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# 1. Installing the Software

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.

## Recommended System Requirements

	Windows	Macintosh
Processor	Pentium II 350 MHz	G3 300 MHz
RAM	256 Mbytes	
Install Space	200 Mbytes	
Working Disk Space		
Operating System	Windows 98 / ME / Windows NT4.0 / 2000 / XP	
Video	800x600 resolution monitor with 16 bit color	
Other	4x CD-ROM or DVD Drive	
	Free USB or LPT Port for hardware key	Free USB Port for hardware key
	Available Port for Output Device	

\* Windows NT 4.0 requires Internet Explorer 5.x or greater & Service Pack 4 or higher.

## 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.

There are three types of hardware keys: Parallel, and USB keys.



Parallel key (Windows only)



USB key

## Installing a Hardware Key

1. Turn off your computer.
2. Plug the hardware key into the port (USB, LPT).
3. Turn on your computer.

\* When using parallel port keys, we recommend that you plug your output device and key into separate parallel ports.

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 the Software (Windows)

Follow these steps to install the software:

\* If you're installing on a PC running Windows NT/2000/XP, you must have Administrator privileges. See your Windows user guide for details.

1. Insert the Installation CD.
2. Select a language and then click **Next**.
3. Enter your user number and password and then click **Next**. The User number and password can be found on the product hardware key.
4. Select the product and language to be installed and then click **Next**.
5. Click **Next** to continue.
6. Read the Software License Agreement and click **Yes** to accept.
7. Click **Next** to continue.
8. Click **Yes** to view the readme file.  
  
\* The readme file contains last-minute issues and information that are not included in this documentation.
9. You may change the default destination folder here. Click **Next**.
10. Select the type of installation to install. **Typical** is recommended. Click **Next**.
11. Select the folder where the software will be included. If you accept the default folder, a new folder will be created for the product. Click **Next**.
12. Click **Yes** to clear the preferences or to retain old preferences.
13. Select the printers you want to install color profiles for then click **Next**.
14. Select **Yes** and click **OK** to restart your computer.

## Uninstalling the Software (Windows)

1. Exit your software by selecting **Exit** from **File** menu.
2. In the Windows Control Panel, double-click the **Add/Remove Programs** icon.
3. Select your software from the list and click the **Change/Remove** button.
4. Click **OK** when finished.
5. Go into the drive containing the directory where the software was installed. Delete this folder.

## Installing the Software (Macintosh)

Follow these steps to install the software:

1. Insert the Installation CD.
2. Double click the "CD Installer" icon.
3. Select a language and then click **OK**.
4. Enter your user number and password and then click **OK**. The User number and password can be found on the product hardware key.
5. Select the product and language to be installed and then click **OK**.
6. Read the Software License Agreement and click **Accept**.
7. Select the type of installation to install. **Easy Install** is recommended. Click **Install**.
8. Click **Yes** to clear the preferences or **No** to retain old preferences.
9. Click **OK**.
10. Click **OK**.
11. Click **Quit**.
16. Restart your computer.

## Uninstalling the Software (Macintosh)

1. Exit your software by selecting **Quit** from **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.

## Using a Hardware Key Over a Local Area Network

It is possible to run the software on a different computer than the one the hardware key is installed on. However, you cannot run more than one concurrent instance of the software using the same hardware key.

To run the software using a hardware key installed on a different computer:

1. On the computer with the hardware key, make sure the software is not running.
2. Run Production Manager on the computer with the hardware key.
3. On the computer you want to run the software on, make sure the software is installed using the user number assigned to the hardware key.

When you run the software on the second computer, it will recognize the hardware key from the first computer and run.

## Macintosh Shortcut Keys

If you are using this software in a Macintosh, see the table below to convert some commands and definitions used in this manual.

Windows System	Macintosh System
Right-click the mouse	= Click the mouse pressing CONTROL key
<b>CTRL</b> key	= <b>OPTION</b> key
<b>ENTER</b> key	= <b>RETURN</b> key

## Clear Preferences

Clear Preferences is a utility that removes all output device setups and returns the software to its default settings. It is particularly helpful when troubleshooting any problems you may encounter with your software.

To clear the preferences stored in your system:

1. Exit the software
2. Run the **Clear Preferences** utility.
3. Select **Yes** when you are asked if you would like to clear your preferences.

## Password Installer

The Password installer is a utility that 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.

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

**To add additional passwords:**

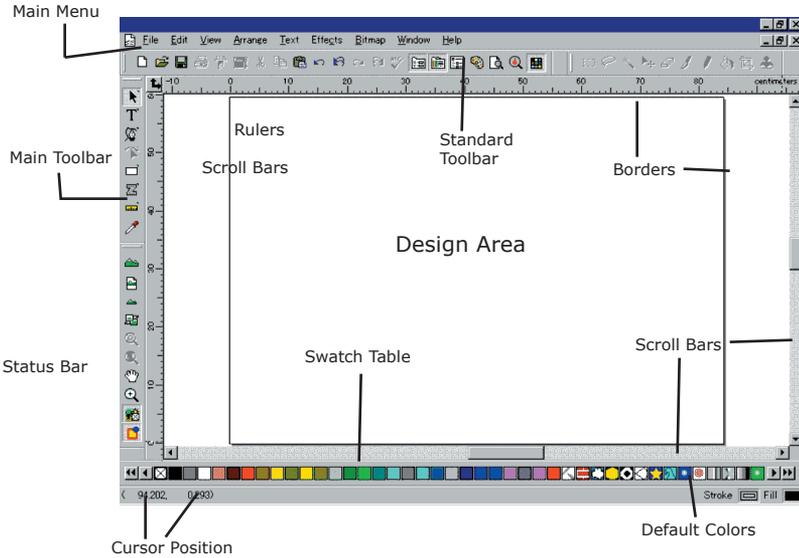
*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

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 list in the optional password field.

## 2. Getting Started

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



### Basic Elements of your Software

#### Toolbars

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



Standard toolbar

To show or hide a toolbar:

1. From the **View** menu, select **Toolbars**.
2. Check or uncheck the toolbars that you want to show or hide.  
Or, in Windows:
3. Right click the area around the design area where the toolbars are docked.
4. 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.

**Software Version Key:**

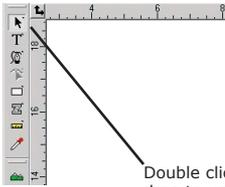
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

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.

To undock a toolbar:

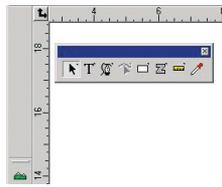
- Drag the toolbar from its docked position. (Do not drag buttons).
- Or
- Double click the toolbar. (Do not double click buttons).

*\* Dragging or double clicking the buttons will not undock or dock the Toolbar.*



*Docked Toolbar*

Double click or drag to undock the toolbar

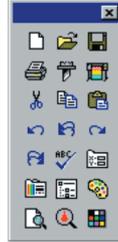


*Undocked View Toolbar*

The shape of a floating toolbar can be adjusted by dragging its borders.



Standard toolbar in different shapes



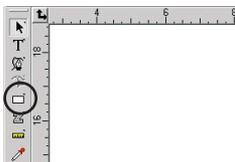
The shape of a floating toolbar can be adjusted by dragging its borders.

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.

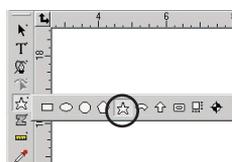
To use the tools in a tear-off palette:



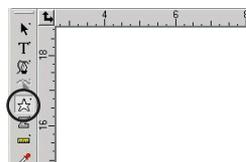
1. Click once on the button and drag it slightly to display the full palette.
2. Once it is displayed, you can either select the desired tool and release the mouse button, displaying the new tool, or you can drag the entire palette away from the original palette and release the mouse to drop it on the drawing area.



*Original palette*



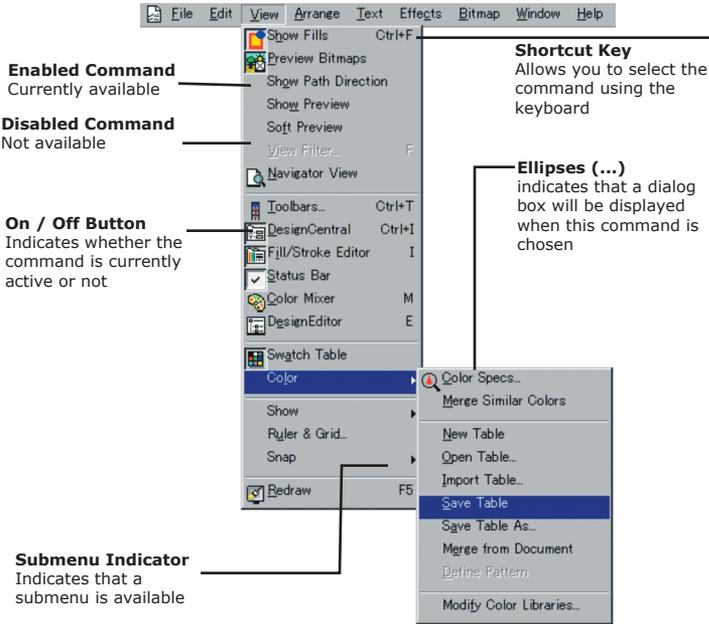
*Dragging the tear-off palette and selecting a new tool*



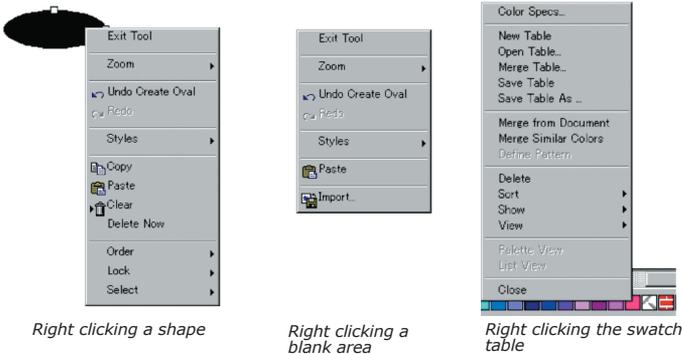
*The new tool is selected*

## Menus

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



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.



## 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.

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

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 "Design-Central - Document Tab" on page 35 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 "Swatch Table" on page 71 for more information on swatch tables.

To show the Swatch Table, from the **View** menu, select **Swatch Table**.

## Rulers 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.

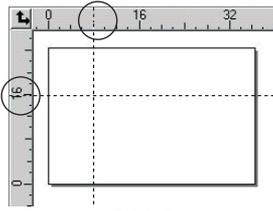
To show or hide the rulers, from the **View** menu, point to **Show** and click **Show Rulers**.

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

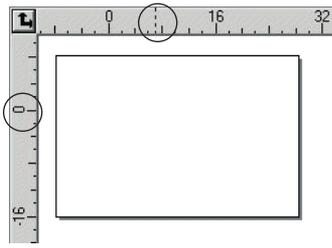
To show or hide the grids, from the **View** menu, point to **Show** and click **Show Grid**.

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. To display this dialog box:

- Double click the **Origin** icon in the upper left hand corner of design area  
Or
- From the **View** menu, select **Ruler and Grid**.

The Ruler & Grid dialog box consists of two Tabs, Rulers and Grid. To select a Tab, click the tabs on the top of the dialog box.

You can adjust the following on the Ruler Tab:

- 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.

You can adjust the following on the **Grid** tab:

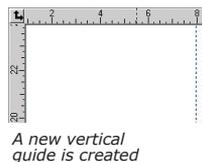
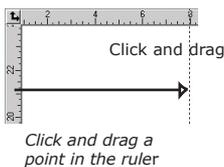
- Spacing** Horizontal and vertical space between adjacent dots.
- Snap to grid** Check this option to snap the objects to the grid while moving or resizing an object.

## Guide

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 then click **Show Guides**.

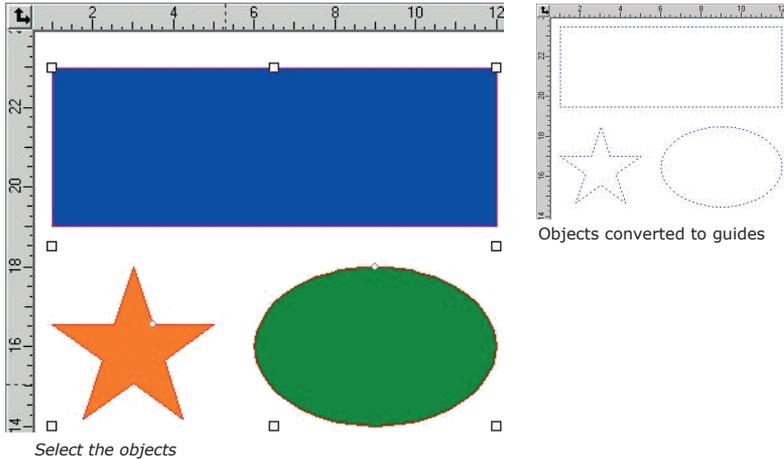
You can create a guide line by:

- Clicking and dragging one point on the ruler. Horizontal or vertical guide lines are created, depending on which ruler you dragged the point from.



- Select objects and from the **Arrange** menu, point to **Guides** and click **Make Guide**. Select **Release Guide** in the same menu to convert guides back to original objects.

To create a diagonal guide, create a horizontal or vertical guide, unlock the guides and then rotate the horizontal or vertical guides in DesignCentral - Rotate Tab



- In DesignEditor, drag objects from generic layer to **Guide** Layer. For more information about the Guide Layer see "DesignEditor - Layers Tab" on page 47.

To lock the guides:

- From the **Arrange** menu, point to **Guides** and click **Lock Guides**.
- Guides cannot be selected by dragging a bounding box around them. You have to click the guide.

To select all guide lines:

3. From the **Edit** menu, point to **Select** and then click **Select by Attribute** command.
4. Select **Guide Line** in Object Tab.
5. 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).

To show or hide the Status Bar:

- From the **View** menu, select **Status Bar**.

## Changing the View

You have several commands to change how the design area is viewed.

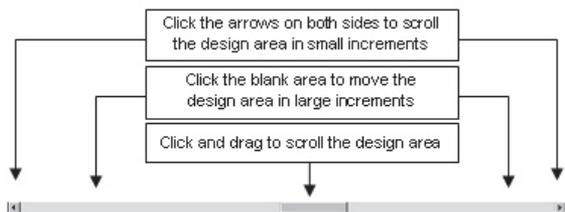
### Using a Wheel Mouse

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

- Moving the mouse wheel up and down pans the view up and down.
- Holding the **SHIFT** key and moving the wheel up and down pans the view left and right.
- Holding the **CTRL** key and moving the wheel up and down zooms the view in and out.

### Using Scroll bars

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



## Zooming and Panning

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

	Magnifies the center of the view to twice the size of current view.
	Magnifies the center of the view to half the size of current view.
	Adjust the view size to fit the design area size.
	Switches the view to previous magnification.
	Adjusts the view size to fit the selected objects. When there are no objects selected, this button is disabled.
	Adjusts the view size to fit all existing objects. When there are no objects in the design, this button is disabled.
	Select this tool and click and drag inside the design area to pan the view position.
	Select this tool and <ul style="list-style-type: none"><li>• Click to zoom in twice the size of the current view, the center will be the clicked position.</li><li>• <b>SHIFT</b> and click to zoom out to half of the current view, the center will be the clicked position.</li><li>• Click and drag to magnify one particular portion of design area.</li></ul>

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**  
Every time you click the Zoom or Pan tool, the view is magnified or panned. By default the cursor will return to the previous tool after using these tools. You must reselect the tool to use the Zoom or Pan tool again. If you want to use the Zoom or Pan tool without selecting it before each use 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** command.
2. Click **Tools** Tab.
3. Select **Zoom** in the list.
4. Uncheck **Resume previous tool after zooming once** option.
5. Click **OK**.

## Showing an Object's 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:

- |                            |   |
|----------------------------|---|
| <b>Show layer color</b>    | All outlines are displayed using the layer color. See "Changing the Layer Color" on page 49 about how to change the layer's color   |
| <b>Show fill color</b>     | The outlines are displayed using the object's original fill color   |
| <b>Show path direction</b> | The outlines are displayed using three colors. <b>Green</b> for clockwise paths, <b>Magenta</b> for counter clockwise paths and <b>Gray</b> for open paths. Selected objects will still be displayed using the layer color. |



Show Fills Enabled



Show Fills Disabled  
(Show fill color)



Show Fills Disabled  
(Show layer color)



Show Fills Disabled  
(Show path direction)

To change the way the outlines are displayed:  
Double click the Fill Mode tool and select the Wireframe option.

Or

1. From the **Edit** menu, select **Preferences** command.
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 119 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.

To show or hide the direction arrows:

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



*Paths with direction arrows*

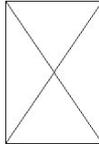
## Previewing Bitmaps (E, M, P)

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**.



*Moving an object with Show Preview off*



*Moving an object with Show Preview on*

## Redrawing the Design Area

Occasionally, when you edit your design, those changes are not reflected accurately. To make sure that the design area is fully updated, select **Redraw** command from the **View** menu. This forces a redrawing of the design area.

## 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.

To filter 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.

You can also filter objects by color using the context menu in the Color Swatch table:

1. Place the cursor over the color in the Swatch Table.
2. Right-click the Swatch Table. A menu is displayed.
3. From the **View** menu select the filtering option. The following options are available:

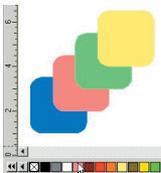
**Hide This Color** Objects using this color will not be visible.

**Show This Color** Objects using this color will be visible.

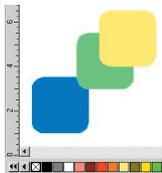
**Show All Except Color** Only the objects using this color will not be visible. This

**Hide All Except Color** Only the objects using this color will be visible. This

**Show all colors** All objects will be visible.



Cursor over the Swatch Table



After selecting Hide This Color



After undoing multiple steps, if you decide that you didn't want to undo those actions:

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 cancel the undo, 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.

To adjust the number of steps stored in undo list :

1. From the **Edit** menu, select **Preferences**.
2. In General Tab, enter the number of steps in **Maximum undo/redo**
3. Click **OK**.

## Repeating the Last Step (P)

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

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.

## 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:

<b>Maximum Undo/Redo</b>	Determines the number of operations stored in the undo / redo list. Smaller values in this field use less memory.
<b>Selection Tolerance</b>	Determines how close the cursor must be from the object to select it. Setting a larger value makes it easier to select points.
<b>Constrain Angle</b>	Sets the constrain angle when you rotate an object with the <b>SHIFT</b> key pressed. The rotation will be performed in increments defined by this field.
<b>Save Documents Every</b>	Open documents will be periodically saved. You can specify the time period between saves.
<b>Trash Capacity</b>	Number of objects that can be saved in the trash layer.
<b>Precision</b>	Number of decimals in numeric fields.
<b>Restore Defaults</b>	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:

<b>Document</b>	The default folder used to store your documents.
<b>Temporary Files</b>	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.
<b>Adobe Plug-ins</b>	If you have the Adobe Photoshop installed, ... specify here the folder where the plug-ins are stored.
<b>Browse</b>	Click this button to change the folder.
<b>Restore Defaults</b>	Click this button to restore the default settings for above fields.

## Preferences - Font Tab

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

<b>Path</b>	The folder where the FSfonts are stored.
<b>Add</b>	If the FSfont is protected by a password, click this button to enter the password.

<b>Delete</b>	Click this button to delete the selected password.
<b>Browse</b>	Click this button to change the folder.
<b>Restore Defaults</b>	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.

 <b>Apply Template</b>	These preferences allow you to specify the default template used when you apply a template. See "Using Templates" on page 29.
 <b>Combine Options</b>	These preferences allow you to specify the options used in Combine effect. See "Combine Effect Options" on page 146.
 <b>Cut/Plot or</b>	This tool allows you to specify that the software must communicate with Production Manager using TCP/IP.
 <b>Paste</b>	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 53 for more information.
 <b>Select Tool</b>	These preferences allow you to specify how the objects will be selected. See "Selecting Objects Using Select Tool" on page 53 for more information.
 <b>Show Fills</b>	These preferences allow you to specify how the paths are displayed when the <b>Show Fill</b> option is off. See "Showing Object's Fill" on page 13 for more details.
 <b>Text Tool</b>	Sets several aspects of the text tool. See "Text Preferences" on page 110 for more information.
 <b>Tip of the Day</b>	Displays a tip when you start your software.
 <b>Zoom</b>	Selects if the zoom and pan tool will be used only once. See "Zooming and Panning" on page 17 for more information.

## 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

	Value 1		Value 2	
	\$	%	\$	%
06-Jan-99	12,000	0.00	12,000	0.00
07-Jan-99	12,101	0.04	12,750	0.48
08-Jan-99	12,104	0.02	12,750	0.00
11-Jan-99	12,100	0.04	12,750	0.00
12-Jan-99	12,114	0.04	12,750	0.00
13-Jan-99	12,182	8.91	14,000	9.80

OLE object

## Creating New Documents

To create a new document:

- From the **File** menu, select **New**.

## Opening Files

To open an existing file:

1. From the **File** menu, select **Open**.
2. Select the file format, folder and the file that will be opened. See "Appendix C - Supported File Formats" at page 200 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.

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Double clicking the file icon in Windows Explorer or dragging the file icon to your software icon on desktop, will start the application and open the file.



Double click to open the file

## Importing Files

To import an existing file into current document:

1. From the **File** menu, select **Import**.
2. Select the file format, folder and the file that will be imported. See "Appendix C - Supported File Formats" at page 200 for all supported file formats.
3. Click **Import**. A bounding box will be displayed.  
**TAB** key changes the position of the cursor on the bounding box.  
**ESC** key stops the import operation.
4. Click the design area and place the imported object.  
If the file contains fonts that are not installed in your system, a dialog box will appear, allowing you to select a replacement font.
  - 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 in step (3).

## Saving Documents

To save the current document:

1. From the **File** menu, select **Save** or **Save as**.
2. If you have selected the **Save as** command 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 (A, E, M, P)

To export the current document or part of it into a file:

1. If you are exporting only part of your document, 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 C - Supported File Formats" at page 263 for all supported file formats.

The following options are available:

**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.

4. Click **Export**.

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## Sending a Job to EnRoute

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**.

## Closing Documents

To close the current document:

1. From the **File** menu, select **Close**.
2. If your document have 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.

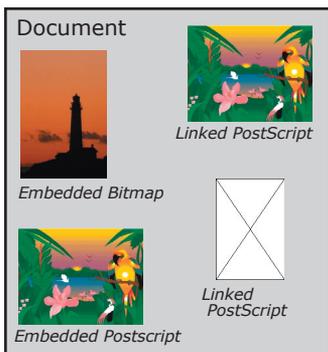
## Linked and Embedded Files

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 an object is 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, a "X" will be displayed instead.



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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

To read in and parse a linked PostScript file, so that it becomes an embedded file:

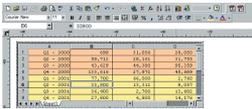
1. Select the preview of the linked PostScript file.
2. Select the **PostScript** tab in DesignCentral.
3. Click **Parse**.

## 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 spreadsheet 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

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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**.



The document with a linked OLE object.

## Editing OLE Objects

To edit an OLE object:

1. Select the OLE object.
2. From the **Edit** menu, point to [...] **Object** and then 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 edition. If you choose **Open**, a full instance of the program will start and you may leave this application running even after editing the OLE object.

- Double clicking the OLE object has the same effect as Edit command

## Converting OLE Objects

You can convert OLE objects to another format:

1. Select the OLE object.
2. From the **Edit** menu, point to [...] **Object** and then click **Convert**.
3. Select the new format from the list.
4. Click **OK**.

You can also convert OLE objects to basic segments and bitmaps:

1. Select the OLE object.
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** By default, linked objects are set for Automatic updating. This means that your software automatically updates the linked information every time you open the document or any time the linked file changes when the document is open. Select Manual to update the object in your document only when you choose to manually update it.

**Update Now** When in Manual mode, click this button to updates the OLE object in your document to reflect the

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situation of the original file.

### Open Source

Click this button to open the linked file using the associated program.

### Change Source

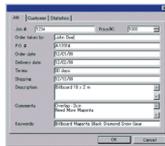
Click this button to change the linked file, replacing the current file with another one.

### Break link

Click this button to permanently break the connection between a linked object and its source file.

## Working with Job Info (E, M, P)

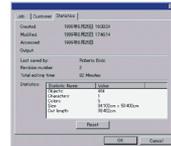
Your program allows you to store information about the job with each file you create. You can add or change information about a job at any point in the design and production process. This information becomes part of the file and is saved when the file is saved.



Job Tab



Customer Tab



Statistics Tab

To view or edit the Job Info:

1. From the **Edit** menu click **Job Info**.
2. There are three tabs that 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. Clicking Reset button will restore the number of revisions and the total editing time on a file.

3. Click **OK**.

## Finding Files (E, M, P)

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.

To search for one file:

1. From the **File** menu, select **Find File**.
2. Click **Browse** and select the folder where the search will be performed. If you want to search all sub folders check the **Include subfolders** option.
3. Enter the search condition:
  - If you want to search a file by its name, enter the file name in **Named**

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**field.**

- If you want to search a file using any of the job information, select the job info field from the list provided and enter the search text in the **contains** field. For example, to search for all jobs where the order was taken by John Doe, you would select Order **Taken by** and type **John Doe** into the **contains** field.
- 4. Click **Search** button.
- 5. A list with all files matching the search condition will be displayed.
- 6. Select the file in list and:
  - \* 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.

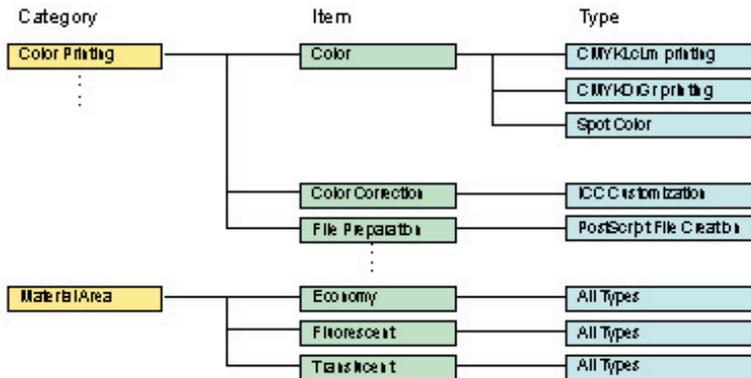
## Job Estimation (P)

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 always 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.

Those cost elements used in job estimation are grouped in **Category**, **Item** and **Type**:



## Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

## 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, you can either print an invoice by clicking **Print** button or save the estimation values as a text file clicking **Export** button.
- \* The **Total** value will be automatically inserted in Job Info - Job Tab.

The screenshot shows the 'Estimation Editor' window. It has a menu bar with 'Forms' and 'Estimation Editor'. Below the menu bar are buttons for 'Save', 'Delete...', 'Export...', and 'Print...'. There are input fields for 'Form' (set to 'Normal'), 'Description', 'Unit cost', and 'Quantity'. A table lists items with columns for 'Item', 'Type', 'Each(\$)', 'Quantity', 'OT', 'Amount(\$)', and 'Unit'. Below the table are buttons for 'Add Item', 'Delete Item', 'Change Item', and 'One time'. At the bottom, there are fields for 'Quantity', 'Subtotal', 'Tax rate', 'Tax', and 'Total'.

Item	Type	Each(\$)	Quantity	OT	Amount(\$)	Unit
Intermediate Vinyl	All Types	0.40	1.54		0.52	square foot
Transfer Tape	All Types	0.09	2.31		0.21	square foot
Plastic	Signita 3mm	1.27	6.00		8.21	square foot
Sign Preparation	Design & Layout	25.00	0.00	*	0.00	hour
Sign Preparation	Cut Time	1.00	0.00		0.00	minute
Sign Preparation	Welding & Application	12.00	0.00		0.00	hour
Sign Preparation	Preparing Sign Blank	12.00	0.00		0.00	hour
Sign Preparation	Installation	25.00	0.00	*	0.00	hour

Buttons: Add Item, Delete Item, Change Item, One time. Fields: Quantity, Subtotal: \$9.04, Tax rate: 6.0%, Tax: \$0.54, Total: \$9.58. Bottom buttons: OK, Cancel, Print.



One sample of Job Estimation.

## Customizing Forms

You can customize the existing forms to match your needs:

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.

You can customize the items list to match your needs:

1. From the **Edit** menu click **Job Estimation**.
2. Select the **Estimation Editor** Tab.
3. Select the **Category** type that will be changed. The following types are available:

**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.

4. You can create a new category by clicking the **New** button. Clicking **Delete** button will delete a category and all its types and items.
5. 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. The type is deleted from the list.

6. 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.

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**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.

- You can print a list with all categories and their item and types clicking Print button.

7. Click **OK**.

## Templates (P)

Templates allow you to:

- \* Make multiple copies of your document using a pre-defined layout.
- \* Create documents such as invoices based on Job Information



Creating copies of a document. 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



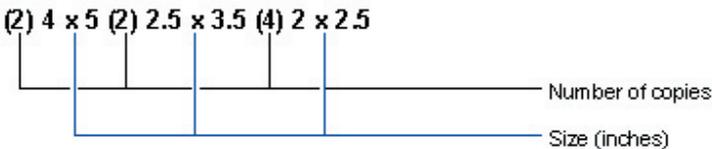
*Invoice created using the template feature*

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

## Applying Templates

To apply a template to your document:

- Open an existing document or create a new one.
- From the **File** menu, point to **Templates** and then click **Apply Template**.
- Choose the template from the list. The templates are named following the convention:



- Choose **Select**.
  - A new document will be created using the template and the original document.
- \* 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

To select the template that will be selected by default in the Select Template dialog:

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 then click **Template Toolbar**.

The Templates toolbar will be used to create and modify existing templates. This toolbar contains buttons that represents 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
- Purple
- Dark Brown
- Satin Gold
- Deep Red
- Red
- Yellow
- 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

You can create your own custom 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.
5. 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.
6. From the **File** menu, point to **Templates** and then click **Save as Template**.

The template has been created. Template objects can be masked, colored and have an effect applied to them.

## Editing Existing Templates

You can modify an existing template:

1. From the **File** menu, point to **Templates** and then click **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**.

The Save Template command will save the current template, Save as Template will save the template in a new file.

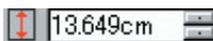
## Changing Placeholders Attributes in DesignCentral

Each placeholder will have different fields in the DesignCentral - Template Tab.

### For Drawing placeholder



Width of the drawing placeholder.

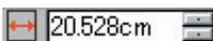


Height of the drawing placeholder.

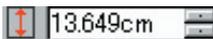
Auto Orientation

Check to automatically change the orientation of the drawing to match the original file.

### For Used Color placeholder



Width of the Used Color placeholder.



Height of the Used Color placeholder.



Font and style used in the color description.

**Software Version Key:**

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Size of the font used in color description.

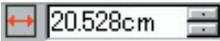


Number of colors per line.

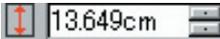


Shape of the color swatch used in color description.

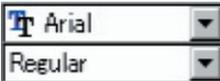
### For Used Fonts placeholder



Width of the Used Fonts placeholder.



Height of the Used Fonts placeholder.



Font and style used in the font description.



Size of the font used in font description.



Number of font descriptions per line.

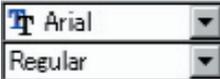
### For Job Info placeholder



Source of the information (Job info, customer info or Other).



Information type.



Font and style used in the job info description.



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.

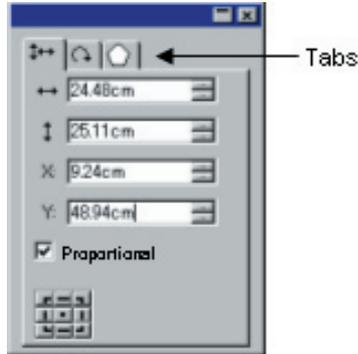
## 4. Using DesignCentral

**DesignCentral** displays an object's properties. It displays tabs and options appropriate for the selected object. For example, when a rectangle is selected, DesignCentral displays the width, height, corner style, and other properties appropriate to a rectangle. When text is selected, it displays the font, font style, character height and width, and other settings.

Displaying DesignCentral

To view DesignCentral:

- From the View menu, select **DesignCentral**.



*DesignCentral*

### Entering Numerical Values

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

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

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

### **Simple Arithmetic Operators**

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

The available arithmetic 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 arithmetic 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 instance, 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 Arithmetic**

Once you enter a numerical value, ratio, or arithmetic expression in a numerical field, the software will automatically apply that value after a brief delay. There is no need to select another field or click an "Apply" button in order to force a calculation or apply a new value to a job preview.

## DesignCentral Tab

DesignCentral consists of several windows, known as “Tabs”. The number of Tabs and the content vary according to the objects that you have selected in your document.

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

### DesignCentral - Document Tab

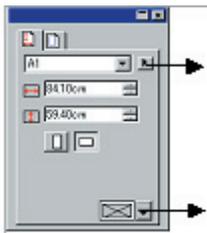
Use the Document tab to specify the size of the drawing area and the color of the substrate (the background color). A number of standard document sizes are included. You can specify a custom drawing area size by entering new horizontal and vertical values.

To show the Document tab, do one of the following:

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

### DesignCentral - Margin Tab

Use the Margin tab to specify the margins around a drawing area. These margins are used when objects are aligned / distributed and also are useful for laying out elements symmetrically. See “Aligning Objects” on page 62 for more details.



Click here to :

- Add a new document size
- Delete an existing document size
- Set a default document size
- Hide the design area borders

Click here to specify the color of the substrate



*DesignCentral - Document Tab*

*DesignCentral - Margin Tab*

### DesignCentral - Size Tab

The Size Tab of DesignCentral allows you to change the size and position of selected objects. You can change objects by dragging the control points or by changing the numerical values in DesignCentral.

To change the size of an object:

1. Select the objects.

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

2. Change the size of an object by editing the values in the entry box at Size Tab or dragging the control points of the selected object.

\* Checking **Proportional** ensures that the object will be scaled proportionally in both the width and height.

### Software Version Key:

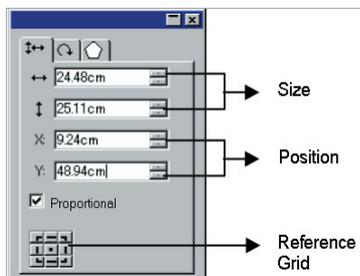
(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

To change the position of an object:

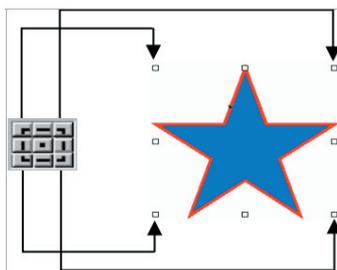
1. Select the objects.
2. Change the position by editing the values in the entry box or dragging the object.

The X, Y coordinates displayed in DesignCentral are the position of the reference point, measured from the origin. See "Rulers and Grid" on page 10 about how to change the origin.

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



DesignCentral - Size Tab

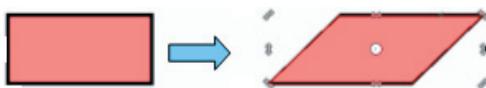


Reference Grid and Resize Points

## 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.

- **Shear** is the process that distorts one object by an angle, using one point as a reference; this point's position is fixed.



A rectangle sheared to an angle of 45 degrees

To rotate an object:

1. Select the objects.  
After selecting an existing object, the Size, Rotate and Object Tabs are available.
2. Select the point that will be fixed during the rotation:
  - Clicking one point on Reference Grid in DesignCentral - Rotate Tab.

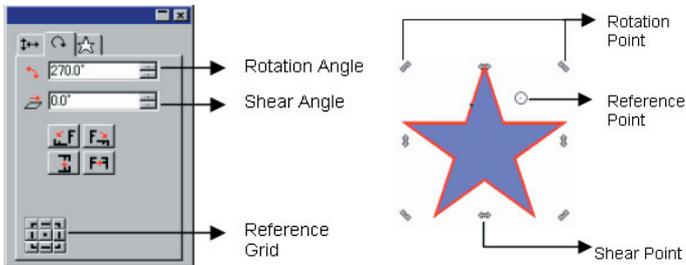
Or

  - Click and drag the Reference Point to the desired position. **CTRL** while dragging fixes the Reference Point to the settings on the Reference Grid.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

3. Change the angle of rotation by editing the values in the entry box or dragging the Rotation points. Click the **Rotate +90 degrees** or **Rotate -90 degrees** button to rotate the object 90 degrees counterclockwise or clockwise.



*DesignCentral - Rotate Tab*

To shear an object:

1. Select the objects.

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

2. Select the point that will be fixed during the shearing:

\* Clicking one point on Reference Grid in DesignCentral - Rotate Tab.

Or

\* Click and drag the Reference Point to the desired position. **CTRL** key while dragging fixes the Reference Point to the settings on the Reference Grid.

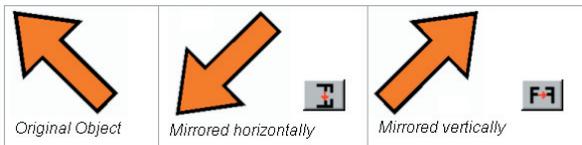
3. Change the shear angle by editing the values in the entry box or dragging the Shear points.

To mirror an object:

1. Select the objects.

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

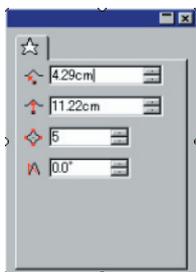
2. Click **Flip X Axis** or **Flip Y Axis** in DesignCentral - Rotate Tab to mirror the selected object horizontally or vertically.



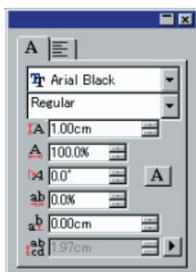
## DesignCentral - Object Tab

The Object Tab will vary according to the objects that you have selected.

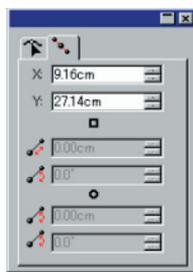
In some cases, the Object Tab consists of two tabs. For instance, when you select text, you have a Character Tab and a Paragraph Tab.



Object Tab when a Path is selected / created



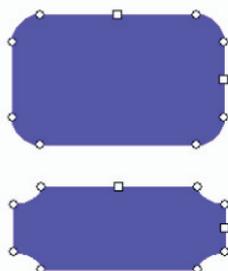
Object Tab when a Text is selected / created



Object Tab when a Star is selected / created

When you are creating an object, 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.



Object Tab when both rectangles are selected

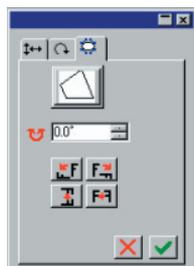


It shows a value since both rectangles have the same width

It is blank since both rectangles have different height.

## DesignCentral - Effects Tab

When you apply an effect over an object, DesignCentral displays the Effect Tab, with all properties of the effect.

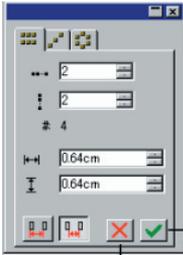


DesignCentral - Effect Tab

- \* 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 with **CTRL** key pressed. See "Selecting Objects Within an Effect" on page 46 for more details.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



Many of the changes you make are automatically applied as you change them. You will notice that some commands, contain two buttons **(Apply / Cancel)** on bottom right side of DesignCentral to confirm or cancel the command.

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

Apply button

Cancel button

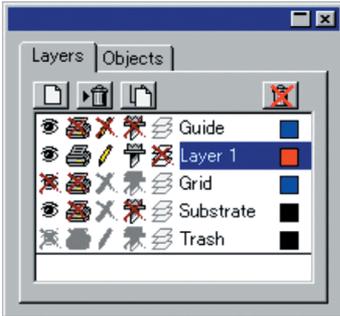
*DesignCentral - Setup Tab copy command*

## 5. Using DesignEditor (M, P)

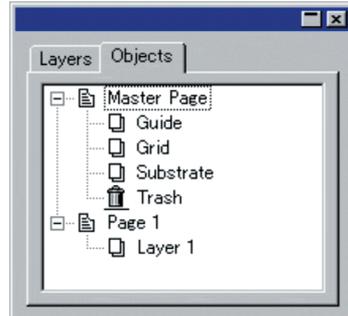
**DesignEditor** is a powerful organizational tool to manage the various layers and objects in your drawing. You can choose to display some layers and hide others, delete or add layers, and do similar functions with individual objects.

### Displaying DesignEditor

The DesignEditor consists of two screens: the **Layers Tab** and **Objects Tab**



DesignEditor - Layers Tab



DesignEditor - Objects Tab

To view the DesignEditor:

\* From the **View** menu, select **DesignEditor**.

### 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.

By default, each new drawing 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 (so that its color is not visible).
- 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. For more information about the Grids see "Rulers and Grid" on page 9.
- Guide Layer** The Guide layer contains the drawing Guides. For more information about Guides see "Guide" on page 10.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

**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 66 for more details about how to recover deleted objects.

**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.

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.

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



When you right click on any of the layers, a menu is displayed and the following commands are available:

**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 Layer.                     |
| 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.                |
| Cutable   |  | Specifies if the layer is cuttable or not. Always disabled for Trash and Grid Layer            |

You can change the layer properties by doing one of the following:

- Clicking the icon on the DesignEditor - Layer Tab. When the property is disabled, it displays a "X" over the icon.



Visible Property Enabled



Visible Property Disabled

### Software Version Key:

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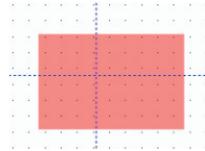
- Right-clicking the layer and selecting the **Properties** command from the menu. Edit the property in the **Layer Properties** dialog box that will be displayed.

## Changing the 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*

You can re-arrange the order of the stack by simply clicking and dragging 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.

To merge layers:

1. Click and hold the mouse on the on the layer you want to merge.
2. While holding down the **CTRL** key, drag the layer to the layer you want to merge it with.

A horizontal dashed line displays directly over the target layer to indicate that the layer will be merged.

3. Release the mouse button.

## Changing the 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...** this color is used to:

- If the option "Show Layer Color" in **Show Fill** preferences (see "Showing Object's Fill" on page 13 for more details) is selected, all objects are displayed using this color in wireframe mode.
- The border of selected objects is displayed in this color.
- If the **Show Preview** option is off (see "Showing Preview" on page 14), the preview for that layer is displayed in this color.

To change the color of a layer, 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.

### Software Version Key:

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- 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 the DesignEditor.

- Each object is assigned a number to distinguish it from other objects of the same type (e.g.: 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 the various effects and other changes that you've applied to each element.

## Selecting Objects Using the Object Tab

The DesignEditor - 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 an object, select the object's name in the DesignEditor - Objects Tab.

**SHIFT** or **CTRL** keys selects multiple objects.

- You can even select individual objects among compounded or grouped objects.

When you select an object in the design area, the corresponding item is automatically highlighted on the DesignEditor - Objects Tab.

## Changing Objects Order

You can change the order of an object by clicking and dragging an object 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 / reorder in the Objects Tab.
2. Drag the object to the desired location.
  - **SHIFT** key while you drag **replaces** the highlighted object with the one you're moving.
  - **CTRL** key while dragging **duplicates** the object and places it in the new location.
    - Right clicking while dragging displays a menu with the following options:
    - Move and Insert
    - Move and Replace

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- 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

To rename an object in DesignEditor - Objects Tab:

1. Click the object in DesignEditor - Objects Tab
2. Click the same object again.
3. Type the new name.

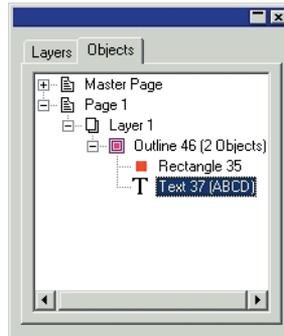
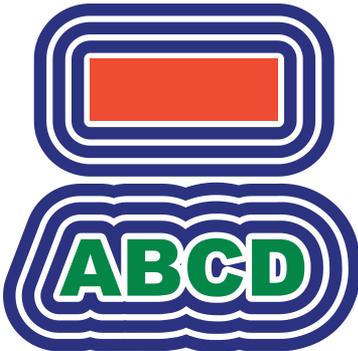
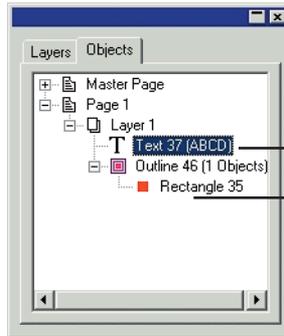
## Applying Effects

When you move an object underneath an effect, that effect is applied to the object. This can be 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, simply move the object within the hierarchy of the effect, or group of effects, that you want to apply.

- When you apply effects in this way, they are applied to the objects underneath them as a group. It is not the same as individually selecting an object and re-applying the same effects.



**ABCD**



## 6. Selecting Objects

There are several ways to select objects, from the most basic point-and-click method to sophisticated selection criteria. Selected objects display 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 42 for more details.

Selecting Objects Using the Select Tool

To select objects using the Select tool:

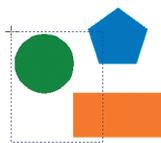
1. Choose **Select** tool.
2. Click the object that you want to select.

To select multiple objects, hold down the **SHIFT** key, and then click on multiple items.

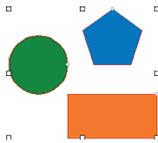
You can make a selection by using two modes. When you are in the **By touching** mode, any object that intersects the bounding box is selected. When you are in the **By fully enclosing** mode, the selection is restricted to those objects that are fully enclosed in the bounding box.

To select objects using the bounding box:

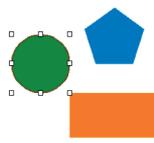
1. Choose **Select** tool.
  2. Click and drag, creating a bounding box around those objects you want to select.
- Holding the **CTRL** key while creating the bounding box temporarily toggles the selection mode to the other setting.



*Bounding Box*



*By touching mode*



*By fully enclosing mode*

### Changing Default Selection Mode

The default setting in your program is **By touching**. To change the default setting, double-click the **Select** tool, or do the following:

1. From the **Edit** menu, select Preferences command.
2. Click **Tools** Tab.
3. Click **Select** tool on the list.
4. Change the selection mode.
5. Click **OK**.

## Selecting Objects Within an Effect

To select an object within an effect (an object with an outline, for example):

1. Choose **Select Within** tool. 
2. Click the object that you want to select.

Or

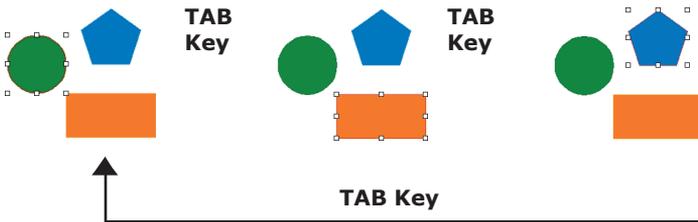
1. Choose **Select** tool. 
2. **CTRL** key and double-click the object that you want to select.



Rectangle selected within an Outline effect

## Selecting Objects Using the TAB Key

Pressing the **TAB** key selects the next object. The selection order follows the order that the objects were created.



## Selecting Similar Objects (P)

This feature selects all objects with similar shape to the currently selected object.

1. Select an object.
2. From the **Edit** menu, point to **Select** and then click **Select Similar Objects** command.

## Selecting Objects With The Same Color (P)

This feature selects all objects with a similar color to the currently selected object.

1. Select an object.
2. From the **Edit** menu, point to **Select** and then click **Select Similar Color** command.

### Software Version Key:

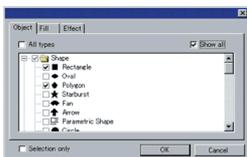
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## Selecting Object Based on Attributes (P)

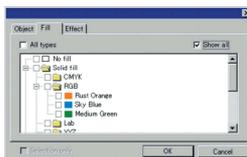
You can specify objects to select based on an object's type, fill and effects. For example: you can select all blue rectangles or all text.

To select objects based on attributes:

1. From the **Edit** menu, point to **Select** and then click Select by **Attributes** command.
2. Select which attribute (**Object, Fill or Effect Tab**) will be used in the selection.



Object Tab



Fill Tab



Effect Tab

- Select **Show all** to display all the possible type of objects, fills, or effects.
  - Select **All types** to select all of the elements listed on the displayed tab.
  - Choose **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 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 43 for more details.

## Selecting All Objects

To select all objects in a document:

- From the **Edit** menu, point to Select and then click **Select All** command.

## Deselecting All Objects

To deselect all selected objects:

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

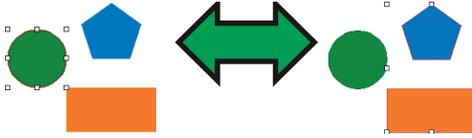
Or

- Click an empty area.

## Inverting Selection

To invert the selection:

- From the **Edit** menu, point to **Select** and then select **Invert Selection** command.



## 7. Arranging Objects

This chapter describes how to arrange, duplicate and manipulate objects in the design area.

### Resizing Objects

Objects may be resized by using the following methods:

#### Resizing Using DesignCentral

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

1. Select the objects.
2. From the **Arrange** menu, select the **Resize** command.
3. Adjust the values in DesignCentral:



New width of the selected objects.



New height of the selected objects.



Percentage that the width will be scaled.



Percentage that the height will be scaled.



**Proportional**

The point selected in this grid will remain stationary after the resizing.

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.

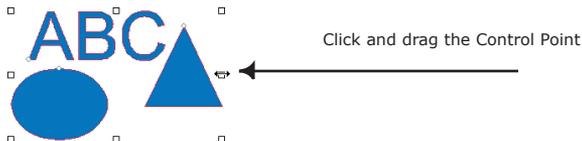
4. Click **Apply**.

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

#### Resizing by Dragging Control Points

You can drag the **Scale** Control Points around an object or group of objects to resize.

1. Select the objects.
2. Position the cursor on a Scale Control Point.



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3. Click and drag the Scale Control Point.

- **CTRL** key while dragging uses the center line of the objects as a stationary point.
- **SHIFT** key while dragging scales not proportionally.



Normal dragging



Dragging with **SHIFT** key pressed



Dragging with **CTRL** key pressed

## Moving Objects

You can move objects using one of the following methods:

### Moving Objects by Dragging

1. Select the objects.
2. Place the cursor over the object.

When the **Show Fills** is disabled, placing the cursor inside the object does not change to move mode. You must place the cursor over the outline of the object.

3. Click and drag to move the object to a new position.
- **CTRL** key while dragging creates a copy of the original object.
  - **SHIFT** key while dragging constrains 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 **Size** Tab.

2. Adjust the **X, Y** values in DesignCentral.



New horizontal position of the selected objects.



New 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

Use DesignCentral to rotate objects to a precise numeric value.

1. Select the objects.
2. From the **Arrange** menu, select **Rotate** command.
3. Adjust the values in DesignCentral.



New angle of selected objects.



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 p point.

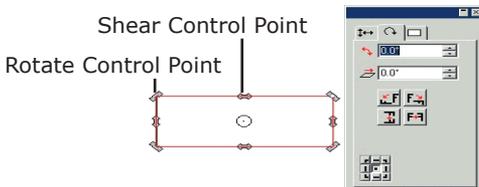
4. Click **Apply**.

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

## Rotating and Shearing Dragging Control Points

You can drag the **Rotate** and **Shear** control points around an object or a group of objects to rotate or shear them.

1. Select the objects.
2. Click **Rotate** Tab in DesignCentral.
3. Adjust the **stationary point** either by selecting one point in DesignCentral point grid, or clicking and dragging the stationary point. Holding the **CTRL** key while dragging the stationary point moves to a point of the point grid.



4. Position the cursor on a **Rotate** or **Shear** control point.
5. Click and drag the control point.

**Software Version Key:**

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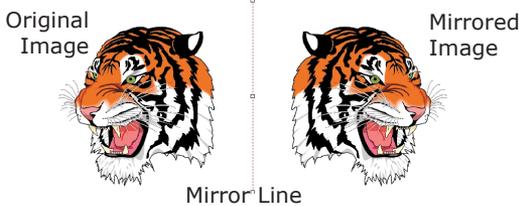
- Hold the **Ctrl** key while dragging to create a copy of the original object.
- Hold the **Shift** key while dragging to constrain the rotation or shear angle to increments of 45 degrees.

## Creating Mirrored Objects

Use the Mirror command when you want to create mirrored objects that are separated by a specific distance.

1. Select the objects.
2. From the **Arrange** menu, select **Mirror** command.

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



3. Adjust the **Distance** in DesignCentral. This value is the total distance separating the original and mirrored image. Check **Keep Original** to create a copy of the original image.

You can also click and drag the control point in the middle of the Mirror Line to adjust the distance. Click and drag a point located at Mirror Line's end to adjust the angle. **SHIFT** key constrains the angle while dragging.

4. Click **Apply**.

## Deskewing Objects

Sometimes a scanned image is slanted because the original image was not properly positioned on the scanner. To make the image horizontal or vertical, use the Deskew command.

The Deskew command 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*



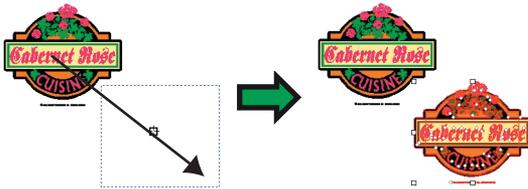
*Deskewed image*

## Duplicating Objects

There are several ways to duplicate an object:

### Duplicating Objects by Dragging

The easiest and fastest way to create one copy of the object, select the object and drag with **CTRL** key pressed. **SHIFT** key while dragging restrains the position of the copy.



Click and Drag with CTRL key pressed

### Duplicating Objects Using Copy and Paste

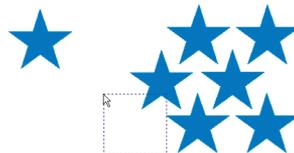
This method is recommended when you want to make several copies in different places.

1. Select the objects.
2. From the **Edit** menu, select **Copy** command or press **CTRL + C**.
3. From the **Edit** menu, select **Paste** command or press **CTRL + V**.
4. Move the cursor to position the copy and click.

Click **TAB** key changes the cursor position in the bounding box. **ESC** key exits the paste process. **ENTER** to place the copy.



Copy the object ...



... And Paste

Sometimes you want to create copies with a specific distance from the original object. In this case, you must change the preferences first:

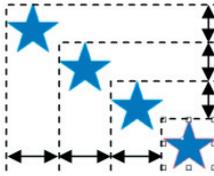
1. From the **Edit** menu, select **Preferences**.
2. Select **Tools** Tab.
3. Select **Paste** tool from the list on left side of dialog box.
4. Check **Auto-place on paste and import** option.
5. Set the distance where the copies will be posted from original object.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

Once the preferences are set:

6. Select the objects.
7. From the Edit menu, select Copy command or press CTRL + C.
8. From the Edit menu, select Paste command or press CTRL + V.



Copy the object ...

... And Paste

## Duplicating Objects Using Paste Special

In Windows, you can use the Paste Special feature. Paste Special allows you to select the format of pasted data.

To use the Paste Special:

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 the Duplicate Command

1. Select the objects.
2. From the **Edit** menu, select **Duplicate**.

## Duplicating Objects Using DesignEditor

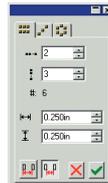
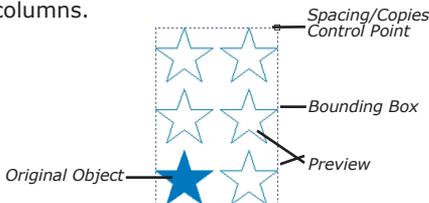
To copy objects using DesignEditor, see "Changing Objects Order" on page 51.

## Duplicating Objects Using the Step and Repeat Command (E, M, P)

Use Step and Repeat command to create multiple copies of objects in a precise position and arrangement.

You have the following patterns to select from:

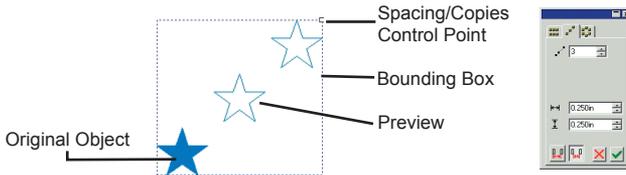
- **Block pattern**, with all copies aligned in a specified set of rows and columns.



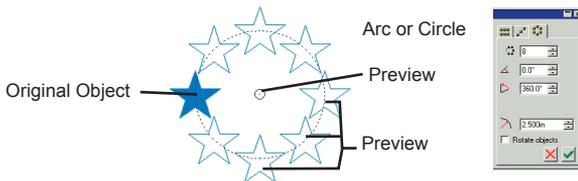
**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

- **Diagonal pattern**, with all copies aligned in a diagonal line.



- **Circular pattern**, with all copies aligned over an arc.



1. Select the objects.
2. From the **Arrange** menu, select **Step and Repeat** command.
3. Select the proper Tab in DesignCentral.
4. The following values can be adjusted in DesignCentral:



Number of horizontal copies.



Number of vertical copies.



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.



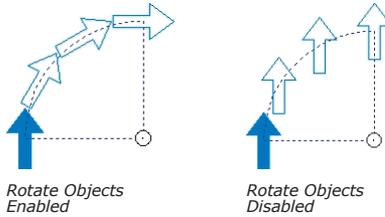
The portion of the circle where the copies are distributed.



Radius of the circle where the copies are distributed.

### Rotate Objects

Specifies whether or not to rotate the copies on the arc.



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

- Drag the point to adjust the number of copies, keeping the spacing unchanged
- **SHIFT** key while dragging adjusts the spacing, keeping the number of copies unchanged.

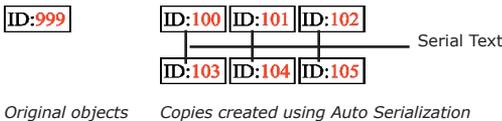
You can control the copies in **Circular** pattern by dragging the Center control point.

- Drag the point to adjust the Angle and the Radius.
- **SHIFT** key while dragging adjusts the Radius, keeping the Angle value unchanged.

5. Click **Apply**.

## Working with Auto Serialization (P)

Serialization allows you to create multiple copies of objects. However, It is different from Step and Repeat, since each copy will have a **Serial Text**, which is a text following a sequential numbering.



To Auto Serialize:

1. Select the objects.
  - At least one of the objects must be text.
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.

*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

3. Select the text to be replaced. You can select multiple items.
4. Adjust the parameters:
  - Number of Copies** The number of copies to be created.
  - Copies in a row** The number of copies that will be placed in a row.
  - Horizontal spacing** Horizontal spacing between copies.
  - Vertical spacing** Vertical spacing between objects.
5. If you have a Tab delimited file, select it.
6. Click **Next**.
7. To manually edit the fields, select the field and then type the new text in **Edit Text field**.
8. To use sequential data, select one field and then click **Serialization**.

Adjust the parameters:

<b>Numeric</b>	The serialized text will be a numeric value.
<b>Character</b>	The serialized text will be a regular text. The serialization will be performed starting from the rightmost character.
<b>Start</b>	Starting value. This value must be in accordance with above selection (Numeric or Character).
<b>Increment</b>	The increment in the serial text.

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

## 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.

1. Select the objects.
2. From the **Arrange** menu, point to **Group** and then select **Group** command.

To release the last grouped objects.

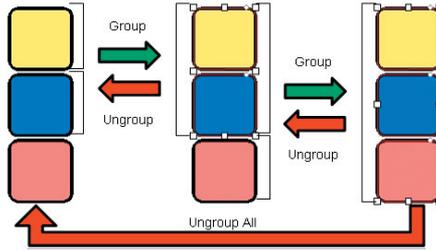
1. Select the grouped objects.
2. From the **Arrange** menu, point to **Group** and then select **Ungroup** command

To release all grouped objects

1. Select the grouped objects.
2. From the **Arrange** menu, point to **Group** and then select **Ungroup All** command.

**Software Version Key:**

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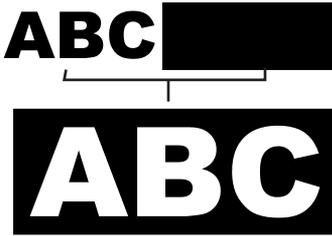


## Compounding Objects

Compounding lets you view overlapping objects exactly as they will appear when cut. When you want to create a hole through an object, use the Compound feature.

ABC

One way to create the sign on the left is to place white text over a black rectangle. That would use two colors of vinyl. You can achieve the same results using the compound command and use only one type of vinyl.



Compounded objects are treated as a single object.

Another example of using a compound:



To compound objects:

1. Select the objects.
2. From the **Arrange** menu, point to **Compound** and then select **Compound** command.

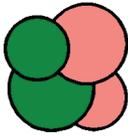
If objects with different colors are selected, the compound object will have the color of the topmost object.

To compound objects based on their color:

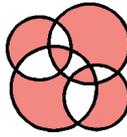
*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

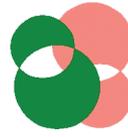
- From the **Arrange** menu, point to **Compound** and then select **Compound by Color** command.
- Objects compounded by color are converted to outlines.



*Original objects*



*Normal compound*



*Compound by color*

Multiple levels of compounds can be made.

To release the last compound:

1. Select the compounded object.
2. From the **Arrange** menu, point to **Compound** and then select **Uncompound** command.

## **Masking Objects (P)**

*Masking* is the process of clipping objects, vector or bitmap objects to a shape of a vector object. A mask can be described as a window that you look through to see the objects beneath it. Everything outside the mask will be hidden.

The topmost object is the mask. If you want to use more than one object as a mask, you must group them first.

- A bitmap object that has been masked cannot be traced. Before tracing the bitmap, it must be unmasked.

To create a mask:

1. Select the objects. The topmost object will be used as a mask
2. From the **Arrange** menu, point to **Mask** and then select **Mask** command.



*The Mask (ABC) and the bitmap that will be masked. The masked image*

Unmasking objects will return the objects to its original shape and size.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

To unmask objects:

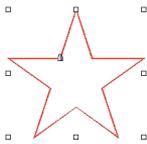
1. Select the masked object.
2. From the **Arrange** menu, point to **Mask** and then select **Unmask** command.

## Locking Objects (M, P)

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

1. Select the objects.
2. From the **Arrange** menu, point to Lock and then select **Lock** command.

A padlock displays on the object.



In some cases, the padlock is placed in a corner and when you select the object, 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 126 about how to change the starting point.

*Locked object with a Padlock symbol*

To release the lock in a object:

1. Select the objects.
- \* The only way to select locked objects is to click each of them with the **Select** tool.
2. From the **Arrange** menu, point to Lock and then select **Unlock** command.

## Changing Object Order

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

You can change the object's order in the stack:

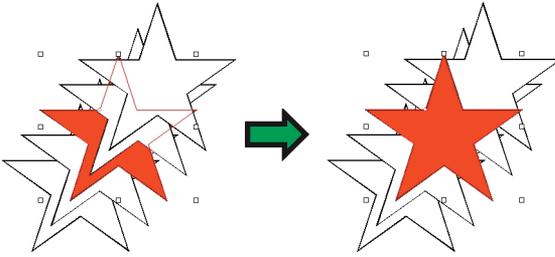
1. Select the objects.
2. From the **Arrange** menu, point to **Order** and then select the new position in the stack.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

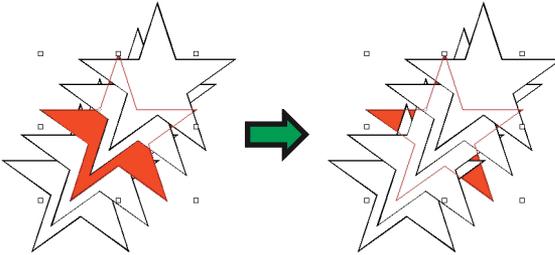
**To Front**

Moves the selection to the top of the stack, in front of all other objects.



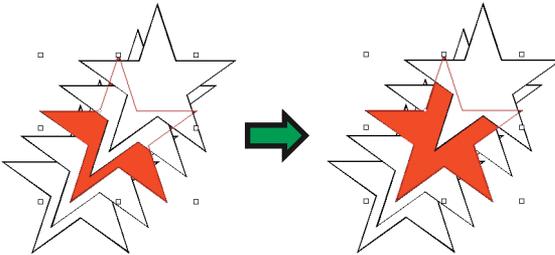
**To Back**

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



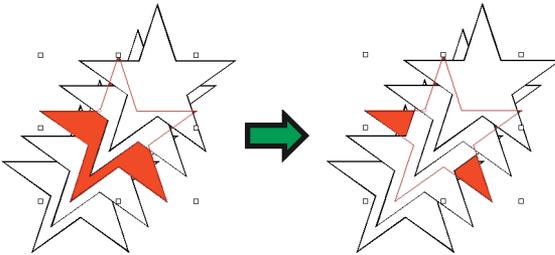
**Forward One**

Moves the selection one position up in the stack.



**Back One**

Moves the selection one position down in the stack.



**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

You can also change the order, dragging the object in DesignEditor - Object Tab, see "Changing Objects Order" on page 43 for more details.

## Aligning Objects (E,M, P)

Align allows you to align objects in relation to one of the objects, or to align objects to the design area.

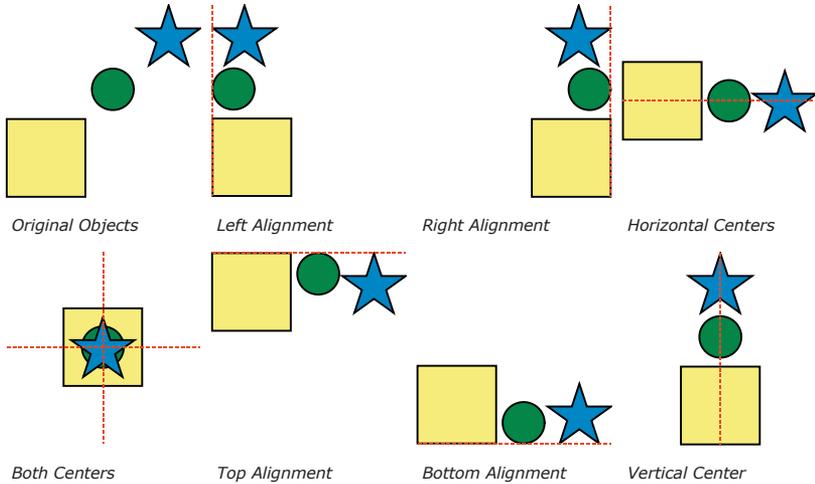
To align objects to another object:

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 with **SHIFT** key pressed, the first selected object is used as **Stationary Object**.

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

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



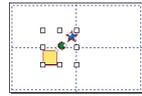
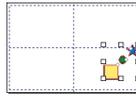
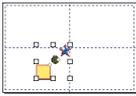
To align objects to the design area:

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

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

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**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

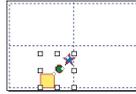
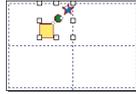
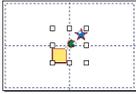


*Original Objects*

*Left Alignment*

*Right Alignment*

*Horizontal Centers*



*Both Centers*

*Top Alignment*

*Bottom Alignment*

*Vertical Center*

## Distributing Objects (P)

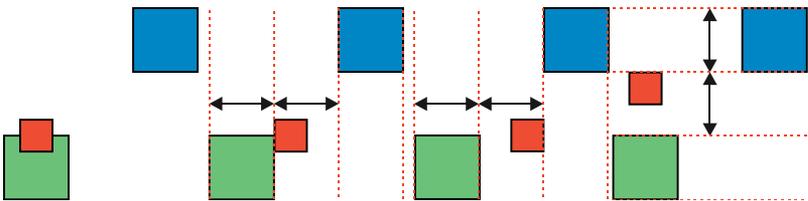
Your software allows you to adjust the spacing and position of the objects using the following methods:

- \* Distribute objects
- \* Distribute objects to design area
- \* Spacing
- \* Nesting

## Distributing Objects

To distribute objects:

1. Select the objects.
2. From the **Arrange** menu, point to **Distribute** and select how the distribution will be done.

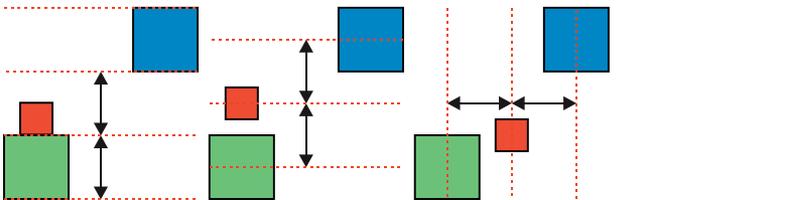


*Original Objects*

*Left Edge*

*Right Edge*

*Top Edge*



*Bottom Edge*

*Horizontal Center*

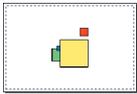
*Vertical Center*

## Distributing Objects to the Design Area

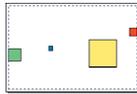
To distribute objects to the design area:

1. Select the objects.
2. From the **Arrange** menu, point to **Distribute** and then select how the distribution will be done.

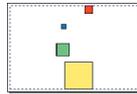
In a **Left Edge to Page** distribution, the leftmost object is moved to a position that touches the left margin, the rightmost object is moved to the right margin and all objects between them are spread keeping the distance between Left Edges equal.



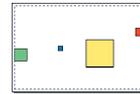
Original Objects



Left Edge to Page



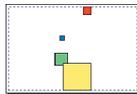
Top Edge to Page



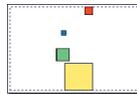
Horizontal Center to Page



Right Edge to Page



Bottom Edge to Page



Vertical Center to Page

## Spacing Objects (E, M, P)

The Spacing command 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 with **SHIFT** key pressed, the first selected object is used as **Stationary Object**.

2. From the **Arrange** menu, select **Spacing** command.
3. Adjust the following values in DesignCentral:



Space between adjacent objects.



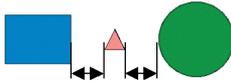
Defines if selected objects will be distributed in a horizontal or vertical direction.



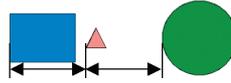
Distance will be measured from the right (top) side of one object to the left (bottom) side of the next object.



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**.

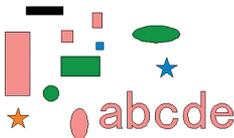
## Nesting Objects (P)

Nesting distributes objects over a specified area, optimizing the material.

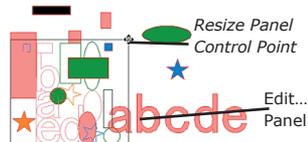
1. Select the objects.
2. From the **Arrange** menu, select **Nest**.
3. Adjust the values in DesignCentral:

	Select the color of the objects that will be nested. If you want to nest all objects, regardless of their color, select All Colors.
	Height of the panel, where the selected objects will be distributed.
	Width of the panel, where the selected objects will be distributed.
	Distance between objects after the nesting.
<p><b>Break text</b></p>	When this option is checked, all text will be separated into individual characters and save more material.
<p><b>Free rotate</b></p>	When this option is checked, the objects will be rotated to increase the compression ratio and save more material.
<p><b>Compress Ratio</b></p>	Displays the compression achieved by nesting the objects.

- 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.



Original objects in their original position



Dragging the **Resize Panel Control Point**

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**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



*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*

## Snapping Objects

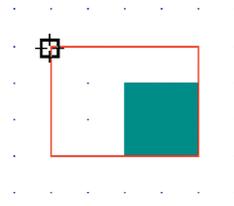
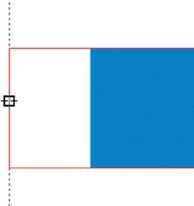
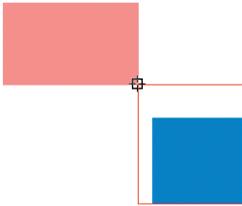
You can activate the snap feature and then create, edit and move shapes to precise locations.

There are five types of snapping:

- \* Snap to Point
- \* Snap to Grid
- \* Snap to Guide
- \* Snap to Edge
- \* Snap to Intersection
- \* Snap to Center of Gravity

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

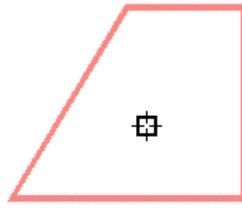
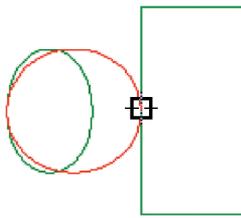
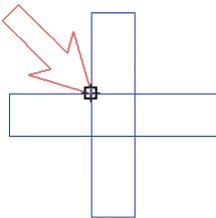
Some examples of snap:



*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 the **BACKSPACE** or **DELETE** key, or from the **Edit** menu, select **Clear**.

The object will be deleted, but will not be entirely removed from your document. When you delete an object, the deleted object will be placed in a Trash Layer.

**Software Version Key:**

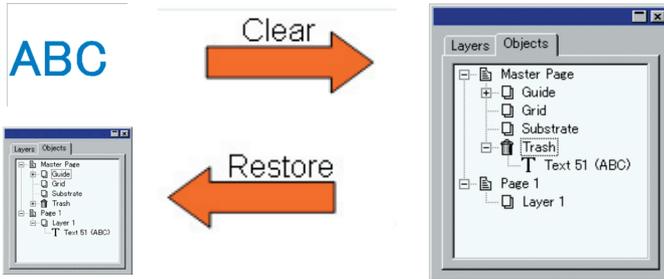
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

To completely remove objects from your document, without moving them to the Trash Layer:

1. Select the objects.
2. From the **Edit** menu, select **Cut**.

To restore objects from the Trash Layer:

1. Select the objects in DesignEditor.
2. From the Edit menu, point to Trash Can and then select Recover.



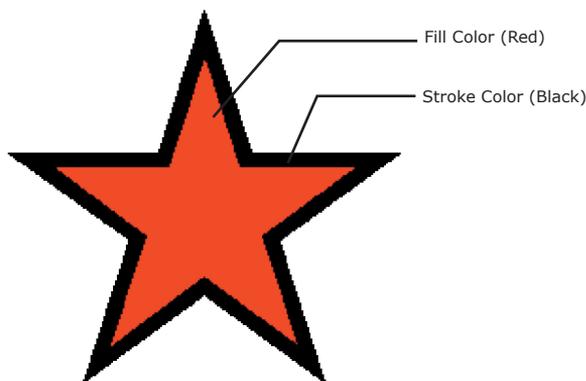
To remove all objects from the Trash Layer:

- From the **Edit** menu, point to the **Trash Can** and then select **Empty Trash**.

## 8. Working with Color

Your software provides you with an array of powerful tools for applying color. In this section, you'll learn how to apply color to an element in your design.

Each object in your design can have a **Fill color** and **Stroke color**.



The Fill Color can be a **Solid Color**, **Pattern** or **Gradient**.



*Solid*



*Pattern*



*Gradient*

### Available Color Models

Colors can be defined using the following models:

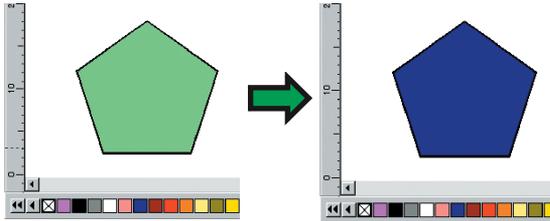
- RGB** The color is expressed as a combination of red, green and blue values. This is the color model most commonly used for computer graphics.
- CMYK** The color is expressed as a combination of cyan, magenta, yellow and black values. This is the color model most commonly used in color printing.
- 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.

## Applying Colors From the Swatch Table

You can apply colors to a design element using the Swatch Table.

1. Select the objects.
2. Select the desired color in the Swatch Table. Hold down the CTRL key to apply the color to the object's stroke.

You can also apply colors by clicking and dragging directly from the Swatch Table.



When you click and drag the cursor into the object in the design area, 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.

The swatches 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



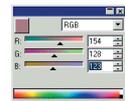
Duotone Color



## 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 an object, 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.

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:

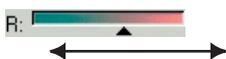
- Enter the numerical values or click the up / down arrows on the right

### Software Version Key:

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side of the numerical field.

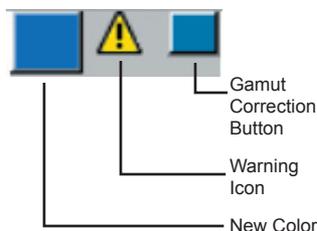
- Click and drag the channel sliders.



- 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.



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.

## Applying Colors Using the Eyedropper (P)

Another way to apply color is with the Eyedropper tool.

1. Select the objects.
  2. Click **Eyedropper**. 
  3. Move the cursor over the object or bitmap with the color that you want the selected object to be and click.
- CTRL key applies the color to the selected object's stroke. You may use the same method to apply patterns and gradients.
  - To select a particular color from a pattern or gradient, follow the previous steps, but hold down the **SHIFT** key while you select the color.

## 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.



To change the default Fill / Stroke colors:

1. Click an empty area on the document.
2. Drag the desired color from Color Swatch or Color Mixer into the default

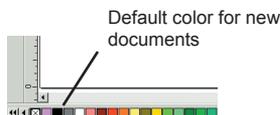
### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

Fill / Stroke color indicator at lower right corner of the design area.

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

To set the default fill color for all documents created in the software, drag the desired color to the leftmost position, just after the transparent color.



## 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.

## Working with the Swatch Table

Swatch Tables (\*.swt) include a group of standard colors, gradients and patterns that can be applied to objects in your design.



To display the Swatch Table, from the **View** menu, select **Swatch Table**.

The Swatch Table can be moved to a different location or resized by clicking and dragging. If necessary, use the scroll arrows to view other colors in the palette.



A double click in the title bar returns the Swatch Table to its original position.

You can view the Swatch Table as a list, showing additional properties for each color.

1. Drag the Swatch Table to the design area, making it a floating palette.
2. Right-click the Swatch Table and point to **List View**.
3. To return to the Palette view, point to **Palette View** in the same menu.

As default, the Swatch Table shows all colors, gradients and patterns available. To select one type of fill to be displayed in the Swatch Table, right-click the Swatch Table and point to **Show**, and then click the Fill type (**All**, **Color**, **Pattern** or **Gradient**).

## Creating New Swatch Tables (P)

You can build custom Swatch Tables that contain only the colors that you specify. To create a custom Swatch Table:

- From the **View** menu, point to **Color** and then select **New Table** command.

### Software Version Key:

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

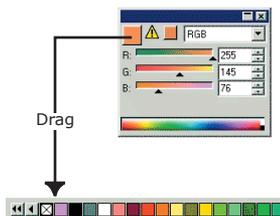
The new palette, which contains only one color (Transparent), replaces the current palette.

You can add colors to the palette in a number of ways:

- Click and drag colors from the Color Mixer.
- Add new set of colors from Color Libraries.
- Merge colors from the document.
- Create a pattern based on the objects from your document.
- Using the Color Specs dialog box.

## Adding New Colors Using the Color Mixer

1. Open the Color Mixer dialog box.
2. Create the new color that will be added. See “Applying Colors Using the Color Mixer” on page 69 for more information.
3. Click the color patch and drag to the palette. You can place the color at any location on the palette.



## Adding New Colors Using Color Specs

1. Open the Color Specs dialog box.
2. Create a new color or add from an existing Color Library. See “Using Color Specs” on page 74 for more information about the Color Specs.

## Adding New Colors From Color Libraries

1. From the **View** menu, point to **Color** and then select **Open Table** or **Import Table** command.

If you select **Open Table** or **Load Table**, all colors in the Swatch Table are replaced by the colors from the Color Library. If you select **Import Table** or **Merge Table**, the colors from the Color Library are added to the existing Color Swatch.

2. Select the Color Library file.
  - More Color Libraries can be found in Swatch folder.
3. Click **Open** button.

All colors from selected Color Library are added to the Color Swatch.

You can also add colors from a Color Library using the Color Spec - see “Color Specs - Library Tab” on page 74 for more details.

## Merging Used Colors From a Document into the Swatch Table

If you’ve created a number of custom colors, but have not added them to the palette, you can use the Merge From Document command. The document will be scanned and all of the colors found will be added to the Swatch Table.

*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

If your document has gradient fills, they will also be added.

- From the **View** menu, point to **Color** and then select **Merge from Document** command.

## Adding and Creating New Patterns

1. Select the objects.
  - You can also create patterns from bitmaps.
2. From the **View** menu, point to **Color** and then select **Define Pattern** command.

The new pattern is added to the palette. To edit the pattern after you have created, double-click on it, and edit it from the "Advanced Settings" dialog box.

## Saving Swatch Tables

Swatch Table palettes are stored as files, and they can be saved like any other file.

- From the **View** menu, point to **Color** and then select Save Table or **Save Table As** command

## Merging Similar Colors

You can merge colors in Swatch Table that have different names but the same color values.

- From the View menu, point to Color and then select **Merge Similar Colors** command.

## Deleting Colors From the Swatch Table

You can delete undesired colors from the Swatch Table:

1. Move the mouse cursor over the color you want to delete in the Swatch Table.
2. Right-click the Swatch Table and point to **Delete** command.
  - 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 76 for more details.

## Changing Color Order in the Swatch Table

There are several ways to change the color position in the Swatch Table

- Click and drag the color over the Swatch Table



- Using the **Color Specs** dialog box. See "Changing The Order of Colors Using Color Specs" on page 76 for more details.

### Software Version Key:

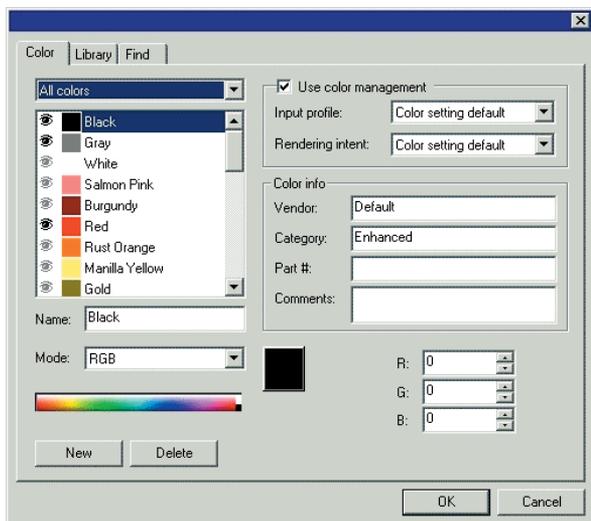
(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

- Right-click the Swatch Table and point to Sort command. You can sort the Swatch Table by Name, RGB / HSV values, Vendor, Type or Part #.

## Using Color Specs

Color Specs dialog box is used to define all properties about colors. To view the Color Specs dialog box, do one of the following:

- Double click one solid color on the Swatch Table.
- From the **View** menu, point to Color and then select **Color Specs** command.



## Color Specs - Color Tab

In the Color Specs - Color Tab dialog box you can set all the properties from 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:

- |                     |  |
|---------------------|--|
| <b>Swatch Table</b> | All colors defined in the present Swatch Table.                            |
| <b>Used colors</b>  | All colors used in your present document.                                  |
| <b>All colors</b>   | All colors from the Swatch table and also 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:

<b>Color Name</b>	The color name defined in the Swatch Table.
<b>Color Mode</b>	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 <b>Process Color</b>  <b>Spot Color</b>  <b>Duotone Color</b> 
<b>Color Values</b>	The color values for selected color. The parameters vary according to the color mode selected.
<b>Color Info</b>	The Vendor, Type, Part# and Comments defined in the Swatch Table.
<b>Use Color Management</b>	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. Change the color name and enter the values in **Color Info**.
3. Select the color mode from the list.
4. Adjust the new color:
  - Enter the numerical values or click the up / down arrows on the right side of the numerical field.
  - Click and drag the mouse over the color picker located at the bottom of the dialog box. When you locate the color you want, release the mouse button.



- Click the color swatch located on the right side of color mode field. The standard Color Setting dialog box is displayed.

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



## Deleting Colors Using Color Specs

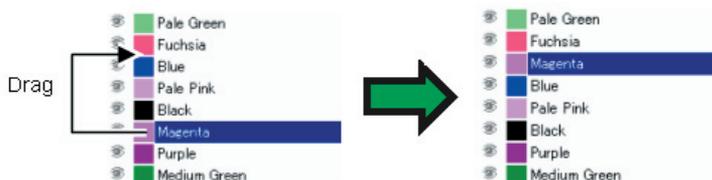
1. Select the color that you want to delete from the list.
2. Click **Delete**.

## Changing Colors Using Color Specs

1. Select the color that you want to change from the list.
2. Change the color name, mode or info and adjust the new color using the methods described in "Creating New Colors Using Color Specs" at page 75.

## 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 the Swatch Table and add colors from Color Libraries into the Swatch Table.

1. Select **Vendor** and **Type** from the list.
2. From the list on the right side, select the color that will be added to the Swatch Table and click **Add**.
- You can select multiple colors using **SHIFT** and **CTRL** keys.
3. To delete a color from the Swatch Table, select the color on the list and click **Delete**.

## 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.

1. Select the color that 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.
2. Select the **Vendors** and the **Types** from the list. Click at (□), located on the left side of the name to select it. Clicking on (⊕) expands the list and show all the Types for the vendor.



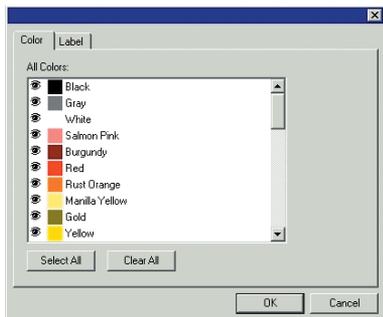
**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

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

The swatch table will appear in the lower left corner of the page.

## 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 an object is filled and its stroke.

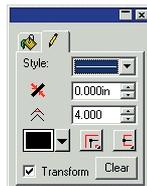
### Displaying Fill/Stroke Editor

The Fill/Stroke Editor consists of two screens: the **Fill Tab** and **Stroke Tab**.

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



Fill/Stroke Editor - Fill Tab

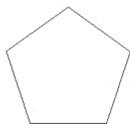


Fill/Stroke Editor - Stroke Tab

### Types of Fills

Vector objects can have the following types of fill:

- |                      |  |
|----------------------|--|
| <b>No Fill</b>       | The object has no fill.  |
| <b>Solid Fill</b>    | The object is filled with one solid color.   |
| <b>Pattern Fill</b>  | The object is filled with multiple copies of a pattern.  |
| <b>Gradient Fill</b> | 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.<br>For more information about how to set the object's fill, see "Working with Color" on page 68. |



No Fill



Solid Fill



Pattern Fill



Gradient Fill

#### Applying No Fill to an Object

To apply the No Fill fill type to an object:

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

#### Applying a Solid Fill to an Object

To apply a solid fill to an object:

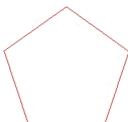
1. Select the object.
2. In the Fill/Stroke Editor, select **Solid Fill**.

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



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. For more information about the Color Spec dialog, see "Using Color Specs" on page 74.

You can also apply a solid fill by selecting the object and clicking on a solid colored swatch in the color palette.

## Applying a Pattern Fill to an Object (P)

To apply a pattern fill to an object:

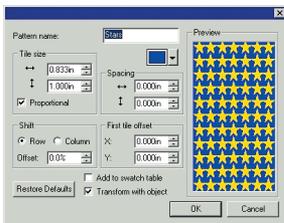
1. Select the object.
2. In the Fill/Stroke Editor, select **Pattern Fill**.



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.



The following parameters of the pattern can be adjusted in this dialog.

**Pattern Name**

Name of the pattern.



The background color.



Width of each pattern.



Height of each pattern.

**Proportional**

Check this option to assure that the pattern will be resized proportionally.



Amount of offset applied to each column or row.



Space between rows.



Space between columns.



Horizontal offset applied to the first tile.



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.

Click **OK** to save your changes.

## Applying a Gradient Fill to an Object (P)

To apply a gradient fill to an object:

1. Select the object.
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

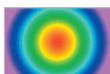
### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

following types are available:



Linear Gradient



Radial Gradient



Conical Gradient



Square Gradient

- b. Select the gradient color mode from the  list. The following 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.



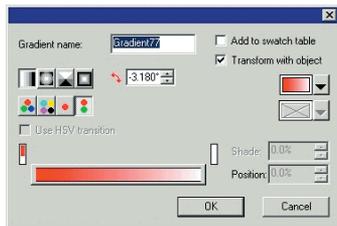
#### Double spot colors

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.

- c. Click  to edit the gradient using the Edit Line. See "Editing Gradients Using the Edit Line" on page 83 for details.
- d. Adjust the angle of the gradient in the  field.

## Advanced Options for Gradient Fill

When the **Advanced** button is clicked in Fill/Stroke Editor – Fill Tab for Gradient Fill, the Advanced Settings dialog will be displayed.



The following parameters of the gradient can be adjusted in this dialog.

#### Gradient Name

Name of the gradient.



Gradient Type.



The gradient angle.



The gradient being edited.



Color selected in gradient edit bar.



Position of the selected color in the gradient edit bar. The value can range from 0 to 100.

#### Add to Swatch Table

When this option is checked, the edited gradient will be added to the swatch table as a new gradient.

**Software Version Key:**

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- 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

## 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.

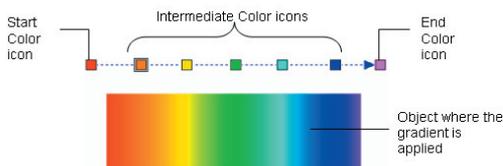


- Click any color icon in the Edit Bar to select it. In Advanced Settings dialog, you can change the color using the swatch on right side of the dialog.
- In the Fill/Stroke Editor – Fill Tab, you can change or create a new color in the gradient, dragging the new color from the swatch table to an existing color or in a blank space between colors.
- Click and drag the 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

When you click the **Edit Gradient** button in Fill/Stroke Editor – Fill Tab, a Gradient Editing Line will be displayed in the object where the gradient is applied.

- The Gradient Editing Line can be placed outside the object.



- 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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

- 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.

## Editing Stroke Properties of an Object

Fill/Stroke Editor – Stroke Tab displays the following vector object’s stroke properties.



Style of the stroke applied to the object.



The color applied to the stroke.



Stroke width.



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.

## 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.

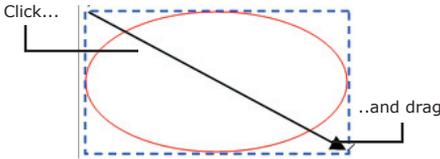
The following standard shapes are available in your software:



### 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.



The rectangle and the arrow are only for illustrative purposes and are not actually displayed while you create a shape.

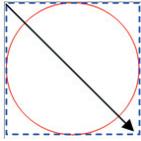
- For some shapes, holding the **SHIFT** and **CTRL** keys during dragging affects the shape creation. For more details see the description below about each shape.
3. Release the mouse button.
  4. Adjust the shape's properties from DesignCentral.
  5. If you want to add another shape with the same size, click again in the design area.

### Holding **SHIFT** or **CTRL** While Creating Rectangles and Ovals

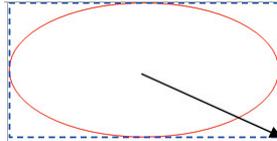
- Hold the **SHIFT** key down while dragging to constrain the rectangle or oval to a square or circle.
- Hold the **CTRL** key down while dragging to draw a rectangle or oval from its center.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



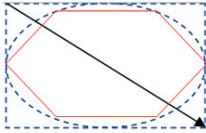
Dragging while holding the **SHIFT** key



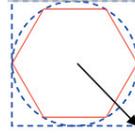
Dragging while holding the **CTRL** key

## Holding SHIFT or CTRL While Creating Polygons

- Hold the **SHIFT** key down to create an irregular polygon within a rectangle determined by the dragging position.
- Hold the **CTRL** key down to create a regular polygon with a horizontal base.



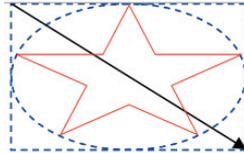
Dragging while holding the **SHIFT** key



Dragging while holding the **CTRL** key

## Holding SHIFT or CTRL While Creating Starbursts

- Hold the **SHIFT** key down to create an irregular starburst within a rectangle determined by the dragging position.
- Hold the **CTRL** key down to constrain the starburst to a vertical position.



Dragging while holding the **SHIFT** key

## Holding SHIFT or CTRL While Creating Fans and Arrows

- Hold the **SHIFT** key down to constrain the fan or arrow angle to certain values. The constrain angles can be set using the Preferences. See "Preferences - General Tab" on page 18 for more information.
- Hold the **CTRL** key down to create a fan or arrow from its center.

## Holding CTRL While Creating Advanced Borders and Parametric Shapes

Hold the **CTRL** key down while dragging 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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

For more details about how to resize, rotate, or mirror a shape, see "Arranging Objects" on page 49.

For each shape you have 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.



*Regular with Inner Border*



*Rounded without Inner Border*



*Inverted without Inner Border*



*Clipped with Inner Border*

*DesignCentral for Rectangle*

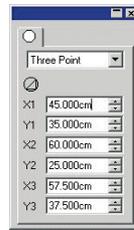
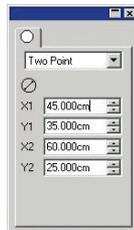
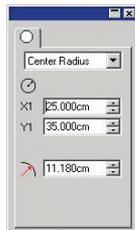
## Circles (M, P)

For Circles, you have the following modes, and for each of them you have different parameters that you can adjust:

**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.



*DesignCentral for Circle*

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

## 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 (P)

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

## Arrow (P)

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*

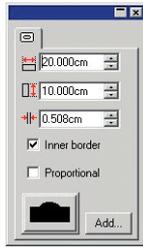
## Advanced Borders

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

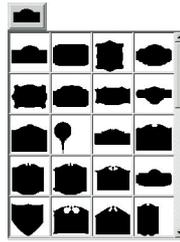
Click the button on left hand side of the **Add** button to show a list with all available border types. Click the **Proportional** check box to keep the border width and height ratio constant.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



*DesignCentral for Advanced Border*

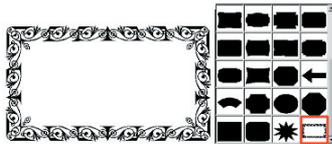


*Border Types*

You can create your own borders and then add them 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**.

The border is added to the list. To delete a border from the list, delete the file from "Border" folder.

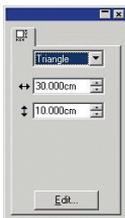


*Border List with a new custom border*

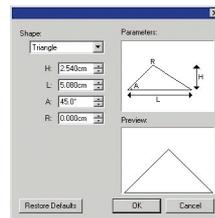
## Parametric Shapes (P)

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*



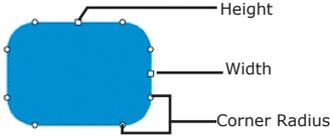
*Parameter editing dialog box*

## 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.

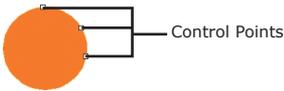


Hold the **SHIFT** key while dragging the Height or Width control points to resize proportionally.

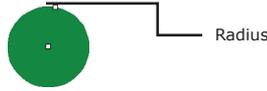
### Circle

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



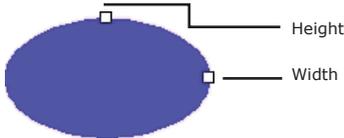
Creating a circle using the 3 point method



Creating a circle using Center and Radius method

### Oval

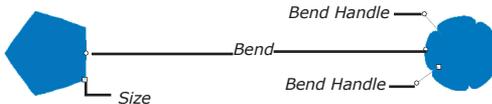
For ovals, you can drag the following control points.



Holding down the **SHIFT** key while dragging the Height or Width control points will 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 the **CTRL** key while dragging the Size control point to keep the polygon's position.
- Hold the **CTRL** key while dragging the Bend control point to restore the

**Software Version Key:**

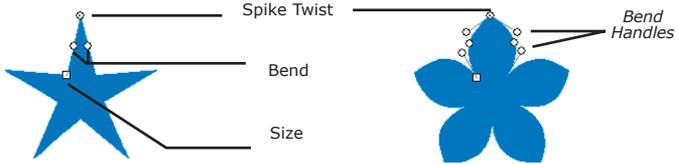
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

polygon to its original shape.

- Hold the **SHIFT** key while dragging the Bend handle to move the opposite handle in the same direction.
- Hold the **CTRL** key while dragging the Bend handle to keep the opposite handle stationary.

## Starburst

You can drag the following points on a Starburst:



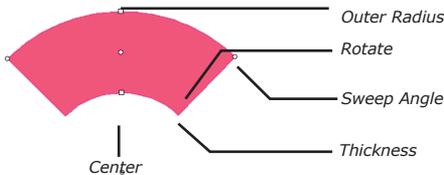
*Original Starburst*

*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

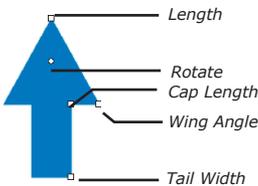
You can drag the following points on a Fan shape:



Hold the **SHIFT** key while dragging the Sweep Angle or Rotate control points to constrain the angle.

## Arrow

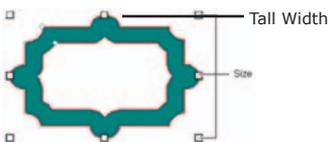
You can drag the following points on an Arrow shape:



Hold the **SHIFT** key while dragging the Rotate control point to constrain the angle.

## Advanced Border

You can drag the following points on an Advanced Border

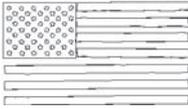


**Software Version Key:**

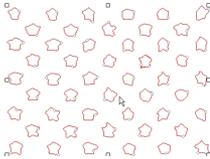
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

## Converting Objects to Shapes (P)

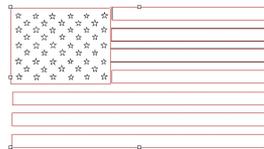
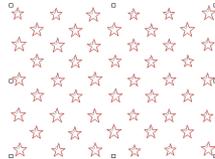
The Convert To Shape command is used to convert objects to shapes. You can quickly convert the traced artwork to the desired shape, then edit the shape.



Original artwork



Converting into Starbursts



Converting into Rectangles

To convert an object into a shape:

1. Select the objects.
2. From the **Arrange** menu, point to **Convert to Shape** and then 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 an example:



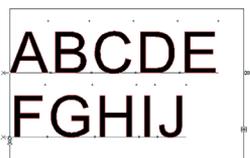
**Horizontal Text:** The text follows a straight horizontal line.



**Arc Text:** The text is placed over a circle.



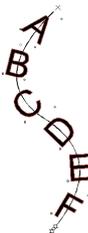
**Horizontal Path Text:** The horizontal text is placed over a path.



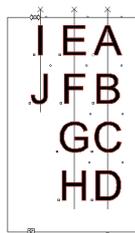
**Horizontal Block Text:** The text is restricted to the width of a block. When the text is wider than the block, it will automatically move to the next line.



**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 create text by using the tools located on the **Text** toolbar.

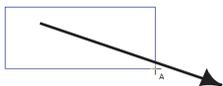
### Creating Horizontal/Vertical Text

1. Select Horizontal Text or Vertical Text tool.  
2. Click anywhere in the design area.
3. Type the text.  
*Lorem ipsum dolor*
4. If desired, hit **ENTER** to move to the next line.  
*Lorem ipsum dolor  
sit amet, consectetur*

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.  
2. Click and drag to create a block where the text will be confined.



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.

Lorem ipsum dolor sit  
 amet, consectetur.

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.  
2. Click on any existing path or shape in your design.



3. Type the text.

Lorem ipsum dolor.

4. Hit **ESC** or select a different tool to finish entering text.

## Creating Arc Text

1. Select **Arc Text** tool. 
2. 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 down the **CTRL** key while dragging 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

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- Holding down the **SHIFT** key while dragging restricts the **Starting Angle** to increments determined in Preferences (see "Preferences - General Tab" on page 18 for more details).
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.

## 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.



DesignCentral for Horizontal Text



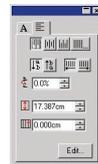
DesignCentral for Vertical Text



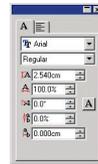
DesignCentral for Horizontal Block Text



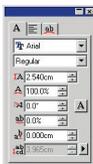
DesignCentral for Vertical Block Text



DesignCentral for Horizontal Path Text



DesignCentral for Vertical Path Text



DesignCentral for Arc Text



## Editing Attributes in DesignCentral

Some attributes in DesignCentral are common for all types of text, others are specific for one type.

The following attributes are available on the DesignCentral - Character Tab.



Character tab



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.

To change the fonts currently in use, select **Modify** from the font list. See "Modifying the Fonts in Use" page 112 for details.



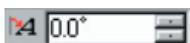
Height of the selected text.

The height is the height of a reference character (by default "X"). See "Text Preferences" on page 110 about how to change the reference character.



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 110 about how to change the display mode.



Slant of the selected text.



Orientation of the selected text. Click to rotate the characters 90 degrees.



Horizontal Text

Spacing between characters, also known as Tracking.



Vertical Text

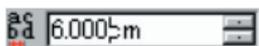
The tracking can be displayed in units (in, cm, mm...) or as a percentage. See "Text Preferences" on page 110 about how to change the display mode.

0.000 is the default value for the units mode. Wider spacing may be achieved by selecting positive values. The default value for percentage is 100%. Values above 100% will produce wider spacing.



Horizontal Text

Amount of spacing between lines of text



Vertical 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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

The following attributes are available in DesignCentral - Paragraph Tab:



Paragraph Tab



Click these buttons to justify the selected horizontal text to the left, center or right.



Horizontal Text

Click these buttons to fully justify the text by changing the character and word spacing, Word spacing only, Character width or Character size. You can also specify the paragraph width and if this setting will be applied to the last line of each paragraph.



Vertical Text



Click these buttons to justify the selected vertical text to the top, center or bottom.



Click these buttons to arrange the horizontal text from left to right, as in standard writing, or from right to left.



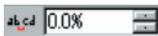
Click these buttons to arrange the vertical text from top to bottom or from bottom to top.



Click these buttons to select the order the lines of selected horizontal text in the paragraph top to bottom or bottom to top.



Click these buttons to select the order the lines of selected vertical text in the paragraph right to left or left to right.



Horizontal Text

Amount of spacing between words in the text.



Vertical Text

The word spacing can be displayed in units (in, cm, mm...) or as a percentage. See "Text Preferences" on page 110 about how to change the display mode



Click this button to display a dialog box where you can retype the selected text. The same dialog box will be displayed if the text is selected and you double click the text tool

The following attributes are available for horizontal and vertical block text only.



This field allows you to specify the width of the block where the horizontal text will be restricted.



This field allows you to specify the height of the block where the vertical text will be restricted.



This field allows you to specify the indent for the first line of the block text.

Horizontal Text



Vertical Text

The following attribute is available for horizontal and vertical path text only.

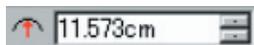


Click this button to move the text to the opposite side of the path.

The following attributes are available on the DesignCentral - Arc Tab and are available for Arc text only:



Arc Tab



Defines the radius of the circle where the text will be placed.



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.



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).

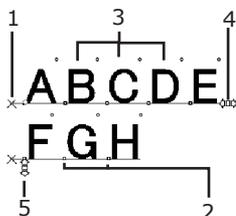
## Changing Text Attributes Using Control Points

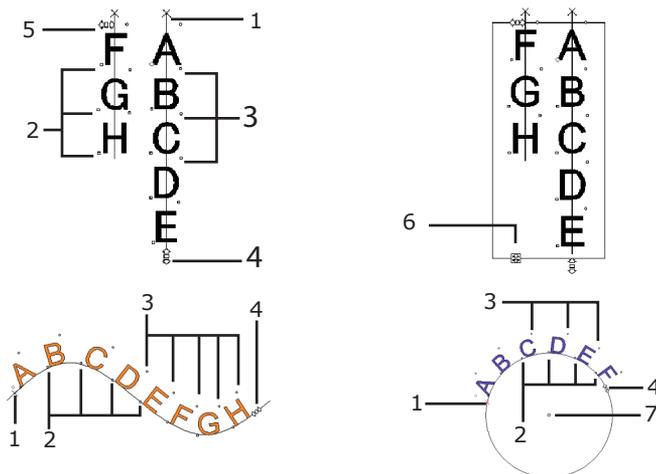
Most of the set DesignCentral properties may also be set manually. You can click and drag directly the Control Points on the text.

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, **CTRL** key while dragging moves only the selected line. For path and arc text, it will restore the text to its initial position.

For arc text, **SHIFT** key while dragging adjusts the vertical offset of the selected line. For all other types of text, **SHIFT** key while dragging moves 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.

**CTRL** key while dragging, moves only the selected character and leaves the remaining text in place. **SHIFT** key while dragging moves 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.

**SHIFT** key while dragging rotates the character in increments. See "Preferences - General Tab" on page 18 about how to set the increment angle. **CTRL** key while dragging restores 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.

**CTRL** key while dragging, changes 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. **SHIFT** key while dragging limits the circle's position to specific positions.

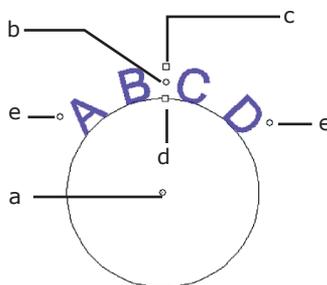
When the Arc Tab is selected, you will see an extra set of control points that can be dragged:

##### ( 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. **CTRL** key while 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. **CTRL** key while dragging will not distort the text.

##### ( d ) Rotate

Drag this point to change the position of the arc text on the circle. **SHIFT** key while dragging constrains the position. See "Preferences - General Tab" on page 18 about how to set the constrain angles.

##### ( 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.

**SHIFT** key while dragging constrains the sweep angle. See "Preferences - General Tab" on page 18 about how to set the constrain angle.

**CTRL** key while dragging, both sides of the text moves at equal rate from the center point.

## Editing Text

In an existing text, you can enter a new text or replace existing words

1. Select any of the text tools.
2. Click on the text you want to edit.
3. To insert characters into the text, place the cursor in the desired location and begin typing.

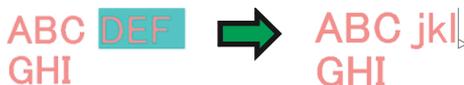


Use the arrow keys on your keyboard to move the cursor within the text.

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.

4. To replace part of the text, select the text you want to replace and type or paste in the text you want to replace it with.



- **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 clicking selects 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.

The baseline changes to the layer color (default is red).



All text selected



Second line selected



One character selected



Multiple characters selected

## Changing Text Attributes

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.

To change the font in existing text:

1. Select the text.
2. From the **Text** menu, point to **Font** and then 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.

To change the font and other attributes 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:



TrueType Fonts



Adobe Type 1  
Fonts



Casfonts



URW Fonts



## Changing Default Text Settings

All new text created uses the default font setting. To change the default font setting:

1. Make sure no text is selected.
2. Select the **Text** tool.
3. Choose the default settings from **Text** menu or in DesignCentral.

## Finding and Replacing (M, P)

Your software includes a standard dialog box for locating and replacing text. To find and replace 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 to replaces all occurrences of the specified text.

## Spell Checking (M, P)

Your software provides a spell checking tool in several languages to check your work.

1. From the **Text** menu, select **Check Spelling**.
  - From the **Language list**, select the language.
  - To spell check within a specific part of the text, select the text and then choose **Selection only** option.
  - Choose the Case Sensitive option to distinguish between upper and lower case.

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

2. Select the misspelled word from the **Misspelled words** list, and then:
  - \* Select the correct word from the **Suggested corrections** list or enter the correct word in the **Change to** field and then click **Change** or **Change All**.
  - \* Click **Ignore** or **Ignore All** to ignore the misspelled word.
  - \* Click **Add** to add the misspelled word to the custom dictionary. Click **Edit List** to edit your custom dictionary.
3. Click **Done** to end spell checking.

## Changing Case

To alter the case of text:

1. Select the text.
2. From the **Text** menu, point to **Case** and then select the desired capitalization from the menu. The following options are available:

<b>UPPER CASE</b>	All text is changed to capital letters.
<b>lower case</b>	All text is changed to lower case letters.
<b>Sentence case</b>	The first character of each sentence is changed to capital and the rest lower case.
<b>Title Case</b>	The first character of each word is changed to capital and the rest lower case.
<b>TOGGLE cASE</b>	Changes the lower case letters to capitals and vice versa.

## Changing Kerning (M, P, E)

Kerning is the space between characters of text. Kerning varies from font to font, and each font contains specific kerning information.

### Using Automatic Kerning

Your software contains several kerning setting options.

1. Select the text.
2. From the **Text** menu, point to **Kerning** and then select the desired kerning setting.

**ABCDEF ABCDEF ABCDEF**

Overlap

Touch

Narrow

**ABCDEF ABCDEF ABCDEF**

Medium

Wide

Default

## Using Manual Kerning

Sometimes you only need to adjust the kerning between a single set of characters.

To change the kerning of all text:

1. Select the text.
2. Change the value of the **Tracking** field on the DesignCentral - Character Tab.

To change the 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 (M, P)

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.

To define kerning for a specific set of characters:

1. Select the text.
2. From the **Text** menu, select **Default 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**

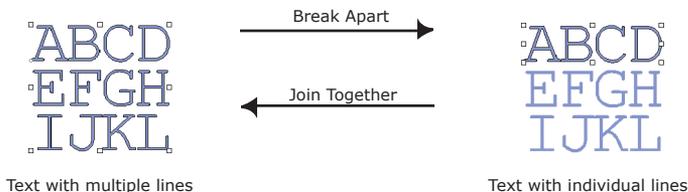
Kerning is used in all files.

In 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 "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.



To break 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.

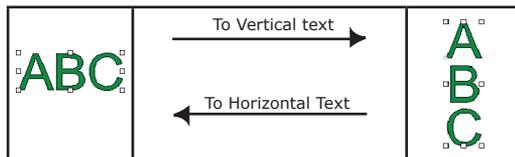
To join several lines:

1. Select the text blocks you would like to join.
2. From the **Text** menu, select **Join Together**.

## Changing Text Orientation

Changes vertical text to horizontal and vice-versa:

1. Select the text.
2. From the **Text** menu, point to **Text Orientation** and then select **Horizontal** or **Vertical** from the menu.



## Adjusting Text Block Size

To specify the text height and width:

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.

*Software Version Key:*

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- Text must have more than one line in order to change the text height.

## Working With Braille Text *(Optional on all versions)*

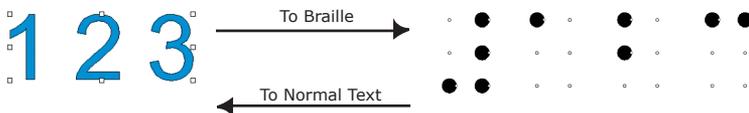
You can convert normal text into Braille Grade 1 or Braille Grade 2. Grade 1 is in full spelling and consists of the letters of the alphabet, punctuation, numbers, and a number of composition signs that are special to Braille. Duxbury Systems conversion is used for Grade 2 support that gives the highest quality Braille available. Braille can be spell checked, and even converted back to normal text to be edited. There is an option to omit the caps indicator and keep Braille in all lowercase that makes for more concise Braille. Dot Size can be specified to make Braille Photo-Polymer compatible.

### Converting Text to Braille

1. Select the text.
  2. From the **Text** menu, point to **Braille** and then select **Grade 1** or **Grade 2** from the menu.
- Once converted to Braille, the text can not be resized. Arc and Path text can not be converted to Braille.

### Converting Braille to Text

1. Select the **Braille** text.
2. From the **Text** menu, select **Braille** then **Braille to Text**.



### Braille Tab in DesignCentral

When Braille text is selected, DesignCentral displays the Braille Tab with the following attributes and commands:

<b>Grade 1 / Grade 2</b>	Changes the Braille coding.
<b>Lowercase Only</b>	Check to remove caps indicators.
<b>Show Empty Dots</b>	Check to show all the empty dots in your text when it is selected. Empty dots are not output.
<b>CA Standard</b>	Check to force the Braille coding to comply with the California Braille standard.
	The diameter of each dot.
<b>Edit</b>	Click this button to edit the original text.
<b>Convert to Text</b>	Click this button to convert Braille text back to normal text.

## Working With Special Characters

Sometimes you may need to insert a special symbol into your text.

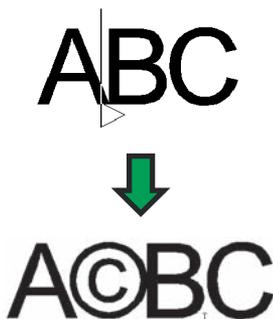
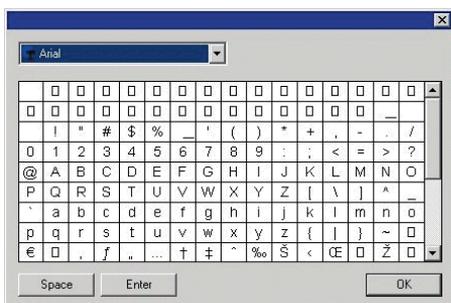
### Using Existing Fonts

If you have a font that contains a special character, you can use the following method to insert a special character:

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 (P)

You can convert paths and shapes into a new special character:

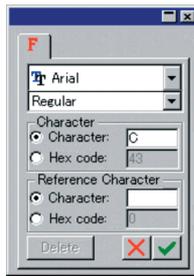
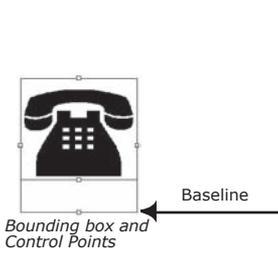
1. Select the path.
2. From the **Text** menu, select **Define Character**.
3. Select the font type and style where the new character will be added in **DesignCentral**.
4. Select the new character or character code in **Character**.
5. To size and position the character properly, specify a reference character in **Reference Character**.

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.

You can also click and drag the control points around the character to adjust the new character's position and size.

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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.

ABCDE

Using standard Arial font

AB☎DE

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.

To delete a custom character:

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 (P)

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 | * Leading          |
| * 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 then select **Copy Style**.
3. Select the text where the style will be applied.
4. From the **Text** menu, point to **Text Style** and then select **Paste Style**.

## Storing Styles in the Style List

1. Select the text.
2. From the **Text** menu, point to **Text Style** and then 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 then select **Apply Style**.
3. Select the style from the list.
4. Click **OK**.

## Text Preferences

To change the text preferences:

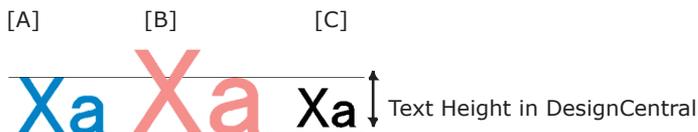
1. From the **Edit** menu, select **Preferences**.
2. Select **Tools** Tab.
3. Select **Text** tool from the list on left side of dialog box.

In **Text Preferences**, the following options are available:

- **Font Size** Your software bases the font height on a specific letter, measuring from the top of the letter to its baseline. 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.

You can also use default font sizes. This information is included in the description of each font. To use default font sizes, select the **Use font height** option.

In the example below text was selected and the same size was set in DesignCentral.



[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 above 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 Design

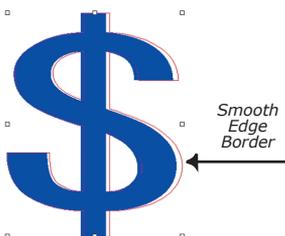
### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

Central 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.
- **Smooth edges of screen fonts** If you want your text to appear with smoother edges on the screen, check this option.



While **Smooth edges of screen fonts** option does make the characters appear smoother, it creates a discrepancy between the displayed size and the actual size of the characters.

Some characters show a red border when selected. This red border is the actual line that will be outputted.

## Working with Fonts

### Installing Fonts

In your software you can use TrueType, Adobe Type 1, FSfont, Casfonts and URW fonts.

### Installing TrueType Fonts

To install TrueType fonts, copy the font files into the operating system's **Fonts** directory. Consult your operating system documentation for details.

### Installing Adobe Type 1 Fonts

Under Windows 2000, XP and later operating systems, Adobe Type 1 support is built into the operating system. Consult your operating system documentation for details.

Under previous versions of Windows, you must install Adobe Type Manager® in order to use Adobe Type 1 fonts. Consult the Adobe documentation for details.

### Installing URW and Casfonts (*Optional on all versions*)

To install 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

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file name 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.

The following is an example of a **casfopen.lst** file:

```
[CAS Fonts]
Eng_Tulip4)=
Eng_G3act1s4)=
Eng_Palm=
Eng_Almond=
Eng_Script=

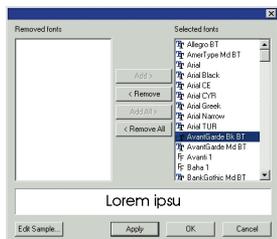
E Iris=
E Iris LZR=
E Normal Block 1 Line=
E Roman Double Line=
E Cursive 1 Line=

E DOUBLE LINE CONNECTING SCRIPT=
E 4 LINE HELVETICA=
E HELVETICA REGULAR 1983=
```

## 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**. The dialog will close and the font will be applied.

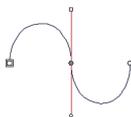
## 12. Working with Paths

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.

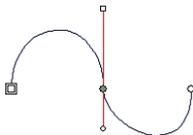
On curved segments, each anchor point displays **Direction Lines**, ending in **Direction Handles**. Their angle and the size determine the shape of the curve.

A Control Point located between two segments can be:

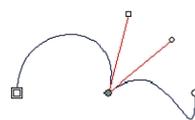
- Symmetric** The direction handles point in opposite directions along the same line and they have the same size.
- Smooth** The direction handles point in opposite directions along the same line but are not the same size.
- Cusp** The direction handles are not in the same line.



*Symmetric Control Points*



*Smooth Control Points*

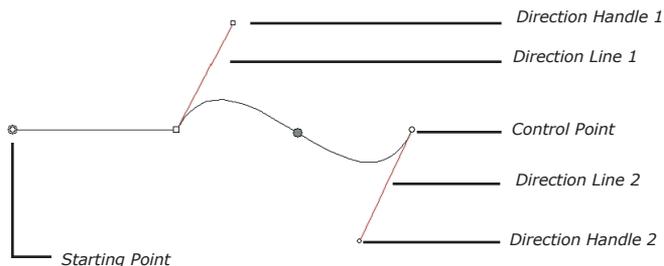


*Cusp Control Points*

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.



A curved segment is selected



## Creating Paths

You can create paths using the Bezier Path tool or the Freehand Path tool.

- 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 the **SHIFT** key 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 the **SHIFT** key while dragging to make the new point **Smooth**, or **CTRL** to make it a **Cusp**.
4. After releasing the mouse button, you can still adjust the Direction Lines, by dragging the Direction Handles. Hold the **SHIFT** key to change one Direction Line length and angle, while keeping the other Direction Line length unchanged. Hold the **CTRL** 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.

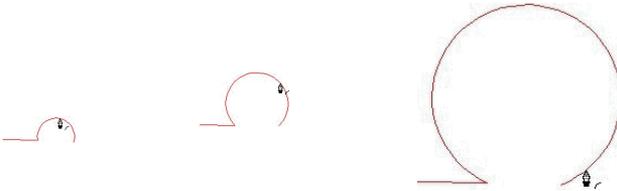
**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

- 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

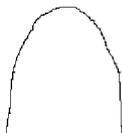
1. Select the **Bezier Path** tool. 
2. Click where the arc will begin in the drawing area.
3. Hold the **CTRL** key and click to mark the endpoint of the arc, then drag to describe the curvature of the arc. The curvature will increase or decrease so that the arc always intersects the cursor.



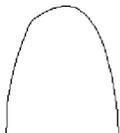
4. After releasing the mouse button, you can still adjust the Direction Lines, by dragging the Direction Handles. Hold the **SHIFT** key to change one Direction Line length and angle, while keeping the other Direction Line length unchanged. Hold the **CTRL** key to change one Direction Line length and 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

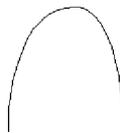
1. Select **Freehand Drawing** tool. 
2. Adjust the **Tolerance** in DesignCentral. The higher the tolerance value, the smoother the path becomes.



Tolerance = 0 pixels



Tolerance = 10 pixels



Tolerance = 20 pixels

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

- Click and drag to create the path. Hold the **SHIFT** key to create a straight line.
- While still creating the path, if you press **CTRL** key and drag back and erase the path that you just created.



Drawing a Freehand Path



Erasing a Path

- To close the path, place the cursor close to the starting point and click.

## Converting Objects into Paths

Converts objects such as shapes and text into paths.

- Select the objects.
  - From the **Arrange** menu, select **Convert to Outlines**.  
If the objects have a stroke around it, 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 Paths

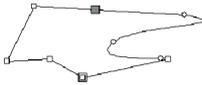
From the **Arrange** menu, select **Convert Stroke to Outlines**.

## Selecting Points and Segments

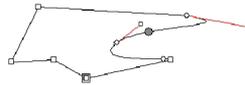
### Selecting Segments

- Choose the **Select Point** tool. 
- 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

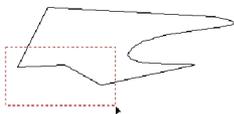
When a control point is selected, it displays a square, when the previous segment is a straight segment and a circle when the previous segment is curved.

Press the **TAB** key to move to the next point.

- Hold the **SHIFT** key 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.

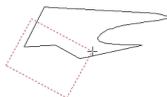


Multiple points selected

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.

To select points using an inclined bounding box:

1. Choose **Select Point** tool.
2. Hold the **CTRL** key and click and drag to define one edge of the bounding box.
3. Release the **CTRL** key and drag the cursor in a perpendicular direction to define the adjacent edge of the bounding box.
4. Release the mouse button.

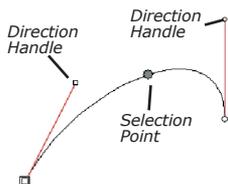


## Using DesignCentral to Edit Points and Segments

When a segment or point is selected, DesignCentral displays two tabs: The Path Tab and the Point Tab. 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

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

## Attributes in Path Tab



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.

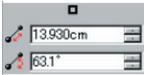


Inclination of selected segment. In a curve segment, this value is the angle of a straight line joining the two ends of the segment as shown on above illustration.

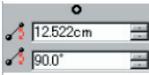
## Attributes in Point Tab



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**.

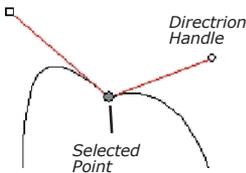


Length and angle of the Direction Handle marked with a **circle**.

## DesignCentral When a Control Point is Selected

When a Control Point is selected, DesignCentral shows all information about the selected point. Depending on the type of the point, some of the information below may not be available.

Direction Handle



Selected Point

Path Tab



Point Tab



## Attributes in Path Tab



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**.

## Path Direction

Every path has a direction associated with it. This direction is used when cutting. To see the path's direction, see "Showing Path Direction" on page 16.

To change the direction of a path:

1. Select the path.
2. From **Arrange** menu, point to **Path Direction** and then select the new direction.

### Automatic

The direction of inside paths (holes) in an object 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.*

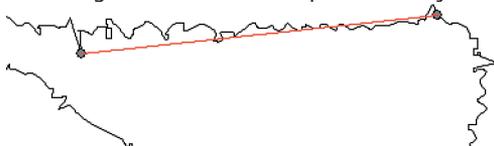
## Editing Path

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

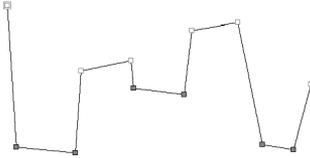
Use the Align Horizontal or Align Vertical tools when you want to align several points along a horizontal or vertical line.

**Software Version Key:**

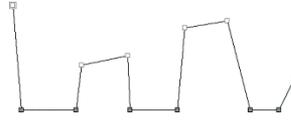
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

1. Select the points.
2. Select the **Align Horizontal** or **Align Vertical** tool. 

The points and segments are aligned.



*Selected points*



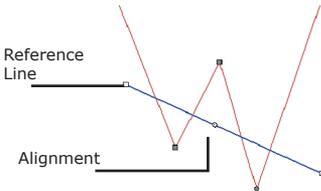
*Points aligned horizontally*

## 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. 

The alignment reference line appears.



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 and when **Vertical** is selected, the points moves vertically.

### Alignment Center Location

X and Y Coordinates of the Alignment Center, the circle located in the alignment reference line.

### Alignment Angle

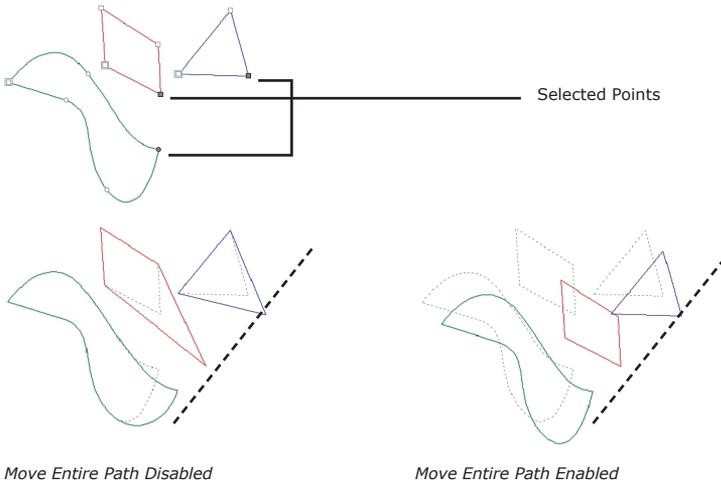
Angle of alignment reference line.

### Move Entire Path

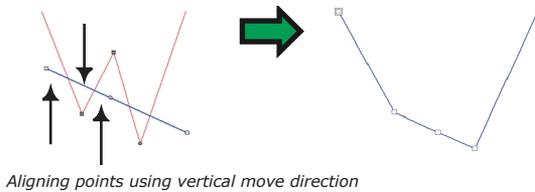
This option is only enabled if the selected points are in different paths. When this option is enabled, the entire path moves to the reference line.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



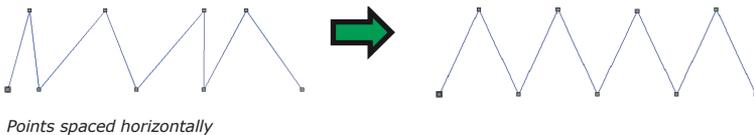
4. Click **Apply** or double click anywhere inside the design area.



## 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**.



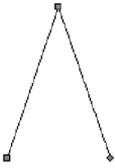
## Repeating Paths

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**.

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(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



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 press **CTRL** key 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

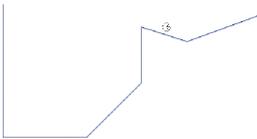
The length that will be applied to the segment. Click the button on right side to select a set of predefined factors.

### 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.

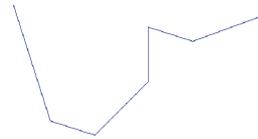
Press the **SHIFT** key to change the point that is used as a reference.



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.

To round one corner of a path:

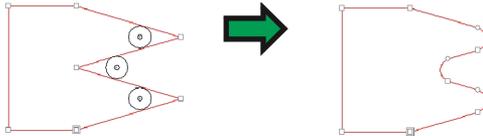
1. Select the **Round Corner** tool. 
2. When the cursor is over a sharp corner, click to select.
3. Click and drag the center of the circle to adjust the corner or enter the **Diameter** value in DesignCentral.
4. Click **Apply** or double click anywhere inside the design area.

To round multiple corners in a path:

*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

1. Use the **Select** tool to select a path and all its sharp corners, or the **Select Point** tool to select specific corners in a path.
2. Select the **Round Corner** tool. 
3. Click and drag the center of a circle to adjust the corners or enter the **Diameter** value in DesignCentral.
4. Click **Apply** or double click anywhere inside the design area.



## Sharpening Corners

The Sharpen Corner tool converts a round corner into a sharp corner.

1. Select the **Sharp 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 the **SHIFT** key while dragging 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.

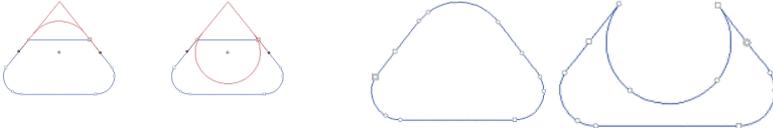
1. Select the **Optimize by Smooth Arc** tool. 
2. Click the point where the arc will begin.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

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.



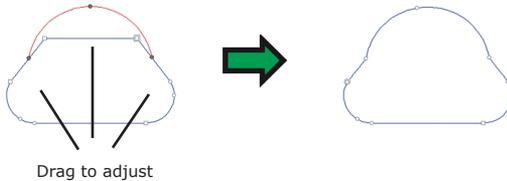
Press **TAB** to select the direction of the arc      Optimized path

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.

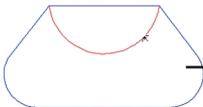
1. Select **Optimize by 3-Point Arc** tool. 
2. Click the point where the arc will begin.
3. Click the point where the arc will end.
4. Drag the start, end and the third control point in the arc to adjust the shape of the arc. Press the **TAB** key to change the arc position.
5. Click **Apply** or double click anywhere inside the design area.



## 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 the **SHIFT** key while dragging 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 unnecessary 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 pressing **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

You can break a path that crosses forming a loop:

1. Select the path.
2. From the **Arrange** menu, point to **Path Direction** and then select **Automatic**.



- This command converts every closed path to compounded outlines.

## 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.

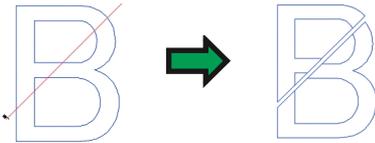
To change the starting point:

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.
  - **SHIFT** key while dragging moves 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.

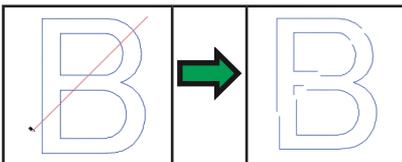
1. Select the **Cleaver Point** tool. 
2. Click and drag the cursor to create a cut line.
  - **SHIFT** key while dragging constrains the angle of the cut line



## Separating to Open Paths

The Scissor tool will separate paths; always creating **open** paths, regardless of the original path was an open or closed path.

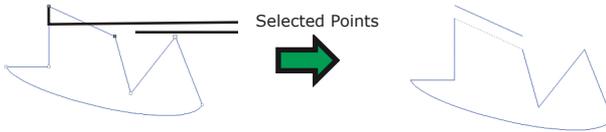
1. Select the **Scissors** tool. 
2. Click and drag the cursor to create a cut line or just click to split a path in one specific point.
  - **SHIFT** key while dragging constrains the angle of the cut line.



## Breaking Paths

Use this tool to separate paths at existing points.

1. Select the points.
2. Select the **Break Path** tool. 



You can also use the Break Path tool to cut one specific point in your **path**

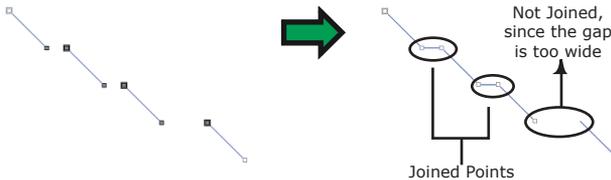
1. Select the Break Path tool. 
2. Click the cursor over the path.



## Joining Paths

Use this tool to join two points separated by a gap.

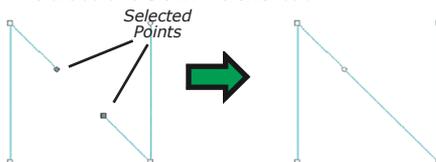
1. Select the points.
2. Select the **Join Path** tool. 
3. Adjust the **Tolerance** value in DesignCentral. Points that are separated beyond this distance are not joined.
4. Click **Apply** or double click anywhere inside the design area.



## Merging Paths with the Join Paths Tool

The Join Paths tool can also be used to merge two paths into one:

1. Using the **Select Point** tool, select the nearest end points of each of the paths.
2. Select the **Join Paths** tool.



## Converting Corners to Right Angle

Use this tool to make right angles.

To make one sharp corner a right angle corner.

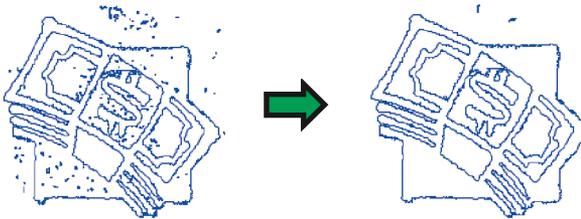
1. Select the corner or segments. 
  - If you select a segment, all sharp corners in the path will be converted to right angle corners.
2. Select the **Make Right Angle** tool.



## Removing Tiny Objects

This tool allows you to remove small objects. This tool is especially good 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 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 color 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.

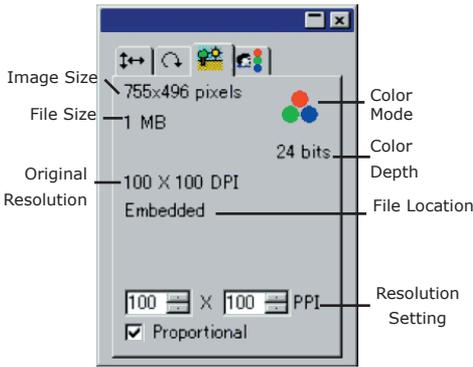
#### Profile Tab

On this screen you can specify the **Input profile** and the **Rendering intent** that will be used as a settings to print this particular bitmap. You can have

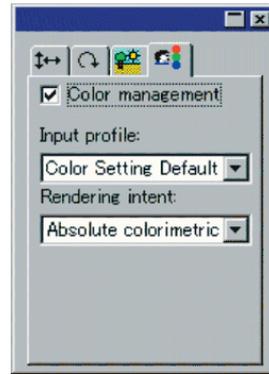
### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

independent settings for each bitmap.



Bitmap Tab



ProfileTab

## Creating Bitmaps

There are several ways to include a bitmap into a document.

## Importing Bitmaps

You can open or import a bitmap files into your document.

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 bit map 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

Any bitmap from your document can be exported into a file.

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 **Export**.

## Scanning Bitmaps (E, M, P)

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.

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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. Make certain your scanner is on and connected 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 then select **TWAIN Select** and select your scanner from the list.
4. From the **File** menu, point to **Acquire Image** and then 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.

Click **TAB** key changes the cursor position in the bounding box. **ESC** key exits the scanning process. **ENTER** to place the scanned image.

On a Macintosh, you can use plug-ins to scan.

1. From the **File** menu, point to **Acquire Image** and then choose **Select Plug-in Folder** and select the folder where the scanner plug-in is installed.
2. On a Macintosh, from the **File** menu, point to **Acquire Image** and then 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 (P)

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.

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- Resolution**      The resolution of the new bitmap.  
**Color Mode**      The color mode of the new 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. 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.

### Changing Bitmap Color Mode (P)

To change the color mode used by a bitmap:

1. Select the bitmap.
2. From the **Bitmap** menu, point to **Color Mode** and then select the new color mode.

## Using the Bitmap Toolbar

All bitmap editing tools are located in the **Bitmap Edit** toolbar.



Bitmap Edit toolbar.

To display this toolbar, from the **Bitmap** menu, select **Bitmap Edit Toolbar**. Select the menu command a second time to hide the toolbar.

- Some tools will not be available for some color modes.

## Defining Marquees (P)

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

To define the entire bitmap as a marquee:

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:
  - a. Hold the **SHIFT** key while dragging to add additional sections of the bitmap to the selection marquee.
  - b. Hold the **CTRL** key while dragging 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 pressing **SHIFT** key



Final marquee



Original bitmap with a marquee



Dragging pressing **CTRL** key



Final marquee

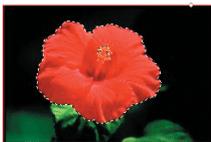
## Using the Magic Wand Tool (P)

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. If DesignCentral is not visible, double click the **Magic Wand** tool button.

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.
4. **SHIFT** and **CTRL** keys add or subtract areas from existing marquees.



Marquee created with Magic Wand tool



## Clearing Marquee

1. Select the bitmap with a marquee.
2. From the **Bitmap** menu, select **Clear Marquee**.

## Inverting Marquee

1. Select the bitmap with a marquee.
2. From the **Bitmap** menu, select **Invert Selection**.

## Converting Objects to Marquees

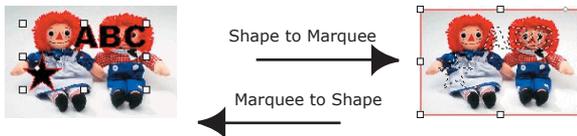
You can convert vector objects into marquees.

1. Place the vector object over the bitmap.
2. Select the bitmap and the vector object.
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**.



## Editing Bitmaps

### Using the Move Tool (M, P)

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.

The image selected by the marquee is moved to a new position, leaving an area filled with the background color. See "Background / Foreground Color" on page 80 about how to set the background color.

Hold the **CTRL** key while dragging 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 (M, P)

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:

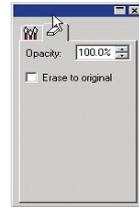
In the **Brush Tab**, you can select the shape and the size of the brush. For more details, see "Changing the Brush" on page 161.

In the **Eraser Options Tab**, you can adjust:

### Opacity

The percentage of the image that will be removed by each pass of the eraser.

100%	■	➔	□
75%	■	➔	■
50%	■	➔	■
25%	■	➔	■



### Erase to original

If checked, the eraser will remove only the changes to the bitmap, returning it to its original state.

Eraser Tab

To erase 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 Pencil Tool (M, P)

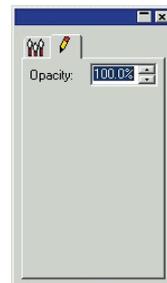
The **Pencil** tool will create freehand lines on a bitmap using the foreground color.

Following options are available in DesignCentral.

In the **Brush Tab**, you can select the shape and the size of the pencil point. For more details, see "Changing the Brush" on page 137.

In the **Pencil Options 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

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**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

To draw a line using the Pencil tool:

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 Fill Tool (M, P)

The Fill tool fills areas of a bitmap with the foreground color.

To use the Fill tool:

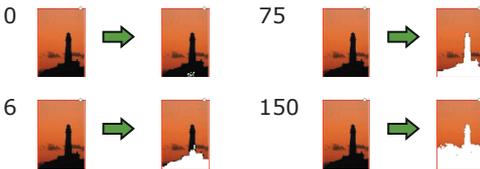
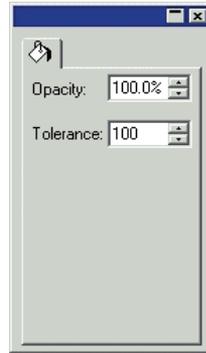
1. Select the **Fill** tool. 
2. Adjust the values in DesignCentral.

**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.

**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.



Fill tab

3. Click the cursor on the bitmap.

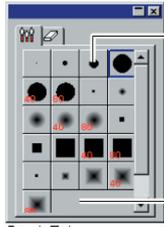


Original Image    Bitmap after Fill

## 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.

<b>Size</b>	Width and Height of the brush.
<b>Hardness</b>	Adjusts how the brush will dissolve with the original image.
<b>Rotate</b>	Angle of rotation.
<b>Style</b>	The brush can have either a rectangular or ellipse shape.

## 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.

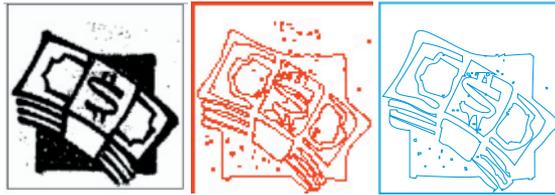
A bitmap that has been masked cannot be traced unless it is unmasked first.

- 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 (M, P)

AutoTrace traces each shape in the bitmap. DesignCentral has the following options:

<b>Noise Reduction</b>	Adjusts the amount of noise that is removed during the tracing process. When <b>None</b> is selected, noise will not be removed. The <b>Most</b> 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 accurate 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.

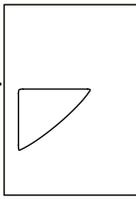
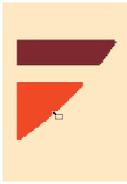
## To Autotrace a bitmap:

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 down the **SHIFT** key to create a square bounding box.
  - Click the bitmap to trace one object.
  - Click with the **CTRL** key pressed to trace all of the bitmap.

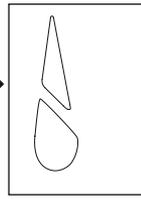
The objects created by the autotracing will be all wireframes. To fill those objects, you have to select and compound them.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



Tracing one object using Click



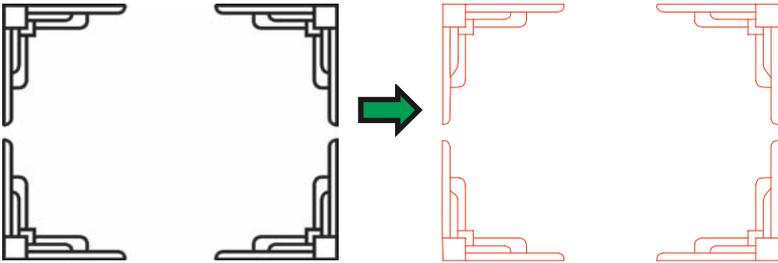
Tracing part of the bitmap using Click and Drag

- 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 (P)

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

DesignCentral has an **Autotrace** Tab with all the options described for the **Autotrace** tool and a **Centerline** Tab with the following options:

- |                              |  |
|------------------------------|--|
| <b>Steps</b>                 | Minimum size to be outlined.   |
| <b>Close Paths</b>           | Creates a separate closed shape in each fully enclosed area.   |
| <b>Outline large objects</b> | When this option is checked, larger objects will be traced with an outline, instead of a centerline. |
| <b>Color</b>                 | The color of the resulting vector objects.   |

To centerline trace a bitmap

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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

Surround the objects that you want to trace on the bitmap. Hold down the **SHIFT** key to create a square bounding box.

- Click the bitmap to trace just one object.
- Click with the **CTRL** key pressed to trace all of the bitmap.

## Using PictureCut Tracing (P)

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

DesignCentral has a **PictureCut** Tab with the following options:

- |                          |  |
|--------------------------|--|
| <b>Enhance Image</b>     | Applies an image enhancement filter, before tracing the image.   |
| <b>Brightness</b>        | Changes how dark the finished image outputs.   |
| <b>Number of Stripes</b> | Number of stripes that will be created.  |
| <b>Resolution</b>        | You can trace using the <b>Full</b> resolution on an image or <b>1/2</b> , <b>1/4</b> and <b>1/8</b> 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 accurate at the reduced resolutions. The <b>Optimal</b> setting picks the resolution based on image size to optimize the traces. |
| <b>Cut Direction</b>     | Defines if the stripes are horizontal or vertical.   |
| <b>Reverse Image</b>     | Reverses the dark and light portions.  |
| <b>Color</b>             | The color of the resulting vector objects.   |

To create stripes using PictureCut

1. Select **PictureCut** tool. 
2. Adjust the tracing parameters in DesignCentral.
3. You can trace the 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. **SHIFT** key creates a square bounding box.
  - Click with the **CTRL** key pressed to trace all bitmap

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

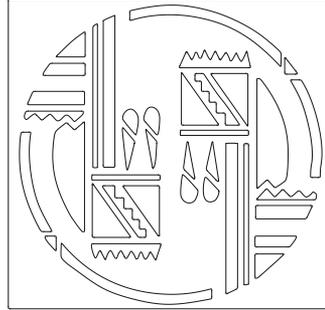
4. To finish using the **PictureCut tool**, select another tool.

## Using Color Tracing (P)

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*

DesignCentral has an **Autotrace** Tab with all the option described in Auto-trace tool and a **Color Trace** Tab with following options:

**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.

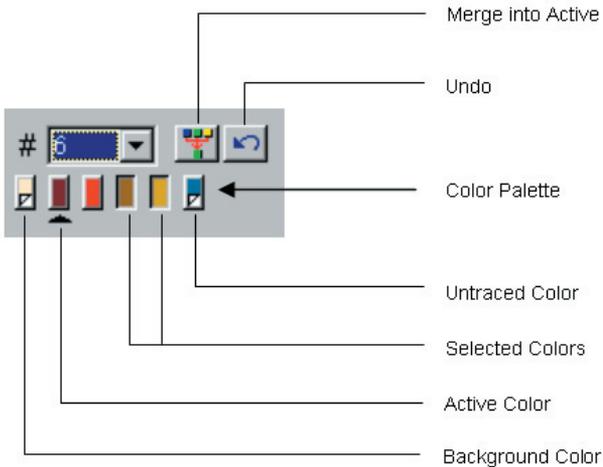
To posterize and color trace a bitmap:

1. Select **Color Trace** tool. 
2. Adjust the tracing parameters in DesignCentral.
3. Select the number of colors to trace.
4. 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 down the **SHIFT** key to create a square bounding box.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

- \* Click the bitmap to trace just one object.
  - \* Click with the **CTRL** key pressed to trace all of the bitmap.
5. Edit the color palette and the posterized image as described in the next item.
  6. Click **Accept**.



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 palette untraced, **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.

1. Make the destination color **Active**.
2. Select the colors that will be merged.
3. Click **Merge into Active** button.

You can undo the operation by clicking the Undo button. Only the last merge can be undone.

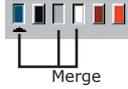
**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

You can also merge two colors together by clicking and dragging the source color over the destination color button.



*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** key pressed.

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 object with the source color*



*Drag where the color will be applied*



*Release the button and the color will 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 (E, M, P)

To separate an effect from the original object, from the **Effect** 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 **Effect** menu, select **Clear [...]**. After the command name, the effect name will be displayed.

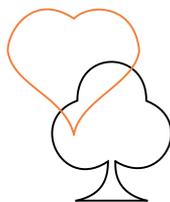
### Using Combine Effects

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.

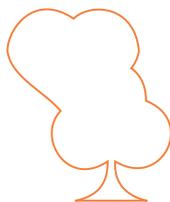
### Weld Effect (E, M, P)

Welds 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 **Effect** menu, point to **Combine** and then select **Weld** command.



Original Objects



Objects after Weld effect

Your software also has an **Auto Weld** feature; this feature will automatically weld all overlapping objects with same color, before outputting your job to a cutter. For more information, see "Cut / Plot Dialog - Advanced Tab" on page 177.

By default, the objects with different colors will be weld using the topmost color, to weld objects based on their colors, see "Combine Effect Options" on page 146.

## **Cut Out Effect (M, P)**

Removes the selected overlapping areas from the bottom most object.

- 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 **Effect** menu, point to **Combine** and then select **Cut Out command**.



*Original Objects*



*Objects after Cut Out effect*

## **Common Effect (M, P)**

Deletes all of the selected objects except for the overlapping area.

- 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 **Effect** menu, point to **Combine** and then select **Common command**.



*Original Objects*



*Objects after Common effect*

## **Exclude Common Effect (M, P)**

Deletes the overlapping area.

- 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 **Effect** menu, point to **Combine** and then select **Exclude Common command**.



Original Objects



Objects after Exclude Common effect

## Fuse Effect (P)

Removes all of the object on the top layer, except for the overlapping area. The object on the lower layer remains intact, and the fused portion retains its original color.

- 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 **Effect** menu, point to **Combine** and then select **Fuse** command.



Original Objects



Objects after Fuse effect

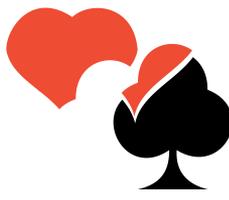
## Separate Overlap Effect (P)

Creates new objects from overlapped areas of selected objects.

1. Select the objects.
2. From the **Effect** menu, point to **Combine** and then select **Separate Overlap** command.



Original Objects



Objects after Separate Overlap effect

## Combine Effect Options (M, P)

You can control the combine effect by changing the combine options.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

To change the combine options:

From the **Effect** menu, point to **Combine** and then select **Combine Options** command.

Or

1. From the **Edit** menu, select **Preferences**.
2. Select **Tools** Tab.
3. Select **Combine Options** from the list on left side of the dialog box.

You can adjust the following options:

**Keep cut objects**

When this option is selected, the object that you used to cut out another object is kept. When you select this option, the object remains.



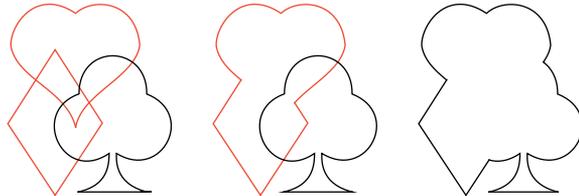
*Original Objects*

*Keep cut objects ON*

*Keep cut objects OFF*

**Weld based on colors**

Check this option to weld objects in groups, based on their color.



*Original objects*

*Weld based on colors ON*

*Weld based on colors OFF*

## Using the Outline Effect (E, M, P)

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.

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

In an outline, you can adjust the number of lines, their width and the spacing between them.



## Outlines Effect (E, M, P)

1. Select the objects that the effects will be applied to.
2. From the **Effect** menu, select **Outline**.
3. Adjust the values in DesignCentral or drag the control points.
4. Click **Apply**.

## Adjusting Outlines Using DesignCentral

When outlines are applied to objects, the following attributes can be adjusted in DesignCentral.



Select the effect type between Contour, Outline and Inline.



Width of the outline.



Distance between outlines.



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

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



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

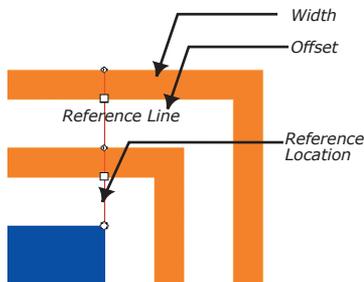


Butt Cap Style

## Adjusting Outlines Using Control Points

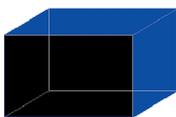
When you apply an outline, a reference line is displayed with control points. You can adjust some of the attributes by dragging the control points.

- 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.



## Using the Shadow Effect (E, M, P)

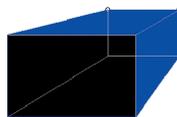
Your software allows you to place a shadow around any object. The following types of shadows are available:



Block Shadow



Drop Shadow



Perspective Shadow



Cast Shadow

## Applying Shadows to Objects

To apply a shadow effect to one or more objects:

1. Select the objects.
2. From the **Effect** menu, select **Shadow**.
3. Adjust the values 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.

### Software Version Key:

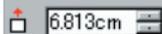
(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



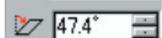
Select the shadow type between Block, Cast, Perspective and Drop.



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 for each shadow:

### 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

Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



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 (P)

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

## Applying Stripes to Objects+

1. Select the objects.
2. From the **Effect** menu, select **Stripe**.
3. Adjust the values in DesignCentral.

## Adjusting Radiant Stripes Using DesignCentral

When radiant stripes are applied to objects, the following attributes can be adjusted in DesignCentral.



Number of stripes on the object.



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.



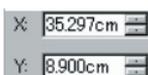
Radiant Percentage: 20%



Radiant Percentage: 50%



Radiant Percentage: 80%



XY Coordinates of the point from which the stripes radiate.



The point selected in this grid will be the point from which the stripes radiate.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



*Bottom left corner*



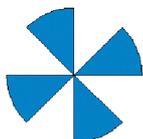
*Middle right point*



*Center*



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. **SHIFT** key constrains the angle.
- Click and drag the left (top) edge of each stripe to change the stripe gap. **SHIFT** key 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.



Number of stripes on the object.

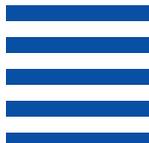


Determines the percentage of the image that is covered with stripes, from 0 to 100%. Changing this value changes the width of the stripes, but not the number.

This value is disabled when Vary stripes and gap is selected in the Gap mode field.



*Percentage: 20%*



*Percentage: 50%*



*Percentage: 80%*



Angle of the stripes.

**Software Version Key:**

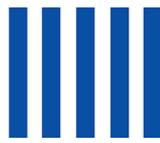
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



Angle: 0 degrees



Angle: 45 degrees



Angle: 90 degrees



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**

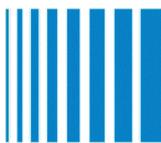
The stripes and gap width is constant.

**Vary Stripes and Gaps**

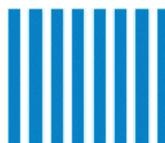
The stripe and gap width has a gradient effect.

**Vary Stripes**

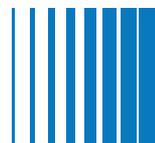
The stripe width changes, producing a gradient effect, the gap width is constant.



Vary Stripes mode



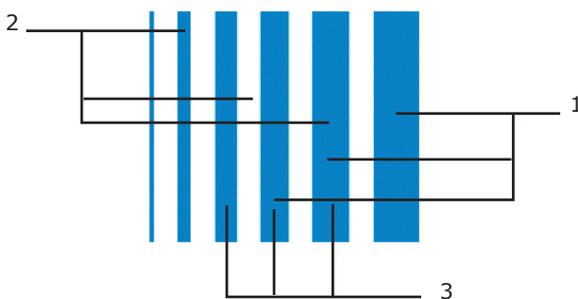
Even Stripes and Gap



Vary Stripes and Gaps

**Adjusting Gradient Stripes Using Control Points**

You can also adjust some of the above fields 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 down the **SHIFT** key 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 object



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.



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 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 (M, P)

Your software allows you to distort vector objects. The following distortions are available in your software. When a distortion effect is applied to a bit-map, it will mask the bit-map using the distortion shape.



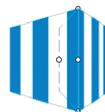
Fit



Slant



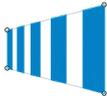
Notch



Corner

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



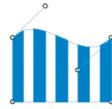
Perspective



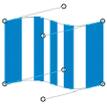
Arc



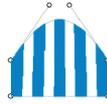
Globe



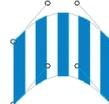
Wave - Top



Wave



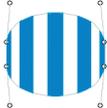
Arch - Top



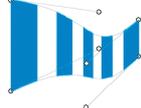
Arch



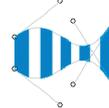
Squeeze



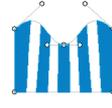
Balloon



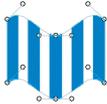
Pennant



Fish



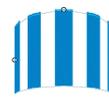
Two Waves - Top



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 to Objects

1. Select the objects.
2. From the **Effect** menu, select **Distortion**.
3. Adjust the values 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.

### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



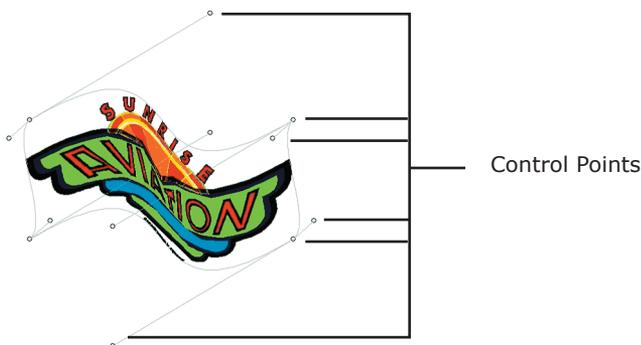
Rotates distortion envelope 90 degrees clockwise or counter clockwise.



Mirrors distortion envelope horizontally or vertically.

## Adjusting Distortions Using Control Points

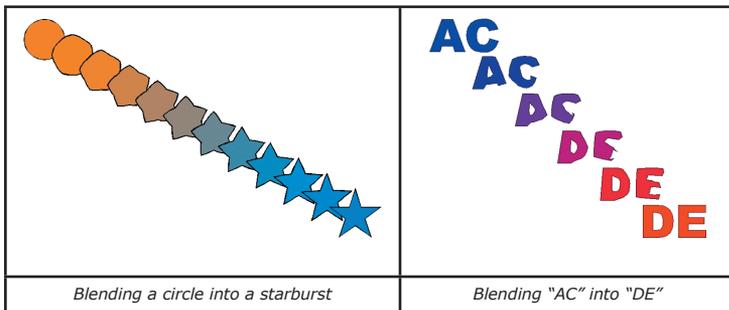
For each distortion, you have a number of control points that can be dragged to adjust the distortion to your requirements. The number of points and the effect when the points are dragged will vary according to the distortion type.



In some symmetric distortions like Wave-Top and Patch, **CTRL** key moves the handles independently from the other handle.

## Using the Blending Effect (P)

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.



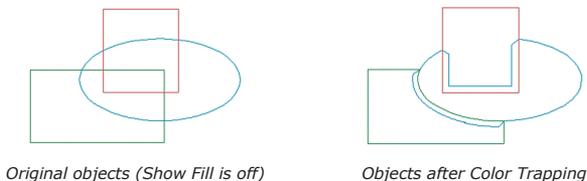
1. Select two objects.
2. From the **Effect** menu, select **Blend**.
3. Adjust the number of steps in DesignCentral.
4. Click **Apply**.

*Software Version Key:*

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

## Using Color Trapping (P)

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.



## Applying Color Trapping to Objects

1. Select the objects.
2. From the **Effect** menu, select **Color Trapping**.
3. Adjust the values in DesignCentral.
4. Click **Apply**.

## Adjusting Color Trapping Using DesignCentral

When Color trapping is applied to overlapping objects, the following attributes can be adjusted in DesignCentral.



Overlapping distance.

### Light to Dark

Select if the trapping will be performed from the light to dark color or vice versa.

### Dark to Light



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 (P)

Styles allow you to capture and apply the fill, stroke and the effects from one object to another. Styles can be stored for future use.

## Copying and Applying Styles

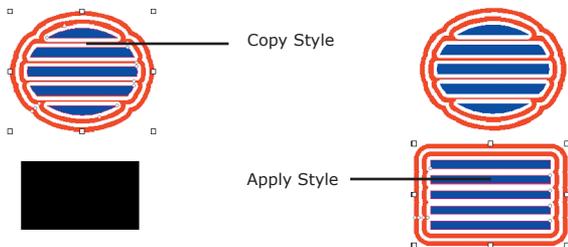
1. Select the object with the desired fill or effect.
2. From the **Edit** menu, point to **Graphic Styles** and then select **Copy Style**.
3. Select the object where the fill or effect will be applied.

#### Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS

- From the **Edit** menu, point to **Graphic Styles** and then select **Paste Style**.

The fill, stroke and the effects from the first object is applied to the second object.



## 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.

To store the properties from an object as a style:

- Select the object.
- From the **Edit** menu, point to **Graphic Styles** and then select **Store Style**.
- Enter the new style name and select the properties that will be stored in this style.
- Click **Save**

## Applying Style in Style List

To apply one style from the style list:

- Select the object.
- From the **Edit** menu, point to **Graphic Styles** and then select **Paste Style**.
- Select the style from the style list.
- Click **Apply**.

## Editing Style from Style List

Edit styles allows you to edit a stored style by renaming, copying or deleting.

To rename or copy a style:

- From the **Edit** menu, point to **Graphic Style** and then select **Edit Style**.
- Select the style from the list then click **Copy** or **Rename**.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

3. Enter the new style name.
4. Click **OK**.

To delete a style:

1. From the **Edit** menu, point to **Graphic Style** and then select **Edit Style**.
2. Select the style from the list then click **Delete**. Go to step 4.
3. Click **OK**.

Using Contour Cut



Contour Cut

Contour cut is a feature that creates a cutting line around objects, either vector or bitmaps.

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.

## Creating a Contour Cut Around an Object (E, M, P)

To create a contour cut:

1. Select the objects.
2. From the **Effect** menu, select **Contour Cut**.
3. Adjust the values in DesignCentral 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.



Select the type between Contour, Rectangle and Ellipse.



Contour mode



Rectangle mode



Ellipse mode



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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



Width of the contour shape (Ellipse or Rectangle).



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

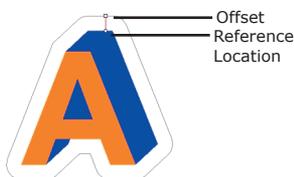
Contour Without Holes



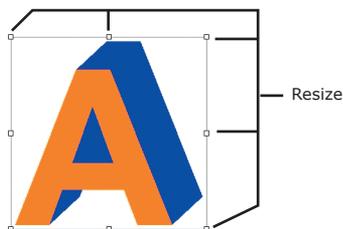
Joint Type, specify how the corners are contoured.

## 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 dragging the control points.



Contour mode



Rectangle mode

## Transforming an Object 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

To convert a vector object into a cutting line:

*Software Version Key:*

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

1. Select the objects.
2. From the **Arrange** menu, point to **Contour Cut** and then 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.

To convert the cutting line back to a vector object:

1. Select the cutting line.
2. From the **Arrange** menu, point to **Contour Cut** and then select **Release Contour Cut**.

# 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 an object.

The lines and labels can be output to a printer or cutter. For more details, see "Cut / Plot Dialog - Advanced Tab" on page 173.

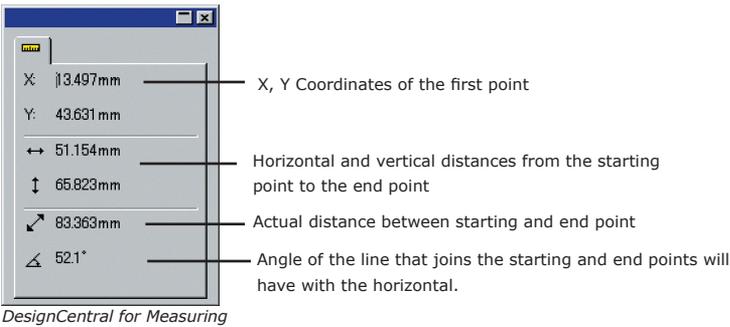
## Measuring Distances

Use the Measure tool when you need to know the distance between two points in your design.

To measure the distance between two points:

1. Select **Measure** tool. 
2. Click and drag the cursor.
  - Just click to show a position of one point in your design.

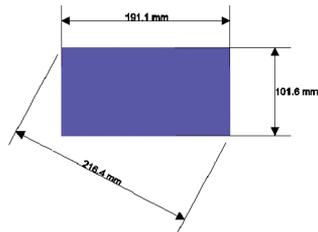
Once you release the mouse button, Design Central displays the following information:



## Creating Dimensioning Lines

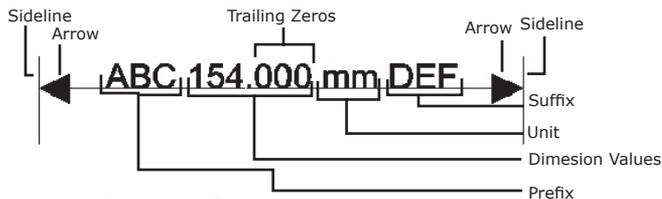
The Dimension tool allows you to create dimensioning lines between two points in your design. The dimensioning lines can be horizontal, vertical or diagonal.

When you are creating a dimension label, the Snap to Point feature is automatically enabled.



**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

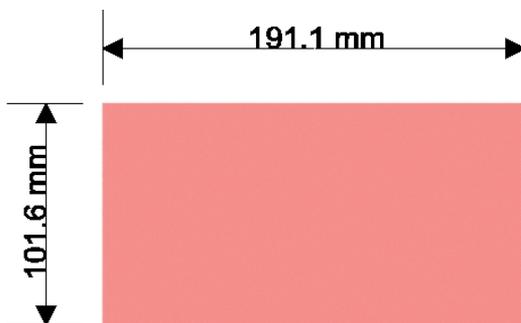


To create a dimension line:

1. Select the **Dimension** tool. 
2. Click the point where the dimension line will start. As you move the cursor, a line displays the direction you are moving.
3. When you are creating a diagonal dimension line, **SHIFT** key constrains the line angle to horizontal or vertical. **CTRL** key makes the dimension lines perpendicular to the object.
4. Click the point where the dimension line will end.
5. Adjust the position of the dimension line and click.

### Automatically Dimensioning Objects (M, P)

The Automatic Dimension tool allows you to automatically create horizontal and vertical dimension lines around an object. These dimension lines are not linked to the object and will not be automatically updated if the object changes size.

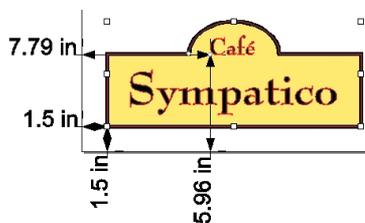


To automatically create a horizontal and vertical dimension line in an object:

1. Select the objects.
2. Select the **Automatic Dimension** tool. 

### Dimensioning to Page (M, P)

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.



**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

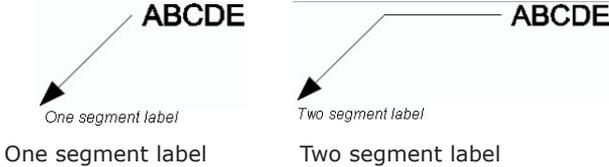
\* Text objects are measured from the baseline of the text.

To create dimension to page lines:

1. Select the objects.
2. Select the **Dimension to Page** tool. 

### Creating Labels (M, P)

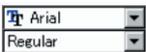
Use the label tools to draw an arrow with a text attached to it. There are two types of label:



To create a label:

1. Select the **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 the **ENTER** key.

After creating the label you can adjust the following attributes in DesignCentral:



Font and style used.



Size of the font used.



Arrow type used in the label line.

**Advanced**

Click this button to access the advanced options.

You can adjust the following options using the Advanced Options dialog box.

**Border Text**

When this option is on, a box displays around the label text



Arrow size

### Editing Dimension Lines

After creating the dimension line you can adjust the following attributes in DesignCentral:

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



Font and style.



Size of the font.



When unlocked, you can edit the dimension text in the field just above the padlock.



Arrow type used in both ends of the dimension line.



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.

You can adjust the following options using the Advanced Options dialog box.

**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.

**Supress 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.



The dimension text can be above, over or under the dimension line.



It fixes the position of the dimension on the line.



When a diagonal dimension is created, the dimension text can aligned with diagonal line or be always is horizontal position.



Using this buttons, you can show only the sideline, no sideline, no arrow or show all



Arrow size.

## 16. Printing to a Desktop Printer

Before the final output, you may want to print a sample to your desktop printer for proofing.

To print your document in a desktop printer:

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 set the appropriated options.
  - \* Check Selection to print only the selected objects.
4. Click **OK**.

### Previewing the Design (Windows Only)

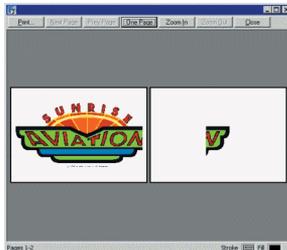
The Print Preview allows you to visualize the output before printing to the desktop printer. The preview should reflect any changes that you made in the Printer Properties (paper size, orientation) and Print Options.

To show a Print Preview:

1. From the **File** menu, select **Print**.
2. Select your desktop printer.
3. Click **Preview**.



Print Preview (One Page)



Print Preview (Two Pages)

In the Preview dialog box, you have the following buttons:

<b>Print</b>	Closes the preview window and returns to the Print dialog.
<b>Next / Prev Page</b>	Allows you to navigate through the pages.
<b>One Page / Two Page</b>	Displays 1 or 2 pages of preview per screen.
<b>Zoom In / Zoom Out</b>	Allows you to zoom the print preview.
<b>Close</b>	Closes the preview window and returns to your design application.

## Print Options

The Print Option dialog box allows you to control several advanced options about desktop printing, such as Scale, Position and Tiling.

To display the Print Options dialog box:

1. From the **File** menu, select **Print**.
2. Select your desktop printer.
3. Click **Options**.
  - On a Macintosh, select your program name in the list. Some printers will show the options in the print dialog.

## Adjusting the Output Size

Scale allows you to adjust the output size to either fit the paper or fit the desired size.

<b>Fit drawing to paper</b>	Resizes the output to fit the entire design into the paper.
<b>Fit border to paper</b>	Resizes the output to fit the entire drawing area into the paper.
<b>Scale</b>	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.



Original Design  
16 x 7 inches



Output on a letter size paper with **Fit drawing to paper** option checked.



Output on a letter size paper with **Fit border to paper** option checked.



Output on a letter size paper with **Scale** set to 25%.

## Tiling the Output

Using the Tiling option you can select to tile the output and set the overlap between the tiles.

**Print tiled pages** When this option is checked, the output will be tiled.

**Overlap** Sets the overlap between the tiles.

Software Version Key:

(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS



Original Design



Tiled output

## Setting the Output Position

The Position option allows you to center the image or to set the position.

**Center on paper** The output is centered on the page.

**Offset X / Y** Sets the offset from the edge of the paper.

## Other Printing Options

**Print border** The border of the design area is printed.

**Print wireframe** The vector objects are printed without fill.

**Include job info** The Job Info is printed with the design. This option is only available if **Fit drawing to paper** is selected in Scale option. To customize the layout of the print, see "Using Templates" on page 29.

**Use device margins** The margin information from the printer driver is used.

**PostScript data** When **Binary** is selected, the data is compressed using a binary encoding and then sent to the printer.

## 17. 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 section "Setting up Production Manager" on page 180s.

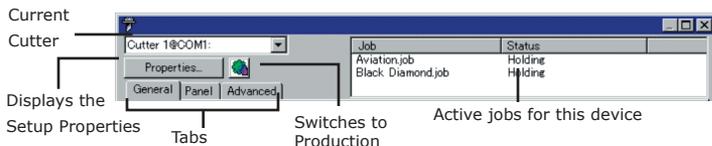
Follow the steps below to send the document to your cutting device:

1. From the **File** menu, select **Cut / Plot**.
  - If you have any object selected, only these selected objects are cut. To cut all objects in the document, click the **Selection Only** button.
2. Adjust the settings available in the dialog box as necessary and click **Send**.

### Setting the Cut/Plot Dialog (A, E, M, P)

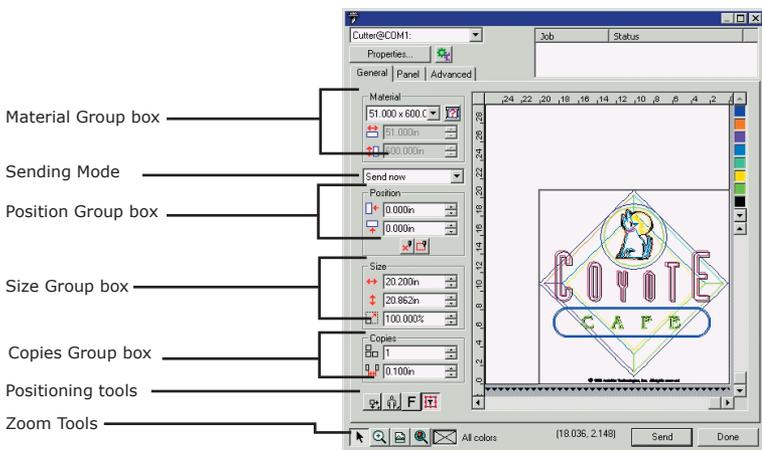
The Cut/Plot dialog box gives you complete control over how the job is produced. This dialog box consists of three Tabs - **General**, **Panel** and **Advanced** Tabs.

The area on top of this dialog is common for all Tabs:



### 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.



- You can resize the Cut/Plot dialog, by clicking and dragging the lower right corner.

## 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 "Changing the Preferences" on page 216 for more details.

## 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.

## 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.



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 for devices that are connected through a serial port (COM).



Material width.



Material height.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

## Position Settings

The Position group box allows you to specify where on the media the job is output.



Horizontal offset distance.



Vertical offset distance.



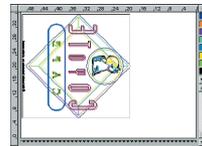
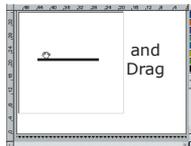
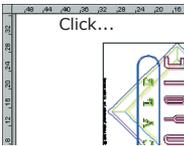
**Interactive:** moves the cutter as you change the position of the job on the preview area.



**Show me:** draws a bounding box of the job without lowering the tool.

You can also 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.



Width of the output.



Height of the output.



Scale ratio.

## Copies Settings

The Copies group box allows you to set the number of copies and the spacing between them.



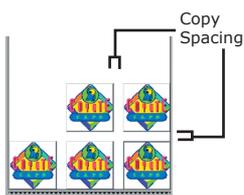
The number of copies.



The amount of space between the copies.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



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 not centered.



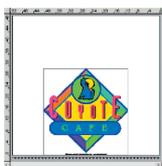
The job is centered in the width of the media.



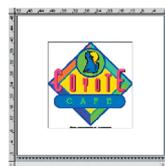
The job is centered in the sheet of media.



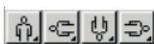
*Positioned at the origin*



*Centered in the width of the media*



*Centered in the media*



Rotate the job in 90-degree increments.



Mirror the job vertically.

## 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** key to Zoom out.



Return the preview area to the default view.



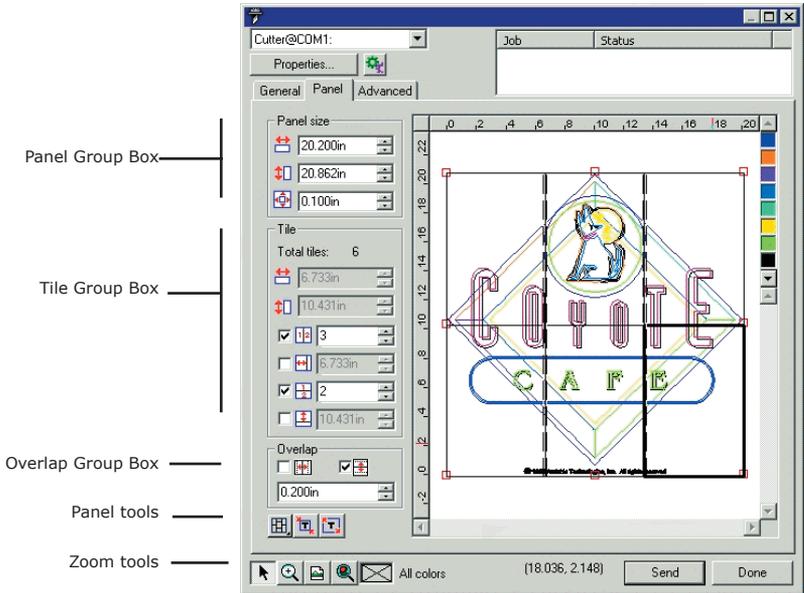
Display the current color selected in the preview area. If all colors are selected, the box will be crossed out.



Click this button to toggle the preview to display the selected objects only or the entire design.

## 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.

The Panel tab provides several tools to tile the job.

### Panel Toolbar

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.



The job is automatically tiled based on the job size and the media size.



The job is automatically tiled based on the size of the drawing area and media size.

## Moving the Panel

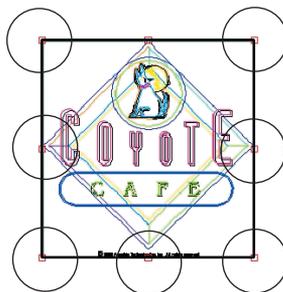
The panel defines the area of design that will be processed for output. Elements of the design that are outside the bounds of the panel will not be cut.

## Resizing the Panel

You can resize the panel by dragging the panel border or using the Panel Size group to numerically enter the panel size.

Changing the 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.



Entering the panel size numerically:



The width of the panel.



The height of the panel.



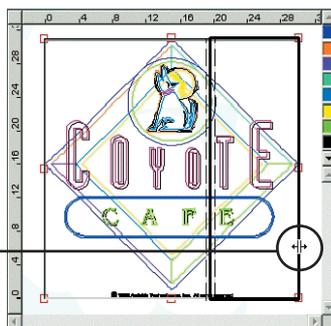
Margin around the panel.

## Tiling the Job Using the Preview Area

You can add 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.

Click and drag the panel border to add a new tile

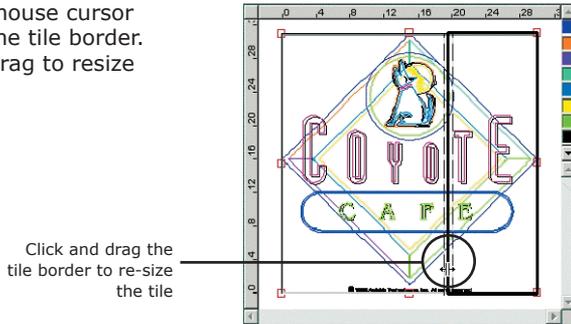


**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

To resize existing tiles:

1. Move the mouse cursor on top of the tile border.
2. Click and drag to resize the tile.



## Tiling the Job Using the Tile Group Box

The Tile group allows you to specify the tiles numerically.

To specifying the size of each tile numerically:

1. Select the tile you want to resize in the preview area.
2. Enter the new size.

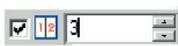


The width of the selected tile.

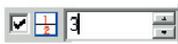


The height of the selected tile.

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.



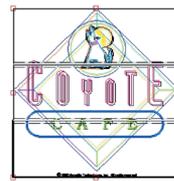
Divides the job into a specified number of evenly sized columns.



Divides the job into a specified number of evenly sized rows.



Even Columns



Even Rows



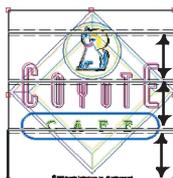
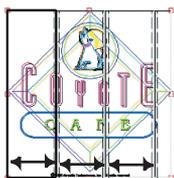
Divides the job into a specified size of columns, starting from the left side.



Divides the job into a specified size of rows, starting from the bottom.

**Software Version Key:**

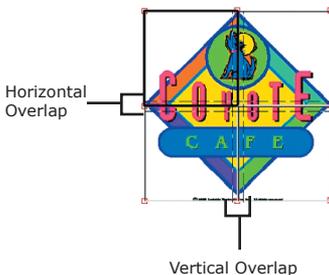
**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**



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.

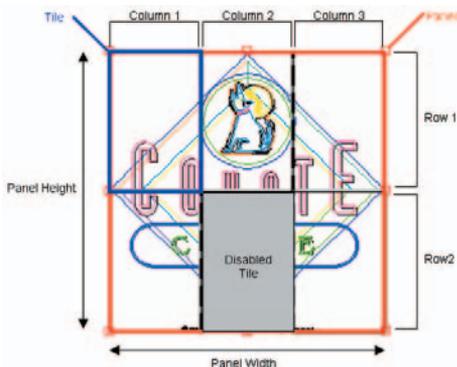


Check to create an overlap on the horizontal edges of tiles.



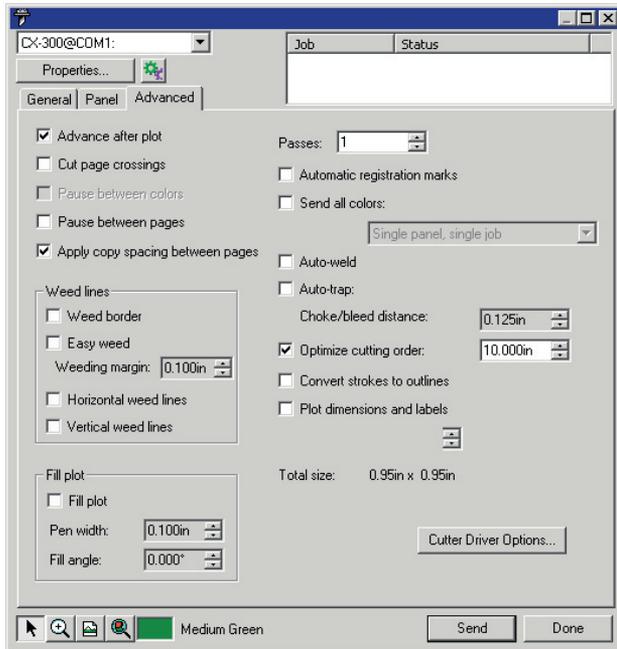
The width of the overlap.

To specify a tile that will not be output, double-click or right-click the tile. The tile will be disabled.



## Cut / Plot Dialog - Advanced Tab

The Advanced tab of Cut / Plot allows you to set several options specific to cutting jobs.



The following options can be adjusted in this dialog box:

**Advance after plot**

Advances the media and resets the origin.

**Cut page crossings**

Cuts the borderline of a page when the output is tiled into several pages.

**Pause between colors**

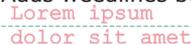
Selects whether the Production Manager should pause after each color is processed, allowing you to change the pen or the media. This option can only be selected when Send all colors is checked.

**Pause between pages**

Selects whether the Production Manager should pause after each page is processed, allowing you to load the media after each page.

**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.

<b>Passes</b>	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.
<b>Automatic Registration Marks</b>	<p>Adds small rectangles to the corners of each layer to aid in positioning each piece.</p> <ul style="list-style-type: none"><li>The automatic registration marks are simply placed at the corners of each layer. If the layers are different sizes, the automatic registration marks will not line up with each other. 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.</li></ul>
<b>Send all colors</b>	See "Sending Each Color as a Different Job" at page 178.
<b>Weed border</b>	Cuts a border around all objects in the selected color.
<b>Easy weed margin</b>	Cuts a weeding border with the specified margin around each object in your design.
<b>Horizontal weedlines</b>	<p>Adds weedlines between lines of text (or objects).</p> 
<b>Vertical weedlines</b>	<p>Adds weedlines between characters (or objects).</p> 
<b>Auto-weld</b>	Removes intersections of overlapping objects of the same color.
<b>Auto-trap</b>	Specifies the amount of overlap between objects of different colors.
<b>Optimize cutting order</b>	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.
<b>Convert stroke to outlines</b>	Selects whether the strokes will be cut separately as an object.
<b>Plot dimensions and labels</b>	Selects whether the labels and dimensions created with measure tool will be cut or plot.
<b>Total size</b>	Displays the total size of the job.
<b>Fill plot</b>	Allow you to define the angle and pen width for fill plot.
<b>Cutter Driver Options</b>	Launches the Cutter Driver Options dialog. See "Cutter Driver Options" at page 195.

## Sending Each Color as a Different Job

Check **Send All Colors** option to process each color separately. When this option is checked you can select how each color will be processed:

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**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.



## 18. Setting up Production Manager

Production Manager configures output devices such as cutters and printers, controls the output of files, and connects to the output device.

Production Manager automatically launches when you execute the output command from your software. You can also preview jobs in Production Manager and change your jobs properties before sending to your output device.

### Understanding Setups

A Setup consists of an output device and its associated properties. Setup information includes the type of output device, the media being used, the size of the media, and any settings specific to the output device.

### Creating Your First Setup

Before you can output your design, your software must establish a connection with the Production Manager and an output device must be configured. Follow the steps below to create a setup for your output device:

1. From your software, select **Cut/Plot** from the **File** menu.
2. Select "On this computer (Local)" and then click **OK**.
3. Select the type of device, manufacturer and the model of your output device, and then click **Next**.
4. Select the appropriated port and click **Finish**.

### Adding New Setups

You can add more setups directly from the Production Manager. See "Adding New Setups" on page 185 for more details.

### Configuring a Setup

Once you have created a setup, you can change its properties.

Most of the settings available in Setup Properties are also available in the Cut/Plot dialog. The settings from the Setup Properties are applied to files that are added directly to Production Manager using the Add Job command.

To display the Setup Properties:

1. From your software, select **Cut/Plot** from the **File** menu.
2. Select the output device in the Cut/Plot dialog from the list.
3. Click Properties.

Or

1. Select the output device from the left pane of Production Manager.
2. From the **Setup** menu, select **Setup Properties**.

Or

Double-click on the output device listed in the left pane of Production Manager.

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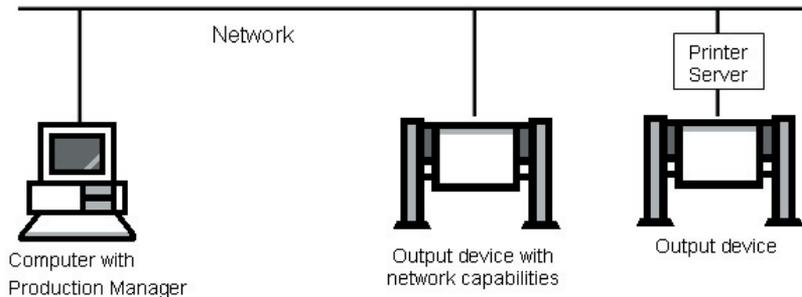
Setup Properties contains several tabs where you can specify the media settings, printing options, cutting options, etc. See "Editing Setup Properties" on page 219 for more details.

## Setting up Production Manager on a Network

The output device does not need to be connected directly to the computer where Production Manager is installed.

## Connecting Production Manager to Networked Output Devices

If your output device supports a network connection, or you have a Network Print Server, you can connect the output device to the Production Manager through a network. Please follow the instructions below to use a network to connect the output device.



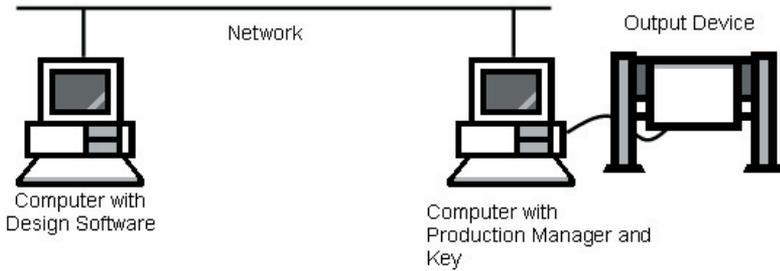
1. The computer must have TCP/IP protocol properly installed and working.
2. The output device or the Print Server must support: TCP/IP, FTP or LPR and have a valid IP address assigned to it.
3. When adding setups in Production Manager, set the port to TCP/IP, FTP or LPR depending on the protocol supported by the device and enter the IP address assigned to the output device.

## Using the Design Software and Production Manager on a Network

Production Manager can be installed on a different computer as long as that computer has a hardware security key attached. 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.

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The following steps will guide you to connect your design software to a Production Manager installed on a different computer:

1. Attach the hardware key on the production station and install the Production Manager.
2. Install the design software on the design station.
3. Launch the Production Manager on your production station, create the setups for the output devices and leave it running.
4. Launch the design software on your design station. The design software can run without the key as long as the network is properly configured and the key is attached to the production station.
5. Select **Cut/Plot** from the **File** menu.
6. Select "On another computer (Network)" and click **OK**.
7. Select the Production Manager on the network and click **OK**.

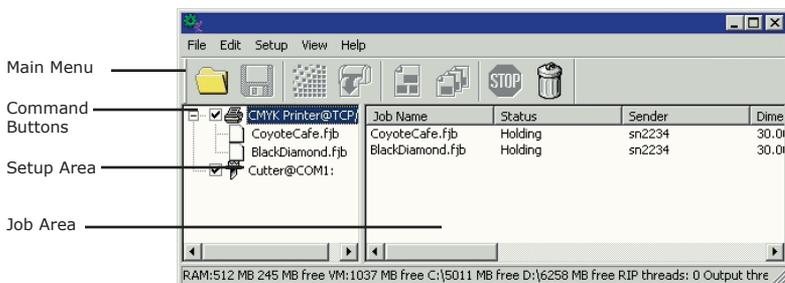
## 19. Using Production Manager

See “Setting up Production Manager” on page 180 if you are launching the Production Manager for the first time or configuring the output devices.

### The Production Manager Window

When you launch Production Manager, the main window is displayed. To launch Production Manager, do one of the following:

- From your design software, select **Cut/Plot** from the **File** menu. The Production Manager is launched and the **Cut/Plot** dialog box appears.
- The Production Manager may be hidden behind the design software. To bring it to foreground, click on the Production Manager icon in the Cut/Plot dialog.
- Double-click the Production Manager icon in the desktop.



**Setup Area** This area displays the setups (output devices) currently configured are displayed. Click the (+) or the (-) symbols to expand or collapse the list of jobs associated with the setup.

**Job Area** This area displays the jobs associated with the selected setup.

### Command Buttons

The command buttons allow quick access to most common tasks in Production Manager. See “Working with Jobs” on page 189 for more details on each command.



**Add Job** Adds a job to the selected output device.



**Save As** Saves the selected job to a file.



**Print Job** Prints the selected job to the specified output device, RIPping it if necessary.



**Nest** Nests the selected print jobs together so as to use the minimum amount of the output media.

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**Unnest** Unnests the selected set of nested jobs.



**Abort** Stops selected file from RIPing or printing.



**Delete** Deletes the selected job or jobs.

## Changing Preferences

To set the application preferences for Production Manager, from the **Edit** menu, select **Preferences**.

The following settings are available:

**Units** The units of measurement displayed.

**Precision** The degree of precision to use with measurements.

**Archive Path** The folder where archived jobs are saved.

**Archive Format** The format that archived jobs will be stored in.

**Original job** Archives the image in its original file format. When you add the archived file back into the software, it will need to be RIPed again before printing.

**Native job** Archives the print data in the output device's native language. No preview information will be available. When you add the archived file back into the software, it will not need to be RIPed again before printing.

**File Paths** Sets the folders which will be used for the following:

**Jobs** The folder that job files are stored in.

**Temporary files** The folder for temporary files that are created during the processing of jobs.

- RIPing files requires a significant amount of storage space. If the drive on which the temp directory has only a small amount of storage space, you may want to consider relocating the temp directory to a drive with more available storage space.

**Maximum number of RIP threads** Sets the number of jobs that can be RIPed at one time. One RIP thread is required for each file being RIPed, and one RIP thread is required to generate a preview for each file.

**Allow remote Send Now/Interactive** If this option is selected, the software will allow Send Now and Interactive operation from a remote design station.

## Working with Setups

Setups provide the link between the software and your output devices. Each setup contains the following information:

- The type of output device being used.
- The method used to communicate with the device.
- Details of how incoming print jobs will be processed.
- The default job properties that will be applied to a new job.

Production Manager allows for multiple setups to be in use at the same time. It is possible to have more than one setup for each output device. This is useful because it allows you to configure each setup for a different purpose. You can have one setup for printing proofs, and another for final output, for instance. You can also have different setups for different output media.

## Adding New Setups

To add new setups:

1. From the **Setup** menu, select **Change Setup** or **Add Setup**.
2. Select the **Manufacturer** and **Model Name** of the output device from the list.
3. Click **Next**.



4. Edit the **Setup name** of the device.
5. Click **Next**.
6. Select the **Port** the output device uses for communication. If necessary, edit the communications settings for the chosen port. See "Editing Setup Properties" page 186 for details on the communications settings.
  - If **TCP/IP** is available for the network output device, use **TCP/IP**. If not, you should choose LPR or **FTP**.
7. Click **Finish**.

## Setting Up Desktop Printers as Output Devices

To set up a conventional printer as an output device:

1. Add the printer to the computer as a standard Windows printer.
2. When creating the setup in the software, select **Desktop Printer** under **Manufacturer**, then select the print queue for the desktop printer under **Model** name and click **Next**.
  - The Port list will be disabled.
3. Click **Finish**.

## Selecting a Setup

To select a setup, highlight its icon in the setup area. Only one device can be selected at any time.

## Activating Setups

An *active setup* is a setup that is ready to output jobs.

To make a setup active, do one of the following:

- Check the box next to its icon in the setup area.
- Select the setup icon, then from the **Setup** menu, select the **Make Active**.
- Right-click on the setup icon and select **Make Active** from the context menu.

## Deleting Setups

To delete a setup, do one of the following:

- Select the setup icon in the setup area and click on the Delete button in the toolbar.
- Select the setup icon in the setup area, then from the Edit menu, select Delete.
- Select the setup icon in the setup area and press the Delete key on your keyboard.
- Right-click on the setup icon in the setup area and select Delete from the context menu.

Deleting a setup will also delete all jobs associated with the setup.

## Editing Setup Properties

To edit the setup properties associated with a particular output device, do one of the following:

- Right-click the setup icon in the Setup Pane and select Properties.
- Select the setup icon in the Setup Pane, then from the Setup menu, select Setup Properties.
- Double-click the setup icon in the Setup Pane.

## Job Workflow Tab

The Job Workflow tab displays information about the output device, media size.

Setup name                      Name of the setup.

## Communication Tab

The **Settings** section of this tab changes depending on the port used to connect to the output device.

Ports are listed in order of popularity for each device. Only the ports that are usable by the output device are listed.

The standard port for the device is selected by default. Some of the port settings may still need to be entered or edited, however.

**Port**                      Select the port to which the output device is connected. The port list is limited to the ports that are actually present on your computer and usable with your output device.

**LPT**                      Parallel port is the most common method to connect printers to the computer. The following settings are available:

### Trans-mission buffer

The size of the transmission buffer in bytes

### Check port state before sending

If checked, the software will send a data packet to the printer to test if the printer is connected before beginning to print the job.

### Use standard LPT driver

Whenever possible, the software uses a custom LPT driver to increase the performance of the LPT port. If checked, the software will use the standard Windows LPT driver instead. Performance will be diminished, but reliability may be enhanced. The following settings are enabled when the custom driver is in use:

### Mode

Use **ECP** (Enhanced Capabilities Mode) for the fastest possible transmission speed. **EPP** (Enhanced Parallel Port) is not as fast, but may be more compatible.

### ECP uses DMA

Using DMA with ECP can increase the maximum bit rate from 2 mbps to 4 mbps.

### Yield if device is busy

If checked, the software will release the extra system resources used by the custom driver while the printer is busy. This may aid overall performance.

**TCP/IP**                      Use this port if your output device supports network connection.

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**TCP/IP address**

The TCP/IP address of the output device (required).

**Port Number**

The port number used for printing to the output device. Select from the list or enter a custom number.

**USB/FireWire** USB/FireWire drivers are provided with output devices that support them. Please make sure the proper drivers are installed when using these ports.

**LPR** Some network devices do not work with TCP/IP and only with LPR protocol.

**Host name or IP address**

The host name or IP address assigned to the output device (required).

**Printer/ queue name**

Depending on the output device, this can either be the printer name, such as PR1, or it can be the path to a UNIX print queue. See FTP listing above for common printer names.

**FTP**

Output devices that connect directly to a network may support FTP protocol. This allows the RIPPed output file to be sent to the output device via FTP.

**Host name or IP address**

The host name or IP address assigned to the output device (required).

**Printer/ queue name**

Depending on the output device, this can either be the printer name, such as pr1, or it can be the path to a UNIX print queue. Common printer names include:

**HP JetDirect EX**

raw

**HP JetDirect EX Plus 3**

raw1, raw2, raw3

**HP JetDirect 600N**

Port1

**Intel Netport Express 10/100**

LPT1\_PASSTHRU

**Intel Netport Express Pro**

LPT1\_PASSTHRU, LPT2\_PASSTHRU,  
COM1\_PASSTHRU

**Axis**

pr1, pr2, pr3

**Linksys**

P1, P2, P3

*Software Version Key:*

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**Hawking**

lp1, lp2, lp3

**FILE** The File port allows you to save the output data as a file. The following settings are available:

**Prompt for file path for each file**

If checked, you will be prompted to provide a file name for the output file when each job is saved to a file.

**Use custom extension**

If checked, enter the file extension you want to use for the output file in the space provided.

**Default Location**

The default folder in which output files will be placed. Click Browse to select a folder.

**SCSI** Use this port if your output device supports SCSI connection.

**Folder** Outputs to a file in the specified folder using a naming convention specific to the output device.

**COM** Serial communications port. This port is only supported by cutters. In addition to the standard serial port controls for bits per second, data bits, parity, stop bits and hardware/software flow control, there are checkboxes which enable/disable the following wires:

**DTR** Data Terminal Ready

**DSR** Data Set Ready

**RTS** Request To Send

**CTS** Clear To Send

**DCD** Data Carrier Detect

## Working with Jobs

Jobs can be added, deleted or have their properties changed while they are in the Production Manager queue.

### Adding New Jobs

Jobs can be sent to the software in a number of different ways.

**Adding Jobs from a File**

To add a file as a new job:

1. Select the setup you want to use to print the file.
2. From the **File** menu, select **Add Job**.
3. Select the file to be added and click **Open**.

See Appendix A for the list of supported file types.

## Dragging a File into Production Manager

To specify the setup to be used, drag the file onto the appropriate setup icon in the setup area. The job will be assigned a status of **Holding**.

## Selecting Jobs

To select a job, click on its listing.

Multiple jobs can be selected using the standard Windows **CTRL** and **SHIFT** methods:

- Hold the **CTRL** key to select multiple individual jobs.
- Hold the **SHIFT** key to select a range of jobs by clicking on the first and last jobs in the range.

To select all the jobs, from the **Edit** menu select **Select All**.

## Saving Jobs

Jobs can be saved as a native file or original format.

To save a job:

1. Select the job file you want to save in the Production Manager window.
2. From the **File** menu, select **Save as** or click on the **Save as** command button.
3. Enter the file name and select the file format (Native or Original) and click **Save**.

## Deleting Jobs

To delete a job, do one of the following:

- Press the **Delete** or **Backspace** key on your keyboard.
- Select the job and from the **Edit** menu, select **Delete**.
- Select the job, then click on the **Delete** button in the toolbar.
- Right-click the job, then select **Delete** from the context menu.

## Setting Job Properties

The Job Properties dialog allows you to edit a large number of settings that control how a job will be output.

See "Setting Job Properties" page 190 for details.

## Processing Jobs

Once the server receives a job, it can be RIPPed and printed.

## Moving jobs to a Different Output Device

To move a job to a different output device setup, do one of the following:

- Select the job and select **Move** from the **File** menu, then select the new setup and click **OK**.

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- Click and drag the job onto the icon for the new output device's setup in the Setup Pane.

## Printing Jobs

To print a job, do one of the following:

- Select the job and from the **File** menu, select **Print**.
- Right-click the job and select **Print** from the context menu.
- Drag the job into the Print Queue with the mouse. Once a job is moved into the Print Queue it will be automatically be RIPPed if it has not been RIPPed already. It will then automatically be printed on the appropriate device.

Jobs in the Print Queue will process in the order of the Job Priority setting in their Job Properties. When multiple jobs with the same priority are waiting in the queue, the job that was received first will process first.

### ***Aborting the Processing of a Job***

To abort the processing of a job while it is being RIPPed or printed, do one of the following:

- Select the job and from the File menu, select Abort.
- Select the job, then click on the Abort button in the toolbar.
- Right-click the job, then select Abort from the context menu.
- Drag the job back into the Hold Queue with the mouse.

If a job is aborted while being RIPPed, its status is set to Aborted. It will need to be RIPPed again before it can be printed.

If a job is aborted while being printed, its print status freezes at 0%.

## Outputting Test Jobs

The software allows you to output print and/or contour cut test jobs to appropriate output devices.

### ***Outputting a Test Print Job***

To print a test job:

1. Select the setup you want to send the test job to.
2. From the **Setup** menu, select **Test Print**.

### ***Outputting a Test Cut Job***

To output a test cut job:

1. Select the setup you want to send the test job to.
2. From the **Setup** menu, select **Test Cut**.

*Software Version Key:*

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## Setting Job Properties

The Job Properties dialog allows you to edit a large number of settings that control how a job will be output.

### Accessing the Job Properties Dialog

To access the Job Properties dialog, select the job and do one of the following:

- Double-click on the job.
- From the **File** menu, select Job Properties.
- Right-click on the job and select **Job Properties** from the context menu.

The left side of the dialog contains the tabs on which the job properties can be set. The right side contains a preview pane that displays the job as it will appear on the output medium.

### Setting Default Job Properties

To make the current job properties the default settings for all new jobs that are added to this setup, click **Set Default**. You will be asked to confirm the change in the default settings.

### Setting Job Properties

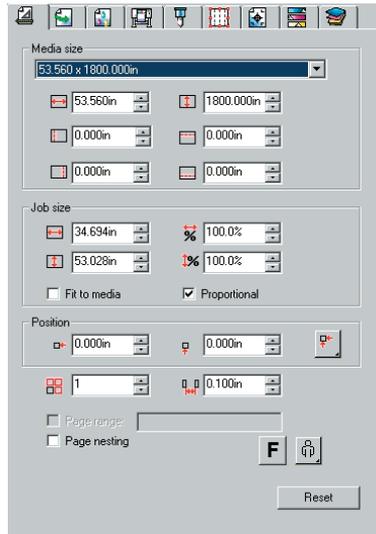
Different tabs within the Job Properties dialog let you set layout options, tiling/paneling options, color calibration options, color adjustment options and labels.

The exact number of tabs and the settings on those tabs will vary depending on the type of job and output device selected, as well as the version of the software in use.

#### Layout Tab



The Layout tab controls how the job will be positioned on the output medium, what size it will be, and the layout of the output.



**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

**Media Size** The size of the media loaded into your output device. Select from one of the preset sizes, or specify unique dimensions below.



The width and height of the media



The margins of the printable area

When a set of unique dimensions is specified, it is automatically added to the list of preset sizes.

**Job Size** Choosing one of these options allows you change the output size and orientation of the page.



The job's width and height.



The job's width and height as a percentage of the original.

**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 medium.

**Proportional** When this option is selected, the height and width of the job are increased or decreased together to keep the original proportions intact.

**Position** These settings change the position of the job on the media.



The distance between the job and the right and bottom margins of the printable area.



Places the job at the specified distances from the lower and right edges of the printable area of the output medium.



Centers the job along the width of the printable area.



Centers the job in the middle of the printable area. Only available for sheet material.



The number of copies to be output.



The amount of space that will exist between the various tiles, copies, and/or nested jobs that will be output as part of the job.

**Workflow Tab**  The Workflow tab displays settings related to the time and order that the job will be processed in.

**After Output** Sets what to do with the job after output:

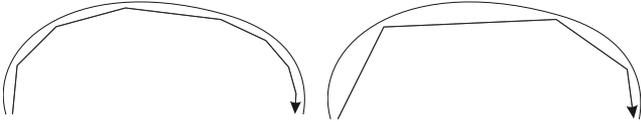
**Delete** Removes jobs from the queue after output.

**Hold** Places jobs in the Hold Queue after output or at the bottom of the queue.

**Archive** Saves the job after output.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

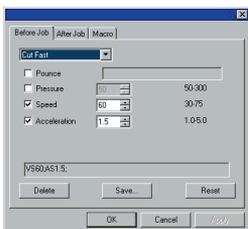
- |                    |   |  |
|--------------------|---|--|
| Cut Tab            |  | The Cut tab is only visible for jobs being output on a hybrid device or cutter. It allows you to specify settings related to cutting.  |
| Resolution         |   | Set the resolution of your cutting device. The default value is already set for optimal results. You should not change this value unless you are experiencing problems with your output (output size not matching the size it was designed). |
| Passes             |   | Specify how many times the blade will move over each line.   |
| Advance after plot |   | Check to advance the media after output and reset the origin.  |
| Send arc commands  |   | Activates the device's internal curve handling.  |
| Knife offset       |   | Check to enter custom values for knife offset. <ul style="list-style-type: none"><li>• You should only change this value if you are using a pen plotter as a cutting device.</li></ul>   |
| Packet size        |   | Check to specify the packet size sent to the device. <ul style="list-style-type: none"><li>• This setting applies to a limited number of cutters and should not be changed unless your cutter requires it.</li></ul>                         |
| Curve quality      |   | Determines the precision of the curves by setting the maximum space allowed between the curve and the line. Higher quality requires more lines, resulting in increased plot file size and cutting time.                                      |
- 
- |                |               |
|----------------|---------------|
| Higher quality | Lower quality |
|----------------|---------------|
- The default is already set for optimal results.
- |                |  |
|----------------|--|
| Cutter Options | Displays the Cutter Driver Options dialog. |
| Reset          | Restores the default settings.             |

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

## Setting Cutter Driver Options

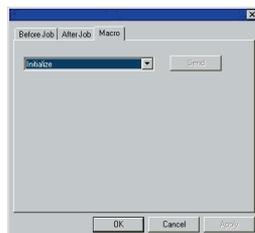
The Cutter Driver Options allow you to control the parameters of operation of your output device such as cut speed, pressure and execute common tasks (roll forward, roll backward, go to origin) from your computer.



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.

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 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.

**Software Version Key:**

**(A) = Apprentice (E) = Expert (M) = Master (P) = Master PLUS**

Initialize      Initializes the output device.

Roll For-      Advances or rolls back the media.  
ward /Back-  
ward

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.

Automatic job nesting

# Appendix A - ASCII Code

Code	Char												
32		64	@	96	`	128	€	160		192	À	224	à
33	!	65	A	97	a	129	□	161	ı	193	Á	225	á
34	"	66	B	98	b	130	,	162	ç	194	Â	226	â
35	#	67	C	99	c	131	f	163	£	195	Ã	227	ã
36	\$	68	D	100	d	132	"	164	¤	196	Ä	228	ä
37	%	69	E	101	e	133	...	165	¥	197	Å	229	å
38	&	70	F	102	f	134	†	166	ı	198	Æ	230	æ
39	'	71	G	103	g	135	‡	167	§	199	Ç	231	ç
40	(	72	H	104	h	136	^	168	"	200	È	232	è
41	)	73	I	105	i	137	%o	169	©	201	É	233	é
42	*	74	J	106	j	138	Š	170	ª	202	Ê	234	ê
43	+	75	K	107	k	139	<	171	«	203	Ë	235	ë
44	,	76	L	108	l	140	Œ	172	¬	204	Ì	236	ì
45	-	77	M	109	m	141	□	173	-	205	Í	237	í
46	.	78	N	110	n	142	Ž	174	®	206	Î	238	î
47	/	79	O	111	o	143	□	175	¯	207	Ï	239	ï
48	0	80	P	112	p	144	□	176	°	208	Ð	240	ð
49	1	81	Q	113	q	145	'	177	±	209	Ñ	241	ñ
50	2	82	R	114	r	146	ˆ	178	²	210	Ò	242	ò
51	3	83	S	115	s	147	“	179	³	211	Ó	243	ó
52	4	84	T	116	t	148	”	180	´	212	Ô	244	ô
53	5	85	U	117	u	149	•	181	µ	213	Õ	245	õ
54	6	86	V	118	v	150	-	182	¶	214	Ö	246	ö
55	7	87	W	119	w	151	—	183	·	215	×	247	÷
56	8	88	X	120	x	152	˘	184	¸	216	Ø	248	ø
57	9	89	Y	121	y	153	™	185	¹	217	Ù	249	ù
58	:	90	Z	122	z	154	š	186	º	218	Ú	250	ú
59	;	91	[	123	{	155	›	187	»	219	Û	251	û
60	<	92	\	124		156	œ	188	¼	220	Ü	252	ü
61	=	93	]	125	}	157	□	189	½	221	Ý	253	ý
62	>	94	^	126	~	158	ž	190	¾	222	Þ	254	þ
63	?	95	_	127	□	159	ÿ	191	¿	223	ß	255	ÿ

# Appendix B - Installation

The following DLL - Dynamic Linked Libraries are installed in Windows folder

* ctl3d32.exe	* msinet.ocx	* owl250f.dll
* hhupd.exe	* msvbvm50.dll	* stdole2.tlb
* mfc42.dll	* msvcirt.dll	* vb5.olb
* mfc42u.dll	* msvcp60.dll	* vb5.dll
* msflxgrd.ocx	* msvcr7.dll	* sentinel.vxd

\* sentinel.vxd is not installed in Windows NT, 2000 and XP systems

The following folders are created under the folder where the program was installed.

<b>Archive</b>	Used as default folder by Production Manager, when you add a job.
<b>Borders</b>	Contains the advanced border shapes (see page 88)
<b>Casfonts</b>	Contains font files in Casfont format.
<b>Color</b>	Contains color printer drivers.
<b>Custom Characters</b>	Contains the characters defined by user (see page 109).
<b>Density</b>	Contains density adjustment files. There are subfolders for each printer manufacturer and printer model.
<b>Dictionaries</b>	Contains dictionary files used by spell checker (see page 103).
<b>Filters</b>	Contains file import filters.
<b>Forms</b>	Contains the forms used in Job estimation
<b>FSFonts</b>	Contains font files in FSfont format.
<b>Help</b>	Contains Help (manual and read me) files.
<b>ICCProfile</b>	Contains ICC Calibration files. There are subfolders for each printer manufacturer and printer model.
<b>Jobs</b>	Used by Production Manager to store Job files. There are subfolders for each printer manufacturer and printer model.
<b>OutputDrivers</b>	Contains the CSM and DLL drivers for printers and plotters.
<b>Plugins</b>	Contains DLL modules used by your software.
<b>Printers</b>	(Not used)
<b>Profiles</b>	Contains the workspaces files used to define the user interface. See page 17.
<b>Program</b>	Contains the main modules of your program.

<b>Samples</b>	Contains the sample files in several formats as FS, TIFF, JPEG, EPS, etc.
<b>Shapes</b>	Contains the definition files for parametric shapes. See page 89.
<b>Styles</b>	Contains the text styles defined by user. See page 109.
<b>Swatch</b>	Contains the swatch tables and color libraries. See page 68.
<b>Temp</b>	Contains temporary files created during processing.
<b>Templates</b>	Contains templates.
<b>URWFonts</b>	Contains font files in URW format.

# Appendix C - Supported File Formats

File formats supported in design application

File Format	Extension	Import	Export
<b>Adobe Illustrator</b>	ai, EPS	10.0	6.0
<b>Adobe PhotoShop</b>	psd	6.0	4.0
<b>AutoCAD Drawing</b>	dwg	2000	-----
<b>Clip Art</b>	ca	4 / 5	4 / 5
<b>CorelDRAW Drawing</b>	cdr	8.0	-----
<b>CorelDRAW Exchange Metafile</b>	cmx	6.0	-----
<b>Digital Microprocessor Plotter Language (DMPL)</b>	plt	Note 1	-----
<b>Drawing Exchange file</b>	dxg	Note 1	Note 1
<b>EnRoute</b>	enr	2.3	-----
<b>FlexiSIGN 5.x</b>	fs, pd, fd, fc, fe	5.9	4 / 5
<b>FlexiSIGN 6.x</b>	fs	6.0	6 / 7
<b>Flexi 7</b>	Fs	7.0	7.0
<b>Gerber Art Definition</b>	gad	-----	1.0
<b>Hewlett Packard Graphics Language (HPGL)</b>	hpg, hgl, plt	Note 1	Note 1
<b>Hewlett Packard Graphics Language II (HPGL/2)</b>	hpg, hgl, plt	Note 1	Note 1
<b>Ikarus</b>	ik	Note 1	-----
<b>Joint Photograph Experts Group (JPEG)</b>	jpg	Note 1	Note 1
<b>Kodak Flashpix</b>	fpx	1.0	-----
<b>Kodak PhotoCD</b>	pcd	Note 1	-----
<b>Macintosh Quickdraw PICT</b>	pct	Note 1	-----
<b>Microsoft Widows Metafile</b>	wmf	Note 1	-----
<b>Portable Network Graphics (PNG)</b>	png	Note 1	Note 1

<b>Portable Document Format (PDF)</b>	pdf	1.3	-----
<b>PostScript</b>	ps, EPS, 2ps, fjb, prn	2.0	3.0
<b>Targa</b>	tga	2.0	2.0
<b>Text</b>	txt	Note 1	-----
<b>Tag Image File Format (TIFF)</b>	tif	Note 1	Note 1
<b>Windows bitmap</b>	Bmp	Note 1	Note 1
<b>Zsoft PC Paintbrush</b>	pcx	5.0	-----

- Note 1: Version number does not exist or not available.

File formats supported in Production Manager

<b>File Format</b>	<b>Extension</b>	<b>Import</b>	<b>Export</b>
<b>Joint Photograph Experts Group (JPEG)</b>	jpg	Note 1	-----
<b>Tag Image File Format (TIFF)</b>	tif	Note 1	-----
<b>Portable Document Format (PDF)</b>	pdf	1.3	-----
<b>PostScript</b>	ps, EPS, 2ps, fjb, prn	3.0	-----
<b>Windows bitmap</b>	bmp	Note 1	-----
<b>Native Files</b>	prt, plt	Note 1	Note 1
<b>Plot / Cut Job Files</b>	job	Note 1	Note 1
<b>Print Job Files</b>	fjb	7.0	-----
<b>Kodak PhotoCD</b>	pcd	Note 1	-----

- Note 1: Version number does not exist or not available.

# Appendix D - Features List

	VE-LXi Master +	VE-LXi Master	VE-LXi Expert	VE-LXi Apprentice
<b>Getting Started</b>				
Preview Bitmaps	X	X	X	
Undo List	X	X	X	
Redo List	X	X	X	
Repeat	X			
<b>Working with Files</b>				
Export Standard File Formats	X	X	X	X
Job Info	X	X	X	
Find File	X	X	X	
Job Estimation	X			
Templates	X			
<b>Using DesignEditor</b>				
DesignEditor	X	X		
<b>Selecting Objects</b>				
Select Similar Objects/Color	X			
Select by Attribute	X			
<b>Arranging Objects</b>				
Step and Repeat	X	X	X	
Auto Serialize	X			
Mask/UnMask	X			
Lock/Un-Lock	X	X		
Align	X	X	X	
Distribute	X			
Spacing	X	X	X	
Nest	X			
<b>Working with Color</b>				
Eyedropper	X			
Color Settings				
Create Swatch Palette	X			
<b>Using Fill/Stroke Editor</b>				
Patterns	X			
Gradients	X			
<b>Working with shapes</b>				
Circle	X	X		

	<b>VE-LXi Master +</b>	<b>VE-LXi Master</b>	<b>VE-LXi Expert</b>	<b>VE-LXi Apprentice</b>
Fan	<b>X</b>			
Arrow	<b>X</b>			
Parametric Shape	<b>X</b>			
Convert to Shape	<b>X</b>			
<b>Working with Text</b>				
Text Justify	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Text Spacing	<b>X</b>			
Find Replace	<b>X</b>	<b>X</b>		
Spell Check	<b>X</b>	<b>X</b>		
Kerning	<b>X</b>	<b>X</b>	<b>X</b>	
Define Kerning	<b>X</b>	<b>X</b>		
Define Character	<b>X</b>			
Insert Symbol	<b>X</b>			
Text Styles	<b>X</b>			
Braille	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>
URW Font Support	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>	<b>Optional</b>
<b>Working with Bitmaps</b>				
Scanning	<b>X</b>	<b>X</b>	<b>X</b>	
Rasterize	<b>X</b>			
Colormode	<b>X</b>			
Marquee	<b>X</b>			
Magic Wand	<b>X</b>			
Move	<b>X</b>	<b>X</b>		
Eraser	<b>X</b>	<b>X</b>		
Pencil	<b>X</b>	<b>BW</b>		
Fill	<b>X</b>	<b>BW</b>		
AutoTrace	<b>X</b>	<b>X</b>		
Centerline Trace	<b>X</b>			
Picture Cut	<b>X</b>			
ColorTrace	<b>X</b>			
Clear Bitmap	<b>X</b>			
<b>Working with Effects</b>				
Seperate	<b>X</b>	<b>X</b>	<b>X</b>	
Combine Weld	<b>X</b>	<b>X</b>	<b>X</b>	
Combine Cut Out	<b>X</b>	<b>X</b>		

	VE-LXi Master +	VE-LXi Master	VE-LXi Expert	VE-LXi Apprentice
Combine Common	X	X		
Exclude Common	X	X		
Combine Fuse	X			
Combine Seperate Overlap	X			
Combine Options	X	X		
Outline	X	X	X	
Shadow	X	X	X	
Stripe	X			
Distort	X	X		
Blend	X			
Color Trapping	X			
Graphic Styles	X			
Countour	X	X	X	
<b>Working with Measurements and Lables</b>				
Automatic Dimension	X	X		
Dimension to Page	X	X		
Dimensions/Labels	X	X		
<b>Configure the System for Color Printing</b>				
Color Settings				
Rip and Print				
<b>Cutting your Design</b>				
Cut/Plot	X	X	X	X

\* This chart lists only the major features that differentiate the versions of the software. Not every feature present in the software is listed.

# Appendix E – Keyboard Shortcuts

<b>Alignment</b>	
Align Both Centers	<b>CTRL+5</b>
Align Both Centers to Page	<b>CTRL+SHIFT+5</b>
Align Bottom	<b>CTRL+2</b>
Align Bottom to Page	<b>CTRL+SHIFT+2</b>
Align Horizontal Centers	<b>CTRL+3</b>
Align Horizontal Centers to Page	<b>CTRL+SHIFT+3</b>
Align Left	<b>CTRL+4</b>
Align Left to Page	<b>CTRL+SHIFT+4</b>
Align Right	<b>CTRL+6</b>
Align Right to Page	<b>CTRL+SHIFT+6</b>
Align Text Baselines	<b>CTRL+0</b>
Align Top	<b>CTRL+8</b>
Align Top to Page	<b>CTRL+SHIFT+8</b>
Align Vertical Centers	<b>CTRL+7</b>
Align Vertical Centers to Page	<b>CTRL+SHIFT+7</b>
<b>Arranging</b>	
Back One	<b>CTRL+PAGE DOWN</b>
Compound	<b>CTRL+M</b>
Convert to Outlines	<b>CTRL+SHIFT+O</b>
Convert to Outlines	<b>V</b>
Forward One	<b>CTRL+PAGE UP</b>
Group	<b>CTRL+G</b>
Redraw	<b>F5</b>
Repeat	<b>CTRL+D</b>
Resize	<b>CTRL+K</b>
Reverse Path Direction	<b>CTRL+SHIFT+D</b>
Rotate	<b>CTRL+R</b>
Spacing	<b>J</b>
To Back	<b>SHIFT+NEXT</b>
To Front	<b>SHIFT+PRIOR</b>
UnCompound	<b>CTRL+J</b>
Ungroup	<b>CTRL+U</b>

<b>Other</b>	
Cancel Edit	<b>ESC</b>
Close	<b>CTRL+F4</b>
Close	<b>CTRL+W</b>
Exit	<b>ALT+F4</b>
Help Topics	<b>F1</b>
New	<b>CTRL+N</b>
Open	<b>CTRL+O</b>
Quit	<b>Command+Q</b>
Save	<b>CTRL+S</b>
Save As	<b>CTRL+SHIFT+S</b>
<b>Palettes</b>	
Color Mixer	<b>M</b>
DesignCentral	<b>CTRL+I</b>
DesignEditor	<b>E</b>
Fill/Stroke Editor	<b>I</b>
<b>Path Editing</b>	
Select Point Tool	<b>N</b>
Bezier Path Tool	<b>P</b>
Add Point	<b>+</b>
Remove Point	<b>-</b>
<b>Selecting</b>	
Select Tool	<b>A</b>
Clear	<b>BACKSPACE</b>
Clear	<b>DELETE</b>
Copy	<b>CTRL+C</b>
Copy	<b>F3</b>
Copy	<b>CTRL+INSERT</b>
Cut	<b>F2</b>
Cut	<b>CTRL+X</b>
Delete Now	<b>SHIFT+BACK</b>
Delete Now	<b>SHIFT+DELETE</b>
Deselect	<b>CTRL+SHIFT+A</b>

Invert Selection	<b>CTRL+SHIFT+I</b>
Paste	<b>SHIFT+INSERT</b>
Paste	<b>CTRL+V</b>
Paste	<b>F4</b>
Redo	<b>CTRL+Y</b>
Redo Multiple	<b>CTRL+SHIFT+Y</b>
Select All	<b>CTRL+A</b>
Select by Attributes	<b>D</b>
Undo	<b>F1</b>
Undo	<b>CTRL+Z</b>
Undo Multiple	<b>CTRL+SHIFT+Z</b>
Text	
Text Tool	<b>T</b>
Find and Replace	<b>F3</b>
Justify Center	<b>CTRL+SHIFT+C</b>
Justify Full	<b>CTRL+SHIFT+F</b>
Justify Left	<b>CTRL+SHIFT+L</b>
Justify Right	<b>CTRL+SHIFT+R</b>
Spell Check	<b>F7</b>
Shapes	
Circle Tool	<b>C</b>
Oval Tool	<b>O</b>
Polygon Tool	<b>G</b>
Rectangle Tool	<b>R</b>
Starburst Tool	<b>S</b>
View	
Next Window	<b>CTRL+TAB</b>

View	
Pan View	<b>SPACE</b>
Show Fills	<b>CTRL+F</b>
View Filter	<b>F</b>
Zoom	<b>Z</b>
Zoom In	<b>CTRL+=</b>
Zoom Out	<b>CTRL+-</b>
Miscellaneous	
Cut/Plot	<b>CTRL+L</b>
Document Setup	<b>CTRL+B</b>
Print	<b>CTRL+P</b>
Print Setup (Page Setup on Macintosh)	<b>CTRL+SHIFT+P</b>
RIP and Print	<b>CTRL+H</b>
Toolbars	<b>CTRL+T</b>
Measure Tool	<b>U</b>
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