



SeaBat 9001

PRODUCT SPECIFICATION

MULTIBEAM ECHO SOUNDER



- ! **Complies to IHO Accuracy**
- ! **60 Soundings in a Swath**
- ! **Up to 15 Swaths per Second**
- ! **Lightweight and Portable**
- ! **Side Scan Upgrade**
- ! **Real-time Quality Control**

The SeaBat 9001 Multibeam Echo Sounder measures 60 soundings in a single swath from a lightweight and portable transducer head. Sixty sonar beams within each swath (combined to form a 90° wide by 1.5° long geometrically correct cross section) provide simultaneous sonar coverage. While traveling at speeds of over 10 knots, the SeaBat is able to output up to 15 complete profiles per second and still maintain 100% coverage of the sea floor.

Because of its small size, the SeaBat 9001 can be installed and operated from an ROV, a small survey launch or a towed platform. With the ability to orient the transducer, 100% coverage of the sea floor can be achieved from two times to four times the measured water depth. Not only is the SeaBat currently utilized for general hydrographic applications, but also for surveying pipeline routes, breakwaters, harbor facilities and dredging operations as well.

Optional upgrades to the SeaBat 9001 include simultaneous output of side scan imagery, dual transducer heads for wider coverage, and forward-looking imaging capability.



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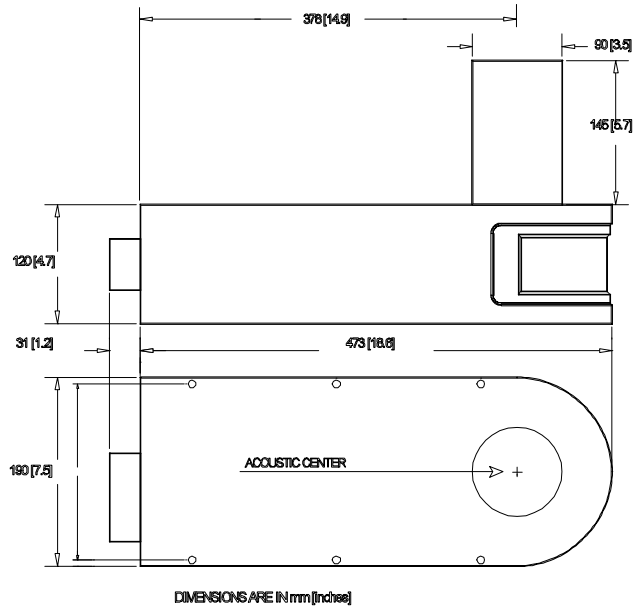
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SeaBat 9001 SYSTEM SPECIFICATIONS

- Operating Frequency:** 455kHz
- Range Settings:** 2.5, 5, 10, 25, 50, 100 and 200 meters
- Range Resolution:** 5cm
- Range Accuracy:** IHO Compliant (4-9 cm)
- Number of Beams:** 60
- Beam Separation:** 1.5°
- Horizontal Beamwidth:** Receive: 1.5° each beam
Transmit: 100°
- Vertical Beamwidth:** Receive: 15°
Transmit: 1.5°
- Source Level:** 210 dB re 1 μ Pa @ 1m (nominal)
- Sample Rate:** 14.2 kHz
- Pulse Width:** 70 μ sec
- Ping Rate:** 2.5, 5, 10 meter range, 15 times/sec
- (Full 90° Sector):** 25 meter range, 13.5 times/sec
50 meter range, 7 times/sec
100 meter range, 3.5 times/sec
200 meter range, 1.7 times/sec



SONAR HEAD SPECIFICATIONS

- Power Requirements:** 24VDC, 2 Amps max. (Power is available from the surface unit.)
- Power Consumption:** 20W
- Uplink Data:** Pseudo-video (requires a 1.5MHz black and white video channel)
- Down Link Control:** RS-232 or RS-422, 300 Baud
- Operating Depth:** 350 meters, 600 meter depth available
- Dimensions:** 350 m: 265 x 190 x 473 mm (HWD)
(10.4 x 7.5 x 18.6 in.)
600 m: 315 x 190 x 473 mm (HWD)
(12.4 x 7.5 x 18.6 in.)
- Temperatures:** Operating: -5° to +30°C
Storage: -30° to +55°C
- Weight:** 350 m: Dry: 18.5 kg (41 lbs)
Wet: 6kg (13 lbs)
600 m: Dry: 27kg (60 lbs)
Wet: 9.5kg (19 lbs)

PROCESSOR SPECIFICATIONS

- Power Requirements:** 115/230VAC, 50/60Hz, 200W max.
- Data Input (Uplink):** Pseudo-video, 1.5MHz black and white video channel
- Data Output (Down Link):** RS-232, 300 Baud
- Data Input (Annotation):** RS-232, 1200 baud
- Data Input (Control):** RS-232, 1200 baud
- Data Output (Depth):** RS-232, 300 to 38400 baud
- Data Output (Intensity):** RS-232, 300 to 38400 baud
- Display Video Output:** Analog RGB, composite and S-VHS (S-Video); PAL or NTSC format
- Graphics Colors:** 256 colors (8-bit)
- Display Mode:** Sector format
- Display Arc:** 90°
- Input Device:** Trackball, Mouse
- Dimensions:** 178 x 483 x 406mm (HWD)
(7 x 19 x 16 in.)
- Mounting:** 19in. rack mountable
- Temperature:** Operating: 0° to +40°C
Storage: -30° to +55°C

DISPLAY SPECIFICATIONS

- Screen Size:** 330mm (13in.) diagonal
- Input:** Analog RGB, S-Video or composite
- Display:** High Resolution Color Monitor
- Power Consumption:** 62 W

OPTIONS

- Option 002:** Joystick input device (splash-resistant)
- Option 003:** Synchronization pulse output for active or passive calibration of sonar; passive sonar mode with user-selectable sensitivity
- Option 007:** Cable Compensation System
- Option 010:** Upgrade to 9001S
- Option 011:** Upgrade to 9002
- Option 012:** Sync-on-Green Output
- Option 019:** Analog Side Scan Imagery



Due to our policy of continuous product improvement, RESON reserves the right to change specifications without notice. 990412-version 2.0