

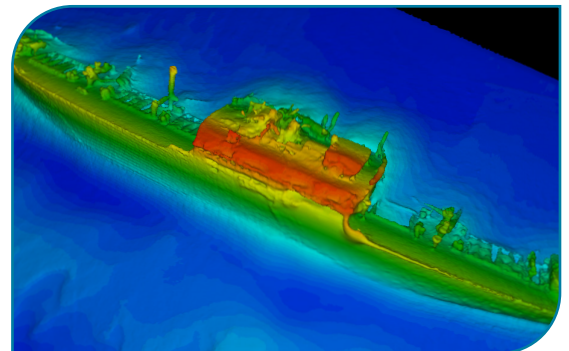


HYSWEEP®

SOFTWARE FOR CALIBRATING, COLLECTING, AND PROCESSING MULTIBEAM BATHYMETRY, BACKSCATTER, TOPOGRAPHIC LASER/LIDAR, AND WATER COLUMN DATA

FEATURES

- Interfaces with nearly all multibeam sonars and several popular compact laser and LiDAR systems on the market today.
- Simplistic, easily repetitive tools for system calibration (Patch Test).
- Backscatter, intensity, and water column data from multibeam sonars and topographic laser and LiDAR systems can be acquired simultaneously with sounding data.
- Real-time 3D point cloud display during data collection allowing for verification of data accuracy.
- Efficient, user-interpretive processing of large data sets within our 64-bit HYSWEEP® Editor.
- Tools for data analysis include TPU, CUBE, Wobble Analysis, and Beam Angle (Performance) Tests.
- Export data to ASCII XYZ, LAS, matrix MTX' files, and multiple custom formats. Data can be gridded to user-defined spacings, user-defined horizontal and vertical sounding positions including actual XY and cell center, and have sounding reductions applied via median, average, mode, standard deviation, and many more.



Included in HYSWEEP®

- The **HYSWEEP® Patch Test** is a simple, repetitive system calibration tool, that provides the user with a statistical analysis and graph of the computed values along with the ability to override and recalculate finer adjustment values, as needed, for the angular mounting offsets.
- **HYSWEEP® SURVEY** provides excellent real-time coverage displays, TPU, and other quality control tools for real-time analysis of the data, allowing you to quickly and efficiently review what you've acquired and verify survey completion before returning to the office for data processing.
- **HYPACK Real Time Cloud (RTC)** runs in conjunction with HYSWEEP® SURVEY and displays both multibeam and topographic laser data in a corrected, geo-referenced, and color-coded point cloud. The RTC window increases visual feature detection and improved data quality control.
- The **HYSWEEP® 64-bit Editor** allows you to review your raw data components, incorporate sound velocity and water level corrections (including manual, RTK, and post-processed RTK tides and VDatum), and apply user-defined and statistical filters to quickly assist the cleaning of your data and output a variety of data subsets.
- The **HYSWEEP® Water Column Logger** allows users to ensure the full detection of fine targets above the seabed, such as wrecks, masts, and cables.
- **GEOCODER™** is included in HYSWEEP® (licensed from UNH CCOM), allowing you to generate mosaics and perform bottom classification using average backscatter and snippet data.

HYSWEEP® interfaces with the following systems, with additional drivers added each year as new technology emerges:

Multibeam

<ul style="list-style-type: none"> • 2G Robotics – ULS-500 • Atlas – Bomasweep, Fansweep, Hydrosweep • Benthos – 162X, C3D • BlueView – 1350, 2250, 5000 • EdgeTech – 2205, 4600, 6205/S2 • FURUNO – HS series • GeoAcoustics – GeoSwath • Hydro-Tech – MS400U • IBeam • Imagenex - Delta T, DT100,101,102 SIR (and Dual Heads) • ITER Systems (Bathyswath and SEA SWATHplus) • Klein – HydroChart 3500/5000, UUV-3500 • Kongsberg - MS1000 • Kongsberg - EM 1002/2000/2040/Dual • Kongsberg - EM 3000/3002/3002D/302 • Kongsberg - EM 710, ME70 	<ul style="list-style-type: none"> • Kongsberg - Mesotech M3 • Kongsberg - KMALL • Norbit – WBMS, iWBMS, WingHead, and Dual Heads • Odom – Echoscan II, ES3 (Dual), MB1 (Dual), MB2 (Dual), Miniscan • Pico-Tech – PicoMBES 120/130 • PingDSP - 3DSS-DX, -iDX • R2Sonic - Sonic 20XX, Dual Head 20XX, and VOX Series • RESON - 71xx (Dual), 81xx (Dual), 90xx, T20 (Dual), T50 (Dual), T51 (Dual) • Ross Smart Sweep • Seabeam 2100, 3000 Series, SB1000 Series • Tritech Gemini • Tritech SeaKing • Velodyne HDL, VLP • WASSP – S3/F3 series
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LiDAR

<ul style="list-style-type: none"> • Carlson – Merlin • Leica – P15/16/20/30/40/50 • MDL – Dynascan • Optech – ILRIS, Polaris • Ouster - OS-1 • Riegl – LMS, V, and VUX Series • Renishaw – SLM • Velodyne – VLP-16 series/VLP-32 series/HDL-32E series

Inertial and Motion Sensors

<ul style="list-style-type: none"> • Advanced Navigation INS • Applanix POS MV/LV – All Models • CodaOctopus - F170/175/180/185/190/290 • IXSEA/IXBLUE – HYDRINS/OCTANS/PHINS • Kongsberg/SeaTex – SeaPath, MRU5/6 • Novatel – SPAN • SBG – Ellipse/Ekinox/Apogee/NavSight • TSS – 335B/DMS

Sound Velocity Profilers

<ul style="list-style-type: none"> • AML – 3/6, BaseX2 • SonTek Castaway CTD • Valeport SWIFT SVP
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HYPACK, a Xylem brand
 56 Bradley Street
 Middletown, CT 06457, USA
 +1.860.635.1500
 sales@hypack.com
 hypack.com

