



Creating Split Axes

You can create split axes using the same techniques described above for creating stacked plots. Simply plot your data twice using different axes and then adjust the axes so they are stacked. You can then adjust the range of the axes independently. You can use draw tools to add cut marks.

WaveMetrics supplies a procedure package to automate all aspects of creating split axes except setting the range and adjusting the ticking details of the axes. To use the package, choose Graph→Packages→Split Axes. For an example, choose File→Example Experiments→Graphing Techniques→Split Axes.

Before using the package, you should create the graph in near final form using just the main axes. For best results, especially if you will be using cut marks, you should work with the graph at actual size before adding the split axes. It is recommended that you create a recreation macro just before executing the split axis macros. This is so you can easily revert in case you need to change the pre-split setup.

After creating the split, you can execute the AddSplitAxisMarks procedure to add cut marks between the two axes. You can then use the drawing tools to duplicate the cut marks if you want marks on the traces as well as the axes. Of course, you can also draw your own cut marks. You should use the default Plot Relative coordinate system for cut marks so they will remain in the correct location should you resize the graph.

Some programs draw straight lines between data points on either side of the split. While such lines provide the benefit of connecting traces for the viewer, they also are misleading and inaccurate. This package accurately plots both sections and does not attempt to provide a bridge between them. If you feel it is necessary, you can use drawing tools to add a connecting bridge.

Live Graphs and Oscilloscope Displays

This section will be of interest mainly if you use Igor for data acquisition.

Normally, when the data in a wave is modified, all graphs containing traces derived from that wave are redrawn from scratch. Although fast compared to other programs, this process may noticeably limit the graph update rate.

Live Mode

If you specify one or more traces in a graph as being “live” then Igor takes some shortcuts, resulting in faster than normal updates. Fast update is obtained when certain conditions are observed.