

Specifications for BSS+5 Sediment Mapping System



SDI's BSS+ is ideal for surveying in shallow water, harbors, and waterways and pre- and post-dredge applications. It is a simple-to-operate, complete hydrographic survey and sub-bottom profiling system contained in a single portable splash proof unit. The system includes an Intelligent Depth Sounder (IDS), a true digital sub-bottom profiling capability, a differential GPS receiver (DGPS), a reference receiver, a navigation computer, a TFT color display, survey software and rapid data playback and review software. IDS is a full survey grade depth sounder that digitizes the echo to 16-bit resolution and stores the full digital record on hard disk. IDS provides playback with high resolution and detail.

65,536 shades of gray are digitized versus a maximum of 16 shades typical of paper records. The

DEPTHIC and SDIDEPTH software provides convenient replay and reprocessing of hydrographic data without hand digitizing or scaling of position. Navigation data and all other collection parameters are saved with all depth soundings. Positions, events and operator annotations are exchanged between HYPACK and SDIDEPTH programs. DEPTHIC and SDIDEPTH software provide convenient replay and reprocessing of hydrographic data without hand digitizing or scaling of position. Navigation data and all other collection parameters are saved with all depth soundings. Post-processing with DEPTHIC saves XYZ data in ASCII text format compatible with HYPACK, SURFER, AutoCAD, ArcView and GIS programs for contouring and TIN mapping.

The portable waterproof case and operation from a 12-volt car battery makes the BSS+ ideal for small boat operations. With the BSS+, a battery and a boat, you are ready to begin surveying. All survey and post-processing software is included. The 200 kHz Intelligent Depth Sounder provides the latest technology in high resolution and accuracy with the added convenience of "paperless" electronic recording. The sub-bottom profiling capability adds up to 4 additional operating frequencies to the 200 kHz IDS depth sounder.

DEPTH SOUNDER SPECIFICATIONS

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|--------------------------|---|
| Software | SDIDEPTH data acquisition and in-the-field data analysis and replay |
| # of Ranges | 6 |
| Ranges | 0 to 7.5 m through 0 to 300 m (0 to 30 foot through 0 to 1000 foot) |
| Minimum Depth | 1.2 feet (0.3 meter) standard, 8" (0.2 m) optional dual transducer |
| Transmit Power range | 2 watts to 1,200 watts settable (auto set for depth range) |
| Depth Sounder | 200 kHz (operator settable +/- 10%) |
| Beam Pattern | 9-degree standard, 3-degree optional (200 kHz) |
| Resolution | 0.75 cm irrespective of range |
| Sampling rate | 100 kHz |
| Data Recording | 100% of digitized echo stored i.e. "Paperless" recording |
| Depth Units | Meters, Feet, Fathoms |
| Speed of Sound | Fresh, Salt, or settable 1400 TO 1600 m/s |
| Operator Settable Inputs | Tide, Draft, blanking, keel alarm, NMEA standard DGPS data format |
| Zoom | Operator continuously selectable |
| Tracking | Automatic, settable and fixed with re-digitizing in playback |
| Tracking gates | 0.1, 0.2, 0.5, 1, 2, 5, 10 (m, ft., ftm.) |
| Data Format | ASCI and binary files compatible with HYPACK, SURFER, AutoCAD and GIS |
| Navigational data | Stored with every depth sounding |

MULTI-FREQUENCY SUB-BOTTOM PROFILER SPECIFICATIONS

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| Acquisition Software | SDDEPTH data acquisition and in-the-field data analysis and replay |
| Processing Software | DEPTHPIC allows processing of multiple sub-bottom layers into GIS, HYPACK, AutoCAD and Surfer compatible ASCII text formats |
| # frequencies | 4 plus depth sounder |
| Available Frequencies | 3.5kHz, 4kHz, 12 kHz, 24 kHz, 48 kHz, 50 kHz, 100 kHz, 200 kHz |
| # of Ranges | 6 |
| Ranges | 0 to 7.5 m through 0 to 300 m (0 to 30 foot through 0 to 1000 foot) |
| Minimum Depth | 1.2 feet (0.3 meter) |
| Transmit Power range | 6 watts to 1,500 watts settable (auto set for depth range) |
| Receiver Gain settings | 1, 2, 4, 8, 16, 32, 64, 128x |
| Digitizer ranges (volts) | +/- 1.25, 2.5, 5.0, 10.0 |
| Beam Pattern 48 kHz | 20 (degrees) |
| Beam Pattern 24 kHz | 30 (degrees) |
| Beam pattern 12 kHz | 60 (degrees) |
| Beam Pattern 4 kHz | 90 (degrees) |
| Resolution | 0.75 cm (100 kHz digitization rate) or 1 wavelength (before De-convolution) |
| transmit Wavelength | 1 through 128 (cycles) |
| Depth Units | Meters, Feet, Fathoms |
| Speed of Sound | Fresh, Salt, or settable 1400 TO 1600 m/s |
| Operator Settable Inputs | Tide, Draft, heave, blanking, keel alarm, NMEA standard DGPS data format |
| Zoom | Operator continuously selectable |
| Primary Depth Digitizing Frequency | Any of Depth or Sub-bottom Frequencies |
| Tracking | Automatic, settable and fixed with re-digitizing in playback |
| Tracking gates | 0.1, 0.2, 0.5, 1, 2, 5, 10 (m, ft., ftm.) |
| Data Format | ASCII or binary compatible with HYPACK, SURFER, AUTOCAD and GIS |

NAVIGATION DGPS SPECIFICATIONS

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| Receiver | Internal 12 channel L1 with SBAS/WAAS1 Standard, optional L1/L2 24 Channel |
| GPS Antenna | Sub-meter DGPS L1 standard (optional L1/L2 for 1-2 cm kinematic) |
| Beacon Antenna | Active patch AM LF |
| Accuracy | sub-meter standard (Upgradeable to 1-2 cm Kinematic) |
| Beacon receiver | integral 2 channel auto tracking (USCG compatible) |
| Alternate Diff. Inputs | Optional Omnistar, Omnistar HD, WAAS2 or radio for RDBS Base Station operation |

COMPUTER SPECIFICATIONS

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| Operating System | Windows XP running at 1.2 GHz or higher |
| Ports | 2 serial, 1 parallel, 2-USB2 (optional Gbyte LAN, IEEE1394 Firewire) |
| Memory | 512MB |
| Keyboard/Mouse | Waterproof backlit tactile keyboard, waterproof joystick/ 4 button mouse |
| Data Storage | 60GB Hi-G shock standard (120GB to 250 GB dual drive optional) |
| Data Transfer | USB flash drive or USB external CDRW (both included with system) |
| Environmental | Watertight, marine aluminum and plastic with stainless steel hardware |
| Display | 1024 x 768 Daylight visible, NVIS compatible, waterproof, armored window |
| Future upgrades | Replaceable computer board, memory and Hard drive |
| Case Dimensions | 53 L 43 W 22 H cm (21"L 17" W 9" H) |
| Case Weight | 30 lbs. |



Made in



Listed



Specialty Devices. Inc.