Data Acquisition System with Real Time Display for Sea Sciences Acrobat

The Sea Sciences Acrobat is a towed oceanographic research platform that can be outfitted with a wide variety of scientific instruments. This is a brief description of the data acquisition system and real time display that can be custom built for your research needs.

Record all data with one program

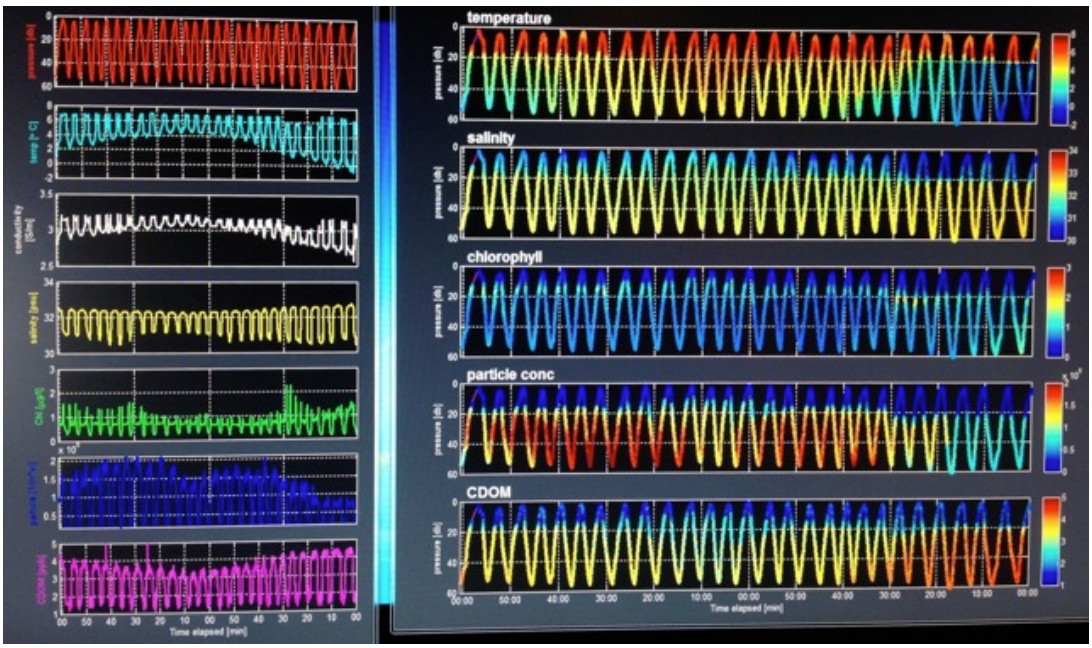
For the scientific payload of your choice, the data acquisition system acquires and archives the raw data from multiple instruments and the shipboard GPS using commercial DASYLab Software. The software is customized to read the raw data streams and apply a timestamp if necessary. For example, a current system includes the integration a 16 Hz SeaBird 49 FastCAT CTD and 10 Hz WET Labs EcoPuck Fluorometer.

View data in real time

The raw data will be displayed in real time on the laptop screen, updating every 30 seconds. Shown below are temporal traces and depth-time profiles of CTD and fluorometer data, but the display can be modified for your particular data stream. In addition, the GPS shiptrack and subsampled GEBCO Global bathymetry is plotted in a separate window (not shown).

Requirements

The data acquisition and real time display programs must be installed on Windows laptop, with DASYLabs and Matlab installed.



Real time display of SeaBird CTD and ECOPuck Fluorometer data. Raw traces are on the left, depth-time profiles on right.