

Remote Hydrographic Surveying System



Staff at Frontier Precision, USA, have been working hard to design and build a safe, affordable and reliable hydrographic surveying system that is simple to use, and easily deployed. The boat uses an RC system that is integrated with a SonarMite high-accuracy echo sounder and a Trimble GNSS receiver which communicate via long-range Bluetooth, with a Trimble TSC3 running Trimble Access. This system provides safe data capture in otherwise challenging hydrographic environments or areas that are too small for conventional boats.

In November 2013, one of the boats was used to perform a hydrographic survey of a utility crossing in a river. This solution worked best for this project because the user wanted something that they could put in their vehicle, go to the site and integrate with the equipment they already owned.

The system can be used with a GNSS base station or a VRS network to receive RTK corrections. Alternatively, it can also be used with a robotic total station for challenging areas under canopy and bridges. The boat is run with RC controls and the survey data is managed and collected with a Trimble TSC3 running Trimble Access. As the system is driven over the area of interest, the RTK component and the echo sounder automatically collect data using a specified point spacing and/or time between measurements. The advantage to having long-range communication is to be able to see the depths in real time, and to also have the ability to see that the required data has been collected. The data is all stored in the Trimble TSC3, and a depth or elevation profile can easily be exported to a CSV file from a custom export style sheet.

<https://www.hydro-international.com/content/news/remote-hydrographic-surveying-system>
