

Chapter
II-10

Dialog Features

Overview 162
Operation Dialogs 162
Dialog Wave Browser 162
Operation Result Chooser 163
Operation Result Displayer 164

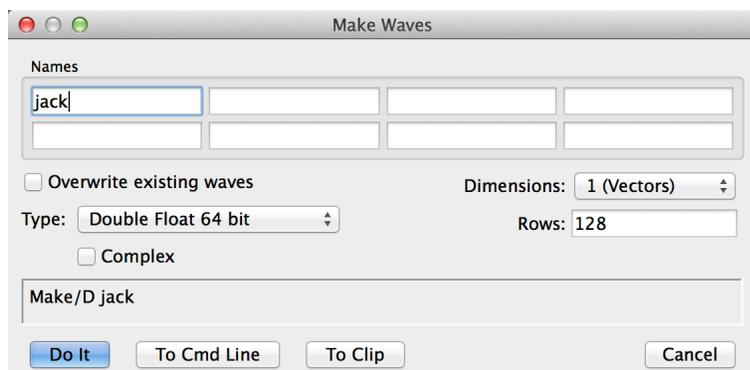
Overview

Most Igor Pro dialogs are designed with common features. This chapter describes some of those common features.

Operation Dialogs

Menus and dialogs provide easy access to many of Igor Pro's operations.

When you choose a menu item, like Data-Make waves, Igor presents a dialog:



As you click and type in the items in the dialog, Igor generates an appropriate command. The command being generated is displayed in the command box near the bottom of the dialog.

As you become more proficient, you will find that some commands are easier to invoke from a dialog and others are easier to enter directly in the command line. There are some menus and dialogs that bypass the command line, usually because they perform functions that have no command line equivalents.

Dialog Wave Browser

In dialogs in which a wave must be selected, Igor presents a list of suitable waves in a dialog wave browser. The browser also lets you navigate through the data folder hierarchy.

Double-click a data folder icon to make that data folder the top level for the hierarchical display. To return to levels closer to the root, use the menu at the top of the browser.

In dialogs that support selection of multiple items, you can drag the mouse over items to select more than one. Press Shift while clicking to add additional contiguous items to a selection. Press Command (*Macintosh*) or Ctrl (*Windows*) while clicking to add additional discontinuous items to a selection.

You can change the columns that are displayed in the browser by right-clicking the header and enabling or disabling the different columns. If you click on a column in the header area, the waves in the browser are sorted by that column. Click the column in the header area again to reverse the sort direction.

After toggling the display of one or more columns, you may wish to right-click the header again and choose Size All Columns to Fit. You can also resize the columns by dragging the vertical bar that separates columns.

Click the gear icon at the bottom of the browser to display the options menu. It allows you to control whether data folders are displayed and how the waves are sorted and grouped.

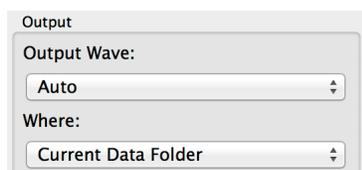
To filter waves by name, type a name in the Filter edit box. Only waves whose name match the filter string are displayed. The filtering algorithm supports the following features:

- ? Matches any single character.
- * Matches zero or more of any characters. For example, "w*3" matches wave3, wave30 and wave300.
- [...] Matches a single character if it is included in the set of characters specified in square brackets. For example, [A-Z] matches any character from A to Z, case-insensitive. [0-9] matches any single digit.

Click the question mark icon at the bottom right corner of the browser to display a tool tip containing information about the current filter. This tip shows you the filtering criteria currently in place and may help you to figure out why waves you expect to be able to select are not displayed in the browser.

Operation Result Chooser

In most Igor dialogs that perform numeric operations (Analysis menu: Integrate, Smooth, FFT, etc.) there is a group of controls allowing you to choose what to do with the result. Here is what the Result Chooser looks like in the Integrate dialog:



The Output Wave menu offers choices of a wave to receive the result of the operation:

- Auto** Igor will create a new wave to receive the results. The source wave is not changed. The new wave will have a name derived from the source wave by adding a suffix that depends on the operation. choosing Auto makes the Where menu available.
- Overwrite Source** The source wave (the wave that contains the input data) will be overwritten with the results of the operation. This will destroy the original data. The Where menu will not be available.
- Make New Wave** This is like the Auto choice, but an edit box is presented that you use to type a name of your own choosing. Igor will make a new wave with this name to receive the results of the operation. This selection makes the Where menu available.
- Select Existing Wave** A Wave Browser will be presented allowing you to choose any existing wave to be overwritten with the results. This choice preserves the contents of the source wave, but destroys the contents of the wave chosen to receive the results.

The Where menu offers choices for the location of a new wave created when you choose Auto or Make New Wave. Usually you will want to choose Current Data Folder.

- Current Data Folder** The new wave is created in the current data folder. If you don't know about data folders, this is probably the best choice.
- Source Wave Data Folder** The new wave is created in the same data folder as the source wave. It is quite likely that the source wave will be in the current data folder, in which case this choice is the same as choosing Current Data Folder.
- Select Data Folder** This choice presents a Wave Browser in which you can choose a data folder where the new wave will be created.

Operation Result Displayer

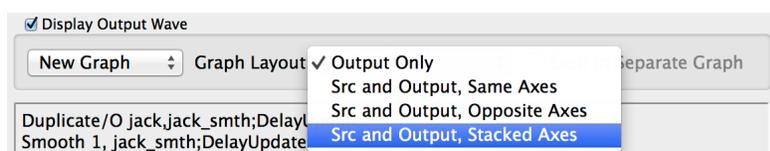
In some Igor dialogs that perform numeric operations (Analysis menu: Integrate, Smooth, FFT, etc.) there is a group of controls allowing you to choose how to display the result. Choices are offered to put the result into the top graph, a new graph, the top table, or a new table. For two-dimensional results, New Image and New Contour are also offered. If the result is complex, as is the case for an FFT, New Contour is not available.

Here is what the Result Displayer looks like in the Smooth dialog:



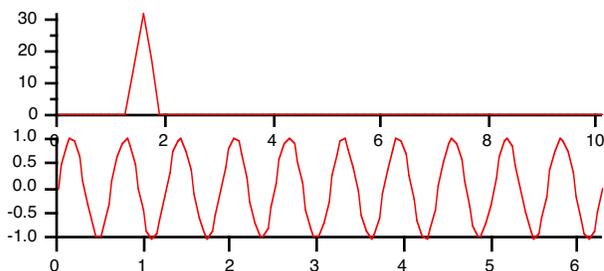
The contents of the displayer are not available here because the Display Output Wave checkbox is not selected. This is the default state.

When you choose New Graph, there are four choices in the Graph menu for the contents and layout of the new graph. In this menu, *Src* stands for Source. It is the wave containing the input data; Output is the wave containing the result of the operation.



In many cases, the second choice, *Src* and Output, Same Axes, will not be appropriate because the operation changes the magnitude of data values or the range of the X values.

This picture shows the result of an FFT operation when *Src* and Output, Stacked Axes is chosen:

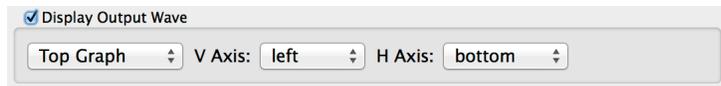


When you choose New Image or New Contour to display matrix results, the Graph Layout menu allows only Output Only or *Src* and Output, Stacked Axes. The axes aren't really stacked - it makes side-by-side graphs. It makes little sense to put two images or two contours on one set of axes.

The Result Displayer doesn't give you many options for formatting the graph, and doesn't allow any control over trace style, placement of axes, etc. It is intended to be a convenient way to get started with a graph. You can then modify the graph in any way you choose.

If you want a more complex graph, you may need to use the New Graph dialog (choose New Graph from the Windows menu) after you have clicked Do It in an operation dialog.

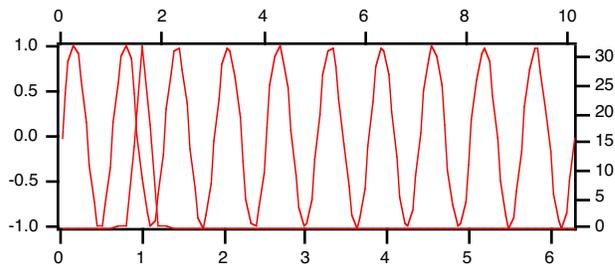
If you choose Top Graph instead of New Graph, the output wave will be appended to the top graph. It is assumed that this graph will already contain the source wave, so there is no option to append the source wave to the top graph. The Graph layout menu disappears, and two menus are presented to let you choose axes for the new wave:



The menus allow you to choose the standard axes: left and right in the V Axis menu; top and bottom in the H Axis menu. If the top graph includes any free axes (axes you defined yourself) they will be listed in the appropriate menu as well.

In most cases the source wave will be plotted on the left and bottom axes. You will usually want to select the right axis because of the differing magnitude of data values that result from most operations. You may also want to select the top axis if the operation (like the FFT) changes the X range as well.

Here is the result of choosing right and top when doing an FFT (this is the same input data as in the graph above):



Note that the format of the graph is poor. We leave it to you to format it as you wish. If you want a stacked graph, it may be better to choose the New Graph option.

