Contents

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1   Installing the Software

The following are instructions for installing the software. A typical installation will install the design software along with Production Manager, the Install Password utility and other features.

It is possible to install the design software on a system without installing Production Manager. This can be useful if you want to connect a computer to your output devices in one area of a shop, while doing your design work in another area, for example. See "Using a Hardware Key over a Local Area Network" on page136 for more information.

Recommended System Requirements

Before you begin installing the software, read the hardware requirements below. For optimal performance, we suggest that your system meet the recommended requirements. As with all computer software, systems with faster processors, more RAM, and greater amounts of storage space allow you to work with larger files and keep your processing time to a minimum.

	Windows	**Macintosh**
Processor	Pentium II 350 MHz	G3 300 MHz
RAM	256 MB	
Install Space	400 MB	
Working Disk Space	4 Gigabytes	
Operating System	Windows 2000 / XP Windows 2003 Server	OSX 10.2.8 or later
Video	1024x768 resolution monitor with 16 bit color	
Other	CD-ROM or DVD-ROM Drive	
	Free USB Port for hardware key	
	Available Port for Output Device	
	Internet Connection	

Installation Procedures

The software will not run without a hardware protection key, also known as a dongle. The hardware key protects the software from being unlawfully copied and must be connected to your computer whenever you use the software.

📄   The Sentinel Hardware Key is the only type of hardware key supported.

Sentinel Hardware Key

Installing the Software (Windows)

📄   To install the software, you must have Administrator privileges. To use the software, you must have Administrator or Power User privileges. See your Windows user guide for more information.

1   Insert the Installation CD.

2   Follow the on-screen instructions to install the application.

3   Plug the hardware key into the port.

Once the USB hardware key driver has been installed, the driver will cause an LED built into the key to light. The USB driver is installed automatically as part of the software installation.

Uninstalling the Software (Windows)

1   Exit your software by selecting **Exit** from **File** menu.

2   In the Windows Control Panel, double-click the **Add or Remove Programs** icon.

3   Select your software from the list and click the **Change/Remove button**.

4   To delete all user-created files stored within the application folder, check **Delete user files in application folder**.

📄   User-created files that are removed by this step are deleted and cannot be recovered.

5   Click **Next**.

6   Follow the on-screen instructions to uninstall the application.

Installing the Software (Macintosh)

1   Insert the Installation CD.

2   Double-click the **Installer** icon.

3   Follow the on-screen instructions to install the application.

4   Plug the hardware key into the port.

Once the USB hardware key driver has been installed, the driver will cause an LED built into the key to light. The USB driver is installed automatically as part of the software installation.

Installing ICC Color Profiles for Your Printers

1   Insert the ICC Profile CD.

2   Double-click on the installer for your language.

3   Follow the on-screen instructions to install ICC profiles for your printers.

Uninstalling the Software (Macintosh)

1   Exit your software by selecting **Quit** from the **File** menu.

2   Drag the alias for your software from the desktop to the Trash.

3   Drag the folder where your software was installed to the Trash.

4   Empty the Trash.

Using Preference Manager
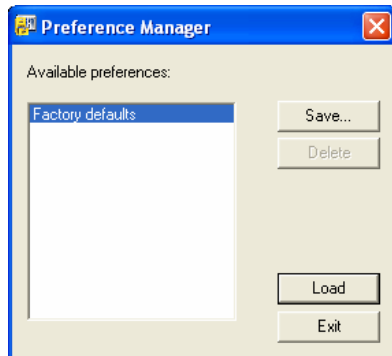
Preference Manager is a utility that allows you to save all of the settings in the software to a file, including all output device setups, setup properties, default job properties and all application preferences.

You cannot load a set of preferences while either the design software or Production Manager is running. You can save preferences at any time.

Saving a Set of Preferences

1   Run **Preference Manager**.

2   Click **Save**.
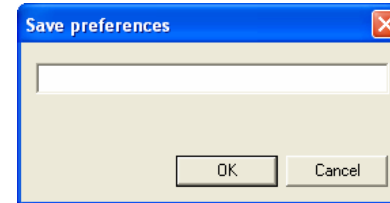
3   Type the name for the set of preferences in the field and click **OK**.

Loading a Set of Preferences

1   Exit the software.

2   Run **Preference Manager**.

3   Select the set of preferences you want to load.

4   Click **Load**.

Restoring the Software to Its Original State

The default settings for the software are stored in the Default set of preferences. Restoring the software to its default state may be particularly helpful when troubleshooting any problems you may encounter with your software.

📄   Loading this set of preferences will remove all of the output device setups in Production Manager.

1   Exit the software.

2   Run **Preference Manager**.

3   Select **Default**.

4   Click **Load**.

Exiting Preference Manager

To exit Preference Manager, click **Exit**.

Install Password

The Install Password utility helps you manage the different passwords that come with the software. After you have installed the basic program with your main password, you should then launch the Password Installer to add any additional passwords you may have.

Application Password   This is your main application password for software.

Option Passwords   If you have purchased additional options, you may enter the option passwords to this field to upgrade your software.

    Make sure that the software is not running when you add a new password.

Adding Additional Passwords

1   Launch the Password Installer.

2   Your main application password will appear in the top section.

3   Add your additional passwords to the optional password section by clicking the **Add** button and entering the password into the dialog.

4   When you have finished, your password should appear in the list in the optional password field.

2 Getting Started

The illustration below shows some of the basic elements of your software:

Main Menu

Main Toolbar

Rulers

Standard Toolbar

Borders

View Toolbar

Design Area

Swatch Table

Scroll Bars

Status Bar

Cursor Position

Default Colors
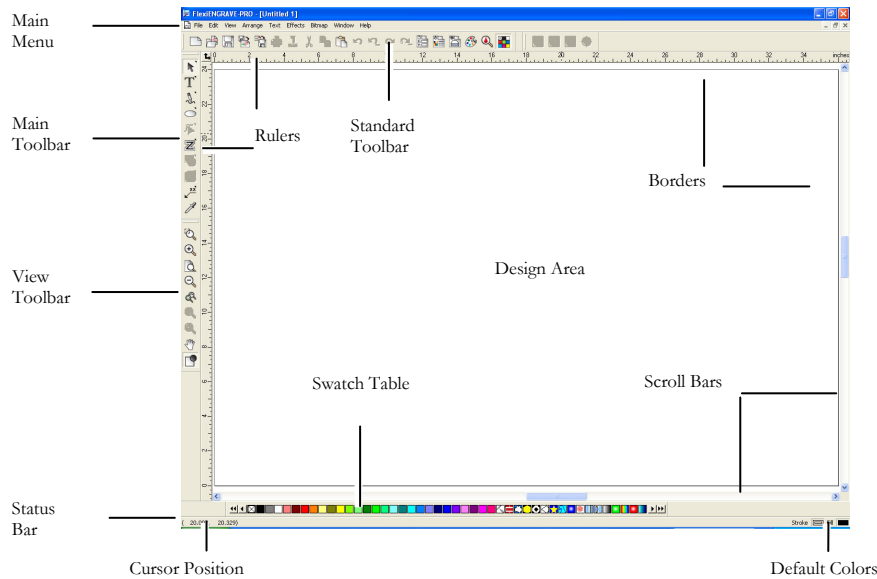
Toolbars

Toolbars are a set of commands grouped according to their function.

Standard toolbar

Showing or Hiding a Toolbar

1   From the **View** menu, select **Toolbars**.

2   Check or uncheck the toolbars that you want to show or hide.

Or (Windows only):

1   Right-click the area around the design area where the toolbars are docked.

2   In the menu, select or unselect the toolbar that you want to show or hide.

📄   You can also hide a toolbar by clicking the Close button on the upper right side of the toolbar.

In Windows, toolbars are docked or floating. Docked toolbars are placed at fixed positions around the design area. Floating toolbars can be placed

anywhere in the design area. You can undock a toolbar, making it a floating toolbar, and then place it at any location in the design area. Macintosh toolbars are always floating.

Unlocking a Toolbar

Do one of the following:

•   Drag the toolbar from its docked position. (Do not drag buttons).

•   Double-click the toolbar. (Do not double-click buttons).

📄   Dragging or double-clicking the buttons will not undock or dock the toolbar.

Double-click or drag to undock the toolbar
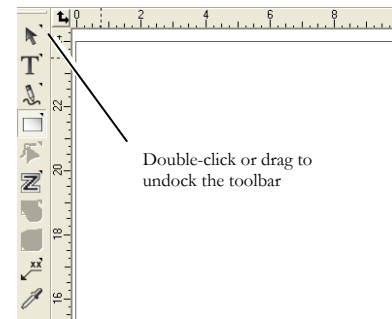
Docked Toolbars
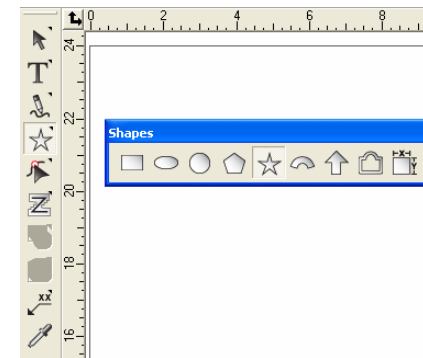
Undocked View Toolbar

The shape of a floating toolbar can be adjusted by dragging its borders.
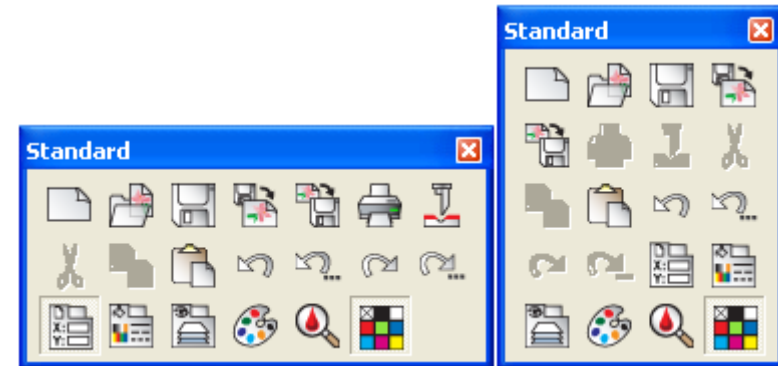
Standard toolbar in different shapes

When a button has a small triangle on upper right corner, is an indication that this button is a part of a tear-off palette.

Using the Tools in a Tear-Off Palette

1 Click once on the button and drag it slightly to display the full palette.

2 Once it is displayed, you can either select the desired tool and release the mouse button, displaying the new tool, or drag the entire palette away from the original palette and release the mouse to drop it on the drawing area.
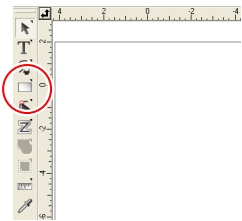
Original palette
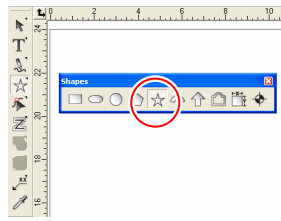
Dragging the tear-off palette and selecting a new tool
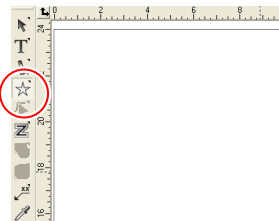
The new tool is selected

Menus

Menus are commands grouped by the types of operations they perform.

Enabled Command

Currently available.

Disabled Command

Not available.

On / Off button

Indicates whether the command is currently active or not.

Shortcut key

Allows you to select the command using the keyboard.

Ellipses (…)

Indicates that a dialog box will be displayed when this command is chosen.

Submenu Indicator

Indicates that a submenu is available.

When right-clicking elements in your software, a context menu is displayed. The context menu will differ according to the element that you are right-clicking on.
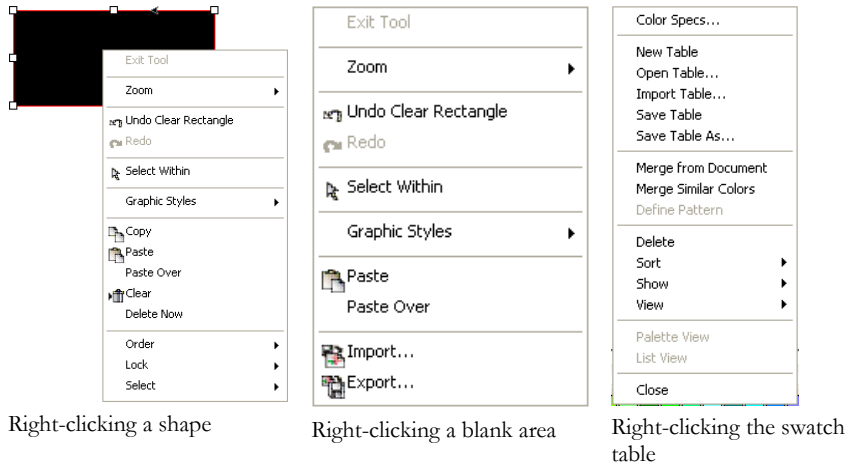
Right-clicking a shape

Right-clicking a blank area

Right-clicking the swatch table

Tool Tips

All fields and control points that can be dragged will show tool tips to help. Some commands will also show a brief description at the bottom of your screen.

📄   To show a tool tip, hover the cursor over the field, command or control point for a few seconds.
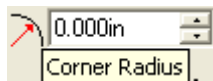
Numeric field with a tool tip
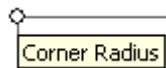
Control Point with tool tip
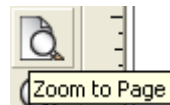
Button with a tool tip

Design Area

The design area is the white area inside the software's screen. It has a border that serves as a guide and represents the size of your substrate. The size of the design area does not limit the size of your design or where the design is placed on your media during output.

Margins can be placed inside the design area. Those margins are used to distribute and align objects inside the design area. You can change the size and the color of the drawing area and show or hide the borders. See "DesignCentral - Document Tab" on page 26 for more information on how to set up your document properties.

Swatch Table

Swatch tables includes a group of standard colors, gradients and patterns that can be applied to objects in your design. See "Working With Swatch Tables" on page 46 for more information on swatch tables.

To toggle the display of swatch tables on and off, from the **View** menu, select **Swatch Table**. This will also force hidden swatch tables to be displayed.

Ruler and Grid

Rulers appear along the top and left side of the main screen to help you measure and align objects. As you move the cursor in the design area, a tick mark on each ruler follows the movement of the cursor. Also, the coordinates of the cursor position are displayed at bottom left corner of the screen.

To show or hide the rulers, from the **View** menu, point to **Show** and click **Show Rulers**.

Grids, like rulers, can help you align objects in the design area. Grids are displayed as horizontal and vertical lines within the design area. They will not show as part of the output.

To show or hide the grids, from the **View** menu, point to **Show** and click **Show Grid**.

The rulers, grids and all other numeric values that represent a length follow a unit system defined in your software. To change the unit system, right-click a ruler and select the new unit. On Macintosh, click and hold on the mouse button on the rulers.

By default, the origin of the rulers is located in the lower left corner of the design area. To change the origin, you can click and drag the origin icon in the upper left corner of your screen.
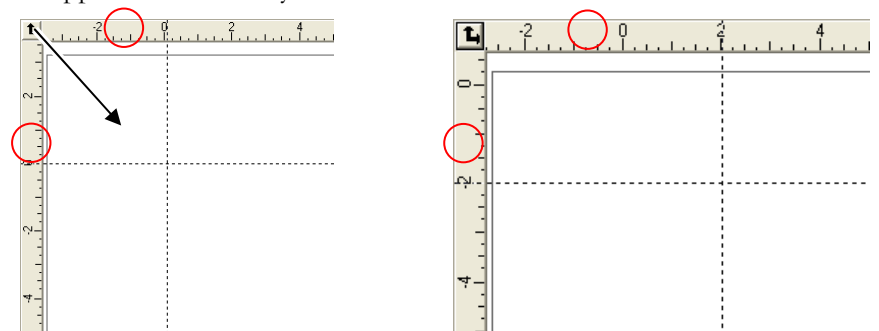
Click and drag the Origin icon   The new Origin

You can also adjust the origin's position by using the Ruler and Grid Settings dialog box.

Displaying the Ruler and Grid Settings

Do one of the following:

- Double-click the **Origin** icon in the upper left corner of the design area. 🔳

- From the **View** menu, select **Ruler and Grid**.

The Ruler & Grid dialog box consists of Ruler and Grid tabs.

On the **Ruler** tab, adjust the following parameters:

Origin	Enter the X, Y coordinates of the new origin.
Orientation	Click one of these buttons to change the orientation of the coordinates in the X, Y rulers.
Units	Select the unit system that will be used for length values from this list.

On the **Grid** tab, adjust the following parameters:

Spacing	Horizontal and vertical space between adjacent dots.
Snap to grid	Check this option to snap the objects to the grid while moving or resizing them.
Show grids as dots	Check to display grids as dots at the intersection points instead of solid lines.

Guides

Guides allow you to visually align design elements on your document.

To show or hide the guides, from the **View** menu, point to **Show** and select **Show Guides**.

Creating a Horizontal or Vertical Guide Line

- Click and drag one point on the ruler. Horizontal or vertical guide lines are created depending on which ruler you drag from.
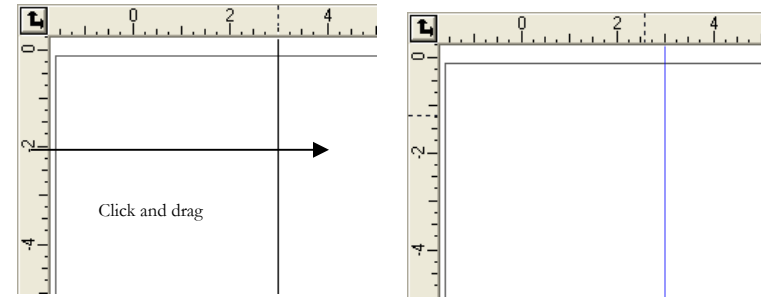
Click and drag

Click and drag a point in the ruler   A new vertical guide is created

Converting Objects to Guides

1   Select objects.

2   From the **Arrange** menu, point to **Guides** and click **Make Guide**.

3   Select **Release Guide** in the same menu to convert guides back to original objects.

Or

- In DesignEditor, drag objects from generic layer to **Guide** Layer. See "DesignEditor - Layers Tab" on page 29 for more information.

Creating a Diagonal Guide

1   Create a horizontal or vertical guide.

2   Rotate the horizontal or vertical guides using DesignCentral - Rotate tab.

📄   Hold **Shift** to constrain the line angle to increments of 45 degrees.
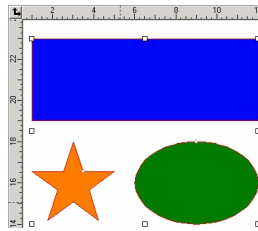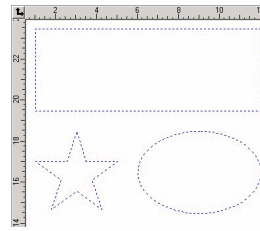
Select the objects   Objects converted to guides

Locking Guides

From the **Arrange** menu, point to **Guides** and click **Lock Guides**.

📄   Guides cannot be selected by dragging a bounding box around them. You must click the guide.

Selecting All Guides

1   From the **Edit** menu, point to **Select** and click **Select by Attributes**.

2   Select **Guide Line** in **Object tab**.

3   Click **OK**.

Status Bar

The Status bar is the area located on the bottom of your screen and displays the following information:

- The present X, Y coordinates of the cursor or additional information about the selected command.

- The default fill and stroke colors or the foreground and background colors (when in bitmap editing mode).

Changing the View

There are several commands to change how the design area is viewed.

Using a Wheel Mouse

If your computer is equipped with a wheel mouse, you can use the mouse wheel to control the view:

- Move the mouse wheel up and down to pan the view up and down.

- Hold **Shift** and move the wheel up and down to pan the view left and right.

- Hold **Ctrl** and move the wheel up and down to zoom the view in and out.

Using Scroll bars

Scroll bars are horizontal and vertical bars located in the bottom and right side of your design area. Use them to scroll the design area.
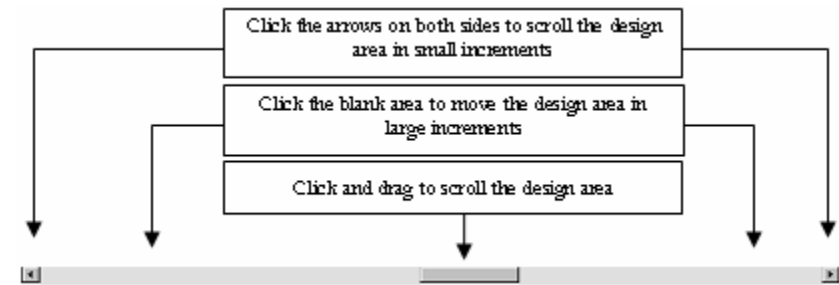
Zooming and Panning

The Zoom tools change the magnification of items within the design area to allow you to see more or less detail. This does not change the output size.

	Zooms in at twice the magnification of the current view. The point you click on will become the center of the view. • Hold **Ctrl** and click to zoom out to half the magnification of the current view. The point you click on will become the center of the view. • Click and drag to magnify one particular portion of the design area.
	Magnifies the center of the view to twice the size of current view.
	Adjusts the view size to fit the design area size.
	Adjusts the center of the view to half the size of current view.
	Switches the view to previous magnification.
	Adjusts the view size to fit the selected objects.
	Adjusts the view size to fit all existing objects.

 Pans the view position.

 Double-click this tool to choose Show layer color, Show fill color or Show path direction.

By default, the cursor will return to the previous tool after using these tools. You must reselect the tool you want to use again.

Using Zoom, Pan or Fill tool without Selecting it Before Each Use

Do one of the following:

- Double-click the **Zoom** tool and uncheck the **Resume previous tool after zooming once** option.

  Or

1 From the **Edit** menu, select **Preferences**.

2 Click **Tools tab**.

3 Select **Zoom** in the list.

4 Uncheck **Resume previous tool after zooming once** option.

5 Click **OK**.

Using Navigator View

Navigator View allows you to view your entire document and specify which portion to display.

To show the Navigator View, from the **View** menu, select **Navigator View**.

Design Area

View Area

Navigator View

Changing the View

Do one of the following:

- Click and drag a point inside the View Area to pan the portion displayed in the design area.

- Click and drag a control point around the View Area to resize it, causing a zoom in or zoom out in the design area.

Showing Objects' Fill

When the Show Fill option is enabled, every vector object is displayed with its fill. When disabled, only the outline will be visible.

To show or hide the fill, from the **View** menu, select **Show Fills**.

When Show Fills is disabled, the outlines can be displayed using the following modes:

Show layer color	All outlines are displayed using the layer color. See "Changing the Layer Color" on page 30 about how to change the layer's color.
Show fill color	The outlines are displayed using the object's original fill color.

Show Fills Enabled

Show Fills Disabled (Show fill color)

Show Fills Disabled (Show layer color)

Show Fills Disabled (Show path direction)

Show path direction	The outlines are displayed using three colors. Green for clockwise paths, Magenta for counter clockwise paths and Gray for open paths. Selected objects will still be displayed using the layer color.

Changing the Way Outlines are Displayed

Do one of the following:

- Double-click the **Fill Mode** tool and select the **Wireframe** option.

  Or

1 From the **Edit** menu, select **Preferences**.

2 Click **Tools tab**.

3 Select **Show Fills** in the list.

4 Select the **Wireframe** option.

5 Click **OK**.

Showing Path Directions

The direction in which the path will be cut or plotted is determined by the path direction. See "Path Direction" on page 85 about how to change the path direction.

You can visualize the path direction using **Show path direction** mode as described in previous item, or show direction arrows in each path.

Showing or Hiding Direction Arrows

1	From the **View** menu, select **Show Path Direction**.

2	Select the objects.
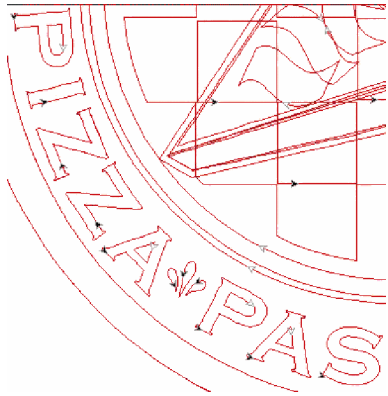
Paths with direction arrows

Showing Tool Diameter

Show Tool Diameter simulates output and allows you to see the diameter of the tool as it follows the tool path.

To Show Tool Diameter, select **Show Tool Diameter** from the **View** menu.

Previewing Bitmaps

You can display or hide bitmap images.

To show or hide the bitmap, from the **View** menu, select **Preview Bitmaps**.

Preview Bitmaps Enabled   Preview Bitmaps Disabled
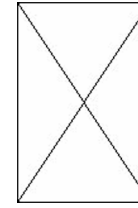
Showing Preview

When Show Preview is on, a copy of the object as it is being edited or moved is displayed. When this option is off, a rectangle representing the bounding of the object is displayed. Performing memory-intensive operations in complex objects may slow the system performance when Show Preview is on.

To show or hide the preview, from the **View** menu, select **Show Preview**.

Previous Location

Moving objects with Show Preview off   Moving objects with Show Preview on
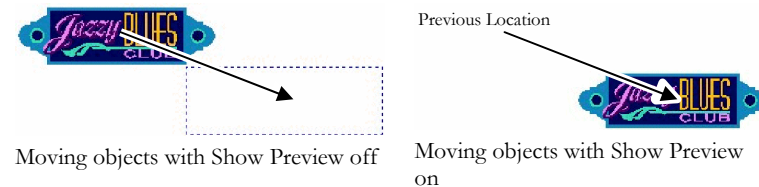
Redrawing the Design Area

Occasionally, when you edit your design, those changes are not reflected immediately.

To force a redrawing of the design area, select **Redraw** from the **View** menu.

Previewing Objects in CMYK

If you are going to print your document, you can preview how your output will look by using the CMYK soft preview. This feature will alter the colors in your document to show how they will look when printed. The colors outside the CMYK gamut will be adjusted to the nearest possible CMYK color value.

To preview the colors in CMYK mode, from the **View** menu, select **Soft Proof**.

📄 If objects in your document and the swatch table appear "washed out," it may be because the Soft Proof feature is on.

Soft Proof is Off   Soft Proof is On

To accurately preview the colors, set up the correct Color Profiles and Rendering Intents that will be used in printing. See "Configuring the System for Color Printing" on page 130 for more information.
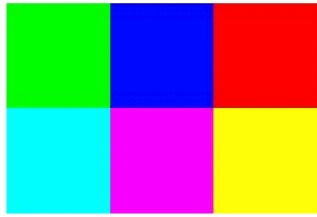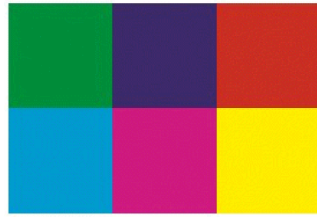
Filtering Objects by Color

Objects may be filtered by their color in the design area. For example, you can show all objects using RGB color space, or all green objects.

Filtering Objects Using the Color Filter

1 From the **View** menu, select **View Filter**.

2 Select the colors that will be visible.

- Click the color space checkbox to select all colors from this color space.
- Click the specific color within one color space to select or unselect this color.
- Click **Show All** to select all colors from all color spaces.
- Click **Show None** to unselect all colors from all color spaces.

3 Click **OK**.

📄 Filtering settings will not be saved with your document. The next time you open this file, all objects will be visible.

Filtering Objects Using the Color Swatch Table

1 From the **View** menu, select **Swatch Table**.

2 From the Swatch Table, right-click the color you want to filter by.

3 From **View**, select the filtering option.

4 Choose one of the following options:

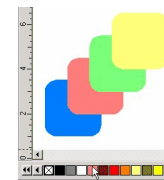|	
Hide This Color	Objects using this color will not be visible.
Show This Color	Objects using this color will be visible.
Show All Except This Color	Only the objects using this color will not be visible.
Hide All Except This Color	Only the objects using this color will be visible.
Show all colors	All objects will be visible.

Cursor over the Swatch Table   After selecting Hide This Color
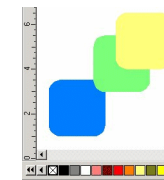
Tracking your Steps

You can retrace your steps by using the undoing and redoing commands.

Undoing and Redoing the Last Step

To undo the last operation, from the **Edit** menu, select **Undo _____**.

To redo a step that you have just undone, from the **Edit** menu, select **Redo _____**.

Undoing and Redoing Multiple Steps

Instead of undoing just the last operation, you can undo a sequence of steps.

Undoing Multiple Steps

1 From the **Edit** menu, select **Undo Multiple**.

📄 A list with all recent steps is displayed. The steps are shown in order, with the most recent step appearing on the top of the list.

2 Click to select the steps that you want to undo, starting from the top.

📄 The design area dynamically shows a preview of the undoing process.

3 Click **OK** to confirm and apply the undo.

📄 The selected steps are undone and placed in a redo list.

Selecting steps to Undo

The Redo list after Undo

The Undo list after Undo

Redoing Multiple Steps

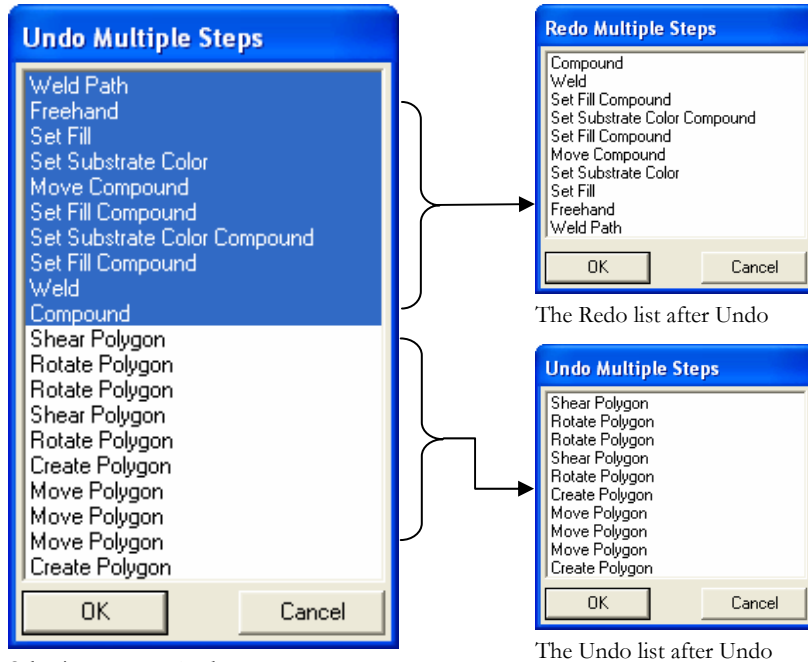**1** From the **Edit** menu, select **Redo Multiple**.

   📄 A list with undo steps is displayed.

2 Click and drag to select the steps that you want to redo, starting from the top.

   📄 The design area dynamically shows a preview.

3 Click **OK**.

The number of undo and redo operations that is allowed can be adjusted. For example, if you set the number of steps to 50, after performing the 50th step, the 1st step will be discarded and the 51st step will be placed at the top of the list.

Adjusting the Number of Steps Stored in Undo List

1 From the **Edit** menu, select **Preferences**.

2 In the **General tab**, enter the number of steps in **Maximum undo/redo.**

3 Click **OK**.

Repeating the Last Step

To repeat the last step, select **Repeat** from the **Edit** menu. The name of the last operation will be displayed after Repeat.

Only the following commands can be repeated:

- Moving objects
- Duplicating objects
- Scaling objects
- Applying effects

Using Workspaces

Workspace stores how and where the menus, buttons, commands and keyboard shortcuts are defined. By changing the Workspace feature, you can rearrange the software's interface to look more like the design software that you are more comfortable with.

To change the workspace, from the **File** menu, point to **Workspace** and select the workspace.

Workspace Editor

The Workspace Editor allows you to customize shortcut keys for Menu Commands and Tools. All default shortcut keys are displayed.

Assigning Shortcut Keys

1 From the **File** menu, point to **Workspace** and select **Customize**.
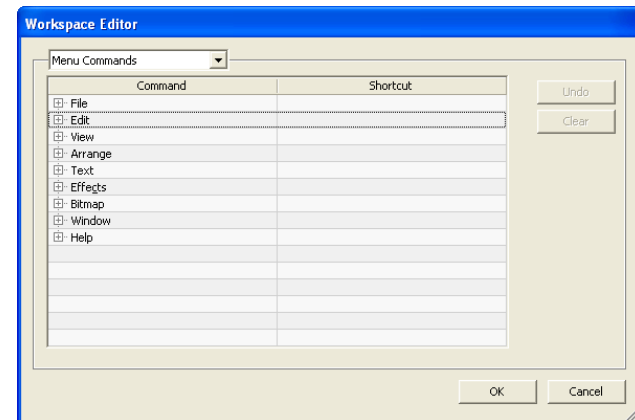
2 Navigate to the **Menu Commands** or **Tools** from the menu.

3 Highlight the Command or Shortcut.

4   Enter a key combination to assign the new shortcut.

    📄   Shortcuts can contain a single character or a combination of a character and **Shift**, **Ctrl** or **Alt**.

5   Click **Undo** to revert to the previous shortcut.

6   Click **Clear** to remove the assigned shortcut.

7   Click **OK**.

Entering Numerical Values

You can use a number of unique features that make it easier to enter numerical values.

Using Spinner Controls

Spinner Control

Use the spinner controls to increase or decrease the value. When you click, or click and hold the mouse on one of the arrows, the value is increased or decreased incrementally. Using the arrow keys on your computer's keyboard will have the same effect.

Using Built-In Mathematical Operations

The software is able to perform a number of calculations whenever a numerical value is being entered.

Automatic Unit Conversion

If you enter a value using a different unit of measurement than the default unit, the software will automatically convert the value to the default unit.

For example, if your default unit is inches, you can enter a value of **1 ft**, and the software will convert the measurement to **12 in**.

Supported units are:

in, "	inch
ft, '	foot
mm	millimeter
cm	centimeter
m	meter
pt	point

Calculation of Ratios

If you enter a ratio in the format **A:B**, the software will scale the previous value in the field by the ratio entered.

For example, if a value is set to **12**, and you enter **2:3**, the new value will be **8**.

Calculation of Percentages

If you enter a percentage in the format **X%**, the software will scale the previous value in the field by the percentage entered.

For example, if a value is set to **10**, and you enter **90%**, the new value will be **9**.

Simple Mathematical Operators

If you enter a simple mathematical expression, the software will calculate the result of the expression and enter that value in the field.

The available mathematical operators, in order of precedence, are:

/	Division
*	Multiplication
+	Addition
-	Subtraction

For example, if you enter **1/8**, the value **0.125** will be calculated.

Operator precedence determines the order in which the mathematical operations will be calculated when more than one operation is specified. In the previous list, operators are listed from top to bottom in order of operator precedence. For example, if you enter **6/2*3**, the software will calculate **6/2** first then multiply the result by **3**, yielding a result of **9**.

Automatic Application of Entered Values and Expressions

Once you enter a numerical value, ratio or mathematical expression in a numerical field, the software will automatically apply that value. You can also press Tab to apply the value. Avoid pressing **Enter**, as it will trigger the **OK** button and close the dialog.

Setting Preferences

Many aspects of your software may be saved so that they are set up the way you like every time you open a new file. These settings are known as program preferences.

There are other settings that are saved on a document basis. Which means that each time you open or save a document, the settings will be applied only for that particular document. These settings are known as document preferences.

To change the program preferences, from the **Edit** menu, select **Preferences**.

Preferences - General Tab

In this dialog box, you can set the general attributes of your software:

|	
Maximum undo/redo	Determines the number of operations stored in the undo / redo list. Smaller values in this field use less memory.
Selection tolerance	Determines how close the cursor must be from the object to select it. Setting a larger value makes it easier to select points.
Constrain angle	Sets the Constrain Angle when you rotate objects with **Shift** pressed. The rotation will be performed in increments defined by this field.
Save documents every	Open documents will be periodically saved. You can specify the time period between saves.
Trash capacity	Number of objects that can be saved in the trash layer.
Precision	Number of decimals in numeric fields.
Display color popup window as	Select whether the popup window that appears when you select a color from the Fill/Stroke dialog is a list of color swatches along with their names, or a palette of color swatches.

List view   Palette view

|	
Save settings on exit	If checked, the current settings for the software will be saved when the software exits, and restored the next time the software starts up. If cleared, the settings are not saved, and at startup the software will load the settings that were in place the last time the software was shut down with this option selected. Selected by default.
Smooth screen display	By default, all objects in the design area are displayed using anti-aliasing, to eliminate jagged edges on curves and provide a more attractive and accurate view of the design.
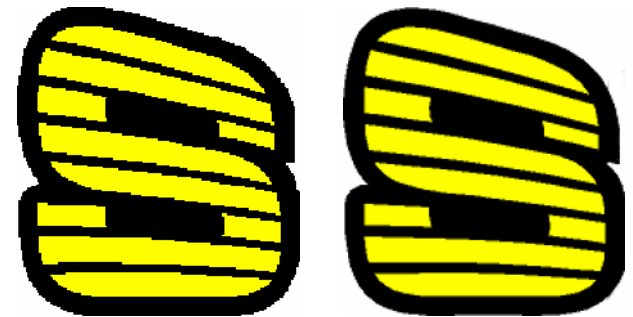
Smoothing off   Smoothing On

> 📄 Users with less powerful computers and graphics cards may wish to turn smoothing off to increase performance.

Restore Defaults	Click this button to restore the default settings for above fields.

Preferences - File Path Tab

In this dialog box, you can set the default folders used in your software:

Document	The default folder used to store your documents. Click **Browse** to select a folder.
Update default location on import, open or save	If checked, every time you import, open or save a file, that folder will become the new default location.
Temporary Files	The default folder used to create temporary files. If you have multiple hard disks, select a folder in the hard disk with more free space available. Click Browse to select a folder.
Adobe Plug-ins	If you have Adobe Photoshop installed, specify here the folder where the plug-ins are stored. Click Browse to select a folder.
Restore Defaults	Click to restore the default settings for above fields.

Preferences - Font Tab

In this dialog box, you can set the default settings for external FSfonts:

|	
Path	The folder where the FSfonts are stored. Click Browse to select the folder.
Password	If the FSfont is protected by a password, click Add to enter the password. To delete a password, select the password and click **Delete**.
Specify Flexi/Casmate fonts with open paths	To specify that a Flexi or Casmate font will not be filled (to use it for engraving, for example), select the font in the list and check Open. The font will be rendered as an outline:
	📄 The software must be restarted in order for this change to go into effect..
Restore Defaults	Click this button to restore the default settings for above fields.

Preferences - Tools Tab

In this dialog box, you can set the default settings for some of the tools available in the software.

✅	**Check Spelling**	Set options related to the on-screen spell checking features of the software. See "Setting On-Screen Spell Checking Options" page 74 for more information.
	Meter	These preferences allow you to specify the colorimeter used in your software to measure color values and the port where the measurement device is connected. See "Defining New Colors Using the Color Specs Dialog" on page 50 and "Modifying Existing Color Libraries (Windows Only)" on page 53 for more information.
	Paste	These preferences allow you to specify if the copied objects will be automatically created when pasted, and the offset distance from the original object. See "Duplicating Objects Using Copy and Paste" on page 36 for more information.
	RIP and Print	This tool allows you to specify that the software must communicate with Production Manager using TCP/IP (Windows Only).
		📄 Clear this box if the operating system is not Windows NT, 2000 or XP, or if the computer is running firewall software that might interfere with TCP/IP communications.
▶	**Select Tool**	These preferences allow you to specify how the objects will be selected. See "Selecting Objects Using Select Tool" on page 32 for more information.
	Show Fills	These preferences allow you to specify how the paths are displayed when the Show Fill option is off. See "Showing Object's Fill" on page 9 for more information.
	Show Grid	Check Show grids as dots to display the grid using dotted lines instead of solid lines. See "Ruler and Grid" page 6 for more information.
T	**Text Tool**	Sets several aspects of the text tool. See "Text Preferences" on page 79 for more information.
	Tip of the Day	Displays a tip when you start the software.
	Zoom	Selects if the zoom and pan tool will be used only once. See "Zooming and Panning" on page 8 for more information.

Windows and Macintosh User Interface Features

You can view the differences between features on the Macintosh and Windows user interface.

Shortcut Keys

When keyboard shortcuts are listed, use the following list to find the equivalent shortcut key on the Macintosh.

Windows System		Macintosh System
Right-click the mouse	=	Click the mouse while holding **control**
Crtl key	=	**command** key (apple/clover)
Enter key	=	**return** key
Backspace key	=	**delete** key
Delete key	=	**del** key

📄 You can access the context menu for the ruler and swatch table by clicking and holding the button.

Menus

The following menu items are in different places on the Macintosh than they are under Windows.

Windows Menu > Item		Macintosh Menu > Item
File > **Exit**	=	[Application] > **Quit**
File > **Print Setup**	=	**File** > **Page Setup**
Recently viewed files (bottom of **File** menu)	=	**File** > **Open Recent**
Edit > **Preferences**	=	[Application] > **Preferences**
Edit > **Paste Special**	=	[No Macintosh equivalent]
Help > **About**	=	[Application} > **About**

Other Controls

The following controls are found in a number of dialogs, and are named differently on the Mac.

Windows Control		Macintosh Control
Browse button	=	**Choose** button

Getting Help

From the **Help** menu, point to **Help Topics** to view the full online documentation for the software. The online help contains all of the information in this guide, plus information on all the other commands in your software.

Exiting the Software

Exiting the Software under Windows

- From the **File** menu select **Exit**.
- Right-click on the software icon in the system tray and select **Exit** from the context menu.

Exiting the Software under Macintosh OS X

- From the application menu, select **Quit** [application].
- Hold **control** and click on the application icon in the dock. From the context menu, select **Quit**.

3 Working with Files

Your document can contain any combination of vector, bitmap, OLE or PostScript objects.

Vectors   Vectors are a collection of straight or curved segments. These objects can be scaled to any size without losing detail or clarity. Shapes like rectangles, circles and text are vector objects.

Bitmaps   Also called raster images, bitmaps are formed by a grid of small dots, known as pixels to represent images. Each pixel is assigned a specific location and color value. A low resolution bitmap image can appear jagged when printed.

PostScript   Images described using a page-description language known as PostScript. These objects can contain a combination of vector and bitmap images. When imported into your document, PostScript objects can be parsed or previewed.

OLE   OLE is the abbreviation of Object Linking and Embedding and it is available only for Windows. OLE is a compound document standard developed by Microsoft and it enables you to create objects with one application and then link or embed them in your document.

Vector objects   Bitmap object   Parsed PostScript object   OLE object

Creating New Documents

To create a new document, from the **File** menu, select **New**.
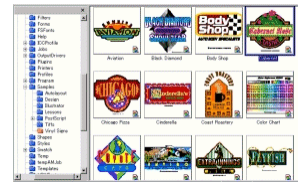
Opening Files

1   From the **File** menu, select **Open**.

2   Select the file format, folder and the file that will be opened. See "Appendix B - Supported File Formats" for all supported file formats.

3   Click **Open**.

📄   If the file contains fonts that are not installed in your system, a dialog box will appear, allowing you to select a replacement font.

Or

- Double-click the file icon in Windows Explorer.

- Drag the file icon to your software icon on the desktop will start the application and open the file.

Double-click to open the file

Importing Files

1   From the **File** menu, select **Import**.

2   Select the file format, folder and the file that will be imported. See "Appendix B - Supported File Formats" for all supported file formats.

3   Click **Import**.

📄   If the Auto-place on paste and import option in Paste preferences is enabled, the file will be imported immediately after clicking the Import button.

4   Click the design area and place the imported objects.

If the file contains fonts that are not installed in your system, a dialog box will appear, allowing you to select a replacement font.

Layering is ignored during import, so that multiple imports do not create many unnecessary layers. To preserve layer information, use **Open** from the **File** menu instead.

Saving Documents

1   From the **File** menu, select **Save** or **Save as**.

2   If you have selected Save As or you are saving the document for the first time, a dialog box is displayed. Enter the name and the location that will be used to save the document.

3   Click **Save**.

Exporting to Files

1   Select the objects that will be exported.

2   From the **File** menu, select **Export**.

3   Select the file format, folder and the file name. See "Appendix B - Supported File Formats" for all supported file formats.

4   Adjust the following parameters:

Selection only	Check this option to export only the selected objects.
Suppress options	Some file formats will show an option dialog box before exporting to a file. Check this option to bypass the options dialog box.

5   Click **Export**.

Layering information, including layer name, color and attributes will be exported for the following formats: Adobe Illustrator, DXF and HPGL.

Sending a Job to EnRoute (Windows Only)

If you have the EnRoute program installed on your computer, the software allows you to transfer the current design directly to EnRoute.

To transfer the current design to EnRoute, from the **File** menu, select **Send to EnRoute**.

Emailing a Job

To send the current job to someone as an email attachment, from the **File** menu, select **Send Email**, then select one of the following:

As Native	The job will be added as an attachment in Flexi format.
As JPEG	The design will be converted to a JPEG and added as an attachment.
As PDF	The design will be converted to PDF and added as an attachment.

A new e-mail message will be created in your default e-mail program, and the current job will be added to the message as an attachment of the selected type.

Closing Documents

1   From the **File** menu, select **Close**.

2   If your document has been changed since the time it was last saved, a dialog box is displayed asking if you want to save the current document.

- Click **Yes** to save the document before closing it.
- Click **No** to close the document without saving.
- Click **Cancel** to exit the closing procedure.

Linked and Embedded Files

When importing bitmap, EPS or PostScript files, you can link or embed the file into your document. A link is a connection between the document and the original file.

Embedded object	An embedded object is contained in your document. Once a file is embedded, there is no longer a connection between it and the file from which it came. Changes to the original file have no effect on the embedded object.
Linked object	When objects are linked, only a reference to the image file is stored in the document. The image information remains in the original image file. If the image file is changed, those changes will also appear in your document. Since linking to a picture preserves the original attributes of the image file, it is recommended for color printing.

📄   PostScript files often contain an optional preview graphic. When you link or embed a PostScript file, the preview graphic will be displayed in your document. If the PostScript file does not contain a preview, an "X" will be displayed instead.
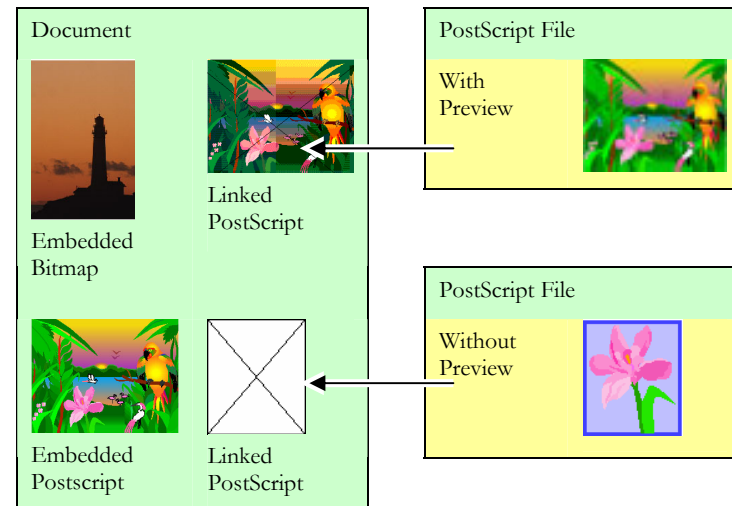
Embedded PostScript files will automatically be converted into the equivalent drawing objects from the software, at which point they can be displayed and edited like any other object.

Embedding Linked PostScript Files

1   Select the preview of the linked PostScript file.

2   Select the **PostScript** tab in DesignCentral.

**3**   Click **Parse**.

Using OLE Objects (Windows Only)

The OLE (Object Linking and Embedding) feature of Windows allows you to import objects that were created using other software installed on your computer such as spreadsheets and word processors.

Inserting OLE Objects

1   From the **Edit** menu, select **Insert New Object**.

2   Select the type of object you want to create. Only programs that are installed on your computer that support OLE appear in the list.

3   Select **Create New** option to create a new OLE object using the selected application.

📄   Check Display as Icon to show the OLE object simply as an icon. Click Change Icon button to change the icon.

4   The selected programs will start, creating a window inside your software.

5   Resize and edit the contents of the window, using the selected program.

6   To finish using the selected program, press **Esc** key or click anywhere outside the program window.
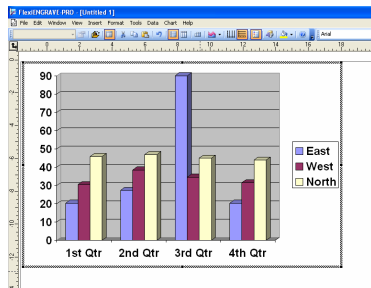

Design area with an Excel spreadsheet
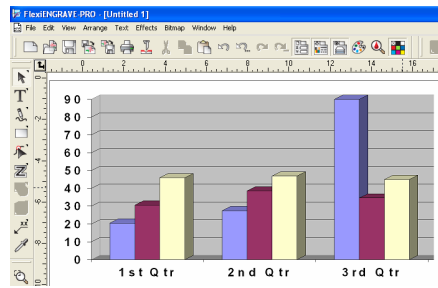
After the OLE object has been inserted

Inserting Existing Files as OLE Objects

1   From the **Edit** menu, select **Insert New Object**.

2   Select **Create From File** to merge an existing file into your document.

3   Click **Browse** and find the file to be inserted.

- Check **Display As Icon** to show the OLE object simply as an icon. Click **Change Icon** button to change the icon.

- Check **Link** option to link the selected file. The object in the file will be stored apart from the document, and all the changes made in the source file will be reflected in your document. If the Link option is unchecked, the object will be embedded and stored with the document.

4   Click **OK**.
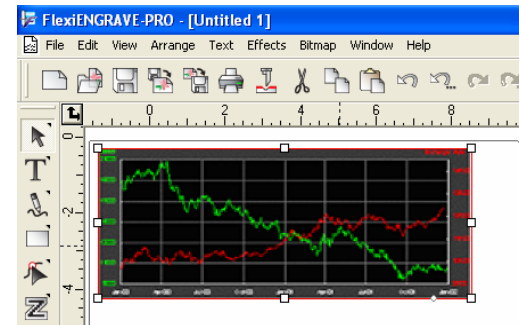
Document with a linked OLE object

Editing OLE Objects

1   Select the OLE objects.

2   From the **Edit** menu, point to **[...] Object** and click **Edit** or **Open**.

When you select Edit, the program associated with the OLE object will start in a window inside your document and will be finished after the editing. If you choose **Open**, a full instance of the program will start and you may leave this application running even after editing the OLE objects.

📄   Double-clicking the OLE object has the same effect as **Edit**.

Converting OLE Objects to another Format

1   Select the OLE objects.

2 From the **Edit** menu, point to **[…] Object** and select **Convert**.

3 Select the new format from the list.

4 Click **OK**.

Converting OLE Objects to Basic Segments and Bitmaps

1 Select the OLE objects.

**2** From the **Arrange** menu, select **Convert Linked to Native**.

Changing Linking Properties of OLE Objects

1 From the **Edit** menu, select **Link**.

2 Change the following linking options:

Automatic / Manual	Determines whether the linked information updates automatically when you open the document or manually when you choose to update it.
Update Now	Updates the OLE object in your document to reflect the situation of the original file when in Manual mode.
Open Source	Opens the linked file using the associated program.
Change Source	Changes the linked file, replacing the current file with another one.
Break link	Permanently breaks the connection between a linked object and its source file.

Working with Job Info

Your program allows you to store information about the job with each file you create. You can add or change information about a job at any point in the design and production process. This information becomes part of the file and is saved when the file is saved.
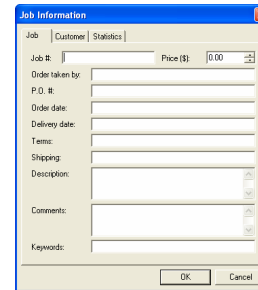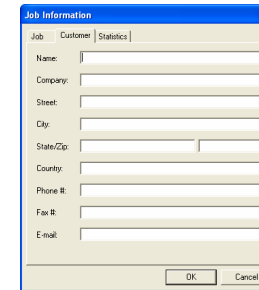
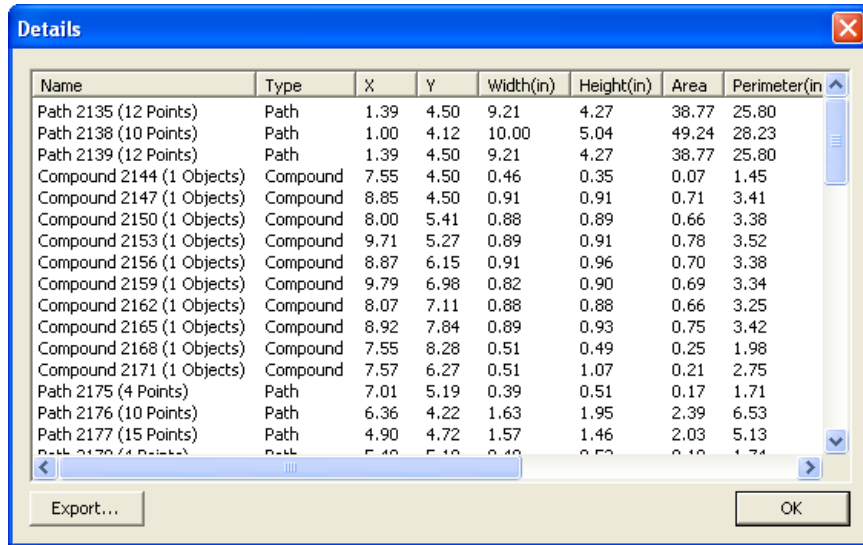|		
Job tab	Customer tab	Statistics tab
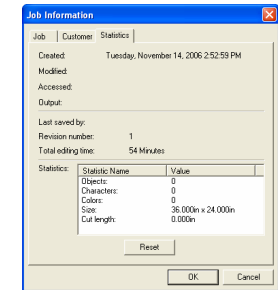
Viewing or Editing Job Info

1 From the **Edit** menu, click **Job Info**.

2 There are four tabs where you can view or edit the job info:

Job tab	In this dialog box you can edit the information about this particular document.
Customer tab	In this dialog box you can edit the information about the customer.
Statistics tab	This dialog box contains stored information about the job, including the amount of time spent editing it, the number of times it was revised (the number of times it was saved) as well as other information. Data in this tab cannot be edited.
	Clicking the Reset button will restore the number of revisions and the total editing time on a file.

3 Click **OK**.

Job Statistics

This dialog contains a list of all the objects contained in the job, along with size, position, area and color information. In addition, the parameters of the current selection are listed. Data in this tab cannot be edited.

Viewing Job Statistics

1. From the **Edit** menu click **Job Statistcs**.
2. Click **Export** to export the job to a tab-delimited text file.
3. Click **OK**.

Finding Files

The Find File feature allows you to search for specific files. You can search the file based on file name or any of the parameters of Job Information.

Searching for a File

1. From the **File** menu, select **Find File**.
2. Click **Browse** and select the folder where the search will be performed. To search all sub folders check the Include subfolders option.
3. Enter the search condition:
    *   To search a file by its name, enter the file name in **Named** field.
    *   To search a file using any of the job information, select any job criteria from the menu and enter the search text in the **contains** field. For example, you can search for all files that "Order taken by" contains the name John Doe.
4. Click **Search**.
5. Select the file in the list.
6. Do one of the following:
    *   Click **Job Info** button to show the job information.
    *   Click **Open** button or double-click the file in the list to open the file.
   *   Click **Cancel** button to end the search.
7. Click OK.

Job Estimation

Job Estimation is a tool for producing price estimates of your job. The Job Estimation stores accounting information for each job, calculates price automatically, and gives a price estimate. The information can be changed or customized to reflect your costs and needs.

> 📄 This feature is intended to be a guideline and therefore all results should be thoroughly reviewed before basing any business or financial agreements upon them.

The estimation is calculated based on some elements of your design like the number of characters or the material area. These values are automatically gathered from your document. Other values like preparation time must be manually entered when doing the job estimation.

The cost elements used in job estimation are grouped in **Category, Item** and **Type**:
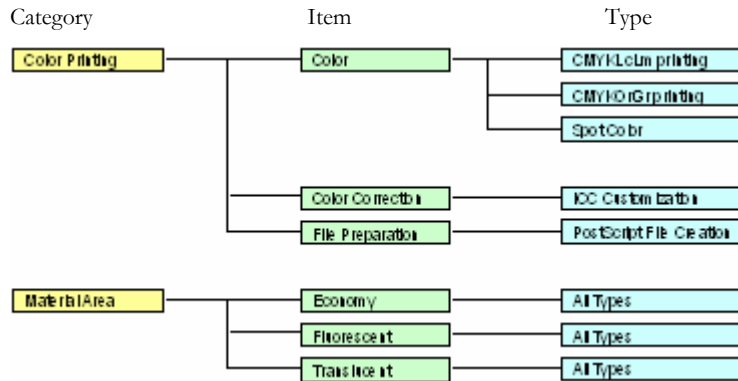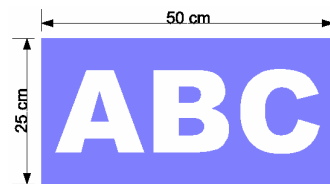
Using Job Estimation

1 From the **Edit** menu click **Job Estimation**.

2 Select the **Form** type.

3 Select the Item in the list and edit the **Unit Cost, Quantity** and **One Time** fields for selected item. Repeat this process for all items that need any correction.

4 Edit the **Quantity** and **Tax rate** fields.

5 After the estimation is completed:

- Print an invoice by clicking **Print** button.

- Save the estimation values as a text file by clicking the **Export** button.

📄 The total value will be automatically inserted in Job Info - Job tab.

One sample of Job Estimation.

Customizing Forms

1 From the **Edit** menu click **Job Estimation**.

2 Select the **Form type** that will be changed.

3 Change the form by clicking the buttons described below:

Add Item	Adds a new item to the list. Click this button and select the Category, Item and Type in the dialog box that is displayed. If the item is one that incurs only a one-time cost for the entire run of finished pieces, such as design time, check One time.
Change Item	Select one item in the list and click this button. Then, select the Category, Item and Type. The new item will replace the selected item.
Delete Item	Select one item in the list and click this button. The item is deleted from the list.
Delete	Deletes the Form type from the list.

4 After all changes are done, click **Save** to save as a new form.

5 Enter a name that will appear in the Form list.

6 Click **OK**.

Customizing the Item List

The Estimation Editor allows you to customize your prices to correspond to your normal charges. Once you make a change using the Estimation Editor, it is reflected every time you insert an item that uses the data you changed.

1 From the **Edit** menu click **Job Estimation**.

2 Select the **Estimation Editor** tab.

3 Select the **Category** type that will be changed.

4 Adjust the following parameters:

Built In	Items that are automatically computed based on the design information such as working time and number of colors.
Color Printing	Items used in color printing.
Material Area	Computes based on the size of the drawing objects.
Services	Single item charges and non-automatic items.
Substrate	Computes based on drawing size.
Text Size	Computes based on the number and size of each character.

5 You can create a new category by clicking the **New** button. Clicking **Delete** will delete a category and all its types and items.

6   To create or delete an item or type inside the selected category, click the buttons described below:

New Item	Click this button and type the new item name to add a new item to the Item list.
Delete Item	Select an item in the list and click this button. The item is deleted from the list.
New Type	Click this button and type the new type name to add a new item to the Type list.
Delete Type	Select a type in the list and click this button to delete it.

7   To change one type, select the type and item from the list and change the following fields:

Cost	Allows you to enter a new default cost per unit for the selected type.
Markup	Percentage of the items cost to include as markup for profit margin and to cover the cost of wasted materials.
Minimum	Allows you to enter a new minimum charge for the selected type. To remove the minimum charge, enter zero (0.00).
One Time	Use this option when a particular item will be charged only one time, independently from the value set in Quantity field.
Unit	This is the unit of measure by which the row is calculated, such as inches, square foot or per hour, day, week or month.

8   To print a list with all categories and their item and types, click the **Print** button.

9   Click **OK**.

Applying Templates

Templates allow you to create multiple copies of your document using a pre-defined layout. Additionally, you can create documents, such as invoices, based on Job Information.
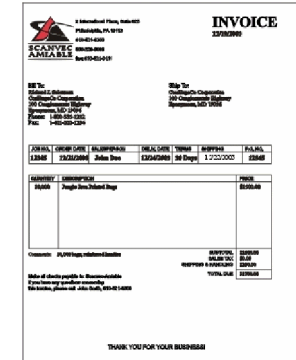

The copies are created using the following pattern:

(2) 4.0 x 5.0 inches

(2) 2.5 x 3.5 inches
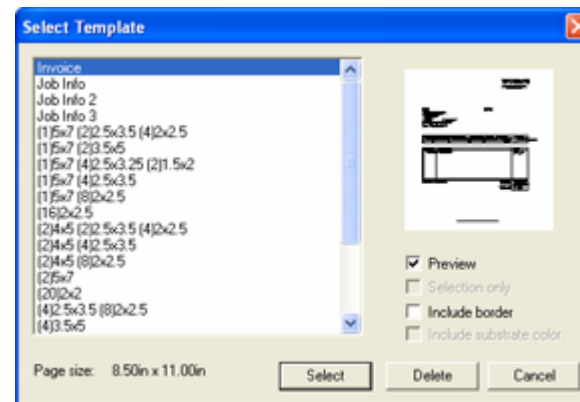
(4) 2.0 x 2.5 inches


Creating copies of a document.

Invoice created using the template feature

📄   If necessary, the original document will automatically be rotated to fit into the space proved by the picture placeholders in the template.

1   Open an existing document or create a new one.

2   From the **File** menu, point to **Templates** and click **Apply Template**.

3   Choose the template from the list. The templates are named following the convention:

(2) 4 x 5 (2) 2.5 x 3.5 (4) 2 x 2.5

Number of copies

Size (inches)
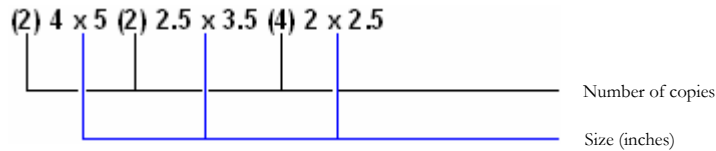
4   Adjust the following parameters:

Preview	Check to display a preview of the template.
Selection only	If checked, only the selected objects in the original design will be copied over into the template.
Include border	If checked, the entire page of the design out to the borders will be copied over into the template. If not checked, only the objects in the design will be copied over.
Include substrate color	If checked, the colored substrate in the original design (if any) will be copied over into a template. This option is only enabled if Include border is checked.

5   Choose **Select**.

📄   When a template is applied to a document, any dimensions or registration marks contained in the document are converted into outlines.

Setting the Default Template

1   From the **Edit** menu, select **Preferences**.

2   Select the **Tools** tab of the **Preferences** dialog.

3   Select **Apply Template** from the list of tools.

4   Select the template you want to make the default from the **Default Template** list.

5   Click **OK**.

Templates Toolbar

To display the Template toolbar, from the **File** menu, point to **Templates** and select **Template Toolbar**.

You can use the Templates toolbar to create and modify existing templates. This toolbar contains buttons that represent the placeholders. Placeholders are fields that will be replaced by objects, images or information from the original document when a template is used.

The following placeholders are available:

The Active Drawing placeholder is replaced by the original document.

The Used Colors placeholder is replaced by a list with all colors used in the original document.

- Black
- Deep Red
- Purple
- Red
- Dark Brown
- Yellow
- Satin Gold
- Cocoa

The Used Fonts placeholder is replaced by a list with all fonts used in the original document.

Arial-Regular
Arial-Bold
Arial-Italic
Century-Regular
Courier New-Regular

The Job Info placeholder is replaced by a value from job info and other information from the original document.

Job Number: 12345
Price: 6493.16
Order Taken By: John Doe
Order Number: 12345
Order Date: 12/25/2001
Delivery Date: 12/27/2001

Job Info	Shows information from Job info - Job tab.
Customer Info	Shows information from Job info - Customer tab.
Other	Shows other information from the original document, such as number of colors, fonts and characters used.

Creating New Templates

1   Open a new document.

2   Select the placeholder from the **Template** toolbar.

3   Click and drag the cursor on design area.

4   Adjust the placeholder's attributes in DesignCentral - **Template** tab.

📄   You can add other objects other than placeholders. Every object available in your software like bitmap, text and shapes can be used in a template.

5   From the File menu, point to Templates and then click **Save as Template**.

📄   Template objects can be masked, colored and have an effect applied to them.

Editing Existing Templates

1   From the **File** menu, point to **Templates** and select **Open Template**.

2   Select the template in the list.

3   Adjust the placeholder's attributes in DesignCentral - **Template tab**.

4   From the **File** menu, point to **Templates** and then click **Save Template** or **Save as Template**.

📄   **Save Template** will save the current template, **Save as Template** will save the template in a new file.

Changing Placeholders Attributes in DesignCentral

Each placeholder will have different fields in the DesignCentral - Template tab. Adjust the following parameters:

8.500in	Width of the drawing placeholder.
11.000in	Height of the drawing placeholder.
Auto Orientation	Check to automatically change the orientation of the drawing to match the original file.
Scale the drawing	Check to resize the drawing by percent of original size.
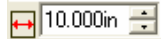
For Used Color placeholder:

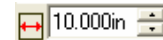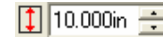|	
Arial / Regular	Font and style used in the color description.
10.000in	Width of the Used Color placeholder.
10.000in	Height of the Used Color placeholder.
1	Number of colors per line.
0.300in	Size of the font used in color description.
0.000in	Line spacing.
0.150in	Width/Height of color swatch.
⦿● ○■	Select circular or square color swatch.

For Used Fonts placeholder:

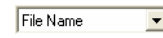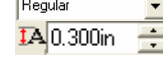|	
Arial / Regular	Font and style used in the font description.
10.000in	Width of the Used Fonts placeholder.
10.000in	Height of the Used Fonts placeholder.
1	Number of colors per line.
0.300in	Size of the font used in font description.
0.000in	Line spacing.

For Job Info placeholder:

|	
File Name	Source of the information (Job info, Customer Info or Other).
Other	Information type.
Arial / Regular	Font and style used in the job info description.
0.300in	Size of the font used in job info description.
Label	Check this option to place a label before the information text. Edit the label text in the field right of this option.

4 Using DesignCentral

DesignCentral displays tabs and options appropriate to objects' properties. For example, when a rectangle is selected, DesignCentral displays the width, height, corner style and other properties.

To display DesignCentral, from the **View** menu, select **DesignCentral**.

DesignCentral Tabs

DesignCentral consists of several tabs. The number of tabs and their content vary according to which objects are selected in the document.

You can select a tab by clicking on its indicator in DesignCentral, or double-clicking the objects. Each double-click will move to the next available tab.

Tabs
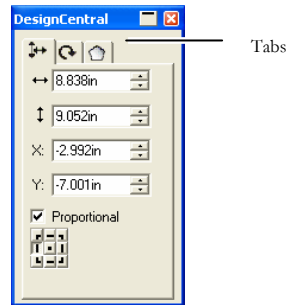
DesignCentral

DesignCentral - Document Tab

Use the Document tab to specify the size of the drawing area and the color of the substrate, or background color. A number of standard document sizes are included. You can specify a custom drawing area size by entering new horizontal and vertical values.
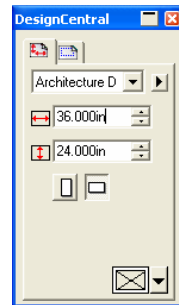
Showing the Document tab

Do one of the following:

DesignCentral – Document tab

- Open DesignCentral and click an empty area in the document.
- From the **File** menu, select **Document Setup**.

Adjust the following parameters:

Architecture D	Selects standard document sizes.
▶	Opens additional options for document size.
Add	Adds a new document size.
Delete	Delete's an existing document size.

|	
Set as Default	Sets a default document size.
Show Border	Shows or hides the design area borders.
↔ 10.000in	Width of document.
↕ 10.000in	Height of document.
	Specifies the color of the substrate.

DesignCentral - Margin Tab

Use the Margin tab to specify the margins around a drawing area.

These margins are used when objects are aligned or distributed, and also are useful for laying out elements symmetrically. See "Aligning Objects" on page 41 for more information.
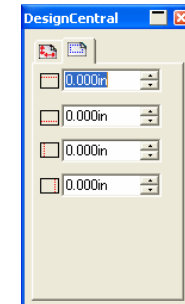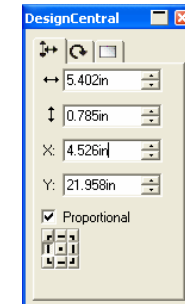
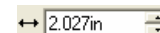DesignCentral – Margin tab

DesignCentral – Scale Tab

The Scale tab allows you to change the width, height and position of selected objects. You can size objects by dragging the control points or by changing the numerical values.

In DesignCentral, adjust the following parameters:

DesignCentral – Scale tab

Changing the Size of Objects

1. Select the objects.
2. Adjust the following parameters:

↔ 2.027in	Width of design.
↕ 2.029in	Height of design.

Or

- Drag the control points on the objects.

Changing the Position of Objects

1 Select the objects.

2 Adjust the following parameters:

X: 15.774in   Horizontal position of the reference point, measured from the origin. See "Ruler and Grid" on page 6 for more information.

Y: 18.346in   Vertical position of the reference point, measured from the origin. See "Ruler and Grid" on page 6 for more information.

Proportional   Ensures that the object will be scaled proportionally in both the width and height.

You can change the reference point by using the Reference Grid. Each button in the grid corresponds to a point on the selected objects. If you want to position the center of objects, click the center point.
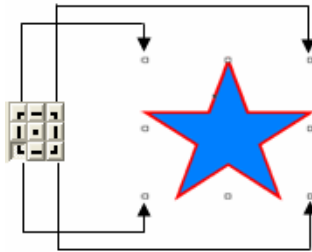
Reference Grid and Resize Points

DesignCentral - Rotate Tab

The Rotate tab of DesignCentral allows you to rotate, shear or mirror selected objects. You can change them either by dragging the object's control points or by changing the numerical values in DesignCentral.

Rotating Objects

1 Select the objects.

📄 After selecting an existing object, the Size, Rotate and Object tabs are available.

DesignCentral – Rotate tab

2 To select the point that will be fixed during the rotation, do one of the following:
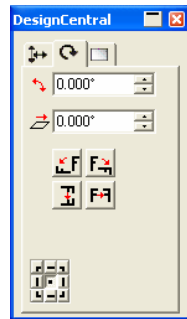
- Click a point on the **Reference Grid**.
- Click and drag the Reference Point to the desired position. Hold **Ctrl** and drag to fix the Reference Point to the settings on the Reference Grid.
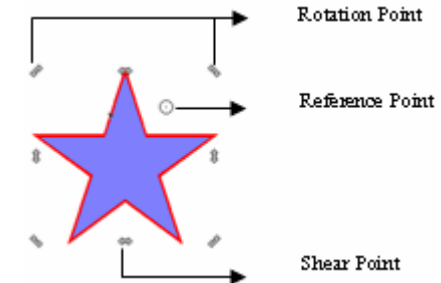
3 Adjust the following parameters:

0.000°   New angle of selected objects.

   Rotates selected objects 90 degrees counter clockwise or clockwise.

Shearing Objects

1 Select the objects.

2 To select the point that will be fixed during the shearing, do one of the following:

- Click a point on the **Reference Grid**.
- Click and drag the **Reference Point** to the desired position. Hold **Ctrl** and drag to fix the Reference Point to the settings on the Reference Grid.

3 Change the following parameters:

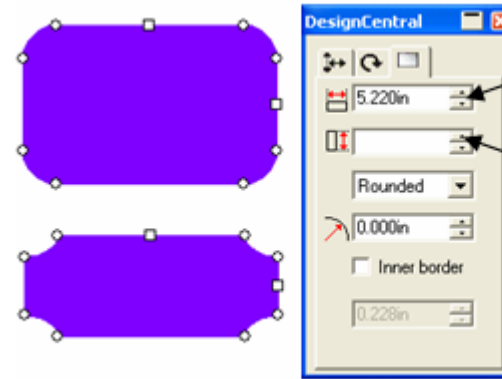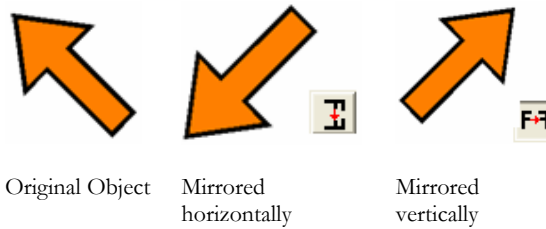0.000°   Shear angle that will be applied to the selected objects.
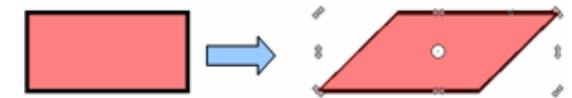
A rectangle sheared to an angle of 45 degrees

Mirroring Objects

1 Select the objects.

2 Adjust the following parameters:

Mirrors selected objects horizontally or vertically.

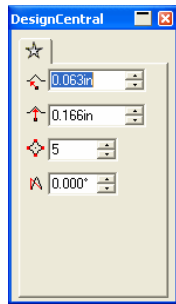Original Object   Mirrored horizontally   Mirrored vertically

It shows a value since both rectangles have the same width

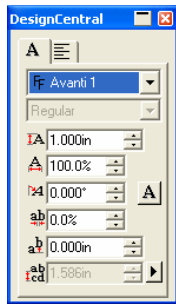It is blank since both rectangles have different height

Object tab when both objects are selected
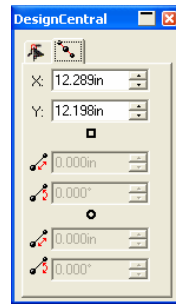
DesignCentral - Object Tab

The Object tab content will vary according to which objects are selected in the document.

Object tab when a Star is selected / created

Object tab when Text is selected / created

Object tab when a Path is selected / created

When creating objects, only the Object tab is visible. After selecting an existing object, the Size, Rotate and Object tabs are available.

The Object tab is not available when different types of objects (like text and rectangle) are selected. However, if you select objects with same type, their common properties are displayed in DesignCentral.

DesignCentral - Effects Tab

When you apply an effect over objects, DesignCentral displays the Effects tab with all properties of the effect.

The Object tab for the object where the effect was applied is not visible in DesignCentral, but you can still select it using the **Select Within** tool or double-clicking the object while holding **Ctrl**. See "Selecting Objects within an Effect" on page 32 for more information.
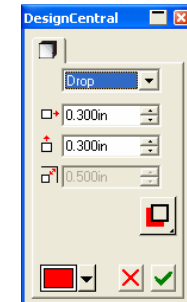
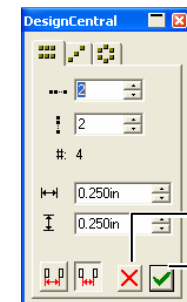DesignCentral - Effects tab

DesignCentral - Setup Tab

Many of the changes you make are automatically applied as you change them. You will notice that some commands contain two buttons, **Apply** and **Cancel**, on the bottom right side of DesignCentral.

DesignCentral will open automatically if there is a Setup tab associated with the command.

Cancel button

Apply button

DesignCentral - Setup tab
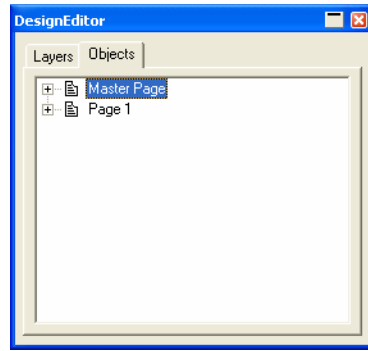
5   Using DesignEditor

DesignEditor helps you manage the various layers and objects in your design. You can choose to display some layers and hide others, delete or add layers and do similar functions with individual objects.

Displaying DesignEditor

To open DesignEditor, from the **View** menu, select **DesignEditor**. DesignEditor consists of two tabs, the Layers tab and Objects tab:

DesignEditor - Layers tab   DesignEditor - Objects tab

DesignEditor - Layers Tab

Layers are a convenient way to organize the elements of your design for easy access and editing. Think of layers as sheets of acetate stacked one on top of another. Where there is no image on a layer, you can see through to the layers below. Behind all of the layers is the Substrate and the Trash Layer.

The layer at the bottom of the tab is the bottom layer of your design, and the layer at the top of the tab is the topmost layer in the stack.

The layer that is highlighted in the Layers tab is called the Active layer. At any given time, one of the layers must be active.

By default, each new design that you open has the following layers:

Substrate Layer	Represents the surface on which your design might be applied. You cannot delete, copy or edit the substrate layer. However, you can move it to a different location in the stack, or hide it from view.

Grid Layer	The Grid layer is placed immediately on top of the substrate layer. Use the grid to help you position objects in the drawing area. See "Ruler and Grid" on page 6 for more information.
Guide Layer	The Guide layer contains the drawing Guides. See "Guide" on page 7 for more information.
Trash Layer	The Trash layer contains the objects that were deleted from your document. This layer allows you to recover objects that were accidentally deleted. See "Deleting Objects" on page 44 for more information.
Layer 1, 2, 3...	These layers contain the actual objects that were created in your document. You can have as many layers as you like for each design.

> When a layer with a disabled Edit property is active, most of the editing tools and commands will not be available.

When you right-click on any layer, a menu is displayed. Adjust the following parameters:

New Layer	A new layer is created. The new layer will be added above the active layer.
Delete Layer	The active layer is deleted.
Duplicate Layer	A copy of the active layer is created. The new layer will be added above the active layer.
Rename	Changes the active layer's name.
Properties	Shows the properties for the active layer.

You can also click the buttons on the top of the DesignEditor - Layer tab to perform some of the above commands:

New Layer	Delete Layer	Duplicate Layer	Empty Trash

Showing Layer Properties

Each layer has the following properties:

	Visible	Specifies if the layer is visible or not. Always disabled for Trash

|		
✏	Editable	Specifies if the layer is editable or not. Not available for Trash, Grid and Substrate layers.
🖶	Printable	Specifies if the layer will be printed or not. Always disabled for Trash Layer.
⬇	Cuttable	Specifies if the layer is cuttable or not. Always disabled for Trash and Grid Layer

Changing Layer Properties

Do one of the following:

- Click the icon on the DesignEditor - **Layers tab**. When the property is disabled, it displays an "X" over the icon.

       👁   Visible Property Enabled   👁   Visible Property Disabled

- Right-click the layer and select **Properties** from the menu. Edit the property in the **Layer Properties** dialog box that will be displayed.

Changing Layer Order

The order of the layer in the stack determines how the objects are displayed in your design area.
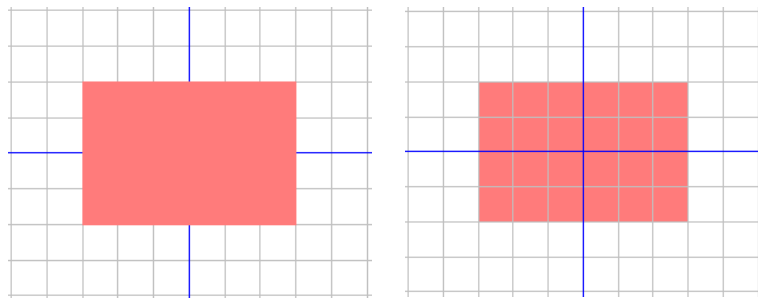
Layer 1 above the Guide and Grid layers

Layer 1 below the Guide and Grid layers

To rearrange the order of the stack, by click and drag a layer to a new position. A horizontal dashed line displays to indicate where in the stack the layer will be placed.

Merging Layers

When you merge one layer with another, all elements of the layer that you merged are added to the target layer.

1	Click and hold the mouse on the layer you want to merge.
2	While holding **Ctrl**, drag the layer to the layer you want to merge it with.
3	Release the mouse button.

Changing Layer Color

Each layer is associated with a color. For the Guide and Grid layers, this color is used to show its objects. For the **Layers 1, 2, 3…** layer, this color is used for the following:

- Displays objects in wireframe mode. See "Showing Object's Fill" on page 9 for more information.

- Colors the border of selected objects.

- Shows the preview for that layer. See "Showing Preview" on page 10 for more information.

Do one of the following:

- Drag any color from the **Color Swatch** and drop it directly onto the color icon on the DesignEditor - **Layer** tab dialog box.

- Open the **Layer Properties** dialog box and click the swatch, then select a color from the list.

DesignEditor - Objects Tab

Every time you draw a shape, create text or add any element to your design, information about that element is stored in the Objects tab of DesignEditor.

Each object is assigned a number to distinguish it from other objects of the same type. For example, Rectangle 1, 2, 3...).

Objects are stacked in the order they are created, with new objects being placed on top of older objects.

Effects, such as shadows, stripes and outlines always appear higher in the stack than the object to which they are applied.

The Objects tab is an excellent way to view the structure of your document. You can see the elements in each layer of your document, as well as any effects and other changes that you've applied to each object.

Selecting Objects Using the Objects Tab

The Objects tab allows you to quickly locate and select specific objects. This is useful when your design is complex, and selecting individual objects in the conventional way, pointing and clicking, has become difficult.

To select objects, select the object's name in the DesignEditor - **Objects tab**. Hold **Shift** or **Ctrl** to select multiple objects.

> 📄 You can select individual objects among compounded or grouped objects.

When you select objects in the design area, the corresponding items are automatically highlighted on the DesignEditor - Objects tab.

Changing the Order of Objects

You can change the order of objects by clicking and dragging them to a new location in the stack. You can change the stack order of objects within a particular layer, or you can move objects from one layer to another.

1. Click on the object that you would like to move or reorder in the **Objects** tab.

2. To drag the object to the desired location, do one of the following:

   - Hold **Shift** and drag to replace the highlighted object with the one you are moving.
   - Hold **Ctrl** and drag to duplicate the object and places it in the new location.
   - Right-click and drag to display a menu with the following options:

○ Move and Insert	○ Move and Replace
○ Copy and Insert	○ Copy and Replace

3. Release the mouse button when the object immediately under the object to be stacked is highlighted.

Renaming Objects

1. Click the object in DesignEditor - **Objects tab**

2. Click the same object again.

3. Type the new name.

Applying Effects

When you move objects underneath an effect, that effect is then applied to the objects. This is useful when you have applied a number of effects to a particular object and want to apply those same effects to another object. To do this, move the object within the hierarchy of the effect, or group of effects, that you want to apply.

> 📄 Effects are applied to the objects underneath them as a group. It is not the same as individually selecting objects and re-applying the same effects.
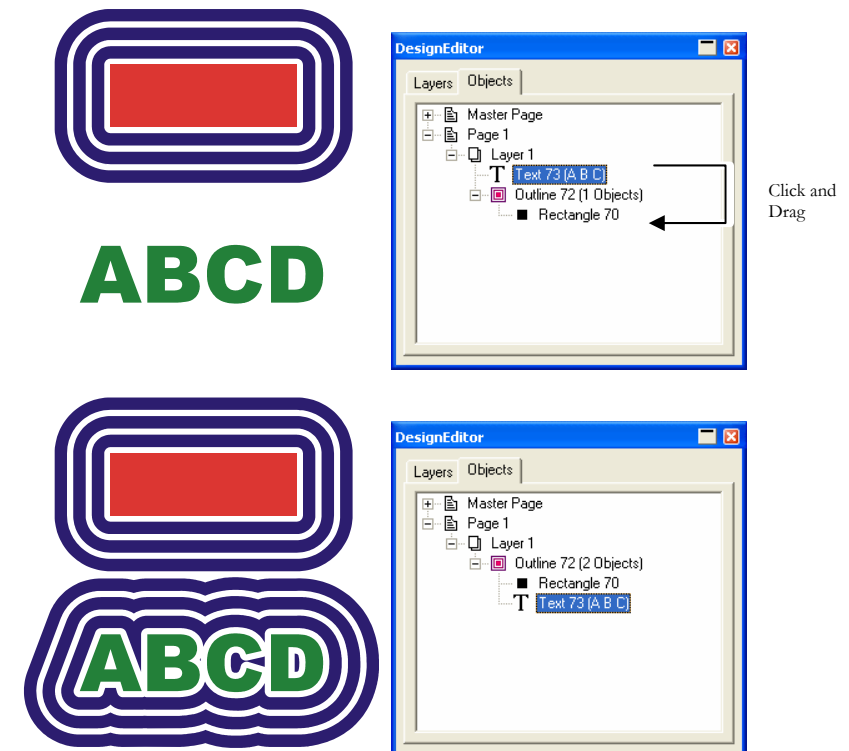
6   Selecting Objects

Selected objects are displayed with a selection border and control points around them, to distinguish selection from other objects.

The color of the Selection Border can be specified by using the DesignEditor - Layer tab. See "Changing the Layer Color" on page 30 for more information.
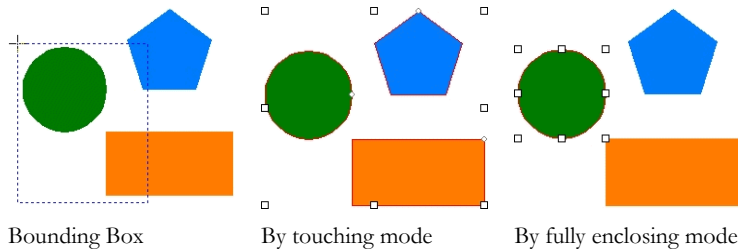
Selecting Objects Using the Select Tool

1   Choose the **Select** tool.

2   Click the object that you want to select.

📄   To select multiple objects, hold **Ctrl** or **Shift** and click on multiple items.

You can make a selection by using two modes. When you are in the By touching mode, any object that intersects the bounding box is selected. When you are in the By fully enclosing mode, the selection is restricted to those objects that are fully enclosed in the bounding box.

Selecting Objects Using the Bounding Box

1   Choose the **Select** tool.

2   Click and drag to create a bounding box around the objects you want to select.

📄   Holding **Ctrl** while creating the bounding box temporarily toggles the selection mode to the other setting.

Bounding Box   By touching mode   By fully enclosing mode

Changing the Default Selection Mode

The default setting in your program is **By touching**.

Do one of the following:

•   Double-click the **Select** tool.

Or

1   From the **Edit** menu, select **Preferences**.

2   Select the **Tools** tab.

3   Choose the **Select** tool from the list.

4   Change the selection mode.

5   Click **OK**.

Selecting Objects within an Effect
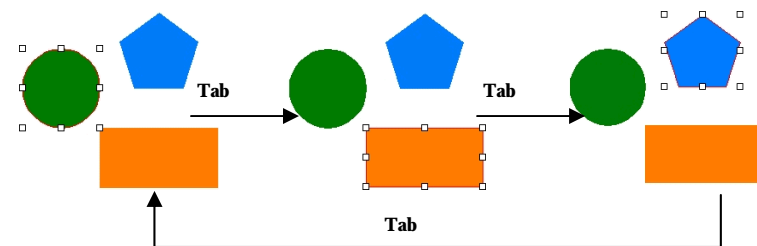
1   Choose the **Select Within** tool.

2   Click the object that you want to select.

Or

1   Choose the **Select** tool.

2   Hold **Ctrl** and double-click the object you want to select.
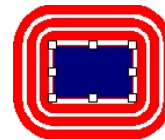
Rectangle selected within an Outline effect

Selecting Objects Using Tab

Pres **Tab** to select the next object. The selection order follows the order that the objects were created.

Selecting Similar Objects

1   Select the objects.

2 From the **Edit** menu, point to **Select**, and select **Select Similar Objects**.

Selecting Objects with the Same Color

1 Select the objects.

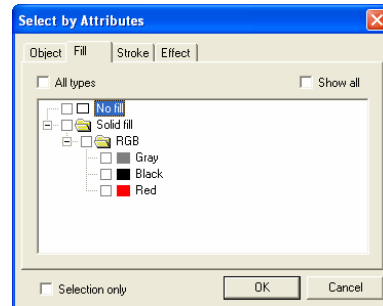**2** From the **Edit** menu, point to **Select,** and select **Select Similar Color**.

Selecting Objects Based on Attributes

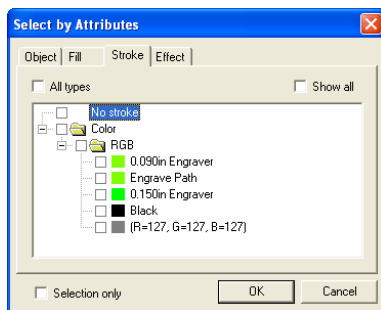You can specify objects to select based on type, fill, stroke and effects.

1 From the **Edit** menu, point to **Select** and then click **Select by Attributes**.

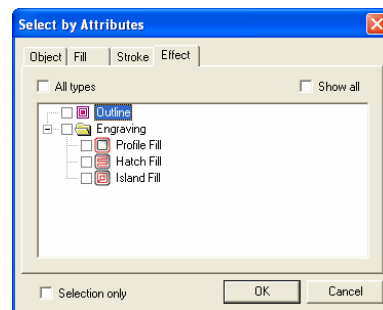**2** Select which attribute will be used in the selection.
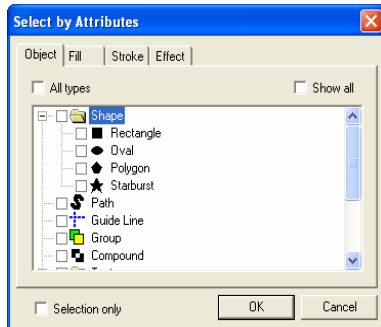
Object tab

Fill tab

Stroke tab

Effect tab

- Select **Show all** to display all the possible type of objects, fills, stokes or effects.

- Select **All types** to select all of the elements listed on the displayed tab.

- Select **Selection only** to limit your selection to the group of currently selected objects. In this way, you can refine your selection to an area that you define. This option is unavailable if you don't have any object selected.

3 Select the type of attribute that will be used in the selection.

4 Click **OK**.

Selecting Objects Using DesignEditor

You can use the DesignEditor - Objects tab to select one or more objects. See "Selecting Objects Using Object Tab" on page 31 for more information.

Selecting All Objects

To select all objects in a document, from the **Edit** menu, point to **Select** and then select **Select All**.
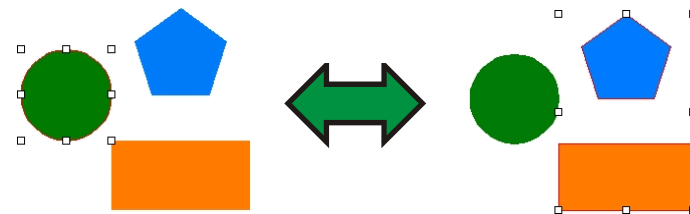
Deselecting All Objects

Do one of the following:

- From the **Edit** menu, point to **Select** and select **Deselect All**.

- Click an empty area.

Inverting a Selection

To invert the selection, from the **Edit** menu, point to **Select** and select **Invert Selection**.

7   Arranging Objects

You can arrange, duplicate and manipulate objects in the design area.

Resizing Objects

Use the following methods to resize objects.

Resizing Using DesignCentral

Use DesignCentral when you have to adjust the size of objects to a precise numeric value.

1   Select the objects.

2   From the **Arrange** menu, select **Resize**.

3   In DesignCentral, adjust the following parameters:

|	
8.500in	Width of the selected objects.
11.000in	Height of the selected objects.
100.0%	Percentage that the width will be scaled.
100.0%	Percentage that the height will be scaled.
(grid)	The point selected in this grid will remain stationary after the resizing.
Proportional	Check this option to assure that selected objects will be resized proportionally in width and height.
Apply scale to all	Check this option to resize all objects in the document, following the scaling that will be done in the selected objects.

4   Click **Apply**. ✔

📄   You can also resize using DesignCentral - Size tab, but some of the above options will not be available.

Resizing by Dragging Control Points

1   Select the objects.

2   Position the cursor on a Scale Control Point.

Scale Control Point
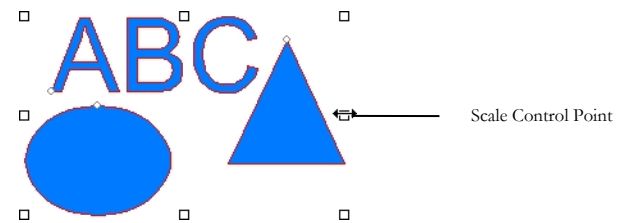
3   Click and drag the Scale Control Point.

- Hold **Ctrl** and drag to use the center line of the objects as a stationary point.
- Hold **Shift** and drag to scale the objects unproportionally.

Normal dragging   Dragging with **Shift** pressed   Dragging with **Ctrl** pressed
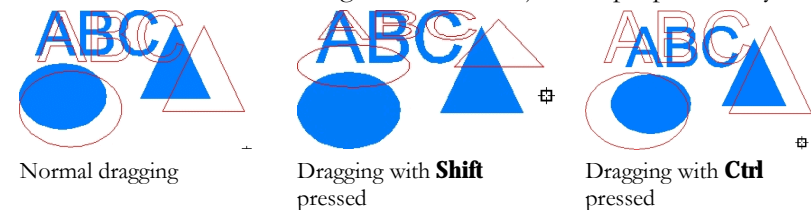
Resizing to the Same Size

1   Select the objects.

📄   If you select the objects by dragging a bounding box, the size of the first object is used as a reference. If you select the objects by clicking them with **Shift** pressed, the size of the first selected object is used as a reference.

2   From the **Arrange** menu, point to **Sizing** and select either **Same Width** or **Same Height**.

Moving Objects

You can move objects by either dragging them or using DesignCentral.

Moving Objects by Dragging

1   Select the objects.

2   Place the cursor over the objects.

📄   When Show Fills is disabled, place the cursor over the outline of the object to select it.

3   Click and drag to move the object to a new position.

- Hold **Ctrl** and drag to create a copy of the original object.
- Hold **Shift** and drag to constrain the new position.

Moving Objects Using DesignCentral

Use DesignCentral when you have to move the objects to a precise position.

1   Select the objects. DesignCentral displays the Scale tab.

2   In DesignCentral, adjust the following parameters:

X: 15.774in	Horizontal position of the selected objects.
Y: 18.346in	Vertical position of the selected objects.
	The point where the X, Y coordinates will refer in above fields.

Rotating, Shearing and Mirroring Objects

You can rotate or mirror objects by using the following methods:

Rotating, Shearing and Mirroring Using DesignCentral

1   Select the objects.

2   From the **Arrange** menu, select **Rotate**.

3   In DesignCentral, adjust the following parameters:

|	
0.000°	New angle of selected objects.
0.000°	Shear angle that will applied to the selected objects.
	Rotates selected objects 90 degrees counter clockwise or clockwise.
	Mirrors selected objects horizontally or vertically.
Keep Original	A copy of original object will be kept after rotating or mirroring.
	The point selected will be used as stationary point.

4   Click **Apply**. ✔

📄   Rotating may also be done using DesignCentral, but some of the above options may not be available.

Rotating and Shearing by Dragging Control Points

1   Select the objects.

2   Click **Rotate** tab in DesignCentral.

3   To adjust the Stationary Point do one of the following:

- Select one point in the DesignCentral Reference grid.
- Click and drag the Stationary Point.
- Hold **Ctrl** and drag the stationary point to move to a point of the Reference grid.
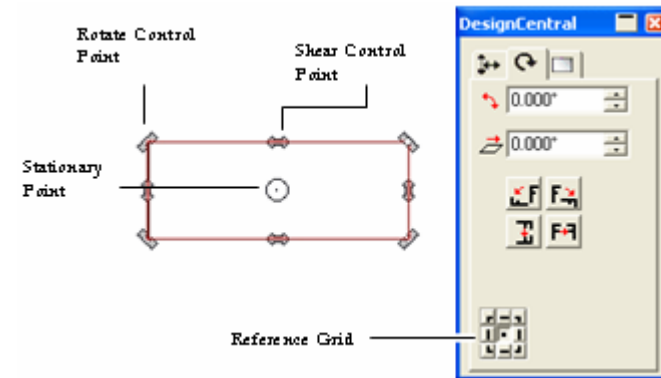
4   Position the cursor on a **Rotate** or **Shear** control point.

5   Click and drag the control point.

- Hold **Ctrl** and drag to create a copy of the original object.
- Hold **Shift** and drag to constrain the rotation or shear angle to increments of 45 degrees.

Creating Mirrored Objects

1   Select the objects.

2   From the **Arrange** menu, select **Mirror**.

📄   A mirrored image is displayed, along with a Mirror Line. If the mirror line is not visible, increase the distance in DesignCentral.

Original
Image

Mirrored Image
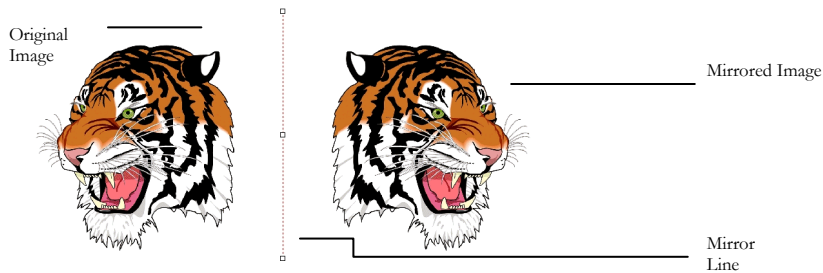
Mirror
Line

3 To adjust the distance, do one of the following:

- Adjust the **Distance** in **DesignCentral**. This value is the total distance separating the original and mirrored image.
- Click and drag the control point in the middle of the Mirror Line to adjust the distance.
- Click and drag a point located at the Mirror Line's end to adjust the angle.
- Hold **Shift** and drag to constrain the angle.

4 Check **Keep Original** to create a copy of the original image.

5 Click **Apply**. ✔

Deskewing Objects

Sometimes a scanned image is slanted because the original image was not properly positioned on the scanner. Deskewing rotates the objects in order to make a baseline horizontal or vertical.

1 Select the objects.

2 From the **Arrange** menu, point to **Deskew** and select either **Horizontal** or **Vertical**.

3 Click and drag to create the baseline.
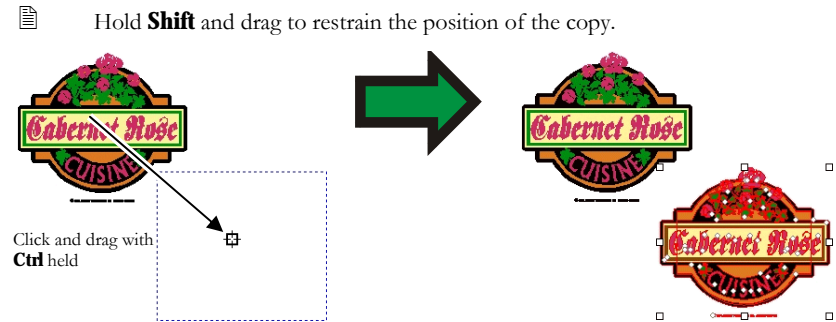
Creating the baseline   Deskewed image

Duplicating Objects

Duplicating is an easy way to create several exact copies of objects.

Duplicating Objects by Dragging

To copy objects, select the objects and drag while holding **Ctrl**.

📄 Hold **Shift** and drag to restrain the position of the copy.

Click and drag with
Ctrl held

Duplicating Objects Using Copy and Paste

1 Select the objects.

2 From the **Edit** menu, select **Copy**.

3 From the **Edit** menu, select **Paste**.

Duplicating Objects Using a Specific Offset Distance

1 From the **Edit** menu, select **Preferences**.

2 Select the **Tools** tab.

3 Select the **Paste** tool from the list on the left side of the dialog box.

4 Check **Auto-place on paste and import** option.

5 Set the distance where the copies will be posted from original object using the **X and Y Offset**.

6 Click **OK** to exit the Preferences dialog.

7 Select the objects.

8 From the **Edit** menu, select **Copy**.

9 From the **Edit** menu, select **Paste**.
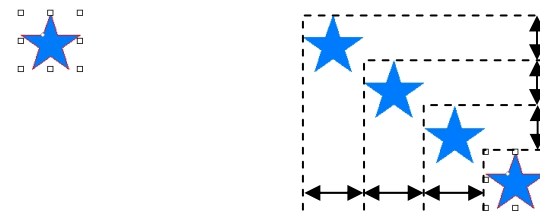
Copy the object …   … And Paste

Duplicating Objects Using Paste Special

The Paste Special feature allows you to select the format of pasted data.

1   Copy the objects.

> 📄   You can copy and paste objects from other programs.

2   From the **Edit** menu, select **Paste Special**.

3   Select the format of pasted data.

4   Click **OK**.

Duplicating Objects Using Paste Over

Paste Over pastes objects on top of the selected objects. The pasted objects will be positioned in the center of the selected objects.

Duplicating Objects Using the Duplicate Command

1   Select the objects.

2   From the **Edit** menu, select **Duplicate**.

Duplicating Objects Using DesignEditor

For details on copying objects using DesignEditor, see "Changing the Order of Objects" on page 31.

Duplicating Objects Using the Step and Repeat Command

You can use Step and Repeat to create multiple copies of objects in a precise position and arrangement.
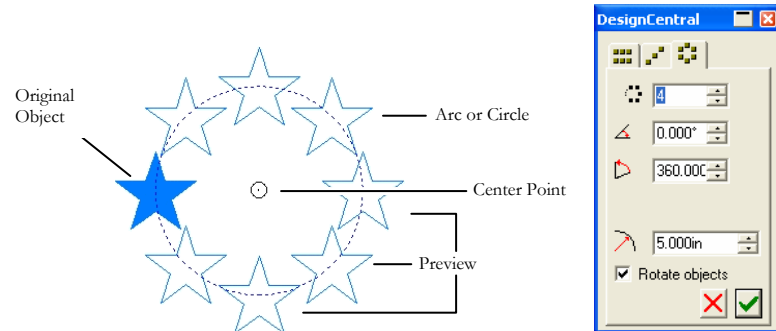
1   Select the objects.

2   From the **Arrange** menu, select **Step and Repeat**.

3   Select one of the following tabs in DesignCentral:

- **Block pattern**, with all copies aligned in a specified set of rows and columns.
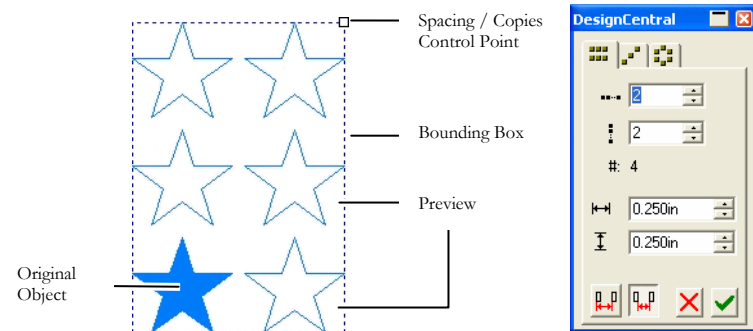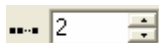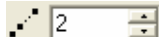
- **Diagonal pattern**, with all copies aligned in a diagonal line.
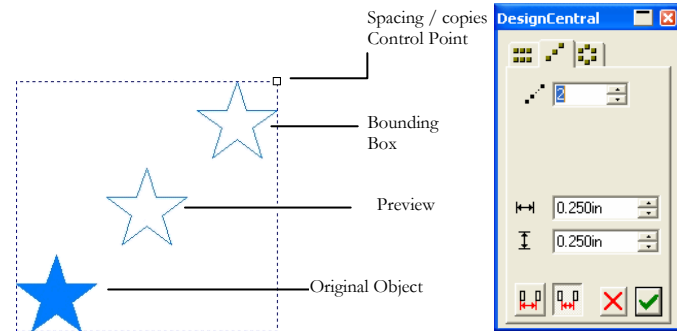
- **Circular pattern**, with all copies aligned over an arc.

4   Adjust the following parameters:

⚫⚫⚫⚫ 2	Number of horizontal copies.
⦙ 2	Number of vertical copies.
#: 4	Total number of copies.
⚫⚫ 2	Number of diagonal copies.

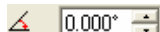 Number of circular copies.

 Horizontal spacing.

 Vertical spacing.

 When this option is selected the distance is measured from the right (top) side of one object to the left (bottom) side of the next object.

 When this option is selected the distance is measured from the left (bottom) side of one object to the left (bottom) side of the next object.

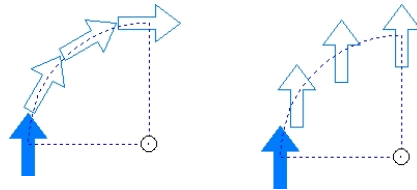 Inclination of the line that joins the original object and the center point.
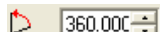
 The portion of the circle where the copies are distributed.

 Radius of the circle where the copies are distributed.

Rotate Objects — Specifies whether or not to rotate the copies on the arc.

Rotate Objects Enabled   Rotate Objects Disabled

📄 You can control the copies in Block and Diagonal pattern by dragging the Spacing / Copies control point at the upper right corner of the bounding box.

- Drag the point to adjust the number of copies, keeping the spacing unchanged.
- Hold **Shift** and drag to adjust the spacing, keeping the number of copies unchanged.
- Drag the center control point to adjust the number of copies in Circular pattern.
- Drag the point to adjust the Angle and the Radius.
- Hold **Shift** and drag to adjust the Radius, keeping the Angle value unchanged.

5   Click **Apply**. ✔

Working with Auto Serialization

Auto Serialization allows you to set a number of options to create serialized copies of objects.

Original Object   Copies created using Auto Serialization
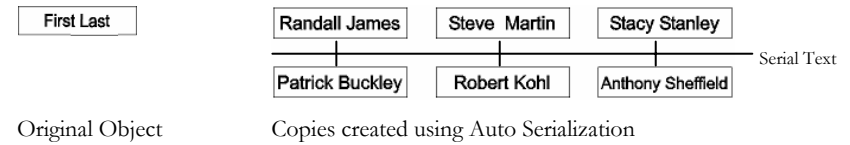
1   Select the objects.

2   From **Arrange** menu, select **Auto Serialize**.

📄 Every word from the selected text will be displayed in the Text Selection box, located on the right side of the dialog box.
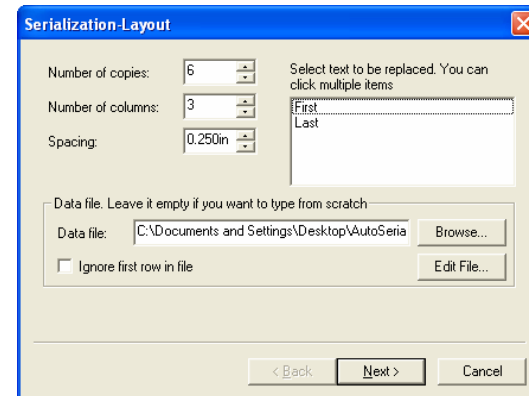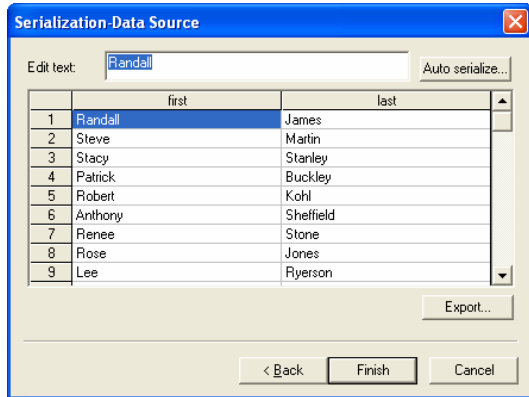

Auto Serialization Layout

3   Select the text to be replaced. You can select multiple items.

4   Adjust the following parameters:

Number of Copies	The number of serialized copies to be created.
Number of Columns	The number of copies that will be placed in a column.
Spacing	Proportional spacing between serialized copies.
Data File	Displays any tab delimited file you choose.
Browse	Click to find a file to serialize.
Edit File	Allows you to edit the content of the file you choose.
Ignore first	Check to prevent the first row in the file from

row in file   appearing in the serialized text.

5   Click **Next**.

Auto Serialization Data Source

6   To manually edit the fields, select the field and then type the new text in **Edit Text** field.

7   To use sequential data, select one field and click **Auto serialize**.

8   Adjust the following parameters:

Numeric	The serialized text will be a numeric value.
Character	The serialized text will be text.
Start	Starting value. This value must be in accordance with above selection (Numeric or Character).
Increment	The numbering increment in the serial text.

9   To save the current configuration as a data file, click **Export**.
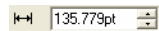
10   Click **Finish**.

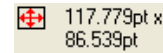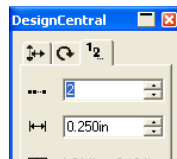## Changing Auto Serialization Attributes Using DesignCentral

You can use the Auto Serialization tab in DesignCentral to adjust the following parameters:

	Number of copies to be placed in a column.
	Proportional spacing between serialized copies.

117.779pt x 86.539pt	Total height and width of serialized objects.
	Measures the distance from the beginning of one serialized object to the beginning of its neighbor to the right.
	Measures the distance between serialized objects. See "Spacing Objects" on page 42 and "Duplicating Objects Using the Step and Repeat Command" on page 37 for more information

Grouping Objects

Grouping is the process of combining several objects into one single set of objects. Grouped objects are moved, resized and rotated as one object.
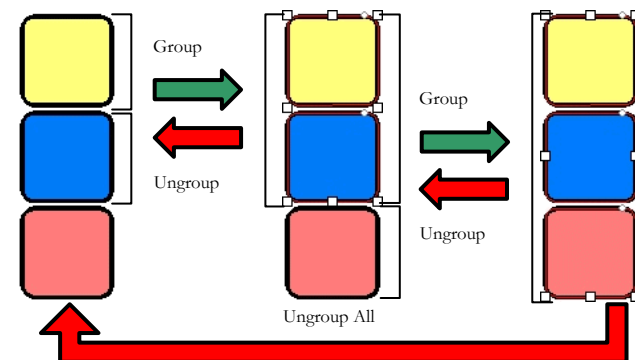
Grouping Objects

1   Select the objects.

2   From the **Arrange** menu, point to **Group** and select **Group**.

Ungrouping Objects

1   Select the grouped objects.

2   From the **Arrange** menu, point to **Group** and select **Ungroup**.
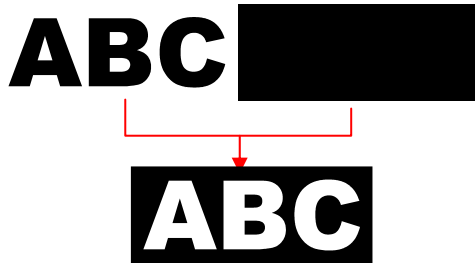
Ungrouping All Grouped Objects

1   Select the grouped objects.

2   From the **Arrange** menu, point to **Group** and select **Ungroup All**.

Compounding Objects

Compounding lets you view overlapping objects exactly as they will appear when cut. This feature is useful for creating holes through objects.

Compounded objects are treated as a single object.

Compounding Objects

1 Align the objects on top of each other.

2 Select the objects.

3 From the **Arrange** menu, point to **Compound** and select **Compound**.

> 📄 If objects with different colors are selected, the compound object will have the color of the topmost object.

Compounding Objects by Color

1 Select the objects.

2 From the **Arrange** menu, point to **Compound** and select **Compound by Color**.

> 📄 Objects compounded by color are converted to outlines.

Original objects   Normal compound   Compound by color
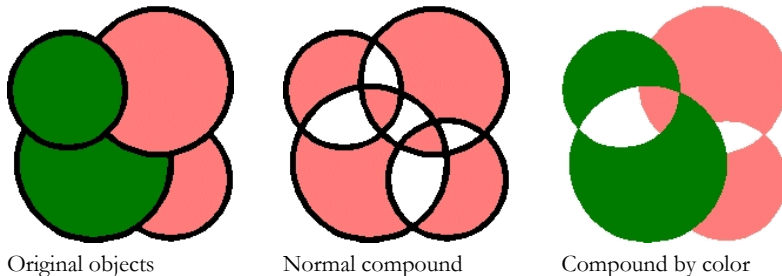
Releasing Compounded Objects

1 Select the compounded object.

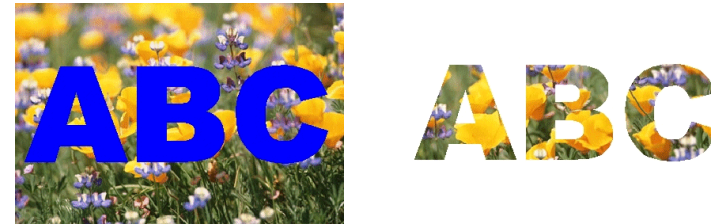**2** From the **Arrange** menu, point to **Compound** and select **Uncompound**.

Masking Objects

Masking is the process of clipping objects, vectors or bitmaps to the shape of a vector object.

> 📄 If you want to use more than one object as a mask, you must group them first.

Creating a Mask

1 Select the objects. The topmost object will be used as a mask

2 From the **Arrange** menu, point to **Mask** and select **Mask**.

The Mask (ABC) and the bitmap that will be masked   The masked image
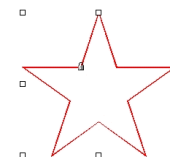
Unmasking Objects

1 Select the masked objects.

2 From the **Arrange** menu, point to **Mask** and select **Unmask**.

Locking Objects

Locked objects can be selected, but cannot be edited, moved or resized.

Locking Objects

1 Select the objects.

2 From the **Arrange** menu, point to **Lock** and select **Lock**.

Locked object with a Padlock symbol

In some cases the Control Point will overlap the Padlock.

In a path, you can change the padlock's position by changing the starting point of the path. See "Changing Starting Point" on page 90 for more information.

Unlocking Objects

1   Select the objects with the **Select Tool**.

2   From the **Arrange** menu, point to **Lock** and select **Unlock**.

Changing Object Order

As you create objects or import files into your document, every object is given a position in the stacking order. The first object you create will be at the bottom of the stack. This order will be reflected when the objects overlap.
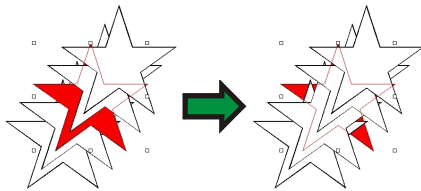
1   Select the objects.

2   From the **Arrange** menu, point to **Order** and select the new position in the stack.
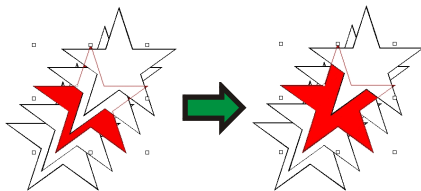
To Front
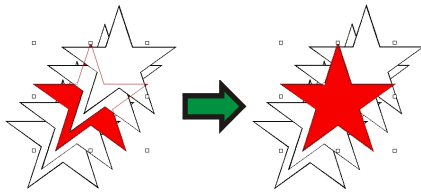
Moves the selection to the top of the stack, in front of all other objects.
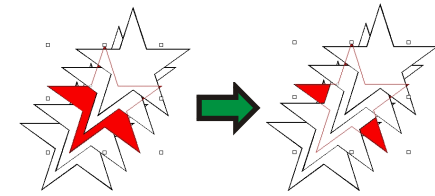
To Back

Moves the selection to the bottom of the stack, behind all other objects.

Forward One

Moves the selection one position up in the stack.

Back One

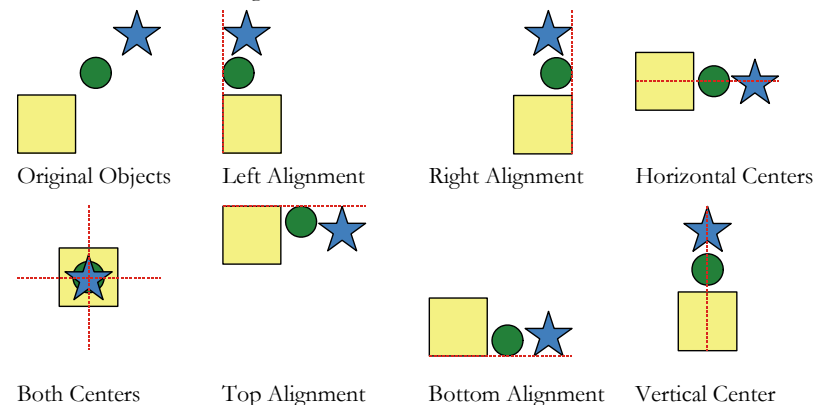Moves the selection one position down in the stack.

You can also change the order by dragging the object in DesignEditor - Object tab. See "Changing Objects Order" on page 31 for more information.

Aligning Objects

Align allows you to align objects in relation to another object, or to align objects to the design area.
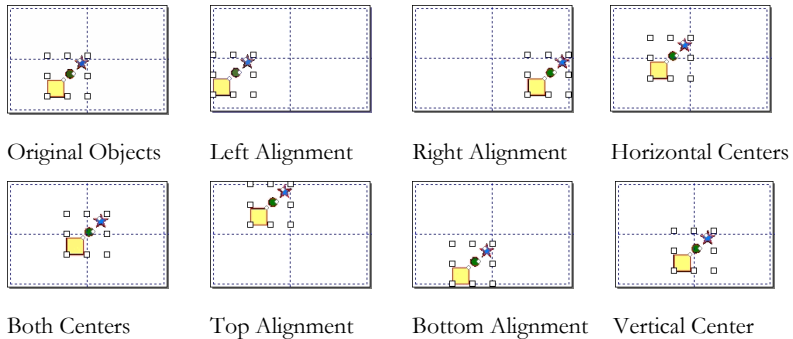
Aligning Objects to another Object

1   Select the objects.

        📄   If you select the objects by dragging a bounding box, the first object in the order stack is used as the Stationary Object. If you select the objects by clicking them while holding **Shift**, the first selected object is used as Stationary Object.

2   From the **Arrange** menu, point to **Align** and select how the objects will align..

        📄   In the example below, the green square is used as the Stationary Object for the alignment.

Original Objects	Left Alignment	Right Alignment	Horizontal Centers

Both Centers	Top Alignment	Bottom Alignment	Vertical Center

Aligning Objects to the Design Area

1 Select the objects.

2 From the **Arrange** menu, point to **Align** and select how the alignment will be done.

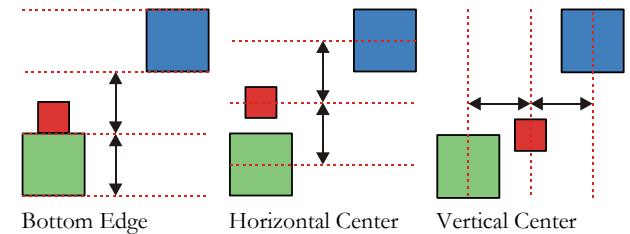📄 If you have a margin set, the objects will be aligned to this margin.
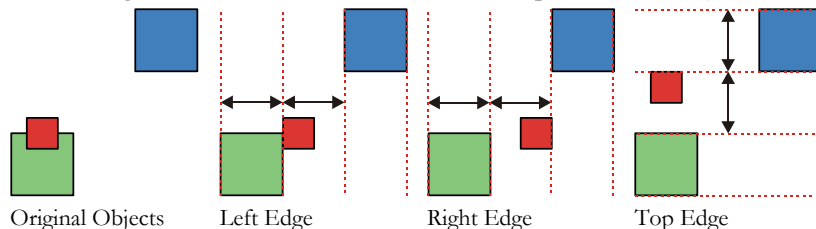

Original Objects   Left Alignment   Right Alignment   Horizontal Centers

Both Centers   Top Alignment   Bottom Alignment   Vertical Center

Distributing Objects

Distributing allows you to evenly distribute a number of objects throughout an area.

Distributing Objects over the Area of the Selection

The first set of Distribute options allows you to evenly distribute the objects over the area covered by the original selection.
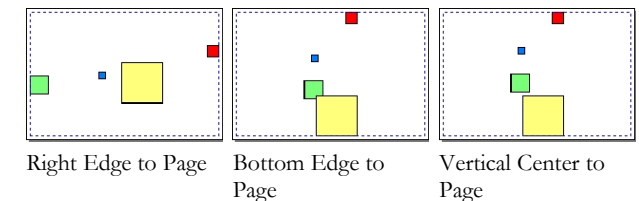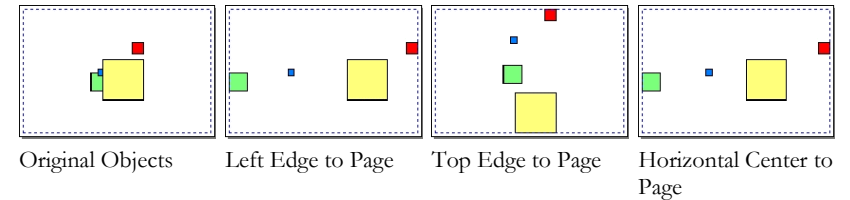
1 Select the objects.

2 From the **Arrange** menu, point to **Distribute** and select the edge or center line that will be used to position the objects:

Original Objects   Left Edge   Right Edge   Top Edge

Bottom Edge   Horizontal Center   Vertical Center

## Distributing Objects throughout the Design Area

The second set of Distribute options allows you to distribute the selected objects over the entire design area.

1 Select the objects.

2 From the **Arrange** menu, point to **Distribute** and select the edge or center line that will be used to position the objects:

Original Objects   Left Edge to Page   Top Edge to Page   Horizontal Center to Page

Right Edge to Page   Bottom Edge to Page   Vertical Center to Page

Spacing Objects

Spacing allows you to distribute objects separated by an exact value.

1 Select the objects.

📄 If you select the objects by dragging a bounding box, the first object in the order stack is used as the Stationary Object. If you select the objects by clicking them while holding **Shift**, the first selected object is used as Stationary Object.

2 From the **Arrange** menu, select **Spacing**.

3 In DesignCentral, adjust the following parameters:

↗ -0.654in ⬍   Space between adjacent objects.

	Defines if selected objects will be distributed in a horizontal or vertical direction.
	Distance will be measured from the right (top) side of one object to the left (bottom) side of the next object.
	Distance will be measured from the left (bottom) side of one object to the left (bottom) side of the next object.

End to Beginning mode   Beginning to Beginning mode

4   Click **Apply**. ✔

Nesting Objects

Nesting fits as many objects as possible into a specified area, optimizing the material.

1   Select the objects.

2   From the **Arrange** menu, select **Nest**.

3   In DesignCentral, adjust the following parameters:

All colors ▼	Select the color of the objects that will be nested. If you want to nest all objects regardless of their color, select All Colors.
3.064in	The height of the panel in which the objects will be nested.
10.689in	The width of the panel in which the objects will be nested.
0.020in	The minimum space between objects after nesting.
Break text	When this option is checked, all text will be separated into individual characters and save more material.
Free rotate	When this option is checked, the objects will be rotated to increase the compression ratio and save more material.
Compress Ratio	Displays the compression achieved by nesting the objects.

4   Click **Apply**. ✔

📄   You can also click and drag the Resize Panel Control Point located on the upper right corner of the panel area. When the panel size is too small to fit all objects, its border changes color from black to red.

Resize Panel Control Point

Edit… Panel

Original objects in their original position   Dragging the Resize Panel Control Point

Nested objects with Break text Off, Free rotate Off

Nested objects with Break text On, Free rotate Off

Nested objects with Break text On, Free rotate On

True Shape Nesting (Windows Only)

True shape nesting is a feature that uses a more detailed nesting algorithm to fit even more objects into a specified area. Because it nests objects based on their actual shape, true shape nesting is able to pack shapes together much more closely than the standard nesting algorithm.

the quick brown fox jumped over the lazy dogs

Original layout

Nested (Break text selected)

True shape nested (Break text selected)

True shape nesting uses a more complex algorithm than standard nesting, and may take considerably longer to nest a group of objects.

Nesting Objects

1   Select the objects.

2   From the **Arrange** menu, select **True Shape Nest**.

3 In DesignCentral, adjust the following parameters:

⬍ 3.064in	The height of the panel the objects will be nested into.
⬌ 10.689in	The width of the panel the objects will be nested into.
⇥⇤ 0.020in	The minimum space between objects after nesting.
↖ 15°	The step angle for rotating parts while nesting. This is the increment used to rotate objects while nesting them.
⬚ 1	The number of copies of the nested objects that will be created. If set higher than 1, the extra copies will be duplicates of the first set of nested objects.
Compress ratio	The software lists the ratio of the current area occupied by the selected objects to the original area.
Break text	When this option is checked, text objects will be separated into individual characters before nesting in order to fit the text into a smaller amount of material. If cleared, each text object will be nested as one big object.
Use holes	When this option is checked, smaller objects will be nested inside of holes in larger objects. A period might be nested inside the letter O, for example.

4 To re-nest the selected objects after you make changes, click **Redraw**.

5 Click **Apply**. ✔

Snapping Objects

You can activate the snap feature and then create, edit and move shapes to precise locations.

To activate snapping, from the **View** menu, point to **Snap** and select **Snap to [...]**

Snap to Point   Snap to Guide   Snap to Grid

Snap to Intersection   Snap to Edge   Snap to Center of Gravity
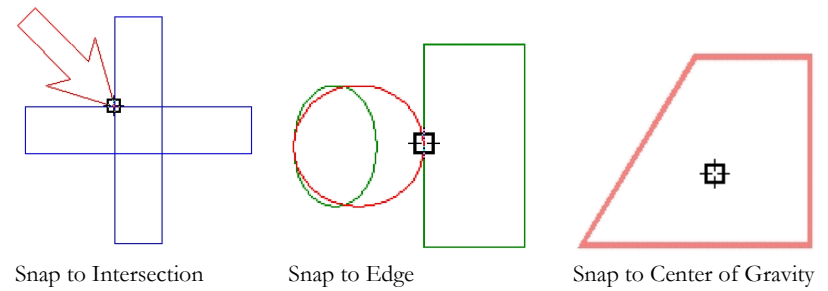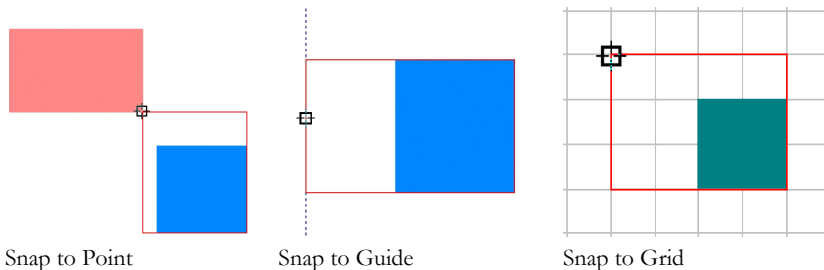
Deleting Objects

You can remove objects by deleting them from the document.

1 Select the objects.

2 Press **Backspace** or **Delete**.

Or

- From the **Edit** menu, select **Clear**.

  📄 When you delete objects they are placed in a Trash Layer.

Removing Objects without Moving Them to the Trash Layer

1 Select the objects.

2 From the **Edit** menu, select **Cut**.

Restoring Objects from the Trash Layer

1 Select the objects in DesignEditor.

2 From the **Edit** menu, point to **Trash Can** and select **Recover**.
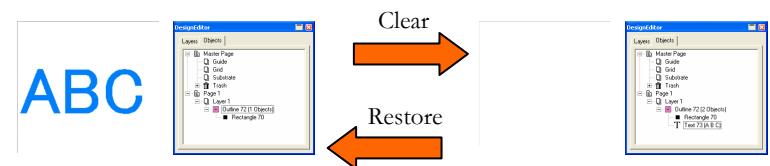
Removing Objects from the Trash Layer

To remove all objects from the Trash Layer, from the **Edit** menu, point to the **Trash Can** and select **Empty Trash**.

Clear Transform

After scaling, rotating or transforming any item geometrically you can return the item back to its original state by using the Clear Transform function.

1   Select the objects.

2   From the **Arrange** menu, click **Clear Transform**.

8 Working with Color

Your software provides you with an array of tools for applying color.

Each object in your design can have a Fill color and Stroke color. The Fill Color can be a Solid Color, Pattern or Gradient.

Fill Color (Red)

Stroke Color (Black)

Solid   Pattern   Gradient
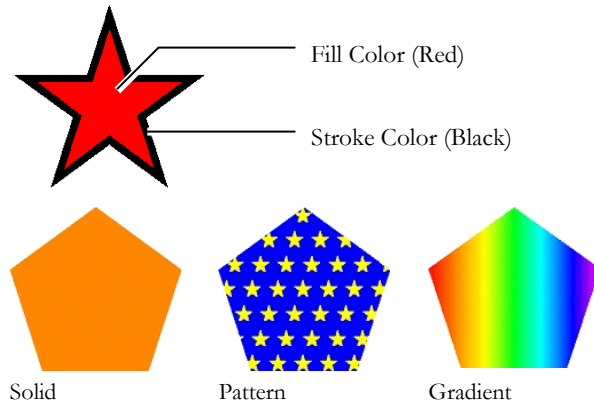
Available Color Models

Colors can be defined using the following models:

RGB	The color is expressed as a combination of red, green and blue values. This is the color model most commonly used for computer graphics.
CMYK	The color is expressed as a combination of cyan, magenta, yellow and black values. This is the color model most commonly used in color printing.
LAB	The CIE LAB model is a device-independent color model that expresses color using a luminance value and two chrominance values.
HSB	The color is expressed using values for hue, saturation and brightness.
Spot	The color is selected from a number of lists of standard ink or ribbon colors provided by established suppliers.
Duotone	Duotone colors are made by overlaying two spot colors. The color that is printed first is called the base color, and the color that is printed on top of the base is called the top color.

Working with Swatch Tables

Every line of ink, film or foil that a manufacturer makes is represented by a separate swatch table, which lists all of the colors available for that line.

The swatches in the swatch tables change appearance based on the color mode in use. Spot colors have a small dot on the right side of the swatch. Duotone colors have two dots on the right side of the swatch.

Process Color   **Spot Color**   **Duotone Color**

Opening a Swatch Table

In order to use a color of foil in your design, you must first open the swatch table for that type of foil.

1 To open the Open dialog, do one of the following:

- From the **View** menu, select **Color,** then **Open Table**.
- Right-click on the default swatch table (or any other open swatch table) and select **Open Table**.

2 Browse to the Swatch/Library subfolder of the software installation folder.

3 Select the manufacturer of the foil type, such as Gerber Scientific Products**,** and click **Open**.

4 Select the swatch library for the desired type of foil and click **Open**.

Closing a Swatch Table

To close a swatch table, right-click on the table and select **Close**.

Creating New Swatch Tables

Do one of the following:

- From the **View** menu, select **Color,** then **New Table**.
- Right-click on an open swatch table and select **New Table**.

Saving a Swatch Table to a File

1   To open the **Save As** dialog, do one of the following:

- Right-click on the table and select **Save Table As**.
- From the **View** menu, select **Color,** then **Save Table As**. Select the table you want to save and click **OK**.

2   Select the folder you want to save the table in.

3   Enter a filename for the table and click **OK**.

Docked or Floating Swatch Tables

By default, swatch tables are docked just above the status bar in the lower part of the screen.

To make a floating swatch table, click and drag it out of its position.

To dock a table, drag it back down onto the status bar. You can also double-click on the title bar to dock a swatch table.

📄   On the Macintosh, all swatch tables are floating and cannot be docked.

Changing the View of a Swatch Table

Each swatch table has two different views.

Palette view displays all of the colors in the table as color swatches.

List view displays a list of all of the colors, along with their names, vendor, type and part number.
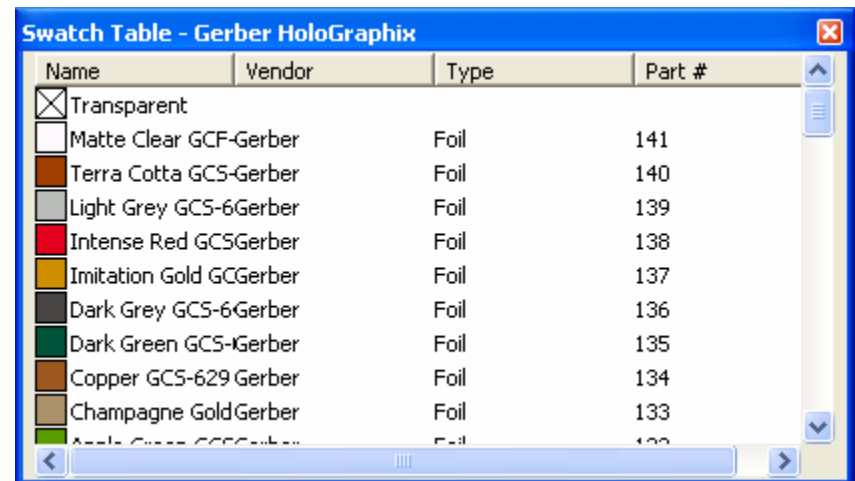
To switch between views, right-click on the swatch table and select **Palette view** or **List view**.

📄   List view is only available when a swatch table is floating.

Hiding and Displaying Swatch Tables

To toggle the display of all swatch tables on and off, from the **View** menu, select **Swatch Table**. This will also force hidden swatch tables to be displayed.

Applying Colors from a Swatch Table

1   Select the objects.

2   Select the desired color in the swatch table. Hold **Ctrl** to apply the color to the object's stroke.

   Or

•   Click and drag colors directly from the swatch table.
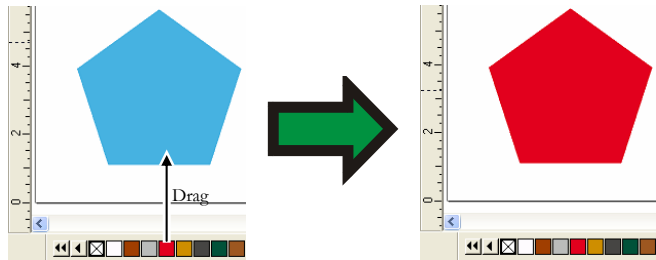
Drag

When you click and drag the cursor over objects, the cursor changes, depending on its location.

Fill the object over which the cursor is positioned with the selected color.

Change the color of the stroke over which the cursor is positioned with the selected color.

Change the color of the substrate to the selected color.

Adding a New Color to a Swatch Table

New colors can be added to swatch tables using the Eyedropper tool, the Color Mixer or the Color Specs dialog. See "Sampling Colors Using the Color Mixer" on page 49, "Applying Colors Using the Eyedropper" and "Defining Colors Using the Color Specs Dialog" on page 50 for more information.

Copying a Color to another Swatch Table

To copy a color from one swatch table to another, click on the color swatch and drag it into the other table.

Deleting Colors from a Swatch Table

To delete undesired colors from a swatch table, right-click on the color swatch you want to delete, and select **Delete** from the context menu.

📄   The Transparent color cannot be deleted.

You can also delete colors from the swatch table using the Color Specs dialog box. See "Deleting Colors Using Color Specs" on page 52 for more information.

Merging Similar Colors

To merge colors that have different names but the same color values as other colors in the table, from the **View** menu, point to **Color** and select **Merge Similar Colors**.

Changing Color Order in a Swatch Table

Do one of the following:

•   Click and drag the color over the swatch table

Drag

•   Use the Color Specs dialog box. See "Changing The Order of Colors Using Color Specs" on page 52 for more information.

•   Right-click the swatch table and point to **Sort**. You can sort the swatch table by Name, RGB / HSV values, Vendor, Type or Part #.

Creating Swatches from the Colors in the Current Design

Merge From Document creates swatches for every color in the current document in the swatch table of your choice. If your document has gradient fills, they will also be added to the swatch table.

1 Open or create the swatch table that you want to save the colors in.

2 From the **View** menu, select **Color,** then **Merge from Document**.

3 Select the table you want to store the color swatches in, then click **OK**.

📄 If you access Merge from Document by right-clicking on a swatch table, the swatches will be added to that table without any prompting.
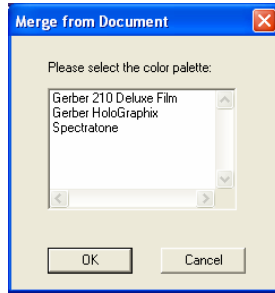
Merge from Document

Applying Colors Using the Color Mixer

The Color Mixer dialog box is used to specify and apply color to elements in your design.

To view the Color Mixer, from the **View** menu, select **Color Mixer**.

When you select objects, the fill color is displayed in the swatch located in the upper left side of the Color Mixer. When multiple objects are selected, the Color Mixer displays the color of the first object.
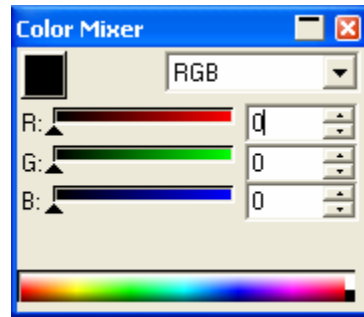
Color Mixer

Use the list in the upper right corner of the mixer to specify a color model (RGB, CMYK, LAB, HSV, Spot or Duotone).

Once you specify a color model to use, there are several ways to specify a color in the mixer:

- Enter the numerical values or click the up / down arrows on the right side of the numerical field.

- Click and drag the channel sliders.
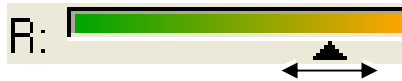
- Click and drag the mouse over the color picker located at the bottom of the Color Mixer. When you locate the color you want, release the mouse button.

Using the Color Mixer, it's possible to specify colors that are beyond the boundaries of the selected color space. When you do this, a warning icon is displayed next to the color swatch, along with a small swatch that is actually a functional button. Clicking the gamut correction button adjusts the color so that it fits within the target gamut. After you click the button, the color is redefined, and both the icon and the gamut correction button disappear.

Gamut Correction Button

Warning Icon

New Color
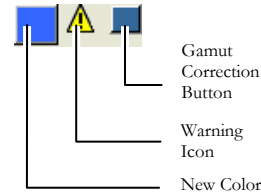
The warning icon only appears when you're viewing objects in RGB, HSV or LAB color space. The software checks to see if the color you specified can be reproduced in CMYK color space accurately, based on the currently active printer profile that you selected in the Color Settings dialog box

If you do not correct the gamut, the color that you selected will not print accurately. See "Configuring the System for Color Printing" on page 130 for more information.

Adding Colors from the Color Mixer to a Swatch table

1 From the **View** menu, select **Color Mixer**.

2 Create the new color that will be added.

3 Click the color patch and drag to the swatch table. You can place the color at any location in the table.
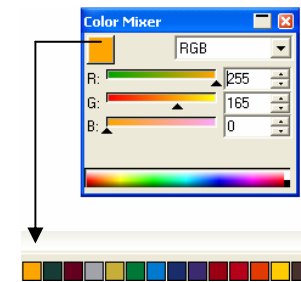
Creating Duotone Colors with the Color Mixer

1 From the **View** menu, select **Color Mixer**.
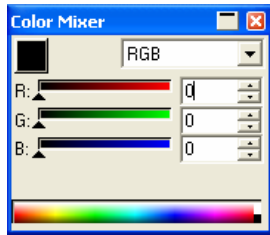
2 Select **Duotone** from the list of color modes.
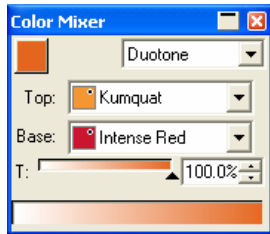
3 Select the **Top** and **Base** colors.

📄   You can only select colors from the swatch tables that are currently open.

4 Select the percent coverage. This will apply to both top and base colors.

5 Drag the color from the upper left box in the Color Mixer down into a swatch table.
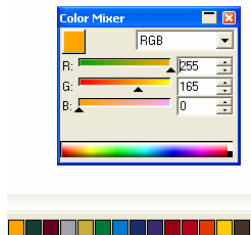
6 Save the swatch table.

Sampling Colors Using the Eyedropper

The Eyedropper tool sets the fill options of the selected objects to match the color, pattern or gradient fill of whatever it clicks on.

If you click on a bitmap, the eyedropper will return a solid color that matches the pixel you clicked on.

Using the Eyedropper

1 Select the objects.

2 Click Eyedropper. 🖊

3 Move the cursor over the objects with the desired color and click.

Selecting a Solid Fill from a Gradient or Pattern

To select a solid color from a pattern or gradient, hold **Shift** while you select the color. The fill color will be set to match the color of the pixel that was clicked on.

Setting Stroke Colors with the Eyedropper

To use the eyedropper to set the stroke color of objects instead of the fill, hold **Ctrl**. The stroke color will be set to match the fill color of the object that was clicked on.

If the object has a pattern or gradient fill, or if it is a bitmap, the stroke color will be set to the color at the point that was clicked on.

Adding a Fill Selected With the Eyedropper to a Swatch Table

To add a fill, pattern or gradient selected with the eyedropper to a swatch table, click and drag the fill swatch out of the Fill/Stroke dialog into the swatch table.
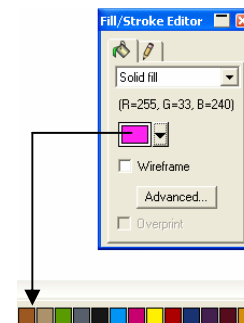
Defining Colors Using the Color Specs Dialog

The Color Specs dialog is used to define all properties about colors.

Viewing the Color Specs Dialog

Do one of the following:

- From the **View** menu, point to **Color** and select **Color Specs**.

- Double-click on a solid color (process, spot or duotone) in any open swatch table.

- Right-click on a swatch table and select **Color Specs**.
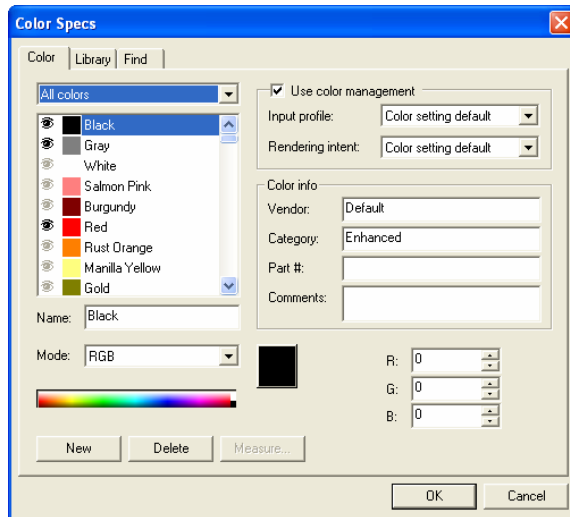
Color Specs - Color Tab

In the Color Specs - Color tab dialog box you can set properties for each color.

From the list on top of the dialog box, you can select the colors that will be displayed in the list. You can select any of the following:

[swatch table]	All colors defined in the selected swatch table.
Used colors	All colors used in your present document.
All colors	All colors from all open swatch tables plus the colors used in the document.

Each color in the list will have an icon on the left side. This icon indicates if a color is being used in the document.

 The color is being used in the document. Clicking this icon hides all objects in your document using this color.

 The color is being used in the document, but all objects using it are hidden. Clicking this icon will show all objects in your document that it is using this color.

 The color is not being used in the document.

For each color you can control the following properties:

Color Name	The color name defined in the swatch table.
Color Mode	The color mode can be RGB, CMYK, LAB, HSV, Spot or Duotone. Spot colors have a small dot on the right side of the swatch. Duotone colors have two dots on the right side of the swatch.

Process Color **Spot Color** **Duotone Color**

Color Values	The color values for selected color. The parameters vary according to the color mode selected.
Color Info	The Vendor, Type, Part# and Comments defined in the swatch table.
Use Color Management	If this option is selected, the settings from the color management system are used to print this color. You can set a different Input Color Profile and Rendering Intent for each color.

Creating New Colors Using Color Specs

1 Click **New**.

2 Select the table you want to add colors to from the list at the top of the dialog.

3 Change the color name and enter the values under Color Info.

4 For each color you want to add, do the following:

5 Click **New**.

6 Type a name for the color under **Name**.

7 Select the color **Mode**.

> If you are creating a spot color, select RGB color mode first, and enter the RGB values that will be used to display the spot color. Then change the color mode to **Spot**.

8 Specify the color values by entering them in the fields to the right, or by clicking in the color bar underneath the list of colors.

9   When finished, click **OK**.

While adjusting the colors, the swatch will show the original color on the top, and the new color on the bottom.

Original Color

New Color

Measuring a New Color

To determine the color values of a new color by measuring them with a measuring device such as a spectrometer, click **Measure**.

📄   The measurement device can be defined by pointing to Preferences in the Edit menu, and selecting Meter Options in the Tool tab.

Deleting Colors Using Color Specs
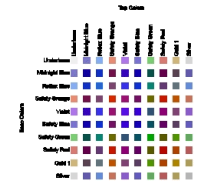
1   Select the color that you want to delete from the list.

2   Click **Delete**.

Editing Colors Using Color Specs

1   Select the color that you want to change from the list.

2   Edit the name, color mode, color values and color info.

3   Click **OK**.

Changing the Order of Colors Using Color Specs

To reorder the colors in the palette using the Color Specs, click on the color in the color list and drag it to its new location.
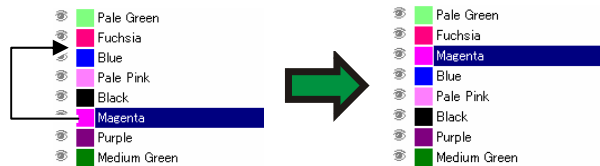
Color Specs - Library Tab
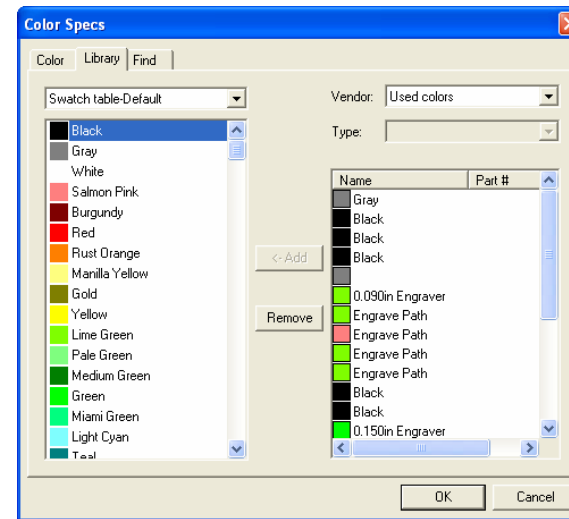
In the Color Specs - Library tab dialog box you can remove colors from swatch tables and add colors from the Color Libraries into the swatch tables.

Adding a Color to a Swatch Table

1   Select the swatch table you want to add the color into.

2   Select **Vendor** and **Type** from the list.

3   From the list on the right side, select the color that will be added to the swatch table and click **Add**.

📄   Hold **Shift** or **Ctrl** to select multiple colors.

Removing a Color from a Swatch Table

1   Select the swatch table you want to delete from.

2   Select the color from the list.

3   Click **Remove**.

Color Specs - Find Tab
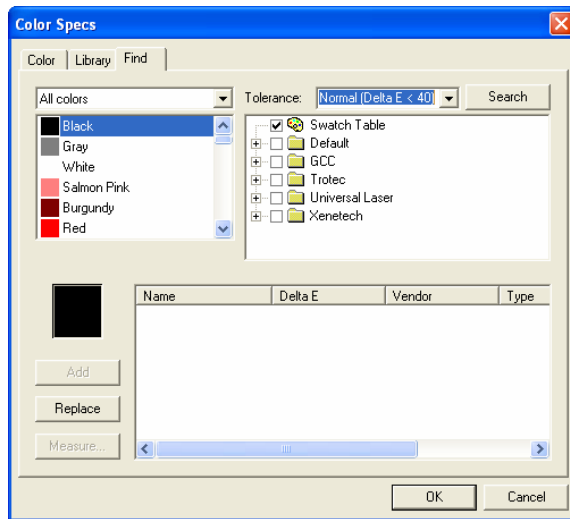
In the Color Specs - Find tab dialog box, you can find a color in the color libraries that matches the color that you are using in your design.

Matching a Color from the Color Libraries

1 Select the swatch table that contains the color.

2 Select the color you want to search from the list on the left side of the screen.

- You can also use your measuring device to measure one specific color. To measure a color, click the **Measure** button.

3 Select the Vendors and the Types from the list. Click □ to select a name. Click ⊞ to expand the list and shows all the Types for the vendor.
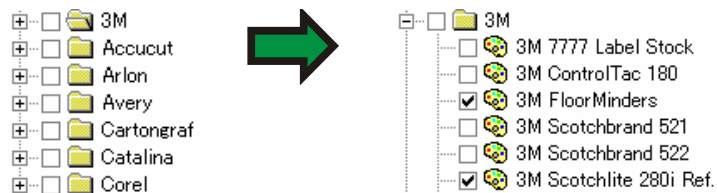
📄 You can select multiple Vendor and Type.

4 Select the tolerance for the search from the list.

5 Click **Search**.

📄 The closest matches for the selected color are displayed on the bottom of the screen. When you select a color from the list, the swatch will show the color on the top, and the color found in the Color Library on the bottom.

New Color — Original Color

6 Select the color from the list.

7 Do one of the following:

- Click **Add** to add the new color to the swatch table.
- Click **Replace** to replace the selected color with the new color found in the Color Library.

Setting the Default Fill / Stroke Color

When a new object is created, the default Stroke and Fill colors will be used. These colors are displayed in the lower right corner of the design area.

Default Stroke and Fill
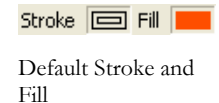
1 Click an empty area on the document.

2 Drag the desired color from a swatch table or the Color Mixer into the default Fill/Stroke color indicator at lower right corner of the design area.

Once the default Fill/Stroke colors are set, all new objects in this document will be created using these colors.

Setting the Background / Foreground Color

When you are editing bitmaps, the lower right corner of the design area will show the foreground and background colors.

Background and Foreground colors
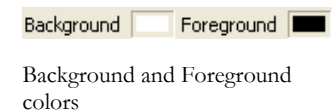
You can change the background and foreground colors using the same methods used to change the default fill and stroke colors. See "Setting the Default Fill / Stroke Color" on page 53 for more information.

Modifying Existing Color Libraries

Color Libraries are files containing a collection of colors. Color collections can be based on a particular manufacturer, an industry standard or similar

concept. Like Swatch tables, you can create a new custom Color Library or modify an existing one.
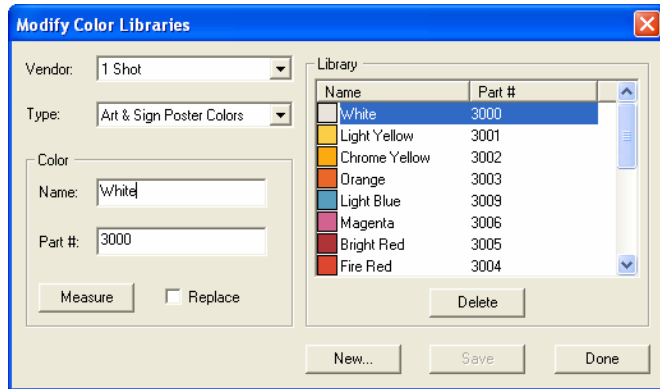
Creating New Color Libraries by Using Measurement Devices

1 From the **View** menu, point to **Color** and select **Modify Color Library**.

2 Click **New**.

3 Select the Vendor and Type from the list or enter a new name.

4 Click **OK**.

5 Enter the new color name and the part number.

6 Click **Measure** and measure the color using the device.

📄 The measurement device can be defined by pointing to Preferences in the Edit menu, and selecting Meter Options in the Tool tab.

Changing Existing Color Libraries

1 From the **View** menu, point to **Color** and select **Modify Color Libraries**.

2 Select the Vendor and Type from the list.

3 Select the color that will be changed in the list.

4 Type the new Name / Part # for the color or click **Delete** to remove the color from the Color Library. You can also measure a new color using a measurement device and replace the selected color.

5 Click **Save** to save the changes. If this button is unavailable, click another color in the list.

Creating Test Swatches

The software has the ability to automatically create the following sets of test swatches:

Duotone	This set of swatches shows all of the duotone colors that can be created using the spot colors in the swatch tables you have open.
CMYK	This set of swatches shows all of the CMY color combinations currently available, plus the range of black values.
Current Palette	This set of swatches lists of all the colors in your current palette.
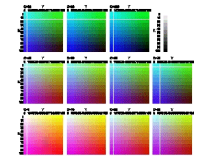
Creating Swatch Tables

1 From the **View** menu, select **Create Swatch**, then select **Duotone**, **CMYK** or **Current Palette**.

2 In DesignCentral, adjust the following parameters:

	The size of each swatch.
	The amount of space taken up by the labels above and to the left of the swatch table.
	The horizontal spacing between swatches.
	The vertical spacing between swatches.
	The number of swatches or sets of swatches per row.
Default	The swatch table to list the colors from (**Current Palette** only).

3 Click **Advanced** to set advanced settings.

4 Click **Apply**. ✔

Advanced Settings for Duotone Swatch Tables
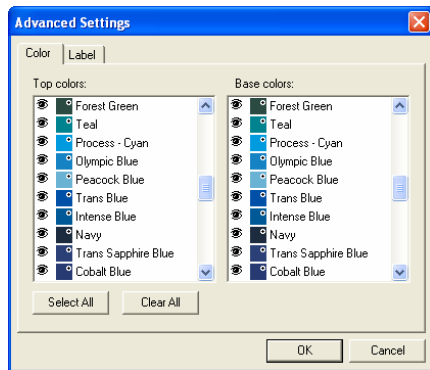
On the **Color** tab, toggle the ⬥ icon to the left of the spot color listings to determine whether the color will show up in the swatch table. You can exclude colors from either the set of top colors, or the set of base colors.

⬥	The color will appear in the swatch table.	✗	The color will not appear in the swatch table.

On the **Label** tab, select the font that will be used for the labels.

Advanced Settings for CMYK Swatch Tables
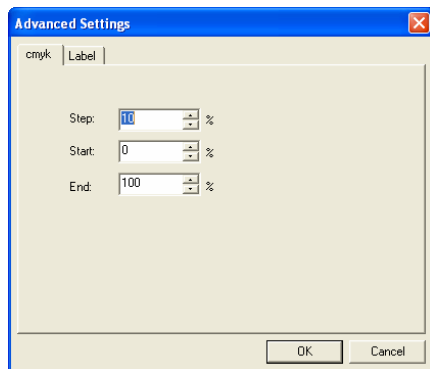
On the **cmyk** tab, adjust the following parameters:

Step	The change in ink values between one swatch and the next.
Start	The lower boundary of the range of color values in the swatch table.
End	The upper boundary of the range of color values in the swatch table.

On the **Label** tab, select the font that will be used for the labels.

Advanced Settings for Current Palette Swatch Tables
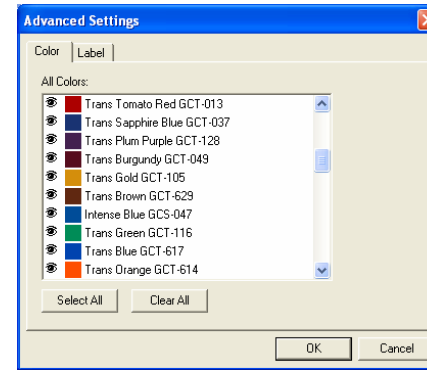
On the **Color** tab, toggle the ⬥ icon to the left of the spot color listings to determine whether the color will show up in the swatch table.

⬥	The color will appear in the swatch table.	✗	The color will not appear in the swatch table.

On the **Label** tab, select the font that will be used for the labels.

9 Using Fill/Stroke Editor

Fill/Stroke Editor shows information about how objects are filled and its stroke.

Displaying Fill/Stroke Editor

To view the Fill/Stroke Editor, from the **View** menu, select **Fill/Stroke Editor**.

Fill/Stroke Editor –
Fill tab
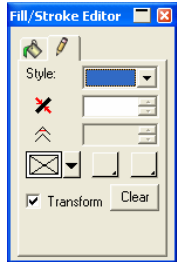
Fill/Stroke Editor –
Stroke tab

Fill/Stroke Editor – Fill Tab

Types of Fills

Vector objects can have the following types of fill:

No Fill	The object has no fill.
Solid Fill	The object is filled with one solid color.
Pattern Fill	The object is filled with multiple copies of a pattern.
Gradient Fill	The object is filled with a gradient, which is a combination of two or more colors so that one color blends smoothly with the next one in increments.

See "Working with Color" on page 46 for more information.
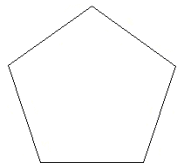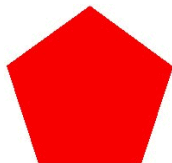
No Fill   Solid Fill   Pattern Fill   Gradient Fill
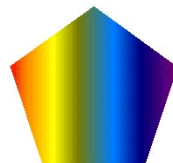
Applying No Fill

1 Select the objects.

2 In the Fill/Stroke Editor, select **No Fill**, or click on the ⊠ swatch in the color palette.

Applying a Solid Fill

1 Select the objects.

2 In the Fill/Stroke Editor, select **Solid Fill**.
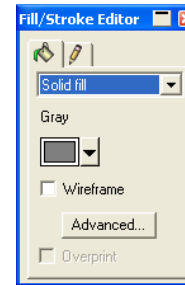
3 Select the color of the fill from the list.

4 If desired, check **Wireframe** to make the object show up as an outline drawn in the color of the fill. This setting will override the outline settings for the object.

Solid Fill with Wireframe enabled

5 Click **Advanced** to edit the fill color using the Color Specs dialog. See "Defining Colors Using the Color Specs Dialog" on page 50 for more information.

Or

• Select the object and click on a solid colored swatch in the color palette.

Applying a Pattern Fill

1 Select the objects.

2 In the Fill/Stroke Editor, select **Pattern Fill**.
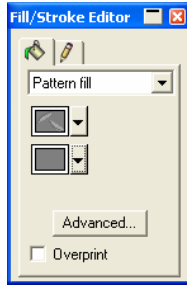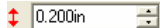
3 Select the pattern to be used from the ▣ list.

4 Select the background color from the ▣ list.
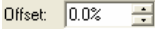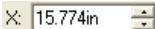
Using Pattern Fill Advanced Settings

When the Advanced button is clicked in Fill/Stroke Editor – Fill tab for Pattern Fill, the Advanced Settings dialog will be displayed.
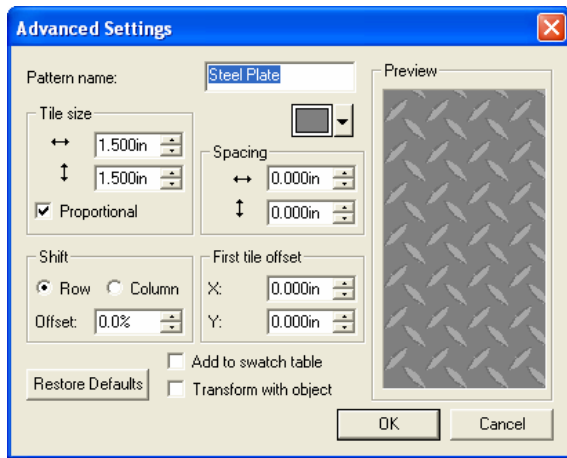
1 Select **Pattern Fill** and click **Advanced**.

2 Adjust the following parameters:

Pattern Name	Name of the pattern.
▣	The background color.
↔ 0.200in	Width of each pattern.
↕ 0.200in	Height of each pattern.
Proportional	Check this option to assure that the pattern will be resized proportionally.

Offset: 0.0%	Amount of offset applied to each column or row.
↔ 0.200in	Space between rows.
↕ 0.200in	Space between columns.
X: 15.774in	Horizontal offset applied to the first tile.
Y: 18.346in	Vertical offset applied to the first tile.
Add to Swatch Table	When this option is checked, the edited pattern will be added to the swatch table as a new pattern.
Transform with Object	When this option is checked, each pattern tile will be proportionally resized when the object is resized.
Restore Defaults	Restores the default settings for selected pattern.

3 Click **OK** to save your changes.

Adding a Pattern Fill to a Swatch Table

1 Select the object with the pattern fill.

2 Click on the **Advanced** button in the Fill/Stroke dialog.

3 Make any needed edits to the pattern fill.

4 Check **Add to swatch table**.

5 Type in a Pattern name.

6 Click **OK**.

Applying a Gradient Fill

1 Select the objects.

2 In the Fill/Stroke Editor, select **Gradient Fill**.
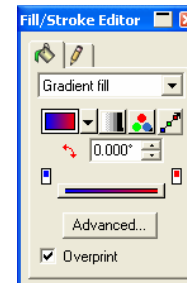
3 If desired, you can select one of the stock gradients from the ▣ list.

**4** To make your own gradient, or edit one of the stock gradients:

a   Select the type of gradient applied to the object from the ▊ list. The following gradients are available:

Linear Gradient	Radial Gradient	Conical Gradient	Square Gradient
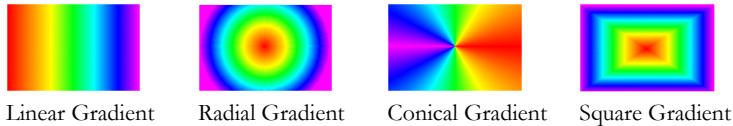
5   Select the gradient color mode from the 🔴 list. The following color modes are available:

🔴	**RGB**	The colors in the gradient will all be defined using the RGB color model.
🔵	**CMYK**	The colors in the gradient will all be defined using the CMYK color model.
🔴	**Single spot color**	The gradient will blend between two or more shades of a single spot color.
🔴	**Double spot colors**	The gradient will use two spot colors. This type of gradient is defined solely by its end points: it has no intermediate points in the middle.

6   Click 🔳 to edit the gradient using the Edit Line. See "Editing Gradients Using the Edit Line" on page 59 for information.

7   Adjust the angle of the gradient in the ↪ field.

Advanced Options for Gradient Fill

1   From Fill / Stroke Editor, select **Graident Fill** and click **Advanced**.
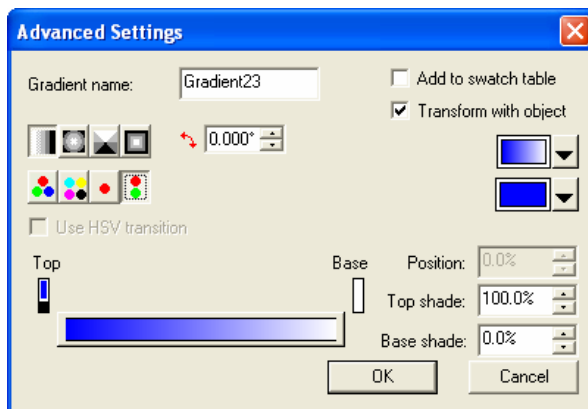
2   Adjust the following parameters:

Gradient Name	Name of the gradient.
▊◉▲▢	Gradient Type.
↪ 0.000°	The gradient angle.
▊▾	The gradient being edited.
🔴🔵🔴🔴	The gradient's color mode.
🔵▾	Color selected in gradient edit bar.
Use HSV transition	Determines how one color transforms into another.
Position	Position of the selected color in the gradient edit bar. The value can range from 0 to 100.
Top shade	For Duotone colors, the amount of color for the top shade.
Base shade	For Duotone colors, the amount of color for the base shade.
Add to Swatch Table	When this option is checked, the edited gradient will be added to the swatch table as a new gradient.
Transform with Object	When this option is checked, each gradient tile will be proportionally resized when the object is resized.
RGB / HSV	The color mode used to create the gradient

3   Click **OK**.

Adding a Gradient to a Swatch Table

1   Select the object with the gradient.

2   Click on the **Advanced** button in the Fill/Stroke dialog.

3   Make any needed edits to the gradient.

4   Check **Add to swatch table**.

5   Type in a **Gradient name**.

6   Click **OK**.

Editing Gradients Using the Edit Bar

In the Fill/Stroke Editor – Fill tab and Advanced Settings dialog, you can adjust the gradient using the Edit Bar.

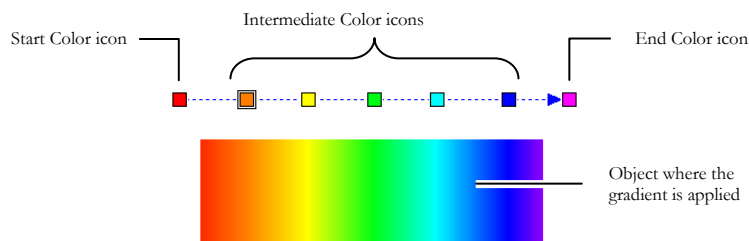Start Color icon   Intermediate Color icons   End Color icon
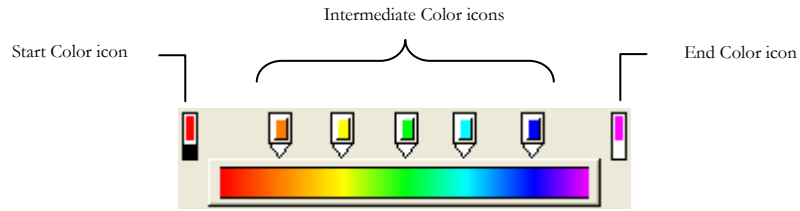
- Click any color icon in the Edit Bar to select it. In Advanced Settings dialog, you can change the color using the swatch on right side of the dialog.

- In the Fill/Stroke Editor – Fill tab, change or create a new color in the gradient by dragging the new color from the swatch table to an existing color or in a blank space between colors.

- Click and drag the color icon to the left / right to change its position in the gradient. In Advanced Settings dialog, you can change the position using the position field on right side of the dialog.

  📄   The Start and End Color icons cannot be dragged.

- Click and drag the color icon above the gradient bar to delete it.

- **Ctrl** and dragging the color icon creates a copy of the dragged color.

- Click a blank space between color icons to create a new color in the gradient.

Editing Gradients Using the Edit Line

To display a Gradient Editing Line in the object where the graident is applied, click the **Edit Gradient** button in Fill/Stroke Editor – Fill tab.

📄   The Gradient Editing Line can be placed outside the objects.

Start Color icon   Intermediate Color icons   End Color icon   Object where the gradient is applied

- You can change or create a new color in the gradient, dragging

the new color from the swatch table to an existing color or in a blank space between colors.

- Click and drag the intermediate color icon to the left / right to change its position in the gradient.

- Click and drag the start /end color icon to change the gradient size and the gradient angle.

- **Ctrl** and dragging the color icon creates a copy of the dragged color.

Fille/Stroke Editor – Stroke Tab

Editing Stroke Properties of Objects

Fill/Stroke Editor – Stroke tab displays the following vector object's stroke properties.

Style: ▭ ▼	Style of the stroke applied to the objects.
▭ ▼	The color applied to the stroke.
✕ 0.010in	Stroke width.
⌃ 4.000	Controls the sharpness of the corners.
⌐ ⌐ ⌐	Select the appropriate Join Type option to specify how corners are outlined.
⊂ ⊏ ⊑	Select the appropriate Line Cap style option to specify how open paths are outlined. Choose from Round, Square or Butt cap styles.
Transform	When this option is checked, the strokes will be proportionally resized when the object is resized.
Clear	Click this button to remove the stroke.

Applying Overprinting

The Overprint setting is used to identify areas of your design that are covered by multiple layers of ink or vinyl. These areas may require special treatment in order to be output successfully.

For example, in some output devices, a higher heat setting must be used when multiple layers are present. This may require that those objects be output using a separate printing pass.

Overprinting is automatically assigned in some cases:

- The top color in a two-color gradient will automatically be printed using overprinting.

- When color trapping is used, the Overprint setting is automatically assigned to the topmost color trapped objects.

- The top color of a Duotone/Spectratone color is automatically set to use overprinting.

Setting Objects to be Output Using Overprinting

Do one of the following:

- From the **Arrange** menu, select **Overprint**, then **Overprint**.

- On the Fill tab of the Fill/Stroke Editor, check **Overprint**.

Turning Off Overprinting for Objects

Do one of the following:

- From the **Arrange** menu, select **Overprint**, then **Release Overprint**.

- On the Fill tab of the Fill/Stroke Editor, make sure that **Overprint** is not checked.

10 Working with Shapes

Shapes are closed objects such as the rectangles, starbursts and polygons. You can create a shape freehand or by specifying the size.

The following shapes are available:

▭	Rectangle tool	⬆	Arrow tool
⬭	Oval tool	⬠	Advanced Border tool
⬠	Polygon tool	⊞	Parametric Shape tool
☆	Starburst tool	✛	Registration Mark tool
⌒	Fan tool	○	Circle tool

Creating Shapes

All of the shapes may be drawn freehand.

1   Select the desired shape tool.

2   Click and drag the cursor in the design area.

Click...

… and drag

📄 The rectangle and the arrow are only for illustrative purposes and are not actually displayed while you create a shape.
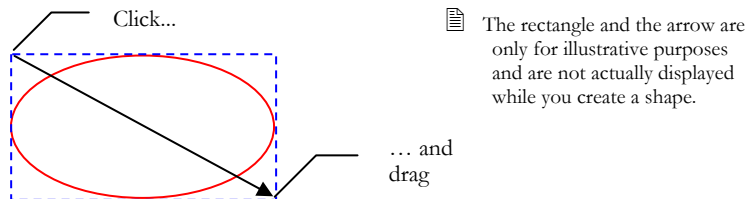
📄 For some shapes, hold **Shift** and **Ctrl** and drag to affect the shape creation.

3   Release the mouse button.

4   Adjust the shape's properties from DesignCentral.

📄 To add another shape with the same size, click again in the design area.

Holding **Shift** or **Ctrl** While Creating Rectangles and Ovals

- Hold **Shift** and drag to constrain the rectangle or oval to a square or circle.

- Hold **Ctrl** and drag to draw a rectangle or oval from its center.

Dragging while holding **Shift**   Dragging while holding **Ctrl**
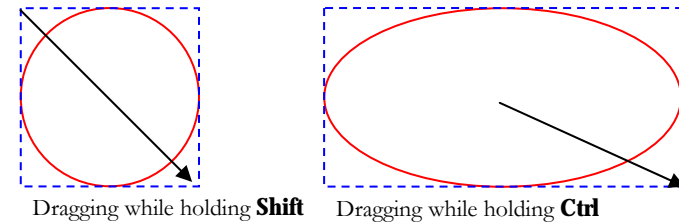
Holding Shift or Ctrl While Creating Polygons

- Hold **Shift** to create an irregular polygon within a rectangle determined by the dragging position.

- Hold **Ctrl** to create a regular polygon with a horizontal base.

Dragging while holding **Shift**   Dragging while holding the **Ctrl**
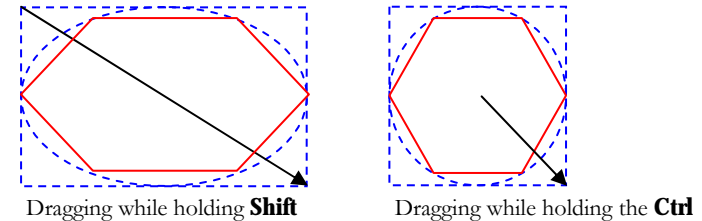
Holding Shift or Ctrl While Creating Starbursts

- Hold **Shift** to create an irregular starburst within a rectangle determined by the dragging position.

- Hold the **Ctrl** to constrain the starburst to a vertical position.

Dragging while holding **Shift**
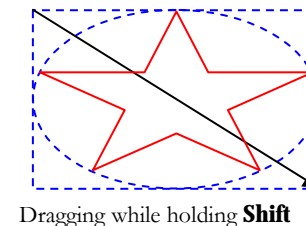
Holding Shift or Ctrl While Creating Fans and Arrows

- Hold **Shift** to constrain the fan or arrow angle to certain values. The constrain angles can be set using the **Preferences**. See

- Hold **Ctrl** to create a fan or arrow from its center.

Holding Ctrl While Creating Advanced Borders and Parametric Shapes

- Hold **Ctrl** and drag to draw a shape from its center.

Editing Shapes Using DesignCentral

You can edit a shape using DesignCentral. The parameters in DesignCentral can be adjusted before, during or after the shape is created. See "Arranging Objects" on page 34 for more information.

For each shape there are different parameters that can be adjusted in DesignCentral.

Rectangle

For rectangles, you can adjust the Height, Width, Corner type (Regular, Rounded, Inverted or Clipped), Corner radius and Inner Border Width.

The Corner radius is only available when the **Rounded**, **Inverted** or **Clipped** type is selected.

DesignCentral for Rectangle

Regular with Inner Border

Rounded without Inner Border

Inverted without Inner Border

Clipped with Inner Border

Circles

Adjust the following parameters:

Center Radius   You can adjust the X, Y coordinates of the center and the radius that determine the circle's shape.

Two Point   You can adjust X, Y coordinates of the two points that determine the circle's shape.

Three Point   You can adjust X, Y coordinates of the three points that determine the circle's shape.

Center Radius   Two Point   Three Point

Ovals

For Ovals, you can adjust the Height and Width.

Polygons

For Polygons, you can adjust the Height, Width and the number of sides.

Starburst

For Starbursts, you can adjust the Inner and Outer radius, the number of spikes and spike twist angle.

DesignCentral for Ovals   DesignCentral for Polygons   DesignCentral for Starbursts

Fan

For Fan shape, you can adjust the Outer radius, Thickness, Rotation angle and the Sweep angle.

Arrow

For Arrows, you can adjust the Arrow Length, Angle, Tail Length and Width, Cap Length and Wing angle.

Registration Marks

For Registration Marks, you can adjust the Size, and the registration mark type (Diamond or Round).
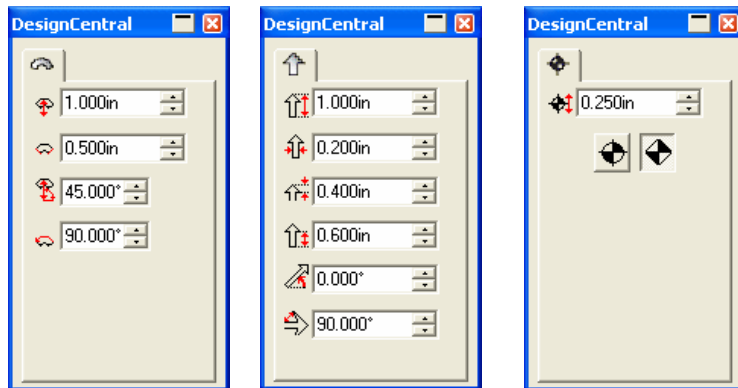
DesignCentral for Fan   DesignCentral for Arrow   DesignCentral for Registration Mark
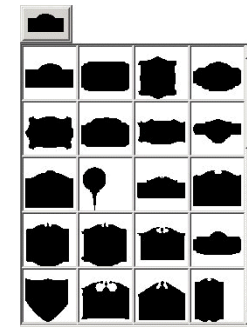
Advanced Borders

For Advanced Borders, you can adjust the Border Type, Height or Width and Inner Border Width.

Click the button on left hand side of the **Add** button to show a list with all available border types. Click the **Proportional** check box to keep the border width and height ratio constant.
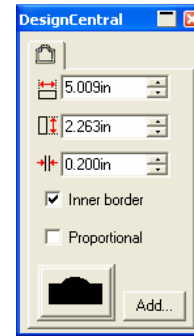
DesignCentral for Advanced Border   Border Types

Adding Borders to the Border List

1   Create the border and save the file.

2   Select Advanced Border tool.

3   Click **Add** button on DesignCentral.

4   Select the file saved in step 1 and click **Open**.

📄   To delete a border from the list, delete the file from Border folder.
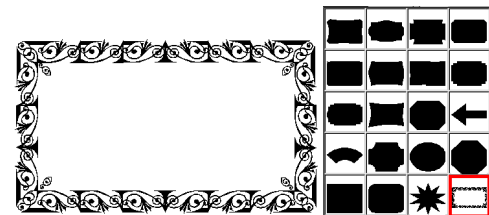
Border List with a new custom border

Parametric Shapes

You can adjust the Height or Width, and several parameters for parametric shapes.

Click the **Edit** button to show a dialog box where you can edit all parameters.
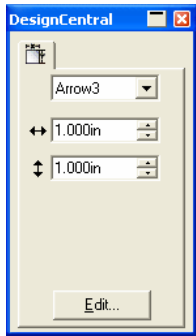
DesignCentral for
Parametric Shape
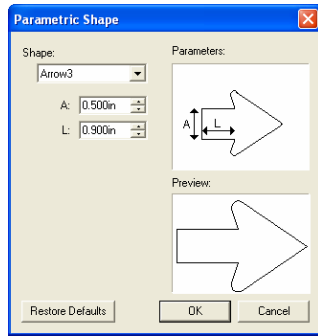
Parameter editing dialog box

Editing Shapes Using Control Points

You can create visually complex objects by using Control Points and Bezier handles.

Rectangle

For rectangles, you can drag the following control points.
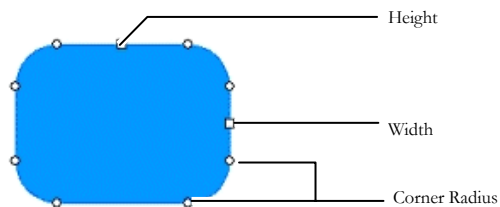
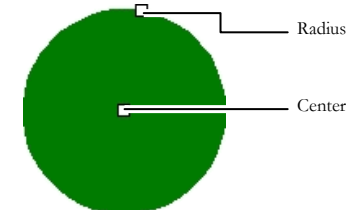- Hold **Shift** and drag the Height or Width control points to resize proportionally.

Circle

Depending on which method you are using, you can drag the following control points while creating a circle:

- Center and the Radius
- First and second points
- First, second and third points
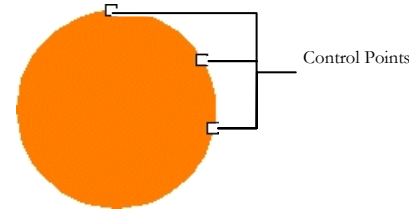
Creating a circle using the 3 point method

Creating a circle using Center and Radius method

Oval

For ovals, you can drag the following control points.
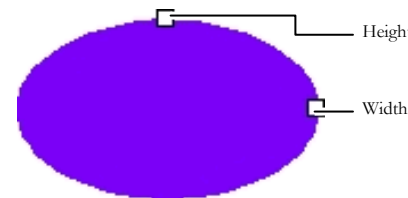
Hold **Shift** and drag the Height or Width control points to make the resizing proportional.

Polygon

For polygons, you can drag the following control points and handles:

Original Polygon

Polygon after dragging the Bend control point
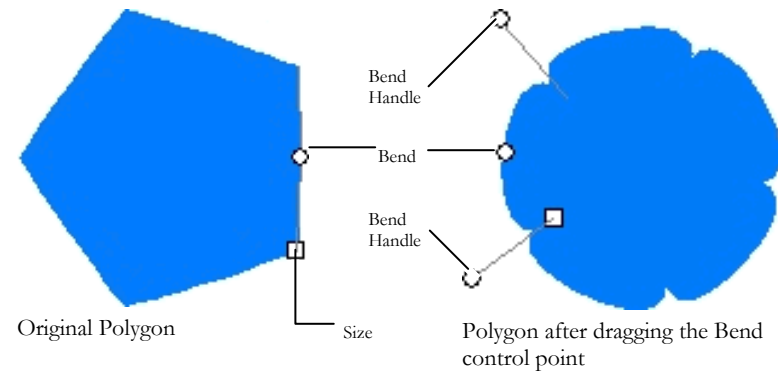
- Hold **Ctrl** and drag the Size control point to keep the polygon's position.
- Hold **Ctrl** and drag the Bend control point to restore the polygon to its original shape.
- Hold **Shift** and drag the Bend handle to move the opposite handle in the same direction.

- Hold **Ctrl** and drag the Bend handle to keep the opposite handle stationary.

Starburst

You can drag the following points on a Starburst:
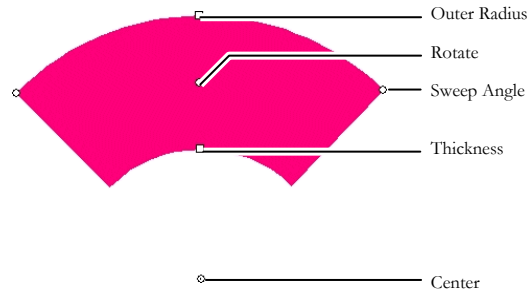
Spike Twist

Bend

Size

Bend Handles
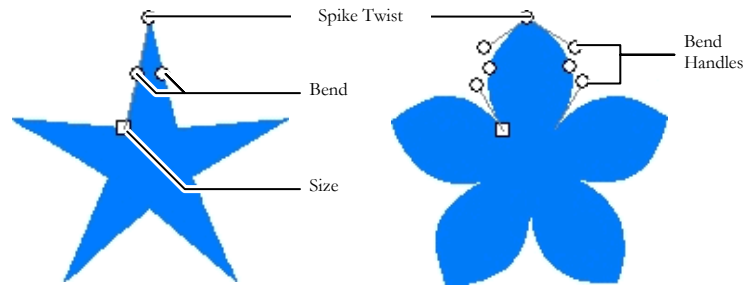
Original Starburst

Starburst after dragging both Bend control points

The Size and the Bend control points behave the same way as explained for the polygon in previous item.

Fan

You can drag the following points on a Fan shape:

Outer Radius

Rotate

Sweep Angle

Thickness

Center

- Hold **Shift** and drag the Sweep Angle or Rotate control points to constrain the angle.

Arrow

You can drag the following points on an Arrow shape:

Length

Rotate

Cap Length

Wing Angle

Tail Width
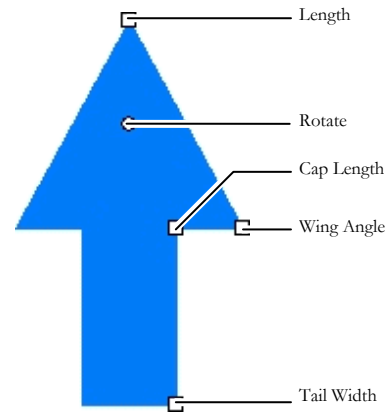
- Hold **Shift** and drag the Rotate control point to constrain the angle.

Advanced Border

You can drag the following points on an Advanced Border:

Size
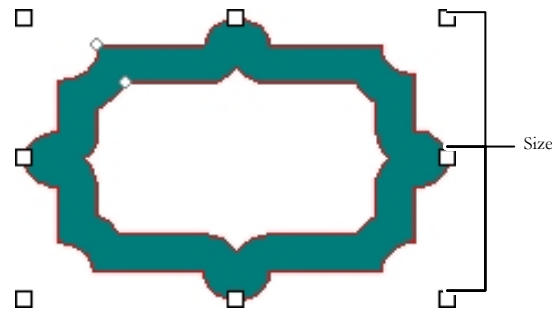
Converting Objects to Shapes

Convert To Shape is used to convert objects to shapes. You can quickly convert the traced artwork to the desired shape, and then edit the shape.
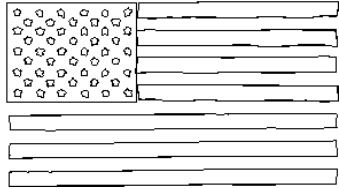
Original artwork
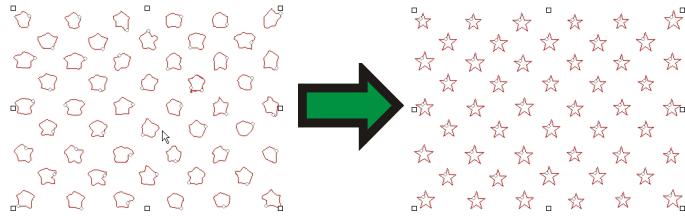
Converting into Starbursts
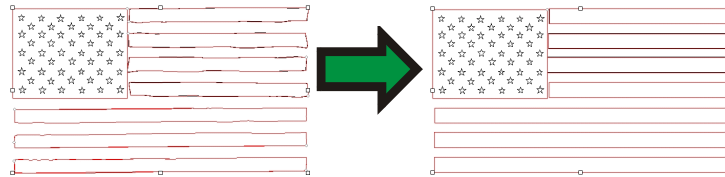
Converting into Rectangles

1   Select the objects.

2   From the Arrange menu, point to Convert to Shape and select the new shape.

11 Working with Text

The software allows you to create text and change its appearance. The following defines each text type and displays and example:

ABCDEF **Horizontal Text**: The text follows a straight horizontal line.

Arc Text: The text is placed over a circle.

Horizontal Path Text: The horizontal text is placed over a path.

Horizontal Block Text: The text is restricted to the width of a block. When the text is wider then the block, it will automatically move to the next line.

Vertical Text: The text follows a straight vertical line.

Vertical Path Text: The vertical text is placed over a path.

Vertical Block Text: The vertical text is the height of a block. When the text is higher than the block, it will automatically move to the next line.

Creating New Text

You can create text by using the tools located on the **Text** toolbar.

Creating Horizontal/Vertical Text

1   Select Horizontal Text or Vertical Text tool. **T T**

2   Click anywhere in the design area.

3   Type the text.

4   If desired, hit **Enter** to move to the next line.

5   Hit **Esc** or select a different tool to finish entering text.

Creating Horizontal/Vertical Block Text

1   Select Horizontal Text or Vertical Text tool. **T T**

2   Click and drag to create a block where the text will be confined.
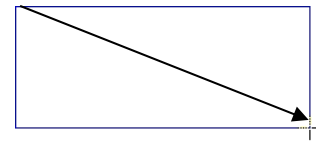
Text block

3   Type the text. The text will automatically wrap when it reaches the opposite end of the text block. The text block will expand to accommodate additional lines of text.

4   If desired, hit **Enter** to move to the next line.

5   Hit **Esc** or select a different tool to finish entering text.

Creating Horizontal/Vertical Path Text

1   Select Horizontal Path Text or Vertical Path Text tool. **T T**

2   Click on any existing path or shape in your design.

3   Type the text.

4   Hit **Esc** or select a different tool to finish entering text.

Creating Arc Text

1 Select Arc Text tool.

2 Do one of the following:

- Click and drag to define the radius and center of the circle the text will be positioned around. The cursor will be placed at the point on the circumference that you clicked on when creating the circle.
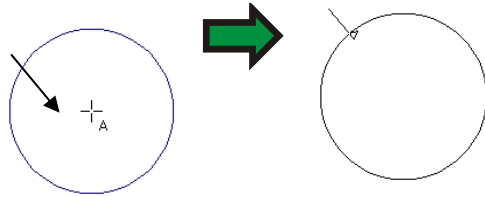
Click and drag

- Hold **Ctrl** and drag to draw the circle from the center point. The cursor will be placed at the point on the circumference that you clicked on when creating the circle.
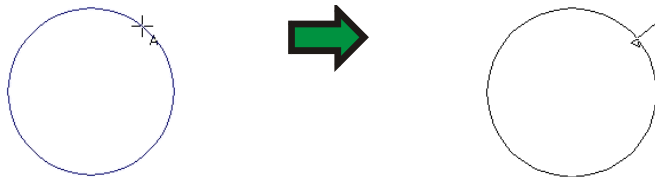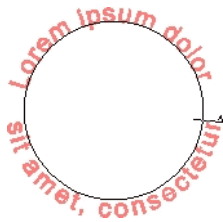

Click and drag

- Hold **Shift** and drag to restrict the Starting Angle to increments determined in Preferences.

📄 See "Preferences - General Tab" on page 14 for more information.

3 Type the text.
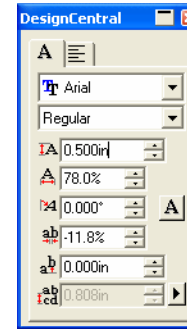
4 To move to the next line press **Enter**.

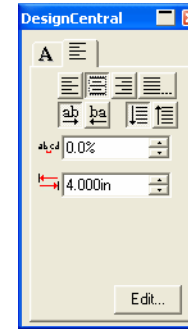**5** To finish entering text, press **Esc** or select a different tool.

Changing Text Attributes Using DesignCentral

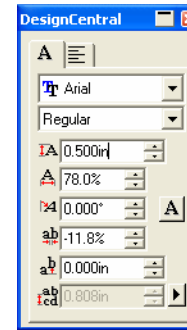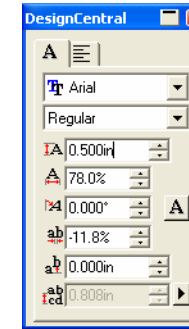While or after creating text, you can adjust the text properties in DesignCentral.

In DesignCentral you can have two or more tabs for each type of text.
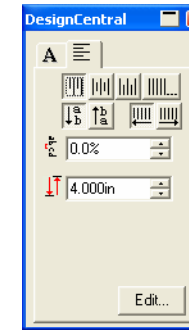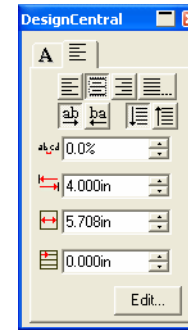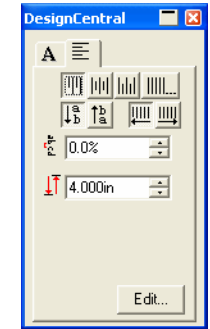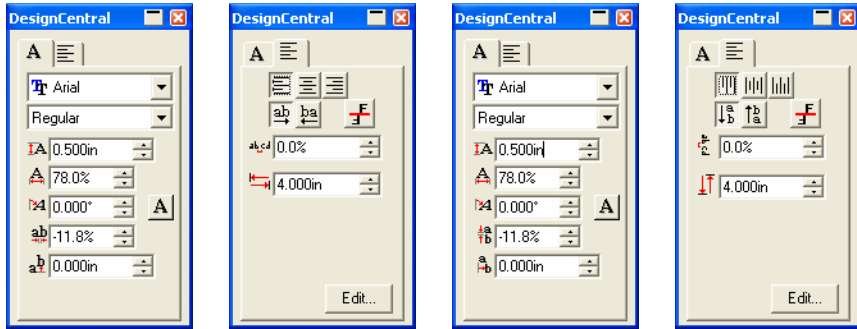

Horizontal Text
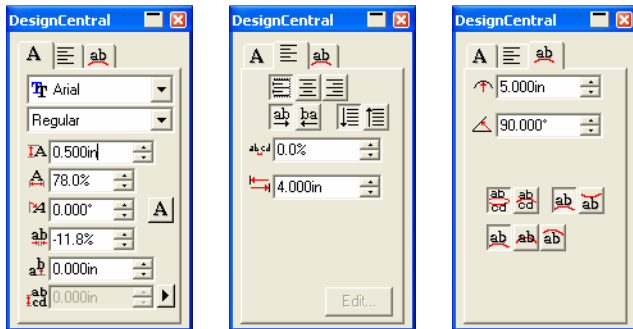

Vertical Text

Horizontal Block Text

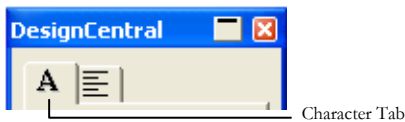Vertical Block Text

Horizontal Path Text   Vertical Path Text

Arc Text

Editing Attributes in DesignCentral

Some attributes in DesignCentral are common for all types of text, others are specific for one type.

DesignCentral – Character tab

Character Tab

Adjust the following parameters:

Font and style used in the selected text. Click the arrow to view a list of available font types and styles. The font style list will be disabled if the font has only one style available.

If you select the font field, and begin typing the name of the font on the keyboard, the software will do an incremental search and take you to the fonts that start with the letters you

have typed in. You could type **TIM** and get Times New Roman, for example.

To change the fonts currently in use, select **Modify** from the font list. See "Modifying the Fonts in Use" page 81 for information.

|	
$\mathbb{I}A$	Height of the selected text.
	The height is the height of a reference character (by default "X"). See "Text Preferences" on page 79 about how to change the reference character.
A	Width of the selected text.
	The width can be displayed in units (in, cm, mm…) or as a percentage of the original character width. See "Text Preferences" on page 79 about how to change the display mode.
$\mathbb{A}$	Slant of the selected text.
$A \triangleright$	Orientation of the selected text. Click to rotate the characters 90 degrees.
ab $\frac{1a}{1b}$	Spacing between characters, also known as Tracking.
	The tracking can be displayed in units (in, cm, mm…) or as a percentage. See "Text Preferences" on page 79 about how to change the display mode.
	0.000 is the default value for the unit's mode. Wider spacing may be achieved by selecting positive values. The default value for percentage is 100%. Values above 100% will produce wider spacing.
ab $\frac{a}{b}$	The vertical or horizontal offset applied to characters.
ab $\frac{ac}{bd}$	Amount of spacing between lines of text.
	Click the button on the right side of this field to select between Automatic and Specify. When Specify is selected, the Line Spacing field is enabled, and you can specify the amount of space between lines.
	📄 This field is not available for Horizontal and Vertical Path Text.
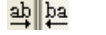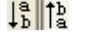
DesignCentral – Paragraph tab
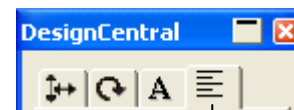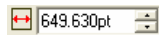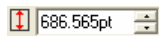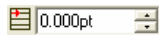
Paragraph Tab

Adjust the following parameters:

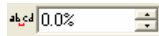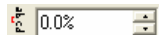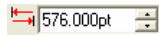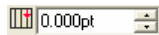|	
☰ ☰ ☰	Justifies selected horizontal text to the left, center or right.
⫴ ⫴ ⫴	Justifies selected vertical text to the top, center or bottom.
☰…	Fully justifies your document horizontally. See "Options for Full Alignment" on page 70 for more information.
⦀…	Fully justifies your document vertically. See "Options for Full Alignment" on page 70 for more information.
ab ba	Arranges the horizontal text from left to right or from right to left.
↓a↑b	Arranges the vertical text from top to bottom or bottom to top.
⫮ ⫮	Orders the horizontal text top to bottom or bottom to top.
⫴ ⫴	Orders the lines of selected vertical text from right to left or left to right.
abcd 0.0%	Amount of spacing between words in the text.
0.0%	Displays word spacing in units or as a percentage. See "Text Preferences" on page 79 for more information.
576.000pt	Allows you to specify the width of the tab indent.
576.000pt	Allows you to specify the height of the block where the vertical text will be restricted.
Edit	Displays a dialog box where you can retype the selected text.

For horizontal and vertical block text only, adjust the following parameters:

649.630pt	Allows you to specify the width of the text block.
686.565pt	Allows you to specify the height of the text block.
0.000pt	Allows you to specify the indent for the first line of the horizontal block text.
0.000pt	Allows you to specify the indent for the first line of the vertical block text.

Options for Full Alignment

Full alignment fully justifies text either horizontally or vertically.

1   From the Paragraph tab in DesignCentral, click **Full Justify**.
    ☰…⦀…

2   Adjust the following parameters:

Character and word spacing	Evenly distributes spacing between characters and words.
Word spacing only	Evenly distributes spacing between words.
Character width	Each character is stretched equally wide to fit within the specified Width of the text box.
Character size	Each character is proportionally stretched to fit within the specified Width.
Fit to width	Fits text to specified Width depending on type of spacing selected.
Width	Width of the text box.
Compression only	Compresses text that extends beyond the boundaries of the specified Width for Character width and Character Spacing.
	📄 This feature automatically centers the text..
Apply equal compression to all lines	Compresses or expands every object to the specified width, depending on the type of spacing selected.
Apply to last line of each paragraph	Compresses or expands the last line of a paragraph depending on the type of spacing selected.
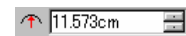
3   Click **OK**.
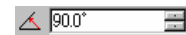
⊥	Click this button to move the text to the opposite side of the path.

DesignCentral – Arc tab

11.573cm	Defines the radius of the circle where the text will be placed.
90.0°	Starting position of the text in the arc.
	This starting angle is related to the Alignment position. For example, if you want the center of the text to be placed in the top of the circle, select Align Center and enter a value of 90 degrees in this field.
ab ab ab	Position of the first line of the text on the arc.

 Starting position of the first line of the arc text.

The top and bottom are determined by the value in Starting Angle. If you created your circle by dragging, the top is the point where you began to draw the circle.

 Starting position of the second line of the arc text.

After typing the first line of the text, press the **ENTER** key and the text will be placed in the next line (Multiple Line Style) or at the opposite side of the circle (Top / Bottom Style).

Changing Text Attributes Using Control Points

Most of the set DesignCentral properties may also be set manually. You can click and drag directly the Control Points on the text.

When you select text, and then display the Character or Paragraph tab of DesignCentral, the text displays with a number of Control Points around it. Each of these Control Points has a special meaning, and changes the text when moved.
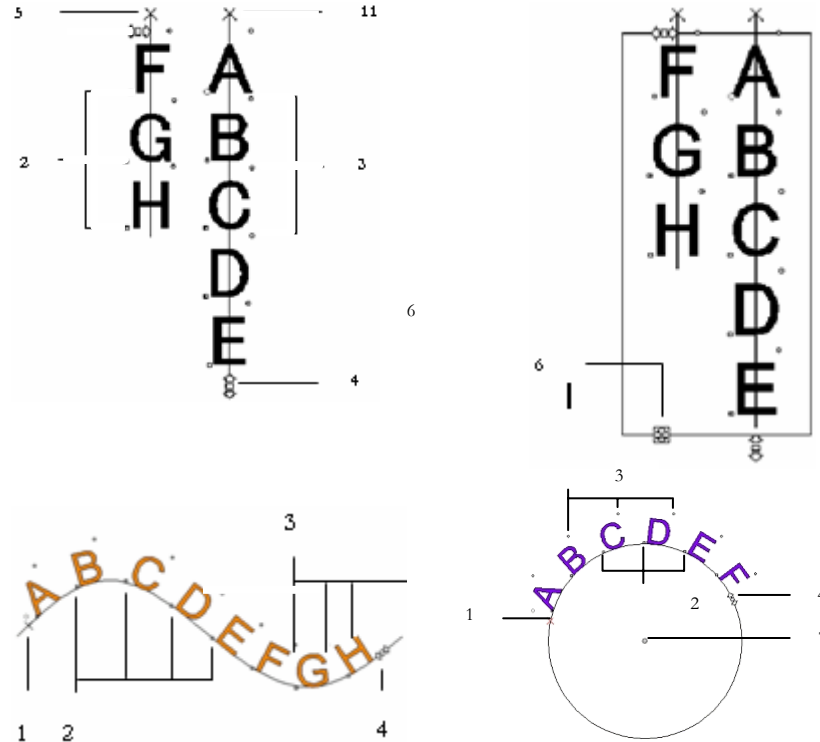
📄 You can use the arrow keys on your keyboard to make incremental adjustments.

The following Control Points can be dragged in a text:

(1) Line Spacing

Click this point to select one line of text. When a line is selected you may change attributes such as color or font.

Drag this point to adjust the spacing between lines. All lines below the selected line are also repositioned. Typing **Ctrl+up arrow** and **Ctrl+down arrow** while the text cursor is displayed in the text also adjusts line spacing.

For text and block text, hold **Ctrl** and drag to move only the selected line. For path and arc text, it will restore the text to its initial position.

For arc text, **Shift** and drag to adjust the vertical offset of the select line. For all other types of text, Hold **Shift** and drag to move the selected line left or right.

(2) Move Character

Click this point to select one individual character. After selecting one character, you can change its attributes.

Drag this point to adjust the spacing between the selected character and the previous one. All characters to the right of the selected character are also repositioned.

Hold **Ctrl** and drag to move only the selected character and leaves the remaining text in place. Hold **Shift** and drag to move the selected character up or down.

(3) Rotate Character

Drag this point, located in the upper right corner of each character, to rotate an individual character.

Hold **Shift** and drag to rotate the character in increments. For details on how to set the increment angle, see "Preferences - General Tab" on page 14 for more information. Hold **Ctrl** and drag to restore the character to its default position.

(4) Tracking

Drag this point to adjust the tracking of the selected text. The tracking is adjusted equally for all characters and between all words.

Hold **Ctrl** and drag to change tracking between words.

(5) Line Spacing

Drag this point to produce equal spacing between lines.

(6) Block Size

Drag this point to restrict the text box width. This option is only available for Block text.
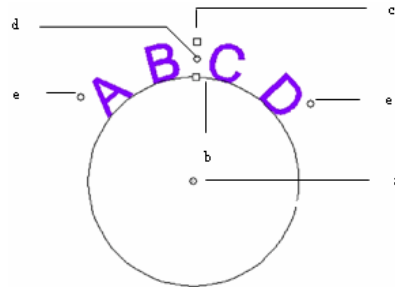
(7) Center

Drag this point to adjust the position of the circle. Hold **Shift** and drag limits the circle's position.

When the Arc tab is selected, you will see an extra set of control points that can be dragged:

(a) Center

Drag this point to adjust the position of the center of the circle and also to change its radius.

(b) Inner Radius

Drag this point to change the radius of the circle while keeping the center and top positions unchanged. This causes a distortion of the text.

> 📄 Holding **Ctrl** and dragging will not distort the text.

(c) Outer Radius

Drag this point to change the radius of the circle while keeping the center and bottom positions unchanged. This causes a distortion of the text.

> 📄 Holding **Ctrl** and dragging will not distort the text.

(d) Rotate

Drag this point to change the position of the arc text on the circle.

Hold **Shift** and drag to constrain the position. For details on how to set the constrain angles, see "Preferences - General Tab" on page 14.

(e) Sweep Angle

Drag this point to change the sweep angle of the arc text on the circle. It changes each character width and the spacing between them.

> 📄 Hold **Shift** and drag to constrain the sweep angle. For details on how to set the constrain angle, see "Preferences - General Tab" on page 14. Hold **Ctrl** and drag both sides of the text to move at equal rate from the center point. Editing Text

Entering New Text

Select any of the text tools.

1 Click on the text you want to edit.

2 To insert characters into the text, place the cursor in the desired location and begin typing.
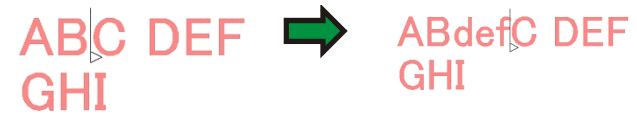
- Use the arrow keys on your keyboard to move the cursor within the text.
- The **Home** key returns the cursor to the beginning of the current line.
- The **End** key moves the cursor to the end of a line.

3 To replace part of the text, select the text you want to replace and type or paste in the text you wan
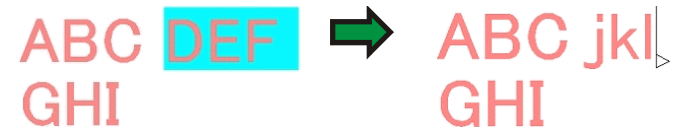
- **Shift** and left arrow / right arrow keys selects a group of characters.
- **Shift** and up arrow / down arrow keys selects the character from the beginning of a line to the insertion point, or from the insertion point to the end of the line.
- Click and drag to select a group of characters.
- Double-click to select one word.

Selecting Text

You can select text as whole text, one line at a time or a group of characters.

Selecting the Whole Text

Select the text with **Select** tool.

Selecting One or More Characters

Click and drag the text with **Text** tool to select a group of characters.
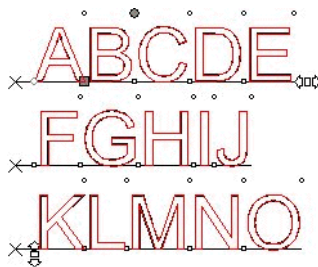
Selecting One Character

1   Select the text.

2   Select the Character or Paragraph tab in DesignCentral.

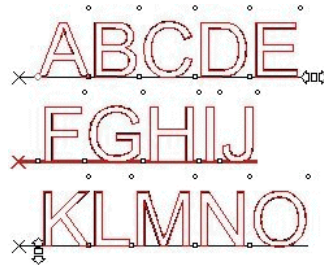3   Click the Move Character control point.

Selecting One Line

1   Select the text.

2   Select the Character or Paragraph tab in DesignCentral.

3   Click the Line Spacing control point.

All text selected

Second line selected

One character selected

Multiple characters selected

Changing Text Attributes

Changing the Font

All fonts in your system are available for selection. In addition, special fonts installed into your software folder are available. These fonts include URW, Casfonts and FSfonts.

Changing Font in Existing Text

1   Select the text.

2   From the Text menu, point to Font and select the desired font type from the menu. If the desired font is not visible in the menu, click **More** at the top of the menu.

Changing Font Using DesignCentral

1   Select the text.

2   Click the Character tab in DesignCentral.

3   Change the attribute.

While you scroll the font list, you will see a preview using the font that is highlighted. Before the font name, an icon indicates the font type:

Tr	TrueType Fonts	**F**	Casfonts
a	Adobe Type 1 Fonts	URW	URW Fonts
F	FSfonts		

Changing Text Alignment

1   Select the text. You do not have to select characters, just the entire text object.

2   From the **Text** menu, select **Justification** and select one of the following text alignments:

Left	The lines of text are aligned against the left margin, and have a ragged edge on the right margin.	Lorem ipsum dolar sit amet, cons incidunt ut labore et dolore magn trud exercitation ullamcorpor susc vel eum irure dolor in reprehende dolore eu fugiat nulla pariatur.
Center	Each line of text is centered, leaving ragged edges on the left and right margins.	Lorem ipsum dolar sit amet, co s incidunt ut labore et dolore magn trud exercitation ullamcorpor susc vel eum irure dolor in reprehende dolore eu fugiat nulla pariatur.

Right	The lines of text are aligned against the right margin, and have a ragged edge on the left margin.	Lorem ipsum dolar sit amet, cons incidunt ut labore et dolore magn trud exercitation ullamcorpor susc vel eum irure dolor in reprehende dolore eu fugiat nulla pariatur.
Full	Extra space is added between words so that each line exactly fills the space between the left and right margins.	Lorem ipsum dolar sit amet, cons incidunt ut labore et dolore magn trud exercitation ullamcorpor susc vel eum irure dolor in reprehende dolore eu fugiat nulla pariatur.

Changing Default Text Settings

All new text created uses the default font setting.

1 Make sure no text is selected.

2 Select the **Text** tool. T|T

3 Choose the default settings from **Text** menu or in DesignCentral.

Finding and Replacing

Your software includes a standard dialog box for locating and replacing text.

1 From the **Text** menu, select **Find**/**Replace**.

2 Enter the text that you want to find in the field.

- Click **Format** button to specify a format to search. The **Find Format Setting** dialog box allows you to locate text by font, style or size.

- To find a set of characters that may be part of a longer word, turn off **Match whole word only**.

- To search within a specific part of the text, select the text and choose **Selection only** option.

- To distinguish between uppercase and lowercase characters, select the **Match case** check box.

3 If necessary, enter the replacement text. You can specify the format of the replacement text by clicking the Format button.

4 Once the text is found you can:

- Click **Find Next** to locate the next occurrence of the text.

- Click **Replace** to replace the text.

- Click **Replace All** to replaces all occurrences of the specified text.

Spell Checking

The software allows you to check the spelling of the words in your design.

On-Screen Spell Checking

On-screen spell checking checks the spelling of words as you type them using the Text tool. Misspelled words are underlined with a red zigzag.

spelling errer

Spelling Error

On-screen spell checking is only in effect while you are editing text using the Text tool, and only displays spelling errors in the selected text object.

Setting On-Screen Spell Checking Options

1 From the **Edit** menu, select **Preferences**.

2 Select the **Tools** tab.

3 Select **Check Spelling** from the list on the left side of the dialog box. ABC

4 Adjust the following parameters:

Language	Select the language to use when checking spelling.
Check spelling on screen	Check to enable on-screen spelling. If cleared, on-screen spelling will not be checked automatically.

Manual Spell Checking

The manual spell checking tool allows you to check your entire design for spelling errors.

1 From the **Text** menu, select **Check Spelling**.

b From the **Language** list, select the language.

c To spell check within a specific part of the text, select the text and then choose the **Selection only** option.

d Choose the **Match Case** option to distinguish between upper and lower case.

2 Select the misspelled word from the Misspelled words list.

3 To change a word to the correct spelling:

e Select the correct word from the **Suggested corrections** list or enter the correct word in the **Change to** field.

f Click **Change** to change this single instance of the misspelled word, or **Change All** to change all instances of the misspelled word in the design.

4 To ignore a word listed as being misspelled, click **Ignore** to ignore this instance of the word, or **Ignore All** to ignore all instances of the word in the design.

5 To add a new word to the custom dictionary list, click **Add**.

6 To edit the custom dictionary list:

g Click **Edit List**.

h To add a word to the custom dictionary list, type the word in the field below the list and click **Add**.

i To change a word listed in the custom dictionary list, select the word in the list, then type the new spelling in the field below the list, and click **Change**.

j To remove a word from the dictionary, select the word in the list and click **Remove**.

k Click **Done**.

**7** Click **Done** to end spell checking.

Changing Case

1 Select the text.

2 From the Text menu, point to Case then select the desired capitalization from the menu:

UPPER CASE	All text is changed to capital letters.
lower case	All text is changed to lower case letters.
Sentence case	The first character of each sentence is changed to capital and the rest lower case.
Title Case	The first character of each word is changed to capital and the rest lower case.
tOGGLE cASE	Changes the lower case letters to capitals and vice versa.

Changing Kerning

Kerning is the space between characters of text. Kerning varies from font to font, and each font contains specific kerning information.

Using Automatic Kerning

1 Select the text.

2 From the Text menu, point to Kerning and select the desired kerning setting.

Overlap	Touch	Narrow
Medium	Wide	Default
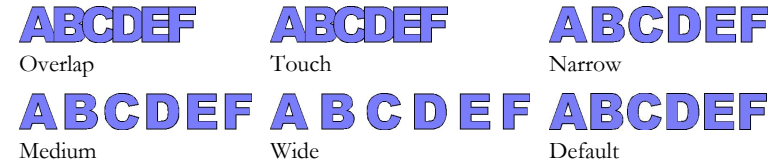
Using Manual Kerning

Changing Kerning for All Text

1 Select the text.

2 Change the value of the Tracking field on the DesignCentral - Character tab.

Changing Kerning between Two Characters

1 Click the Text tool between two characters.

2 Adjust the kerning by changing the value of the Tracking field on DesignCentral - Character tab.

> **Ctrl** and **right arrow** / **left arrow** keys narrows or widens the kerning.

Defining Kerning

Instead of setting the kerning each time you create a design, you can change the default kerning for a pair of characters for one font. By setting up a table of kerning pairs for your frequently used fonts, you can ensure that they will look right every time you use them.

> The kerning specified here is used only by this program and will not affect or be used by other applications.
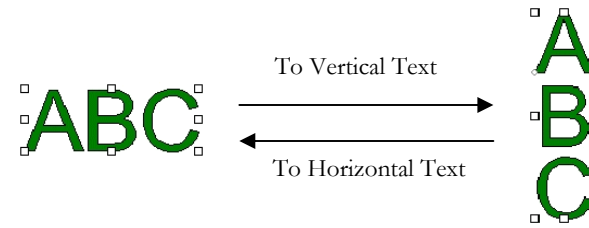
1 Select the text.

2 From the **Text** menu, select **Define Kerning**.

3 Select where the kerning will be stored:

|	
Selection only	Kerning is used only for selected text.
In document	Kerning is used for all text that is using this font and pair of characters for this file.
As default	Kerning is used in all files.

     ▤   In the Define Kerning dialog box, you can type a new pair of characters.

4   Drag the character in Define Kerning dialog box or enter a value in Kerning field.

     ▤   The kerning is defined in Em units. An Em space is equal to the width of an "M" in the selected font.

5   Click **OK**.

Breaking and Joining Text

You can break text with multiple lines in individual lines of text, and also join several lines of text.

Text with multiple lines   Text with individual lines
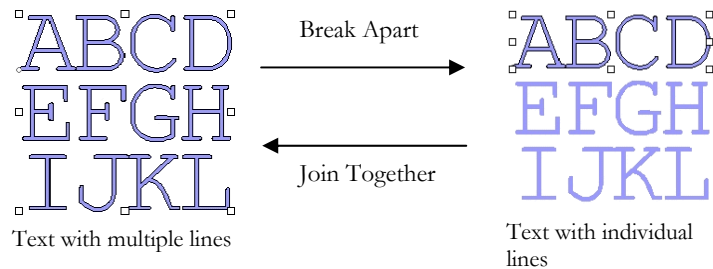
Breaking Text

1   Select the text.

2   From the **Text** menu, select **Break Apart**.

     ▤   When a single line is selected, the text is separated into individual characters.

Joining Text

1   Select the text blocks you would like to join.

2   From the Text menu, select Join Together.

Changing Text Orientation

1   Select the text.

2   From the **Text** menu, point to **Text Orientation** and select **Horizontal** or **Vertical** from the menu.

To Vertical Text

To Horizontal Text

Adjusting Text Block Size

1   Select the text.

2   From the **Text** menu, select **Text Spacing**.

3   Enter the desired text Width and Height.

- When **Adjust word spacing only** is checked, only the spaces between words are increased or decreased. If there are no spaces in the text, the width will remain unchanged.

- When **Proportional** is checked, changing a value automatically changes the other one, keeping the size proportional.

     ▤   Text must have more than one line in order to change the text height.

Working with Braille Text

The Braille feature allows you to convert text to Braille.

Converting Text to Braille

1   Select the text you want to convert.

2   From the **Text** menu, point to **Braille** and select **Text to Braille**.

3   Adjust the following parameters:

To Braille

To Text
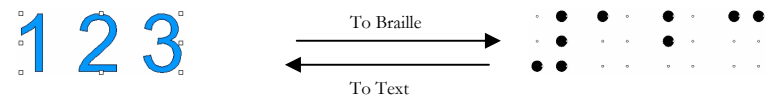
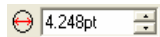|	
Grade 1 or Grade 2	Changes the Braille coding to Grade 1 or Grade 2. For Grade 1, each Braille cell represents one letter of the alphabet. For Grade 2, a Braille cell can symbolize a contraction or single letter to represent an entire word. This method is language dependent. This software offers Grade 2 Braille translations for English, Danish, Dutch, German, Norwegian, Spanish and Swedish.
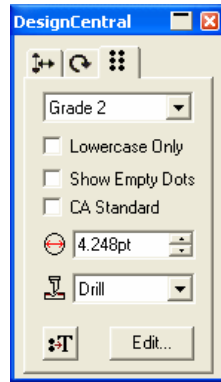
DesignCentral – Braille tab

|	
Lowercase Only	Converts text to lowercase letters, which removes capital letter indicators.
Show Empty Dots	Check to show all the empty dots in your text when it is selected. Empty dots are not output.
CA Standard	Check to force the Braille coding to comply with the California Braille standard, which requires that there be a specific distance between Braille dots.
	Diameter of each Braille dot.
Drill	Drill style leaves the design unchanged. Drill holes will be drilled at each Braille point.

Drill Style

Fill	Fill style places a black border around the Braille and compounds the objects so that the Braille dots are holes.
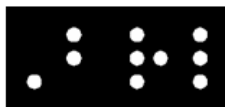
Fill Style

Laser	Laser style places a black border behind the Braille and assigns a radial gradient to the dots so that the center is white and the circumference is black.

Laser Style

	Converts Braille text back to normal text.
Edit	Click this button to edit the original text.

Working with Barcodes

You can convert normal text into Barcodes using Code 39 or Extended Code 39.

Code 39 is an alphanumeric bar code. It can encode numbers 0-9, the uppercase alphabet A-Z, Space, and then some symbols (- . * $ / % +). If you need lowercase letters, there is also an Extended Code 39 that encodes the 128 character ASCII character set by pairing existing Code 39 characters.

Converting Text to Barcode

1 Select the text.

2 From the **Text** menu, point to **Barcode** and select **Barcode39** or **Barcode39 Extended**.

📄 Once converted to Barcode, the text can not be resized or edited. Arc and Path text can not be converted to Barcode.

Converting Barcode to Text

1 Select the Barcode.

2 From the **Text** menu, point to **Barcode** and select **Barcode to Text**.
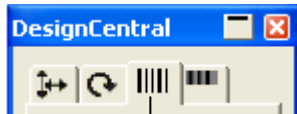
To Barcode

To Normal Text
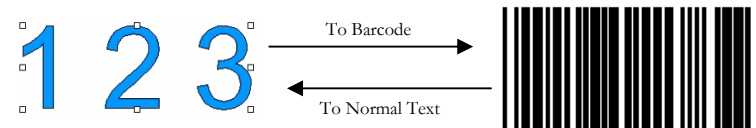
Barcode Tabs in DesignCentral

When a Barcode is selected, DesignCentral displays tabs for editing Barcodes.

DesignCentral – Barcode tab

Adjust the following parameters:

Barcode Tab

Barcode 39	Changes the encoding method from Barcode 39 or Extended Barcode 39.
0.010in	Width of a narrow bar.
50.0%	Barcode height.
2.200	Width ratio between wide and narrow bars.
1.000	Width ratio between space and narrow bars.
12.000	Width of blank area before and after the barcode.

DesignCentral – Barcode Text tab

Adjust the following parameters:

Barcode Text Tab

Show Title	Click this option to show the title under the barcode.
Show Asterisks	Click this option to show the asterisks in the title.
Arial / Regular	Font and Style used in title.
Edit	Click this button to edit the original text.
Convert to Text	Convert the Barcode back to text.

Working with Special Characters

## Inserting Special Characters

1 Click the text with **Text** tool, placing the cursor where the special character will be inserted.

2 From the **Text** menu, select **Insert Symbols**.

3 Select the font and click the special character that will be inserted

📄 Click **Enter** to change lines and **Space** to enter a space.

4 Click **OK**.
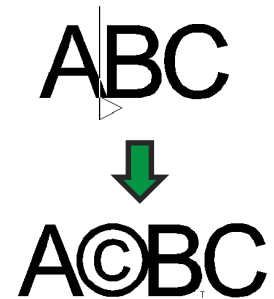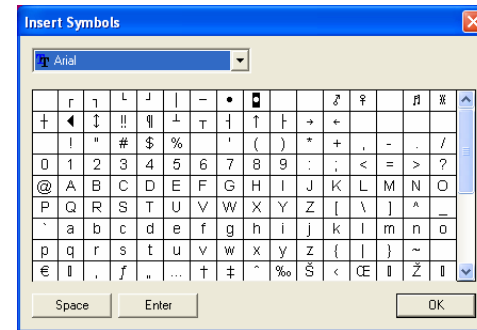
Creating New Characters

1 Select the path.

2 From the **Text** menu, select **Define Character**.

3 Select the font type and style where the new character will be added in **DesignCentral**.

4 Select the new character or character code in Character.

5 To size and position the character, specify a reference character in Reference Character.

Or

• Click and drag the control points around the character to adjust the new character's position and size.

The baseline and the box of the new character will be placed relative to the bounding box in the same ratio as the reference character. When the reference character is not specified, the baseline is on the bottom of the object bounding box, and the character is scaled to fit the ascent.

Bounding box and Control Points
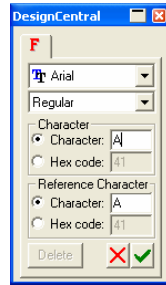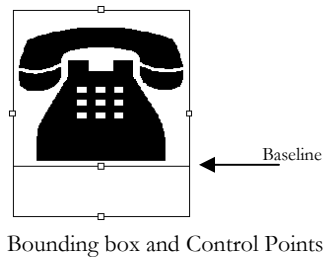
In this example, the new character will be defined as "C" in Arial Regular font

6 Click **Apply**. ✔

In the example below, the character "C" in Arial font is replaced with a telephone symbol. Every time you type "C" using the Arial font, a telephone symbol will be used.

Using standard Arial font

The same text after the new character has been created

📄 The special character specified here is used only by this program and will not affect or be used by other applications. Also, the existing text in your document will not be affected.

Deleting Custom Characters

1 Select the text.

2 From the **Text** menu, select **Define Character**.

3 Select the font type and style where the character was added.

4 Select the character or character code in Character.

**5** Click **Delete**.

Working With Text Styles

You can copy text attributes and apply them to other text within your document. You may also store text styles within a list. The text style contains the following attributes:

- Font
- Kerning
- Word Spacing
- Line Orientation

- Style
- Size
- Tracking
- Line Spacing

- Direction
- Width
- Vertical Offset
-

- Character Orientation
- Slant
- Justification
-

Copying and Pasting Text Styles

1 Select the text with the desired attributes.

2 From the **Text** menu, point to **Text Style** and select **Copy Style**.

3 Select the text where the style will be applied.

4 From the **Text** menu, point to **Text Style** and select **Paste Style**.
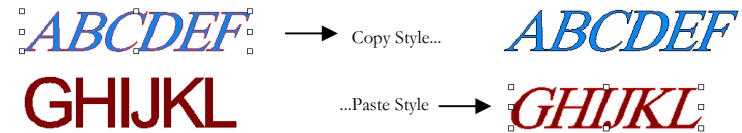
Storing Styles in the Style List

1 Select the text.

2 From the **Text** menu, point to **Text Style** and select **Store Style**.

3 Type the style name.

4 Click **OK**.

Applying Styles from the Style List

1 Select the text.

2 From the Text menu, point to Text Style and select **Apply Style**.

3 Select the style from the list.

4 Click **OK**.

Text Preferences (Windows Only)

1 From the **Edit** menu, select **Preferences**.

2 Select **Tools** tab.

3 Select **Text** tool from the list on left side of dialog box.

4 Adjust the following parameters:

Font Size — Select which option will be used to determine the font size used to fit a specified text height:

Use font height — The software sets the font size so that the height of the bounding box of the font matches the specified height.

Based on height of __	The software sets the font size so that the height of the letter you specify, measured from the top of the letter to its baseline, exactly matches the specified height. By default, sizes are based on the height of the letter "X." The benefit of using a reference letter is knowing the exact size of one particular letter.

    📄 Using a reference letter does not make all characters the same size as that letter.

In the example below text was selected and the same size was set in DesignCentral.

[A]   [B]   [C]

Text Height in Design Central
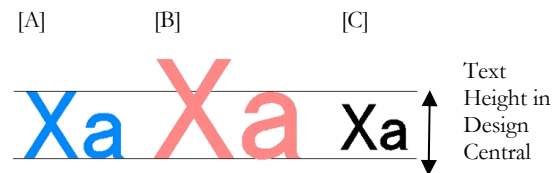
[A] The height of letter "X" was set as a reference in Based on height of. The height of letter "X" is exactly the size specified in DesignCentral because it is used as a reference. All other letters, like the "a" in the previous example, will be proportionally resized.

[B] The height of letter "a" was set as a reference in Based on height of. The height of letter "a" is exactly the size specified in DesignCentral and all other letters, like the "X" is proportionally resized.

[C] Setting Use font height in Font size in Preferences. The height of the font's original bounding box has the size specified in DesignCentral.

Width / tracking/word spacing	You can choose to show this value in DesignCentral in actual size or as a percentage.
Use Chinese language kits	Check to accept Chinese characters input from the Chinese language kit while running a Roman language version of Windows.

Working with Fonts

Installing Fonts

In your software you can use TrueType, Adobe Type 1, FSfont, Casfonts and URW fonts.

Installing TrueType and Type 1 Fonts

To install TrueType and Type 1 fonts, copy the font files into the operating system's Fonts directory. Consult your operating system documentation for information.

Installing FSfonts

1   Copy the font files to FSFonts folder.
2   From the **Edit** menu, select **Preferences**.
3   Select **Font** tab.
4   Enter the path or click **Browse** to select the folder where the fonts are stored.
5   If the fonts are protected, click **Add** and type the password.
6   Click **OK**.
7   Restart the software.

Installing URW and Casfonts

1   Copy the font files to **URWFonts** or **Casfonts** folder.
2   Restart the software.

Casmate Engraving Fonts

Casmate engraving fonts install in the same manner as other Casmate fonts, with the following additional conditions:

- If the filename of the font starts in **ENG_**, **E_** or **E** (E followed by a space), the font is automatically loaded as an open path font.

- Fonts whose filenames begin with some other characters must be listed in a text file named **casfopen.lst** in the **Casfonts** folder. Once the filename is listed in the **casfopen.lst** file, the software will automatically load the font as an open path font.

The format of the **casfopen.lst** file is as follows:

- The first line consists of the section header **[CAS Fonts]**.

- All other lines are font entries. Each font entry is on its own line. A font entry consists of the name of the font, exactly as it appears in Inspire or CASmate, followed by an equal sign (=). Font entries are case-sensitive.

```
[CAS Fonts]
Eng_Tulip4l=
Eng_Glacis4l=
Eng_Palm=
Eng_Almond=
Eng_Script=

E Iris=
E Iris LZR=
E Normal Block 1 Line=
E Roman Double Line=
E Cursive 1 Line=

E DOUBLE LINE CONNECTING SCRIPT=
E 4 LINE HELVETICA=
E HELVETICA REGULAR 1983=
```
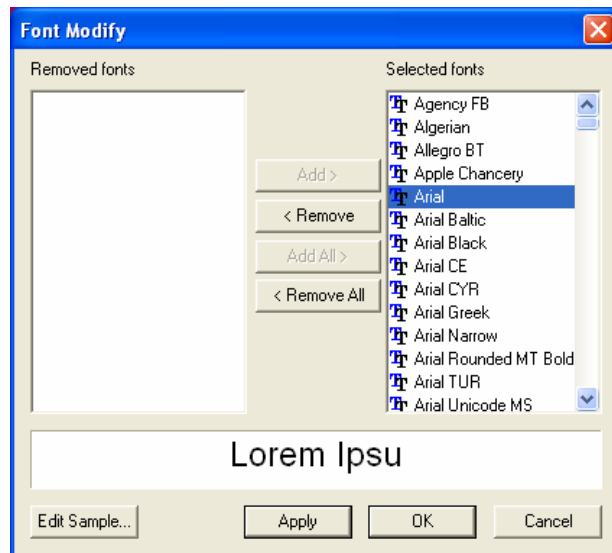
An example of a **casfopen.lst** file:

Modifying the Fonts in Use

The software allows you to determine which of the fonts on your system will be loaded when the software starts up.

To modify the selection of fonts the software will load, from the **Text** menu, select **Font** then **Modify**.

- A piece of sample text in the selected font is displayed at the bottom of the dialog.

- To unload a font, select it in the **Selected Fonts** list and click **Remove**.

- To load a font, select it in the **Removed Fonts** list and click **Add**.

- To unload all fonts, click **Remove All**.

- To add all fonts, click **Add All**.

- To apply the selected font to the current text object, click **Apply**.

12 Working with Paths

A path consists of one or more straight or curved segments and can be **Open** or **Closed**. When you have more than one segment in one path, the segments are separated by a **Control Point**. The position of the Control Point determines the shape of the adjacent segments.

On curved segments, each anchor point displays **Direction Lines**, ending in **Direction Handles**. Their angle and size determine the shape of the curve.

A Control Point located between two segments can be:

Symmetric	The direction handles point in opposite directions along the same line and they have the same size.
Smooth	The direction handles point in opposite directions along the same line but are not the same size.
Cusp	The direction handles are not in the same line.
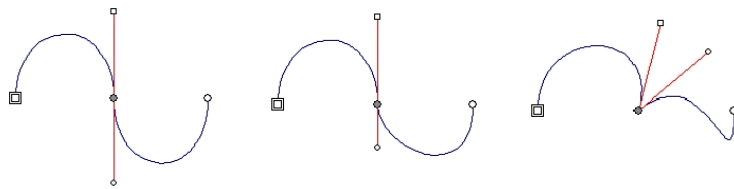
Symmetric Control
Points

Smooth Control Points

Cusp Control Points

A double circle or square indicates the Starting Point of the path. In an open path, the starting point can be at either end of the path. In a closed path, the starting point can be anywhere on the path.

Control Points

A straight segment is selected

Direction Handle 1

Direction Line 1

Control Point

Direction Line 2

Direction Handle 2

Starting Point
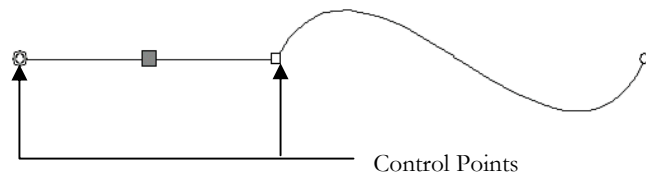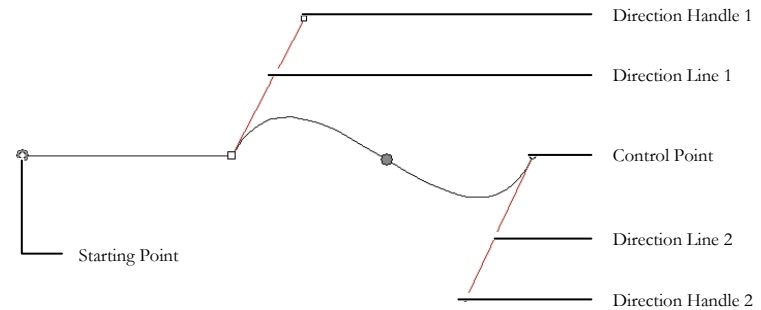
A curved segment is selected

Creating Paths

You can create paths using path tools.

> 📄 To continue drawing an existing open path, select the Bezier Path or Freehand Path tool and click the cursor over either end of the path.

Drawing Straight Segments Using the Bezier Path Tool

1 Select the **Bezier Path** tool. 🖊

2 Click where the segment will begin in the drawing area.

3 Click where the segment will end.

> 📄 Hold **Shift** to constrain the line angle.

4 Repeat step 3 to create additional straight lines.

- Press the **Backspace** key to delete the last segment.
- Press the **Esc** key or click the **New Path** button in DesignCentral to create a new path.
- To close the path, place the cursor close to the starting point and click when the cursor shows a small circle underneath or press the **Close Path** button in DesignCentral.
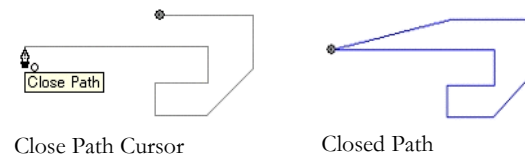
Close Path Cursor

Closed Path

- Press the **Delete** key to delete the entire path.

Drawing Curved Segments Using the Bezier Path Tool

1   Select the **Bezier Path** tool. 🖋

2   Click where the segment will begin in the drawing area.

3   Click and drag where the segment will end in the drawing area.

> 📄 By default, the new Control Point is Symmetric. Hold **Shift** and drag to make the new point Smooth, or **Alt** to make it a Cusp.

4   After releasing the mouse button, you can still adjust the Direction Lines, by dragging the Direction Handles. Hold **Shift** to change one Direction Line length and angle, while keeping the other Direction Line length unchanged. Hold the **Alt** key to change one Direction Line length and angle, while keeping the other Direction Line length and angle unchanged.

5   Repeat step 3 to create more segments.

- Press the **Backspace** key to delete the last segment.

- Press the **Esc** key or click the **New Path** button in DesignCentral to create a new path.

- To close the path, place the cursor close to the starting point and click when the cursor shows a small circle underneath or press the **Close Path** button in DesignCentral.

- Press the **Delete** key to delete the entire path.

Drawing Arcs Using the Bezier Path Tool

1   Select the **Bezier Path** tool. 🖋

2   Click where the arc will begin in the drawing area.

3   Hold **Ctrl** and click to mark the endpoint of the arc, then drag to describe the curvature of the arc. The curvature will increase or decrease so that the arc always intersects the cursor.
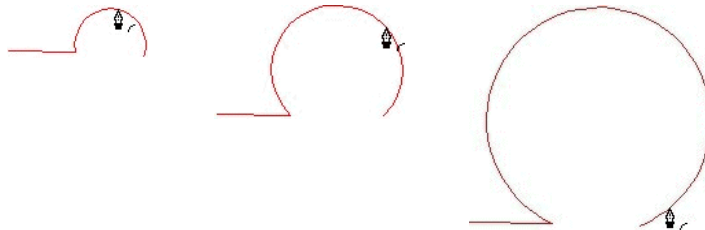
4   After releasing the mouse button, you can still adjust the Direction Lines, by dragging the Direction Handles. Hold **Shift** to change one Direction Line length and angle, while keeping the other Direction Line length unchanged. Hold **Ctrl** to change one Direction Line length and angle, while keeping the other Direction Line length and angle unchanged.

5   Repeat step 4 to create additional segments.

- Press the **Backspace** key to delete the last segment.

- Press the **Esc** key or click the **New Path** button in DesignCentral to create a new path.

- To close the path, place the cursor close to the starting point and click when the cursor shows a small circle underneath or press the **Close Path** button in DesignCentral.

- Press the **Delete** key to delete the entire path.

Drawing Segments Using the Freehand Drawing Tool

1   Select **Freehand Drawing** tool. ✏

2   Adjust the **Tolerance** in DesignCentral. The higher the tolerance value, the smoother the path becomes.

Tolerance = 0 pixels   Tolerance = 10 pixels   Tolerance = 20 pixels
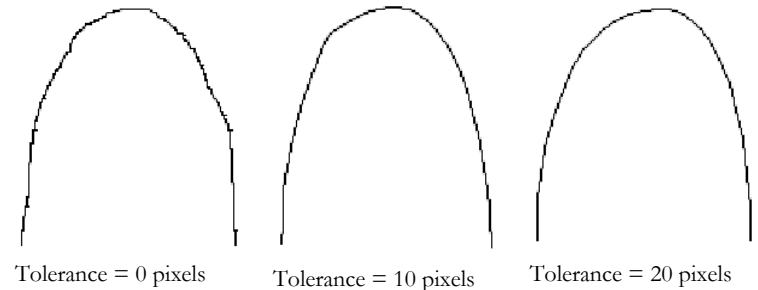
3   Click and drag to create the path. Hold **Shift** to create a straight line.

4   While still creating the path, hold **Ctrl** and drag back to erase the path you just created.

Drawing a Freehand Path   Erasing a Path

5   To close the path, place the cursor close to the starting point and click.

Converting Objects into Paths

1   Select the objects.

2   From the **Arrange** menu, select **Convert to Outlines**.

If the objects have a stroke around them, the resulting path will keep the stroke.

> 📄   When text is converted to paths, the resulting paths will be compounded. To edit those paths, you have to uncompound them first.

Converting Stroke to Outlines

To convert Strokes to Outlines, from the **Arrange** menu, select **Convert Stroke to Outlines**.

Selecting Points and Segments

Selecting Segments

1   Choose the **Select Point** tool.

2   Click a control point or a segment.

When a straight segment is selected, a filled square is displayed. When a curved segment is selected, the Direction Handles and Lines for the segment is displayed along with a filled circle.
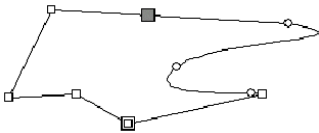
Straight segment selected   Curved segment selected
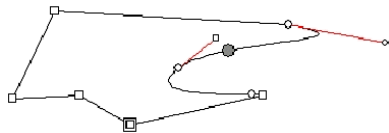
When a control point is selected, it displays a square, when the previous segment is a straight segment and a circle when the previous segment is curved.

> 📄   Press the **Tab** key to move to the next point.

3   Hold **Shift** and click other segments to select multiple segments or points.

Selecting Control Points by Enclosing

1   Choose **Select Point** tool.

2   Click and drag to create a rectangular bounding box.
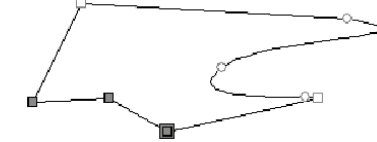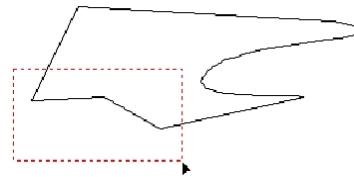
Multiple points selected

Another way to select multiple control points is by using an inclined bounding box. This method is useful when the points to be selected are placed in a way that a rectangular bounding box can not select them.

Selecting Points Using an Inclined Bounding Box

1   Choose **Select Point** tool.

2   Hold **Ctrl** and click and drag to define one edge of the bounding box.

3   Release **Ctrl** and drag the cursor in a perpendicular direction to define the adjacent edge of the bounding box.

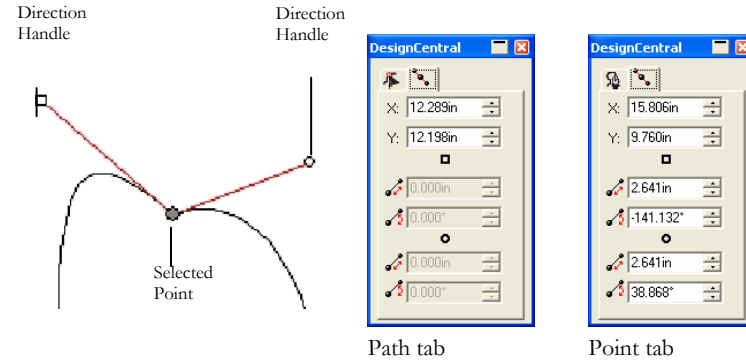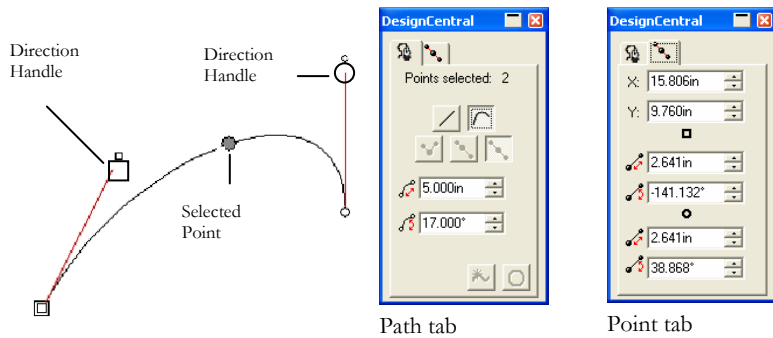**4**   Release the mouse button.
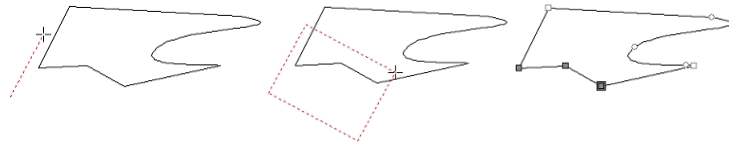
Using DesignCentral to Edit Points and Segments

When a segment or point is selected, DesignCentral displays path editing tabs. The information on each tab differs if a point or a segment is selected.

DesignCentral When a Segment is Selected

When a segment is selected, the following information is available in DesignCentral

Path tab   Point tab

Attributes in Path tab

Points selected — Number of points selected on a path.

Type of selected segment (line or curve). You can convert one type to another by clicking these buttons.

Length of selected segment. In a curve segment, this value is the length of a straight line joining the two ends of the segment as shown on above illustration.

Inclination of selected segment. In a curve segment, this value is the angle of a straight line joining the two ends of the segment as shown on above illustration.

Attributes in Point tab

X, Y coordinates of the selection point (the point where the segment was clicked).

Length and angle of the Direction Handle marked with a square.

Length and angle of the Direction Handle marked with a circle.

DesignCentral When a Control Point is Selected

When a Control Point is selected, DesignCentral shows information about the selected point. Depending on the type of point, some of the information below may not available.

Path tab   Point tab

Attributes in Path tab

Points selected — Number of points selected on a path.

Type of segment prior to the selected point. You can convert one type to another by clicking these buttons.

Type of selected point. You can convert one type to another by clicking these buttons. But in order to convert a Cusp point to Symmetric or Smooth, the two adjacent segments to this point must be curved segments.

Angle between two Direction Handles.

Attributes in Point tab

X, Y coordinates of the selected point.

Length and angle of the Direction Handle marked with a square.

Length and angle of the Direction Handle marked with a circle.

DesignCentral When an Engraving Path Is Selected

When an engraving path is selected, DesignCentral displays a tab showing information about the engraving path.

Direction Handle

Selected Point
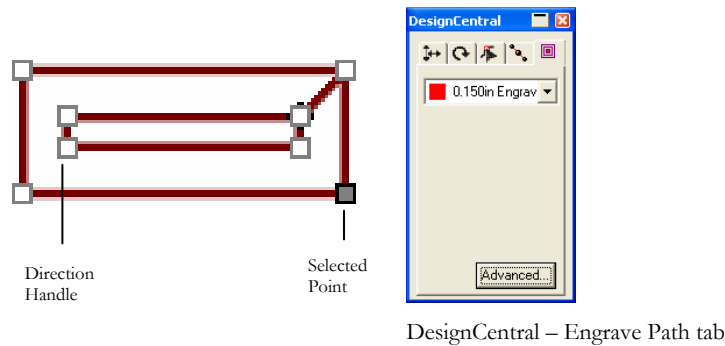
DesignCentral – Engrave Path tab

Attributes in Engrave Path tab
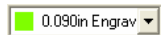
     Displays the tool selected from the Tool Library.

Advanced Settings for Engrave Paths

To display Advanced Settings for Engrave Paths, click the **Advanced** button in DesignCentral – Engrave Path tab. See "Advanced Settings for Engraving Fills" on page 123 for more information.

Path Direction

Every path has a direction associated with it. This direction is used when cutting. See "Showing Path Directions" on page 10 for more information.

Changing Path Direction

1   Select the path.

2   From **Arrange** menu, point to **Path Direction** and select the new direction.

Automatic	The direction of inside paths (holes) in objects are clockwise and the outside paths are counterclockwise.
Reverse	Inverts the current direction.
Clockwise	All paths have the same clockwise direction.
Counter Clockwise	All paths have the same counter clockwise direction.

Editing Paths

The Path Edit toolbar contains tools that allow you to edit paths.

Straightening Lines

This Straighten Point tool is used to straighten a section of a path. In some cases, when you trace an image, extra points are added to the traced path. Use this tool to eliminate these points.

1   Select the **Straighten Points** tool.

2   Place the cursor over the path.

3   Click the point where the straight line will begin.

4   Click the point where the straight line will end.

5   Drag the start and end points to adjust the position of the straight line.
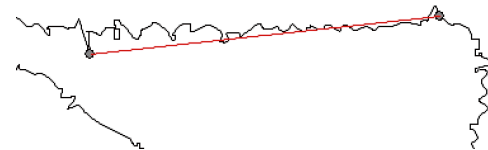
6   Click **Apply** ✔ or double-click anywhere inside the design area.
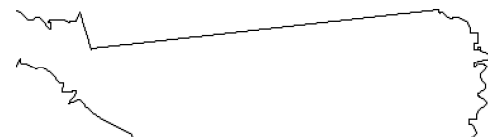
Aligning Points and Segments Horizontally or Vertically

Use the Align Horizontal or Align Vertical tools to align several points along a horizontal or vertical line.

1   Select the points.

2   Select the **Align Horizontal** or **Align Vertical** tool.
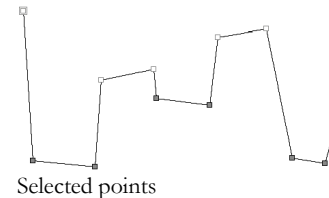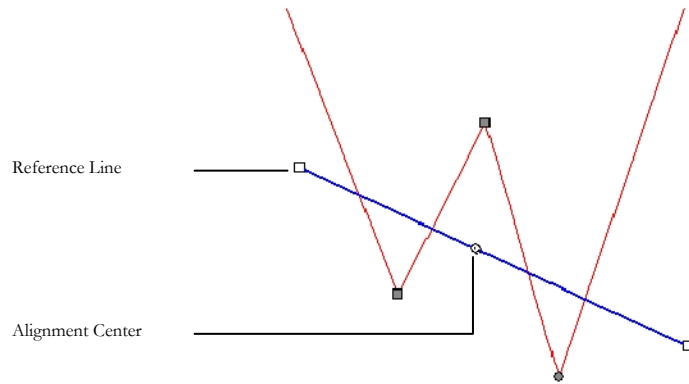

Selected points
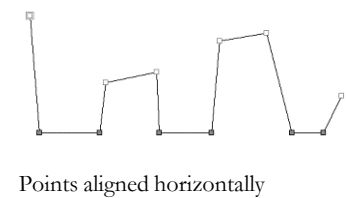
Points aligned horizontally

Aligning Points and Segments to an Angle

The Align Points tool aligns selected points along an alignment reference line.

1 Select the points.

2 Select **Align Points** tool.

Reference Line

Alignment Center

3 Click and drag the either end of reference line to change the angle of the alignment reference line. Click and drag the Alignment Center to change its position.

> 📄 You can also adjust the alignment reference line using the numeric fields in DesignCentral.

Move Direction	When **Closest** is selected, the point moves to the alignment reference line using the shortest path.
	When **Horizontal** is selected, the point moves horizontally to the reference line.
	When **Vertical** is selected, the point moves vertically.
Alignment Center Location	X and Y Coordinates of the Alignment Center, the circle located in the alignment reference line.
Alignment Angle	Angle of alignment reference line.
Move Entire Path	This option is only enabled if the selected points are in different paths. When this option is enabled, the entire path moves to the reference line.

Selected Points

Move Entire Path Disabled   Move Entire Path Enabled
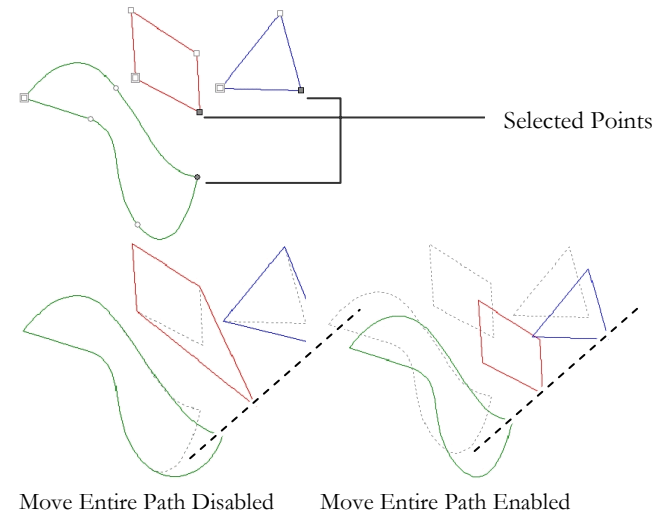
4 Click **Apply** ✔ or double-click anywhere inside the design area.
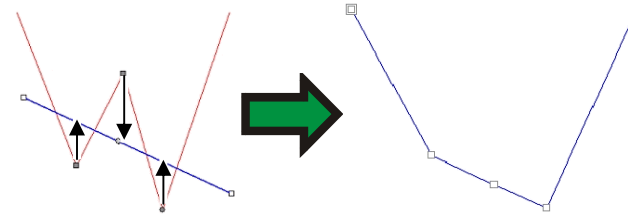
Aligning points using vertical move direction

Spacing Points

You can space points evenly horizontally or vertically.

1 Select the points.

2 From the **Arrange** menu, select **Spacing**.

3 In DesignCentral, enter the distance between points and the direction that they will be spaced.

4 Click **Apply**. ✔

Points spaced horizontally
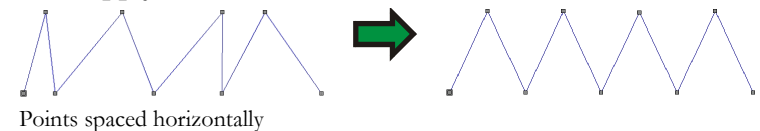
Repeating Paths

You can create several copies of an open path, creating a closed path.

1   Select the points with the **Select Point Tool**.

2   From the **Arrange** menu, select Step and Repeat.

3   Click **Apply**. ✔

Original path

After Step and Repeat

Acquiring and Applying Length and Angle

Use this tool to copy on segment angle and length and apply it to another segment.

1   Select **Apply Length and Angle** tool.

2   Enter the angle and length values in DesignCentral or hold **Ctrl** and click over the segment from where the angle and length will be copied.

Apply Length	Check this field to apply the length.
Apply Angle	Check this field to apply the angle.
Segment Length	The length that will be applied to the segment. Click the button on right side to select a set of predefined factors.
Segment Angle	The angle that will be applied to the segment. Click the button on the right side to select a set of predefined angles or apply the opposite angle.

3   Click the cursor over the segment where the angle and length will be applied.

📄   Press **Shift** to change the point that is used as a reference.

Ctrl + Click

Click

Shift + Click

Acquiring the length and angle

Click to apply the length and angle

Shift + click to apply the length and angle.
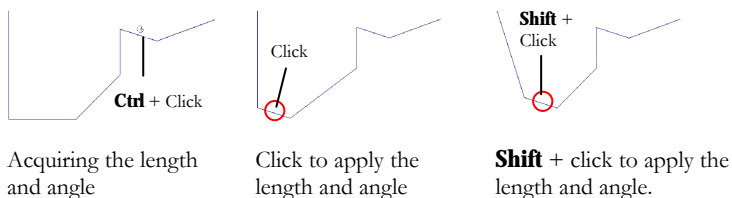
Rounding Corners

The Round Corner tool converts corners into rounded corners.

Rounding One Corner of a Path

1   Select the objects.

2   Select the **Round Corner** tool.

3   From the Round Corner tab in DesignCentral, choose **Selected**.

4   Click on the path points of the corners you want to select. Use the **Shift** key to select multiple points.

5   Adjust the **Diameter** in DesignCentral or click and drag the Round Corner circles.

6   Click **Apply**. ✔

Rounding Multiple Corners of a Path

1   Select the objects.

2   Select the **Round Corner** tool.

3   From the Round Corner tab in DesignCentral, choose either **All Corners**, **Inner Corners** or **Outer Corners**.

4   Adjust the Diameter in DesignCentral or click and drag the center of a circle.

Sharpening Corners

The Sharpen Corner tool converts a round corner into a sharp corner.

1   Select the **Sharpen Corner** tool.

2   Click the point where the sharp corner will begin.

3   Click the point where the sharp corner will end.

4   Drag the start and end points over the path to adjust the position of the corner. **Tab** key joins the start and end points using a straight line.

5   Click **Apply** ✔ or double-click anywhere inside the design area.
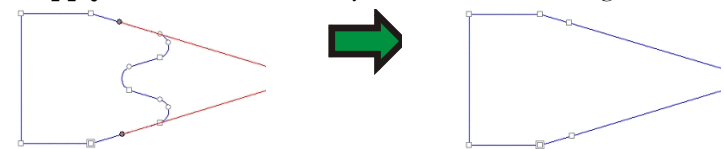
Converting Segment into a Curve

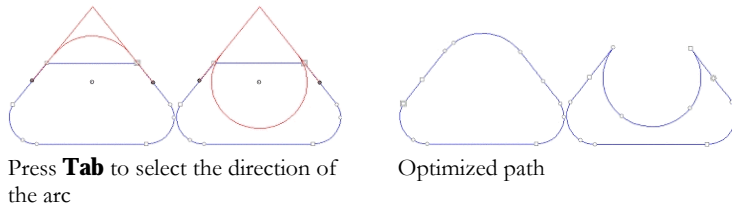The Optimize by Curve tool creates a curved segment between two points on a path.

1. Select the **Optimize by Curve** tool.
2. Click the point where the curve will begin.
3. Click the point where the curve will end.
4. Drag the start and end points over the path and the Direction Handles to adjust the shape of the curved segment. Hold **Shift** and drag the direction handles to constrain the dragging to the original direction of the handles. Hold the **Tab** key to change which side of the path will be kept.
5. Click **Apply** ✔ or double-click anywhere inside the design area.

Converting Segment to Smooth Arc

The Optimize by Smooth Arc tool creates an arc segment between two points in a path.

1. Select the **Optimize by Smooth Arc** tool.
2. Click the point where the arc will begin.
3. Click the point where the arc will end.
4. Drag the start and end points over the path and the center of the arc to adjust the shape of the arc. You can also enter the **Diameter** value in DesignCentral.

   📄 Click the **Tab** key to change the arc position.

Press **Tab** to select the direction of the arc   Optimized path

5. Click **Apply** ✔ or double-click anywhere inside the design area.

Converting Segment to 3-Point Arc

The Optimize 3-Point Arc tool creates a semicircle between two points on a path.

1. Select **Optimize by 3-Point Arc** tool.
2. Click the point where the arc will begin.
3. Click the point where the arc will end.

4. Drag the start, end and the third control point in the arc to adjust the shape of the arc. Press the **Tab** key to change the arc position.
5. Click **Apply** ✔ or double-click anywhere inside the design area.

Drag to adjust the arc shape
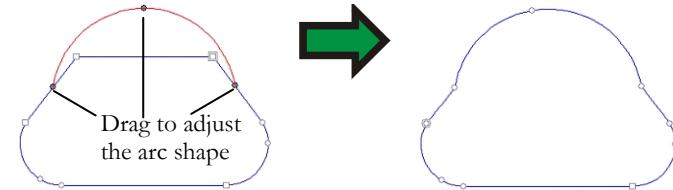
Converting Segment to Arc

The Make Arc tool converts one segment of the path into a semicircle.

1. Select the **Make Arc** tool.
2. Click and drag one segment of the path.

   📄 Hold **Shift** and drag to constrain the arc into a half circle.

3. Release the mouse button.

Click and drag to create an Arc
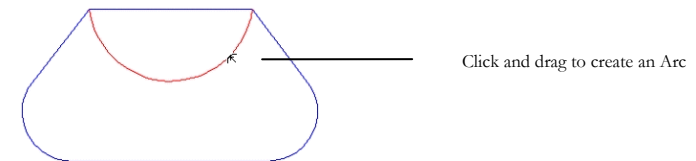
Eliminating Extra Points

Many paths that have been auto-traced have a number of extra points that should be removed.

1. Use **Select** tool to select a path and all its points, or the **Select Point** tool to select specific points in a path.
2. Select the **Reduce Points** tool.
3. Adjust the **Tolerance** value in DesignCentral. Lower values of tolerance will follow the original path more closely; higher values will eliminate more points.
4. Click **Apply** ✔ or double-click anywhere inside the design area.

Path before reducing the extra points

Path after reducing the unecessary points
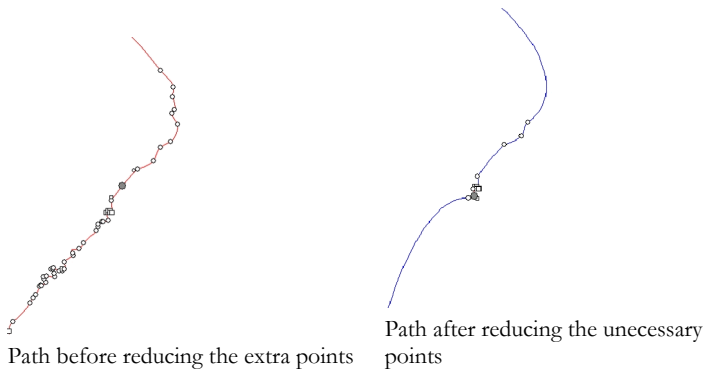
Removing One Point

You can remove one specific point from the path using the Remove Point tool.

1 Select the **Remove Point** tool.

2 Click over the points to be removed.

> 📄 You can also remove points by selecting them with Select Point tool and holding Delete key.

Adding One Point

You can add one specific point from the path using the Add Point tool.

1 Select the **Add Point** tool.

2 Click over the path to add new points.

Removing Self-Intersections

Removing Self-Intersections converts every closed path to a compounded outline.

1 Select the path.

2 From the Arrange menu, point to Path Direction and select Automatic.


Changing Starting Point

Every path has a starting point. When this path is cut, the plotter will start cutting from the starting point. In an open path, the starting point must be at one end of the path.

1 Use the **Select** tool to select a path or the **Select Point** tool to select one point or segment.

2 Select the **Change Start Point** tool.

3 Click and drag the starting point into its new position.

> 📄 Hold **Shift** and drag to move the starting point to an existing point.

4 Click **Apply** ✔ or double-click anywhere inside the design area.

Separating to Closed Paths

The Cleaver tool separates closed paths, creating new **closed** paths. Open paths will be separated into open paths.

1 Select the **Cleaver** tool.

2 Click and drag the cursor to create a cut line.

• Hold **Shift** and drag to constrain the angle of the cut line.
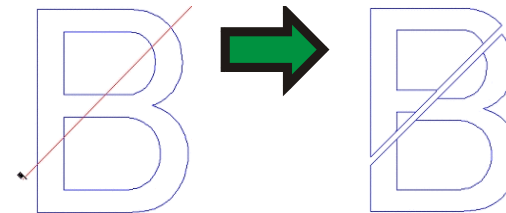
Separating to Open Paths

The Scissor tool will separate paths; always creating open paths, regardless if the original path was an open or closed path.
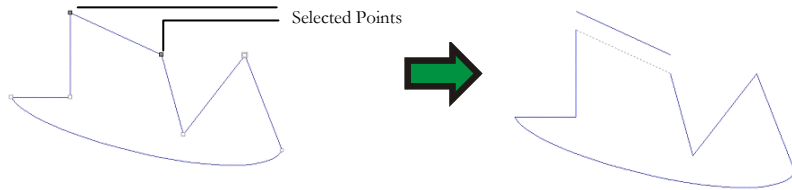
1 Select the **Scissors** tool.

2 Click and drag the cursor to create a cut line or just click to split a path in one specific point.

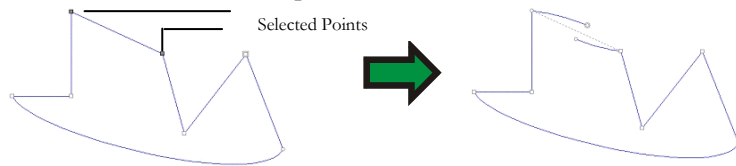> 📄 Hold **Shift** and drag to constrain the angle of the cut line.
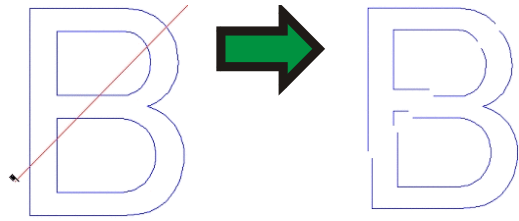
Breaking Paths

Breaking Paths at Existing Points

1   Select the points.

2   Select the **Break Path** tool.

Selected Points

Breaking Paths at a Specific Point

1   Select the **Break Path** tool.

2   Click the cursor over the path.

Selected Points

Joining Paths

Use this tool to join two points separated by a gap.
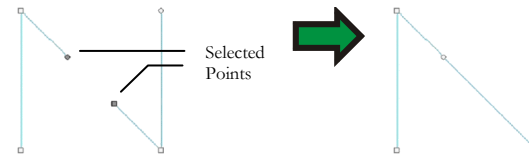
1   Select the points.

2   Select the **Join Path** tool.

3   Adjust the Tolerance value in DesignCentral. Points that are separated beyond this distance are not joined.

4   Click **Apply** ✔ or double-click anywhere inside the design area.

Not joined, since the gap is too wide

Joined Points

Merging Paths with the Join Paths Tool

1   Using the **Select Point** tool, select the nearest end points of each of the paths.

2   Select the **Join Paths** tool.

Selected Points

Converting Corners to Right Angle

1   Select the corner or segments.

📄   If you select a segment, all sharp corners in the path will be converted to right angle corners.

2   Select the Make Right Angle tool.

Selected Point
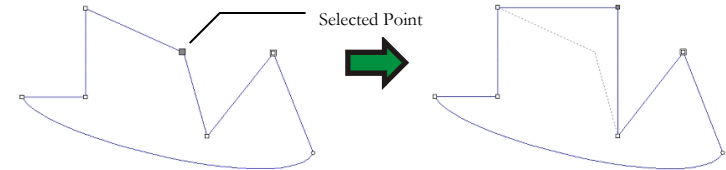
Removing Tiny Objects

This tool allows you to remove small objects. This tool is especially useful to use after autotracing a bitmap.

1   Select the **Remove Tiny Objects** tool.

2   Adjust the Threshold value in DesignCentral. Paths with size below this value are deleted.

3   Click **Apply** ✔ or double-click anywhere inside the design area.
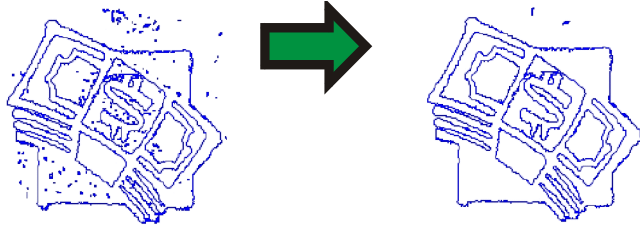
13 Working with Bitmaps

A bitmap represents an image as a mosaic of colored dots called pixels. The pixels are arranged in a fixed number of rows and columns. Bitmaps are also known as raster images, and the method used to create them is called rasterization.

When a bitmap is edited, the color values of its pixels are changed to form the new image.

The following color modes are supported:

Black and White	Each pixel is either black or white, with no shades of gray.
Grayscale	Pixels are colored in 256 shades of gray ranging from solid black to solid white.
RGB	The color values for each pixel are expressed as a combination of red, green and blue values. Up to 16.7 million different colors can be reproduced under this color model.
CMYK	The color values for each pixel are expressed as a combination of cyan, magenta, yellow and black values. This is the color mode most commonly used in color printing.
Indexed	The color of each pixel is indicated by a reference to a separate swatch table containing 256 colors.

If a bitmap is magnified or printed at too low a resolution, the individual pixels become visible. This gives the image a jagged, pixilated appearance (see above).

Resolution is the number of pixels displayed per unit of printed length in an image, usually measured in pixels per inch (PPI) or dots per inch (DPI).
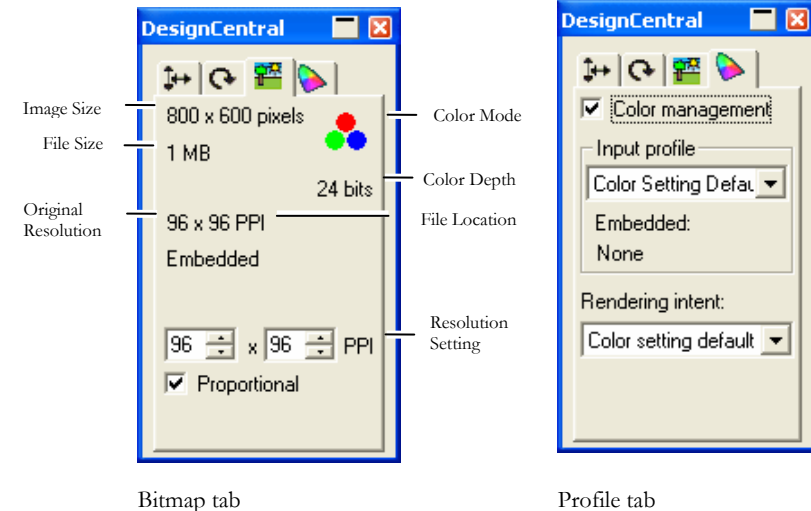
Using DesignCentral

When a bitmap is selected, DesignCentral shows the Bitmap and Profile tabs.

Bitmap Tab

The Bitmap tab will show some attributes of selected bitmaps. On this tab you can change the resolution of the bitmap. Changing the resolution will automatically change the bitmap's size. Uncheck the **Proportional** option to set different resolutions for horizontal and vertical direction.

Profile Tab

On this screen you can specify the **Input profile** and the **Rendering intent** that will be used as settings to print a particular bitmap. You can have independent settings for each bitmap. See "Configuring the System for Color Printing" on page 130 for more information.

Bitmap tab   Profile tab
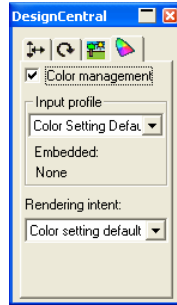
Embedded ICC Profiles

If the selected bitmap contains an embedded ICC profile, it will be listed on the Profile tab of DesignCentral.

To use the embedded ICC profile as the input profile, select **Use Embedded ICC Profile** from the **Input profile** list.

Embedded profiles are currently supported for TIFF and JPEG file formats.

Creating Bitmaps

There are several ways to include a bitmap into a document.

Importing Bitmaps

1   From the **File** menu, select **Open** or **Import**.

2   Select the bitmap file from the list and click **Open** or **Import**.

When importing a bitmap you can create a link between the original bitmap file and your document. This link is an electronic connection between the files and every time that the document is open, the linked bitmaps will be imported. To create a link, check the **Link** option in the import dialog box.

Exporting Bitmaps

1   If you want to export only one bitmap from your document, select it.

2   From the **File** menu, select **Export**.

3   Select the file format from the list and type the file name.

4   If you are exporting only a selected object, be sure to check the Selection only option. Checking Suppress Option will export the bitmap using the default settings for the bitmap file format.

5   Click **Save**.

Scanning Bitmaps

Scanning allows you to convert a printed image into an electronic image.

To scan an image, you must have a scanner and a computer with your scanner's TWAIN_32 driver installed. TWAIN_32 is a cross-platform interface for acquiring images captured by scanners and digital cameras.

The manufacturer of the scanner device must provide a proper driver for your device. Instructions for setting up your scanner are included in your scanner's user manual.

1   Turn on your scanner and connect it to your computer.

2   Place your image on the scanner.

3   If you have more than one scanner, from the File menu, point to Acquire Image and select TWAIN Select and select your scanner from the list.

4   From the **File** menu, point to **Acquire Image** and select **TWAIN Acquire**.

5   Follow the scanner's directions.

6   After your image is scanned, a bounding box showing the scanned image displays.

7   Move the bounding box to the desired location and click to place the image.

> 📄   **Tab** changes the cursor position in the bounding box. **Esc** exits the scanning process. **Enter** to place the scanned image.

Using Plug-ins to Scan on a Macintosh

1   From the **File** menu, point to **Acquire Image** and choose Select Plug-in Folder and select the folder where the scanner plug-in is installed.

2   From the **File** menu, point to **Acquire Image** and select the plug-in from the list.

Creating New Bitmaps

You can create an empty white bitmap on your document and draw on it with the bitmap drawing tools.

1   From the **Bitmap** menu, select **Create Bitmap**.

2   Edit the Width, Height and the Resolution of the bitmap.

3   Select the Color mode in the list.

4   Click **OK**.

Converting Objects into Bitmaps

You can convert vector objects and text into bitmaps, and then use bitmap filters to apply effects. The process of converting vector objects into a bitmap is called Rasterization.

1   Select the objects.

2   From the **Bitmap** menu, select **Rasterize**.

You can edit the following attributes:

Keep Original	Checking this option will preserve the original objects, a new rasterized image will be placed on top of original objects.
Create mask	When this option is checked, the shape of the new bitmap will be the same as the original objects.
Transparent	When this option is checked, the background color of the bitmap will be set to be transparent.
Resolution	The resolution of the new bitmap.
Color Mode	The color mode of the new bitmap.
Margin	The white space around the bitmap.

3   Click **OK**.

Changing Bitmap Properties

Once the bitmap is placed in the design area, you can edit some of its properties like resolution and color mode.

Changing Bitmap Resolution

DesignCentral - Bitmap tab allows you to change the resolution of a bitmap.

1   Select the bitmap.

2   Select the Bitmap tab in DesignCentral.

3   Select the new resolution from the PPI fields at the bottom of the tab.

   📄   Check **Proportional** to keep the horizontal and vertical resolution the same.

Changing the resolution does not change the number of pixels in the bitmap; it merely changes how many pixels fit into an inch. As the resolution of a bitmap is increased, the area covered by the bitmap will decrease, because more pixels will fit into each square inch. Decreasing the resolution will cause the bitmap to cover a larger area.

Resampling a Bitmap

Resampling changes the resolution of an image without changing the area it covers. It does this by increasing or decreasing the number of pixels used to represent the image. At the same time, the software changes the resolution

to compensate for the change in pixel count, so that the bitmap remains the same size.
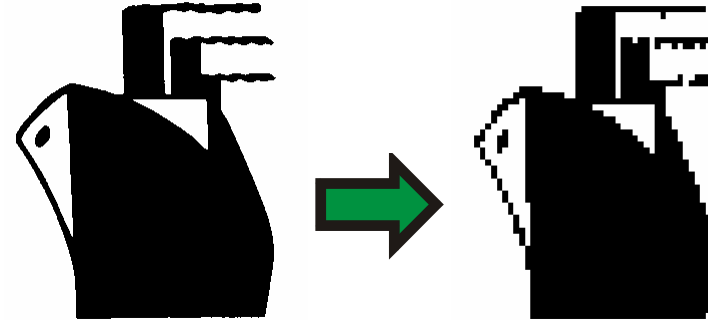
Black and white bitmap resampled to lower resolution.

   📄   Resampling an image will degrade it to some extent. Resampling to a lower resolution makes the image blocky and jagged. Resampling to a higher resolution may blur the image. If you resample an image and are not pleased with the results, use the Undo feature to return it to its previous state, rather than resampling it again.

1   Select the bitmap.

2   From the **Bitmap** menu, select **Resample**.

3   Adjust the values in Resample dialog box.

Width and Height	New size (in pixels) of the bitmap. The actual size (in inches or cm) of the bitmap will not be changed, only the resolution of the bitmap will be adjusted.
Proportional	The bitmap is resized proportionally.
Nearest Neighbor	This option is the fastest, but least precise, interpolation method.
Bilinear	Select this option for a quality interpolation method.

## Changing Bitmap Color Mode

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Color Mode** and select the new color mode.

Making a Bitmap Transparent

It is possible to set one of the colors in a bitmap to be transparent. This allows part of the bitmap image to appear to be "floating" in the design without the rectangular outline of the bitmap.
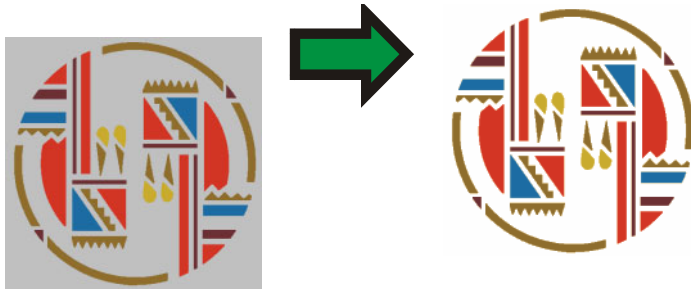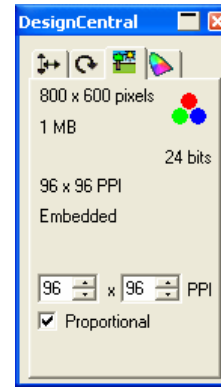
1   Select the bitmap.

2   From the **Bitmap** menu, select **Make Transparent**.

3   Move the wand over the bitmap and click on the color that you want to make transparent.

4   To select all instances of the color that appear in the bitmap, click **Select Similar**.

5   Click **Apply**. ✔

📄   If you are getting unwanted outlines around your bitmap elements, increase the Tolerance setting in DesignCentral.
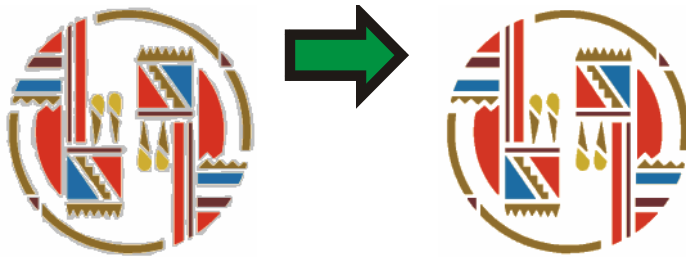

Removing Transparency

1   Select the bitmap.

2   Select the **Bitmap** tab in DesignCentral.

3   Click **Make Opaque**.

📄   The **Make Opaque** button is only visible when a transparent bitmap is selected.

Using the Bitmap Toolbar

All bitmap editing tools are located in the **Bitmap Edit** toolbar.

To display this toolbar, from the **Bitmap** menu, select **Bitmap Edit Toolbar**. To hide the toolbar, select the menu again.

Bitmap Edit toolbar

📄   Some tools will not be available for some color modes.

Defining Marquees

Marquees select part of the image and allow only that part to be edited. The marquee can have any shape and its border is marked by a flashing dotted line.

Bitmap with a marquee

Selecting the Entire Bitmap

1   Select the bitmap.

2   From the **Bitmap** menu, select **Marquee Select All**.

Using the Marquee Tool

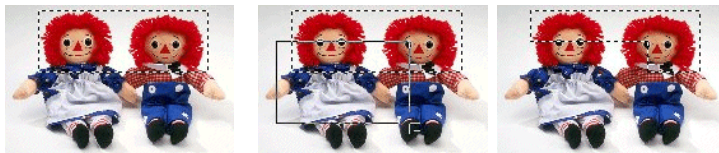The Marquee tool selects rectangular portions of the bitmap.

1 Select the **Marquee** tool. ⬚

2 Click and drag the cursor over the bitmap.

3 After creating one marquee you can add or subtract areas:

- Hold **Shift** and drag to add additional sections of the bitmap to the selection marquee.

- Hold **Ctrl** and drag to subtract sections of the bitmap from the selection marquee.

4 Once drawn, click inside the marquee and drag it to move the marquee to the desired position.

Original bitmap with a marquee

Dragging while holding **Shift**

Final marquee

Original bitmap with a marquee

Dragging holding **Ctrl**

Final marquee

Using the Lasso Tool

The Lasso tool allows you to select a marquee by tracing its outline on the bitmap.

1 Select the **Lasso** tool. ◯

2 Click and drag the cursor over the bitmap to create a closed shape.

📄 You can add or subtract areas from an existing marquee by pressing **Shift** and **Ctrl**.

3 Click inside the marquee and drag it to move the marquee to the desired position.

Using the Magic Wand Tool

The Magic Wand tool lets you select an area of a bitmap based on the color. You can specify the color range, or tolerance, for the magic wand tool's selection.

1 Select the **Magic Wand** tool. ✳

2 Adjust the Tolerance in DesignCentral.

📄 Enter a low value to select colors very similar to the pixel you click, or a higher value to select a broader range of colors.

3 Click the cursor over the bitmap.

📄 **Shift** and **Ctrl** add or subtract areas from existing marquees.

Marquee created with Magic Wand tool

Clearing Marquees

1 Select the bitmap with a marquee.

2 From the **Bitmap** menu, select **Clear Marquee**.

Inverting Marquees

1 Select the bitmap with a marquee.

2 From the **Bitmap** menu, select **Invert Selection**.

Converting Objects to Marquees

You can convert vector objects into marquees.

1 Place the vector object over the bitmap.

2 Select the bitmap and the vector objects.

3 From the **Bitmap** menu, select **Convert Shape to Marquee**.

Converting Marquees to Objects

You can convert marquees into vector objects.

1 Select the bitmap.

2   From the **Bitmap** menu, select **Convert Marquee to Shape**.

Shape to Marquee

Marquee to Shape
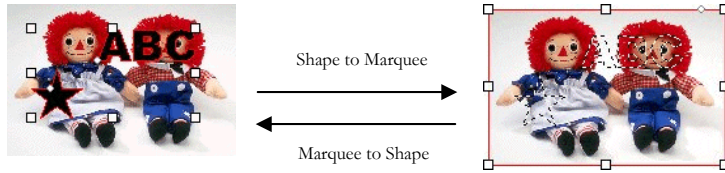
Editing Bitmaps

Using the Move Tool

The Move tool copies selected portions of bitmaps, marked by marquees.

1   Select the bitmap and create a marquee.

2   Select the **Move** tool.

3   Click and drag inside the marquee and drag to a new position.

See "Setting the Background / Foreground Color" on page 53 for more information.

▤   Hold **Ctrl** and drag the marquee to move a copy of the image enclosed by the marquee, while leaving the original in its place.

Original bitmap with a marquee

After dragging the marquee with Move tool

After dragging the marquee with Move tool and **Ctrl**

Using the Eraser Tool

The Eraser tool is used to remove unwanted parts of a bitmap, to restore an edited bitmap to its original image or fill an area with the background color.
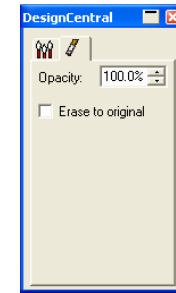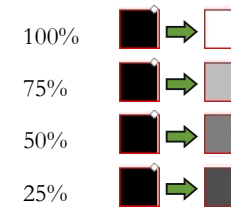
The Eraser tool has the following options in DesignCentral:

In the **Brush** tab, you can select the shape and the size of the brush. See "Changing the Brush" on page 101 for more information.

In the **Eraser** tab, you can adjust the following parameters:

Opacity	The percentage of the image that will be removed by each pass of the eraser.

100%

75%

50%

25%

Eraser tab

Erase to original	If checked, the eraser will remove only the changes to the bitmap, returning it to its original state.

Erasing a Bitmap

1   Select the bitmap.

2   Select the **Eraser** tool.

3   Click and drag inside the marquee.

▤   Use the **Undo** feature to remove bitmap editing errors.

Using the Paintbrush Tool

The Paintbrush tool paints brush strokes on a bitmap.

In DesignCentral, adjust the following parameters:

In the DesignCentral - **Brush tab**, you can select the shape and the size of the brush. See "Changing the Brush" on page 101 for more information.

In the Paintbrush tab, the Opacity determines the percentage of each stroke that will be added to the bitmap image. Lower numbers will create transparent strokes.

100%

75%

50%

25%
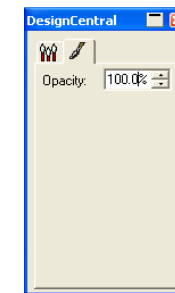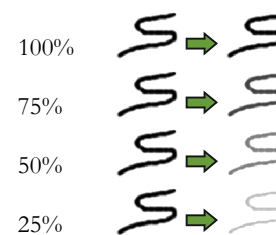
Paintbrush tab

1   Select the bitmap.

2   Select the **Paintbrush** tool. ✏

3   Select the foreground color you want to paint in.
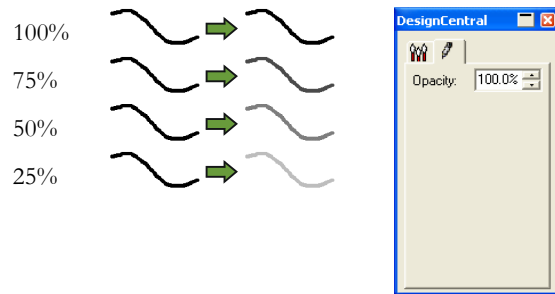
4   Click and drag.

Using the Pencil Tool

The Pencil tool will create freehand lines on a bitmap using the foreground color.

In DesignCentral, adjust the following parameters:

In the **Brush** tab, you can select the shape and the size of the pencil point. See "Changing the Brush" on page 101 for more information.

In the **Pencil** tab, the Opacity determines the percentage of each stroke that will be added to the bitmap image. Lower numbers will create transparent strokes.

Pencil tab

1   Select the bitmap.

2   Select the **Pencil** tool. ✏

3   Select the foreground color you want to draw in.

4   Click and drag inside the marquee.

Using the Crop Tool

The Crop tool allows you to select part of a bitmap and delete the rest of it.

1   Select the bitmap.

2   Select the **Crop** tool. ▨

3   Click and drag the cursor over the bitmap to create a rectangular marquee. (Hold **Shift** and drag to create a square marquee).

    📄   The marquee selection for the Crop tool must be a simple rectangle or square. You cannot use the **Ctrl** or **Shift** to create a more complex marquee with the Crop tool.
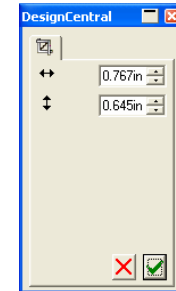
4   Adjust the width and height values of the marquee in DesignCentral. You can also adjust the cropping size by dragging the marquee's borders and corners.

5   Click and drag a point inside the marquee to move it to a new position.

6   Click **Apply** ✔ or double-click inside the marquee to crop the bitmap to the selected size.

Original image with a cropping marquee

Cropped Image

DesignCentral for Crop

Using the Fill Tool

The Fill tool fills areas of a bitmap with the foreground color.

1   Select the Fill tool. 🪣

2   In DesignCentral, adjust the following parameters:

Opacity   The percent to which the fill will overwrite the bitmap. At 100%, the fill will be completely opaque. At lower numbers, the fill area will get less color, but will retain more detail.
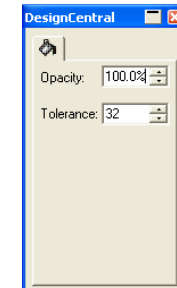

Fill tab

Tolerance The fill expands until it encounters the edge of the bitmap, or a change in color. **Tolerance** determines how big a change in color the fill will tolerate before stopping. Tolerance ranges from 0 to 255. Enter a low value to fill colors very similar to the pixel you click or a higher value to fill a broader range of colors.

0

6

75

150
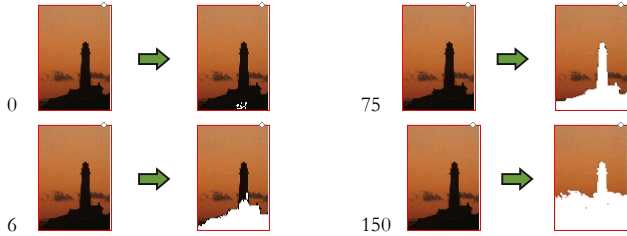
3 Click the cursor on the bitmap.

Click

Original Image   Bitmap after Fill
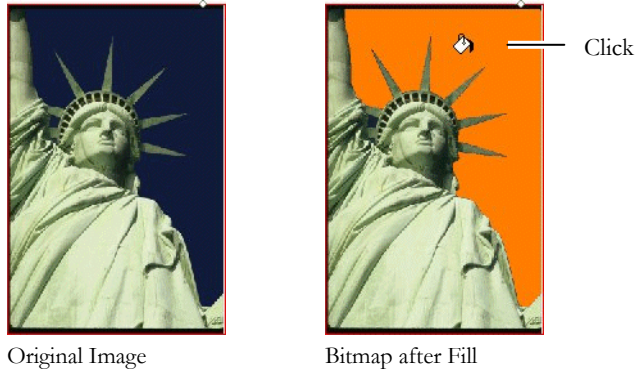
Using the Stamp Tool

The Stamp tool copies portions of a bitmap to another area on the same bitmap.

The **Stamp** tool has the following options in DesignCentral:

In the **Brush tab**, you can select the shape and the size of the brush. See "Changing the Brush" on page 101 for more information.

In the **Stamp** tab, adjust the following parameters:
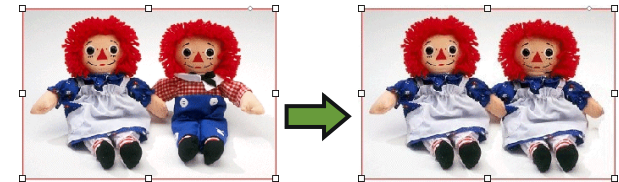
Opacity The percent to which the output of the tool will overwrite the existing bitmap. At 100% the output will be opaque; at lower numbers it will be more transparent.
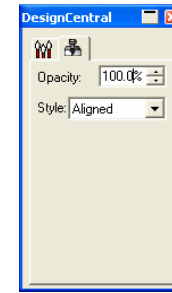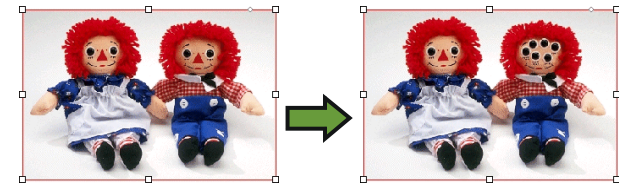

Stamp tab

Style If **Aligned** is selected, the origin and destination points always move together, whether the tool is drawing or not. This is best for copying a large area over to another area of the bitmap.

If **Nonaligned** is selected, the origin and destination points are only synced while the tool is drawing. When the tool is not drawing, the destination point can be moved without moving the origin point. This setting is better for copying a smaller part of the bitmap to a number of different places.

**1** Select the bitmap you want to edit.

2 Select the **Stamp** tool.

3 Adjust the parameters in DesignCentral.

4 Click the **Stamp** tool over the location from which you want to copy (the origin).

5 Move the cursor over the area of the bitmap that you want to overwrite and then click and drag.

📄 To change the stamp origin, hold **Ctrl** and click on the new point you want to copy from.

Changing the Brush

In the Brush tab, you can select the shape and the size of the brush.

Some brushes display a small number in the lower left corner. This number is the size of the brush in pixels.
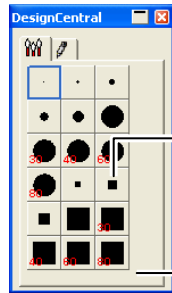
Double-click to change the shape of an existing brush

Click here to create a new brush

Brush tab

You can add a new brush or change the shape and size of an existing brush. Click the blank area in the Brush tab to create a new brush or double-click an existing brush button to change its properties.

You can enter or change the following brush properties.

Size	Width and Height of the brush.
Hardness	Adjusts how the brush will dissolve with the original image.
Rotate	Angle of rotation.
Style	The brush can have either a rectangular or ellipse shape.

Using Filters

Your software allows you to filter bitmaps. The following filters are available:

- Reduce Noise
- Sharpen
- Color Balance
- Blur
- Level
- Brightness/ Contrast

🗏 Not all filters are available for all color modes.

While applying a filter, an on-screen preview will be displayed. You can resize or move the preview area. Also, the area where the filter will be applied can be limited using a marquee.

Reduce Noise Filter

Use this filter to clean up scanned images with small imperfections, known as noise.
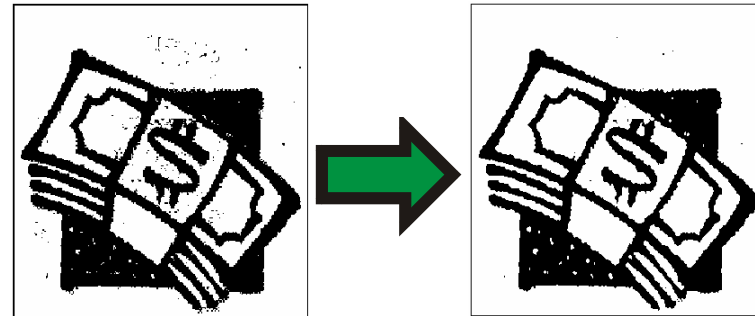
1 Select the bitmap.

2 From the **Bitmap** menu, point to **Filters** and select **Reduce Noise**.

3 In DesignCentral, adjust the following parameters.

Radius	The size of the noise that will be cleared.
Preview	When this option is checked, you will see a preview while adjusting the Radius parameter.

4 Click **Apply**. ✔

Blur Filter

This filter creates a softening effect by averaging the pixels next to the edges.
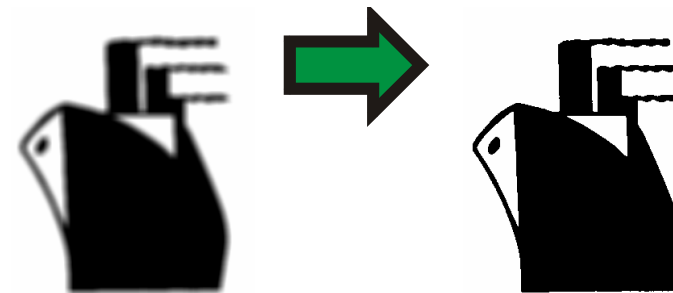
1 Select the bitmap.

2 From the **Bitmap** menu, point to **Filters** and select **Blur**.

3 In DesignCentral, adjust the following parameters.

Amount and Radius	Higher values in these fields will produce more blurred images.
Preview	When this option is checked, you will see a preview while adjusting the parameters.

4   Click **Apply**. ✔

Sharpen Filter

This filter focuses blurry images by increasing the contrast of adjacent pixels.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Filters** and select **Sharpen**.

3   In DesignCentral, adjust the following parameters.

Amount and Radius	Higher values in these fields will produce more sharp images.
Preview	When this option is checked, you will see a preview while adjusting the parameters.

4   Click **Apply**. ✔

Level Filter

This filter shows a histogram that graphically represents the colors present in the image. Peaks indicate color density. By moving the sliders inwards, it is possible to redefine the black and white points in the bitmap.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Filters** and select **Levels**.

3   In DesignCentral, adjust the following parameters.

- Select **RGB** on the list to adjust all RGB channels at once. If you want to adjust one specific color channel, select **Red**, **Green** or **Blue**.

- Click and drag the sliders under the histogram, or enter the values in the numeric fields.

- Click the **Auto** button and the software will automatically define the black and white point in each channel and then redistribute the intermediate pixel values proportionately.

- Click the **Reset** button to restore the sliders to their original position.

- When the **Preview** option is checked, you will see a preview

while adjusting the parameters.

4   Click **Apply**. ✔

Color Balance Filter

DesignCentral shows slider bars (Cyan-Red, Magenta-Green and Yellow-Blue) for adding or subtracting color from the image. For example, if you drag the Cyan / Red slider to the Cyan side, the amount of Cyan in your image is increased and the amount of Red is decreased.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Filters** and select **Color Balance**.

3   Adjust the filter settings in DesignCentral by:

- Choose **Shadows**, **Midtones**, or **Highlights** in the list to select the tonal range on which you want to focus the changes.

- Click and drag the sliders, or enter the values in the numeric fields.

- When the **Preview** option is checked, you will see a preview while adjusting the parameters.

4   Click **Apply**. ✔

Brightness / Contrast Filter

Using this filter, you can adjust the Brightness, Contrast and Saturation of your image.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Filters** and select **Brightness / Contrast**.

3   To adjust the filter settings in DesignCentral, do one of the following:

- Click and drag the sliders, or enter the values in the numeric fields.

- When the Preview option is checked, you will see a preview while adjusting the parameters.

4   Click **Apply**. ✔

Adobe Filters

If you have Adobe filters installed, you can use its filter plug-ins in your software.

Setting up the Folder Where the Plug-ins are Installed

1 From the **Edit** menu, select **Preferences**.

2 Go to **File Path** tab and enter the folder location in Adobe Plug-ins.

📄 Click **Browse** to find the folder.

3 Click **OK**.

Using the Filters

1 Select the bitmap.

2 From the **Bitmap** menu, point to **Adobe Filters** and select the filter.

3 Follow the instructions of each filter.

📄 See your Adobe user manual for more information.

Tracing Bitmaps

Tracing allows you to convert bitmap images into vector objects, this allows them to be cut or edited using path editing tools. The tracing area can be limited by a marquee.

A bitmap that has been masked cannot be traced unless it is unmasked first.

📄 After tracing the bitmap, if you want to hide the bitmap to see just the traced paths, click Preview Bitmap tool on View toolbar or Select Preview Bitmap from View menu.

Using AutoTrace

AutoTrace traces each shape in the bitmap. Adjust the following parameters:
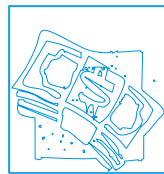
Noise Reduction	Adjusts the amount of noise that is removed during the tracing process. When **None** is selected, noise will not be removed. The **Most** setting removes the maximum amount of noise.

Original Image

Traced with noise reduction set to Less

Traced with noise reduction set to Most

|	
Corners	Adjusts how strong the corners are traced. When **None** is selected, corners are not recovered. The Most setting recovers the maximum amount of corners.
Resolution	You can trace using the Full resolution on an image or 1/2, 1/4 and 1/8 of its original resolution. When the resolution is lowered, the tracing process is quicker and produces fewer points, but the trace quality will not be as actuate at the reduced resolutions. The Optimal setting picks the resolution based on image size to optimize the traces.
Tolerance	Controls how closely the tracing follows the bitmap being traced. You can enter values from 0 to 100%. In a high resolution image, lower values will cause the tracing to follow the bitmap more closely, resulting in jagged edges on the curves. Higher values will produce smoother and more even curves, but some details may be lost.
Corner Style	Adjusts how recovered corners are drawn. **Sharp** recovers the maximum amount of sharp corners.
Color	The color of the resulting vector objects.
Reverse Image	Traces white areas.

1 Select the **Autotrace** tool. 🅩

2 Adjust the tracing parameters in DesignCentral.

3 You can trace the whole bitmap or parts of it.

- Click and drag the cursor to create a rectangular bounding box. Surround the objects that you want to trace in the bitmap. Hold **Shift** to create a square bounding box.

- Click the bitmap to trace one object.

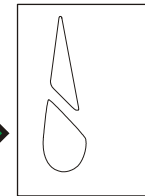- Hold **Ctrl** while clicking to trace all of the bitmap.

📄 The objects created by the autotracing will be all wireframes. To fill those objects, you have to select and compound them.

Tracing one object using Click and Drag
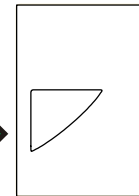
Tracing part of the bitmap using Click and Drag

📄   For best results, scan the image to be traced in grayscale (256 gray) at 300-600 DPI. Tracing images scanned at high resolution will create extra points when traced and the paths will not be smooth.

Using Centerline Tracing

The Centerline tool traces a single line down the middle of each part of a bitmap, and includes an option to outline any areas that are wider than a specified width. This tool is useful for producing neon patterns, routing and engraving paths.

Only black and white bitmaps can be traced using Centerline trace.
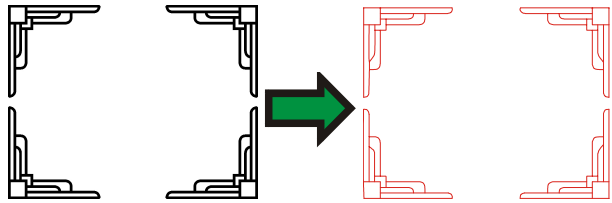
Paths created in Centerline tracing

In DesignCentral – Autotrace and Centerline tabs, adjust the following parameters:

Steps	Minimum size to be outlined.
Close Paths	Creates a separate closed shape in each fully enclosed area.
Outline large objects	When this option is checked, larger objects will be traced with an outline, instead of a centerline.
Color	The color of the resulting vector objects.

1. Select **Centerline Trace** tool. ⧅
2. Adjust the tracing parameters in DesignCentral.
3. You can trace the whole bitmap or parts of it:

   - Click and drag the cursor to create a rectangular bounding box. Surround the objects that you want to trace on the bitmap. Hold **Shift** to create a square bounding box.

   - Click the bitmap to trace one object.

   - Hold **Ctrl** while clicking to trace all of the bitmap.

Using PictureCut Tracing

The PictureCut tool applies a striping effect to a bitmap. The process slices the image with a series of horizontal or vertical stripes of varying widths.

The stripes will be joined into several groups, each with their own tab, in order to aid the weeding process.

Original Image   Vertical stripes created using PictureCut   Horizontal stripes created using PictureCut

In DesignCentral – PictureCut tab, adjust the following parameters:

Enhance Image	Applies an image enhancement filter, before tracing the image.
Brightness	Changes how dark the finished image outputs.
Number of Stripes	Number of stripes that will be created.
Resolution	You can trace using the **Full** resolution on an image or **1/2**, **1/4** and **1/8** of its original resolution. When the resolution is lowered, the tracing process is quicker and produces fewer points, but the trace quality will not be as actuate at the reduced resolutions. The **Optimal** setting picks the resolution based on image size to optimize the traces.
Cut Direction	Defines if the stripes are horizontal or vertical.
Reverse Image	Reverses the dark and light portions.
Color	The color of the resulting vector objects.

1. Select **PictureCut** tool. ▤
2. Adjust the tracing parameters in DesignCentral.
3. You can trace the entire bitmap or parts of it:

   - Click and drag the cursor to create a rectangular bounding box. Surround the area that you want to trace on the bitmap. Holding **Shift** creates a square bounding box.

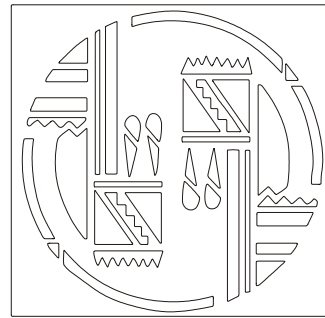   - Hold **Ctrl** while clicking to trace all bitmap

4   To finish using the PictureCut tool, select another tool.

Using Color Tracing

The Color Tracing converts a color bitmap into colored paths. The color trace process involves two steps. The first is Posterizing, which reduces the number of colors. Then the posterized image is traced into objects with different colors.

Original bitmap   Paths created in color tracing

In DesignCentral – Autotrace and Color Trace tabs, adjust the following parameters:

Posterize Bitmap	When this option is checked, the posterized bitmap will be kept.
Edge Filter	Determines how aggressively the application removes noise from the bitmap when posterizing. **None** does not remove noise and the **Most** setting will remove the maximum amount of noise.
Number of Posterized Colors	Controls the number of colors the program will use to posterize the bitmap. If there are several shades of a given color in the bitmap, specifying one or more colors than the actual number needed ensures that the correct colors are retained.
Merge into Active	Merges the selected color into the active color.
Undo	Undoes the last merge operation.

1   Select **Color Trace** tool.

2   Adjust the tracing parameters in DesignCentral.

3   You can trace the whole bitmap or parts of it by:

- Click and drag the cursor to create a rectangular bounding box. Surround the objects that you want to trace on the bitmap.

    Hold **Shift** to create a square bounding box.

- Click the bitmap to trace one object.

- Hold **Ctrl** while clicking to trace all of the bitmap.

4   Edit the color palette and the posterized image as described in the next item.

5   Click **Apply**. ✔
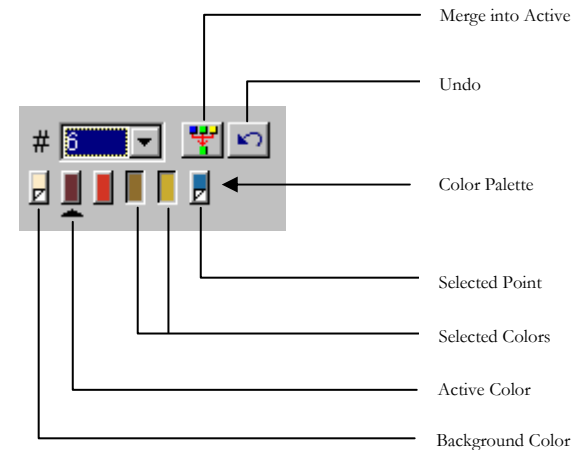
While color tracing an image, you can specify the number of colors that will be in the **Number of Posterized Colors** list.

If a **Background color** was found, it will be placed on the far left side of the color palette. The background color will not be traced, as indicated by the folded corner.

Traced parts of the bitmap with an **Untraced color** will not be displayed in the preview and will not be traced. You can skip any color in the untraced color by **Shift**-clicking it.

The color with a triangle underneath is the **Active color**. The active color is used when merging colors. To make one color active, click the space underneath the color.

You can select colors by clicking them. To deselect the color, click again. You can select multiple colors. Selecting an invisible color will make it visible.

When you have two or more colors that you want to trace with the same color, you can merge them.

Merging Active Colors

1   Make the destination color Active.

2   Select the colors that will be merged.

3   Click **Merge into Active** button.

4   You can undo the operation by clicking the **Undo** button.
        Only the last merge can be undone.

     Or

•   You can also merge two colors together by clicking and dragging
       the source color over the destination color button.

Merge

Posterized Bitmap   Posterized bitmap after merging
                               colors
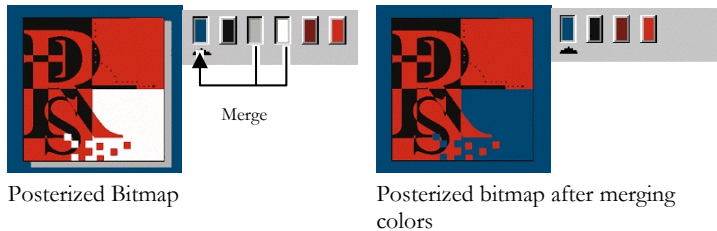
To change the order of the colors in the palette, click and drag the color to
a new position.

You can edit a posterized color in the color palette. To do so, click the
color with the **Ctrl** held.

After Posterizing the Image

1   Click the area in the posterized image with the source color.

     📄   The cursor will change into a paint bucket cursor.

2   Drag into the object where the color will be applied.

     📄   When the mouse button is released, the color will be applied.

Click the   Drag   Release the
object with   where the   button and
the source   color will   the color will
color   be applied   be applied.

14 Working with Effects

Your software contains a number of tools that you can use to add special effects to the elements in your document.

Common Features

There are a number of basic functions that you can use on all effects.

Separating Effects

To separate an effect from the original object, from the **Effects** menu, select **Separate […]**. After the command name, the effect name will be displayed.

Original Object with Effect

Text and Effect separated
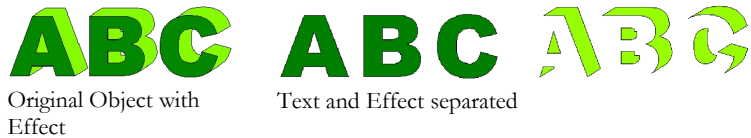
Clearing Effects

To remove an effect, from the **Effects** menu, select **Clear […]**. After the command name, the effect name will be displayed.

Using the Combine Effect

Combine effects are applied to overlapping objects, separating or merging the portions that are overlapping. Combine effects can only be applied on vector objects, they are not available for bitmaps.

Applying Weld Effect

Weld effects weld selected objects into single objects, removing overlapping. Use this tool to eliminate extra lines in overlapping objects that will be cut.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Weld**.
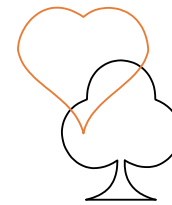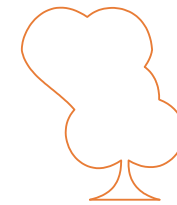
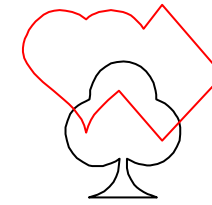Original Objects   Objects after Weld effect

Applying Weld by Color Effect

The Weld by Color effect will automatically weld together any overlapping objects that have the same color.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Weld by Color**.
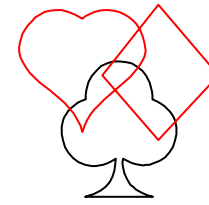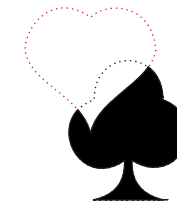
Original Objects   Objects after Weld by Color effect

Applying Cut Out Effect

The Cut Out effect is applied to overlapping objects. It deletes the topmost object, and also removes the overlapping areas from the objects underneath it.

📄   This effect will be always applied to the topmost object. If you want to apply the effect to other objects underneath, group the top objects first.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Cut Out**.

Original Objects   Objects after Cut Out effect
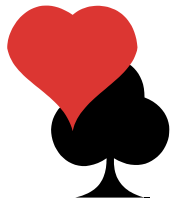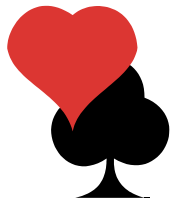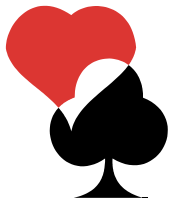
Applying Common Effect

The Common effect deletes all of the selected objects except for the overlapping area.

📄   This effect will be always applied to the topmost object. If you want to apply the effect to other objects underneath, group the top objects first.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Common**.

Original Objects   Objects after Common effect

Excluding Common Effect

The Exclude Common effect is applied to overlapping objects. It deletes the overlapping areas of the objects.

📄   This effect will be always applied to the topmost objects. If you want to apply the effect to other objects underneath, group the top objects first.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Exclude Common**.

Original Objects   Objects after Exclude Common effect
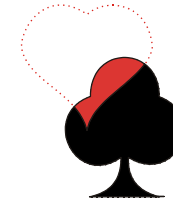
Applying Fuse Effect

The Fuse effect is applied to overlapping objects. It removes the entire topmost object, except for the overlapping area. The overlapping area and the objects on the lower layers are combined into one object. The objects on the lower layers remain intact, and the fused portion retains its original color.

📄   This effect will be always applied to the topmost object. If you want to apply the effect to other objects underneath, group the top objects first.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Fuse**.
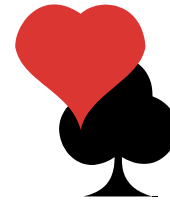
Original Objects   Objects after Fuse effect

Removing Overlap Effect

The Remove Overlap effect is applied to overlapping objects. It deletes the areas from the bottom-most objects that overlap the top-most object, but does not delete the top-most object.

📄   This effect will be always applied to the topmost object. If you want to apply the effect to other objects underneath, group the top objects first.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Remove Overlap**.
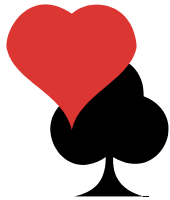
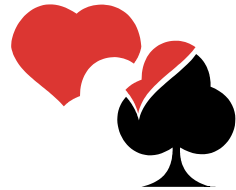Original Objects   Objects after Remove Overlap effect

Applying Separate Overlap Effect

The Separate Overlap effect is applied to overlapping objects. It removes the overlapping areas from the objects, and makes them into separate objects.

1   Select the objects.

2   From the **Effects** menu, point to **Combine** and select **Separate Overlap**.

Original Objects   Objects after Separate Overlap effect

Using the Outline Effect

Your software allows you to place inlines, outlines or contour lines around any object.

Outline   A closed path created around the outer edges of the selected object and inside holes such as the inside of closed letters (a, o, etc).

Contour   An outline without holes.

Inline   A closed path created around the inner edge of the selected object.

Outline   Contour   Inline

📄   The term "outline" in this chapter refers to Inlines, Outlines and Contours.

In an outline, you can adjust the number of lines, their width and the spacing between them.
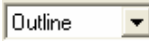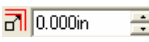
Width

Applying Outlines Effect

1   Select the objects that the effects will be applied to.

2   From the **Effects** menu, select **Outline**.

3   Adjust the parameters in DesignCentral or drag the control points.
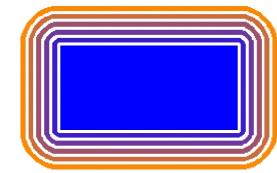
4   Click **Apply**. ✔

Gap
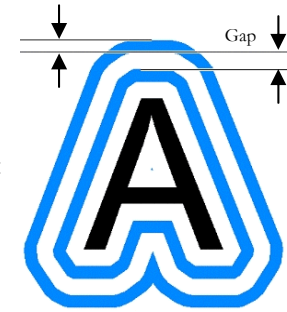
Adjusting Outlines Using DesignCentral

When outlines are applied to objects, the following attributes can be adjusted in DesignCentral.

Outline ▼	Select the effect type between Outline, Inline and Contour.
0.300in	Width of the outline.
0.000in	Distance between outlines.
# 1	Number of outlines.
	This option allows you to choose between using the same color for each outline generated or to create a "gradient" of colors for each outline created.
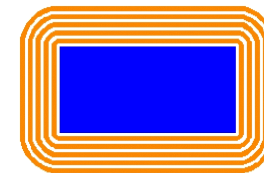
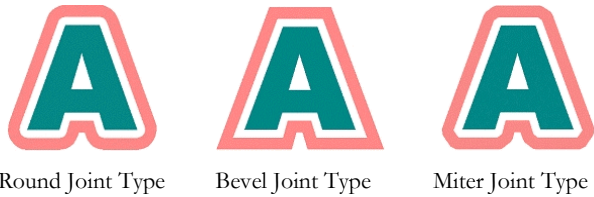Outlines with same color   Gradient Outlines

	Allows you to select to create a backing behind the original object. This option is only available when the distance between outlines is zero.
	The outline color.
	Select the appropriate Joint Type option to specify how corners are outlined.

Round Joint Type   Bevel Joint Type   Miter Joint Type

  Controls the sharpness of the corners

  Select the appropriate Line Cap style option to specify how open paths are outlined. Choose from Round, Square or Butt cap styles.


Round Cap Style   Square Cap Style   Butt Cap Style

Keep Original   If checked, the original object will remain along with the outline. If cleared, the original object will be deleted.

Adjusting Outlines Using Control Points

When you apply an outline, a reference line is displayed with control points. You can adjust some of the attributes by dragging the control points.

- Click and drag the **Width** point to change the Outline width.

- Click and drag the **Offset** point to change the gap between outlines.

- Click and drag the **Reference Location** point to change the position of the Reference line over the object where the outline is applied.

Width Offset

Reference Line

Reference Location
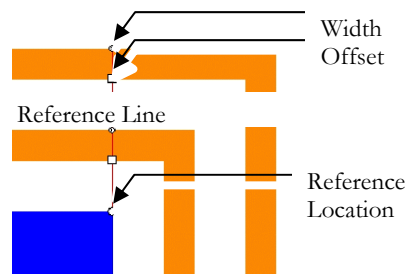
Using the Shadow Effect

Your software allows you to place a shadow around any object.
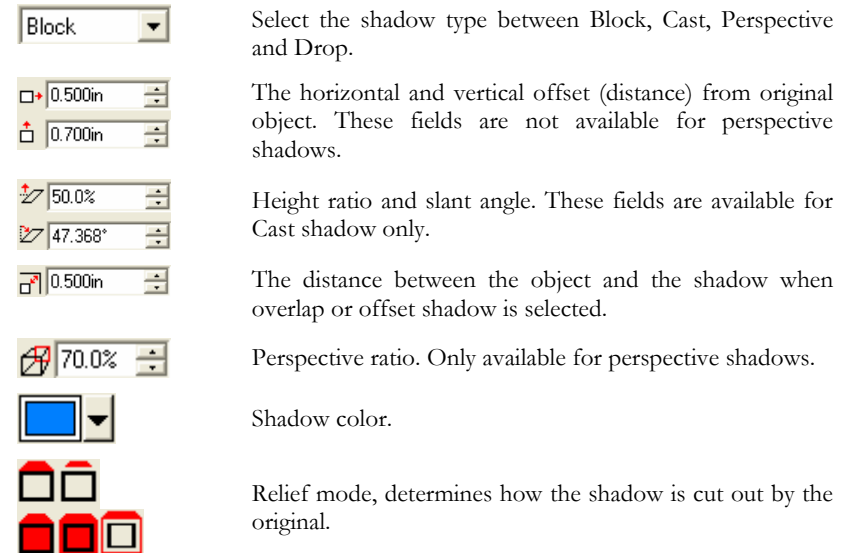
The following types of shadows are available:

Block Shadow   Drop Shadow   Perspective Shadow   Cast Shadow
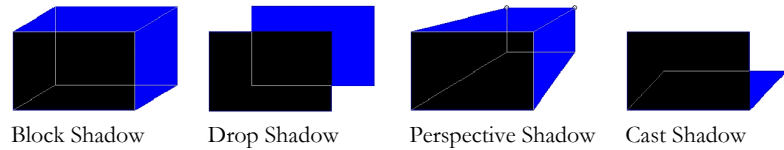
Applying Shadows

1   Select the objects.

2   From the **Effects** menu, select **Shadow**.

3   Adjust the parameters in DesignCentral or drag the control points.
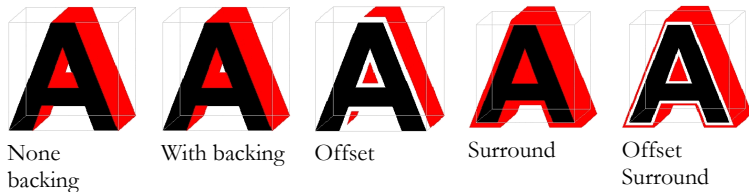
4   Click **Apply**. ✔

Adjusting Shadows Using DesignCentral

When shadows are applied to objects, the following attributes can be adjusted in DesignCentral.

  Select the shadow type between Block, Cast, Perspective and Drop.

  The horizontal and vertical offset (distance) from original object. These fields are not available for perspective shadows.

  Height ratio and slant angle. These fields are available for Cast shadow only.

  The distance between the object and the shadow when overlap or offset shadow is selected.

  Perspective ratio. Only available for perspective shadows.

  Shadow color.

  Relief mode, determines how the shadow is cut out by the original.

The following relief modes are available:

Block and Perspective shadows

None backing | With backing | Offset | Surround | Offset Surround

Drop shadows

None backing | With backing | Overlap | Offset relief | Offset Surround

Cast shadows

None backing | With backing | Overlap | Offset relief

📄 You can see the difference when backing is applied if you separate the shadow from its original object

No backing | With backing

Adjusting Shadows Using Control Points

Click and drag the shadow to adjust the **height ratio** and **slant angle** (cast shadow), **horizontal** and **vertical offset** (other shadows) or **perspective ratio** (perspective shadow).

Using the Stripes Effect

Use the Stripe effects to apply stripes to any vector objects. There are three types of stripes that can be applied.

Radiant Stripes   Circular Stripes   Gradient Stripes

1. Select the objects.
2. From the **Effects** menu, select **Stripe**.
3. In DesignCentral, adjust the parameters.

Adjusting Radiant Stripes Using DesignCentral

When radiant stripes are applied to objects, the following attributes can be adjusted in DesignCentral.

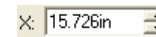|	
Gradient ▼	Select the stripe type between Gradient, Circular and Radiant.
# 1	Number of stripes on the objects.
50.0%	Determines the percentage of the image that is covered with stripes, from 0 to 100%. Changing this value changes the width of the stripes, but not the number.
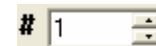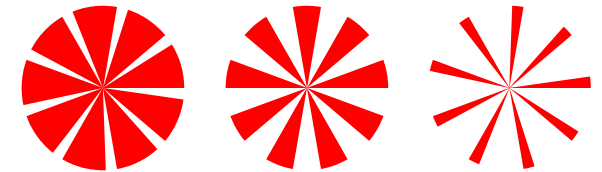
Radiant Percentage: 20% | Radiant Percentage: 50% | Radiant Percentage: 80%

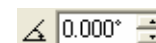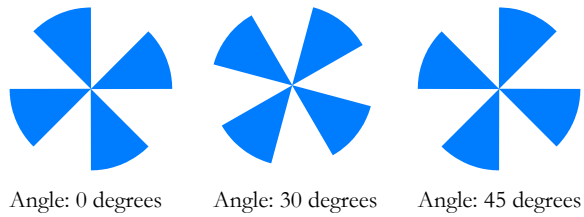|	
X: 15.726in Y: 9.615in	XY Coordinates of the point from which the stripes radiate.
(grid)	The point selected in this grid will be the point from which the stripes radiate.
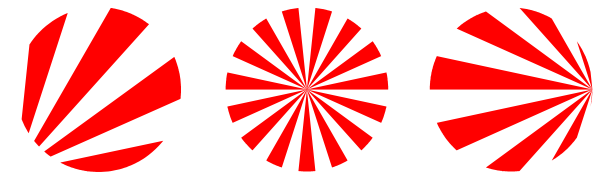
Bottom left corner | Center point | Middle right point

∠ 0.000°	Initial angle of the stripes.

Angle: 0 degrees   Angle: 30 degrees   Angle: 45 degrees

Adjusting Radiant Stripes Using Control Points

You can also adjust some of the above fields by dragging the control points.
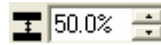
- Click and drag the right (bottom) edge of each stripe to change the stripe angle. Holding **Shift** constrains the angle.

- Click and drag the left (top) edge of each stripe to change the stripe gap. Holding **Shift** constrains the angle.

- Click and drag the center point to change where the stripe starts.

Adjusting Gradient Stripes Using DesignCentral

When gradient stripes are applied to objects, the following attributes can be adjusted in DesignCentral.

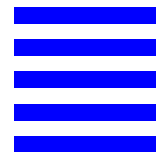**#** | **1**   Number of stripes on the objects.

50.0%   Determines the percentage of the image that is covered with stripes, from 0 to 100%. Changing this value changes the width of the stripes, but not the number.

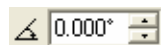This value is disabled when **Vary stripes and gap** is selected in the **Gap mode** field.
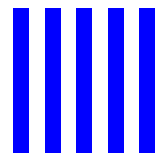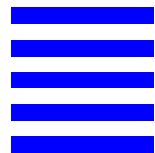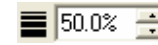
Percentage: 20%   Percentage: 50%   Percentage: 80%

0.000°   Angle of the stripes.

Angle: 0 degrees   Angle: 45 degrees   Angle: 90 degrees

50.0%   Determines the degree of the gradient, expressed as a percentage from 0 to 100%.

This value is disabled when **Even Stripes and Gap** is selected in Gap mode field.

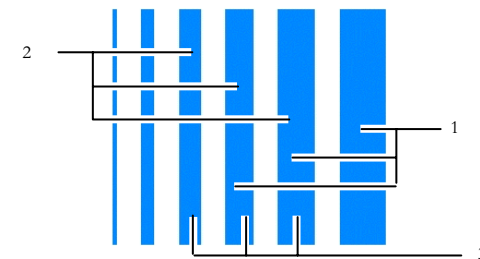| **Gap Mode**	**Even Stripes and Gap**	The stripes and gab width is constant.
	Vary Stripes and Gaps	The stripe and gap width has a gradient effect.
	Vary Stripes	The stripe width changes, producing a gradient effect. The gap width remains constant.

Vary Stripes mode   Even Stripes and Gap   Vary Stripes and Gaps

Adjusting Gradient Stripes Using Control Points

You can also adjust some of the above fields by dragging the control points.

- When **Even Stripes and Gap** mode is selected, click and drag point **1** or **2** to change the stripe gap.

- When **Vary Stripes and Gaps** mode is selected, click and drag point **1** or **2** to change the stripe gradient.

- When **Vary Stripes** mode is selected, click and drag point **1** to change the stripe gap. Click and drag point **2** to change the stripe gradient.
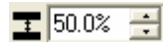
- Click and drag point **3** to change the stripe angle. Hold **Shift** to constrain the angle.

Adjusting Circular Stripes Using DesignCentral

When circular stripes are applied to objects, the following attributes can be adjusted in DesignCentral.

Number of stripes on the objects.

Determines the percentage of the image that is covered with stripes, from 0 to 100%. Changing this value changes the width of the stripes, but not the number.
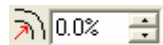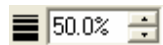
Percentage: 20%   Percentage: 50%   Percentage: 80%

Determines the distance from the center to the first gap.

The distance from the center of the rings to the outermost ring is specified in this entry box. If the object extends beyond the last ring, the remainder of the object is solid.

Determines the degree of the gradient, expressed as a percentage from 0 to 100%.

The point selected in this grid will be the center of the circular stripes.
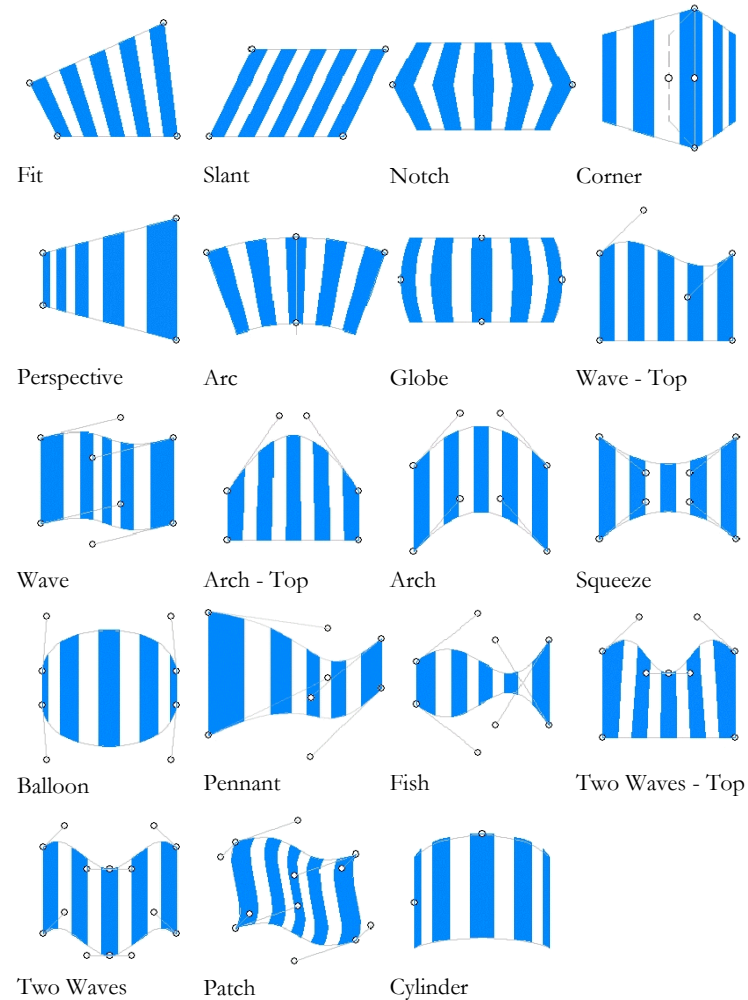
Adjusting Circular Stripes Using Control Points

You can also adjust some of the above fields by dragging the control points.

- Click and drag the inside edge of each stripe to change the stripe gradient.
- Click and drag the outside edge of each stripe to change the stripe gap.
- Click and drag the center point to change where the stripe starts.

Using the Distort Effect

Your software allows you to distort vector objects. The following distortions are available in your software. When a distortion effect is applied to a bitmap, it will mask the bitmap using the distortion shape.

Fit   Slant   Notch   Corner

Perspective   Arc   Globe   Wave - Top

Wave   Arch - Top   Arch   Squeeze

Balloon   Pennant   Fish   Two Waves - Top

Two Waves   Patch   Cylinder

For example, you can use the distortions to fit your design in a bitmap, to see how the final sign will look.

Vector object   Bitmap object   Distorted vector object over the bitmap
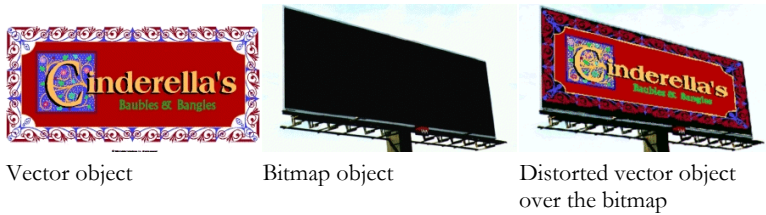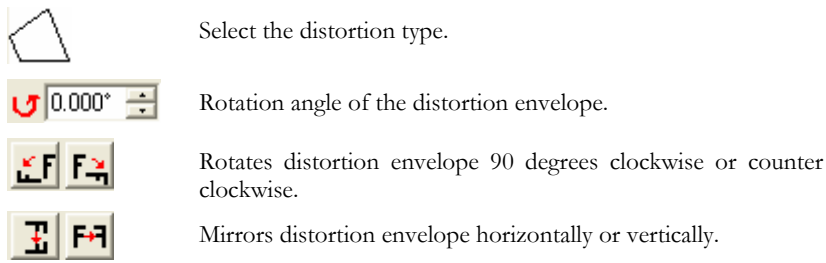
Applying Distortions

1   Select the objects.

2   From the **Effects** menu, select **Distortion**.

3   Adjust the parameters in DesignCentral or drag the control points.

4   Click **Apply**. ✔

Adjusting Distortions Using DesignCentral

When distortions are applied to objects, the following attributes can be adjusted in DesignCentral.

|	
	Select the distortion type.
	Rotation angle of the distortion envelope.
	Rotates distortion envelope 90 degrees clockwise or counter clockwise.
	Mirrors distortion envelope horizontally or vertically.

Adjusting Distortions Using Control Points

For each distortion, you have a number of control points that can be dragged to adjust the distortion to your requirements. The number of points and the effect when the points are dragged will vary according to the distortion type.

Control Points
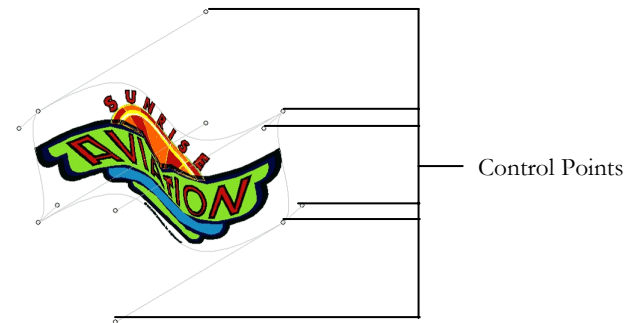
In some symmetric distortions like Wave-Top and Patch, **Ctrl** moves the handles independently from the other handle.

Using the Blending Effect

Your software allows you to blend two objects. The shape and color of one object will gradually change to another object. Both objects must be vector objects.

Blending a circle into a starburst   Blending "AC" into "DE"
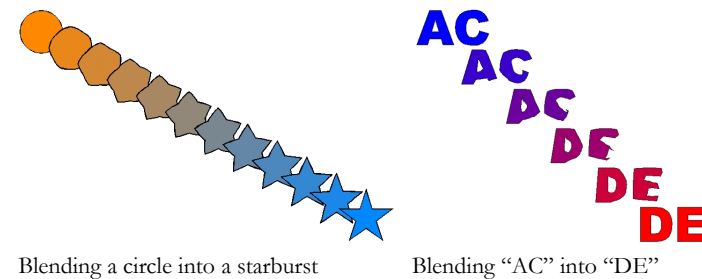
1   Select two objects.

2   From the **Effects** menu, select **Blend**.

3   Adjust the number of steps in DesignCentral.

4   Click **Apply**. ✔

Using the Lens Effect

Use the Lens effects to control transparency and appearance of objects' color.

The lens effects are applied to the topmost object and can only be applied on vector objects, except for the tranparent lens, which can be applied to bitmaps. The lens effects are only for color printing.

Applying Transparent Effect

With this effect, the object where the effect was applied will have a transparency that allows you to see the objects underneath.

1   Select the objects.

2   From the **Effects** menu, point to **Lens** and select **Transparent**.

3   In DesignCentral, adjust the following parameters:

Opacity	Degree of opacity applied to objects. This value can range from 0 to 100 %.
Hide Stroke	Check this option to apply the transparency to the object's stroke.

Applying Invert Effect

The colors of all vector and bitmap objects under the object where the effect is applied will be inverted.

1   Select the objects.

2   From the **Effects** menu, point to **Lens** and select **Invert**.

3   In DesignCentral, adjust the following parameters:

Hide Stroke	Check this option to apply the effect to the object's stroke

Applying Brighten Effect

The colors of all vector and bitmap objects under the object where the effect is applied will be brightened.

1   Select the objects.

2   From the **Effects** menu, point to **Lens** and select **Brighten**.

3   In DesignCentral, adjust the following parameters:

Brightness	Degree of brightness applied to objects. This value can range from 0 to 100 %.
Hide Stroke	Check this option to apply the effect to the object's stroke.

Applying Wireframe Effect

The vector objects underneath the object where the effect is applied are displayed without any fills.

1   Select the objects.

2   From the **Effects** menu, point to **Lens** and select **Wireframe**.

3   The following options can be adjusted in DesignCentral:

Hide Stroke	Check this option to apply the effect to the object's stroke.

Applying Magnify Effect

The objects under the object where the effect is applied are magnified.

1   Select the objects.

2   From the **Effects** menu, point to **Lens** and select **Magnify**.

3   The following options can be adjusted in DesignCentral:

Zoom Scale	Degree of magnification applied to objects. Values above 100% will magnify the objects; values below 100% will reduce the objects.
Hide Stroke	Check this option to apply the effect to the object's stroke.

Using the Underbase Effect

The underbase feature is used to create a "primer" coat of base color that the actual image will be printed on top of.

    An underbase can only be output on a thermal transfer device, or by using the Print as Separations feature.

Creating a Solid Underbase

1   Select the objects.

2   From the **Effects** menu, select **Underbase**, then **Solid Underbase**.

3   In DesignCentral, select either **Choke** or **Bleed**.

4   Set the size of the Choke or Bleed in the field.

5   Check **With Holes** to make holes in the underbase underneath holes in the selected objects above.

6   Select the color of the underbase from the list.

7   Click **Apply**.

After creating the underbase, the underbase and the objects are joined together into a compound object.

Creating a Variable Underbase

1 Select the objects.

2 From the **Effects** menu, select **Underbase**, then **Variable Underbase**.

3 Select the **Resolution** that the underbase will be applied at. This should match the resolution supported by your output device.

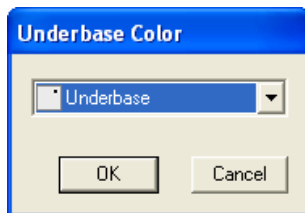**4** Select the color of the underbase from the list.

5 Click **Apply**. ✔

After creating the underbase, the underbase and the objects are joined together into a compound object.

Removing an Underbase

1 Select the compound object containing the object and its underbase.

2 From the **Effects** menu, select **Clear Underbase**.

Making a Vector Object into an Underbase

1 Select the objects.

**2** From the **Arrange** menu, select **Underbase**, then **Make Underbase**.

3 Select the color of the underbase from the list and click **OK**.

Releasing an Underbase Back to a Vector Object

1 Select the objects.

2 From the **Arrange** menu, select **Underbase**, then **Release Underbase**.

Using the Finisher Effect

The Finisher effect defines a coating that will cover an area of the design and protect it from scratches and UV. The finish can be applied as a rectangle covering an entire area of the design, or as a shape that follows the outlines of the design.
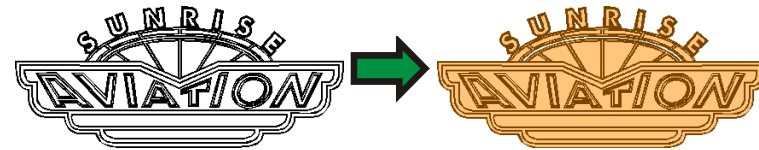
📄 A finish area can only be output on a thermal transfer device, or by using the Print as Separations feature.

Creating a Rectangular Finish

1 Select the objects.

2 From the **Effects** menu, select **Finisher**, then **Rectangle Finisher**.

3 Select the spot color for the finish from the list in Design Central.

📄 After a finish area is created, it and the objects it was created for become a single compound object.

Creating a Shape Finish

1 Select the objects.

2 From the **Effects** menu, select **Finisher**, then **Shape Finisher**.

**3** Select the spot color for the finish from the list in Design Central.

📄 After a finish area is created, it and the objects it was created for become a single compound object.

Removing a Finish

1 Select the compound object containing the object and its finish area.

2 From the **Effects** menu, select **Clear Rectangle Finisher** or **Clear Shape Finisher**.

Using Color Trapping

The Color Trapping effect removes most of the overlapping material between objects. The effect leaves enough overlapping material to ensure that no gaps will exist between the objects, even if the registration is slightly off.

Original objects (Show Fill is off)   Objects after Color Trapping
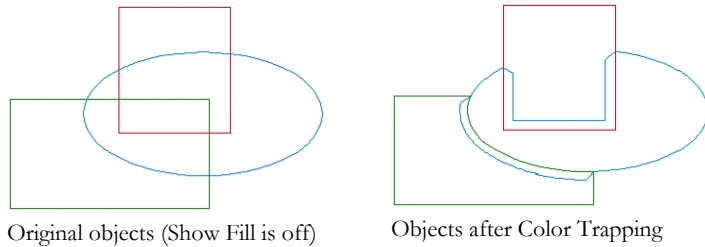
Applying Color Trapping

1   Select the objects.

2   From the **Effects** menu, select **Color Trapping**.

3   In DesignCentral, adjust the parameters.

4   Click **Apply**. ✔

Adjusting Color Trapping Using DesignCentral

When Color trapping is applied to overlapping objects, the following attributes can be adjusted in DesignCentral.
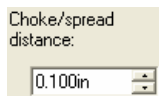
Choke/spread distance:
`0.100in`   Overlapping distance.

Light to Dark
Dark to Light   Select if the trapping will be performed from the light to dark color or vice versa.

Light to Dark   Dark to Light
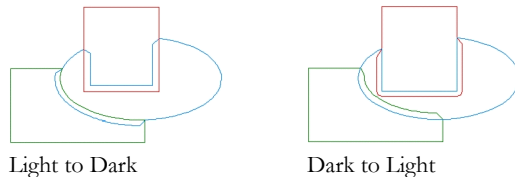
Include Strokes   When this option is checked, the color trapping will be applied to the object strokes.
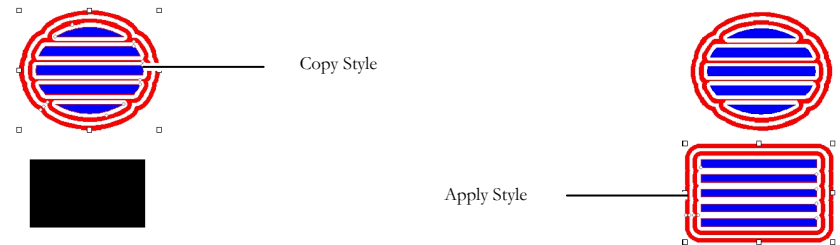
Using Styles

Styles allow you to capture and apply the fill, stroke and effects from one object to another.

> 📄 Styles can be stored for future use.

Copying and Applying Styles

1   Select the object with the desired fill or effect.

2   From the **Edit** menu, point to **Graphic Styles** and select **Copy Style**.

3   Select the object where the fill or effect will be applied.

4   From the **Edit** menu, point to **Graphic Styles** and select **Paste Style**.

Copy Style

Apply Style

Storing Style in Style List

You can select which properties from the original object will be stored in a style. For example, if you have a green object with a shadow, you can choose to save only the shadow as a style, the shadow and the green fill or just the green fill.

1   Select the objects.

2   From the **Edit** menu, point to **Graphic Styles** and select **Store Style**.

3   Enter the new style name and select the properties that will be stored in this style.

4   Click **Save**.

Applying Style in Style List

1   Select the objects.

2   From the **Edit** menu, point to **Graphic Styles** and select **Paste Style**.

3   Select the style from the style list.

4   Click **Apply**. ✔

Editing Style from Style List

Edit Style allows you to edit a stored style by renaming, copying or deleting.

Renaming or Copying a Style

1   From the **Edit** menu, point to **Graphic Style** and select **Edit Style**.

2   Select the style from the list then click **Copy** or **Rename**.

3   Enter the new style name.

4   Click **OK**.

Deleting a Style

1   From the **Edit** menu, point to **Graphic Style** and select **Edit Style**.

2   Select the style from the list then click **Delete**.

3   Click **OK**.

Using Contour Cut

Contour Cut is a feature that creates a cutting line around objects, either vector or bitmaps.

← Contour Cut

This allows you to output an image in a printer and then cut its contours using a cutting plotter. If you have a hybrid device (printer with cutting capabilities), you can print and cut using the same machine.

To allow the Contour Cut effect to trace the outline of objects in a bitmap, make the background of the image transparent using the Make Transparent function. Otherwise, the effect will only be able to trace around the outside of the bitmap. See "Contour Cutting" on page 155 for more information.

Creating a Contour Cut around Objects

1   Select the objects.

2   From the **Effects** menu, select **Contour Cut**.

3   In DesignCentral, adjust the parameters or drag the Control Point on Contour Cut line.

4   Click **Apply**. ✔

Adjusting Contour Cut Using DesignCentral

The following attributes from Contour Cut can be adjusted in DesignCentral:

Contour ▼   Select the type between Contour, Rectangle and Ellipse.
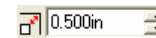
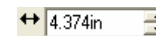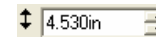Contour mode   Rectangle mode   Ellipse mode

0.500in   Offset distance from object to cutting line. The value can be negative, allowing you to make a contour cut line inside the design, in order to prevent misalignments in printing and cutting process. This field is only available for Contour mode.

↔ 4.374in   Width of the contour shape (Ellipse or Rectangle).

↕ 4.530in   Height of the contour shape (Ellipse or Rectangle).

Proportional   Check this value to assure that the cutting line will be resized proportionally when you change its height or width. This option is not available for Contour mode.

With Holes   When this option is checked, all holes in the selected objects will have an inner contour cut line. This option is not available for Ellipse or Rectangle mode.
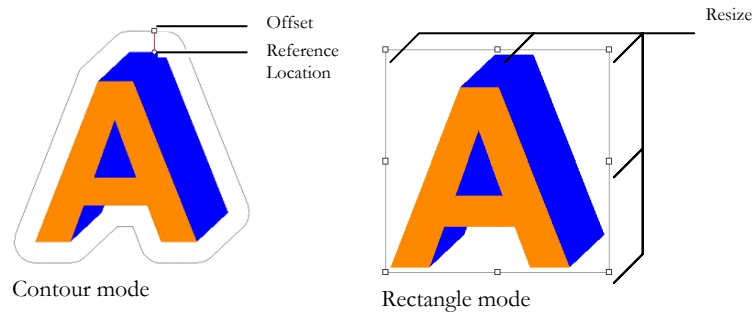
Contour with Holes   Contour Without Holes

Joint Type specifies how the corners are contoured.

Adjusting Contour Cut Using Control Points

When you apply an outline, a reference line is displayed with control points. You can adjust some of the above fields by dragging the control points.

Contour mode

Rectangle mode

Tracing Bitmaps with the Contour Cut Effect

To allow the Contour Cut effect to trace the outline of objects in a bitmap, make the background of the image transparent using the Make Transparent function. Otherwise, the effect will only be able to trace around the outside of the bitmap.

Opaque Background   **Transparent Background**

Transforming Objects into a Cutting Line

If you need a cutting line with a special shape, you can create a vector object and transform it into a cutting line.

A fan shape converted into a cutting line

Converting a Vector Object into a Cutting Line

1 Select the objects.

2 From the **Arrange** menu, point to **Contour Cut** and select **Make Contour Cut**.

The object's outline color will change to a light gray, indicating that it has been converted to a cutting line. Even after being converted to a cutting line, the object will have its original attributes.

Converting a Cutting Line to a Vector Object

1 Select the cutting line.

2 From the **Arrange** menu, point to **Contour Cut** and select **Release Contour Cut**.

Using Engraving Fills

Engraving fills must be applied in order to output the job to an engraver.

To access the Engraving fills, select **Engraving** from the **Effects** menu. You can also use the Engraving toolbar located at the top of your screen.
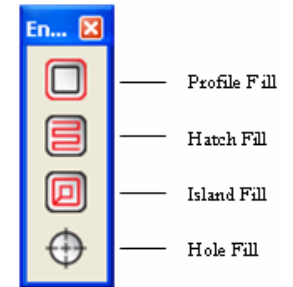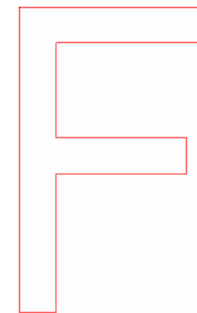
For details on editing engraving fill paths, see "DesignCentral When an Engraving Path is Selected" on page 85.
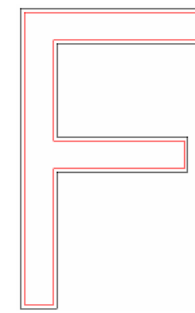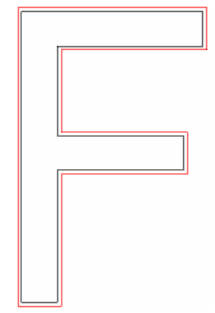

Applying Profile Fill
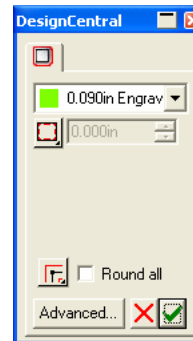
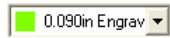DesignCentral – Profile fill, Online   Profile fill, Inset   Profile fill, Offset
Profile tab

1   Select the objects.

2   From the **Effects** menu, point to **Engraving** and select **Profile fill**. ▢

3   In DesignCentral, adjust the following parameters:

Selects a tool from the Tool Library.

    📄   Select **Edit** from the menu to create a new tool or edit an existing one. See "Tool Library" on page 125 for more information.

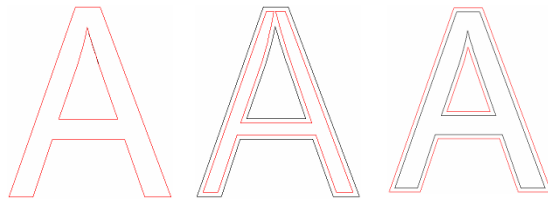Online path style creates a tool path that directly follows the existing path.
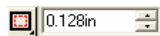
    📄   For stroke fonts use Online path style.

Inset path style creates a tool path that is set inside the existing path.

Offset path style creates a tool path that is set outside the existing path.

Online, Profile Fill   Inset, Profile Fill   Offset, Profile Fill

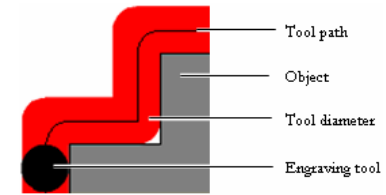Determines the distance between the existing path and the tool path.

For Sharp corners, the tool path follows the object's corner.
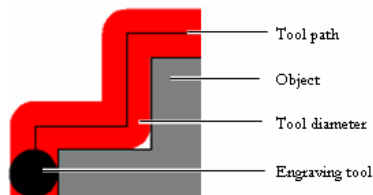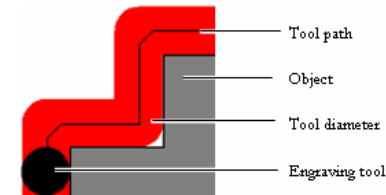
Sharp Corners

For Round corners, the tool path curves around the object's corner.

Round Corners

For Clipped corners, the tool path bevels around the object's corner.

Clipped Corners

Round All   Tool path rounds off the object's corners so that objects can be inlayed.

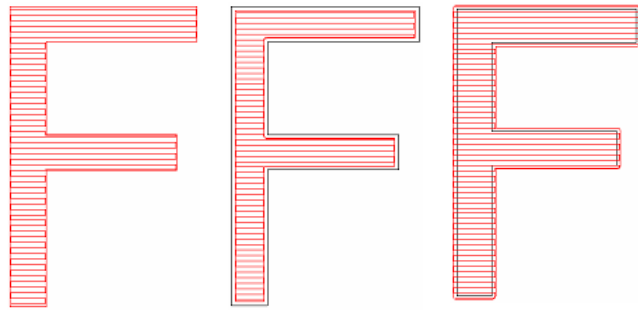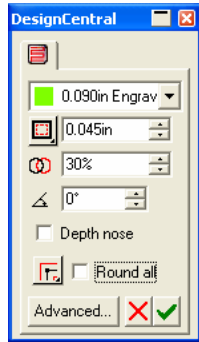For all path styles, all corners will be rounded.

Round All, Online   Round All, Inset   Round All, Offset

4   Click Apply. ✔

Applying Hatch Fill

Hatch Fill, the quickest method to fill an object, uses a zig-zag pattern to engrave a surface. This fill is typically used to engrave large areas.

DesignCentral – Hatch Fill, Online   Hatch Fill, Inset   Hatch Fill, Offset
Hatch tab

1   Select the objects.

2   From the **Effects** menu, point to **Engraving** and select **Hatch fill**. 📋

3   In DesignCentral, adjust the following parameters:
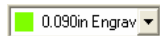
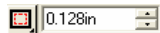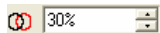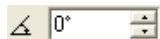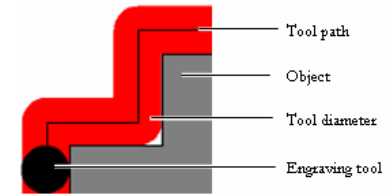|	
0.090in Engrav ▼	Selects a tool from the Tool Library.
	📄 Select **Edit** from the menu to create a new tool or edit an existing one. See "Tool Library" on page 125 for more information.
🔲	Online path style creates a tool path that directly follows the existing path.
🔲	Inset path style creates a tool path that is set inside the existing path.
🔲	Offset path style creates a tool path that is set outside the existing path.
🔲 0.128in	Determines the distance between the existing path and the tool path.
⊙ 30%	Amount of overlap between a tool path and its immediate neighbor.
∠ 0°	Determines the angle of the hatch pattern.
Depth Nose	Prevents the tool from lifting while engraving, which could cause a spring-loaded depth nose to engrave too deeply.
🔳	For Sharp corners, tool path follows the object's corner.

Sharp Corners

🔳   For Round corners, the tool path curves around the object's corner.
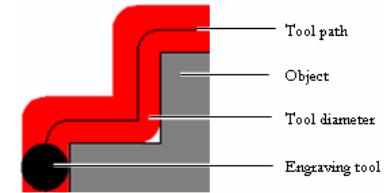
Round Corners

🔳   For Clipped corners, the tool path bevels around the object's corner.
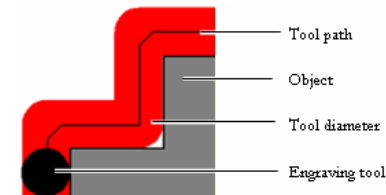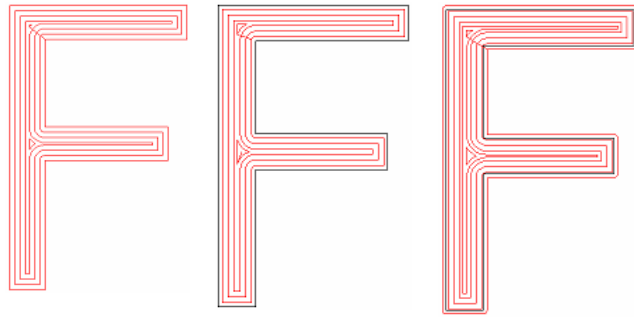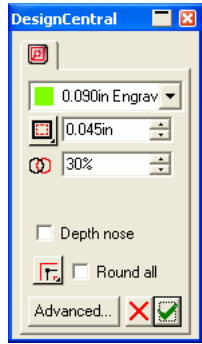

Clipped Corners

Round All   Tool path rounds off the object's corners so that objects can be inlayed.

For Inset and Offset all corners will be rounded. For Online, inside corners will be rounded.

4   Click Apply. ✔

Applying Island Fill

Island Fill, the cleanest method to fill an object, uses a continuous contour pattern that fills the surface.

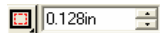DesignCentral – Island Fill, Online | Island Fill, Inset | Island Fill, Offset
Island tab

1 Select the objects.

2 From the **Effects** menu, point to **Engraving** and select **Island fill**. 🔲

3 In DesignCentral, adjust the following parameters:

0.090in Engrav ▾	Selects a tool from the Tool Library.
	📄 Select **Edit** from the menu to create a new tool or edit an existing one. See "Tool Library" on page 125 for more information.
🔲	Online path style creates a tool path that directly follows the existing path.
🔲	Inset path style creates a tool path that is set inside the existing path.
🔲	Offset path style creates a tool path that is set outside the existing path.
🔲 0.128in	Determines the distance between the existing path and the tool path.
◎ 30%	Amount of overlap between a tool path and its immediate neighbor.
Depth Nose	Prevents the tool from lifting while engraving, which could cause a spring-loaded depth nose to engrave too deeply.
⌐	For Sharp corners, tool path follows the object's corner.
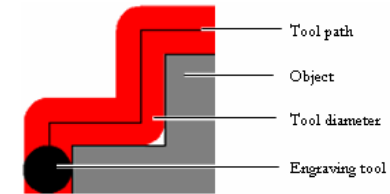
Sharp Corners

⌐	For Round corners, the tool path curves around the object's corner.
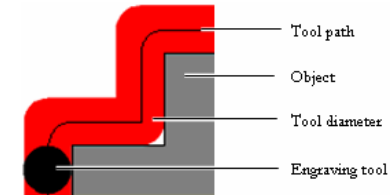
Round Corners

⌐	For Clipped corners, the tool path bevels around the object's corner.
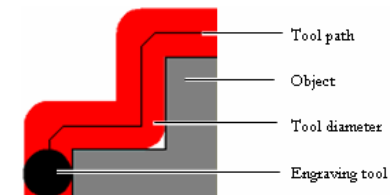
Clipped Corners

Round All	Tool path rounds off the object's corners so that objects can be inlayed.
	For Inset and Offset all corners will be rounded. For Online, inside corners will be rounded.

4 Click **Apply**. ✔

Applying Hole Fill

Hole fill is used to create drill holes or cut circles at a specified point on a path.

DesignCentral – Hole tab

Hole Fill, Center of Path

Hole Fill, Path Points   Hole Fill, Along Path   Hole Fill, Fill Path

1   Select the objects.

2   From the **Effects** menu, point to **Engraving** and select **Hole fill**. ⊕

3   In DesignCentral, adjust the following parameters:

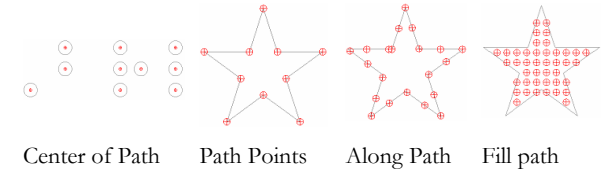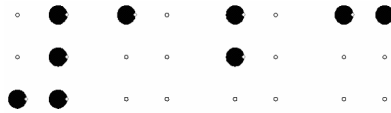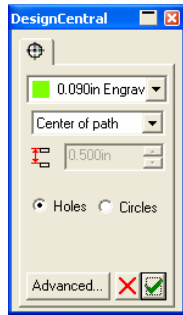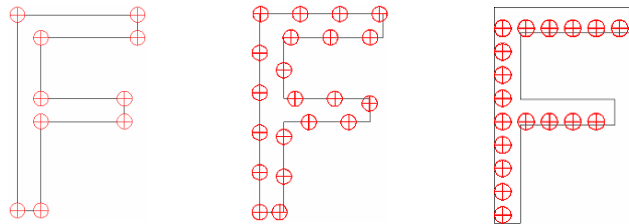|	
[0.090in Engrav]	Selects a tool from the Tool Library.
	Select **Edit** from the menu to create a new tool or edit an existing one. See "Tool Library" on page 125 for more information.
Center of Path	Places a drill hole in the center of the object. This style is typically used for converting Braille dots to drill points.
Path Points	Places drill holes on existing points on path.
Along Path	Places drill holes along the existing path at a specified distance.
Fill Path	Fills objects with a matrix of drill holes at a specified distance.
[0.700in]	Determines the distance between drill holes.

Center of Path   Path Points   Along Path   Fill path

Holes	Creates a drill hole.
Circles	Creates a circle.

4   Click **Apply**. ✔

Advanced Settings for Engraving Fills

The Advanced settings allow you to set parameters for the engraver. The engraving fills share the same Advanced settings.
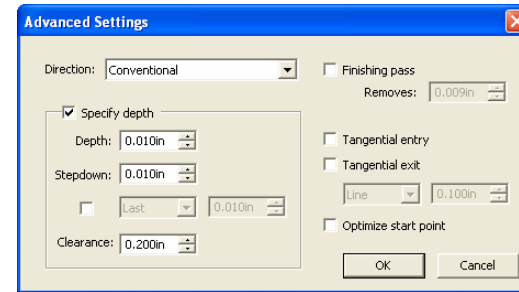
Advanced Settings for Profile, Island and Hole Fill   Advanced Settings for Hole Fill
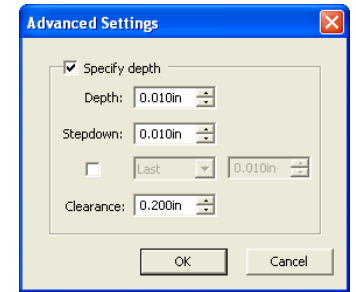
1   From an engraving fill tab in DesignCentral, click **Advanced**.

2   Adjust the following parameters:

Direction	Selects the direction in which a path will be engraved. Choosing the appropriate direction will ensure the smoothest edges. See "Showing Path Directions" on page 10 for more information.

Conventional Conventional direction engraves Inset and Offset tool paths so that the parts will have a smooth edge.

> 📄 Inside holes in text or objects will be cut in the opposite direction of the outside path.

- Conventional direction with Offset path style will engrave counter clockwise for outside tool paths and clockwise for inside tool paths.

- Conventional direction with Inset path style will engrave counter clockwise for inside paths and clockwise for outside paths.

Conventional   Conventional
Offset   Inset

Climb Climb direction engraves in the opposite way of Conventional direction and is typically used for materials such as heavy-grained wood and aluminum.
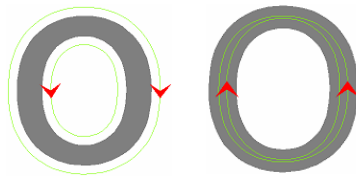
Climb Offset   Climb Inset

Clockwise Clockwise direction engraves clockwise for all paths.
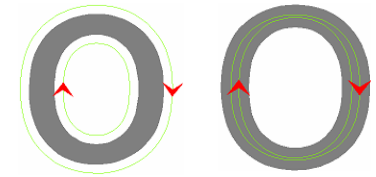
Clockwise Offset   Clockwise Inset

Counter Clockwise Counter clockwise direction engraves counter clockwise for all paths.
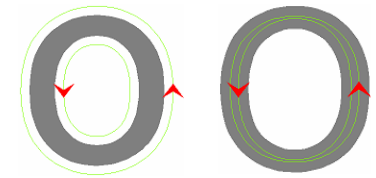
Counter   Counter
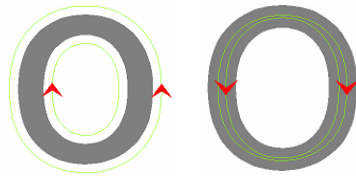Clockwise Offset   Clockwise Inset

Specify Depth Check to enter values that will override the engraver settings.

Depth Specifies the total depth the tool will engrave.

Stepdown Specifies how deeply the tool will engrave on each pass to ensure that the tool does not remove too much material.

First, Last or Both Sets additional Stepdown values for First, Last or Both passes. You can specify how deeply you want the tool to engrave on each pass.
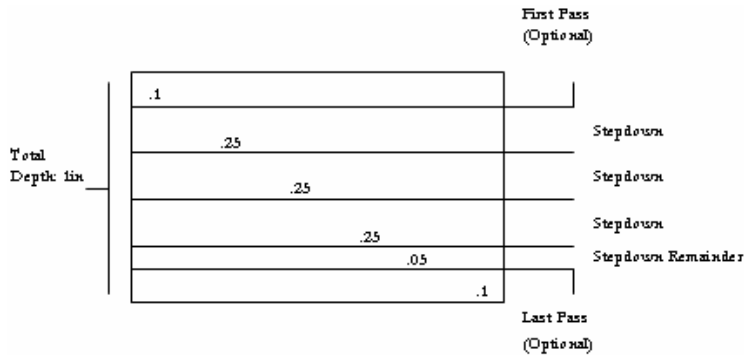
Clearance   Sets the amount of space the tool lifts between paths.

Finishing Pass   A final pass that removes a small amount of material to smooth the edges from the previous pass.

Removes   Determines the amount of material the Finishing Pass removes.

Tangential Entry and Exit   For Tangential Entry, the tool will begin outside the tool path and move toward the tool path in a line or arc. This allows the tool to gain speed and make a clean entry on the tool path.
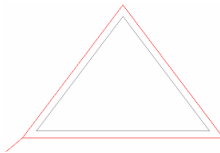
Tangential Entry, Line

For Tangential Exit, the tool finishes the job and continues outside the tool path in a line or arc. This allows the tool to power down and make a clean exit from the tool path.
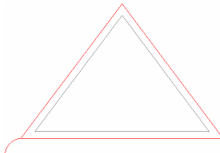
Tangential Exit, Arc

Line   A straight line of a specified length.

Arc   A curved arc of a specified radius.

Optimize Start Point   Automatically moves the start point of each path to reduce the distance from the end point of one path to the start point of the next.

📄 Tangential entry and exits will be created at the object's start point. Disable this option to use the original start point of the object.

3   Click **OK**.

Tool Library

You can use the Tool Library to edit or create an engraving tool to your specifications.
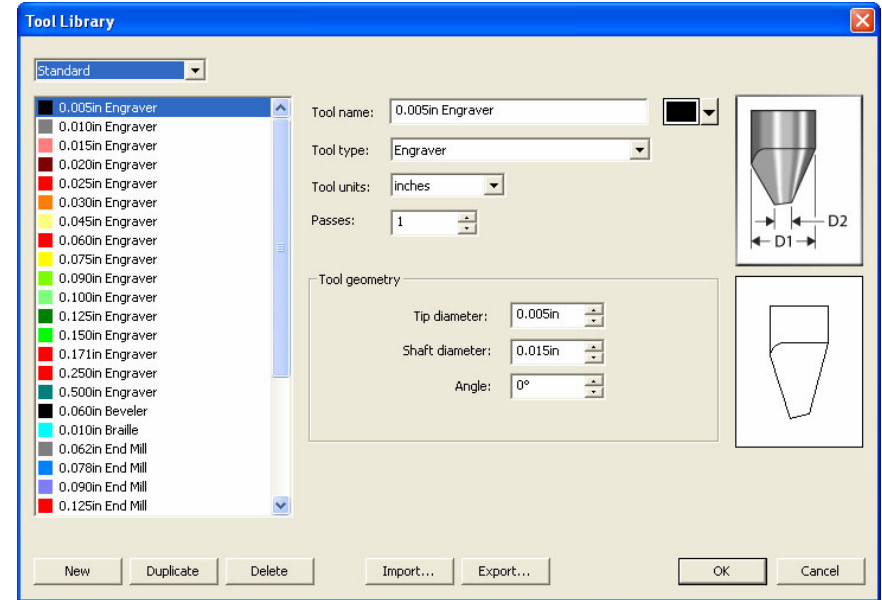
1   From the **Edit** menu, select **Tool Library**.

2   Adjust the following parameters:

New   Creates a new tool from the Tool Library.

Duplicate   Creates a duplicate of a selected tool from the Tool Library.

Delete   Deletes a tool from the Tool Library.

Import   Opens your saved tool settings.

Export   Saves the tool settings as an xml file.

Editing a Tool

1   Select **Standard**, **Metric** or **All Tools** to show a selection of engraving tools.

2   Click on the tool you will edit.

3   Adjust the following parameters:

Tool name   Displays the tool name selected.

	Changes the color that represents the selected tool.
Tool type	Displays the type of tool selected.
Tool units	Converts the units of measurement for the tool diameter to inches or millimeters.
Passes	Number of passes the tool will make along the path.
	The Passes value sets the number of times the tool will follow a path before moving onto the next path. This value differs from Stepdown in that Stepdown sets how deeply the tool will engrave on each pass.
Tool Geometry Group Box	The Tool Geometry group box describes measurements of your tool. The diagram in the upper right corner shows measurements of the values in Tool Geometry. The diagram to the right of the group box dynamically moves as you enter values in Tool geometry.
Tip diameter	Displays the width of the tool tip.
Shaft diameter	Displays the width of the tool shaft.
Angle	Angle of the tool's point.

4   Click **OK**.

15 Working with Measurements and Labels

The software allows you to measure, label and dimension objects. By using the measuring tools, you can indicate the horizontal, vertical or diagonal dimensions of the design, or label objects.
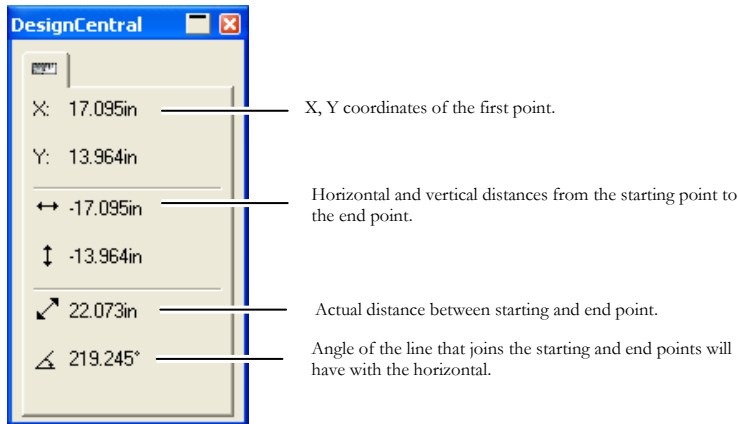
The lines and labels can be output to a printer or cutter. See "RIP and Print Dialog - Advanced Tab" on page 149 or "Cut / Plot Dialog - Advanced Tab" on page 142 for more information.

Measuring Distances

Use the Measure tool when you need to know the distance between two points in your design.

1 Select **Measure** tool.

2 Click and drag the cursor.

📄 Just click to show a position of one point in your design.

Once you release the mouse button, Design Central displays the following information:

X, Y coordinates of the first point.

Horizontal and vertical distances from the starting point to the end point.

Actual distance between starting and end point.

Angle of the line that joins the starting and end points will have with the horizontal.

DesignCentral for Measuring

Creating Dimensioning Lines

The Dimension tool allows you to create dimensioning lines between two points in your design. The dimension lines can be horizontal, vertical or diagonal.

When you are creating a dimension label, the Snap to Point feature is automatically enabled.

Sideline

Trailing Zeros

Arrow
Sideline

Arrow

ABC 154.000 mm DEF

Suffix

Unit

Dimension Value

Prefix
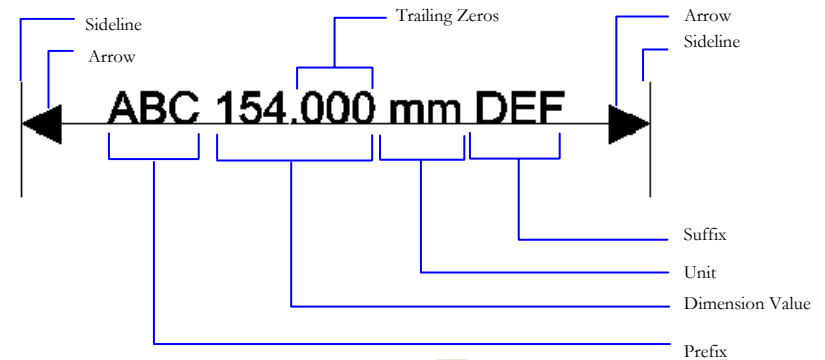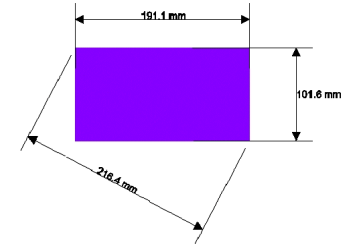
1 Select the **Dimension** tool.

2 Click the point where the dimension line will start.

3 Either click the point where the dimension line will end, or drag from the start point to the ending point. As you move the cursor, a line displays the direction you are moving.

4 Click a third time to set the distance between the dimension line and the starting and ending points.
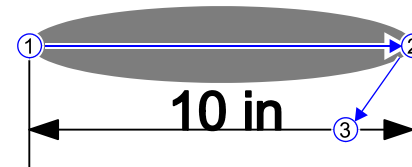
- Hold **Shift** to constrain the line angle to increments of 45 degrees.

- Hold **Ctrl** to constrain the dimension lines to be perpendicular

to the object.

Changing the Text Position of a Dimension Line

The dimension text can appear either inside the dimension line, or to either side, depending on whether the third click was made below the dimension line or to one side.

4 in ⟷   ⟷**4 in**   ⟷ **4 in**

To change the position of the dimension text, double-click the dimension line, and select the circle next to the dimension text. You can then drag the text around.

4 in   **4 in**   ➡   4 in ⟷

Automatically Dimensioning Objects

The Automatic Dimension tool allows you to automatically create horizontal and vertical dimension lines around objects. These dimensions lines are not linked to the object and will not be automatically updated if the object changes size.

191.1 mm

101.6 mm

1   Select the objects.

2   Select the **Automatic Dimension** tool.
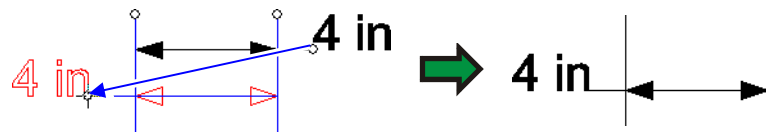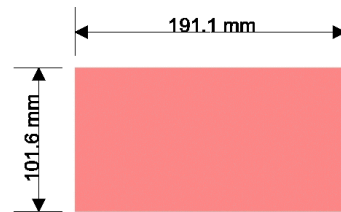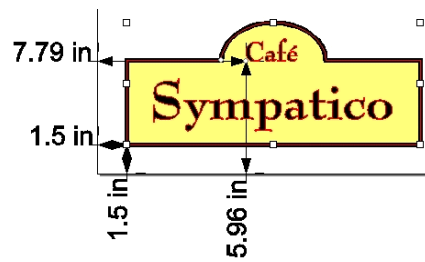
Dimensioning to Page

The Dimension to Page tool allows you to automatically create horizontal and vertical dimension lines that measure the position of the object to the lower left corner of the design area. These dimension lines are linked to the object and will be updated if the objects change position.

7.79 in

1.5 in

1.5 in

5.96 in

Café

Sympatico

📄   Text objects are measured from the baseline of the text.

1   Select the objects.

2   Select the **Dimension to Page** tool.
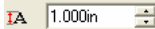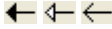
Creating Labels

Use the label tools to draw an arrow with text attached to it.
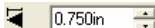
There are two types of labels:

ABCDE   ABCDE

One segment label   Two segment label
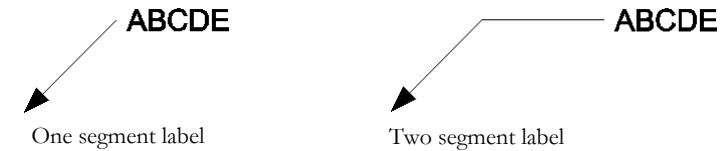
1   Select a **Label** tool.

2   Click the point where the label line will start.

📄   As you move the cursor, a line shows the direction in which you are moving.

3   If you are creating a two segment label, click to define the point where the first segment ends and the second segment begins.

4   Click the point where the label will end.

5   Edit the label text in DesignCentral and press **Enter**.

6   In DesignCentral, adjust the following parameters:

Arial / Regular	Font and style used.
1.000in	Size of the font used.
← ← ←	Arrow type used in the label line.
Advanced	Click this button to access the advanced options.

7   In the Advanced Options dialog box, adjust the following parameters:

Border Text	When this option is on, a box displays around the label text.
0.750in	Arrow width.
0.500in	Arrow Length.

Editing Dimension Lines

1   Create the dimension line.

2   In DesignCentral, adjust the following parameters:

[Tr Arial / Regular]	Font and style.
[IA 1.000in]	Size of the font.
[padlock icons]	When unlocked, you can edit the dimension text in the field just above the padlock.
[arrow type icons]	Arrow type used in both ends of the dimension line.
[arrow position icons]	Arrow position. The arrows can be inside or outside the sidelines.
Linked	When this option is checked, if you resize the object that this dimension line is measuring, the dimension value will automatically reflect the resizing.
	Once you unlink this option, you cannot revert it back to link again.
Advanced	Click this button to access the advanced options.
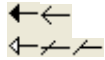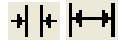
3   In the Advanced Options dialog box, adjust the following parameters:

Prefix	This text will be placed before the dimension value.
Suffix	This text will be placed after the dimension value.
Scale	Scale used to show the dimension value. A scale of 50% will display half of the actual value in dimension value.
Unit	Unit used to show the dimension value.
Precision	Number of decimal places in dimension value.
Trailing Zeros	When this option is off, no decimals will be displayed.
Suppress unit	When this option is on, no unit will be displayed after the dimension value.
Border text	When this option is on, a box will appear around the dimension text.
[text position icons]	The dimension text can be above, over or under the dimension line.
[position icons]	It fixes the position of the dimension on the line.
[diagonal icons]	When a diagonal dimension is created, the dimension text can be aligned with the diagonal line or maintain a horizontal position.
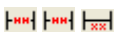
[sideline buttons]	Using these buttons, you can show only the sideline, no sideline, no arrow or show all.
[0.750in]	Arrow width.
[0.500in]	Arrow height.
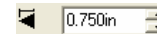
16 Configuring the System for Color Printing

You should configure your system before printing. Color Settings dialog provides the default settings that are applied to files that are imported into your software and to emulate the output color on the monitor.

To open the Color Settings dialog box and to configure your software for color printing, from the **Edit** menu, select **Color Settings**.

Setting the Display Settings

Most files are calibrated for specific output devices. Files in RGB format are usually color corrected for display on specific monitors, and CMYK files are color corrected for output to a certain printer. Display Settings are used to convert these files to a neutral color space, so that your software can later color correct for your output device using the output profiles.

The Display Settings tab in the Color Settings dialog allows you to set the input profiles that are used when importing files. The input profiles should match the output devices (either a monitor or a printer) used in the creation of the files.

Adjust the following parameters:

Monitor	Select the profile that matches your computer monitor.
Printer	Select the printer that will be used to print your design. Check **Soft proof preserves white point** option to emulate the white point of the paper.
Profile	Selects the profile that will be used for output.

Setting the Input Profiles

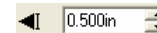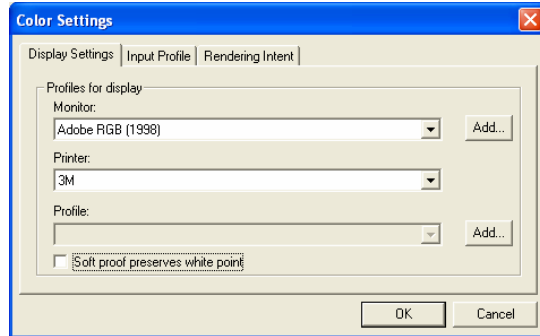You can emulate the output color on your computer monitor, in a process called Soft Proofing.

In order for this emulation to be as accurate as possible, you have to set the appropriated profiles in the Input Profiles tab of Color Settings dialog.
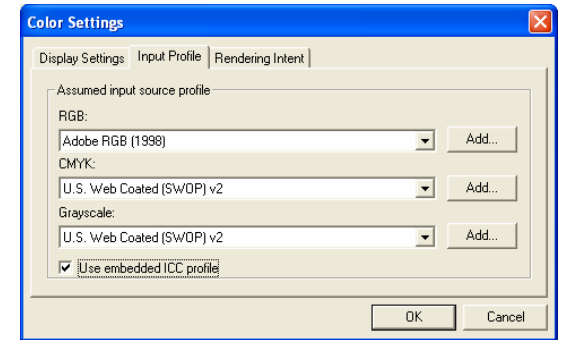
RGB	Select the RGB profile that matches the source of images.
CMYK	Select the CMYK profile that matches the source of images.
Grayscale	Select the profile that matches the source of grayscale images.
📄	You can add additional profiles by clicking the **Add** button.

Selecting Rendering Intents

Rendering Intent specifies how a color space from the input file gets mapped to the color space of the output device.

Rendering Intents can be specified for four different types of objects that make up jobs:

Bitmap	The rendering intent to use with bitmap images (raster images) contained in your job file.
Vector	The rendering intent to use with vector objects such as circles, polygons, lines, arcs and Bezier curves contained in vector-

based files like PostScript, DXF or Adobe Illustrator.
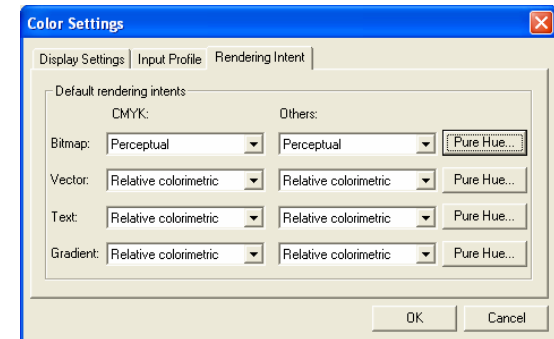
Text   The rendering intent to use with text objects contained in PostScript and other vector-based files.

Gradient   The rendering intent to use with vector-based gradient objects contained in PostScript and other vector-based files. Gradients created in bitmap files will be rendered using the **Bitmap** rendering intent.

Different rendering intents can be specified for CMYK objects versus all other objects (RGB, grayscale, LAB, etc.).

📄 The options set here are only used as a default setting for your output. You can specify different rendering intents for each bitmap or color in your design. See "Profile Tab" on page 93 and "Color Specs - Color Tab" on page 51 for more information.

Choose one of the following rendering intents:

Perceptual   This intent is best for photographic images. Colors outside of the output device's gamut are either clipped or compressed to fit the output device's color space.

Saturation   This intent is best for graphic images, such as vector art, where vivid colors are more important than true color matching. Colors outside of the output device's gamut are mapped to colors at the extent of the gamut's saturation. Colors that fall within the gamut of the output device are Shifted closer to the gamut's saturation extent.

**Relative Colorimetric**   This intent is best for images, such as logos, where the output needs to match the original image. Colors that fall outside of the output device's gamut are clipped. This method may reduce the total number of colors available. The white point of Relative Colorimetric is always zero.

Absolute Colorimetric   This intent is similar to Relative Colorimetric, but has a different white point value. Absolute Colorimetric represents colors relative to a fixed white point value of D50. For example, the white of paper A will be simulated when printing on paper B. This intent is best for color proofing.

Spot Color   This intent was created to supplement the Saturation intent. Spot Color maps colors similarly to the Saturation rendering intent, but Spot Color rendering intent produces the greatest saturation possible, and should not be used with photographic images.

No color correction   The object will be printed without any color correction.

Using Pure Hue Settings

The Pure Hue buttons allow you to specify that certain color channels should not be mixed in with other colors when the job is rendered. These settings can be different for each of the 4 types of objects.

For example, if a job contains yellow text, you could check the Pure Hue setting on the yellow color channel for text, so that no other colors appear in the yellow text.

1   Click the **Pure Hue** button next to the object's rendering intent.
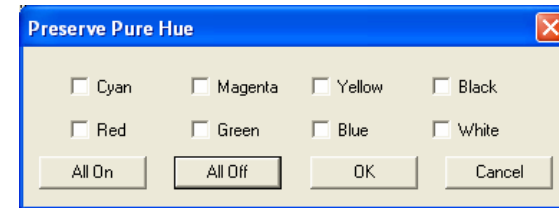
2   Check the boxes for each color channel that you want to preserve unmixed.

📄 Click **All On** to check all color channels, or **All Off** to clear all channels.

3   Click **OK**.

17 Printing to a Desktop Printer

Before the final output, you may want to print a sample to your desktop printer for proofing.

1 Make sure all the objects and colors you want to print are visible in your document.

2 From the **File** menu, select **Print**.
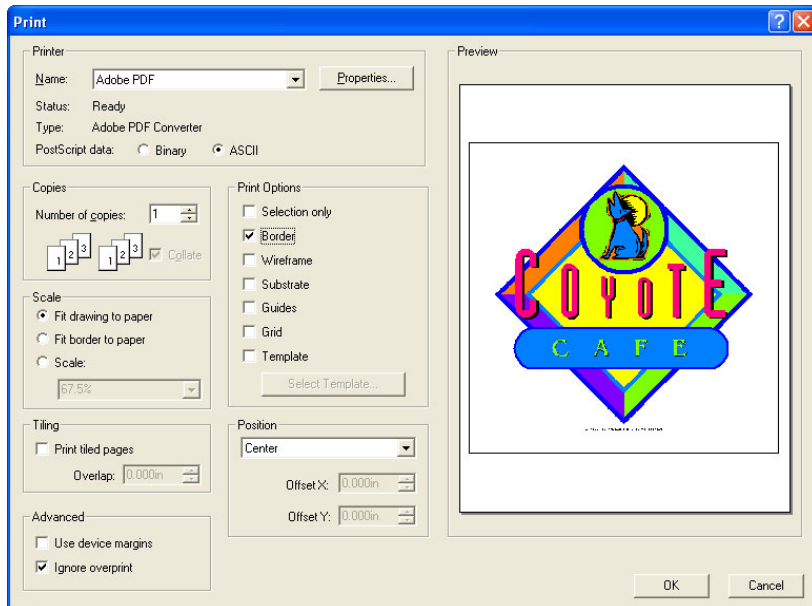
3 Select your desktop printer and select the desired options.

📄 Check Selection to print only the selected objects.

4 Click **OK** (Windows), or **Print** (Macintosh).

5 Adjust the following parameters:

Printer Select the following printer-related properties:

Name Select the name of the print queue you want to print to.

Properties Click to set printer-specific properties. See your printer documentation for details.

PostScript data Select **Binary** or **ASCII**. When **Binary** is selected, the data is compressed using a binary encoding and then sent to the printer.

Copies Set the **Number of copies** you want to print.

Scale Select one of the following:

Fit drawing to paper Resizes the output to fit the entire design into the paper.

Fit border to paper Resizes the output to fit the entire drawing area into the paper.

Scale Enter the scale in percentage to resize the output. You can use the **Tiling** option to print images that are bigger than the paper size that your printer can handle.

📄 If you want to print a scale of 1 inch = 1 feet, enter the value "1:12" in this field.

Position Select one of the following positions:

Top Left

Top Center

Top Right

Left Center

Center

Right Center

Bottom Left

Bottom Center

Bottom Right

Custom — Position the design precisely by specifying the following offsets:
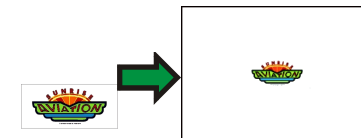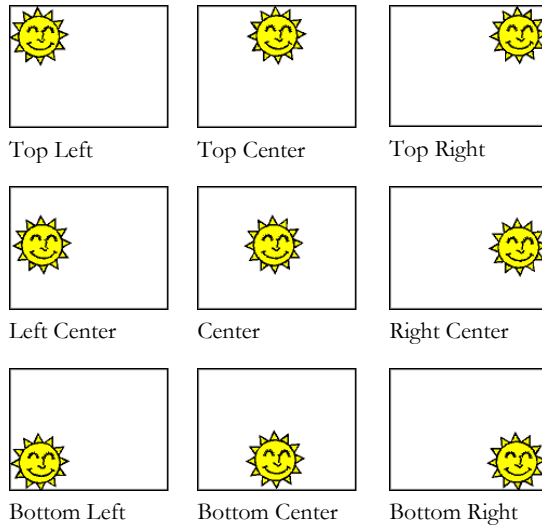
Offset X — The distance from the right edge of the design to the right edge of the printable area of the page.

Offset Y — The distance from the bottom edge of the design to the bottom of the printable area of the page.

Print Options — Check to enable the following options:

Selection only — Only the selected portions of the design will be output.

Border — The border of the design area is printed.

Wireframe — The vector objects are printed without fill.

Substrate — Prints the substrate color, if any, along with the design.

Guides — Prints the guides along with the design.

Grid — Prints the grid along with the design.

Template — Applies a layout template to the output.

Tiling — The Tiling options allow you to divide the output into tiles and set the overlap between the tiles.

Print tiled pages — Check to tile the output

Overlap — Sets the overlap between the tiles.

Original Design

Tiled output

Advanced — Check to enable the following advanced options:

Use device margins — The margin information from the printer driver is used.

Ignore overprint — Any overprinting that was set up in the design stage will be ignored. This can be useful if you want to save the time and output media needed to do overprinting.

📄 If you check **Ignore Overprint**, your output will automatically be changed so that it will not use features that depend on overprinting. For example, output that had been set up to use color trapping will now output untrapped.

18 Connecting to Production Manager or PhotoPRINT Server

The design software is capable of sending output to either Production Manager or PhotoPRINT Server.

📄   You can only connect to copies of Production Manager that have the same version as the design software. Attempting to connect to an older version of Production Manager will yield an error.

Connecting to Production Manager

If you open either the Cut/Plot dialog or the RIP and Print dialog, and Production Manager is already running on your computer, the design software will automatically connect to the Production Manager on your computer.

If Production Manager is not already running on your computer when you open the Cut/plot or RIP and Print dialog, the following dialog appears:

This dialog allows you to:

- Connect to a copy of Production Manager running on your computer, starting up Production Manager if it is not already running.

- Connect to a copy of Production Manager running on another computer on your local area network.

- Connect to a copy of Production Manager running on a remote computer by specifying its TCP/IP address.

Connecting to Production Manager on the Same Computer

1   Create your design in the design software.

2   Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar. ⏚ 🖫

3   Select **On this computer (Local)**.

4   Click **OK**.

📄   If your local copy of Production Manager is not running, it will automatically be started.

Connecting to Production Manager on another Computer on your Local Area Network

1   Make sure that neither Production Manager nor PhotoPRINT Server are running on your computer.

2   Create your design in the design software.

3   Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar. ⏚ 🖫

4   If the Select a Production Manager dialog does not appear, select **Other** from the Setup List in the top left corner of the dialog.

5   Select **On another computer (Network)**.

6   Click **OK**.

7 Select the program you want to connect to.

8 Click **OK**.

Once the software connects to Production Manager, it will automatically populate the Setup List with the available setups.

Connecting to Production Manager at an Internet Address

1 Make sure that neither Production Manager nor PhotoPRINT Server are running on your computer.

2 Find out the TCP/IP address of the remote computer.

3 To determine the TCP/IP address of a Windows computer, from the command line type **IPCONFIG** and hit **Enter.**

```
Windows IP Configuration

Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . : alias.com

        IP Address. . . . . . . . . . . : 10.1.1.134

        Subnet Mask . . . . . . . . . . : 255.255.255.0

        Default Gateway . . . . . . . . : 10.1.1.2
```

4 Create your design in the design software.

5 Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar.

6 If the Select a Production Manager dialog does not appear, select **Other** from the Setup List in the top left corner of the dialog.

7 Select **On the internet address**.

8 Enter the TCP/IP address of the remote computer.

9 Click **OK**.

Once the software connects to Production Manager, it will automatically populate the Setup List with the available setups.

Connecting to PhotoPRINT Server

The software has the ability to output your design to the PhotoPRINT Server. To make this work, you connect to PhotoPRINT Server instead of Production Manager.

As with Production Manager, you can connect to a copy of PhotoPRINT Server running on the same computer, on another computer on your LAN or on a remote computer accessed via TCP/IP.

Connecting to PhotoPRINT Server on the Same Computer

If PhotoPRINT Server is running on your computer, and Production Manager is not running, the software will automatically connect to PhotoPRINT Server.

> 📄 If both programs are running, the software will always connect to Production Manager first.

1 Create your design in the design software.

2 Make sure that Production Manager is not running.

3 Start **PhotoPRINT** Server.

4 Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar.

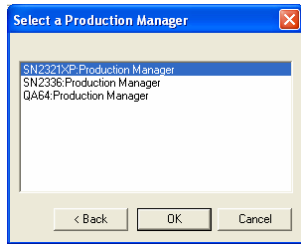**5** Select **On this computer (Local)**.

6 Click **OK**.

Once the software connects to PhotoPRINT Server, it will automatically populate the Setup List with the available setups.

Connecting to PhotoPRINT Server on another Computer on your Local Area Network

1   Make sure that neither Production Manager nor PhotoPRINT Server are running on your computer.

2   Create your design in the design software.

3   Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar. 🖨️ 🖨️

4   If the Select a Production Manager dialog does not appear, select **Other** from the Setup List in the top left corner of the dialog.

5   Select **On another computer (Network)**.

6   Click **OK**.

7   Select the copy of **PhotoPRINT Server** you want to connect to.
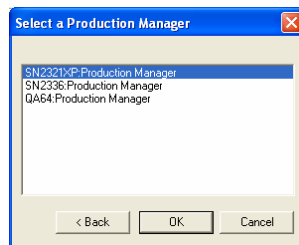
8   Click **OK**.

Once the software connects to PhotoPRINT Server, it will automatically populate the Setup List with the available setups.

Connecting to PhotoPRINT Server at an Internet Address

1   Make sure that neither Production Manager nor PhotoPRINT Server are running on your computer.

2   Make sure that Production Manager is not running on the remote computer.

📝   If Production Manager is running on the computer, the software will connect to that copy of Production Manager instead of PhotoPRINT Server.

3   Find out the TCP/IP address of the remote computer.

4   To determine the TCP/IP address of a Windows computer, from the command line type **IPCONFIG** and hit **Enter.**

```
Windows IP Configuration

Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . : alias.com

        IP Address. . . . . . . . . . . . : 10.1.1.134

        Subnet Mask . . . . . . . . . . . : 255.255.255.0

        Default Gateway . . . . . . . . . : 10.1.1.2
```

5   Create your design in the design software.

6   Click on either the **Cut/Plot** or **RIP and Print** button in the toolbar. 🖨️ 🖨️

7   If the Select a Production Manager dialog does not appear, select **Other** from the Setup List in the top left corner of the dialog.

8   Select **On the internet address**.

9   Enter the TCP/IP address of the remote computer.

10   Click **OK**.

Once the software connects to PhotoPRINT Server, it will automatically populate the Setup List with the available setups.

Sharing a Hardware Key over a Local Area Network

It is possible to run the design software on one computer and Production Manager on a separate computer, using only one hardware key. The computer that has Production Manager and the computer that has the design software must be networked and TCP/IP must be installed and working properly.

📄 You cannot run more than one concurrent instance of the software using the same hardware key.

1 Install the design software on the design station.

2 Install the production software on the production station.

3 Attach the hardware key to either the design station or the production station.

4 Launch either the design software or the production software. The software can run as long as the key is attached to one of the stations.

5 Connect to the instance of Production Manager running on the production station. See "Connecting to Production Manager on another Computer on your Local Area Network" on page 134 for more information.

19 Cutting your Design

Before you can cut any design, make sure you have established a connection from your design software to the Production Manager and created a setup for your output device as instructed in the Production Manager User Manual.
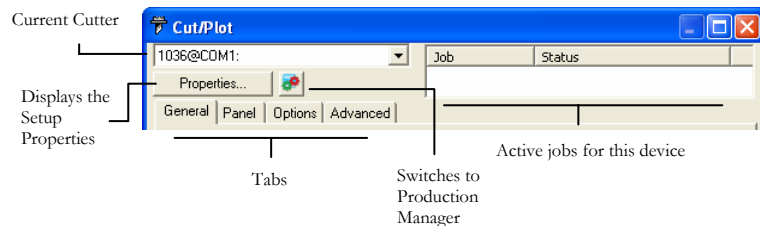
Sending the Document to the Device

1   From the **File** menu, select **Cut / Plot**.

   📄   If you have any object selected, only the selected objects will be cut.

2   Adjust the settings available in the dialog box as necessary and click Send.
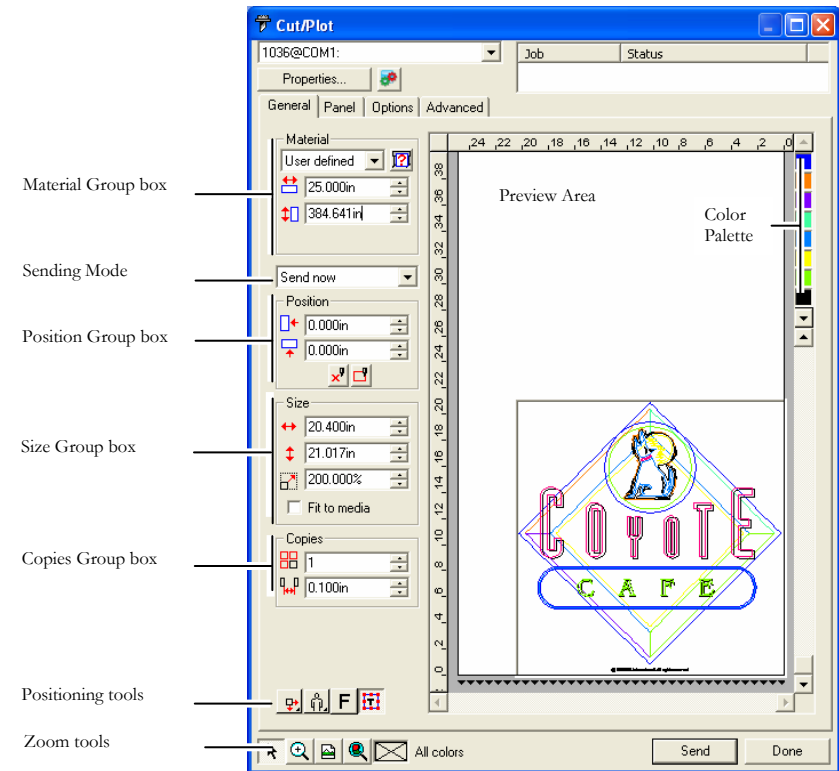
Cut/Plot Dialog Settings

The Cut/Plot dialog box gives you complete control over how the job is produced.

The area on top of this dialog is common for all tabs:

Current Cutter
Displays the Setup Properties
Tabs
Switches to Production Manager
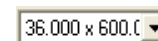Active jobs for this device

Cut / Plot Dialog - General Tab

The General tab allows you to specify the size of media, size of the job and the location of your output on the media.

Material Group box
Sending Mode
Position Group box
Size Group box
Copies Group box
Positioning tools
Zoom tools
Preview Area
Color Palette

   📄   You can resize the Cut/Plot dialog, by clicking and dragging the lower right corner.

Material Settings

The Material group box allows you to specify the size of the media used in your output device and entering the Media Width and Height. The media size is used to panel your job if it is larger than the media.

| 36.000 x 600.0 ▼ | Select your media size from the list or specify a custom size by selecting User Defined. |

❓   Poll Size: polls the size of the media loaded in the cutter. This feature only works if the device and port support bi-directional

communications.

⊞ `51.000in` ⊟ Material width.

⊡ `600.000in` ⊟ Material height.

Sending Mode

The Send List allows you to select what to do with the job once it arrives in the Production Manager queue.

Send now The job is automatically processed and sent to the output device.

Hold in list The job stays in the Production Manager queue until it is manually sent to the output device from the Production Manager window.

Save to file The job is processed and saved as a native file.

📄 The Send Now mode is not available if the output device is inactive or the Production Manager is on another computer on the network and the option Allow remote Send Now/Interactive is not enabled in the Production Manager Preferences. See the Production Manager User Manual for more information.

Position Settings

The Position group box allows you to specify where on the media the job is output.

▯ `0.000in` ⊟ Horizontal offset distance.

▯ `0.000in` ⊟ Vertical offset distance.

✗ Activates Interactive mode. Interactive mode allows you to dynamically interact with the tool head by moving the tool as you change the position of the job on the preview area.

▭ Show me tool draws a bounding box of the job without lowering the tool.

Positioning the Job by Clicking and Dragging

1 Choose **Select** tool from the toolbar of Cut/Plot dialog. ↖

2 Click and drag the preview to a new position.
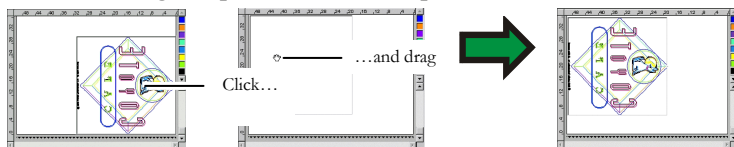
Size Settings

The Size group box allows you to change the size of your output.

↔ `0.200in` ⊟ Width of the output.

↕ `0.200in` ⊟ Height of the output.

▱ `0.500in` ⊟ Scale ratio.

Fit to media Scales the job proportionally so that it is as large as possible while still fitting within the printable area of the output media.

Copies Settings

The Copies group box allows you to set the number of copies and the spacing between them.

▦ `1` ⊟ The number of copies.

▯ `0.100in` ⊟ The amount of space between the copies.
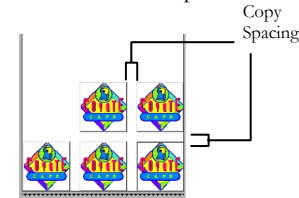
Copy Spacing The copies are automatically positioned to optimize the media usage.

Positioning Tools

The Positioning tools allow you to rotate, mirror or position the job.

The job is placed at specified distances from the right edge and the leading edge of the media.

The job is centered on the leading edge of the media.

The job is centered in the length and width of the media.

	The job is placed at specified distances from the left edge and the leading edge of the media.

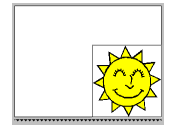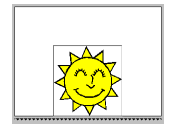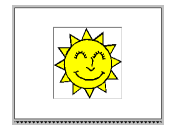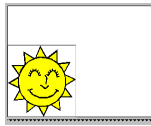|	
	Rotate the job in 90-degree increments.
	Mirror the job vertically.
	Displays feed direction.

Viewing Tools

The viewing tools allow you to manipulate the job on the preview area.

	Changes the position of the job on the media by clicking and dragging the job preview.
	Zooms in or out. Hold the **Ctrl** to Zoom out.
	Return the preview area to the default view.
	Zoom to fit all objects into the preview area.
	Display the current color selected in the preview area. If all colors are selected, the box will be crossed out.
	Click this button to toggle the preview to display the selected objects only or the entire design.

Color Palette

Select the color to display in the preview area. Only the color displayed will be processed. You will not be able to select individual colors if the option **Send all colors** in the Advanced tab is checked.

> 📄 Click and drag the colors to change the output order.

- Setting the Visibility of Colors

Right-clicking on a color in the color palette allows you to toggle the **Visible** setting on and off for that color. A color that is set to invisible will not be output.

> 📄 If you want to output all colors except one, check Send All Colors on the Advanced tab and then turn off the Visible setting on the color you do not want to output.

Cut / Plot Dialog - Panel Tab
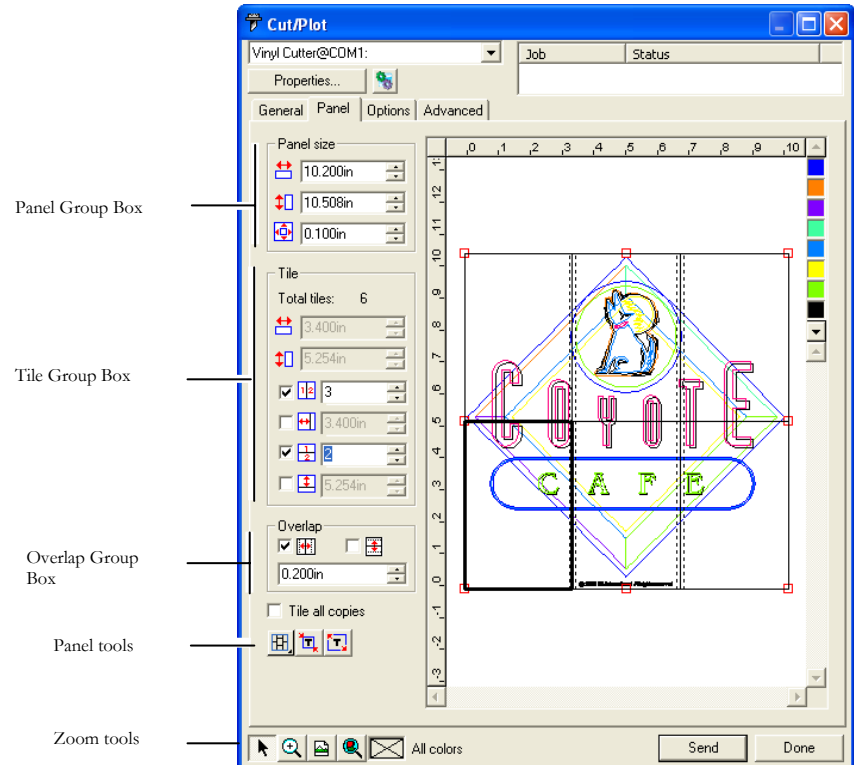
Jobs that are bigger than the media size should be tiled before output.

The panel can be divided in several columns and rows. Each section or cell is called a Tile.

Panel Tools

The tool bar provides tools to change the Panel mode and to automatically tile.

	Locks the columns so that the tiles on a same column can be adjusted as a group.
	Locks the rows so that the tiles on a same row will can be adjusted as a group.
	Locks both columns and rows so that the entire columns or rows can be adjusted as a group.

Auto-tile: A tile will automatically be created that includes all selected objects. If no objects are selected, all 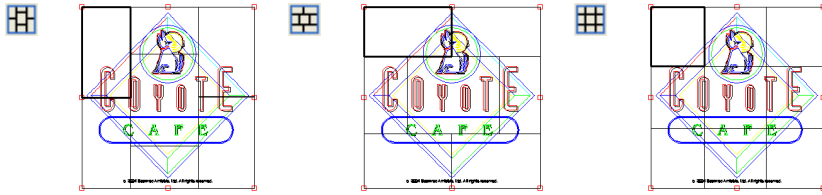of the objects in the design will be included. If the design is too large to fit on the selected media, it will automatically be tiled so that each tile is the maximum possible size. Auto-tile does not attempt to tile the entire page, just the design or the selected objects.

Tile to Border: The entire design page is automatically tiled. If the page is too large to fit on the selected media, it will be tiled so that each tile is the maximum possible size.
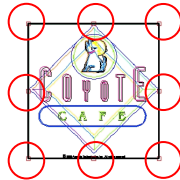
Resizing the Panel

The panel defines the area of design that will be processed for output. Elements of the design that are outside the bounds of the panel will not be cut.

You can resize the panel by dragging the panel border or using the Panel Size group to numerically enter the panel size.

Resizing the Panel with the Mouse

1   Move the cursor on top of the small red squares along the panel border.
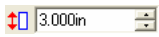
2   Click and drag to resize the panel.

Resizing the Panel Numerically

Adjust the following parameters:

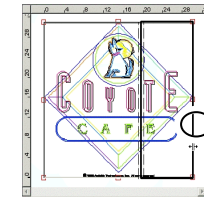|	
↔ 8.800in	The width of the panel.
↕ 3.000in	The height of the panel.
0.000in	Margin around the panel.

Tiling the Job Using the Preview Area

Adding New Tiles to the Panel

1   Move the mouse cursor on top of the panel border.

2   Click and drag towards the center of the panel to add a new panel.

Panel border

Resizing Existing Tiles

1   Move the mouse cursor on top of the tile border.

2   Click and drag to resize the tile.

Tile border

Tiling the Job Using the Tile Group Box

The Tile group allows you to specify the tiles numerically.

1   Select the tile you want to resize in the preview area.

2   Enter the new size.

↔ 8.800in	The width of the selected tile.
↕ 3.000in	The height of the selected tile.

Tiling the Job Evenly

To tile the job evenly, check the tiling option you want to perform and enter the desired number or the size of rows and columns.

Adjust the following parameters:

1|2	Divides the job into a specified number of evenly sized columns.
1/2	Divides the job into a specified number of evenly sized rows.

Even Columns   Even Rows

 Divides the job into a specified size of columns, starting from the left side.

 Divides the job into a specified size of rows, starting from the bottom.

Specifying column width   Specifying row height

Specifying Overlap between Tiles

You can specify the amount of overlap between rows and columns. By overlapping, you can eliminate any gaps between the tiles when assembling the final output. Overlap is measured as the total amount two rows or columns overlap.
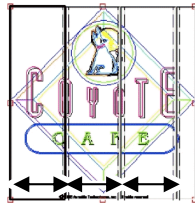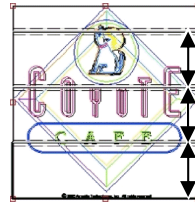

☐ Check to create an overlap on the vertical edges of tiles.

☑ Check to create an overlap on the horizontal edges of tiles.

| 0.167in | The width of the overlap.

Horizontal Overlap   Vertical Overlap
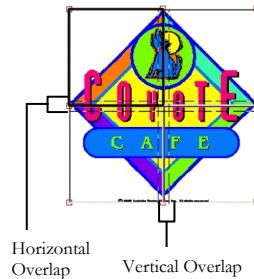
Tiling All Copies Individually

Tile all Copies   Check to show all copies in the preview so that the tiles can be adjusted on each copy. When this option is on, job height and job width in the general tab will update as the number of copies is changed.

Preventing Tiles from Being Output

Do one of the following:

- Double-click on the tile in the preview pane.

- Right-click on the tile in the preview pane.

📄 Disabled tiles are marked with a hash pattern.
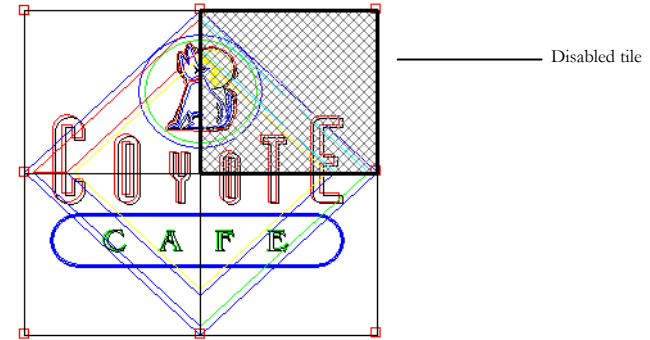
Disabled tile

To enable a disabled tile, double-click or right-click the disabled tile a second time.

One tile in each job must always be enabled. If you try to disable all of the tiles, one of the other tiles will become enabled again.

Cut/Plot Dialog – Options Tab

The Options tab allows you to set a number of commonly used options for cutting jobs.

Adjust the following parameters:

Send all colors	Check **Send All Colors** option to process each color separately. When this option is checked you can select how each color will be processed:

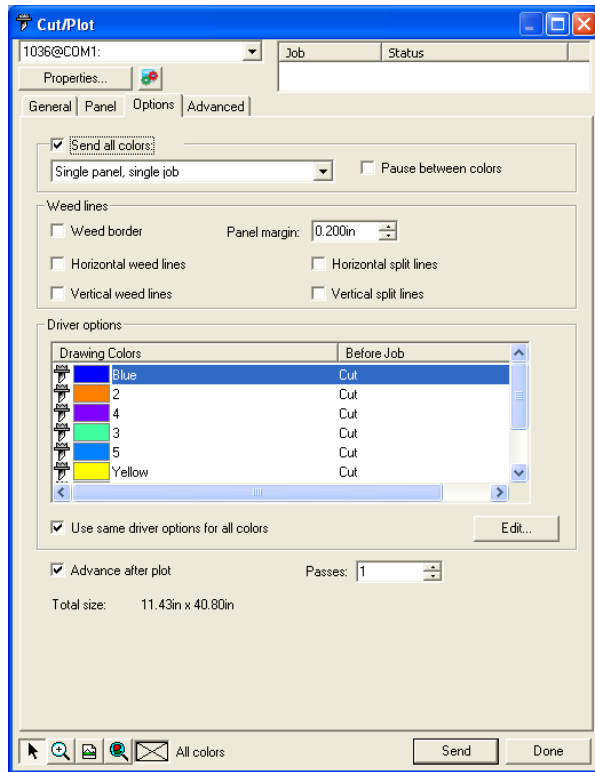|	
Single Panel, Single Job	The job is sent as a single file and processed using the same panel size for all colors.

Single Panel, Separate Jobs	A separate job file is created for each color but they are still processed using the same panel size for all colors.

Separate Panels, Separate Jobs	A separate job file is created for each color and you can define the panel size for each color separately.

Pause between colors	Selects whether the Production Manager should pause after each color is processed, allowing you to change the pen or the media. This option can only be selected when Send all colors is checked.

Weed border	Cuts a border with the specified **Panel margin** around all objects in the selected color.

Horizontal weed lines	Adds weed lines between lines of text (or objects).
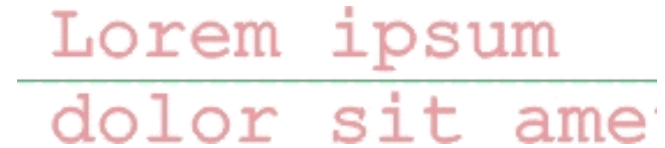
Horizontal split lines	Adds horizontal lines that run down the center of the rows of text, but do not cut the text. The split lines are interrupted where they cross the text.

Vertical weedlines	Adds weedlines between characters (or objects).
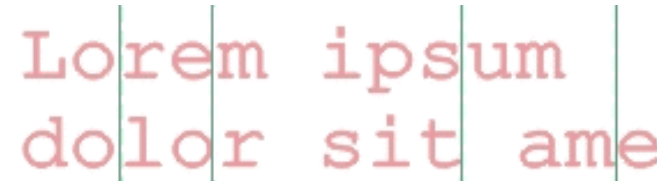
Vertical split lines	Adds vertical lines that run through characters but do not cut the text. The split lines are interrupted where they cross the text.

|	
Cutter driver options	This set of controls allows you to set a number of cutter-related output options, such as cutting speed and pressure. Different cutter options can be specified for each color in the design.
	To edit the cutter driver options for a given color, select the color in the list and click **Edit**. See "Setting Cutter Driver Options" below for more information.
	Check **Use same driver options for all colors** to force all of the colors to use the same cutter driver options.
	To disable a color from being output, click on the knife icon to the left of the color. 🔪 A red X will appear over the knife icon, indicating that it will not be cut. 🔪 To re-enable the color to be output, click on it again to clear the red X.
Advance after plot	Advances the media and resets the origin.
Passes	Defines the number of times that the blade will cut the same path. Set this option if you are using thick or hard media that can't be cut in a single pass.
Total size	Displays the total size of the job. This option cannot be edited.

Setting Cutter Driver Options

The Cutter Driver Options allow you to control the parameters of operation of your output device such as cut speed, pressure and execute common tasks (roll forward, roll backward, go to origin) from your computer.
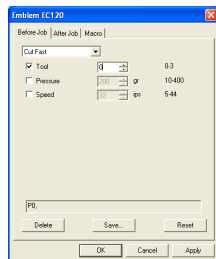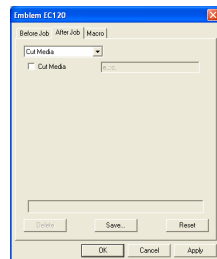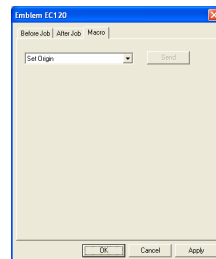
Before Job tab   After Job tab   Macro tab

📄 The settings available in the Cutter Driver Options vary according to your output device.

Each command has a checkbox to enable or disable it. When enabled, you can change the value, and the command will be sent to the output device overriding the settings in the output device. When the option is unchecked, the settings from the output device are used.

Adjust the following parameters:

|	
Save	Saves the changes you made as a new command.
Delete	Deletes the selected command from the list. You can only delete commands that were added using Save.
Reset	Reverts all settings to its default settings (any custom commands added by the user will be deleted).
Before Job	Defines commands that will be sent before the job is processed.
Cut Fast / Medium / Slow / None	Defines a series of settings for fast, medium and slow cutting speeds. Select None if you want to use all settings from the output device.
Pressure / Force	Defines the pressure of the knife.
Speed	Defines the traveling speed of the head.
Tool	Defines the tool when several tools are available or switch between cut and plot.
After Job	Defines commands that will be sent after the job is processed.
Cut Media / Auto Cut	Specify if the media will be cut after cutting or plotting.
Macro	Allows you to execute common tasks that you are usually required to do from the cutter's control panel.
Initialize	Initializes the output device.
Roll Forward / Backward	Advances or rolls back the media.
Go to origin	Moves the head to the origin.

📄 Make sure nobody is around the output device when sending the macros, since the cutter may move and injure the operator.

Cut / Plot Dialog - Advanced Tab

The Advanced tab allows you to set advanced options specific to cutting jobs.
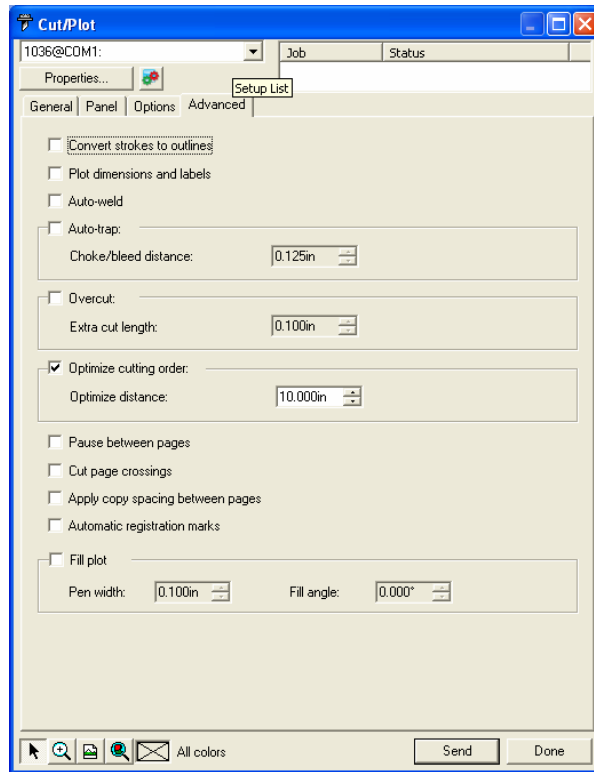
The following options can be adjusted in this dialog box:

Convert stroke to outlines	Selects whether the strokes will be cut separately as objects.
Plot dimensions and labels	Selects whether the labels and dimensions created with the Measure Tool will be cut or plot.
Auto-weld	Removes intersections of overlapping objects of the same color.
Auto-trap	Specifies the amount of overlap between objects of different colors.

Overcut	If selected, when the software is cutting around closed curves, it will continue cutting around the curve a second time, for a specified distance. This ensures that the curve is cut out completely.
Optimize cutting order	When this option is not selected, the objects are cut or plot in the order they were created. When selected, the software processes the objects within the specified section of length before moving to the next section.
Pause between pages	Selects whether the Production Manager should pause after each page is processed, allowing you to load the media after each page.
Cut page crossings	Cuts the borderline of a page when the output is tiled into several pages.
Apply copy spacing between pages	Separates pages, tiles and panels using the amount of space specified for spacing out copies in the Copies group on the General tab.
Automatic Registration Marks	Adds small rectangles to the corners of each layer to aid in positioning each piece. 📄 If you want to use the automatic registration marks to align different colored objects to each other, either the panel size must be identical for all layers, or you must use **Send All Colors** with the single panel option enabled.
Fill plot	Allows you to define the angle and pen width for fill plot.

20 Printing your Design

Before you can print any design, make sure you have established a connection from your design software to the Production Manager and created a setup for your output device as instructed in the section "Setting up the Production Manager and Configuring Output Devices."
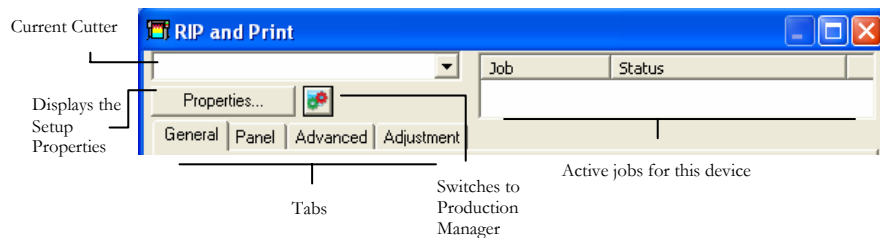
Sending Follow the steps below to send the document to your cutting device:

1 From the **File** menu, select **RIP and Print**.

📄 If you have any object selected, only the selected objects will be cut.

2 Adjust the settings available in the dialog box as necessary and click Send.

RIP and Print Settings
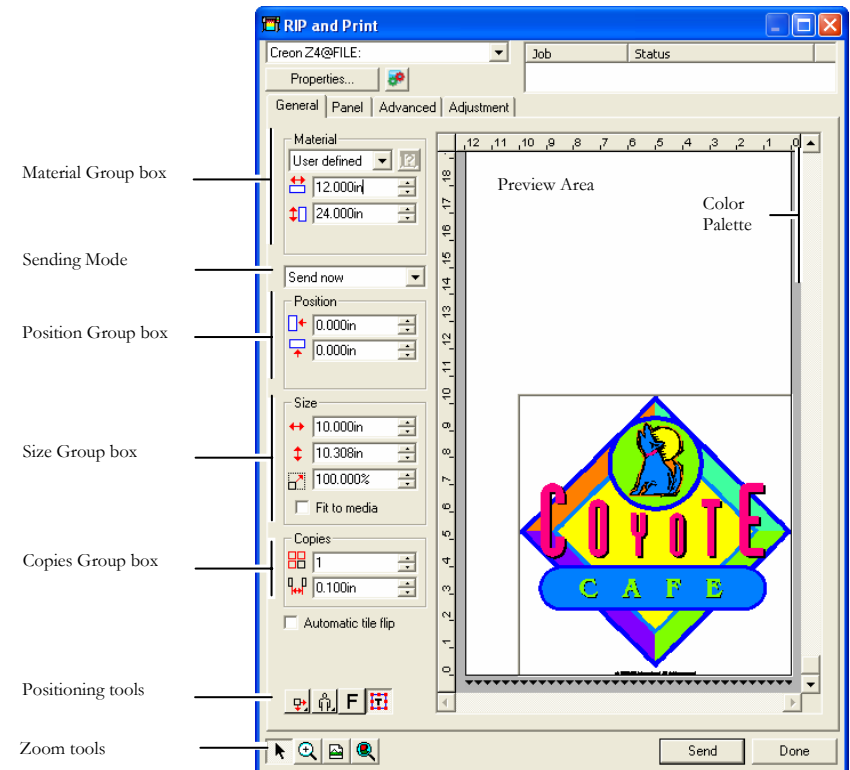
The RIP and Print dialog box gives you complete control over how the job is produced.

The area on top of this dialog is common for all tabs:

Current Cutter

Displays the Setup Properties

Tabs

Switches to Production Manager

Active jobs for this device

RIP and Print Dialog - General Tab

The General tab allows you to specify the size of media, size of the job and the location of your output on the media.

Material Group box

Sending Mode

Position Group box

Size Group box

Copies Group box

Positioning tools

Zoom tools

Preview Area

Color Palette

📄 You can resize the RIP and Print dialog, by clicking and dragging the lower right corner.

Material Settings

The Material group box allows you to specify the size of media used in your output device by entering the Media Width and Height. The media size is used to panel your job if it is larger than the media.

36.000 x 600.0 ▼ Select your media size from the list or specify a custom size by selecting User Defined.

? Poll Size: polls the size of the media loaded in the cutter. This feature only works if the device and port support bi-directional communications.

51.000in Material width.

600.000in Material height.

Sending Mode

The Send List allows you to select what to do with the job once it arrives in the Production Manager queue.

Send now The job is automatically processed and sent to the output device.

Hold in list The job stays in the Production Manager queue until it is manually sent from Production Manager.

Save to file The job is processed and saved as native file (prt files).

📄 Send Now mode is not available if the output device is inactive or the Production Manager is on another computer on the network and the option Allow remote Send Now/Interactive is not enabled in the Production Manager Preferences.

Position Settings

The Position group box allows you to specify where on the media the job is output.

0.000in Horizontal offset distance.
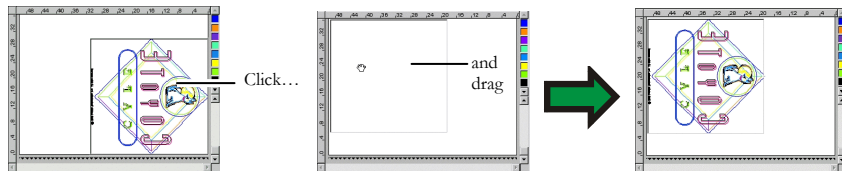
0.000in Vertical offset distance.

Positioning the Job by Clicking and Dragging:

1 Choose **Select** tool from the tool bar of RIP and Print dialog.
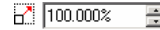
2 Click and drag the preview to a new position.

Click… and drag

Size Settings

The Size group box allows you to change the size of your output.

0.200in Width of the output.

0.200in Height of the output.

100.000% Scale ratio.

Fit to media Scales the job proportionally so that it is as large as possible while still fitting within the printable area of the output media.
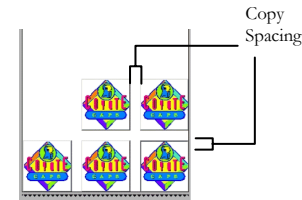
Copies Settings

The Copies group box allows you to set the number of copies and the spacing between them.
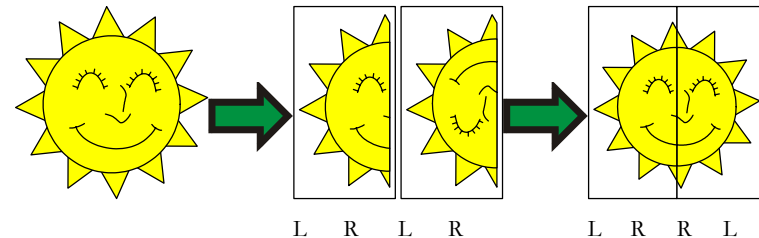
1 The number of copies.

0.100in The amount of space between the copies.

Copy Spacing   The copies are automatically positioned to optimize the media usage.

Automatic Tile Flip

If **Automatic tile flip** is checked, every other tile that is printed will be rotated 180° so that adjacent vertical edges are always printed with the same side of the print head. This helps them match up cleanly.
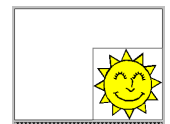
L R L R   L R R L

Positioning Tools
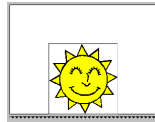
The Positioning tools allow you to rotate, mirror or position the job.

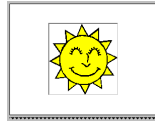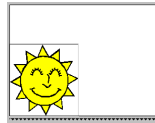The job is placed at specified distances from the right edge and the leading edge of the media.

	The job is centered on the leading edge of the media.	
	The job is centered in the length and width of the media.	
	The job is placed at specified distances from the left edge and the leading edge of the media.	
	Rotate the job in 90-degree increments.	
	Mirror the job vertically.	
	Displays feed direction.	

Viewing Tools

The viewing tools allow you to manipulate the job on the preview area.

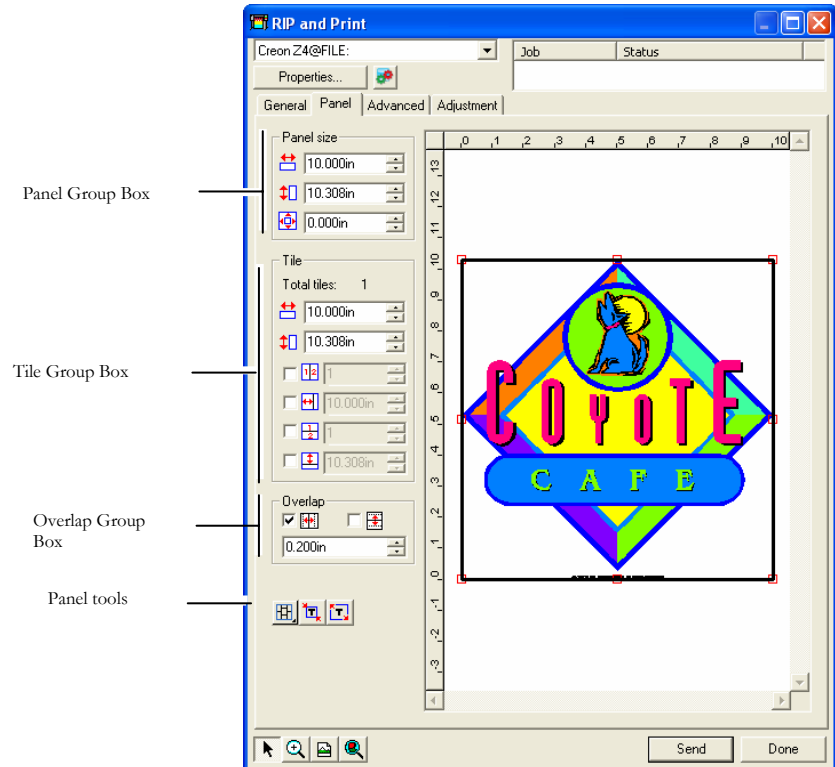|	
	Changes the position of the job on the media by clicking and dragging the job preview.
	Zooms in or out. Hold **Ctrl** to Zoom out.
	Return the preview area to the default view.
	Zoom to fit all objects into the preview area.
	Click this button to toggle the preview to display the selected objects only or the entire design.

RIP and Print Dialog - Panel Tab

Jobs that are bigger than the media size should be tiled before output.

The panel can be divided in several columns and rows. Each section or cell is called a Tile.

Panel Tools

The tool bar provides tools to change the Panel mode and automatically tile.

	Locks the columns so that the tiles on a same column can be adjusted as a group.
	Locks the rows so that the tiles on a same row will can be adjusted as a group.
	Locks both columns and rows so that the entire columns or rows can be adjusted as a group.

Auto-tile: A tile will automatically be created that includes all selected objects. If no objects are selected, all of the objects in the design will be included. If the design is too large to fit on the selected media, it will automatically be tiled so that each tile is the maximum possible size. Auto-tile does not attempt to tile the entire page, just the design or the selected objects.

Tile to Border: The entire design page is automatically tiled. If the page is too large to fit on the selected media, it will be tiled so that each tile is the maximum possible size.
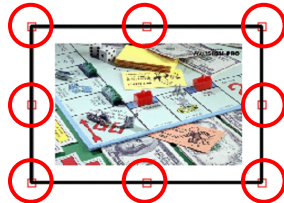
Resizing the Panel

The panel defines the area of design that will be processed for output. Elements of the design that are outside the bounds of the panel will not be printed.
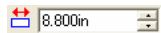
You can resize the panel by dragging the panel border or using the Panel Size group to numerically enter the panel size.

Changing Panel Size with the Mouse

1. Move the cursor on top of the small red squares along the panel border.
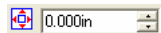2. Click and drag to resize the panel.

Changing Panel Size Numerically

 The width of the panel.

 The height of the panel.

 Margin around the panel.

Tiling the Job Using the Preview Area

Adding New Tiles to the Panel

1. Move the mouse cursor on top of the panel border.
2. Click and drag towards the center of the panel to add a new panel.

Panel border

Resizing Existing Tiles

1. Move the mouse cursor on top of the tile border.
2. Click and drag to resize the tile.

Tile border

Tiling the Job Using the Tile Group Box

The Tile group allows you to specify the tiles numerically.
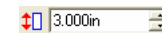
Changing Tile Size with the Mouse

1. Move the cursor on top of the tile border.
2. Click and drag to resize the tile.

Changing Tile Size Numerically

1. Select the tile you want to resize in the preview area.
2. Enter the new size.

 The width of the selected tile.

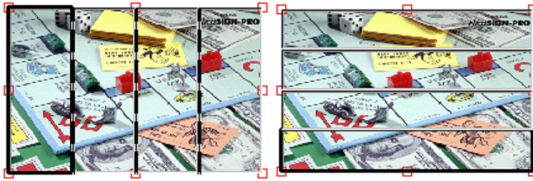 The height of the selected tile.

Tiling the Job Evenly

To tile the job evenly, check the tiling option you want to perform and enter the desired number or the size of rows and columns.

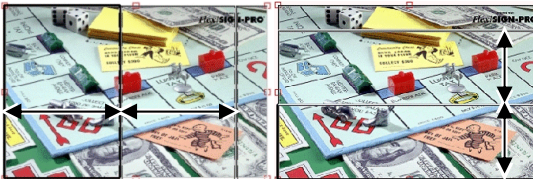| | Divides the job into a specified number of evenly sized columns. |
| | Divides the job into a specified number of evenly sized rows. |

Even Columns   Even Rows

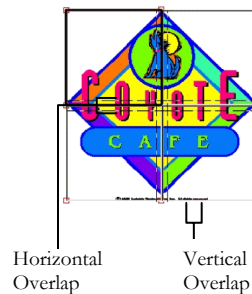| | Divides the job into a specified size of columns, starting from the left side. |
| | Divides the job into a specified size of rows, starting from the bottom. |

Specifying column width   Specifying row height

Specifying Overlap between Tiles

You can specify the amount of overlap between rows and columns. By overlapping, you can eliminate any gaps between the tiles when assembling the final output. Overlap is measured as the total amount two rows or columns overlap.

Horizontal Overlap   Vertical Overlap

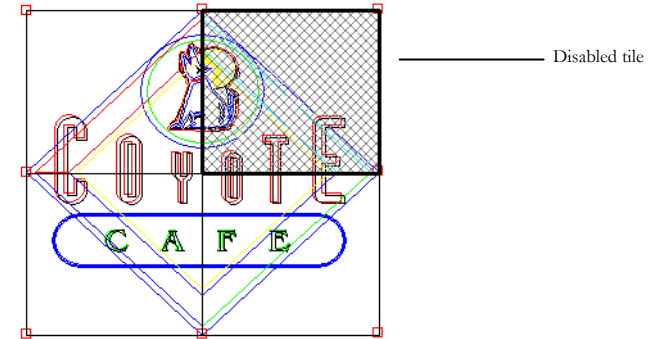| | Check to create an overlap on the vertical edges of tiles. |
| | Check to create an overlap on the horizontal edges of tiles. |
| 0.167in | The width of the overlap. |

Preventing Tiles from Being Output

Do one of the following:

- Double-click on the tile in the preview pane.

- Right-click on the tile in the preview pane.

📄 Disabled tiles are marked with a hash pattern.

Disabled tile

To enable a disabled tile, double-click or right-click the disabled tile a second time.

One tile in each job must always be enabled. If you try to disable all of the tiles, one of the other tiles will become enabled again.

RIP and Print Dialog - Advanced Tab

The Advanced tab allows you to set advanced options specific to color printing jobs. The Advanced tab has two layouts depending on which printer you are using.
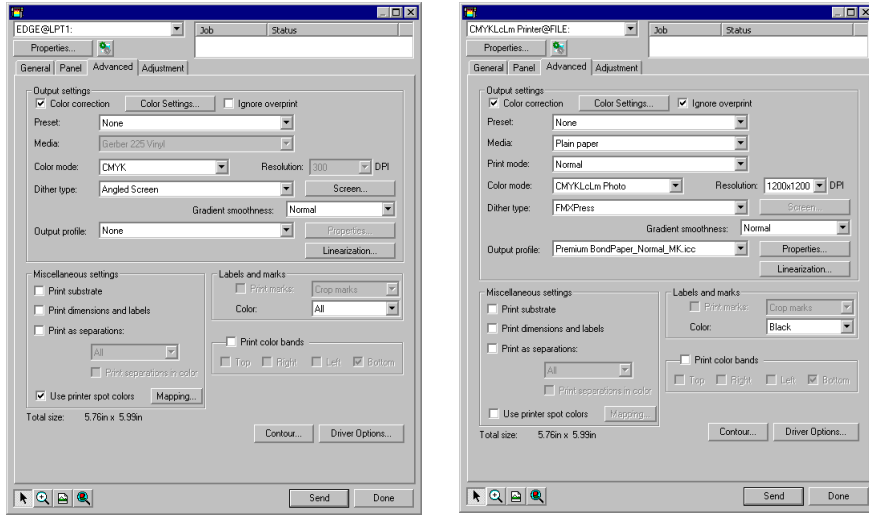
Advanced tab with automatic profile selection   Advanced tab (standard)

Setting the Print Quality

The Output Settings group and the Driver Options define all the settings related to the quality of the output.

Color correction	If this setting is not checked, incoming jobs are assumed to already have color correction.
Color settings	Clicking this button will launch the Color Settings dialog. See "Configuring the System for Color Printing" on page 130 for more information.
Ignore Overprint	Check to ignore any overprinting that was set up in the design stage. This can be useful if you want to save the time and output media needed to do overprinting.

    📄 If you check **Ignore Overprint**, your output will automatically be changed so that it will not use features that depend on overprinting. For example, output that had been set up to use color trapping will now output untrapped.

Preset	Select the preset to load the settings relevant to the Advanced tab from the preset. Only the settings relevant to the Advanced tab (media, color mode, dither type, etc.) will be loaded from the preset.
	When finished, click **Done**.

    📄 Loading settings from a preset only affects the Advanced tab; it does not set the job to automatically use that preset in Production Manager.

|	
Media	Select the media type your job will be printed on.
Print mode	Select the desired quality of your printout.
Color mode	If your output device supports multiple color modes, then you can select one of the supported color modes here.
Resolution	Choose an appropriate DPI for your job. A higher DPI produces higher quality output but increases the processing time.
Dither type	Selects the dither type, or the pattern in which the individual dots that make an image are applied to the media.
Screen	Clicking the Screen button will launch a dialog box when the **Angled Screen** dither type is selected. You can adjust frequency, angle and shape for each output channel (CMYK).
Gradient smoothness	Select **Normal**, **Enhanced** or **Super**. The higher settings cause the software to render gradients using more elaborate algorithms that produce smoother dithering.
Output profile	Output profiles are created for the combination of ink, media, resolution and dither type of your output device. When selecting a profile, be sure to select the profile that matches these criteria.
	Select Add to add ICC output profiles from another source.
	Select the ICC profile and click **Open**.
Properties	Clicking the **Properties** button will launch the Profile Properties dialog, which contains information pertaining to the ICC output profile that has been chosen under Output profile and also UCR/GCR settings.

Linearization	Click to launch the Linearization dialog.
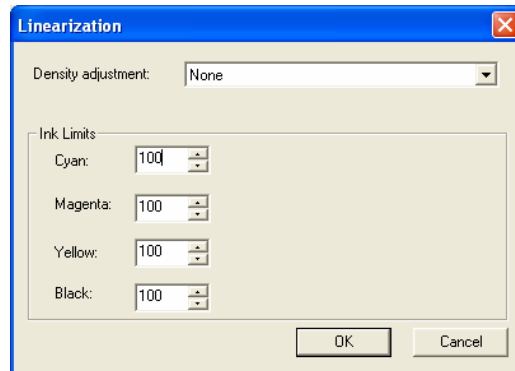
Density adjustment	Selecting a density file applies the ink density adjustments created in Color Profiler. If you do not wish to apply a density adjustment, set this field to None.
Ink Limits	Set the ink limit for each color of ink to the maximum percent coverage that the device can output without causing bleeding or drying issues, then click **OK**.
Print substrate	If checked, the color of the drawing area will be printed with the design.
Print dimensions and labels	Selects if the labels and dimensions added with dimension/label tools will be printed with the design.
Print as separations	Check to print each color plane separately.

You can select to print one color channel or all color channels as a separate job.

Print separations in color	Check to make each process color separation print in the appropriate color of ink. If this option is not selected, all process color separations will print in black.

    📄 Separations for spot colors will always print in black.
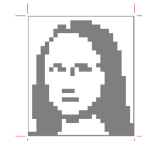
Use printer spot colors	Allows you to map the spot color used in the design to specific ink in the printer. See "Printing with Spot Colors" on page 154 for more information.

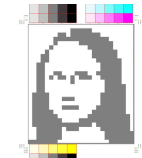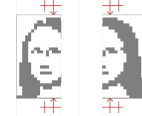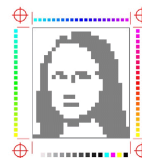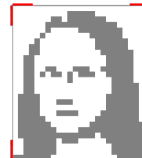|	
Labels and marks	Check **Print Marks** to print the selected type of mark. Set **Color** to the ink color that will be used to print the marks. The available types of print mark are:
Crop Marks	Adds crop marks to the output to aid in trimming the printout.
Standard marks	Standard marks intended for aligning color separations.
Swatch	Color swatches for each color of ink will be printed around the job.
Overlap Marks	Overlap marks will be printed, indicating how the tiles of a tiled job should overlap.
Tonal Scale	Color swatches containing blended CMY colors and a gray scale will be printed around the job.
Margin	Marks will be printed at the corners of the job indicating its outside margins.
Border	A border will be printed around the outside edge of the job.
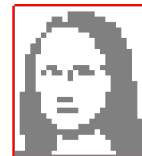
Print Color Bands	Prints a thin strip of each ink color along the selected edges of the print to show that all print heads are firing.	

Contour — Clicking this button opens the Contour Options dialog. See "Setting Contour Cut Options" page 155.

Driver Options — Clicking this button opens the Driver Options dialog. See "Setting Driver Options" page 154.

RIP and Print Dialog – Adjustment Tab

The Color Adjustment tab provides some basic tools to manually adjust the output color.

Each color channel is listed separately as a linearization curve that determines what percentage of coverage will be used (output) for a specified percentage in the original image (input).
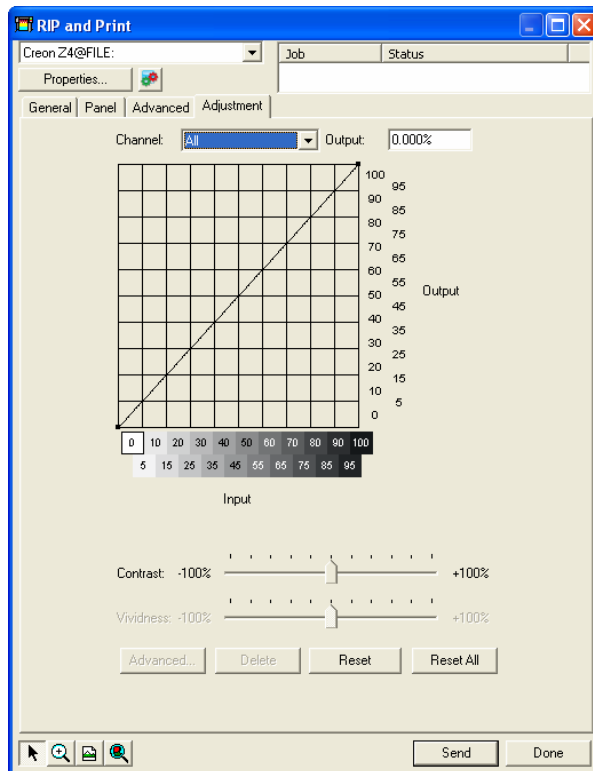
Preview — Check to see the changes in your color settings reflected in the preview pane.

Channel — Select the color channel that you want to edit. Select **All** to apply the changes to all color channels.

Output — The value for the point that is currently selected on the linearization curve.

- Click on the curve to select a different point to edit. You can also select a point by clicking on the input axis label.

- To change the value at a given point on the curve, edit the value in the **Output** field or click and drag the point up or down.

Contrast — Adjusts the amount of contrast in the image.

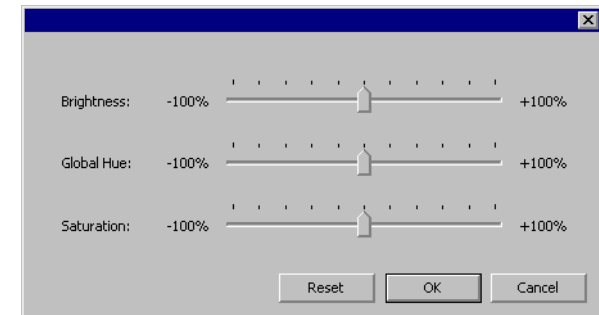📄 This setting is only available when All color channels are selected.

Vividness — Adjusts the vividness of the image. Higher settings boost color saturation and brightness at the expense of color fidelity and detail. Lower settings decrease color saturation and brightness, but increase contrast.

📄 This setting is only available when All color channels are selected.

Advanced — Click to edit the color settings in the image using a more advanced model.

📄 This setting is only available when all color channels are selected.

Brightness — Higher values make all colors in the image lighter in shade. Lower values darken the colors in the image.

Global Hue — This setting adjusts the overall hue of the picture. It can make the image bluish, or sepia-toned. For this setting, the range of values from -100% to +100% represents the spectrum of colors that can be applied to the image.

|	
Saturation	Higher values increase the amount of color in the image, but can reduce the contrast and detail. Lower values reduce the amount of color.
Reset	Click to reset all sliders to their defaults.
	Click **OK** to accept changes and return to the color adjustment tab.
Delete	Click to delete the selected point from the linearization curve.
Reset	Click to restore the values and settings for the current channel to its original states.
Reset All	Click to restore the values and settings for all channels to their original states.

Setting Driver Options

The Driver Options dialog displays settings related to the selected output device.

The options displayed may vary depending on your output device.
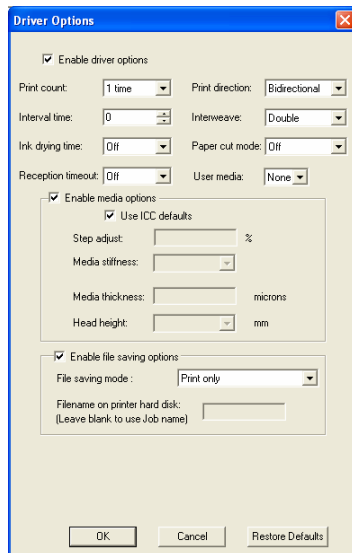
Enable driver options	Allows you to use the available driver options for your output device. When driver options are enabled, you can set special options from within the driver options dialog. When driver options are disabled, the printer's own settings will be used.

|	
Overprint	Number of times you would like the printer to print over the same area. This setting increases the number of ink layers placed on the media.
Page Spacing	The amount of space between each separate job.
Dry Time	This is the amount of time the printer waits after it has completed printing, allowing the ink to dry.
Print Direction	Direction the print heads move when printing. In Bi-directional mode the print cartridges print from left to right, then from right to left. In unidirectional mode, the cartridges print from right to left only. Bi-directional mode prints faster, but unidirectional mode usually produces a better quality print.
Media feed calibration	If checked, the printer will use the value provided to compensate for variations in feed rates during the output process. This provides more accurate output.
Cut sheet after printing	Cuts the media after the print is complete. If a drying time has been set, the media will be cut after the dry time is finished.
Advance after print	If checked, the media will feed past the heads and remain there at the end of the job.
Restore Defaults	Click to return all settings on the tab to their default values.

Printing with Spot Colors

Some printers support spot color inks. Spot colors are used to reproduce colors that are difficult to produce using standard inks. If your printer supports spot colors, you can use the following steps to print them.

1   Use the spot color swatch tables for your printer to create your design.

  📄   The software already comes with spot color libraries specific for printers that support spot color printing. If a certain color is not listed in the color library you should create the color and define it as a spot color.

2   From the **File** menu, select **RIP and Print**.

3   Select the **Advanced** tab.

4   In the Miscellaneous settings group, check **Print spot colors**.

5   Click the **Spot color mapping** button.
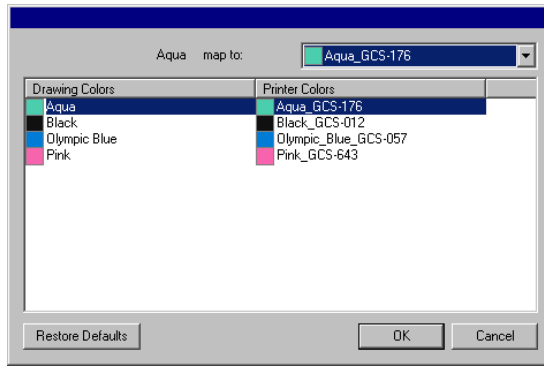
6 Select the drawing color for which you want to change the mapping and select the Printer color from the map to list. Select Print as process color if you want to print that color using process colors (CMYK). Select Skip to disable the color.

7 Click **OK**.

8 Set the appropriate options in the RIP and Print dialog and select **Send** to print the job.

📄 The printer or the Production Manager will prompt whenever you have to change the spot color ink in the printer.

Contour Cutting

Contour cutting allows you to print and then cut a contour line around your design. The output of a design with contour cut involves several steps as follow:

1 Create your design in your software and add a contour cut line. See "Using Contour Cut" on page 118 for more information.

2 From the **File** menu, select **RIP and Print**.

3 Select the **Advanced** tab in the RIP and Print dialog.

4 Click **Contour**.

5 Set the contour cut options.

6 Print your design.

7 Cut the contour cut.

Setting Contour Cut Options

When a print job containing one or more contour cuts is opened in the RIP and Print dialog, you can set the cutting options for the contour cuts in the Contour Options dialog.

1 Click on the **Contour** button on the **Advanced** tab of the RIP and Print dialog.

📄 If you have not yet set up your vinyl cutter, you will be prompted to add a setup before you can access the Contour Options dialog.
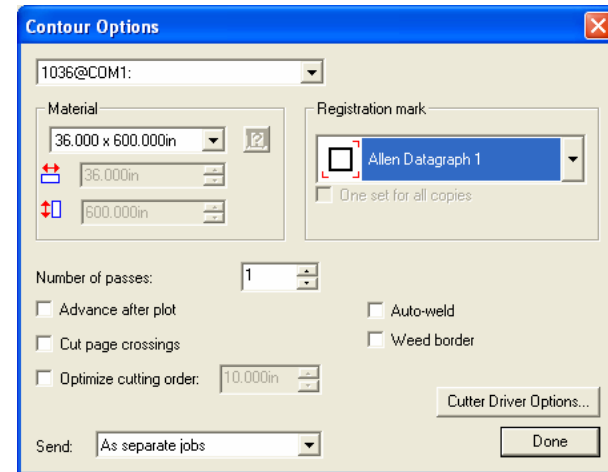
2 Adjust the following parameters:

1036@COM1:	The cutter that will be used to cut the contour.
36.000 x 600.0	Media size.
8.800in	Material width.
3.000in	Material height.
⁇	Poll Size: polls the size of the media loaded in the cutter. This feature only works for devices that are capable of two-way communication, such as serial or USB devices.
Registration mark	Select the type of registration mark to help you align the printed media in the cutter for contour cutting. Some cutters are equipped with sensors that detect the registration marks automatically.
	The **Print Marks Color** setting in the **Advanced** tab of the RIP and Print dialog determines the color of the registration marks.

📄 For best result with an automatically aligned cutter, use the registration mark for that manufacturer and device.

	4 Points Horizontal	Places registration marks along the upper and lower horizontal edges of the job.

	Vertical	Places registration marks on the right side of the image. The arrow in the registration mark indicates the media feed direction for cutting.
	Horizontal	Places registration marks on the bottom of the image. The arrow in the registration mark indicates the media feed direction for cutting.

One set for all copies	If checked, only one set of registration marks will be printed for the entire job.
Advance after plot	Check to lift the knife and advance the media after output, then reset the origin.
Cut page crossings	Cuts the borderline of a page when the output is tiled into several pages.
Optimize cutting order	When this option is not selected, the objects are cut or plot in the order they were created. When selected, the software processes the objects within the specified section of length before moving to the next section.
Auto-weld	Removes intersections of overlapping objects of the same color.
Weed border	Cuts a border around all objects in the selected color.
Send	Specify how the job will be sent to the output device:
	As hybrid job — Sends both printing and cutting data as a single job. This option is available for hybrid printer/cutter devices.
	As separate jobs — Sends printing and cutting data as separate jobs. This option is available if you use different devices for cutting and printing. This is also known as virtual hybrid output.
	Print job only — Sends only the printing job.
	Contour job only — Sends only the cutting job
Cutter Driver Options	Click to edit the cutter driver options. See "Setting Cutter Driver Options" page 144 for more information.

3 Click **Done**.

Cutting the Contour on a Hybrid Device

If you are using a hybrid device, the contour will be cut automatically after printing.

Cutting the Contour as a Separate Job

If you send the print and cut data as separate jobs, the software will output the print job first. The cut job will be put in the queue of the selected cutting device, and its status will be set to **Holding**. You can then load the output media from the printer into the cutting device and send the cut job to the device.

In order for the contour to line up properly on the print job, you must align the cut job to the printed output using either automatic alignment or manual alignment.

Cutting the Contour on a Cutter with Automatic Alignment

1 RIP and print the job.

2 Remove the output media from the printer and load it into the cutter.

3 Output the cut job in the **Hold Queue** as you would a normal print job.

Please detect the registration marks from the device. Click OK to continue.

OK
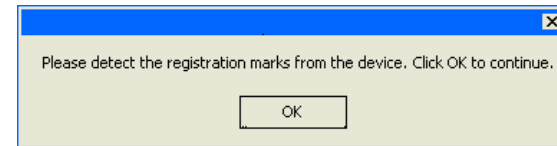
4 Align the cutting head over the first automatic registration mark (lower right if not marked) using the controls on the front panel of the cutter.

5 Click **OK** to cut the contour.

Cutting the Contour on a Manually Aligned Cutter

1 RIP and print the job.

2 Remove the output media from the printer and load it into the cutter. Make sure the output media is straight, and align the registration marks to the origin for the cutter.

**3** Output the cut job in the **Hold Queue** as you would a normal print job.
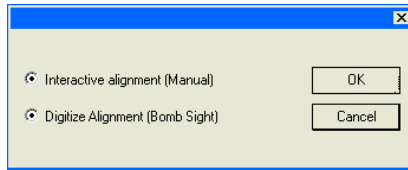
4 Select the method to be used to position the cut head over the registration marks and click **OK**.

|	
Interactive alignment	You will position the cut head over the registration marks using software controls.
Digitize alignment	You will position the cut head over the registration marks using the controls on the face of the cutter.

> 📄 This option is only available when a bi-directional communications protocol such as serial or USB is used.

a To indicate the position of the registration marks using Interactive alignment:
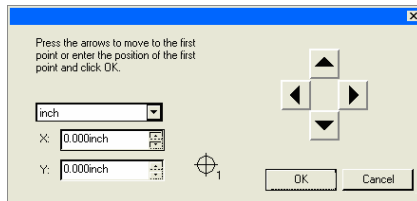
i Use the arrow buttons to position the head of the cutting device over registration mark 1 and click **OK**.

ii Repeat for all additional registration marks.

b To indicate the position of the registration marks using **Digital alignment**:

iii Use the front panel controls on the cutter to position the head of the cutting device over registration mark 1. Press **Enter** on the cutting device, then click **OK**.

iv Repeat for all additional registration marks.

5 Make sure the knife is loaded into the cutter, then click **OK** to cut the contour portion of the design.
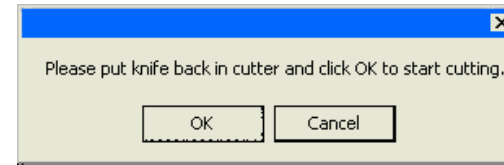
21 Engraving your Design

In order to output the job, engraving fills must be applied to the design. See "Applying Engraving Fills" on page 119 for more information.

Before you can output any design, make sure you have established a connection from your design software to the Production Manager and created a setup for your output device as instructed in the Production Manager User Manual.

1   From the **File** menu, select **Engrave**.

2   Select material size from **Material** group box.

3   Adjust the settings available in the Engrave dialog box as necessary and click **Send**.

Engrave Dialog Settings

The Engrave dialog box gives you complete control over how the job is produced.

The area on top of this dialog is common for all tabs:
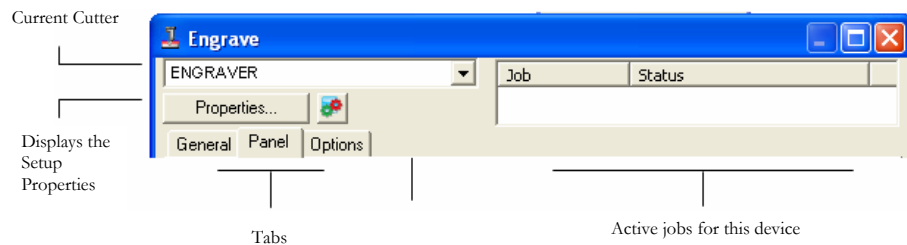
Engrave Dialog – General Tab
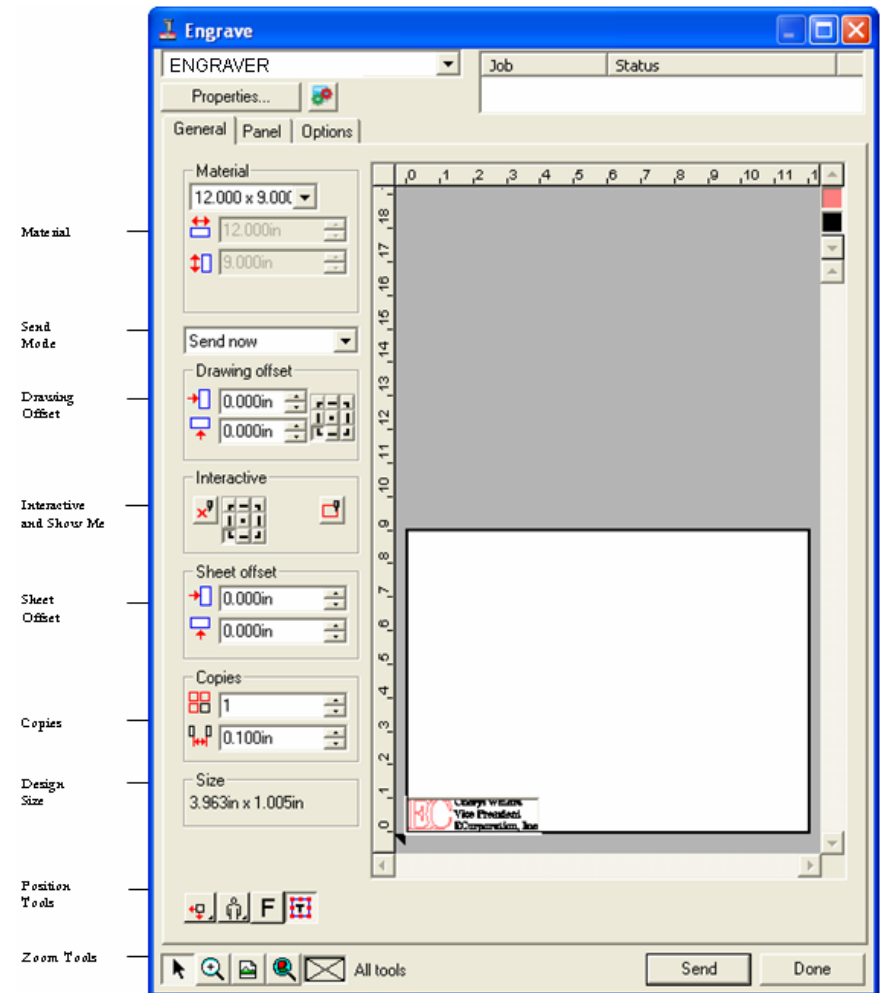
Material Settings

The Material group box allows you to specify the size of the media used in your output device.

 Select your media size from the list or specify a custom size by selecting **User Defined**.

 Width of material.

 Height of material.

Send Mode

The Send mode allows you to select what to do with the job once it arrives in the Production Manager queue.

Send now	The job is automatically processed and saved as a native .PLT file.
Hold in list	The job stays in the Production Manager queue until you send the job to the engraver from the Production Manager window.
Save to file	The job is processed and saved as a native file.

📄 The **Send Now** mode is not available if the output device is inactive or the Production Manager is on another computer on the network and the option **Allow remote Send Now / Interactive** is not enabled in the Production Manager Preferences. See the Production Manager User Manual for more information.

Drawing Offset

The Drawing Offset group box allows you to set the distance between the design and the edge of the sheet.

Specifies at which point on the sheet to place your design for output.

📄 To use this option, select the positioning tool for the left and bottom edges of the media. ⬆

Horizontal offset distance.
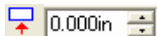
Vertical offset distance.

Interactive Mode and Show Me

Interactive mode allows you to dynamically interact with the tool head by moving the tool as you change the position of the job on the preview area.

📄 To use the Interactive feature, your engraver must be turned on and online. Some engravers do not support interactive communications.

Activates Interactive mode.

Using any of the nine points in the Reference Grid, you can adjust which corner of the design the engraver will move to.

Show Me feature draws a bounding box around the job without lowering the tool.

Sheet Offset

The Sheet Offset group box allows you to set the distance between the sheet and the engraver.

Horizontal offset distance.
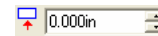
Vertical offset distance.

Copies Settings

The Copies group box allows you to set the number of copies and the spacing between them.

Number of copies.

Amount of space between the copies.

Design Size

Design Size allows you to view the size of your design.

Displays the total size of the job.

Positioning Tools

The Positioning tools allow you to rotate, mirror or position the job.

📄 To further adjust the job placement, use the Drawing Offset values.

The job is placed at the left and bottom edges of the media.

The job is centered horizontally on the media.

The job is centered in the length and width of the media.

The job is placed at the right and bottom edges of the media.

The job is centered vertically on the media

Rotates the job in 90-degree increments.

Mirrors the job vertically.

Triangle shows the engraver's origin point.

Viewing Tools

The Viewing tools allow you to manipulate the view in the preview area.

	Changes the position of the job on the material by clicking and dragging the job preview.
	Zooms in or out. Hold the **Ctrl** key to zoom out.
	Returns the preview area to the default view.
	Zooms to fit all objects in preview area.
	Displays the color of the current tool selected in the preview area. If all tools are selected, the box will be crossed out.
	Click this button to toggle the preview to display the selected objects only or the entire design.

Tool Color

Select the tool color to display in the preview area. Only the color displayed will be processed.

> 📄 You will not be able to select individual tools if the option Send all tools in the Options tab is checked.

To change the output order, click and drag the tool colors.

Engrave Dialog – Panel Tab

The panel defines the area of design that will be processed for output. Elements of the design that are outside the bounds of the panel will not be output.
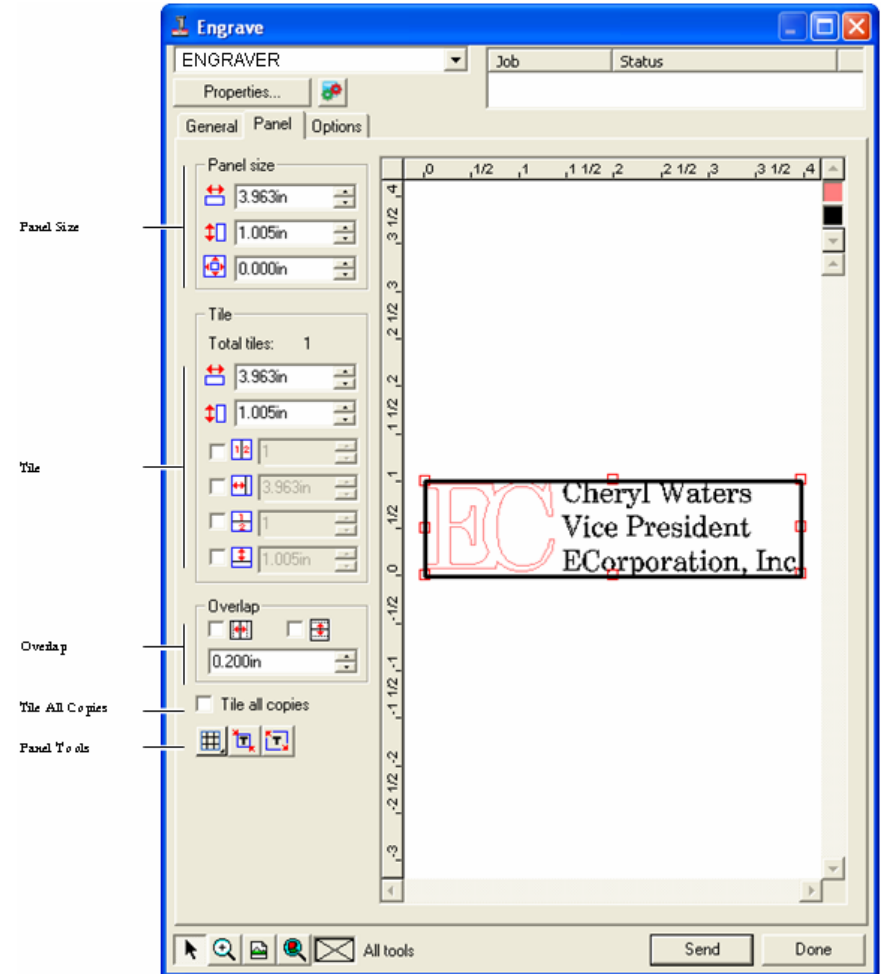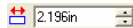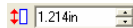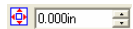
Panel size

The Panel size group box allows you to specify the size of the panel using the width, height and margin values.

Resizing the Panel Numerically

Adjust the following parameters:

⟷ 2.196in	Width of panel.
↕ 1.214in	Height of panel.
⊡ 0.000in	Margin around the panel.

Resizing the Panel with the Mouse

1   Move the cursor on top of the small red squares along the panel border.

2   Click and drag to resize the panel.
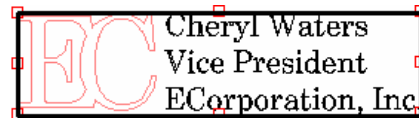
Click red squares to change panel size

Tile Group Box

Jobs that are bigger than the sheet size should be tiled before output. The panel can be divided in several columns and rows. Each section is called a Tile.

The Tile group box allows you to specify the tiles numerically using the width and height values.

Total tiles: 1	Displays number of tiles in panel.
⟷ 2.196in	Width of tiles.
↕ 1.214in	Height of tiles.
1|2	Divides the job into a specified number of evenly sized columns.
↔|	Divides the job into columns of a specified size, starting from the left side.
1/2	Divides the job into a specified number of evenly sized rows.
↕	Divides the job into a specified size of rows, starting from the bottom.

Creating New Tiles with the Mouse

1   Move the mouse cursor on top of the panel border.

2   Click and drag toward the center of the panel.
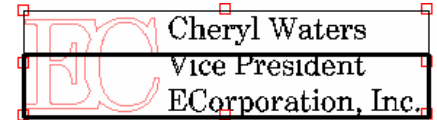
Click panel border to create tiles

Resizing Existing Tiles with the Mouse

1   Move the mouse cursor on top of the tile border or over the red squares.

2   Click and drag.

Preventing Tiles from Being Output

Do one of the following:

- Double-click on the tile in the preview screen.
- Right-click on the tile in the preview screen.
- 📄   Disabled tiles are marked with a hash pattern.

To enable a disabled tile, double-click or right-click the disabled tile.

One tile must always be enabled. If you try to disable all of the tiles, one of the other tiles will become enabled again.
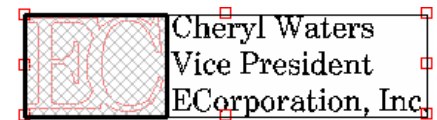
Disabled Tile

Overlap

Overlap, measured as the total amount two rows or columns overlap, can eliminate any gaps between tiles when assembling the final output.

☑ ⊞	Check to create an overlap on the horizontal edges of tiles.
☑ ⊞	Check to create an overlap on the vertical edges of tiles.
0.167in	Amount of overlap between tiles.

Tile All Copies Individually

Tile all copies	📄	Check to show all copies in the preview screen so that the tiles can be adjusted on each copy. When this

option is on, job height and job width in the General tab will update as the number of copies is changed.

Panel Tools

The tool bar provides tools to automatically tile the job.

Panel Mode locks columns and rows so that the entire column or row can be adjusted as a group.

Auto Panel creates a panel that includes all selected objects. If no objects are selected, all of the objects in the design will be included. If the design is too large to fit on the selected material, it will automatically be tiled so that each tile is the maximum possible size.

> 📄 Auto-panel does not attempt to panel the entire page, just the design or the selected objects.

Panel to Border tiles the entire design page. If the design is too large to fit on the selected material, it will be tiled so that each tile is the maximum possible size.

Engrave Dialog – Options Tab

The Options tab allows you to set a number of options for engraving jobs.
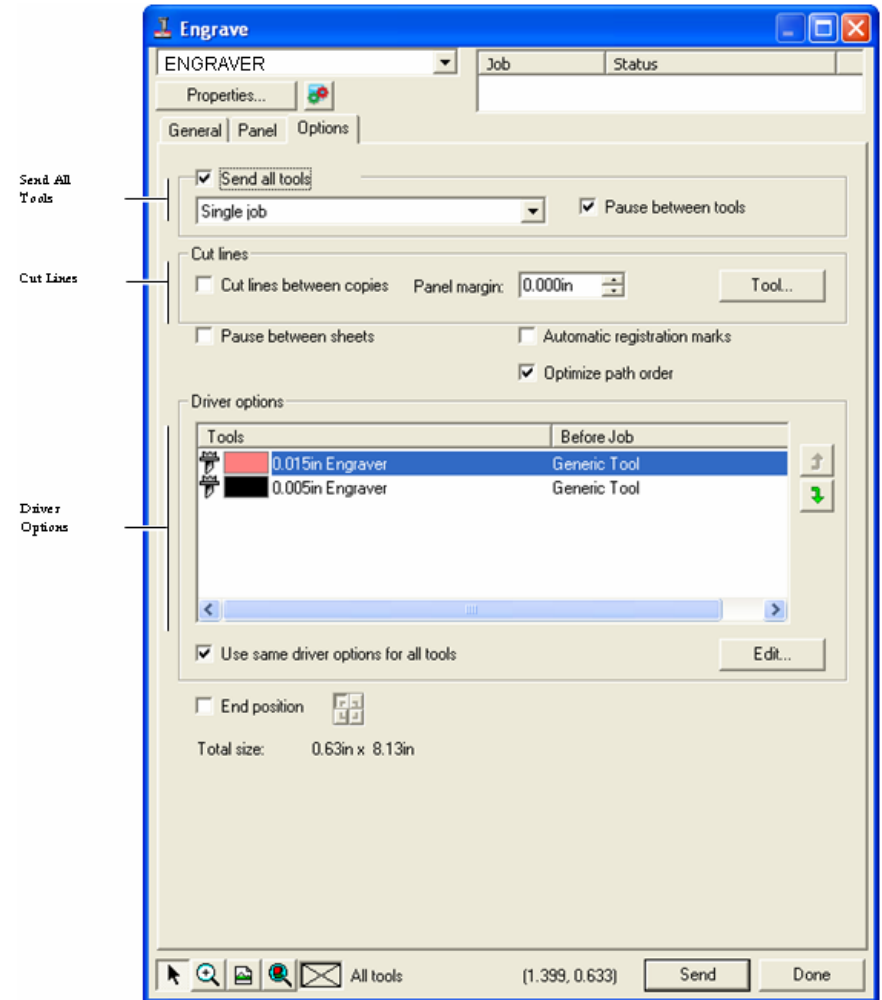
Send all tools	Check to engrave all tools and select how each tool will be processed.
Single Job	The job is sent as a single file and processed using the same panel size for all tools.
Multiple Jobs	A separate job file is created for each tool but they are still processed using the same panel size for all tools.

Pause between tools	Check to enable Production Manager to prompt you to insert the next tool for each tool change. This option can only be selected when Send all tools is checked.
Cut lines	Cuts a rectangle around each serialized copy or between serialized objects.

Cut lines between copies	For a single object, Cut lines will engrave a border.
	For multiple objects, Cut lines will engrave a border around each copy. These lines do not overlap.
Panel margin	For a single object, Panel margin sets the amount of space between cut lines.
	For multiple copies, Panel margin sets the amount of space between cut lines.
Tool	Opens Tool Dialog box. You can choose a tool name, change Depth, Stepdown and Clearance. See "Tool Options" to the right for more information.

Pause between sheets	Selects whether Production Manager should pause after each sheet is processed, allowing you to load the material and align Registration Marks after each sheet.
Automatic registration marks	For long plate / wide plate jobs, the software creates a dot on each tile, which will assist in aligning the final output. After each tile is processed, use the created Registration Mark to line the tile up with the top left corner of the engraver.
	See "Tiling All Copies Individually" on page 161 for more information.

Automatic Registration Marks
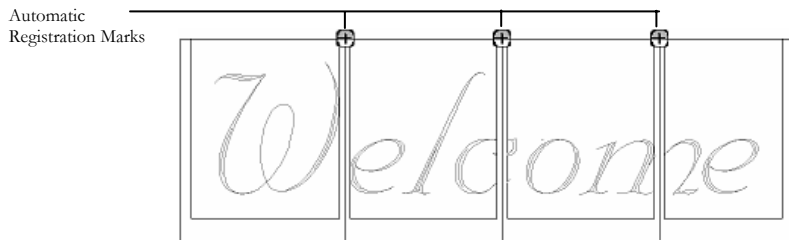
Optimize path order	Optimizes the order in which the engraver moves from one path to the next to reduce engraving time.
Driver Options	Shows the tools used for the job and allows you to suppress output and set engraving parameters for the machine.

|	
Edit	Allows you to adjust engraving parameters for Before job, After Job and Macro. See "Engraver Driver Options" on page 164 for more information.
	End position points allow you to specify where the engraver will return at the end of the job.

Tool Options

Tool options allow you to set tool parameters.
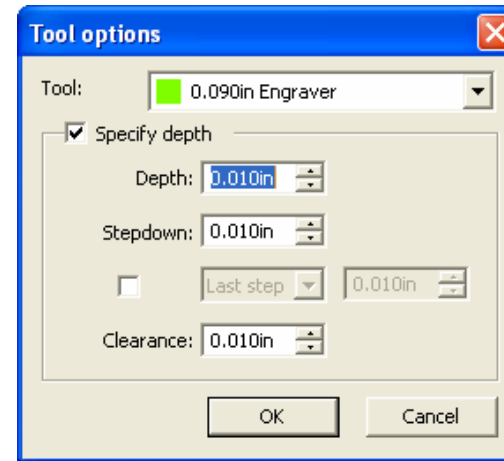
1 From the Engrave dialog box – Options tab, click **Tool**.

2 Adjust the following parameters:

Tool name	Displays the tool name selected.
Specify depth	Check to enter values that will override the engraver settings.

Depth	Specifies the total depth the tool will engrave.
Stepdown	Specifies how deeply the tool will engrave on each pass to ensure that the tool does not remove too much material.

| First, Last or Both	Sets additional Stepdown values for First, Last or Both passes. You can specify how deeply you want the tool to engrave on each pass.
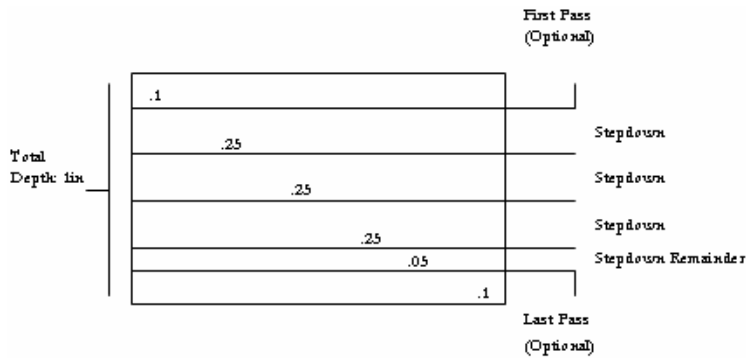
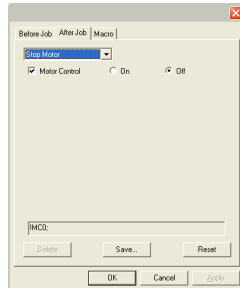| Clearance	Sets the amount of space the tool lifts between paths.

3   Click **OK**.

Engraver Driver Options

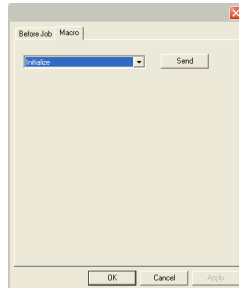Engraver Driver Options allow you to set parameters for your output device.

You can change the values so that the settings will be sent to the output device, overriding the settings in the output device.
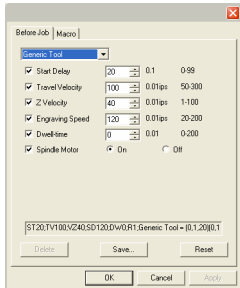
Before Job tab   After Job tab   Macro tab

Before Job	Defines commands that will be sent before the job is processed.
After Job	Defines commands that will be sent after the job is processed.
Macro	Allows you to execute common tasks that you are usually required to do from the engravers control panel.
Save	Saves the changes you made as a new command.
Delete	Deletes the selected command from the list. You can only delete commands that were added using the Save command.
Reset	Reverts all settings to the default settings. Any custom commands you add will be deleted.
XY Velocity	Speed at which tool engraves material.
Z Velocity	Speed at which tool lifts and lowers.
Spindle RPM	The speed at which the spindle rotates.
Dwell-time	Amount of time engraver pauses before changing path direction.
Motor Control	Turns engraver motor on and off.
Start Delay	Delay before engraver begins engraving.
Engraving speed	Speed at which tool engraves material.
Spindle Motor	Turns engraver motor on and off.

📄   Keep clear of the output device when sending the macros, since the engraver may move and injure the operator.

Appendix A - ASCII CODE

Code	Char	Code	Char	Code	Char	Code	Char	Code	Char	Code	Char	Code	Char	Code	Char
32		57	9	82	R	107	k	132	„	157		182	¶	207	Ï	232	è
33	!	58	:	83	S	108	l	133	…	158	ž	183	·	208	Ð	233	é
34	"	59	;	84	T	109	m	134	†	159	Ÿ	184	¸	209	Ñ	234	ê
35	#	60	<	85	U	110	n	135	‡	160		185	¹	210	Ò	235	ë
36	$	61	=	86	V	111	o	136	ˆ	161	¡	186	º	211	Ó	236	ì
37	%	62	>	87	W	112	p	137	‰	162	¢	187	»	212	Ô	237	í
38	&	63	?	88	X	113	q	138	Š	163	£	188	¼	213	Õ	238	î
39	'	64	@	89	Y	114	r	139	‹	164	¤	189	½	214	Ö	239	ï
40	(	65	A	90	Z	115	s	140	Œ	165	¥	190	¾	215	×	240	ð
41	)	66	B	91	[	116	t	141		166	¦	191	¿	216	Ø	241	ñ
42	*	67	C	92	\	117	u	142	Ž	167	§	192	À	217	Ù	242	ò
43	+	68	D	93	]	118	v	143		168	¨	193	Á	218	Ú	243	ó
44	,	69	E	94	^	119	w	144		169	©	194	Â	219	Û	244	ô
45	-	70	F	95	_	120	x	145	'	170	ª	195	Ã	220	Ü	245	õ
46	.	71	G	96	`	121	y	146	'	171	«	196	Ä	221	Ý	246	ö
47	/	72	H	97	a	122	z	147	"	172	¬	197	Å	222	Þ	247	÷
48	0	73	I	98	b	123	{	148	"	173		198	Æ	223	ß	248	ø
49	1	74	J	99	c	124	|	149	•	174	®	199	Ç	224	à	249	ù
50	2	75	K	100	d	125	}	150	–	175	¯	200	È	225	á	250	ú
51	3	76	L	101	e	126	~	151	—	176	°	201	É	226	â	251	û
52	4	77	M	102	f	127	□	152	˜	177	±	202	Ê	227	ã	252	ü
53	5	78	N	103	g	128	€	153	™	178	²	203	Ë	228	ä	253	ý
54	6	79	O	104	h	129		154	š	179	³	204	Ì	229	å	254	þ
55	7	80	P	105	i	130	‚	155	›	180	´	205	Í	230	æ	255	ÿ
56	8	81	Q	106	j	131	ƒ	156	œ	181	µ	206	Î	231	ç		

Appendix B - Supported File Formats

File Format	Extension	Import	Export
Adobe Illustrator	ai, EPS	11 (CS)	6.0
Adobe PhotoShop	psd	6.0	4.0
Adobe Portable Document Format (PDF)	pdf	1.3	1.3
AutoCAD Drawing	dwg	2000	------------
CASmate	scv	6.52	6.52
Clip Art	ca	4 / 5	4 / 5
CorelDRAW Drawing	cdr	8.0 (B)	------------
CorelDRAW Exchange Metafile	cmx	6.0	------------
Desktop Color Separation (DCS)	dcs	2.0	------------
Digital Microprocessor Plotter Language (DMPL)	plt	(A)	------------
Drawing Exchange file	dxf	(A)	(A)
EnRoute	enr	2.3	------------
FlexiSIGN 5.x	fs, pd, fd, fc, fe	5.9	4 / 5
FlexiSIGN 6.x	fs	6.0	6 / 7
Flexi 7	fs	7.0	7.0
Flexi 7.5	fs	7.5	7.5
Gerber Artwork Definition	gad	------------	1.0
Gerber Clip Art	gca	(A)	------------
Gerber Graphic Advantage	plt	6.20	------------
Gerber Omega	plt	2.0	------------
Hewlett Packard Graphics Language (HPGL)	hpg, hgl, plt	(A)	(A)
Hewlett Packard Graphics Language II (HPGL/2)	hpg, hgl, plt	(A)	(A)
Ikarus	ik	(A)	------------
Inspire	sci	1.6 (B)	------------
Joint Photograph Experts Group (JPEG)	jpg	(A)	(A)
Kodak Flashpix	fpx	1.0 (B)	------------

File Format	Extension	Import	Export
Kodak PhotoCD	pcd	(A) (B)	------------
Macintosh Quickdraw PICT	pct	(A) (B)	------------
Microsoft Widows Metafile	wmf	(A) (B)	------------
Portable Network Graphics (PNG)	png	(A) (B)	(A) (B)
PostScript	ps, EPS, 2ps, fjb, prn	2.0	3.0
Targa	tga	2.0	2.0
Text	txt	(A)	------------
Tag Image File Format (TIFF)	tif	6.0	6.0
Windows bitmap	Bmp	(A)	(A)
Zsoft PC Paintbrush	pcx	5.0 (B)	------------

(A): Version number does not exist or is not available.

(B): Not supported on Macintosh.

Layering information, including layer name, color and attributes (locked, visible) will be preserved in files exported to the following formats: Adobe Illustrator, DXF, and HPGL.

Layering is ignored during import, so that multiple imports do not create many unnecessary layers. To preserve layer information, use **Open** instead.

AutoCAD DXF Import

When DXF files are imported, the following dialog will appear:
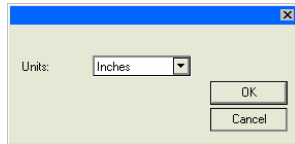
1 Set **Units** to the desired units (imperial or metric).

2 Click **OK**.

📄 If a DXF file is opened instead of imported, layers that are marked as frozen (hidden and non-editable) in the DXF file will be preserved as separate layers, and marked as hidden.

Adobe Acrobat PDF Export

When a design is exported to PDF format, the following dialog will appear:
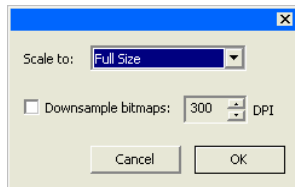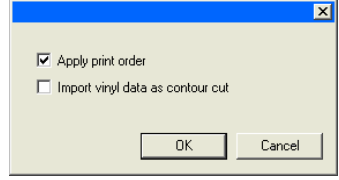
1 Set **Scale** to the desired size for the PDF page. The software will shrink or enlarge the design to match the selected page size.

2 Select **Full Size** to keep the PDF at the same size as the design.

3 Check **Downsample bitmaps** to force the software to reduce the number of pixels in bitmaps that are above the selected **DPI** setting. This may reduce the picture quality of bitmaps, but will also reduce the PDF file size.

4 Click **OK**.

Objects that are not supported by the PDF format, such as Lens effects, will be rasterized and inserted into the PDF as bitmaps.

Gerber File Format Supported Features

The following features of the Gerber file formats are supported:

Preview	Supported. Preview is shown in the Open and Import dialogs.
Paths	Supported.
Groups	All objects are automatically grouped after import.
Bitmap	Supported. If the original bitmap is missing, you will be prompted to locate the file.
Text	Text is usually imported as outlines, but in some cases they will be detected as text and you will be prompted for font substitution if there are any missing fonts.
Foil Color	Supported. Spot, Spectratone (Duotone), RGB and CMYK are all supported.
Vinyl Color	Supported, but if the job contains both vinyl and foil colors then the following message will appear:

Check **Import vinyl data as contour cut** and click **OK** to import vinyl color objects as contour cut paths. If the **Import vinyl data as contour cut** box is cleared, vinyl objects will be imported as standard vector objects.

Gradients	Supported. Linear and radial gradient are supported for both spot and process.
Job print order	Supported. Choose Apply print order during import to use the job print order.
Overlap/ Overprint	Supported. Both import as overprint, but heat setting can be changed in driver options.
Primer	Supported.
Substrate color	Supported. In order to see the substrate color use Open. It is skipped when using Import.
Stroke Color	Supported. If the fill and stroke have different primer/overprint or if the stroke is behind the fill then they will be imported as two objects, one with fill only, the other with stroke only.

Appendix C – Features List

	Flexi SIGN-PRO	Flexi EXPERT	Flexi PRINT & CUT	Flexi SIGN	Flexi LETTER	Flexi DESIGNER	FlexiENGRAVE	FlexiENGRAVE PRO
Getting Started								
Navigator View	•		•			•		
Tool Diameter	Opt	Opt	Opt	Opt	Opt		•	•
Repeat	•	•	•	•		•	•	•
Working with Files								
Job Info	•	•	•	•	•	•	•	•
Job Estimation	•	•				•		•
Templates	•	•				•		•
Using DesignEditor								
DesignEditor	•	•	•	•		•	•	•
Arranging Objects								
Same Width / Same Height	•					•		
Auto Serialize	•	•				•		•
Distribute	•	•				•		•
True Shape Nesting	•	Opt	Opt	Opt	Opt	Opt	Opt	•
Clear Transform	•					•		
Working with Color								
Eyedropper	•	•	•	•		•	•	•
Modify Color Libraries	•					•		
Measure Color	•					•		
Create Duotone Swatch	•					•		
Create CMYK Swatch	•		•			•		
Create Current Palette Swatch	•	•	•	•	•	•	•	•
Using Fill/Stroke Editor								
Patterns	•	•	•			•		•

	Flexi SIGN-PRO	Flexi EXPERT	Flexi PRINT & CUT	Flexi SIGN	Flexi LETTER	Flexi DESIGNER	FlexiENGRAVE	FlexiENGRAVE PRO
Gradients	•	•	•	•		•	•	•
Overprint	•		•			•		
Working with Shapes								
Circle	•	•	•	•		•	•	•
Fan	•	•				•		•
Arrow	•	•				•		•
Parametric Shape	•	•				•		•
Convert to Shape	•	•				•		•
Working with Text								
Text Block Size	•	•				•		•
Braille	Opt	Opt	Opt	Opt	Opt	Opt	•	•
Barcode	•		•			•		
Insert Symbol	•	•				•		•
Define Character	•	•	•	•		•	•	•
Text Styles	•	•	•	•		•	•	•
URW Font Support	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
Working with Paths								
Engrave Path tab	Opt	Opt	Opt	Opt	Opt		•	•
Working with Bitmaps								
Scanning	•	•	•	•		•	•	•
Creating New Bitmaps	•	•	•			•		•
Rasterize	•	•	•	•		•	•	•
Resample	•		•			•		
Colormode	•	•	•	•		•	•	•
Filters	•		•			•		

	Flexi SIGN-PRO	Flexi EXPERT	Flexi PRINT & CUT	Flexi SIGN	Flexi LETTER	Flexi DESIGNER	FlexiENGRAVE	FlexiENGRAVE PRO
Marquee	•	•	•	•		•	•	•
Lasso	•		•			•		
Magic Wand	•	•	•			•		•
Move	•	•	•	•		•	•	•
Eraser	•	•	•	•		•	•	•
Paintbrush	•		•			•		
Pencil	•	•	•	BW		•	BW	•
Fill	•	•	•	BW		•	BW	•
Crop	•	•	•			•		•
Stamp	•		•			•		
AutoTrace	•	•	•	•		•	•	•
ColorTrace	•	•				•		•
Centerline Trace	•	•	•	•		•	•	•
PictureCut	•	•	•	•		•	•	•
Working with Effects								
Fuse	•	•	•	•		•	•	•
Separate Overlap	•	•				•		•
Stripe	•	•	•	•		•	•	•
Blend	•	•	•			•		•
Lens	•		•			•		
Underbase	•					•		
Finisher	•					•		
Color Trapping	•	•	•	•		•	•	•
Graphic Styles	•	•	•	•		•	•	•
Contour	•	•	•	•	•	•	•	•
Profile Fill	Opt	Opt	Opt	Opt	Opt		•	•
Hatch Fill	Opt	Opt	Opt	Opt	Opt		•	•
Island Fill	Opt	Opt	Opt	Opt	Opt		•	•
Hole Fill	Opt	Opt	Opt	Opt	Opt		•	•

	Flexi SIGN-PRO	Flexi EXPERT	Flexi PRINT & CUT	Flexi SIGN	Flexi LETTER	Flexi DESIGNER	FlexiENGRAVE	FlexiENGRAVE PRO
Tool Library	Opt	Opt	Opt	Opt	Opt		•	•
Working with Measurements and Labels								
Dimensions / Labels	•	•	•	•		•	•	•
Automatic Dimension	•	•	•	•		•	•	•
Dimension to Page	•	•	•	•		•	•	•
Configuring the System for Color Printing								
Color Settings	•		•			•		
Soft Proof	•		•			•		
Cutting your Design								
Cut/Plot	•	•	•	•	•	•		
Printing your Design								
RIP and Print	•		•			•		
Engraving your Design								
Engrave	Opt	Opt	Opt	Opt	Opt		•	•
CASmate Tracing Features*								
Bezier Tracing	•	•	•	•		•	•	•
Enhanced Curves Tracing	•	•	•	•		•	•	•
Enhanced Corners Tracing	•	•	•	•		•	•	•
Centerline Vectorization	•	•	•	•		•	•	•
Color Vectorization	•	•				•		•

*   Not supported on Macintosh operating systems.

📄   This chart lists only the major features that differentiate the versions of the software. Not every feature present in the software is listed.

Appendix D - CASmate Tracing Features (Windows Only)

Using Bezier Tracing

Bezier Tracing traces the outline of the image and converts it to Bezier curves. Bezier curves are very convenient for graphic editing, and typically contain fewer points than lines/arcs.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Vectorize** and select **Bezier**.

Using Enhanced Curves Tracing

This option traces the outline of the image and converts them to Lines and Arcs. This option is the preferred method when scanning small business cards or poor quality artwork.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Vectorize** and select **Enhanced Curves**.

Using Enhanced Corners Tracing

This vectorization option is great for larger, camera-ready artwork. It will produce fewer points and sharper corners than the Enhanced Curves option.

1   Select the bitmap.

2   From the Bitmap menu, point to Vectorize and select Enhanced Corners.

3   Adjust the following parameters. You can adjust by dragging the sliders or entering a numeric value:

Tolerance	Controls how closely the traced path stays to the original scanned image. Smaller values will provide an accurate result that is very close to the scanned image, but larger values will create smoother lines and fewer control points.
Noise Suppression	Used to filter out some of the small garbage that is created during the scanning process. If the image contains a lot of "garbage," try using the Reduce Noise bitmap filter prior to vectorizing.
Corner Detection	Sets the threshold for detecting what is and what isn't a corner, and how sharply the corners will be defined.

Reset	Resets the tracing parameters to their default value.

4   Click **OK**.

Using Centerline Vectorization

This vectorization method is used for black and white or grayscale images, which contain mostly lines rather than filled shapes. It detects the center of the lines and creates a single line vector graphic. Centerline vectorization is typically used in routing and engraving where you may want a single line path for the machine.

1   Select the bitmap.

2   From the **Bitmap** menu, point to **Vectorize** and select **Centerline**.

3   Adjust the tracing parameters.

Pure Centerline	The program will find the center of each line and create a single line contour.
Outline Thick Areas	The program will centerline contours that are smaller than the **Line Width** value and outline areas that are larger than this value.
Shortest segment length	This option is the minimum distance between junctions. The larger the parameter value is, the more perfect the junctions will be. However, if you are working with an image that may have a lot of close lines, you will want to keep the value small.
Shortest centerline section	This option only applies when using **Outline Thick Areas**. It controls the centerline leftovers at the ends of the outlines.
Joining Paths	When creating a centerline you can select how you want the contours created. The results of the centerline will look the same no matter which option is selected.

None	This option will create open contours that are made up of small segments.
Loops	This option will create as many closed contours as possible. These contours can be filled later if necessary.

Long Paths	This option will generate the longest possible contours. This is the most popular option because it minimizes the amount of up/down movements that a router or engraver will have to make.	
Automatic	This option will let your software determine what should be centerlined and what should be outlined. The **Outline Thick Areas** option defaults to the Automatic setting,	
Manual	When this option is selected, the **Line Width** value can be entered.	
Line Width	This field tells the program to centerline anything smaller than this value and to outline anything larger.	
Enhancement	When using **Outline Thick Areas** you can tell the program what vectorization method to use on the outlines. See "Tracing Bitmaps" on page 103 about Bezier, Corners or Curves tracings.	
Options	This button is only available when **Corners** is selected in Enhancement field. See "Using Enhanced Corners Tracing" on page 170 about the tracing properties of Corner Enhancement tracing.	
Reset	Resets the tracing parameters to their default value.	

4   Click **OK**.

Using Color Vectorization

Color vectorization is used to convert color raster images into vector graphics. Before vectorization, the image must be posterized in order to reduce the number of colors.

Posterizing

Posterization is the process of reducing the number of colors to a manageable level so the image can be vectorized.

1   Choose the posterization method you want.

2   Choose the number of colors.

3   Click **Posterize**.

> 🗊   After the bitmap is posterized, the resulting colors will be displayed in the dialog box.

Your software provides three methods of posterization:

Fast Posterization	This method works on each of the three color channels (Red, Green and Blue) separately. It divides the color range within each channel into equal bands, and then fits each pixel in the image to the color band closest to it.
	In this method you specify how many colors you want in the posterized results. Your software offers you a choice from a list of numbers: 8, 27, etc. If, for example, you want to divide each color channel into two bands, the total number of possible colors in all three channels will be 8 (2x2x2). In the same way, 3 bands per channel will create 27 colors (3x3x3), etc.
	The Fast method is the fastest posterization method. This method is useful for posterizing logos with very distinct colors. It is not recommended for photos because the colors in the posterized image are quite different than those in the original image.
Smart Posterization	In this method the program finds the most dominant colors in the image. Any pixel is converted to one of these dominant colors, the one closest to it in color. In this method you specify how many colors you want in the posterized result. This method is slower, but the results are much better than the Fast method.
	This method is recommended both for scanned logos and for photos. The limitation of this method is that if you have a picture with many background colors, such as many shades of blue in the sky, the program may prefer those to objects in the foreground.
Manual Posterization	In this method you not only decide how many colors you want, but you actually pick these colors in the image. When you choose the Manual method, the cursor changes to a pipette tool. Click the colors in the image you want in the final results. Any color you click on is added to the color list in the dialog box. If you picked a color by mistake, you can select this color in the dialog and press the **Delete** key to remove it from the list.

Merging Colors

After you posterize the image, you may want to get rid of some colors. For example, an area in the image which looked orange may become a mixture (or pattern) of yellow and red after posterization. In this case you can merge these two colors in order to get one solid color for the whole area.

1   From the list of colors in the dialog, select the colors you want to merge together.

📄 Use **Shift** and **Ctrl** to select multiple colors. The color you want to be the result of the Merge must be selected last. The result of the merge will be displayed in the lower right corner of the dialog.

2 Click **Merge**.

📄 All pixels in the image that have the selected color will be converted to the desired color.

Vectorizing

Once you are satisfied with the colors in the posterized image, click the **Vectorize** button to vectorize the image into multiple color vector objects.

Appendix E – Stroke Fonts

Avanti 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

Baha 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

Cent 3

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

College 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Almond 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Cursive 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%&*()

E Cyclamen 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Glacis 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Glacis 4

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Iris 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Iris Laser 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Jasmine 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E LILAC 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
Y0123456789!@#$%^&*()

E Normal 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Orchid 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E PALM 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789!@#$%^&*()

E Roman 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E Script 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%¢&*()

E Squill 2

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

E TULIP 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789!@#$%&*()

E TULIP 4

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789!@#$%&*()

Engrave 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789!@#$%^&*()

Helvet1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

HUCKLE 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789!@#$%^&*()

Script 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%~&*()

Serif 1

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*()

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

0123456789!@#$%^&*()

Appendix F – Keyboard Shortcuts

Alignment	
Align Both Centers	**CTRL+5**
Align Both Centers to Page	**CTRL+SHIFT+5**
Align Bottom	**CTRL+2**
Align Bottom to Page	**CTRL+SHIFT+2**
Align Horizontal Centers	**CTRL+3**
Align Horizontal Centers to Page	**CTRL+SHIFT+3**
Align Left	**CTRL+4**
Align Left to Page	**CTRL+SHIFT+4**
Align Right	**CTRL+6**
Align Right to Page	**CTRL+SHIFT+6**
Align Text Baselines	**CTRL+0**
Align Top	**CTRL+8**
Align Top to Page	**CTRL+SHIFT+8**
Align Vertical Centers	**CTRL+7**
Align Vertical Centers to Page	**CTRL+SHIFT+7**
Arranging	
Back One	**CTRL+PAGE DOWN**
Compound	**CTRL+M**
Convert to Outlines	**CTRL+SHIFT+O**
Convert to Outlines	**V**
Forward One	**CTRL+PAGE UP**
Group	**CTRL+G**
Redraw	**CTRL+E**
Redraw	**F5**
Repeat	**CTRL+D**
Resize	**CTRL+K**
Reverse Path Direction	**CTRL+SHIFT+D**

Rotate	**CTRL+R**
Spacing	**J**
To Back	**SHIFT+PAGE DOWN**
To Front	**SHIFT+PAGE UP**
UnCompound	**CTRL+J**
Ungroup	**CTRL+U**
Other	
Cancel Edit	**ESC**
Close	**CTRL+F4**
Close	**CTRL+W**
Exit	**ALT+F4**
Help Topics	**F1**
New	**CTRL+N**
Open	**CTRL+O**
Quit	**Command+Q**
Save	**CTRL+S**
Save As	**CTRL+SHIFT+S**
Palettes	
Color Mixer	**M**
DesignCentral	**CTRL+I**
DesignEditor	**E**
Fill/Stroke Editor	**I**
Path Editing	
Select Point Tool	**N**
Bezier Path Tool	**P**
Add Point	**+**
Remove Point	**-**
Selecting	
Select Tool	**A**

Clear	**BACKSPACE**
Clear	**DELETE**
Copy	**CTRL+C**
Copy	**F3**
Copy	**CTRL+INSERT**
Cut	**F2**
Cut	**CTRL+X**
Delete Now	**SHIFT+BACK**
Delete Now	**SHIFT+DELETE**
Deselect	**CTRL+SHIFT+A**
Invert Selection	**CTRL+SHIFT+I**
Paste	**SHIFT+INSERT**
Paste	**CTRL+V**
Paste	**F4**
Redo	**CTRL+Y**
Redo Multiple	**CTRL+SHIFT+Y**
Select All	**CTRL+A**
Select by Attributes	**D**
Undo	**F1**
Undo	**CTRL+Z**
Undo Multiple	**CTRL+SHIFT+Z**
Text	
Text Tool	**T**
Find and Replace	**F3**
Justify Center	**CTRL+SHIFT+C**
Justify Full	**CTRL+SHIFT+F**
Justify Left	**CTRL+SHIFT+L**
Justify Right	**CTRL+SHIFT+R**
Spell Check	**F7**

Shapes	
Circle Tool	C
Oval Tool	O
Polygon Tool	G
Rectangle Tool	R
Starburst Tool	S
View	
Next Window	**CTRL+TAB**
Pan View	**SPACE**

Show Fills	**CTRL+F**
View Filter	F
Zoom	Z
Zoom In	**CTRL+=**
Zoom Out	**CTRL+-**
Miscellaneous	
Cut/Plot or Engrave	**CTRL+L**
Document Setup	**CTRL+B**
Print	**CTRL+P**

Print Setup (Page Setup on Macintosh)	**CTRL+SHIFT+P**
RIP and Print	**CTRL+H**
Toolbars	**CTRL+T**
Measure Tool	U
Paint Brush Tool	B

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