



HYPACK
a xylem brand

Sounding Better!

Working with Water Quality Data in HYPACK®

by Dave Maddock

One little-known feature of HYPACK® that has existed for quite some time is the ability to log and process time series data from water quality sensors, such as the EXO or 6600 sondes manufactured by YSI. This article will outline how you can deploy one of these sensors from a survey vessel, acquire the data, and process it in HYPACK®.



exo²

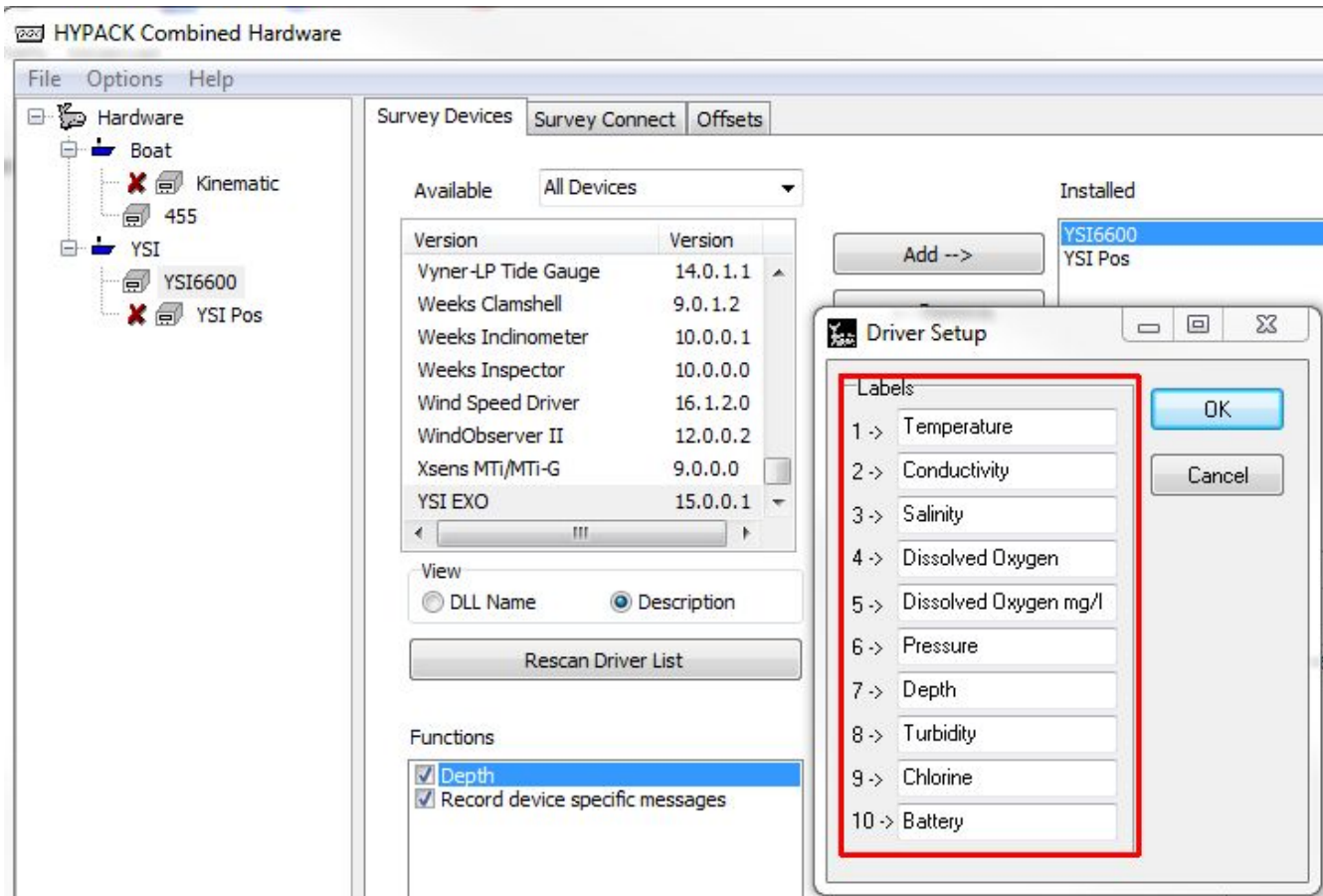
SETUP AND ACQUISITION

To acquire data from a sonde in HYSWEEP® SURVEY , add the appropriate driver to a boat in HYPACK® HARDWARE. The YSI sonde drivers are called ysi6600.dll and ysiexo.dll respectively. These devices communicate via a serial port, so set the COM port details on the “Survey Connect” tab as usual.

These sondes have a modular design where a subset of sensors can be fitted to the device depending on your needs. To tell HYPACK® what sensors are connected to your sonde, click the “Setup” button to open the device-specific setup form, and enter a label for each sensor. This information will be recorded and displayed to you during data processing.



FIGURE 1. Driver Setup in HARDWARE



PROCESSING

Once you have collected the data, you can use the 32-bit SINGLE BEAM EDITOR to process it. The editor allows you to work with the time series data in the same way that you do with depth data from an echosounder. As you load up your files, choose the sonde device on the Read Parameters form and the Specialized Marine Instrument (SMI) dialog will display.

You can select up to two time series per session. (They will be called “Depth 1” and “Depth 2” in the editor regardless of the SMI label.) The full suite of editing tools are available—profile display, line & block editing, spreadsheet view, filtering, etc.

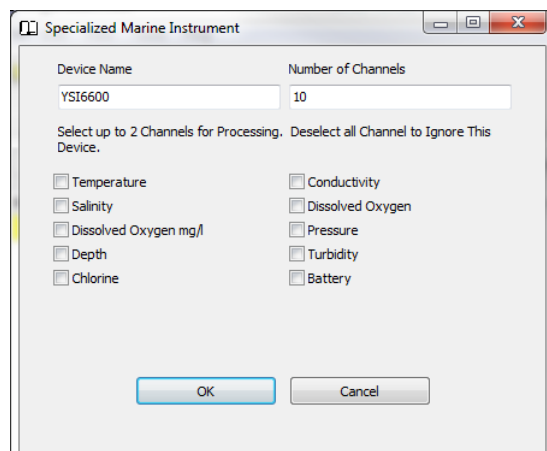
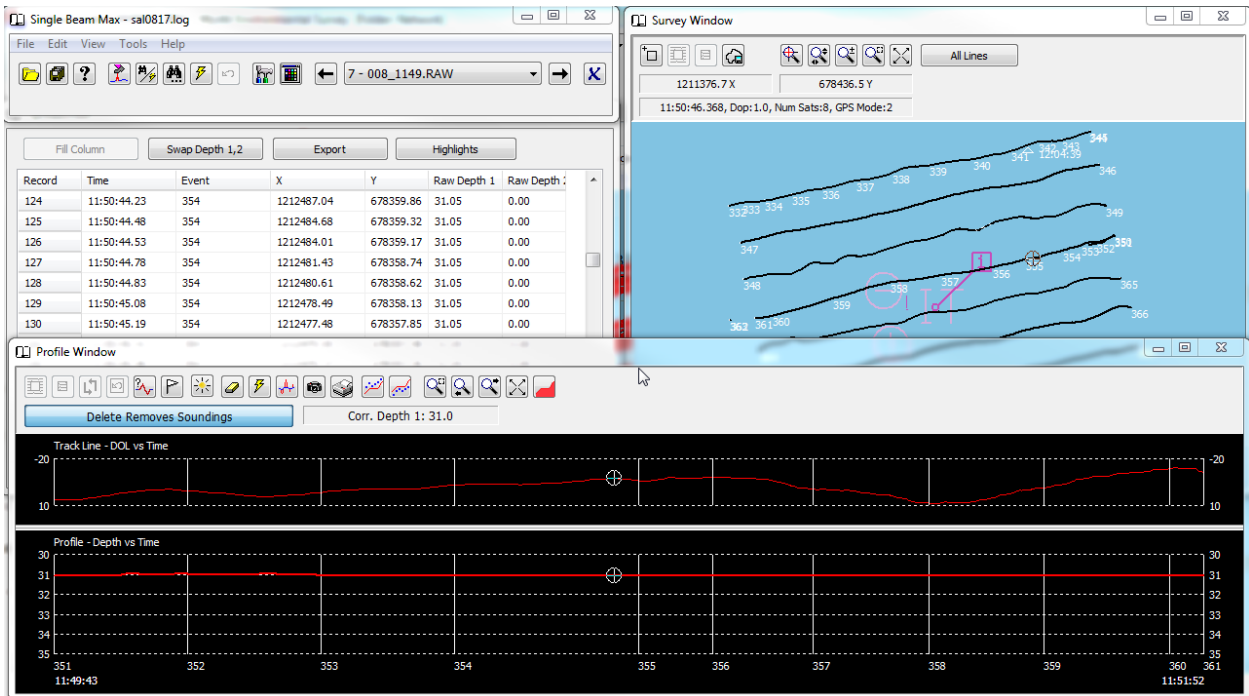


FIGURE 2. SINGLE BEAM EDITOR Displays



Once your edited data is saved out to EDT or XYZ format, it can be modeled and displayed with the suite of HYPACK® final product tools. Here is a survey of the Mystic Harbor in Mystic, CT charting the salinity in the harbor as an overlay and as a TIN model.

FIGURE 3. Salinity in Mystic Harbor—Overlay (left) and TIN Model (right)

