

Dialog Features

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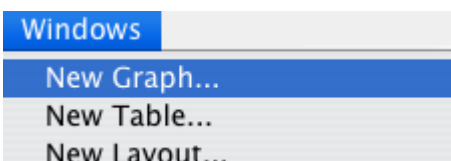
Overview

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:



You will see a dialog:

The dialog generates a command suitable for execution in the command line.

Transfers the command to the command line and executes it.

Copies the command to the command line where you can edit it and then execute it.

Copies the command to the Clipboard. Useful when you are writing Igor procedures.

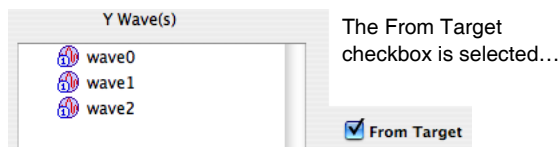
Read about Wave Browsers below.

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.

Many dialogs include a From Target checkbox. If it is selected, the lists of waves available for you to choose are restricted to waves that appear in the topmost graph or table window:

Point	wave0	wave1	wave2
0	0.182	0	0.682
1	0.191	6.6913e-08	0.691
2	0.196	1.7365e-07	0.696
3	0.2	2.6022e-07	0.7
4	0.206	3.4661e-07	0.706
5	0.211	4.3284e-07	0.711

The table is showing wave0, wave1, and wave2.



... only wave0, wave1, and wave2 are available.

Sometimes, if your top graph or table contains waves that are not in the current data folder, or if you are not viewing the current data folder in the wave browser, you may not see any waves. In that case, you may need to hunt for them. If you are unfamiliar with data folders, this probably won't be a problem.

Resizable Dialogs

Many dialogs are resizable. The dialog at the beginning of this chapter is one. On Macintosh, you can identify a resizable dialog by the resizing handle in the lower-right corner. On Windows, resizable dialogs are marked with a special icon in the upper-left corner.

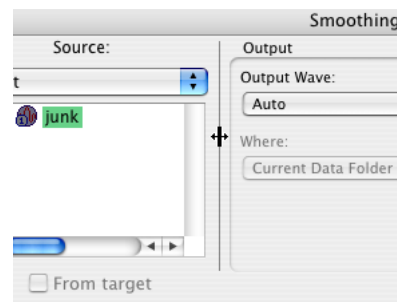


When you resize a dialog, parts of the dialog that may need more space will be made larger. In the New Graph dialog pictured above, the Wave Browsers are given more room when you increase the size of the dialog.

Movable Dividers

Many dialogs include movable dividers. These allow you to change the proportion of dialog real estate allocated to different parts of the dialog. The dividers may be hard to find- they look just like plain divider lines. Moveable dividers can be recognized by the drag arrow cursor when the mouse cursor is over a moveable divider.

In this case a vertical divider can be dragged left or right to give more or less room to the Wave Browser in the left portion of the dialog.

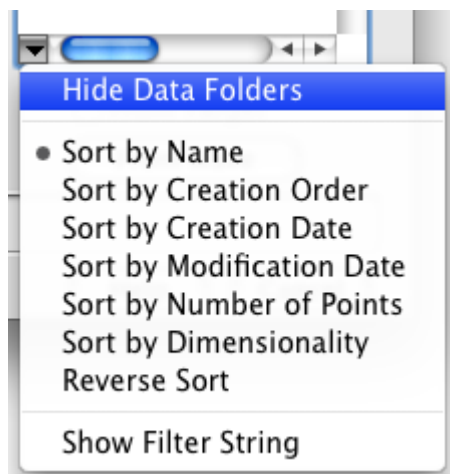


Dialog Wave Browser

In dialogs in which a wave must be selected, Igor presents a list of suitable waves in a Dialog Wave Browser. As shipped from the factory, Igor shows only waves in the current data folder. As shipped from the factory, Igor shows a hierarchical list of data folders and waves and/or numeric or string variables. Here is a picture of a typical dialog wave browser, after two waves have been made, and no data folders have been created:



If you don't know what data folders are, or you prefer not to deal with them, you may prefer to hide the data folders view. To do so, pop up the Options menu and select Hide Data Folders:

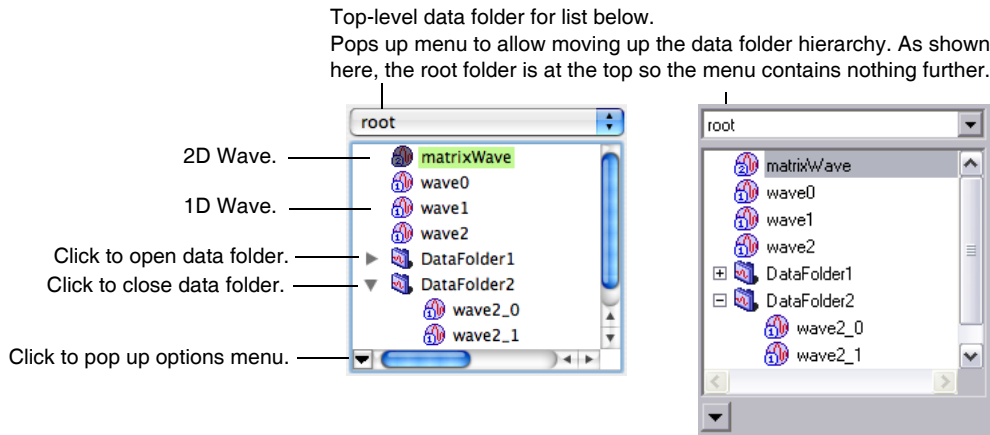


You can restore the data folders view by again popping up the Options menu and selecting Show Data Folders. When you change from Show to Hide or from Hide to Show, all dialog wave browsers in all the dialogs are changed, and the change is stored in preferences so that you won't have to make the selection again.

To learn more about data folders, see **Data Folders** on page II-121.

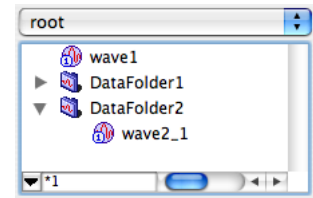
Dialog Wave Browser Details

With data folders displayed, if you have created a couple of data folders, and some waves, the dialog wave browser looks like this:

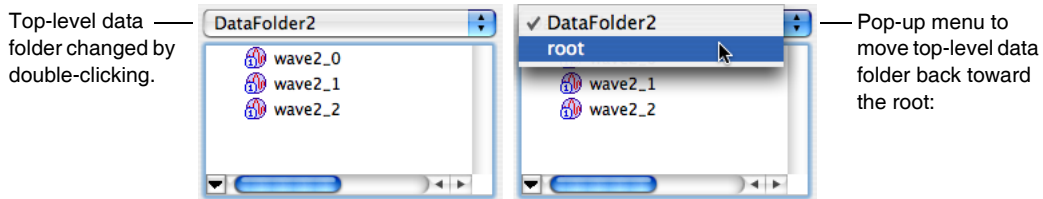


The options menu turns display of data folders on or off, sets criteria for sorting the waves, and displays an edit box for editing a filter string to select a subset of the waves.

Here is a view of the Wave Browser with the filter string displayed. Unless you change it, the filter string is * which simply allows any names. The * is the “wild card” character, which matches anything. In the picture below, the filter string has been changed to *1, which will show only waves whose names end with the character 1.



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:

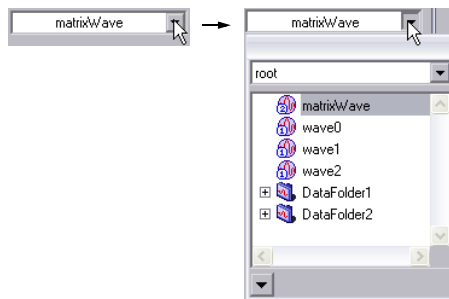


Depending on how the Wave Browser is used in a given dialog, it may support selection of multiple items or it may allow selection of only one item. In multiple-selection browsers, you can hold down the mouse button and drag over multiple items to select more than one item. To add additional items to a selection:

- Hold down Shift and click an item to extend the selection over all items between the current selection and the item clicked.
- Hold down Command (*Macintosh*) or Ctrl (*Windows*) and click an item to add just that item to the current selection or to remove it if it is already selected.

In some dialogs, a pop-up version of the Wave Browser is used. It attempts (not entirely successfully) to mimic a pop-up menu:

Browser in pop-up window is just like standard Wave Browser.



When Hide Data Folders is selected, it presents an ordinary menu of waves.

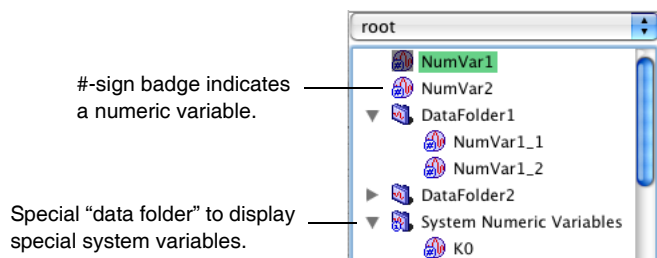
Pop-up window can be moved and resized.

Click outside window or press Esc to cancel.

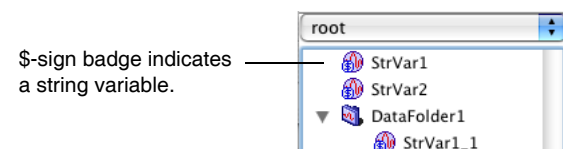
Click on item selects and dismisses pop-up window.

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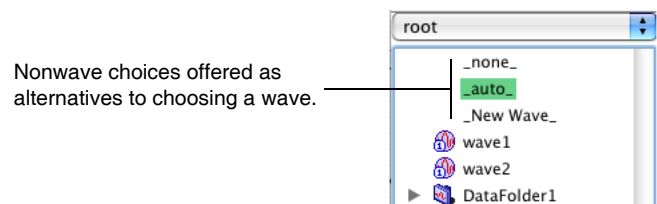
Throughout this discussion, we have talked only about selecting waves. In a few cases, a Wave Browser may be presented to select global variables, strings or even data folders. Here is a Wave Browser for selection of numeric variables:



or string variables:

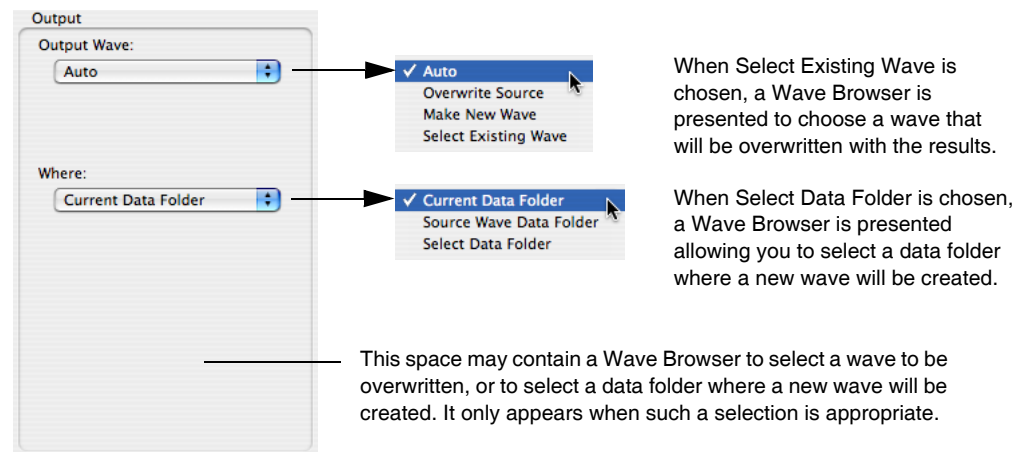


Sometimes a dialog will offer some alternative choice that is not a wave. For instance, several operations allow you to choose X values that come from either the Y wave's X scaling or from an X wave. In that case, the X wave browser will offer the choice "_calculated_" in addition to waves. Other dialogs may offer other nonwave choices. These nonwave choices will be visible, usually at the top of the Wave Browser window, regardless of the top-level data folder. Here is a picture of a Wave Browser from the Curve Fitting dialog with several nonwave choices:



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 Result Chooser is not always laid out vertically as in this picture, but it generally offers all the choices shown here.

Note: Users of older versions of Igor will recall that in almost all cases, an operation dialog would replace the original data in the wave with the result, thereby destroying the input data. The Result Chooser eliminates having to cancel the dialog in order to make a duplicate of the input data.

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. This is how most operations worked prior to Igor Pro 5. 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.

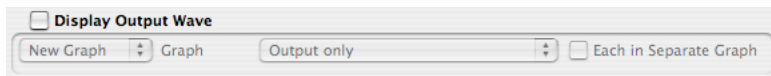
The Where menu offers choices for the location of a new wave created when you choose Auto or Make New Wave. Usually you will want to choose Current Data Folder. If you don't understand what this means, it is almost certain that you should choose Current Data Folder.

- 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

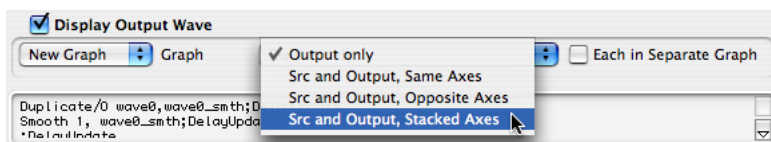
In some Igor dialogs that perform numeric operations (Analysis menu: Integrate, Smooth, FFT, etc.) there is a group of controls allowing you to choose how to display the result. Choices are offered to put the result into the top graph, a new graph, the top table, or a new table. For two-dimensional results, 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.

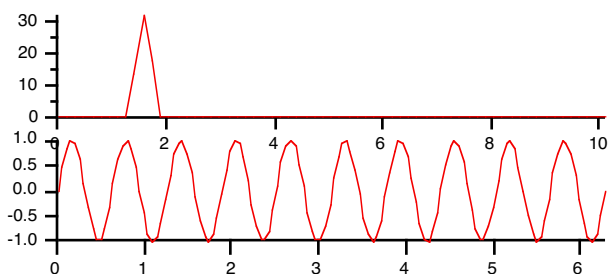
When you choose New Graph, there are four choices in the Graph menu for the contents and layout of the new graph. In this menu, *Src* stands for Source. It is the wave containing the input data; *Output* is the wave containing the result of the operation.



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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:

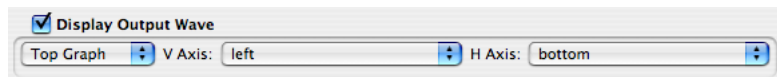


When you choose New Image or New Contour to display matrix results, the Graph Layout menu allows only Output Only or Src and Output, Stacked Axes. The axes aren't really stacked- it makes side-by-side graphs. It makes little sense to put two images or two contours on one set of axes.

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.

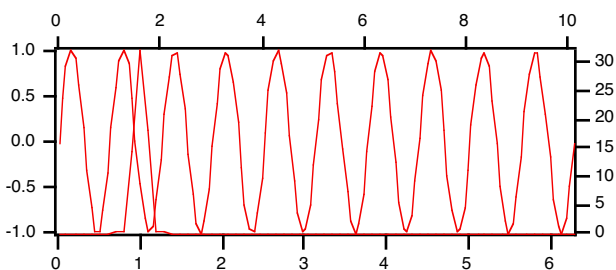
If you choose Top Graph instead of New Graph, the output wave will be appended to the top graph. It is assumed that this graph will already contain the source wave, so there is no option to append the source wave to the top graph. The Graph layout menu disappears, and two menus are presented to let you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