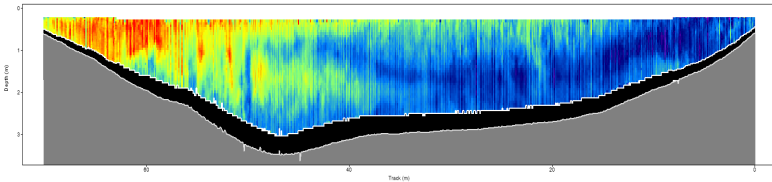


R2V2 Remote-Control Survey Boat



Overview: The R2V2 is a light-weight, robust, and highly maneuverable twin-engine remote-controlled boat designed for river discharge/velocity measurements, Hydrographic surveys, and surface water-quality sampling. The R2V2 has a top speed of 2.5 m/s and can operate for hours all the while streaming live data to an on shore laptop computer up to 1.5 Km away. The R2V2 is ultimately designed to provide a very stable and controlled measurement platform which is the primary key to successful measurements especially in shallow, low-velocity settings.



Discharge and 3-D Water Velocity data are collected using SonTek M9/S5 Acoustic Doppler Current Profiler (ADCP). You have the option of using power and telemetry supplied by a SonTek Power and Control Module (PCM) or simply adding an optional long-range radio telemetry package to transmit data to an on-shore laptop. GPS data is provided by the PCM or using your existing GNSS equipment.

Hydrographic Survey data is collected using 4-beam depths or vertical-beam depths from the S5/M9 using RiverSurveyor or HydroSurveyor acquisition software. You also have the option to collect bathymetry data from a single-beam echo-sounder (SBE) for high-precision surveys using data acquisition software such as HYPACK or QINSy along with an integrated GNSS.

Water-Quality data is collected using a YSI multi-parameter sonde in place of the M9 ADCP and logged internally for download following the survey.

Position (Latitude/Longitude) data is collected and synchronized to your sensor data using a variety of GNSS equipment options:

- ◇ SonTek DGPS/RTK solution. This option allows you to also use bottom-tracking data in place of missing or poor GPS data due to navigating under bridges or large tree canopies.
- ◇ User Supplied GNSS Equipment. This option allows you to mount your existing GNSS equipment to the R2V2 and connect to the SonTek M9 or a single-beam echo-sounder.

R2V2 Specifications:

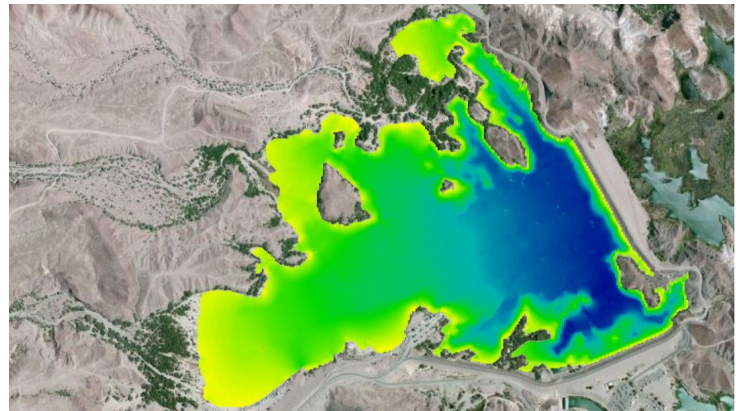
Hull length: 134 cm
Hull Width: 48 cm
Hull Depth: 28 cm
Weight: Hulls/Propulsion: 13 kg

Material: Fiberglass Reinforced Polymer
Motor: Dual Brushless 12-V DC Drives
Maximum Speed: 2.5 m/s
Avg. Run Time (30Ah, 12V): 2.5 Hrs.

Navigation Remote Control: 2.4Gz FHSS
Navigation Remote Range: 1.5 Km

Options:

- ◇ Long-Range Data Telemetry >2000 m
- ◇ Single-beam echo-sounder (100-m range)
- ◇ 30-Ah, 12-v gell-cell battery w/wiring harness
- ◇ Inflatable tubing barrier—provides additional stability and protects it from potential collisions
- ◇ Auto-Navigation (incl. GPS and Compass)
- ◇ Existing GNSS equipment and echo-sounders can also be integrated upon request.



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