



YSI i3XO Data Processing in HYPACK

By John Lindberg

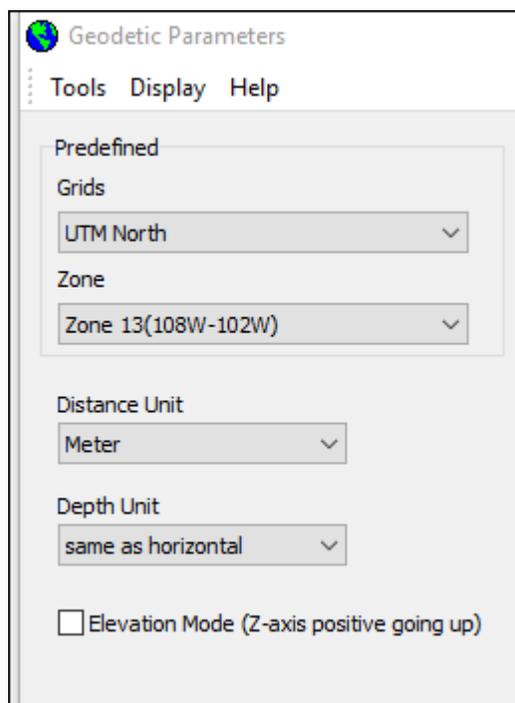
The HYPACK® MagEdit (MAGNETOMETER EDITOR) program has evolved recently to handle multiple channels of data. In addition to magnetometer data, MagEdit has also become the standard for processing data from environmental sensors. Whereas the single beam editors only had the ability to process only 2 channels at once, MagEdit was configured to be able to handle up to 32 channels of data collected in HYPACK® SURVEY!

We have also given the MAGNETOMETER EDITOR the ability to process data collected directly from the YSI i3XO EcoMapper. The i3XO is an AUV that collects water quality data from a multitude of sensors. It logs internally to its own format.



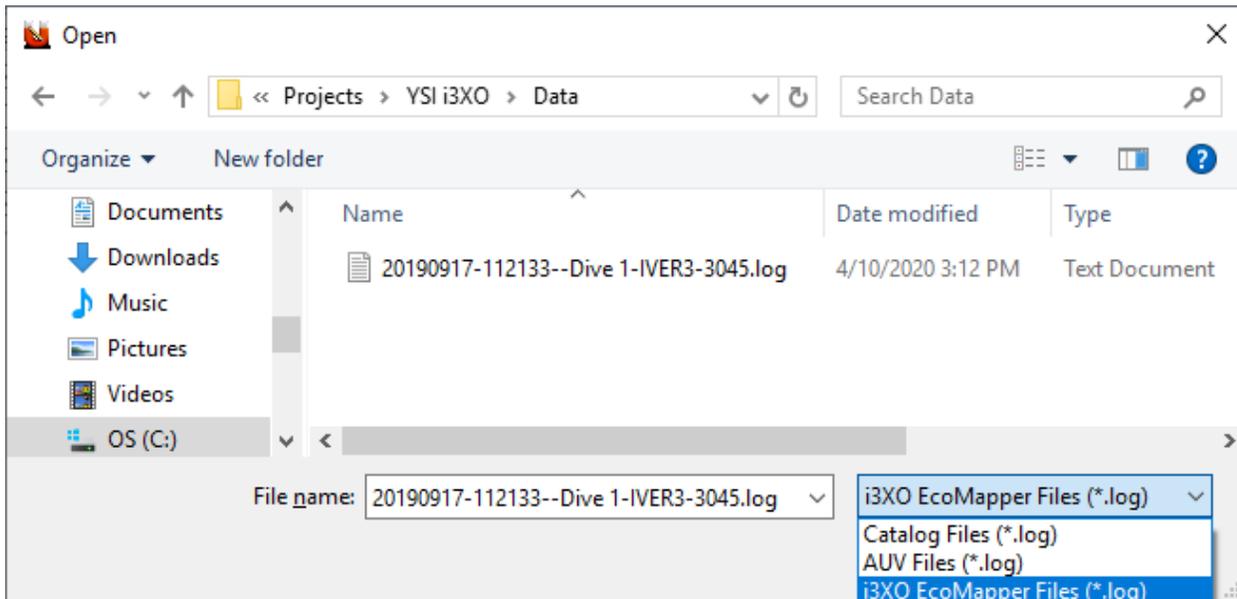
Before starting your processing you want to be sure your geodesy is set correctly. Since the i3XO logs latitude and longitude, and HYPACK® typically works in local XY, you want to set something for your work area. In this example, I set up UTM North Zone 13 using meters as the distance unit.

FIGURE 1. Sample Geodetic Parameters



To load the EcoMapper data into MagEdit, you need to select the “i3XO EcoMapper Files (*.LOG)” option in the file selection dialog. Whereas a *.LOG file in HYPACK® is just a listing of data files, the i3XO *.LOG file is the actual data. So choose correctly!

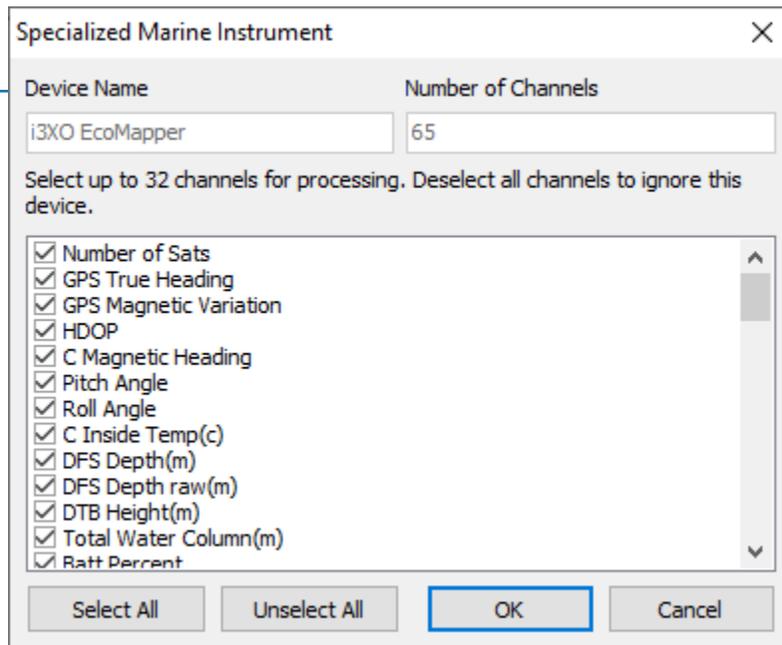
FIGURE 2. Loading an i3XO Data to the 64-bit HYSWEEP® EDITOR



Once you select the i3XO LOG file, a dialog box titled “Specialized Marine Instrument” will pop up.

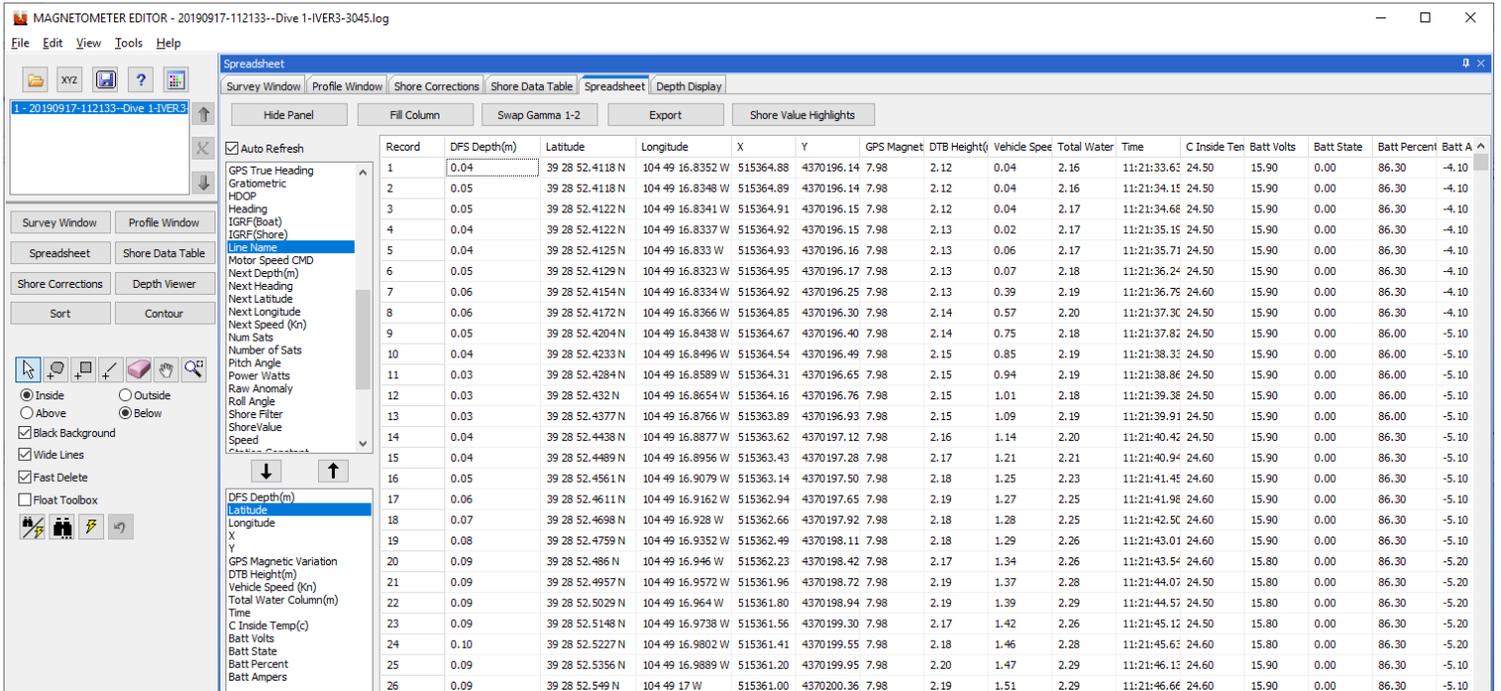
FIGURE 3. Choosing your Data Channels from the i2XO LOG

As it states, you can select up to 32 channels to process at once, so check the required channels and click [OK]. The Read Parameters dialog will pop up next, but there are no options necessary for the i3XO so just click [OK] and the data will load into MagEdit.



The spreadsheet can display any of the data collected. You can pick and choose the columns you wish to view. You can also export the selected columns to a text file.

FIGURE 4. Sample Spreadsheet



If you wish, you can also select and view different sensor data in the Profile Window. You can edit out spikes, noise, etc.

FIGURE 5. Sample Profile Window



You also have the Survey window, where you can display the vessel tracks, and also edit out any bad positions.

FIGURE 6. Sample Survey Window Display

