M2OCEAN
THINKING OUTSIDE OF THE

HYDROBLOCK™

The **HydroBlock™** is a **rugged** and **easy-to-use** hydrographic system suitable for both **traditional bathymetric surveying** as well as **Trusted Crowd-Sourced Bathymetry (TCSB)** data collection.

Among its distinguishing features are the high-accuracy attitude sensor for heave/pitch/roll corrections and GNSS receiver built into the unit ensuring the collected data **meets the IHO S-44 accuracy standards**.

Another great feature is in the **rugged design** of the unit itself, allowing the versatility of a permanent installation **inside the wheelhouse** of the vessel, or on an **adjustable pole-mount** on the vessel's gunwale for **quick installation** and removal as needed.

APPLICATIONS

TRUSTED CROWD-SOURCED BATHYMETRY SURVEYS

Vessels already equipped with echo sounders are ideal for collecting **TCSB** data in a **nonintrusive way**. The mariner can **continue engaging** in his **routine maritime operations** without changing course while collecting TCSB and contributing to the global mapping of the oceans with the HydroBlock™.

TRADITIONAL AND CAPACITY BUILDING SURVEYS

The HydroBlock™ is also perfectly suited for traditional single beam surveys and capacity building surveys. The **Data Acquisition Package** is readily portable in its own rugged transit case. It **installs quickly** and easily on most **vessels of opportunity**, allowing for rapid mobilization in any condition and location.

The ease of deployment and operation of the HydroBlock™ also make it an ideal teaching tool to **introduce hydrographic surveying to non-experts.** With minimal training, new operators can be collecting quality data within a day!

DEPLOYMENTS METHODS

VESSELS ALREADY EQUIPPED WITH SINGLE BEAM ECHO SOUNDER

1. Secure the HydroBlock™ in the wheelhouse or elsewhere on the vessel where it will have access to a 12V power supply and one of the outputs of the echo sounder.

2. Mount the GNSS antenna on top of the cabin somewhere clear of interference.

3. Measure your offsets and away you go!

VESSELS WITHOUT SINGLE BEAM ECHO SOUNDER

1. An optional Data Acquisition Package (DAP) consisting of an echo sounder and an adaptable pole-mount with brackets for all three components (HydroBlock™, GNSS antenna, echo sounder) is available.

2. The offsets are already measured with this package.

3. Connect to a 12V power supply and away you go!

SPECIFICATIONS

DIMENSIONS (L x W x H)
12.5 x 10.1 x 6.0"

WEIGHT
2.7 kg (6 pounds)

ENVIRONMENTAL
Waterproof (IPX7), dustproof (IP6X)

POWER
External 12V power supply necessary for HydroBlock™ systems

CONNECTION
Serial/USB for data transfer
Bluetooth for real-time monitoring

POSITIONING
GNSS receiver type:
Multi-Frequency GPS, GLONASS, BeiDou, Galileo and QZSS
ACCURACY (2DRMS (95%)): Autonomous, no SA[1]: 2.5 m
SBAS[1]: 0.6 m
PPK[1]: 15 mm + 2 ppm
Update rate: 1 Hz
1: Depends on multipath environment, number of satellites in view, satellite geometry, and ionospheric activity.

ATTITUDE
ACCURACY[2]:
Heading: Tilt < ± 30° : 3.0°
Pitch, Roll: Tilt < ± 30° : 0.4°
Update rate: 10 Hz
2: The accuracy will be reduced if the HydroBlock™ system is located close to nasty magnetic environments. For the best performance, located the HydroBlock™ away from hard and soft-irons to preserve accuracy.

ECHO SOUNDER

ECHO SOUNDER FROM DAP
Frequency: 675k Hz
Beam width: 10°
Range[3]: 0.50 m – 50.0 m
Range resolution: 20 mm
Update rate: 1 Hz
3 : Range from transducer head to maximum detectable depth

EXTERNAL ECHO SOUNDER
Compatible input feed:
NMEA0183 strings (DBS, DBT) through RS-232

SOFTWARE
DepthStar™: Windows-based post-processing software
HydroBall® Monitor: Android-based application for monitoring and controlling the **HydroBlock™**

ACCESSORIES
Pole mount
A custom pole mount can be provided to install the different sensors on vessel

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