# WORKING WITH IGOR

What is IGOR Pro?

IGOR Pro is a commercially available graphing, analysis, and automation software product developed by WaveMetrics. IGOR Pro allows you to manipulate, process, and plot your tag data.

There are two versions of IGOR Pro: a free version and a paid premium version. The free version of IGOR Pro only allows you to view the plots on your screen while the paid version allows you to download the plots for inclusion in presentations or to write your own data processing scripts.

Wildlife Computers chose IGOR Pro because of its active user community and commercial support, as well as the built-in and custom GUI and rapid data visualization and inspection.
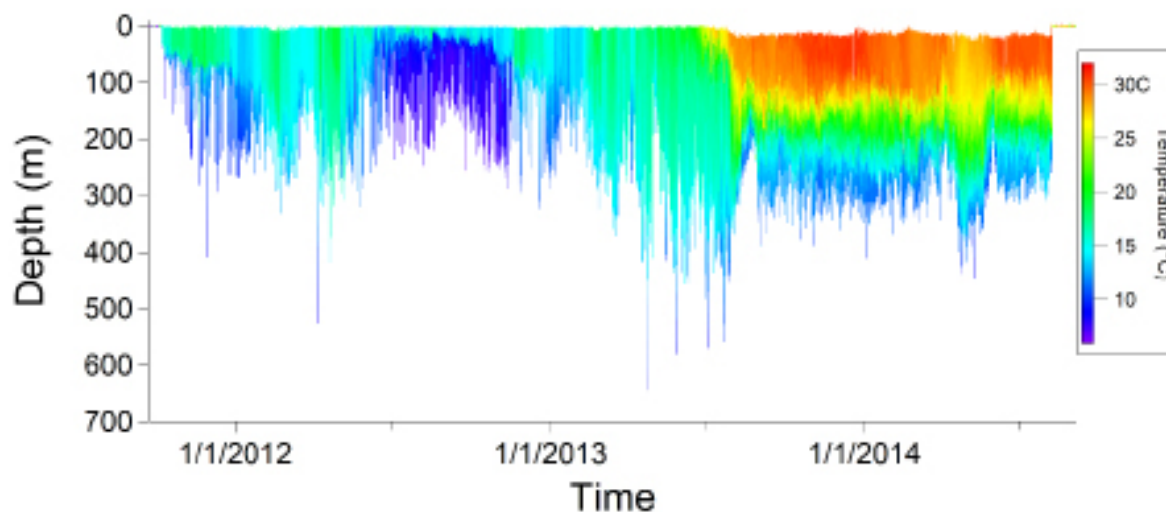
Using IGOR Pro

The Wildlife Computers Data Portal and Wildlife Computers Data Analysis Program (DAP) will output an IGOR experiment file (.pxp) for use in IGOR Pro. You can work with your data using the vast array of built-in IGOR features, or you can use the Wildlife Computers custom data visualization interface.

By installing IGOR Pro first and then installing DAP, DAP's custom IGOR plotting scripts become available automatically. Just double-click on an exported IGOR file. It is automatically opened, loaded, and displayed in the IGOR Plot Selector.

Analyzing Your Data

For detailed instructions, users should consult the IGOR Pro User Guide.

Once you export the decoded data in DAP, you will see a pop-up window asking you to view the data in IGOR. Or, you can open the .pxp file directly.

In the panel, use the drop-down menu to Select Data Set. Choose the data you want to plot. You can see summary information like the length of deployment, number of transmission days, pop-off diagnostics, etc.

IGOR supports many plot types:

- Deployment Summary – Data coverage, depth data, and light data.
- Histograms & PDT – Summary period data for these products.
- TimeLines – Data products viewed as a time series.
- DateLines – Data products viewed as daily summaries.
- "XY" Sensor Plot – Shows relationship between data.
- Mixed Layer Message Data – Summary period data for each parameter.
- Time Series Message Data – Stacked view as a time series.
- Message Reception TimeLine – Trouble shooting and diagnostics.
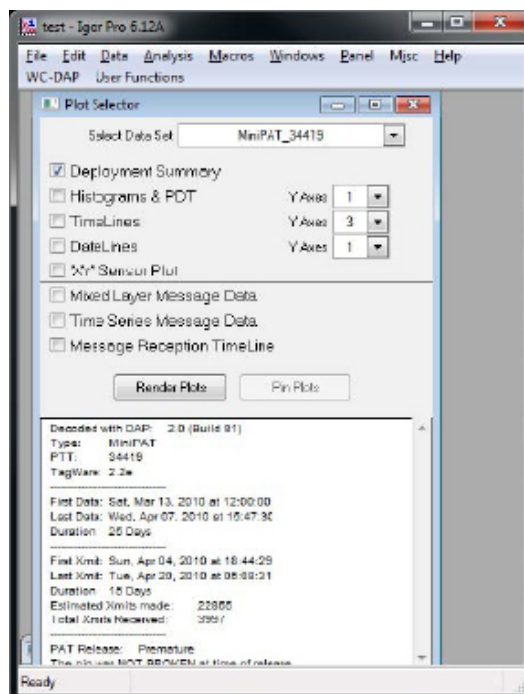
If your data set contains the required data to generate a specific plot, the corresponding check box will be enabled. From here, you can choose the plots you want to generate. Once you select the plots and the number of Y axes, click the Render Plots button. Not only will this render the plots but this action will enable the Pin Plots button. Click Pin Plots if you want to preserve the currently rendered plots. Otherwise, if you choose a different tag and click the Render Plots button, the plot window will be reused to show the newly selected tag's data.

Now you can modify your key plot preferences by choosing the Display Preferences Panel.

- Interpolate PDT Data: improves the appearance of plots containing PDT data. You can choose to have IGOR interpolate the temperature colors between reported depths. The interpolation is linear.

- Set Deepest Bin Limit to 1000 Meters: tells IGOR where to cut off the bottom of the graph. Checking this box sets the deepest depth in the histogram plot to 1000 meters unless some deeper data is reported.

- Check Setup File for Histogram Bin Limits: IGOR needs this data to properly display histogram data. Use this setting to suppress the bin limit prompt. If no valid bin limits are provided, IGOR will plot the data against the bin number.

- Show Message Count in Deployment Summary: this plot has a number of axes that show whether or not a data type exists in the overall data set for a particular period of time. This information is useful when you trying to manage your Argos transmission count budget. The number of times a piece of data was received will be encoded as the height of the blue tick.

- Plot Window and Axis Color: use this to set the plot's background color and axis color. These setting do not apply to the diagnostic plots (Mixed Layer, Time Series, and Message Reception).

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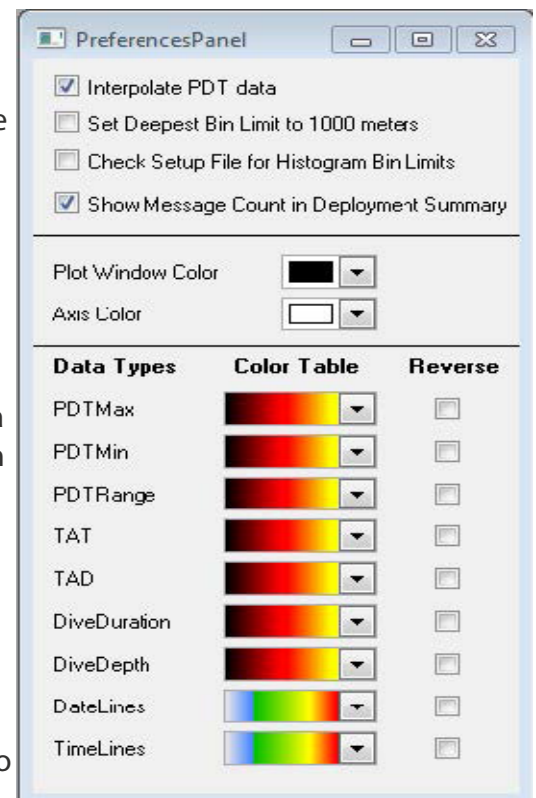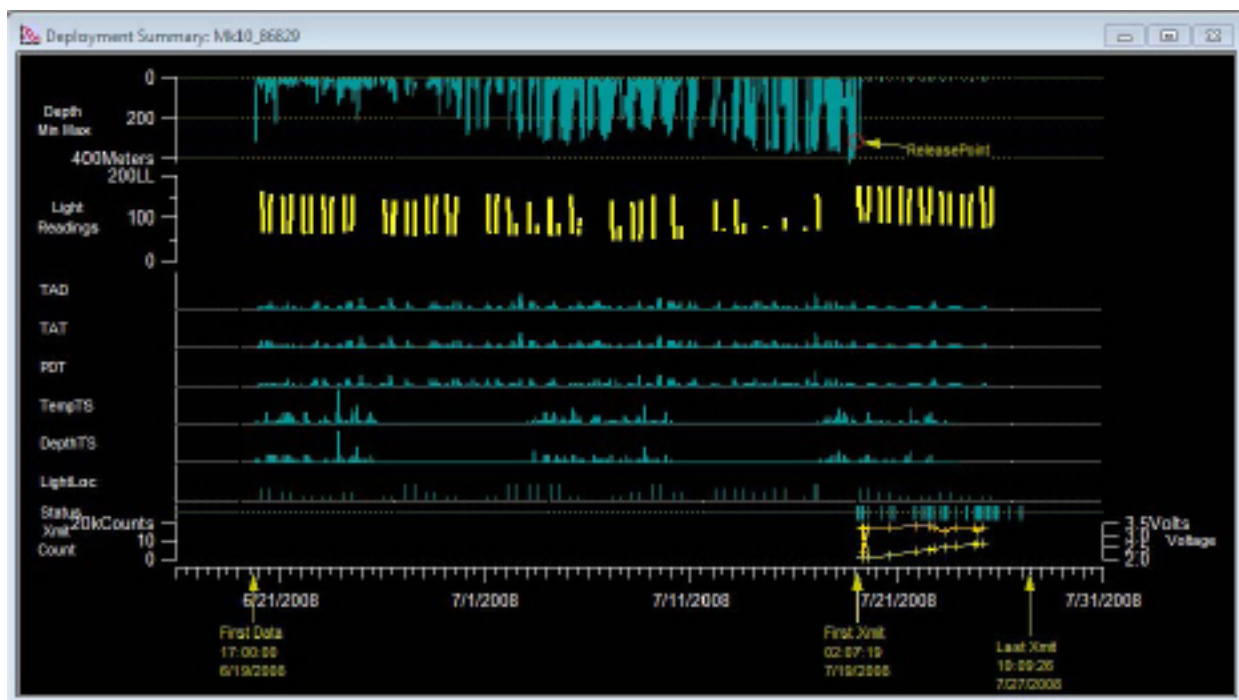
SYSTEM REQUIREMENTS

Windows Operating System	Version 8 and above
DAP	https://wildlifecomputers.com/support/downloads/
IGOR Pro 6.3	https://wildlifecomputers.com/support/downloads/

To Learn More Call: **+1 (425) 881-3048** or Email: **tags@wildlifecomputers.com**