BATHMETRY

Bathymetry & imagery from 3m to 1000m

OPERATION

Automatic operation

STABILISATION

Pitch stabilisation

IHO

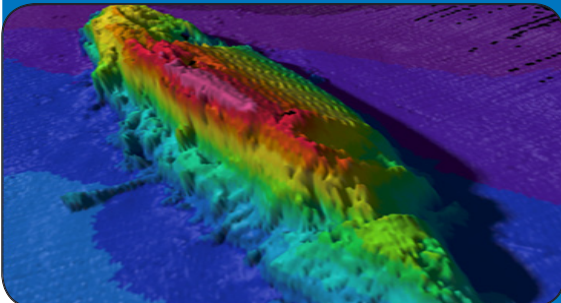
IHO compliant

OPTIONS

- 19" marine grade monitor
- 1 TB external RAID drive
- SVP-70 sound velocity profiler with
- 25m cable
- Standard Service Level Agreements (SLA)
- 7111 30m transducer cables
- 7111 spares kit

SEABAT 7111 SYSTEM SPECIFICATIONS

Frequency	100kHz
Pulse length	0.08ms to 3.04ms (selectable)
Typical depth	1m to 900m
Max depth	1000m
Depth resolution, sector coverage,	3cm, 150°
Number of beams	101, 201 EA or 301 ED
Along-track, across-track beamwidth	1.9°, 1.5° ± 0.05° (3.0°, 4.5°, 6.0° operator selectable)
Bottom detection method	Center-of-energy and phase-zero-crossing algorithm
Pitch stabilisation	±10° (motion sensor required)
Max update rate	20Hz (range selection dependent)
System supply	90 to 260 VAC 50/60 Hz, 350 W
System control	Trackball or from ethernet
Temperature: operating, storage	-5°C to +40°C, -30° to 55°C
Data output	Gigabit ethernet
Transducer array: weight	72kg (air), 59 kg (water) with cables
Sonar processor: dimensions, weight	431.4mm x 220.8mm x 559.5mm, 30kg
Transceiver: dimensions &, weight	267mm x 483mm x 489mm, 13.6kg
Hydrophone & projector dimensions	636mm x 118mm (Diameter/ Length), 113mm x 650mm (Diameter/Length)
Cable length	15m, 30m (optional)



WHY CHOOSE A SEABAT 7111 SYSTEM?

- Lightweight and portable system, which can be installed
- Temporarily over the side of a vessel
- Sidescan and snippet, assisting with determination of detected features
- Advanced signal processing and bottom detect routines deliver second-to-none data quality
- Service Level Agreements (SLA)

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