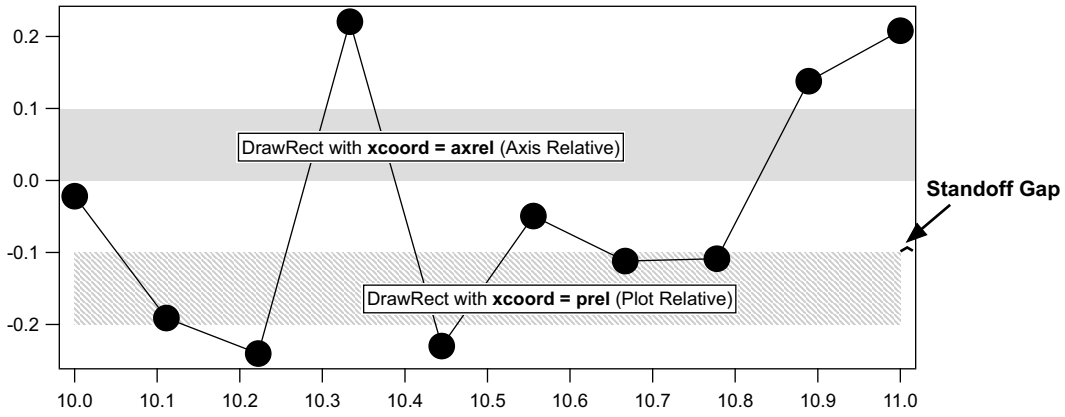

Both rectangles use axis-based coordinates, described next, for their Y coordinates.

Axis-Based (Graphs Only)

The pop-up menu for the X coordinate system includes a list of the horizontal axes and the pop-up menu for the Y coordinate includes a list of the vertical axes. When you choose an axis coordinate system, the position on the screen is calculated just as it is for wave data plotted against that axis, with the exception that drawing object coordinates are not limited to the plot area. This mode is ideal when you want an object to stick to a feature in a wave even if you zoom in and out.

Axes are treated as if they extend to infinity in both directions. For this reason along with the fact that axis ranges can be very dynamic, it is very easy to end up with objects that are offscreen. You can use the Mover pop-up menu Retrieve submenu to retrieve objects or, if you press Option (*Macintosh*) or Alt (*Windows*) before clicking the Mover icon, you can edit the numerical coordinates of each offscreen object. You can also end up with objects that are huge or tiny. It is best to have the graph in near final form before using axis-based drawing objects.

Axis-based coordinates are of particular interest to programmers but are also handy for a number of interactive tasks. For example you can easily create a rectangle that shades an exact area of a plot. If you use axis coordinate systems then the rectangle remains correct as the graph is resized and as the axis ranges are changed. You can also create precisely positioned drop lines and scale (calibrator) bars.

Drawing Layers

Layers allow you to control the front-to-back layering of drawing objects relative to other window components. For example, if you want to demarcate a region of interest in a graph, you can draw a shaded rectangle into a layer behind the graph traces. If you drew the same rectangle into a layer above the traces then the traces would be covered up.

Each window type supports a number of separate drawing layers. For example, in graphs, Igor provides three pairs of drawing layers. You can see the layer structure for the current window and change to a different layer by clicking the layer icon. The current layer is indicated by a check mark.

Drawing layers have names. This table shows the names of the layers and which window types support which layers:

Graphs	Page Layouts	Control Panels
ProgBack	ProgBack	ProgBack
UserBack	UserBack	UserBack
ProgAxes		