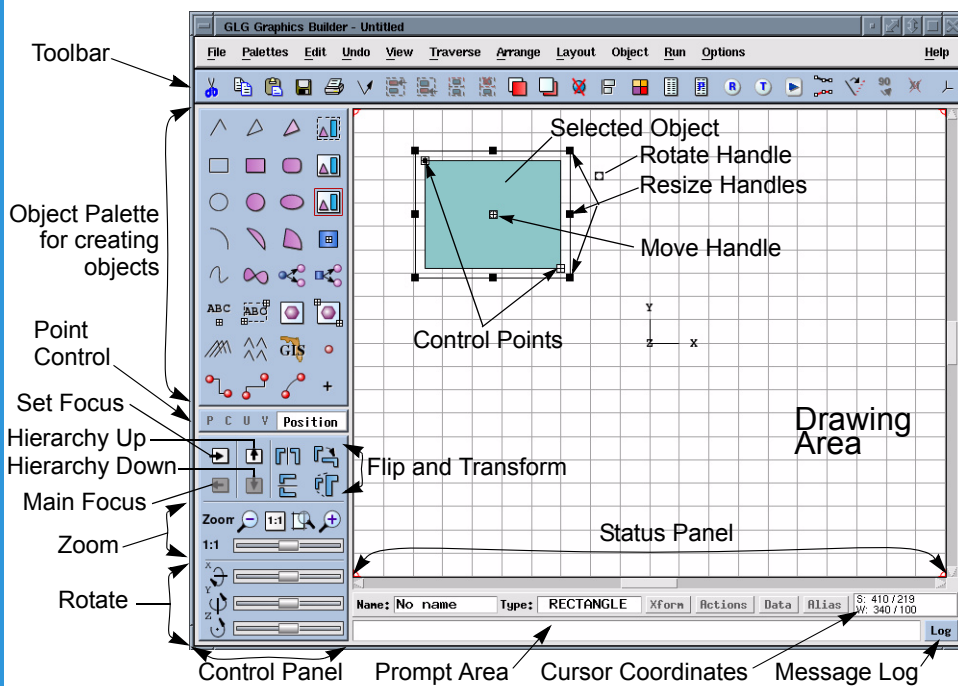


# GLG Graphics Builder Quick Reference Guide

## Graphics Builder Screen Layout



## Object Selection and Editing

To select an object: **Click** on the object with the left mouse button.

To prevent moving an object accidentally during selection: use **Shift+Click** to select an object.

To select one object among several objects at the same location: **Shift+Click** on the object, then rotate the selection using either the *Object Selection* dialog, or the arrow buttons in the upper right corner of the *Properties* dialog, if it is open.

To move an object: **Click and drag** the selected object or its move handle with the mouse.

To resize an object: use the selected object's resize handles.

## Editing Object Properties

To edit properties of the selected object: Use the *Properties* toolbar button to open the *Properties Dialog*. Edit properties in-place, or click on the ellipses **...** button next to the property to open its *Attribute Dialog* containing menus and palettes.

To quickly change properties of the selected object: Use the *Edit Toolbox* toolbar button to open the *Edit Toolbox*. Select the property on the left side, then select its value from a palette on the right.

To add a gradient, shadows or arrowheads to an object: click on the *Add Rendering* button in the object's *Properties Dialog*, then edit the object's rendering properties.

## Editing Color Properties

To try multiple colors from a color palette: click and drag the mouse in the palette.

To enter color RGBs in 0-255 range: Use the *Options, Color Options, 255 Color Display* menu option (default range is 0-1).

To change color palettes: **Shift+Click** in the color palette for pastel colors, **Ctrl+Click** for custom colors. Edit the *glg\_config* file to increase the number of colors.

## Adding Dynamics

To add *Move, Rotate or Scale* dynamics to an object: select the object and use the *Add Dynamics* toolbar button or the *Add Dynamics* button in the object's *Properties Dialog*.

To add *Color, Visibility and other attribute* dynamics: use the ellipses **...** button next to the attribute to open its *Attribute Dialog*, then use the *Add Dynamics* button.

## Editing Control Points

To move a control point: **Click and drag** the point with the mouse.

To edit a control point's coordinates: **Shift+Click** on the point to open the *Control Point Dialog*, then enter the point's coordinates in the *Value* text box.

To move a control point by a few pixels: **Shift+Click** on the point and use directional arrows in the *Point Dialog*.

To move or resize an object by a few pixels: **Shift+Click** on the move or resize handle and use the directional buttons.

To position an object's center at exact coordinates: **Shift+Click** on the move handle and enter new coordinates for the object's center in the *Position* text box.

## Navigating the Object Hierarchy

To add or edit objects inside a viewport: **Click** on the viewport to select it, then click on the *Hierarchy Down* button in the *Control Panel* to go "down" into the viewport. Use the *Hierarchy Up* button to return back to the previous level of the hierarchy.

To access objects inside a viewport for quick editing: use the *Set Focus* button in the *Control Panel*, then **Click** on a viewport to temporarily move the editing focus inside the viewport. Use the *Main Focus* button to reset the focus.

To edit objects inside a group or edit a subdrawing's template: use the *Hierarchy Down* button.

**Ctrl+Shift+Click** is a shortcut to access objects inside viewports and groups. Use it repeatedly for nested objects.


## Multiple Selection and Grouping

**To select several objects:** *Ctrl+Click* on each object to add it to the selection. To delete an object from the selection, *Ctrl+Click* on it again.

**To select objects within a rectangular area:** click and drag in the drawing to define a rectangle. All objects that intersect the rectangle will be selected and placed in a temporary group.


**To select all objects in the drawing:** press *Ctrl+A*.



**To convert multiple selection to a permanent group:** use the *Arrange, Permanent Group* menu option.


**To create a permanent group:** click on the *Group*  button in the *Object Palette*, then define a rectangle in the drawing. All objects that intersect the rectangle will be added to the group.

**To ungroup objects in a permanent group:** select the group and click on the *Explode Object*  toolbar button.



## Editing Groups


**To edit properties of all objects in a group:** use the *Edit Toolbox*  or the *Edit All* button in the group's *Properties Dialog*.

**To edit individual objects inside a group:** select the group, then click on the *Hierarchy Down*  button in the *Control Panel* to go “down” into the group. Use the *Hierarchy Up*  button to return back to the previous level of the hierarchy.

**To select individual objects inside a group for quick editing:** select the group, click on the *Select Next*  toolbar button, then click on an object inside the group to select it; this will start the **group zooming mode**. In the group zooming mode, other objects in the group can be selected by simply clicking on them with the mouse. Press *Esc* to abort the group zooming mode.

*Ctrl+Shift+Click* on an object in a group provides a shortcut for selecting an element inside a group; it can be used repeatedly for getting access to objects inside nested groups.

**To add or delete objects from a group:** select the group, click on the *Add To Group*  or *Delete From Group*  toolbar button, then click on objects to be added or deleted.


**To create new objects inside a group:** use the *Hierarchy Down*  button to get inside the group and create new objects.


## Custom Fonts



**To edit a viewport's Font Table:** click on the *Screen Attributes* button in the viewport's *Properties Dialog*, then click on the *Add Font Table* to add a custom *Font Table*. Click on the *Fonts* button to change the fonts used by the font table.

Refer to the description of the *Font Table* object on page 184 of the *GLG User's Manual and Builder Reference* for more information on using a custom font table from an external file, as well as defining a global custom font table.


## Object Layout and Alignment

**To display the Layout Toolbox:** Use the *Layout Toolbox*  toolbar button.

**To set an anchor object for aligning elements of a group:** click the *Select Anchor Object*  button in the *Layout Toolbox*, then click on an object to be used as an anchor.

**To define object dimensions in the world or screen coordinates:** use the *Set Width*  or *Set Height*  buttons in the *Layout Toolbox*. For a group, use the *Group/Objects* toggle to set either the dimensions of the group itself or the dimensions of each of its elements.

## Browsing Resources and Tags

**To browse resources:** Use the *Resources*  toolbar button to open a *Resource Browser*.



**To expose an object as a resource:** name the object using the *Name* text box in the *Properties Dialog*. For an attribute, enter a name in the *Attribute Dialog*. All named objects and attributes are exposed as resources. Use the *HasResources* flag to organize resource hierarchies.

**To browse tags:** Use the *Tags*  toolbar button.


**To add a data tag to an object's attribute:** click on the *Add Tag* button in the *Attribute Dialog*.


## Images, SubDrawings and GIS Maps

**To import an image into a drawing:** create an image object using one of the *Image* buttons in the *Object Palette*. Use the image's *Image File* property to change the image file. Add a *List* transformation to the image's *Image File* property to implement **image dynamics**.

**To create a SubDrawing:** use the *SubDrawing from File*  button in the *Object Palette*. Use the subdrawing's *Source Path* property to change the displayed subdrawing. To implement **subdrawing dynamics**, add a *List* transformation to the *Source Path* property. Use the *Hierarchy Down*  button to edit the subdrawing's template drawing.

**To dedicate an area of the GUI for swapping drawings at run time:** use the *SubWindow*  object.

**To display a GIS map:** use the *GIS Object* .

**To position icons on a map directly in lat/lon:** use the *Hierarchy Down*  button to go “down” into the *GIS Object* and add icon objects as children of the *GIS Object*.

## Miscellaneous

**To scroll the drawing by dragging it with the mouse:** *Ctrl+Click* in the *Drawing Area*, then drag the mouse.

**To add, delete or reorder points of a polygon:** use the *Point List* button in the polygon's *Properties Dialog*.