KwikHelp
Welcome to KwikDraw Help

KwikDraw Version 1.30

Introduction to KwikDraw

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Introduction to KwikDraw

KwikDraw is a drawing program. It is very different from a paint program, in that it is object oriented. This means that after drawing objects (such as rectangles, ellipses, lines,text, curves, or polygons), you have the ability to select and modify them as independent entities. In a paint program an object, once it is drawn, loses it's identity as an independent entity. Any editing capability in a paint program must thus treat all the objects as mere patterns of bits on the drawing surface.

The distribution disk contains several example drawings in files using the extension ".kwk". Select the "Open" option on the KwikDraw "File" menu to look at these example drawings. These examples illustrate how complex drawings can be produced as a conglomeration of simple objects such as lines, arcs, rectangles, polygons, and ellipses, the fundamental building blocks provided by KwikDraw. To get a feel for this take a close look at "train.kwk" and "car.kwk".

You may be thinking that it is a lot of work to build a complex drawing out of such simple objects. However, you are not restricted to building your drawings solely out of the basic objects provided by KwikDraw. The "Group" feature of KwikDraw allows you to create new building blocks out of more primitive ones. For example, in a drawing of a car you may combine two circles to form a tire, along with several ellipses for a custom wheel. The objects that make up the tire and wheel may be "Grouped" to form a more complex building block. This "Tire and Wheel" object may be duplicated and reused in your drawing. "Grouped" objects may copied, moved, stretched, resized, flipped, filled, rotated, etc. just like the simple objects. You may wish to create libraries of your own parts or components. KwikDraw includes a "Parts Library Browser" that will allow you to scroll through the parts in your library while working on a drawing. For an example, try using the "Open As Library" option on the "File" menu, and select the file "logic.kwk."

Feel free to experiment with the example drawings. Any changes you make to them will not be permanent as long as you do not select "Save" from the "File" menu.

Help on KwikDraw Menus

File Menu
Edit Menu
Layout Menu
Arrange Menu
Pen Menu
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Size Menu

File Menu

New
Clears the drawing and sets the current filename to "noname.kwk" (displayed in the caption bar at the top of the drawing).

Open
Shows the disk directory and allows you to open a new file. The Open dialog box will also allow you to change the current directory.

Open as Library
Shows the disk directory and allows you to open a KwikDraw file into a "Parts Browser" window. Parts may be inserted from the Parts Browser using the "Insert from Library" option on the "Edit" menu. The "Open as Library" menu selection is deactive if a Parts Browser is already active. For more informationon this, see Creating and Using Parts Libraries.

Save
Saves the drawing to disk under the current filename (as displayed in the caption bar at the top of the drawing). If the caption bar is labelled "KWIKDRAW", then the current filename is actually "noname.kwk".

Save As
Allows you to save the drawing with a new filename. The Save As dialog box will not allow you to change the current directory. You can, however, save to a file in a different directory by prefixing the filename with a directory path.

Print
Brings up the print popup menu. You may want to set the printer orientation to match the drawing size entered in the "Drawing, Grid Size" dialog box (which is launched from the "Layout" menu). To do this, use the "Setup" button on the print popup menu. KwikDraw will automatically scale the screen drawing to the paper size of your printer.

Select Printer
This menu option allows you to change your default printer by launching the Printers portion of the Windows Control Panel. To change printers, double-click on a new printer to make it the default.

Exit
Quits KwikDraw. If the current drawing has been modified since last saved, then you will be asked whether you wish to save the changes before quitiing.

Edit Menu

Undo
Undoes the last change made to an object, or a set of objects. Use this option to undo the following changes: Moved objects, Scaled objects, Polygon vertex changes, Text changes, Curve extent changes, Line arrowhead changes, Rotations, Fill Pattern changes, Line style changes, and Font changes. To Redo something that you have undone, simply select Undo again (Undo the Undo). To undo a Flip operation, perform the Flip again. To undo Group Objects, use Ungroup Objects (and visa-versa). To undo Object Forward, use Object Backward (and visa-versa). To undo Cut, use Paste (and visa-versa). To undo Duplicate, use Cut or the Backspace key.

Cut to Clipboard
Cuts the currently selected objects into the Windows Clipboard. Objects in the Windows Clipboard may be pasted into the current drawing, into a newly loaded drawing, into a drawing in another session of KwikDraw, or into any application that supports MetaFile formats, which includes most Windows based word processors and drawing programs.

Copy to Clipboard
Copies the currently selected objects into the Windows Clipboard.

Paste from Clipboard
If the Windows Clipboard currently contains any KwikDraw objects, then they will be pasted into the current drawing. The objects will be pasted in a selected state so that you can easily move them about.

Show Clipboard
Launches the Windows Clipboard. This is a convenient way to view or resize the contents of the clipboard before pasting into another application. For more information on this, see Transfer to Other Applications.

Insert From Library
Inserts the part currently displayed in the "Parts Browser" window into the current drawing. To open a Parts Library, use the "Open as Library" selection on the "File" menu. The "Insert From Library" selection is only active when a Parts Browser window is active. For more informationon this, see Creating and Using Parts Libraries.

Duplicate
Duplicates the selected items, leaving the newly created objects in a selected state.

Text Edit
Allows you to edit a previously placed text object. A single text object must be selected before this menu item can be used. You can also edit a text object by double clicking on it with the pointer tool, or by selecting it and then pressing the right mouse button.

Edit Poly
Selecting this item will toggle the "Edit Poly" mode on or off. When checked, this menu item indicates that you are currently in "Edit Poly" mode. In this mode, the vertices of polygon objects may be altered by pointing at them, holding the left button down, and dragging the mouse. In order to scale a Polygon object by stretching one of the corners, the Edit Poly mode must be turned off.

Extend Curve
Selecting this menu item will toggle the "Extend Curve" mode on or off. When checked, this menu item indicates that you are currently in "Extend Curve" mode. Curve type objects

(curve, pie, or chord) are initially created as one quadrant of an ellipse. In the "Extend Curve" mode, the endpoints of Curve type objects may be lengthened or shortened by pointing at them, holding the left button down, and dragging the mouse. In order to scale a curve object by stretching one of the corners, the "Extend Curve" mode must be turned off.

Layout Menu

Show Grid
This menu item toggles the grid display on and off.

Snap to Grid
This menu item toggles the grid snap mode on and off. When grid snap is on, you will only be allowed to draw, move, and stretch objects to the nearest grid points.

Constrain
This menu item toggles the Constrain mode on and off. When Constrain is on, new objects, other than Lines or Polygons, will only be drawn with a one-to-one aspect ratio. Thus only Squares will be drawn when using the Rectangle tool, and only Circles will be drawn when using the Ellipse tool, etc. Line objects, and the line components of Polygon objects, will only be drawn horizontally, vertically, or at 45 degree angles in the Constrain mode. When resizing or stretching objects, the Constrain mode will prevent you from changing the aspect ratio of the object. This means that changing the size of an object in one dimension can only occur with a proportionally equal change in the other dimension. Constrain mode is especially helpful when resizing text objects.

Drawing, Grid Size
This menu selection allows you to alter the size of the drawing or the grid spacing. All dimensions in the resulting dialog box are expressed in "logical" pixels, where a logical pixel corresponds to a screen pixel in the 100% zoom mode (in the 200% zoom mode, a logical pixel is two screen pixels in each dimension). For more information on this see Changing the Drawing Size or Changing the Grid Spacing.

Zoom (25%-400%)
These menu items control the zoom level of the screen. At a 100% zoom level, logical drawing pixels (the smallest increment of dimension in the drawing) correspond to screen pixels. At 200% zoom level, a logical drawing pixel is two screen pixels in each dimension, with the result that the objects appear larger on your screen. You should try to do the bulk of your drawing at the 100% level. If you find that you require additional drawing area, then it is better to increase the size of your drawing (using the "Drawing, Grid Size" selection), rather than attempting to make smaller objects by working at a higher zoom level.

True Type Fonts

The True Type Fonts are Courier, Arial, Tms Rmn, Wingdings, and Symbol.

Stroke Fonts

The Stroke Fonts are Roman, Modern, and Script.

Solid Colors

Solid Colors are those that can be obtained directly from your video hardware for each display pixel.

Dithered Colors

Dithered Colors are generated (by MS Windows) by placing display pixels with different solid colors adjacent to each other. If you are standing far enough away from your monitor, your eyes will "mix" the adjacent pixels to give the effect of a color that your video hardware cannot otherwise generate directly.

Arrange Menu

Move Forward
This menu item will move the currently selected item on top of the first item found that overlaps it. When multiple items are selected, this procedure is applied to each item in the order that the items were selected. The results can be confusing since the next item Moved Forward could undo the result of the last item Moved Forward. Similar comments apply to the other Move selections.

Move Backward
Moves the currently selected item below the first item found that it overlaps.

Move to Front
Moves the currently selected item to the top of all items that overlap it.

Move to Back
Moves the currently selected item to the bottom of all items that it overlaps.

Flip Horizontal
Flips the selected items horizontally about their individual center points. The items that make up a Grouped object will be flipped about the center of the Group, such that the entire object flips as a unit.

Flip Vertical
Flips the selected items vertically about their individual center points. The items that make up a Grouped object will be flipped about the center of the Group, such that the entire object flips as a unit.

Rotate
Rotates the selected items 90 degrees about their individual center points. The items that make up a Grouped object will be rotated about the center of the Group, such that the entire object rotates as a unit.

Group
Combines the selected object into a grouped object, which can be moved, stretched, flipped, rotated, etc as a single entity. Groups of Groups can be formed to an arbitrary number of levels.

Ungroup
Ungroups the selected Group objects back one level into independent entities. Note that Ungrouping a Group of Groups takes you back only one level instead of all the way back to the base object types.

Pen Menu

The selections and dialog boxes launched from this menu are context sensitive. When no objects are currently selected, this menu and its associated dialog boxes show you (and allow you to modify) the current defaults for Fill Patterns, Line Widths, Line Types, and Line Arrowheads. When a single object is selected, the menu and dialog box items show and modify the attributes of only that object, WITHOUT changing the defaults that will be used for newly created objects. When multiple objects or Grouped objects are selected, the menu and dialog boxes will show nothing checked, since the selected objects may all have different settings. In this case, when you choose a menu or dialog box item, it will set the corresponding attribute of ALL currently selected items, again WITHOUT modifying the default attributes.

Fill
Launches a dialog box that allows you to change the Fill Pattern and the Fill Color for closed objects (rectangles, ellipses, closed curves, and closed polygons).

Line Style
Launches a dialog box that allows you to change the Line Width, Line Style, and Line Color for any object other than Text Objects. Only solid lines may be given a width greater than 1 in this dialog box. If any of the dotted or dashed line styles is selected, the width will be forced to 1, and the width entry field on the dialog box will be disabled.

Arrow Style
Launches a dialog box that allows you to change the Arrowhead Style for Line Objects.

Arrows
These menu items only apply to Line objects. The attributes of the selected object are shown as a check mark next to the Left Arrow or Right Arrow menu items (or both). Any of the menu items Left Arrow, Right Arrow, No Arrows, or Both Arrows, may be chosen to alter the selected object. The Left Arrow and Right Arrow items act as toggles.

Font Menu

This menu only applies to Text objects. The selections are context sensitive. When no objects are currently selected, this menu shows you (and allows you to modify) the current defaults for Font Type and Style. When a single object is selected, the menu shows the attributes of only that object, WITHOUT changing the defaults that will be used for newly created Text objects. When multiple objects or Grouped objects are selected, the menu will show nothing checked, since the selected objects may all have different settings. In this case, when you choose a menu item, it will set the corresponding attribute of ALL currently selected items, again WITHOUT modifying the default attributes.

True Type Fonts
The first group of font types on this menu are True Type Fonts if you are running Windows 3.1. If you are running Windows 3.0, then these font selections will result in the older Raster Fonts. Raster Fonts are not arbitrarily scalable, which can result in some displays that are not true to the printed output at zoom levels below 100%. Raster Fonts are also not rotatable and are difficult to scale by grabbing a selection corner. In other words, you should get Windows 3.1 if you haven't already.

Stroke Fonts
The second group of font types on this menu are Stroke Fonts.

Font Style
The last group on this menu controls the font style (Normal, Bold, Italic, or Underline).

Size Menu

This menu only applies to Text objects. The selections are context sensitive. When no objects are currently selected, this menu shows you (and allows you to modify) the current defaults for Font Size. When a single object is selected, the menu shows the Font Size of only that object, WITHOUT changing the default that will be used for newly created Text objects. When multiple objects or Grouped objects are selected, the menu will show nothing checked, since the selected objects may all have different sizes. In this case, when you choose a size, it will set the corresponding attribute of ALL currently selected text objects, again WITHOUT modifying the default size.

You can also change font sizes by dragging one corner of the selection box, as discussed under Modifying Objects. KwikDraw will try to maintain a reasonable aspect ratio for the font during this process. You can help out by trying to scale the font equally in both dimensions or by turning the Constrain option on.

Help on KwikDraw Tool Bar

The KwikDraw Tool Bar is displayed vertically along the left edge of the drawing area. The tool bar contains the Pointer Tool and an collection of primitive object Drawing Tools. The Pointer Tool is used to select objects in preparation for any type of modification. The Drawing Tools are used to draw primitive objects on the drawing surface. KwikDraw will give you visual clues as to which tool is currently in use. First of all, the current tool's button is displayed with a pushed-in look. In addition, when a Drawing Tool is in use, the cursor will appear as a cross-hair instead of a pointer. Different cursors are also used during object movement and resizing.

Normally, after drawing an object, the Tool Bar will revert to the Pointer Tool with the object already selected. This makes it convenient for you to immediately move or rescale the object. If you would rather draw several object instances in succession without having to rechoose the tool, simply select the tool from the tool bar with a double-click of the left button or with the right button. The pushed-in button will now appear with a dark black background as a reminder that you have selected it in the "sticky" mode.

Pointer Tool

This tool is used to Select objects. An object must be selected before it can be moved, rescaled, copied, cut, duplicated, edited, moved forward, moved backward, flipped, rotated, grouped, ungrouped, or had any of its attributes modified (such as pen style, pen width, fill pattern, font type, font style, or font size).

Text Tool

This tool is used to place a text object on the drawing. After activating the tool, simply point to the entry point on your drawing, then click and release the left mouse button. A text entry dialog box will pop up. Type the text desired and terminate by pressing the OK or Cancel buttons. During text entry you may use the Enter key to start a new line. You may also edit your text using the cursor keys, the backspace key, and the delete key. To replace a block of text, simply highlight the block to be replaced and start typing the new text.

You may initiate edits to an existing Text object in three ways. Any of the methods below will pop-up a dialog box which will allow you to edit the text:

Using the Edit Menu:
To use this method, first select the Text object. Then choose the Edit Text option on the Edit Menu.

Double-Clicking:
To use this method simply double-click on the text object using the left mouse button.

Using the Right Mouse Button:
To use this method, first select the Text object. Then press the right mouse button.

Line Tool

This tool is used to draw lines. After activating the tool, simply point where you desire the start of the line, click and hold down the left mouse button, drag the cursor to where you desire the end of the line, and release the mouse button. Arrowheads may be added to line objects using the options on the Pen Menu. The line style or width may be altered using the Line Style option on the Pen Menu. In the Constrain mode, lines may only be drawn horizontally, vertically, or at 45 degree angles.

Rectangle Tools

There are two tools to draw rectangles, one for regular rectangles and another for rectangles with rounded corners. After activating one of these tools, simply point where you desire one of the rectangle corners, click and hold the left mouse button, drag the cursor to where you desire the opposite corner, and release the mouse button. The rectangle fill pattern may be altered using the "Fill" option on the Pen Menu. The line style or width may altered using the "Line Style" option on the Pen Menu.

Ellipse Tool

This tool is used to draw ellipses, including circles. Drawing an ellipse is identical to drawing a rectangle that surrounds the desired ellipse. After activating the tool, simply point where you desire one of the rectangle corners, click and hold the left mouse button, drag the cursor to where you desire the opposite corner, and release the mouse button. The ellipse fill pattern may be altered using the "Fill" option on the Pen Menu. The line style or width may altered using the "Line Style" option on the Pen Menu.

Arc, Chord, Pie Tools

Curved regions are drawn as a portion an ellipse. There are three tools for drawing curved regions, one for drawing Arcs, which are open curves, one for Chords, which connect the endpoints of an arc with a straight line, and one for Pies, which connect the endpoints of an arc with two straight lines meeting at the center of the ellipse. Arc, Chord, and Pie objects are initially drawn as one quadrant of an ellipse. The endpoints may be extended away from the quadrant boundary when in the Extend Curve mode, controllable from the Edit Menu. Drawing one of these objects is identical to drawing a rectangle that surrounds the quadrant of the underlying ellipse. After activating the tool, simply point where you desire one of the rectangle corners, click and hold the left mouse button, drag the cursor to where you desire the opposite corner, and release the mouse button. The fill pattern for the Chord and Pie objects may be altered using the "Fill" option on the Pen Menu. The line style or width may altered using the "Line Style" option on the Pen Menu.

Polygon Tools

There are two tools to draw Polygons, one for Closed Polygons and another for Open Polygons. After activating one of these tools, simply point where you desire one of the polygon vertices, then click and release the left mouse button. Now move the cursor to the next vertex and click and release again. To finish the Polygon, you must double-click the left mouse button or single click the right mouse button on the last vertex. Closed Polygons will automatically be connected back to the starting vertex. After finishing the object, Polygon vertices may be individually moved when in the Edit Polygon mode, controllable from the Edit Menu. The Closed Polygon fill pattern may be altered using the "Fill" option on the Pen Menu. The line style or width may altered using the "Line Style" option on the Pen Menu.

Help on General Topics

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Open, Save, or Rename a Drawing

To open an existing drawing, use the"Open" option on the File Menu.

To start a new drawing, use the "New" option on the File Menu.

To open a drawing as a parts library, select "Open as Library" from the File Menu. See Creating and Using Parts Libraries for more information on this.

To save your work under the current filename, use the "Save" option on the File Menu. The current filename is usually displayed above the menu. If "KWIKDRAW" is currently displayed above the menu, then the current filename is "noname.kwk" by default.

To save your work under a different filename, use the "Save As" option on the File Menu.

Printing a Drawing

To print a drawing, use the "Print" option on the File Menu.

The "Select Printer" menu option allows you to change your default printer by launching the Printers portion of the Windows Control Panel. To change printers, simply double-click on a new printer to make it the default. After selecting a printer, close the Printer Control Panel by double clicking in the upper left corner.

The "Print" menu option launches the print popup menu. You may want to set the printer orientation to match the drawing size entered in the "Drawing, Grid Size" dialog box (which is launched from the Layout Menu). To do this, press the "Setup" button on the print popup menu. As an alternative, this printer setup step can also be performed from the printer selection control panel at the time that you select a printer.

When printing, KwikDraw will automatically scale the screen drawing to the paper size of your printer.

Transfer to Other Applications

You can copy a drawing, or any portion of a drawing, to any application that supports Windows MetaFiles using the Windows Clipboard. This includes most word processors and drawing programs that run under Windows.

To transfer a drawing to another application through the Windows Clipboard:

1) Select the portion of the drawing you wish to transfer.
2) Choose the Copy option on the Edit Menu.
3) Activate the application that you wish to receive the drawing.
4) Choose the Paste option on the Edit Menu of that application.

You should be able to rescale the drawing after it is pasted into the other application. If the application does not support rescaling, then you may be able to rescale the drawing before pasting by opening the Windows Clipboard and changing the window size. The Windows Clipboard can be opened from the KwikDraw Edit Menu or from the Accessories Group in the Program Manager.

To transfer a drawing to another application as an HPGL file:

You can also transfer your drawing to another application as an HPGL (Hewlett Packard Graphics Language) file. Several DOS and Windows based graphics compatible word processors support this format:

1) Select the Printer Setup option from the File Menu. This runs the Printers setup in the Windows Control Panel.
2) Install an HP Plotter as the default printer, printing to a file.
3) Print your drawing using the Print option on the Edit Menu.
4) Import the resulting HPGL file into your other application.

Making Objects Transparent

When one object overlaps another in your drawing, you will often want to make the top object transparent, so that you can see through it to the object below. This is easy to do. Simply select the top object and choose the "Fill" option on the Pen Menu. In the Fill Patterns dialog box, check the fill pattern labelled "(none)".

You should note that a transparent object can only be selected by pointing at the boundary of the object, whereas an object with any other fill pattern may be selected by pointing anywhere in its interior.

Coloring Objects

To add color to an object simply select the desired object(s) and choose either the "Fill" or "Line Style" Dialog Boxes, which are launched from the Pen Menu. Use the Fill Dialog Box to color the internal area of closed objects, such as Rectangles, Ellipses, Closed Curves, or Closed Polygons. Use the Line Style Dialog Box to color the border lines that define any object or to color a text object. These dialog boxes contain three scrollbars for individually controlling the red, green, and blue color content.

Note that only solid fill patterns will use Dithered Colors, non-solid fill patterns and line styles will revert to the closest available Solid Color.

Modifying Objects

To make any changes to an existing object, you MUST first select it. Once it is selected, various object attributes may be altered, as detailed below:

ReSizing Objects
When the object is selected, point at one of the highlighted corners with the pointer tool, press the left mouse button (the cursor should change to an pointing hand), stretch or shrink the outline to the desired size, and release the mouse button.

When the Constrain option on the Layout Menu is on, the resized object will be constrained such that the aspect ratio is preserved. This means that any change in object size in one dimension will be accompanied by a proportionally equal change in the other dimension.

Changing Fill Patterns or Fill Color
When the object is selected, choose the "Fill" option on the Pen Menu.

Changing Line Style, Line Width, or Line Color
When the object is selected, choose the "Line Style" option on the Pen Menu.

Adding or Modifying Line Arrowheads
When a Line object is selected, choose one of the four arrowhead options on the Pen Menu. To change the Arrowhead size or style choose the "Arrow Style" option on the Pen menu.

Changing Font Type, Style, or Size
When the object is selected, choose a Font Type or Style on the Font Menu, or a Font Size option on the Size Menu. You can also change font sizes by dragging one corner of the selection box, as discussed under "Resizing Objects," above. KwikDraw will try to maintain a reasonable aspect ratio for the font during this process. You can help out by trying to scale the font equally in both dimensions or by turning the Constrain option on.

Flipping or Rotating Objects
When the object is selected, choose one of the Flip or Rotate options on the Arrange Menu.

Changing Polygon Vertices
To change the vertices of a Polygon, you must be in the "Edit Poly" mode, which can be set on the EditMenu. When the Polygon is selected, point at one of the highlighted vertices with the Pointer tool, press the mouse button (the cursor should change to a pointing hand), drag the vertex to the desired location, and release the mouse button.

Changing Extent of a Curve
To change the extent of an Arc, Pie, or Chord object, you must be in the "Extend Curve" mode, which can be set on the EditMenu. When the object is selected, point at one of the curve endpoints with the pointer tool, press the mouse button (the cursor should change to a pointing hand), drag the endpoint to the desired location, and release the mouse button.

Moving Objects

To move an object, you MUST first select it. Once the object is selected it will appear with "selection dots" at the four corners of a box that surrounds it. To move the object, point at it again, press the left mouse button (the cursor should change to an open hand), drag the outline to the desired location, and release the mouse button.

Editing Existing Text

You may initiate edits to an existing Text object in three ways. Any of the methods below will pop-up a dialog box which will allow you to edit the text:

Using the Edit Menu:
To use this method, first select the Text object. Then choose the Edit Text option on the Edit Menu.

Double-Clicking:
To use this method simply double-click on the text object with the pointer tool.

Using the Right Mouse Button:
To use this method, first select the Text object. Then press the right mouse button.

Selecting Objects

Normally, when an object is selected, the four corners of a rectangle that surrounds that object are highlighted. There are a few exceptions:

- Line objects are only highlighted at the two endpoints when selected.
- When in the "Edit Poly" mode, the vertices of a Polygon object are highlighted
- When in the "Extend Curve" mode, the endpoints of an Arc, Chord, or Pie object are highlighted.

The Edit Poly and Extend Curve modes are discussed under Edit Menu and under Modifying Objects.

To Select a Single Object:
Objects are selected using the Pointer Tool. Closed objects such as Rectangles and Ellipses can normally be selected by pointing the cursor anywhere inside the object and clicking the left mouse button. However, if the object is using a transparent fill pattern (the default), then you must point near the boundary of the object to select it. Note that a solid white fill pattern is not the same as a transparent fill pattern. Lines, Arcs, and Open Polygons are not closed objects, so they also must be selected by pointing near the lines that define them. If the object you wish to select is overlapped by another object, click on an exposed portion.

To Select Multiple Objects:
You can select multiple objects in one of two ways. One method is to simply follow the procedure for selecting single objects, except that you hold down the Shift key when selecting additional objects. To use the second method, activate the Pointer Tool, point the cursor outside of any object, and press and hold the left mouse button. This will initiate a selection box outline. Now drag the mouse cursor, drawing an outline around all the objects that you wish to select. When finished, release the mouse button. All objects falling completely within the selection box outline will be selected.

To Deselect Only One of Multiple Objects
If you need to deselect one object while keeping others selected, simply point at that object and click and release the left mouse button while holding down the Shift key.

Grouping Objects

Multiple objects may be grouped together so that they behave as a single entity with regards to operations such as selection, moving, scaling, flipping, rotating, alteration of fill patterns, line styles, or font changes. This feature provides you with a mechanism for building a set of drawing components that is more complex than the object types provided on the KwikDraw Toolbar.

To group several objects you must first select them. When the desired objects are selected, choose the "Group" option on the Arrange Menu. Groups of grouped objects can be formed to an arbitrary number of levels. To ungroup a group of objects, first select it and then choose the "Ungroup" option on the Arrange Menu. Note that ungrouping a group of grouped objects takes you back only one level instead of all the way back to the base object types.

Scrolling

When you are at a zoom level such that the drawing surface is larger than the KwikDraw window, you may scroll about the drawing using the scroll bars at the bottom and right edges of the KwikDraw window. There are three ways to use the scroll bars:

Clicking on the arrow buttons at either end of the Scroll Bar:
This method will scroll the window in incremental amounts. It gives you a fine amount of control over the viewing position with visual feedback. It is, however, the slowest scrolling method.

Pressing and moving the thumbscroll button in the Scroll Bar:
This method allows you to rapidly scroll to any arbitrary viewing position. Unfortunately, you will not get visual feedback as you move the thumscroll because the window does not update until you release it.

Clicking on the region between the arrow buttons and the thumbscroll button:
This method will scroll the window in coarser increments than clicking on the arrow buttons. This is often the best method for panning a drawing quickly with visual feedback.

Creating and Using Part Libraries

Creating your own Part Libraries is a very effective way to improve your drawing productivity. KwikDraw's Part Library capabilities provide you with a means of building and reusing using your own collection of drawing objects. Creating a Part Library is as simple as creating a normal drawing. The library "parts" are those drawing objects at the highest grouping level, and may be placed anywhere on the drawing. Simply draw the desired "part" and group its components so that it forms a single object. Place a collection of logically related "parts," such as electronic symbols or flow chart symbols into a single drawing and save it as you would any normal drawing.

When the Parts Library file is opened using the "Open as Library" option on the File Menu, the parts will be displayed in a small browse window with a vertical scroll bar. You may then scroll through the parts in the library for possible inclusion in your current drawing. To place the currently viewed part into your drawing, simply select "Insert from Library" from the "Edit" menu. The browse window may be relocated and resized as desired.

The parts will appear in the browser in the order in which they were drawn in the library file. You may change this ordering by using the "Move Forward/Backward" options on the Arrange Menu while editing your library file. The objects on top are last in the browse order, while those on the bottom are first. You may wish to overlap the objects in the library file in order to better see which order they will browse in.

Changing the Drawing Size

You may alter the size of the logical drawing surface on your screen using the "Drawing, Grid Size" option on the Layout Menu. You may find, for example, that you need more working space. You can also obtain additional working space by simply doing all your work in one of the zoom-in modes. It is, however, preferable that you work at 100% zoom as much as possible, and control your work space size through the "Drawing, Grid Size" dialog box. One of the main reasons for this is that you lose placement resolution when working in zoom modes over 100% because the "logical pixels" are larger. The higher zoom modes are also slower to work in.

The "Drawing, Grid Size" dialog box allows you to define the number of "logical pixels" in each drawing dimension. A "logical pixel" is equivalent to a screen pixel at the 100% zoom level. Some caveats are in order here:

1) For a printer that uses 8.5" x 11" paper, with a printable surface of 7.5" x 10", it is best to maintain a 1.333 (10/7.5) to 1 aspect ratio, with the larger dimension depending on whether you intend to place your printer in landscape or portrait modes. This will result in the maximum utilization of paper area. If you choose some other ratio, KwikDraw is nice enough to maintain your aspect ratio on paper, but some of the printable area will be unused.
2) KwikDraw will not allow you to define either dimension larger than 2047 logical pixels. Placing a number larger than 2047 in any of the boxes on the "Drawing, Grid Size" dialog box will cause KwikDraw to disable the "OK" button.

The "Drawing, Grid Size" dialog box includes buttons for four default configurations: 1:1 Landscape, 1:1 Portrait, 2:1 Landscape, and 2:1 Portrait. The 1:1 configurations are scaled such that the size of objects at 100% zoom on a 13" VGA screen (in 640 x 480 resolution) are approximately the same size as the printed output on an 8.5" x 11" sheet of paper with a 7.5" x 10" printing area. For the 2:1 configurations, objects on screen will be approximately half of their printed size. There is nothing special about these configurations, feel free to define your own sizes. You may find one of the defaults as a useful starting point from which you can scale your drawing size up or down. Please note that these default buttons will also reset the Grid spacings as discussed in Changing the Grid Spacing.

Changing the Grid Spacing

You may alter the Grid Spacing using the "Drawing, Grid Size" option on the Layout Menu. KwikDraw uses two grid parameters, the Major Grid Spacing, and the Minor Grid Spacing. These grid spacing parameters are expressed in logical pixel units, where a logical pixel is equivalent to a screen pixel when at the 100% zoom level. When Grid Snap is on, objects are snapped to the nearest pixel in a Minor Grid Position. When the Grid is displayed, however, these pixel Snap locations are only displayed where they coincide with the Major Grid Positions. This enhances redraw time and avoids visual confusion when small grids are defined with the Minor Grid Spacing. You may, of course, define the Minor and Major grid spacings to be identical, if you wish.

A popular grid setting places Major Grid marks for every 1" of the printed output, and Minor Grid marks every 1/8th or 1/10th inch. Thus for a 7.5" x 10" printable surface and a 600 x 800 logical pixel size, a typical Major Grid would be 800 (pixels per inch) divided by 10 (inches), or 80 pixels. Note that the other dimension also works out to 80 pixels (600 divided by 7.5).

Please note that the Major Grid Spacing MUST be some multiple of the Minor Grid Spacing. KwikDraw will not allow a combination of grid spacings that violate this rule. If the grid spacings do not conform, then KwikDraw will disable the "OK" button on the dialog box.

The "Drawing, Grid Size" dialog box includes buttons for four default configurations: 1:1 Landscape, 1:1 Portrait, 2:1 Landscape, and 2:1 Portrait. These buttons are discussed in Changing the Drawing Size. Be aware, however, that these buttons will reset the Major and Minor Grid Spacings to 80 pixels and 10 pixels, respectively. In the 1:1 configurations, this corresponds to a Major Grid for every inch on the printed output, with a Minor Grid every 1/8th of an inch. In the 2:1 configurations, this corresponds to a grid pattern that is twice as dense. Feel free to define your own grid pattern regardless of whether you are using one of the default drawing sizes.