

Setup Guide



SignLab Version 9 | Integrated Design
and Production Solutions

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CONTACT INFORMATION

After using this guide to configure your shop equipment, you should have a good impression of how the tools can be used to improve your shop efficiency. However, if you have questions about the SignLab Trial, then please contact either your assigned dealer, or CADlink directly.

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INTRODUCTION

This setup guide has been created for users that are evaluating the **SignLab 9 Trial**. These setup configurations have been excerpted from the SignLab 9 User Guide, which will be provided as part of a typical SignLab 9 package. At this point, it is expected that you have completed installation of the SignLab 9 Trial, and you are using this setup guide to configure your shop equipment and confirm that you can output jobs as expected.

SignLab

SignLab is Computer Aided Design (CAD) software for signmakers, which provides leading edge technologies as an all-in-one package for efficient sign shop operation. Development for SignLab is an ongoing process, where new technologies and tools are incorporated into SignLab to support modern sign shop needs. Despite the pressure to add new features, radical changes to the user interfaces and workflows are avoided, so that signmakers are not inconvenienced when upgrading to the latest SignLab.

SignLab tools are simple and versatile for designing with text, line art, and images (i.e., bitmaps). SignLab also provides significant support for other design applications, so that unfinished or archived designs can be brought into SignLab for pre-production work.

Visual Production Manager

Included with SignLab Print and Cut is the Visual Production Manager (VPM), which is a production management tool that serves as a repository for all of your volume production printing and/or cutting activities. Sorting and accumulating jobs is accomplished by creating one-or-more queues for each of your machines, thereby providing a simple means for designers to output their designs.

From a designer perspective, a queue in Visual Production Manager appears as a print destination (i.e., in the application **Print** dialog), and designers are otherwise insulated from the technical aspects of production. However, for the operator that oversees production, they are presented with a clean interface that allows them to preview jobs at a glance, and intuitive controls that can be set behind-the-scenes.

Send to VPM Plug-ins

As a means of avoiding the **Print** dialog configuration steps within your PhotoShop, Illustrator and/or CorelDraw packages, special plug-ins are provided that allow a design to be sent directly to SignLab or VPM. In this manner, you have increased freedom to choose the workflow that best suits your production requirements.

SENDING JOBS FROM SIGNLAB

Once you have completed the SignLab installation, choose from the following workflows to confirm that print and/or cut jobs are being received and processed as expected. By completing the workflow that best corresponds to your shop configuration, you will develop a greater understand about the SignLab interface.

- **Deciding when to Cut, Print, Print&Cut, etc.** - When in doubt, review these pointers to help you choose the workflow that best suits your needs.
- **Choosing Registration Marks and Alignment Systems** - This section provides additional comments about aligning cut operations to print jobs.

- **Print and/or Cut from SignLab** - Use this workflow for *SignLab Print & Cut* packages, where jobs will be processed by Visual Production Manager (VPM) and output to a printer and/or cutter.
- **Contour Cut-only from SignLab** - Use this workflow for *SignLab Vinyl, Vinyl Pro, and CutPro* packages, where jobs are output from SignLab to the cutter.

- **Garment Printing from SignLab** - Use this workflow with the *Garment Decorating Module* to print to both white and black garment material. See also the *Sending Jobs from PhotoShop/Illustrator/CorelDraw* sections.
- **Cutting Rhinestone Patterns from SignLab** - Use this workflow with the *Garment Decorating Module* to place rhinestones and then output the cut pattern to the cutter.

- **Rotary Engraving from SignLab** - Use this workflow with the *Engraving Module* to configure machine settings within SignLab and output a tool path to the engraver.
- **Laser Engraving from SignLab** - Use this workflow to configure SignLab for **File** menu >> **Print** output to your laser engraver.
- **Routing from SignLab** - Use this workflow with the *Sign Routing Module* to configure SignLab with material definitions, cutting tools, and cut templates for output to a router.

- **Print and/or Cut to Roland VersaWorks** - Use this workflow with the *SignLab for VersaWorks™ Edition* to configure SignLab for sending output to Roland VersaWorks.
- **Print and/or Cut to Mimaki Rasterlink** - Use this workflow with the *SignLab for Mimaki™ Edition* to configure SignLab for sending output to Mimaki RasterLink.

For workflows that involve sending jobs from third-party design applications to VPM, see *Sending Jobs to Visual Production Manager (VPM)*

DECIDING WHEN TO CUT, PRINT, PRINT&CUT, ETC.

Due to the variety of supported workflows in SignLab, the following differences should be noted about how jobs are output from SignLab:

Printing versus Print&Cut

- Both “print only” and “print and cut” jobs can be processed through the **Print and Cut** command.
- A “print and cut” job is like a regular print job, except that contour cut paths are applied after the print portion of the job. For example, stickers are commonly created through a “print and cut” process.
- Though the **File** menu >> **Print** command is available in SignLab, it is typically used for printing simple drafts or customer proofs to a desktop printer, whereas large format printing should be performed through the **Print and Cut** command.

Contour Cutting versus Print&Cut

- When using the **Print and Cut** command, all workspace shapes are considered to be print-only objects, except contour cut paths that represent cut-only objects.
- Cut paths are created using the **Cut** menu tools, such as **Contour Cut**, **Contour Cut On/Off**, or **Die Cut**.
- The **Print and Cut** command is not available with *SignLab Vinyl*, *Vinyl Pro*, or *CutPro* packages. Instead, cut jobs are sent via **Cut** menu >> **Plot**.
- When using **Cut** menu >> **Plot**, all workspace shapes are treated as cut-only objects.

Contour Cutting versus Routing or Engraving

- For both the *SignLab Sign Routing Module*, and the *SignLab Engraving Module*, the **Tool Path Tools** are first used to create tool paths, and then jobs are sent via **Cut** menu >> **Plot**.
- If contour cut paths are output to a router or engraver, the cut paths will be of zero depth (i.e., the cut path will score the material).
- Since laser engravers use a Windows printer driver, such jobs are sent from SignLab using **File** menu >> **Print**.

Visual Production Manager, VersaWorks, and RasterLink

- Print and cut jobs sent from SignLab will be received and processed through the Visual Print Manager, unless either the *SignLab for VersaWorks* or *SignLab for Mimaki* Editions have been purchased.
- For the SignLab for VersaWorks Edition, the **Print to Roland VersaWorks** command will process jobs through your VersaWorks RIP software (either queue A or B).
- For the SignLab for Mimaki Edition, the **Print to RasterLink** command will cause jobs to be processed through your Rasterlink RIP software.
- Regardless of the choice of RIP, the software should be launched prior to sending the job from SignLab, rather than rely upon Windows to launch the RIP software automatically.

CHOOSING REGISTRATION MARKS AND ALIGNMENT SYSTEMS

SignLab provides support for an extensive variety of printers and cutters, both in terms of manufacturers and machine models. However, the technology used for printer-cutter alignment varies, such as the following:

- Hybrid printers that automatically align cut operations after completing the print job.
- Printers that automatically print registration marks that will be used for cut alignment.
- For print-laminate-cut jobs, where the printed job will be laminated and loaded back into the hybrid printer for cutting, the printer will typically print the registration marks that it needs for cut alignment.
- Cutters that have optical eye systems (i.e., a laser) that can automatically align to specific types of registration marks.
- Cutters that do not have optical eye systems, which require that the operator visually position the cutting tool according to the registration marks. In such cases, it is recommended that **Three point automatic** registration marks be created (if available).
- For cut vinyl applications, cutting registration marks that are used to visually align multiple layers of color vinyl.

When configuring your printer and/or cutter, it is important to consider both the job application, and the choices of printer/cutter alignment that are detailed within the Operator Manuals of the given machines.

Depending upon the type of work being performed, it may be necessary to manually add registration marks within SignLab, or to automatically add registration marks within Visual Production Manager.

Registration Marks in SignLab

- In SignLab, choose **Shapes Tools >> Registration Mark** to manually place individual registration marks.
- Likewise, choose **Shapes Tools >> Multi-Registration Mark** to place sets of registration marks.
- The Multi-Registration Mark tool is also available in Cut Preview mode (i.e., for cut-only jobs).
- These tools are typically used for cut vinyl applications, though they can be equally applicable for print&cut applications, provided that the marks are placed according to the Operator Manual guidelines.

Registration Marks in Visual Production Manager

- Visual Production Manager can automatically add registration marks when jobs are received.
- Depending upon how the queue is configured, marks can be added for individual jobs, or for sets of jobs that have been nested upon the media.
- Automatic registration marks can be set as follows:
 1. Choose **Queue** menu >> **Properties**.
 2. Click the **Registration Marks** tab.
 3. From the **Select registration system** drop-list, choose the type of registration marks (Fig. 1).

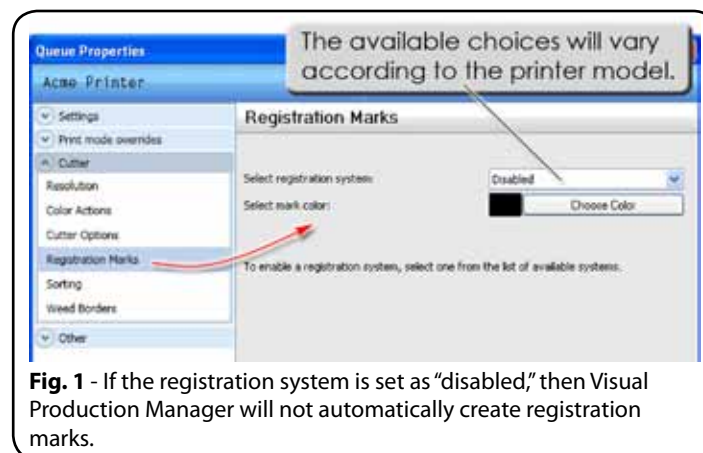


Fig. 1 - If the registration system is set as “disabled,” then Visual Production Manager will not automatically create registration marks.

PRINT AND/OR CUT FROM SIGNLAB

Use this workflow to print and/or cut jobs from SignLab to a local or remote-connected printer. This workflow is typical of working with a *SignLab Print and Cut* package.

In this workflow, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In Visual Production Manager

1. From the toolbar, click the **Start Queue** button.
2. Choose **Queue** menu >> **Manage Queues**.
3. Verify that the **Port** settings are correct for the printer and/or cutter that will be used.
4. Click the **Close** button.

Print&Cut

5. For print&cut jobs, it may be necessary to set Visual Production Manager to automatically create registration marks. Please review the *Choosing Registration Marks and Alignment Systems* section.

In SignLab

6. Prepare the print design on the SignLab workspace.

Print&Cut

7. Select the design and use **Cut** menu >> **Contour Cut** to create a cut path around the design.

8. Choose **File** menu >> **Print and Cut** to open the **Print and Cut** dialog.
9. From the **Printing queues** drop-list, choose the queue that will receive the job in Visual Production Manager.

Note: If VPM has been installed on another computer, then click the **Add Remote Printing Queue** button, and select the **VPM** install directory on the remote computer.

10. Click **OK** to proceed, and the job will be received in Visual Production Manager.

In Visual Production Manager

Print&Cut

11. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
12. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

13. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

CONTOUR CUT-ONLY FROM SIGNLAB

Use this workflow to cut jobs directly from SignLab to a local or remotely connected cutter. This workflow is typical of working with either the *SignLab Vinyl*, *Vinyl Pro*, or *CutPro* packages.

1. From the **Start** menu, launch **SignLab**.
2. Prepare the cut design on the SignLab workspace.
Vector shapes will be treated as cut objects, whereas bitmap images must be vectorized into vector shapes.
3. Choose **Cut** menu >> **Plotting Defaults** to open the **Plot** dialog.
4. Verify that the **Selected Driver** indicates the cutter that will receive output.
If the cutter is not available, then use **File** menu >> **Install Cutting Devices**.
5. To commit your changes to the **Plot** dialog, click the **Apply** button.
6. Click the **Setup** button to open the **Plotter Setup** dialog.
7. Click the **Port** tab.
8. If the cutter is connected directly to the computer that SignLab is installed, then click the **Direct to Port** option. Skip to step (12).

Remote Cutter

9. For a cutter that is on a remote computer, click the **Use Visual Production Manager** option.
10. Click the **New Remote Visual Production Manager** button. Browse to the **VPM** directory on the remote computer. The “queue name” associated with the Visual Production Manager on the remote computer will be added to the drop-list.
11. From the drop-list, select the “queue name” that has been configured on the remote computer.

12. Verify that the **Port Location** indicates the port to which the cutter is connected.
13. Click **OK** to close the **Plotter Setup** dialog.
14. Click **OK** to close the **Plot** dialog.
15. Confirm that the cutter is ON, connected to the expected port, and is ready to accept data.
16. Choose **Cut** menu >> **Plot** to preview the job.
Alternatively, click the **Cut** button on the **Tools** toolbar.
17. In the SmartBar, confirm that the **Device** is the cutter that you had selected (Fig. 2).
18. At the far-right of the **Cut Toolbox**, click the **Cut** button.
19. The cut data is now sent to your cutter, and the cutter should proceed to cut the job.

1. This should indicate the cutter that you had chosen

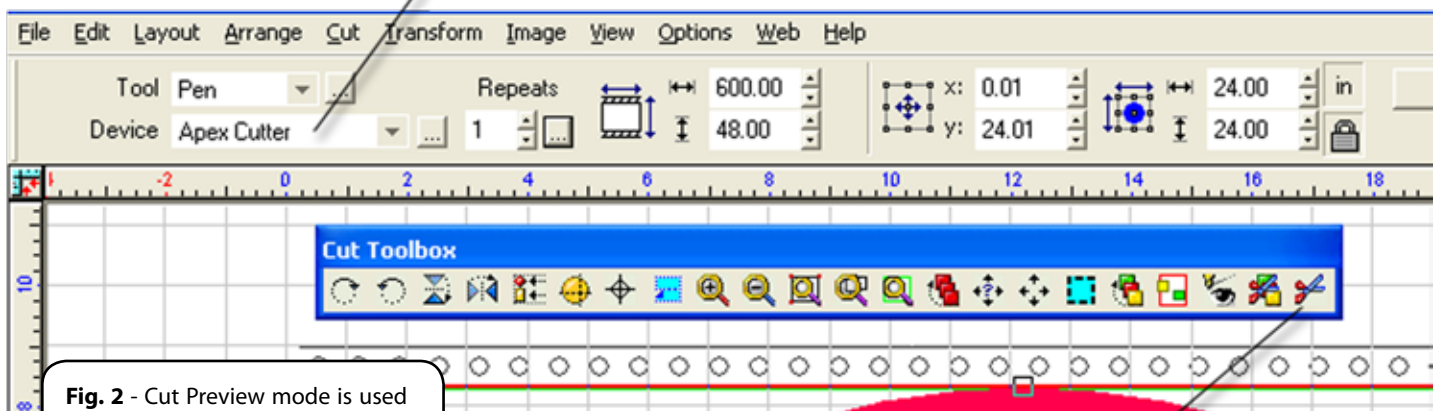


Fig. 2 - Cut Preview mode is used to preview your design as it will be cut on the material. Click the **Cut** button to send the cut data to the cutter.

2. If okay, then click the **Cut** button to send the cut data

GARMENT PRINTING FROM SIGNLAB

With the *SignLab Garment Decorating Module*, when you created your first queue, you were asked to set “White T-Shirt” as the queue name, which would differentiate it from the “Black T-Shirt” queue that we will create shortly.

Note: For alternative garment printing tools, see the *Sending Jobs from PhotoShop/Illustrator/CorelDraw* sections.

Print to White Garment Material

Before we proceed with printing to a black garment, use the following procedure to confirm that Visual Production Manager (VPM) is communicating to the printer as expected.

1. Prepare or import a design on the SignLab workspace.
2. Choose **File** menu >> **Print and Cut** and choose the “White T-Shirt” queue.
3. The job will be received in VPM.
4. Turn on the printer and wait until it indicates readiness for receiving print jobs.
5. Load a white T-shirt onto the printer platen.
6. A preview of this job will appear in Visual Print Manager. To adjust its positioning or size, click this job in the Visual Print Manager to access context-sensitive controls.
7. In the Active List, right-click the job and choose **Print**.

Create a Second Queue for Black Garment Material

Now that we have confirmed that VPM is communicating to the printer, we shall now create a “Black T-shirt” queue, and we will prepare a design with a white ink underbase. Here are some pointers before we proceed:

- For black and color garments, an underbase layer (i.e., a printed layer of white ink) is critical for avoiding hue shifts in your printed design.
- Alternatively, to create an underbase layer in your design application, create an alpha channel (i.e., transparency layer), and define your underbase information on that layer. VPM can then convert the alpha channel into an underbase layer.
- As described in *Sending Jobs to Visual Production Manager (VPM)*, special **Send to VPM** plug-ins are available for your PhotoShop, Illustrator and CorelDraw design applications, such that your designs can be sent directly to VPM, and the alpha channel will be converted into an underbase layer.
- However, **DO NOT USE** the **File** menu >> **Print** command from your design application because the alpha channel will be discarded (i.e., no underbase layer will be created).
- For applications other than PhotoShop, Illustrator and CorelDraw, it may be necessary to save the design file in a format that can store the alpha layer information, and then the file can be imported into VPM.

Create the Black T-Shirt Queue In VPM

1. From the **Queue** menu, choose **Manage Queues** to open the **Queue Manager**.
2. Click the **Add Queue** button to launch the **Create Queue Wizard**.
3. Choose the previously installed printer from the **Installed Devices** drop-list.
4. On the **Printer Defaults** page, choose the output port and print mode (media profile) for your printer.
 - For the output port, if you are using the same printer as you had chosen for your previous “White T-Shirts” queue, then set the same port here.
 - To the right of the **Print Mode** drop-list, clicking the ellipsis (...) button will open the **Print Mode Selection** dialog. Typically, if the same printer is being used, then the same print mode that you chose for your “White T-Shirts” queue will be fine.
5. On the **Name Your Production Queue** page, you are asked to provide a meaningful name for referring to this queue.
 - Set the name as “Black T-Shirts”.
6. For the subsequent three pages of the wizard, use the same settings that you set for your White T-Shirts queue.
 - Media Setup** page - Previously, you had likely set Fixed Sheet or Templates.
 - Layout Mode** page - Use Auto Page for garment printing.
 - Output Options** page - For garments, choose either **Hold** (i.e., do nothing), or **RIP Now, Print later** (i.e., spend time creating a spool file, but don’t send to the printer yet).
7. Once these wizard pages have been completed, close the **Queue Manager** dialog.
8. Your Black T-Shirts tab will now be available, which can be clicked to view the jobs that are pending in that queue.

Print to Black Garment Material

9. Prepare or import a design on the SignLab workspace.
10. Use **Image** menu >> **CADlink** >> **KnockMeBlackOut** to prepare the design for black garment printing. For color garments, use **KnockMeColorOut**.
11. Choose **File** menu >> **Print with Underbase**, and choose the “Black T-Shirt” queue.
This command is similar to **File** menu >> **Print and Cut**, except that the entire design will be converted into PNG data (i.e., bitmap) that retains transparency info.
12. When the job is received in VPM , the **Image Import** dialog will prompt for the underbase settings.

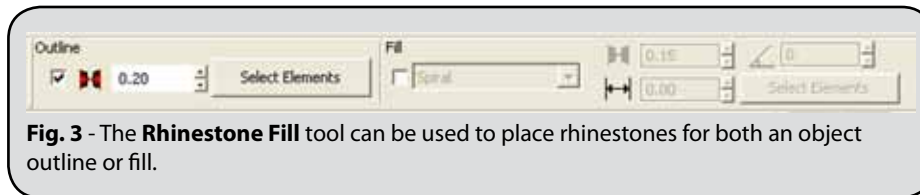
Note: The underbase settings appear only when applicable for the given printer.

13. Click **OK** to set your underbase settings, and the job will appear in the **Active List**.
14. Turn on the printer and wait until it indicates readiness for receiving print jobs.
15. Load a black T-shirt onto the printer platen.
16. Right-click the job and choose **Print**.

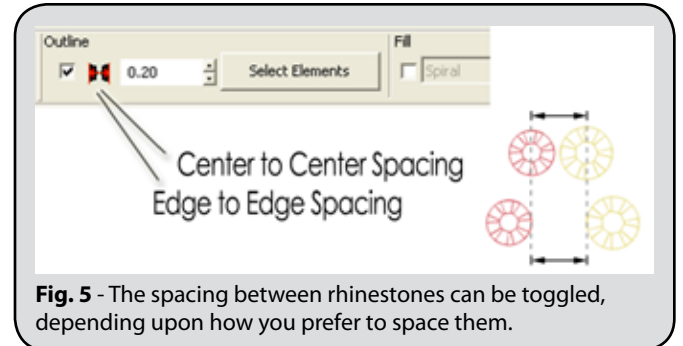
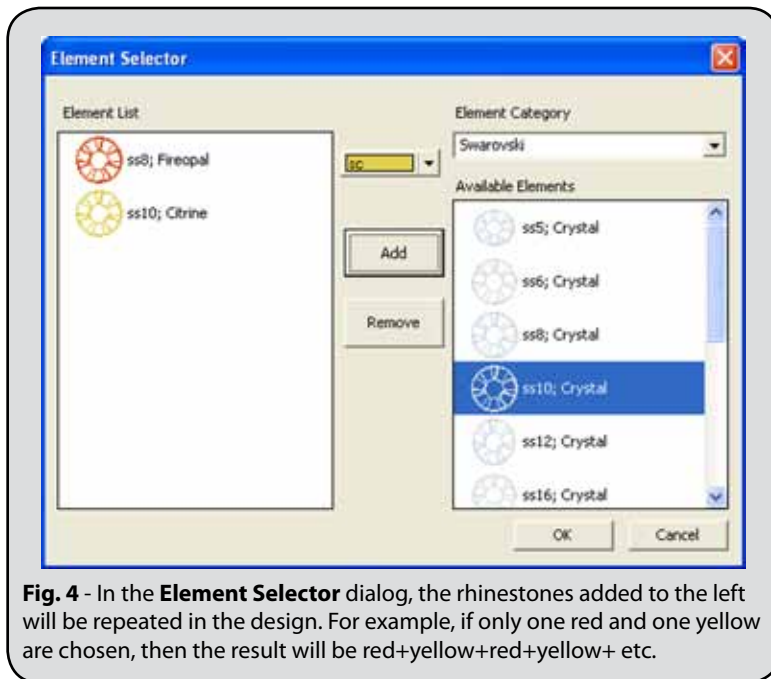
CUTTING RHINESTONE PATTERNS FROM SIGNLAB

With the *SignLab Garment Decorating Module*, tools are provided for easily distributing rhinestones along the contours and within the fill areas of both vector objects and images. The design can then be output to a cutter that will cut the holes into a sheet of material, which can then be used for positioning rhinestones upon garment material. The following steps provide an example of creating such a design and outputting it to a cutter.

1. Suppose that we have imported clipart of an apple onto the SignLab workspace.
2. Select the vector artwork and choose **Transform** menu >> **Rhinestone** >> **Rhinestone Fill**.
3. The Rhinestone Fill options will appear in the SmartBar (Fig. 3).



4. Suppose that we only want to apply rhinestones to the artwork contour.
5. Clear the **Fill** checkbox.
6. Tick the **Outline** checkbox.
7. Click the **Select Elements** button.
8. The **Element Selector** dialog will open (Fig. 4).



9. From the **Available Elements** list, click the desired rhinestone size.
10. From the color picker, choose the rhinestone color.
11. Click the **Add** button, and your choice will appear in the **Element List**.
Optionally, add two-or-more rhinestones of varying size and/or color, and the resulting rhinestones will cycle through your choices that are in the **Element List**.
12. Click the **OK** button, and the resulting rhinestones will be shown on the workspace (Fig. 6).
13. Use the SmartBar controls to modify your choices, or click **Close** to finish editing.

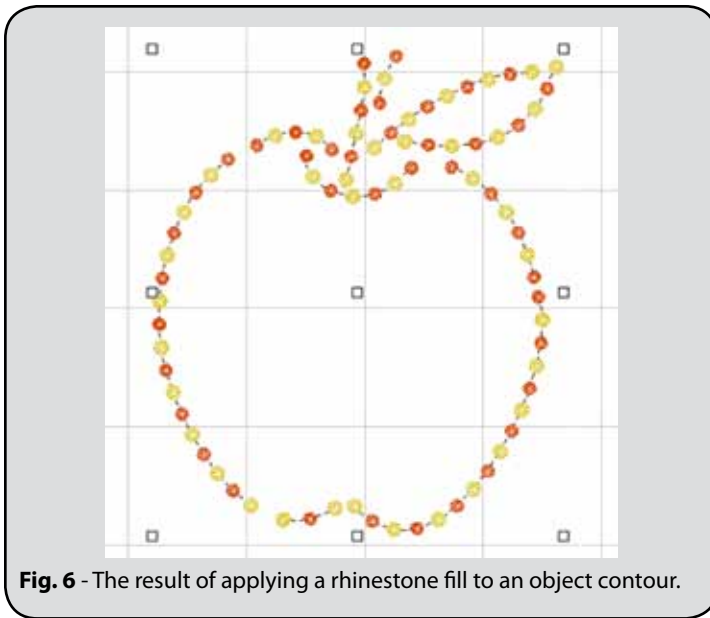


Fig. 6 - The result of applying a rhinestone fill to an object contour.

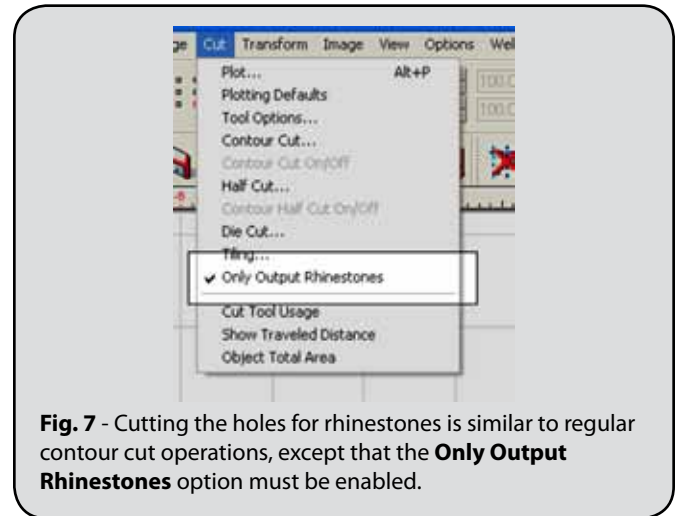


Fig. 7 - Cutting the holes for rhinestones is similar to regular contour cut operations, except that the **Only Output Rhinestones** option must be enabled.

Notes:

- In the SmartBar, the **Element Spacing** value is automatically calculated according to your choice of rhinestone(s), and the choice of artwork. After step (12), the **Element Spacing** value can be increased manually, which will reduce the number of rhinestones being applied (i.e., the **Outline Count**).
- The **Center to Center Spacing** button (Fig. 5) will toggle how the **Element Spacing** value is measured between rhinestones.

Sending the Rhinestone Cut Data

The procedure for cutting rhinestones is virtually the same as described in *Contour Cut-only from SignLab*, except that the **Cut** menu >> **Only Output Rhinestones** option must be enabled.

1. Choose **Cut** menu >> **Plotting Defaults** to open the **Plot** dialog.
2. Verify that the **Selected Driver** indicates the cutter that will receive output.
If the cutter is not available, then use **File** menu >> **Install Cutting Devices**.
3. To commit your changes to the **Plot** dialog, click the **Apply** button.
4. Click the **Setup** button to open the **Plotter Setup** dialog.
5. Click the **Port** tab.
6. If the cutter is connected directly to the computer that SignLab is installed, then click the **Direct to Port** option.
7. Verify that the **Port Location** indicates the port to which the cutter is connected.
8. Click **OK** to close the **Plotter Setup** dialog.
9. Click **OK** to close the **Plot** dialog.
10. Confirm that the cutter is ON, connected to the expected port, and is ready to accept data.
11. Confirm that the **Cut** menu >> **Only Output Rhinestones** option (Fig. 7) has a checkmark.
12. Choose **Cut** menu >> **Plot** to preview the job.
Alternatively, click the **Cut** button on the **Tools** toolbar.
13. In the SmartBar, confirm that the **Device** is the cutter that you had selected.
14. At the far-right of the **Cut Toolbox**, click the **Cut** button.
15. The cut data is now sent to your cutter, and the cutter should proceed to cut the job.

ROTARY ENGRAVING FROM SIGNLAB

With the *SignLab Engraving Module*, the following procedure describes how to configure SignLab for a rotary engraving job. We will begin by adjusting the machine settings within SignLab, creating a design that has a tool path for engraving, previewing how that design will appear before output, and then sending the job to be cut.

Note: For laser engravers, please refer to the subsequent procedure, *Preparing a Laser Engraving Job*.

Machine Setup

When SignLab is installed for the first time, or when drivers for a new machine have been installed, the **Plot** dialog should be used to configure SignLab for output to the machine.

1. From the Windows **Start** menu, launch **SignLab**.
2. Choose **Layout** menu >> **Blank Size**, and set the **Width** and **Height** according to the cutting area of your machine.
3. Choose **Cut** menu >> **Plotting Defaults** to open the **Plot** dialog (Fig. 8)

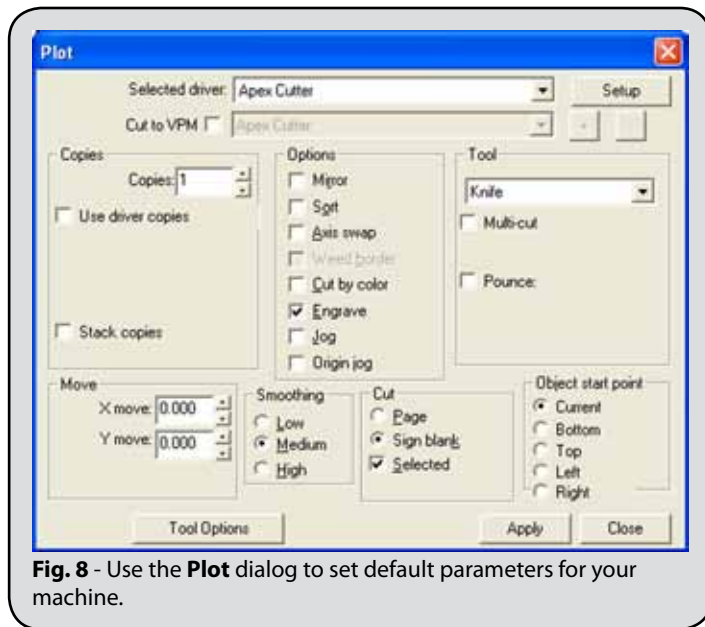


Fig. 8 - Use the **Plot** dialog to set default parameters for your machine.



Fig. 9 - The **Tool Path Options** dialog is used to enable the creation of tool paths, or to automatically apply a default tool path to objects.

4. Verify that the **Selected Driver** and **Tool** settings are correct.
Where shapes will be cut with more than one pass (i.e., cutting to progressive depths), the **Tool** setting should be “**Multiple Pass**” or “**Router**” (depending on the machine model).
5. Near the bottom-center of the dialog, ensure that **Sign blank** is selected.
6. The **Engrave** checkbox will probably be enabled by default. If so, then clear the checkbox. If this checkbox is already cleared, then proceed to the next step.
7. With the **Engrave** checkbox clear, click the option to tick it. The **Tool Path Options** dialog will open (Fig. 9).
8. Click the **Cut Tool Paths** option. Enabling this option indicates that the tool paths will be previewed in the **Cut Preview** state.
9. Clear the “**Also Cut Contour Paths**” option.
If this option were checked, then all objects (aside from tool paths) will be viewed as contour cutting paths in the Cut Preview state. By disabling this option, only tool paths will be previewed in the **Engrave Preview** state.
10. Click **OK** to return to the **Plot** dialog.
11. Click **Apply** to confirm your changes.
12. Click the **Setup** button to open the **Plotter Setup** dialog.
13. On the **Plotter** tab, confirm that the **Machine Limits** are correct (Fig. 10).
14. Set the **Origin** and **End Point** according to where you want the machine to start and finish each job.
15. Click the **Port** tab, set the **Method** = Direct to port (Fig. 11).
16. Set the **Port Location** for the machine.

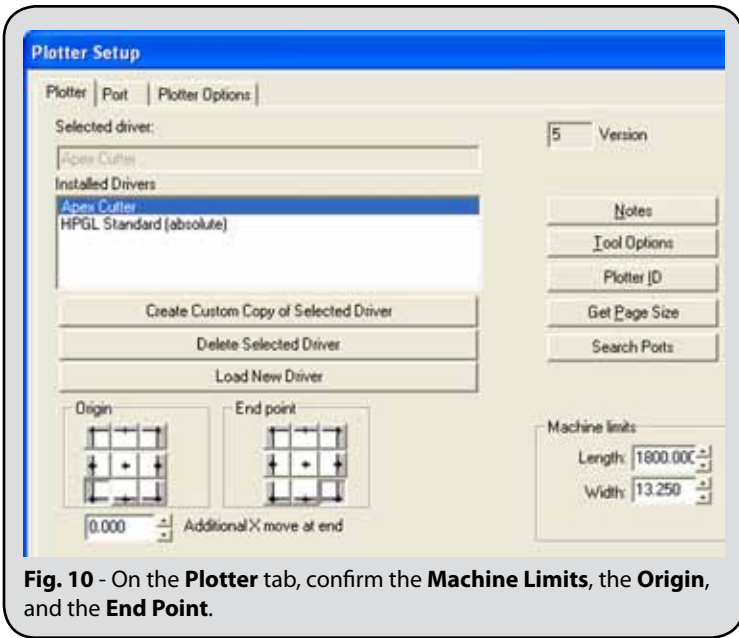


Fig. 10 - On the **Plotter** tab, confirm the **Machine Limits**, the **Origin**, and the **End Point**.

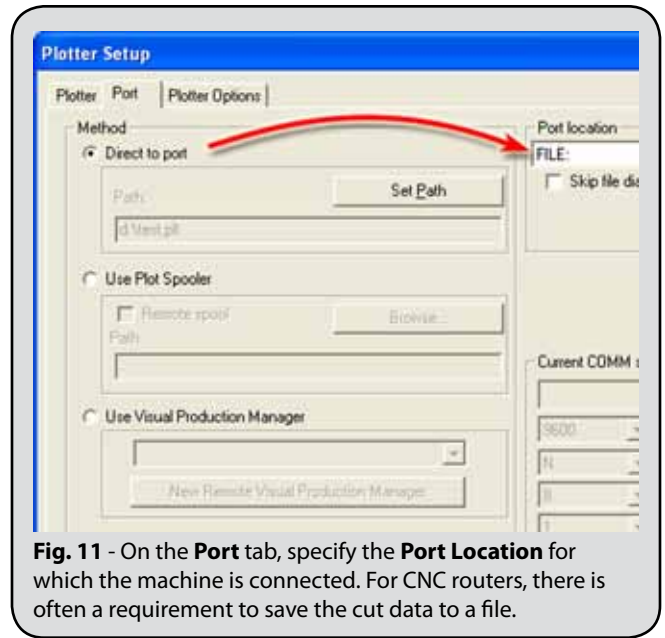


Fig. 11 - On the **Port** tab, specify the **Port Location** for which the machine is connected. For CNC routers, there is often a requirement to save the cut data to a file.

In the vast majority of cases with CNC routers, the port will be “FILE:”, and the router will have a system for downloading the output file that is generated by SignLab. For more information, please refer to the Operator Manual that was provided with the router.

17. Click **OK** to close the **Plotter Setup** dialog.
18. Click **Close** to close the **Plot** dialog.

Creating a Tool Path

At this point, SignLab has been configured to send output to your machine. Now we want to create a design and assign a tool path that can be output for cutting.

1. On the SignLab workspace, create a rectangle shape, and make note of its size and position.
2. With the rectangle shape selected, right-click the **Online** button from the **Tool Path Tools** flyout. The **Online** dialog will open (Fig. 12). Right-click will force the given tool settings dialog to open, whereas left-click will automatically apply the previously set tool settings.

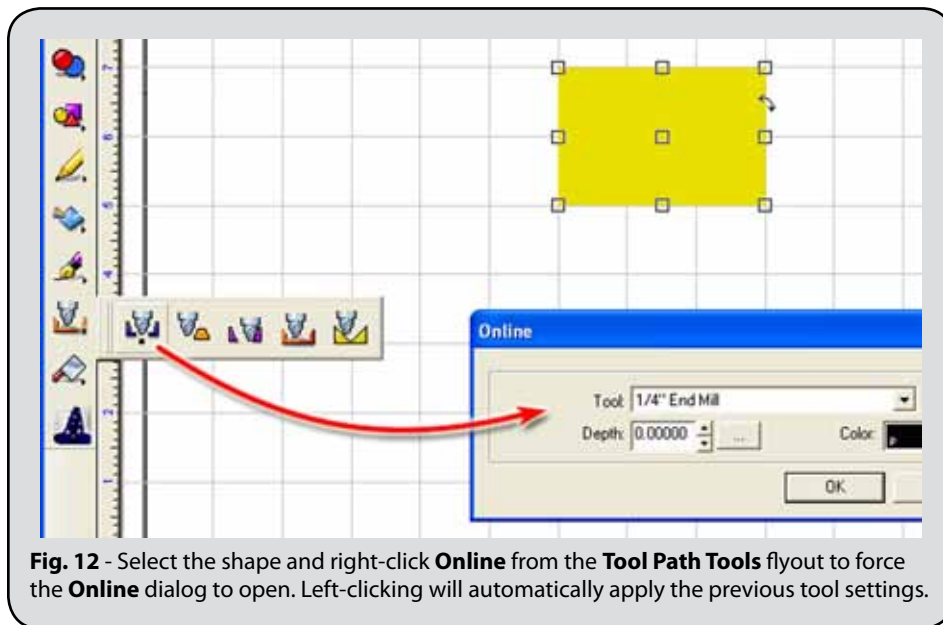


Fig. 12 - Select the shape and right-click **Online** from the **Tool Path Tools** flyout to force the **Online** dialog to open. Left-clicking will automatically apply the previous tool settings.

3. Confirm that the **Tool** and **Depth** are correct for the desired operation. The **Color** will be used for displaying the tool path on the workspace.
4. Click **OK** to apply the tool path.
5. The resulting tool path will appear like a stroke on the rectangle.
If the tool path is not visible, then confirm that **View** menu >> **Show Tool Paths** is enabled.

Previewing and Cutting the Tool Path

1. Now that the tool path has been created, choose **Cut** menu >> **Plot** to activate **Cut Preview** mode.
Alternatively, click the **Cut Tool** to activate **Cut Preview**.
2. The tool path will be previewed as it will be cut upon the material, and a green bounding rectangle used to represent the machine limits (Fig. 13).
3. In the SmartBar, verify that both the **Tool** and **Device** are the same as were selected previously within the **Plot** dialog.
4. At this point, the cut data is ready to be sent from SignLab. Please confirm that the machine is online and loaded with the appropriate material.
5. On the **Cut Toolbox**, click the **Cut** button to begin sending cut data.

Note: If the **Port Location** of the **Plotter Setup** dialog had been set to "FILE:", then SignLab will prompt for a filename and file location before saving the cut data.

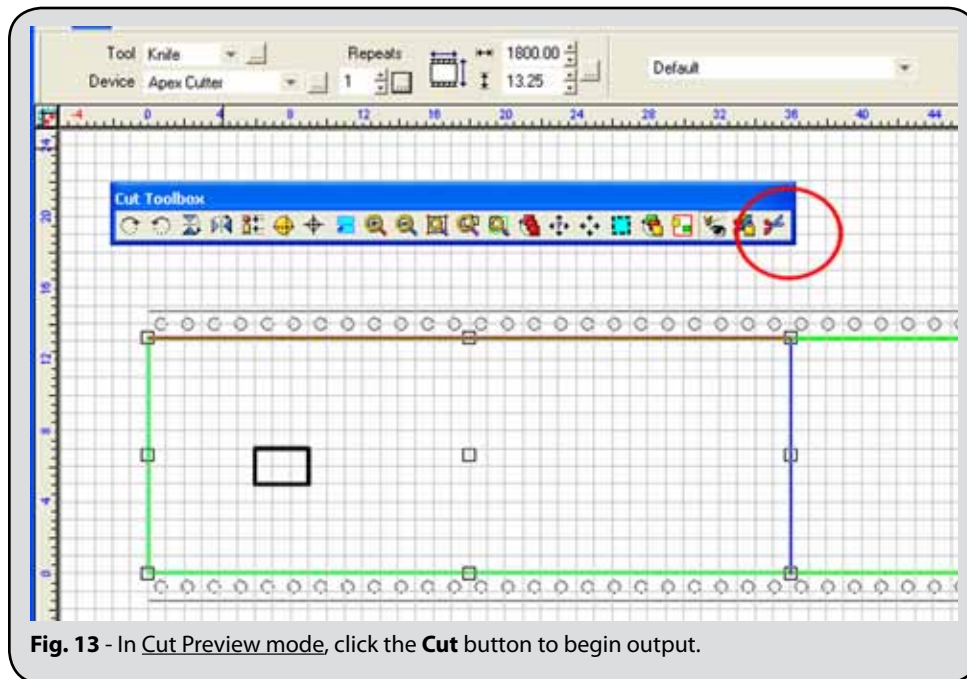


Fig. 13 - In Cut Preview mode, click the **Cut** button to begin output.

LASER ENGRAVING FROM SIGNLAB

Whereas cutting to a rotary engraver uses the **Cut** menu >> **Plot** command for sending a job, laser engravers use the **File** menu >> **Print** command because the printer driver provided with the laser engraver is used to interpret the image data for laser engraving. In this manner, laser engravers can interpret object fills and strokes as cut data.

1. From the Windows **Start** menu, launch **SignLab**.
2. Choose **Layout** menu >> **Blank Size**, and set the **Width** and **Height** according to the cutting area of your machine.

Set a Default Color Palette

1. From the **Options** menu, choose **Palette** >> **Load** >> **Set Default**.
This command is also available through the Shop Palette context menu.
2. From the SignLab install directory, browse to the **Palettes** >> **Engrave** directory.
3. In the **Engrave** directory are an assortment of color palettes per different manufacture of laser engraver. Each palette contains colors used by the given manufacturer to indicate speed and power.
4. Choose the color palette that corresponds to your laser engraver, and then click the **Save** button.
5. Start a new workspace using **File** menu >> **New**.
6. Along the bottom of the workspace, note that the Shop Palette has loaded the manufacturer palette that you had chosen.

Setting Fill and Stroke Colors

With laser engravers, object fill colors produce an engrave fill, and line style colors produce a cutting line.

1. Confirm that there is a checkmark beside the **View** menu >> **Show Fill**.
2. Confirm that there is a checkmark beside the **View** menu >> **Show Tool Paths**.
3. Create a circle shape and assign a black fill. This circle will be output as an engraving fill.
4. Draw a square shape around the circle and assign an **Invisible** fill to the square (Fig. 14).

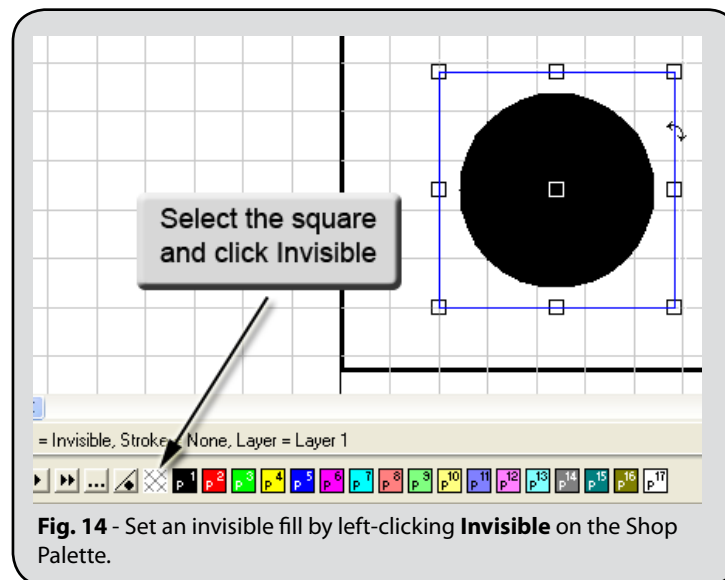


Fig. 14 - Set an invisible fill by left-clicking **Invisible** on the Shop Palette.

5. With the square selected, choose **Stroke and Fill Tools** >> **Line Style**.
6. In the SmartBar, choose a **Hairline** style.
7. Set a red stroke color.

Printing to the Laser Engraver

As mentioned previously, laser engraving output is driven through a printer driver, so output from SignLab is done using the **File** menu >> **Print** command.

1. Choose **File** menu >> **Print** to open the **Print** dialog.
2. From the **Printer** tab, select your laser engraver.

Note: If your laser engraver is not listed, then refer to the installation instructions provided with your laser engraver.

3. Tick the **Preview** checkbox.
 4. Click the **Preferences** tab.
 5. Tick the **Print As Shown On Screen** checkbox.
 6. Click the **Sign Blank Area** option.
 7. On the **Printer** tab, click the **Setup** button.
 8. The **Properties** dialog for your laser engraver will open.
 9. The controls on the **Properties** dialog will vary according to your model of laser engraver. For specific instructions concerning these controls, please refer to the documentation provided with your laser engraver.
 10. The following aspects of the **Properties** dialog (e.g., Fig. 15) should be confirmed:
 - For the colors defined within the driver, adjust the power and speed settings as required.
 - For each color, set the pen mode to output both raster and vector data.
 - Confirm that the engraving area is correct.
 - Set the cutting mode to **Black and White**.
13. Click **OK** to accept the **Print** dialog settings and enter the **Print Preview** page.

Sending the Laser Engraving Job

1. The file is ready to be sent from SignLab.
2. Confirm that the machine is online and loaded with the appropriate material.
3. In **Print Preview**, click **Print** to begin engraving. (Fig. 16)

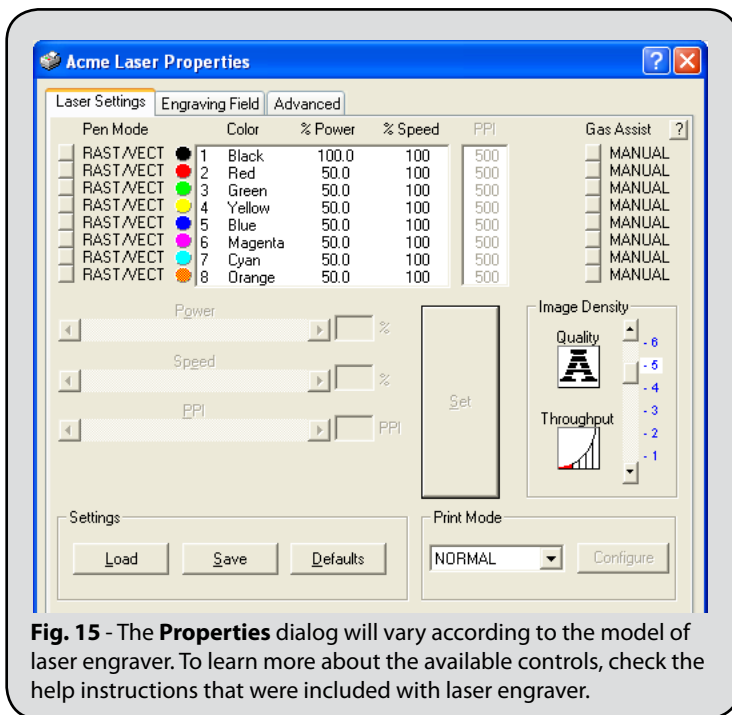


Fig. 15 - The **Properties** dialog will vary according to the model of laser engraver. To learn more about the available controls, check the help instructions that were included with laser engraver.

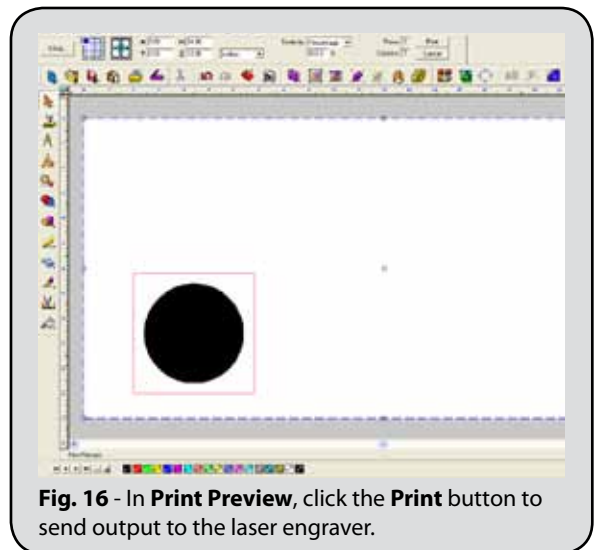


Fig. 16 - In **Print Preview**, click the **Print** button to send output to the laser engraver.

ROUTING FROM SIGNLAB

For the *SignLab Sign Routing Module*, the following sections show the steps that are required to prepare and output cut data to a router.

A) Launch SignLab

1. From the Windows **Start** menu, launch SignLab.

B) Machine Setup

The machine settings must be configured before sending any cut jobs to the machine.

1. Choose **Cut** menu >> **Plotting Defaults** to open the **Plot** dialog (Fig. 17).
2. Verify that the Selected Driver and Tool settings are correct. Where shapes will be cut with more than one pass (i.e. cutting to progressive depths), the Tool setting should be “Multiple Pass” or “Router” (depending on the machine model).
3. Near the bottom-center of the dialog, ensure that **Sign blank** is selected.
4. The **Engrave** checkbox will probably be enabled by default. If so, then clear the checkbox. If this checkbox is already cleared, then proceed to the next step.
5. With the **Engrave** checkbox clear, click the option to tick it. The **Tool Path Options** dialog will open (Fig. 18)

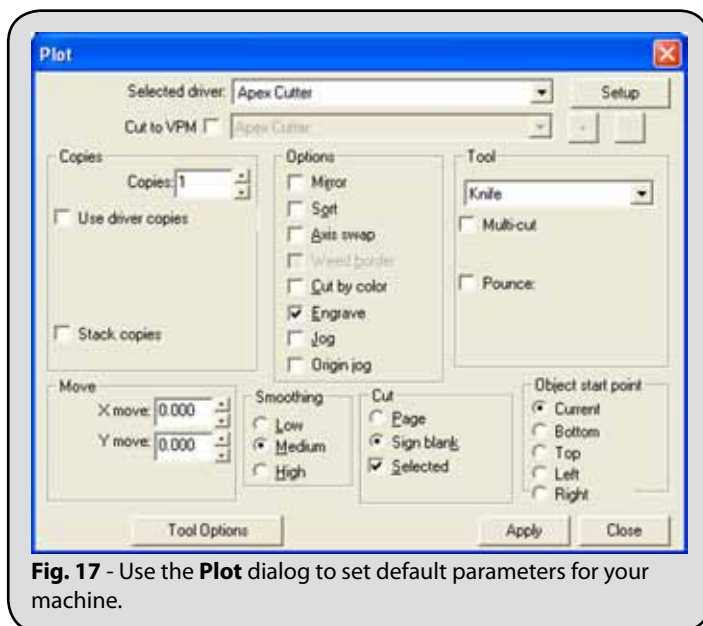
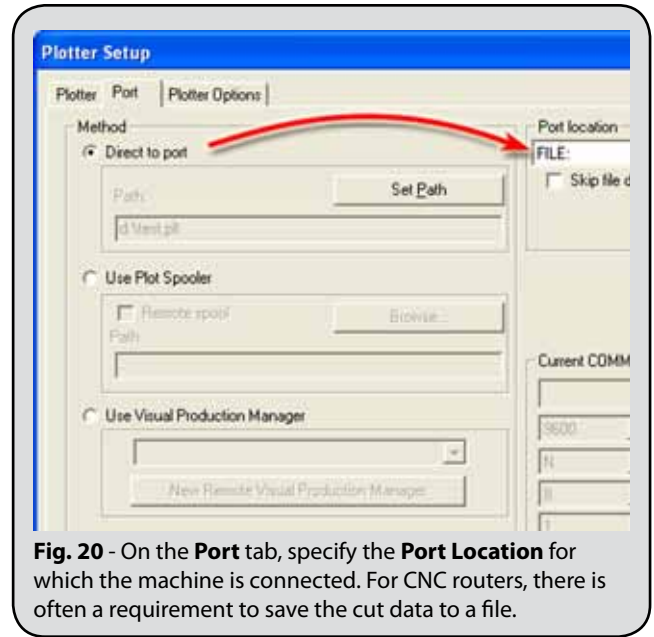
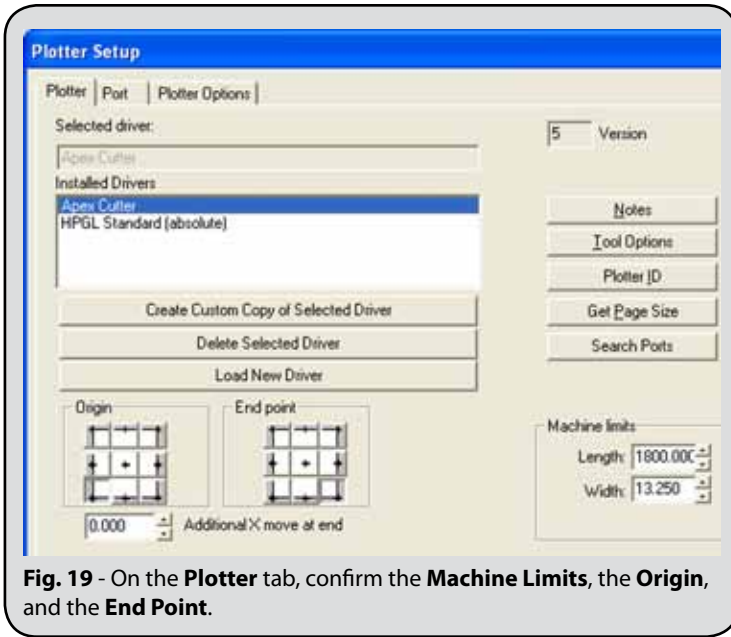


Fig. 17 - Use the **Plot** dialog to set default parameters for your machine.



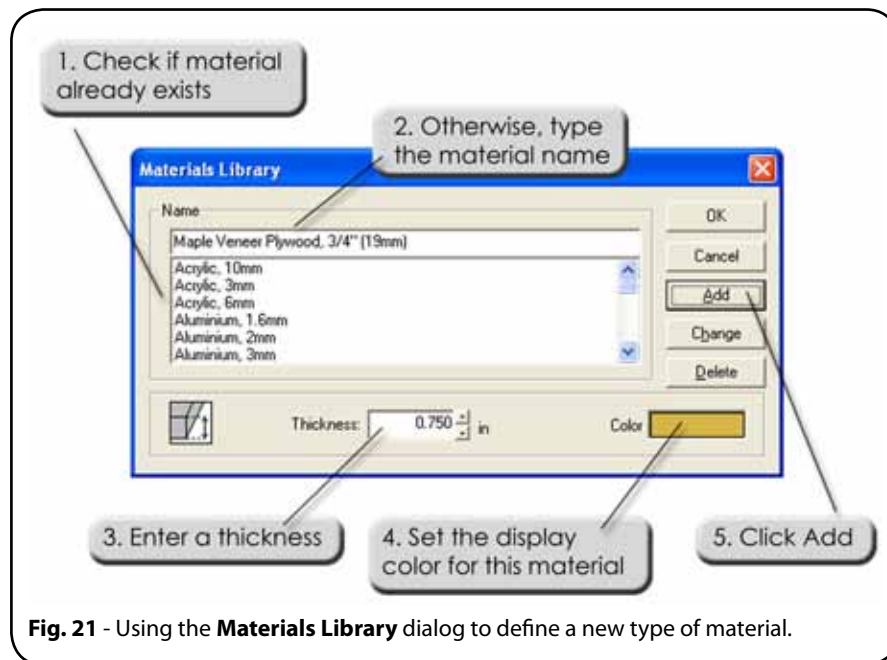
Fig. 18 - The **Tool Path Options** dialog is used to enable the creation of tool paths, or to automatically apply a default tool path to objects.

6. Click the **Cut Tool Paths** option. Enabling this option indicates that the tool paths will be previewed in the **Cut Preview** state.
7. Clear the “**Also Cut Contour Paths**” option.
If this option were checked, then all objects (aside from tool paths) will be viewed as contour cutting paths in the Cut Preview state. By disabling this option, only tool paths will be previewed in the **Engrave Preview** state.
8. Click **OK** to return to the **Plot** dialog.
9. Click **Apply** to confirm your changes.
10. Click the **Setup** button to open the **Plotter Setup** dialog.
11. On the **Plotter** tab, confirm that the **Machine Limits** are correct (Fig. 19).
12. Set the **Origin** and **End Point** according to where you want the machine to start and finish each job.
13. Click the **Port** tab, set the **Method** = Direct to port (Fig. 20).
14. Set the **Port Location** for the machine.
In the vast majority of cases with CNC routers, the port will be “FILE:”, and the router will have a system for downloading the output file that is generated by SignLab. For more information, please refer to the Operator Manual that was provided with the router.
15. Click **OK** to close the **Plotter Setup** dialog.
16. Click **Close** to close the **Plot** dialog.



C) Define a Material Type

From the **Cut** menu, choose **Material Library** and confirm that your material is listed. The material will be used later to categorize the cut templates that are used to create tool paths. If you need to define a new material, then use Fig. 21 as a guide:



D) Set the Blank Size

The Blank Size is the visual representation of the area that is available for cutting. For example, it could represent either a single door plate, or a sheet of material wherein multiple door plates have been nested.

Note: In order to see the material size, verify that **View** menu >> **Show Sign Blank** is ON.

1. Choose **Layout** menu >> **Blank Size**.
2. Set the **Orientation** to either **Portrait** or **Landscape**. The customary orientation is **Landscape**.
3. Set the **Origin Selection** to position the workspace rulers. It is customary to start the rulers counting from the lower-left corner.
4. The **Current Selection** drop-list is used to choose the size (width by height) of the material size. If **Custom** is chosen, then the **Width** and **Height** fields may be entered.
5. Click **OK** to close the **Blank Size** dialog.

E) Define a Cutting Tool

Choose **Cut** menu >> **Tools Library** and confirm that the necessary tools are defined. These tools will be selectable later when defining the cut templates that are used to create tool paths. If you need to define a new tool, then use Fig. 22 as a guide:

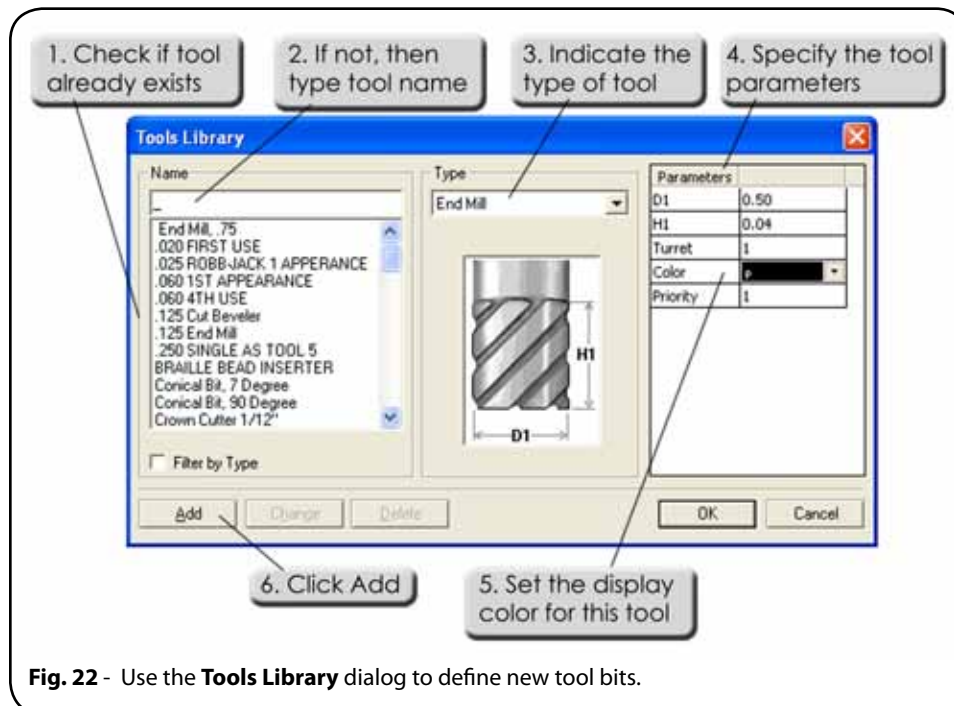


Fig. 22 - Use the **Tools Library** dialog to define new tool bits.

F) Define a Cut Template

Cut templates contain all the parameters that are used to create tool paths. By defining a cut template, it can be used repeatedly to apply those specific tool path parameters to objects.

Note: The following procedure assumes that the material and cutting tool have been defined. For more information, please refer to the previous sections: *Define a Material Type*, and *Define a Cutting Tool*.

1. Create a cut template as follows:
2. Choose **Cut** menu >> **Cut Template Wizard**.
3. Click **Next** to proceed past the introductory wizard page.
4. Choose the type of tool path to create (Fig. 23) and then click **Next**.
5. Click **Next** to proceed to the "Use New or Existing Cut Template" page and use Fig. 24 as a guide.
6. Click **Next** to continue with the remaining wizard pages. The pages will vary according to the type of cut template and any additional parameters that you choose.
7. On the final page of the wizard, type a **Cut Template Name** and then click the **Add New** button.
8. Click **Close** to finish the wizard.

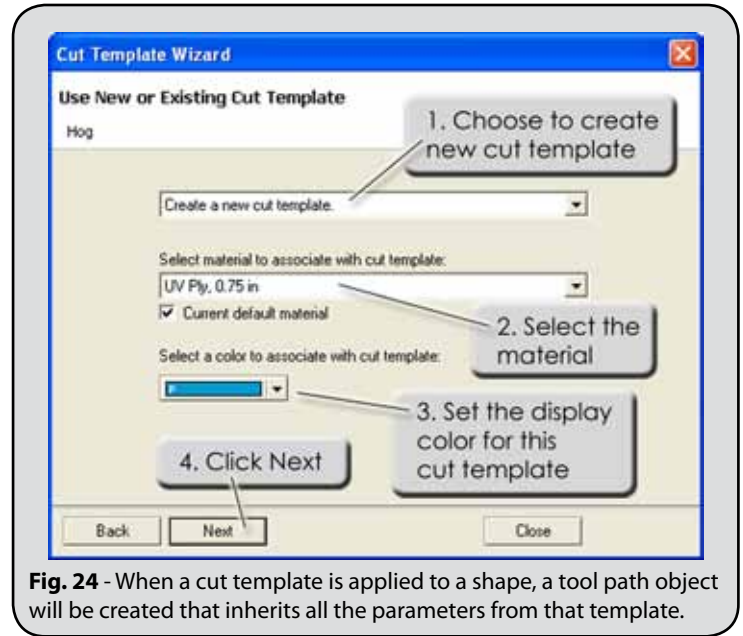
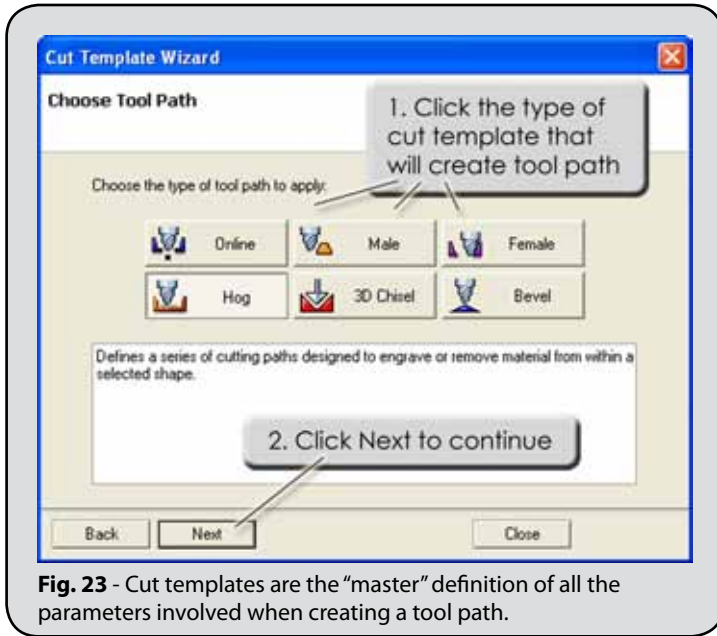


Fig. 23 - Cut templates are the “master” definition of all the parameters involved when creating a tool path.

Fig. 24 - When a cut template is applied to a shape, a tool path object will be created that inherits all the parameters from that template.

G) Define a Drill Hole Cut Template

In the previous section, the **Cut Template Wizard** does not include an option for defining cut templates for drill holes. Instead, use the following procedure:

1. From the **Tool Path Tools** flyout, right-click the **Drill** tool (Fig. 25).

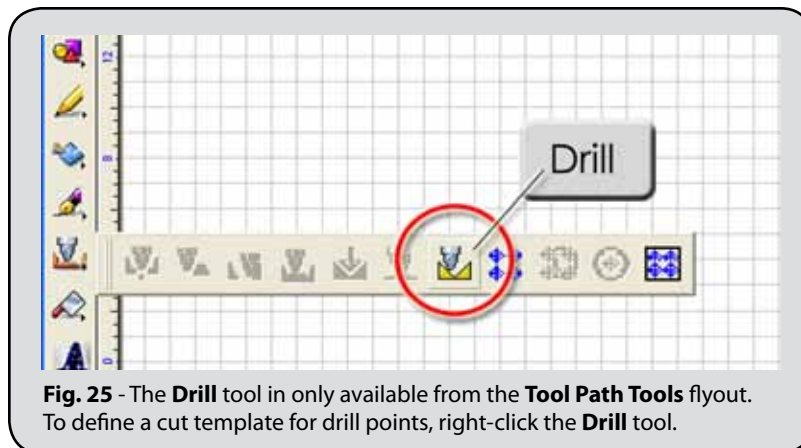


Fig. 25 - The **Drill** tool is only available from the **Tool Path Tools** flyout. To define a cut template for drill points, right-click the **Drill** tool.

2. The Cut Template dialog will open to the **Template** tab (Fig. 26).
3. On the **Template** tab, set the fields accordingly.
4. Click the **Basic Cut** tab to set the feeds and speeds (Fig. 27).
5. Click the **Add** button to finished creating the new cut template.

To close the dialog, either click **OK** to apply, or **Cancel** to close without applying. If **OK** is clicked, then the cursor will appear as a set of crosshairs for placing drill points, and each left-click will place a drill point.

For the cut template that was just created, it can be reused wherever drill points are applied, such as with the following Tool Path flyout tools: **Drill**, **Drill Matrix**, **Drill Contour**, **Drill Center** and **Drill Corner**.

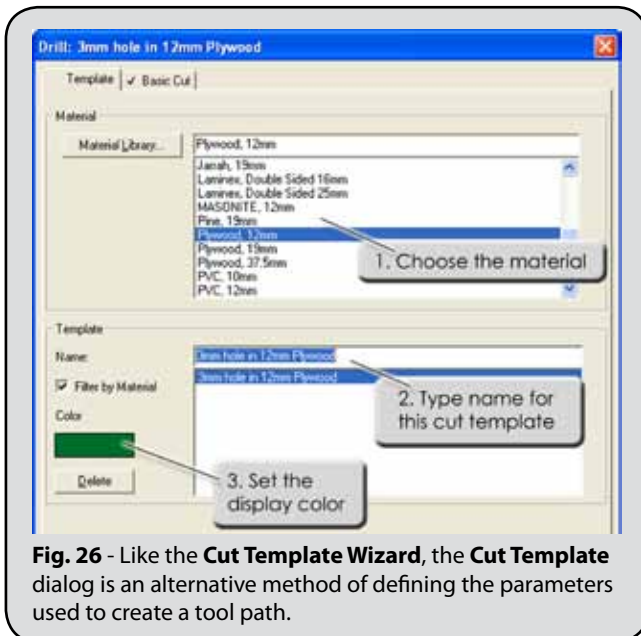


Fig. 26 - Like the **Cut Template Wizard**, the **Cut Template** dialog is an alternative method of defining the parameters used to create a tool path.

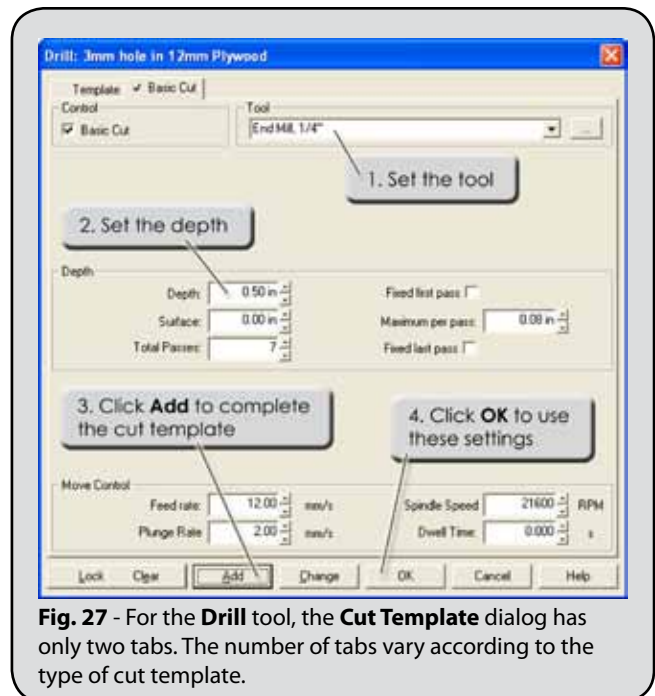


Fig. 27 - For the **Drill** tool, the **Cut Template** dialog has only two tabs. The number of tabs vary according to the type of cut template.

H) Apply a Tool Path to an Object

The previous sections described how to create a cut template. The following steps show how to use the cut template to apply a tool path to an object.

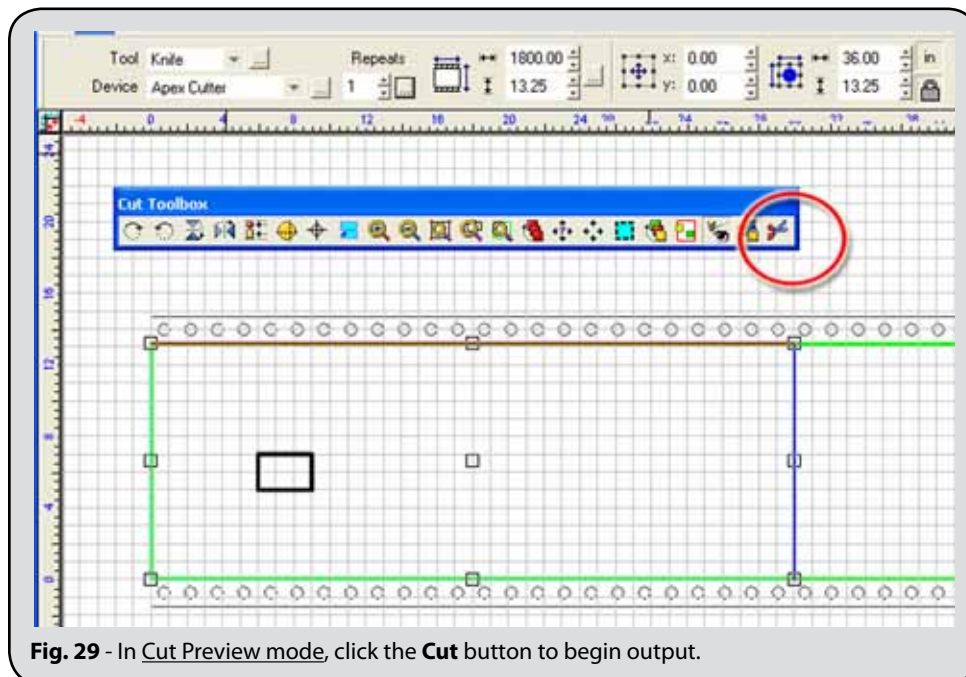
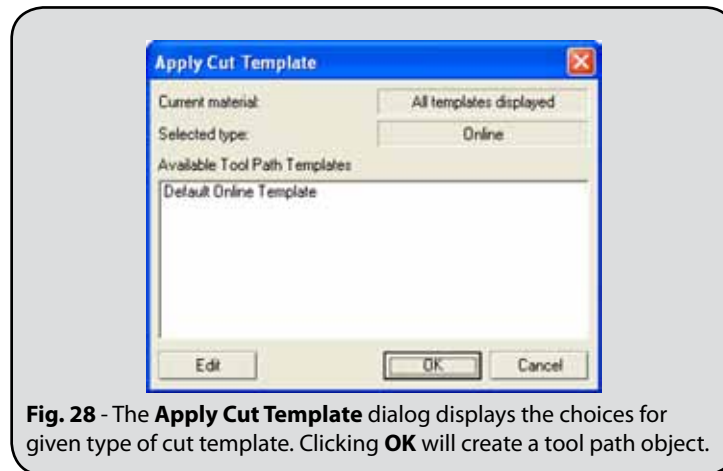
1. Select a shape on the workspace.
2. From the **Cut** menu >> **Apply Tool Path** flyout, choose the type of cut template.
3. The **Apply Cut Template** dialog will open (Fig. 28).
4. The top-right corner of the dialog will indicate, “All templates displayed.”
5. Select the desired cut template and click **OK**.

Note: When applying Drill Matrix, Drill Contour, or Drill Corner tool paths, an additional dialog is used for placement of the drill holes. Please refer to the Help File for an explanation of the dialog settings.

I) Previewing and Cutting the Tool Path

1. Now that the tool path has been created, choose **Cut** menu >> **Plot** to activate **Cut Preview** mode.
Alternatively, click the **Cut Tool** to activate **Cut Preview**.
2. The tool path will be previewed as it will be cut upon the material, and a green bounding rectangle used to represent the machine limits (Fig. 29).
3. In the SmartBar, verify that both the **Tool** and **Device** are the same as were selected previously within the **Plot** dialog.
4. At this point, the cut data is ready to be sent from SignLab. Please confirm that the machine is online and loaded with the appropriate material.
5. On the **Cut Toolbox**, click the **Cut** button to begin sending cut data.

Note: If the **Port Location** of the **Plotter Setup** dialog had been set to "FILE:", then SignLab will prompt for a filename and file location before saving the cut data.



PRINT AND/OR CUT TO ROLAND VERSAWORKS

Note: When you launch SignLab for the first time, a **Browse for Folder** dialog will ask you to identify the VersaWorks installation directory. Once this has been done, SignLab will be configured to use the color profiles that are set within your VersaWorks, thereby providing you with the necessary color matching for your media and inks.

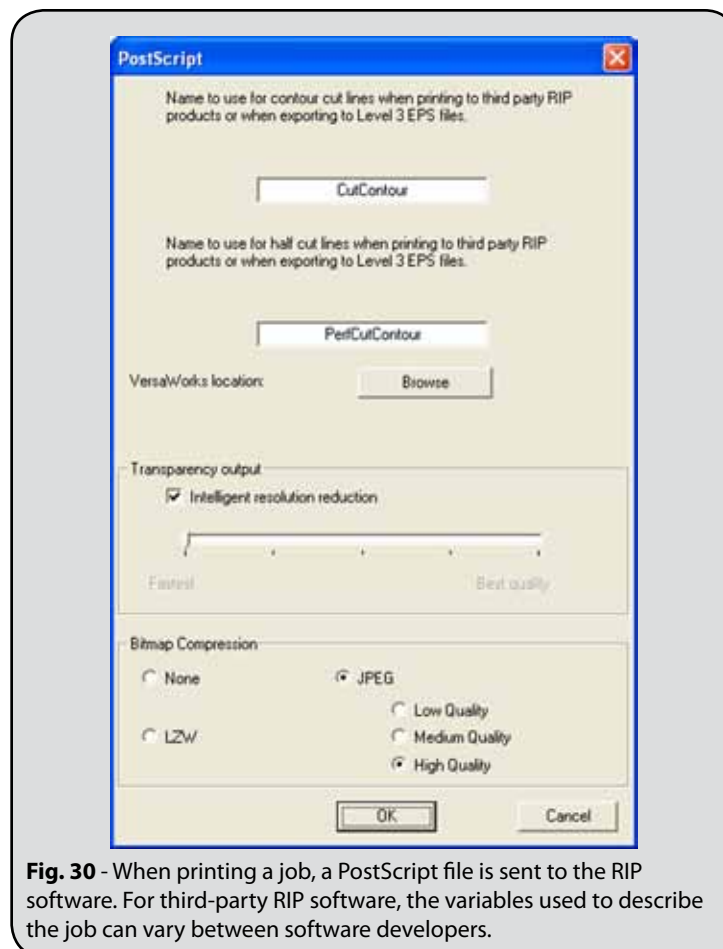
For the *SignLab for VersaWorks™ Edition*, when a print and/or cut job is sent from SignLab to VersaWorks, a special cut path name is used to tag cut paths within the job file. By default, the cut path name is set as “CutContour” when SignLab is installed. However, if you have changed the default cut path name within VersaWorks, then you will need to tell SignLab to use the correct cut path name when outputting to VersaWorks.

If you wish to complete a print-only job, then skip the steps in gray.

Print&Cut

1. In SignLab, choose **Options** menu >> **SignLab Setup** >> **PostScript Setup**.
2. The **PostScript** dialog will open (Fig. 30).
3. By default, “CutContour” is the name that VersaWorks uses to recognize cut paths in jobs that are received from SignLab.
4. On the SignLab workspace, import or create your design.
5. Choose **File** menu >> **Print to Roland VersaWorks**.
6. When prompted, choose whether the job should go to **Queue A** or **Queue B**.

The job will now be received by VersaWorks.



PRINT AND/OR CUT TO MIMAKI RASTERLINK

Note: When you launch SignLab for the first time, a **Browse for Folder** dialog will ask you to identify the RasterLink installation directory. Once this has been done, SignLab will be configured to use the color profiles that are set within your RasterLink, thereby providing you with the necessary color matching for your media and inks.

For the *SignLab for Mimaki™ Edition*, when a print and/or cut job is sent from SignLab to RasterLink, a special cut path name is used to tag cut paths within the job file. By default, the cut path name is set as “MPC_CD_0” when SignLab is installed. However, if you have changed the default cut path name within RasterLink, then you will need to tell SignLab to use the correct cut path name when outputting to RasterLink.

If you wish to complete a print-only job, then skip the steps in gray.

Print&Cut

1. In SignLab, choose **Options** menu >> **SignLab Setup** >> **PostScript Setup**.
2. The **PostScript** dialog will open (Fig. 31).
3. By default, “MPC_CD_0” is the name that RasterLink uses to recognize cut paths in jobs that are received from SignLab.
4. On the SignLab workspace, import or create your design.
5. Choose **File** menu >> **Print to RasterLink**. The RasterLink dialog will open to the **Preferences** tab (Fig. 32).

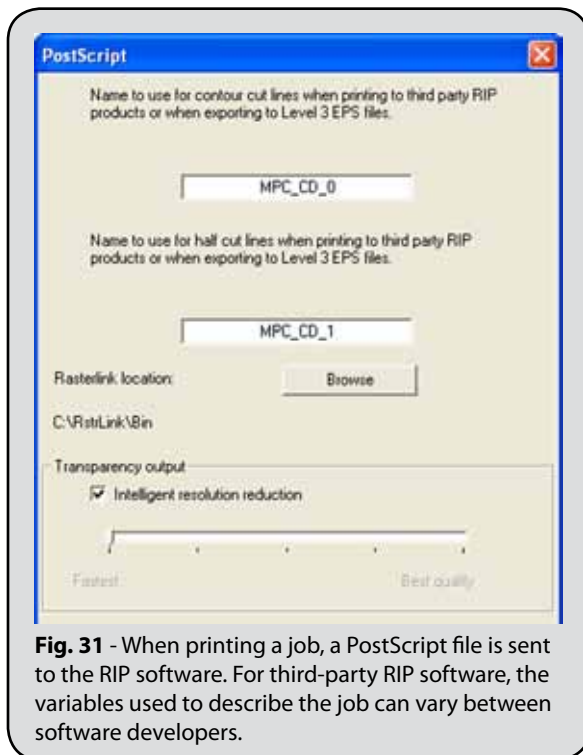


Fig. 31 - When printing a job, a PostScript file is sent to the RIP software. For third-party RIP software, the variables used to describe the job can vary between software developers.

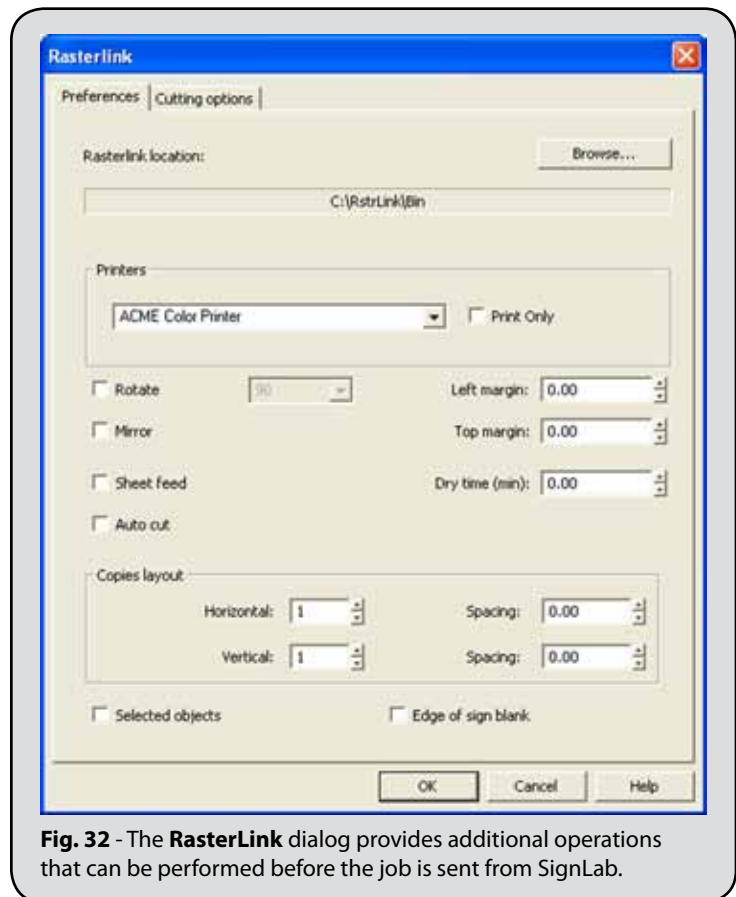


Fig. 32 - The **RasterLink** dialog provides additional operations that can be performed before the job is sent from SignLab.

6. On the **Preferences** tab, near the bottom are “Selected objects” and “Edge of sign blank” checkboxes for specifying whether objects need to be selected, or within the sign blank bounds to be included with the job.
7. Also note that controls are available for generating copies of the job, though bear in mind that registration marks will be generated for each of these copies, which will introduce additional seek time for locating registration marks.
It is recommended that the **Layout** menu >> **Array** feature be used instead of creating copies. After creating the array, sending the job will produce registration marks for the overall job, rather than for individual copies.
Alternatively, the **Layout** menu >> **Badges** feature can be used to prepare copies with automatic text substitution and serialization.
8. If you are sending a print-only job, then please skip to step (15).
9. On the **Cutting Options** tab (Fig. 33), the registration marks can be set.

Note: The **Cutting Options** tab will not be available if cut paths have not been created on the workspace.

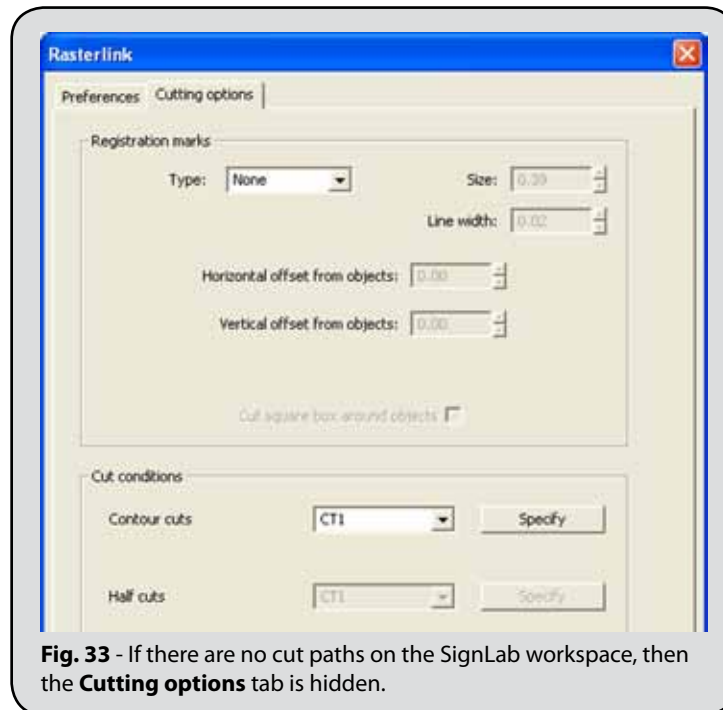


Fig. 33 - If there are no cut paths on the SignLab workspace, then the **Cutting options** tab is hidden.

10. The **Registration marks** section is used to indicate the type and characteristics of the registration marks that will be create. These registration mark settings must correspond to what is set from the cutter control panel, otherwise the cutter will not be able to recognize the registration marks.
11. In the **Cut conditions** section, the **Contour cuts** drop-list is used for choosing from one of five presets that are defined at the cutter control panel.
12. Likewise, the **Half cuts** drop-list is used to choose the preset when performing Half Cut operations.
13. Each of the presets is configured for cutting at a given speed, pressure, etc.
The **Specify** button can be used to create a new set of configurations, which will be transmitted and become available at the cutter control panel.
14. Please note that if (say) you change the size of the registration marks, then you need to update the given preset (that you've chosen) at the cutter control panel. Otherwise, there will be a mismatch that prevents the machine from accurately locating the registration marks.
15. Once the **RasterLink** dialog settings are complete, click **OK** to continue and the job will be sent to the **RasterLink** window.
16. The **Rasterlink** window provides a simple flat list of the pending jobs, along with a thumbnail of the givens jobs.
17. To send a given job, right-click to access its context menu, and then choose from the **Cut** flyout.

SENDING JOBS TO VISUAL PRODUCTION MANAGER (VPM)

There are a variety of means that jobs can be sent directly to Visual Production Manager, as opposed to importing or linking the design into SignLab first.

For the PhotoShop, Illustrator and CorelDraw workflows, a special **Send to VPM** plug-in that is used instead of **File** menu >> **Print**. For garment printing, there is also a **Send to VPM with Underbase** plug-in that will automatically create a white ink underbase for the design.

- **Sending Jobs from PhotoShop** - In PhotoShop, the Send to VPM plug-ins are available through the **File** menu >> **Automate** flyout.
- **Sending Jobs from Illustrator** - In Illustrator, the Send to VPM plug-ins are available under the **File** menu.
- **Sending Jobs from CorelDraw** - In CorelDraw, the Send to VPM plug-ins are available as buttons on the Standard toolbar.

- **Sending Jobs from Other Design Applications** - Where the **Send to VPM** plug-ins are not available, this workflow describes how to configure **File** menu >> **Print** to send jobs from your third-party graphic design application to VPM.

- **Importing Designs Directly into VPM** - If a saved design file is available, it can be imported directly into VPM.

- **Sending Jobs Across a Network** - This workflow uses Windows remote printer sharing to send jobs from one Windows system to another Windows system.
- **Sending Jobs from Non-Windows Computers** - This workflow uses a specially designated **Hot Folder** for VPM to receive jobs from non-Windows systems.
- **Sending Jobs from Mac OSX to VPM** - This workflow uses Windows remote printer sharing in combination with Samba (SMB) networking protocol, such that Mac OSX applications can **File** menu >> **Print** directly to VPM.

For workflows that involve preparing and sending jobs from within SignLab, see *Sending Jobs from SignLab*

SENDING JOBS FROM PHOTOSHOP®

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.

In PhotoShop

2. Prepare the print design in PhotoShop.
3. For black garment material, use **Filter** menu >> **CADlink** >> **KnockMeBlackOut** to reduce the amount of black ink that will be printed. Likewise for color garment material, use **KnockMeColorOut** to reduce ink that matches the garment color.

Print&Cut

4. Create a path that will represent the cutting path (See *Creating Paths in PhotoShop*).

5. Save the PSD file, such that the design is not “untitled.”
6. Choose **File** menu >> **Automate** >> **Send to VPM**.
7. In the **Send to VPM** dialog, choose the queue name and click **OK**.
8. The job will be received in VPM.

Alternatively, the PSD file (or an exported file in TIFF or JPEG format) will preserve the path information, which can then be loaded into VPM via **File** menu >> **Import File**.

In VPM

Print&Cut

9. The **PhotoShop Document Path Import Options** dialog will open.
10. Tick the **Import working path as cut lines** checkbox.
11. In the **Cut Line Color** section, choose the color that will identify the path within the imported file (i.e., the imported path will be converted into a “cut path” and assigned this color).

Note: For the path color, choose an unique color that will specifically represent paths to be cut from VPM. All vectors that have this stroke color will be processed as cut paths.

12. Click **OK** to proceed with the import options.

13. (Optional) If the **Image Import** dialog is enabled, then clicking **OK** will proceed with the import.

Print&Cut

14. In the Active List, the job thumbnail will have a knife icon to indicate that cut data is present.
15. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

16. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

CREATING PATHS IN PHOTOSHOP

The following are quick pointers for creating paths in PhotoShop:

- To view paths within a PhotoShop file, inspect the **Paths** palette (**Window** menu >> **Paths**)
- To draw paths from the **Paths** palette, click the **Create new path** button, and then use the **Pen Tool (P)**. The **Path Selection Tool (A)** is used to select and move path nodes.
- If shape tools (U) are being used, then click the **Paths** button. When shapes are drawn, paths will be created instead of filled pixels.
- If the selection marquee would make a good path, then from the **Paths** palette click the **Make work path from selection** button.

SENDING JOBS FROM ILLUSTRATOR®

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.

Print&Cut

2. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
3. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
4. Click **OK** to close the **Queue Properties** dialog.

In Illustrator

5. Prepare the print design in Illustrator.

Print&Cut

6. Create a shape that will represent the cutting path.
7. For the cut path shape, assign an invisible fill, and create a hairline stroke that uses the color set in step (3).

8. Save the design file, such that the design is not “untitled.”

9. Choose **File** menu >> **Send to VPM**.

If the design is being prepared for printing to a black or color garment material, then choose **Send to VPM with Underbase**.

10. In the **Send to VPM** dialog, choose the queue name and click **OK**.

11. The job will be received in VPM.

In VPM

Print&Cut

12. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
13. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

14. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

SENDING JOBS FROM CORELDRAW®

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.

Print&Cut

2. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
3. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
4. Click **OK** to close the **Queue Properties** dialog.

In CorelDraw

5. Prepare the print design in CorelDraw.

Print&Cut

6. Create a shape that will represent the cutting path.
7. For the cut path shape, assign its fill to None, and assign a hairline stroke that uses the color set in step (3).

8. Save the design file, such that the design is not “untitled.”
9. From the Standard toolbar, click the **Send to VPM** button (Fig. 34).

If the design is being prepared for printing to a black or color garment material, then click **Send to VPM with Underbase**.

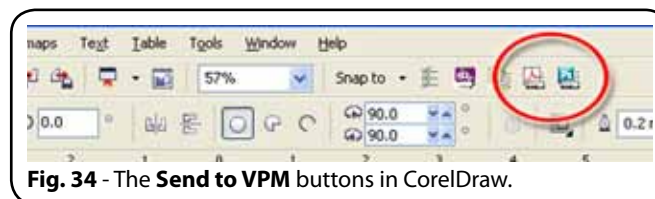


Fig. 34 - The **Send to VPM** buttons in CorelDraw.

10. In the **Send to VPM** dialog, choose the queue name and click **OK**.
11. The job will be received in VPM.

In VPM

Print&Cut

12. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
13. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

14. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

SENDING JOBS FROM OTHER DESIGN APPLICATIONS

For other design applications that were not covered in the previous sections, the **File** menu >> **Print** command can be used to send jobs to Visual Production Manager (VPM). However, please note that the design application must be capable of defining vectors, which will be converted into cut paths when received by VPM.

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.
2. Choose **Queue** menu >> **Manage Queues**.
3. In the **Control Panel** column, click the **Install** button, such that the queue is available as a print destination for other Windows applications.
4. Click the **Close** button.

Print&Cut

5. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
6. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
7. Click **OK** to close the **Queue Properties** dialog.

In Your Design Application

Once your queue has been installed in the Windows Control Panel, it can be selected as a print destination within your graphic design application.

8. In your design application, prepare the print design.

Print&Cut

9. Create a shape that will represent the cutting path.
10. For the cut path shape, assign an invisible fill, and create a hairline stroke that uses the color set in step (6).

11. Choose **File** menu >> **Print**.
12. From the **Printer** drop-list, choose the queue that had been designated in step (3).
13. The description for the printer (if any) should indicate that it is a “Visual Production Manager” or “CADlink” destination.

Note: It is possible for printer names to be quite similar to the queue name you have selected. If description does not indicate “Visual Production Manager” or “CADlink,” then check for a similar name from the **Printer** drop-list.

Set the Media Profile

Media profiles in VPM are referred to as “print modes,” which contain all of the printer settings (resolution, printer options, ink levels, etc.) that are used with a given job. Use the following procedure to set the print mode from within your graphic design application.

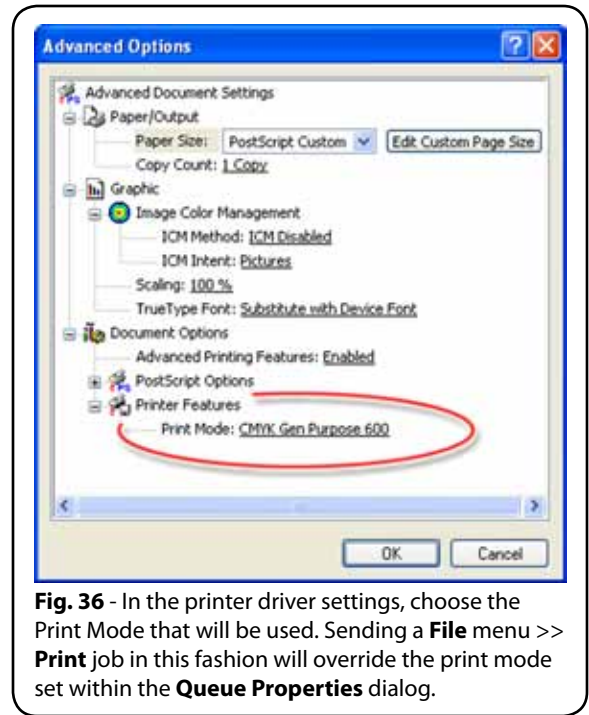
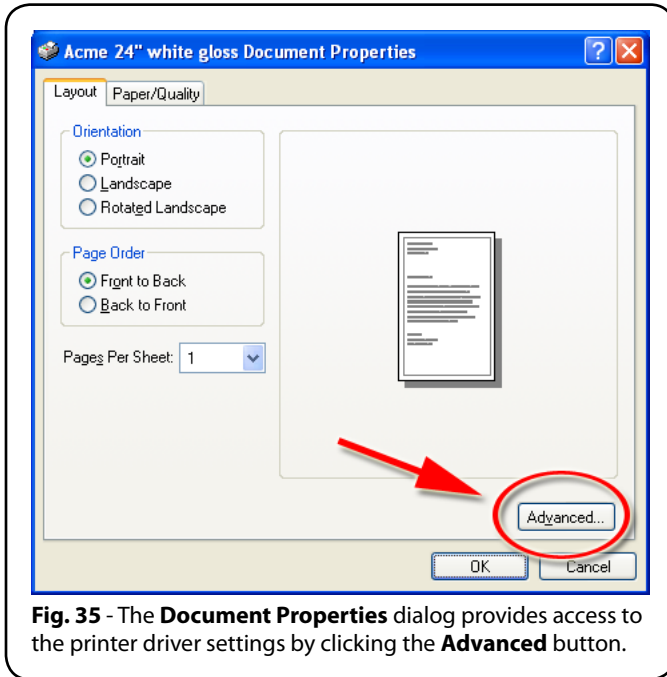
14. From the **Print** dialog of your graphic design application, there should be a **Page Setup** or **Properties** button that will open the **Document Properties** dialog (Fig. 35).
15. Click the **Advanced** button. The **Advanced Options** for the driver will open (Fig. 36).
16. Under **Document Options**, locate the **Printer Features** category and click the **Print Mode** field.
17. The **Print Mode** drop-list will become active.
18. Choose the print mode that is most appropriate for the media and image quality. Print modes are typically named according to media, print resolution, ink density, halftone frequency, and ink set.
19. Click **OK** to close the **Advanced Options**.
20. Click **OK** again to close the **Properties** dialog.
21. Click **OK** to close the **Print** dialog, and the job will be received in VPM.

In VPM

Print&Cut

22. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
23. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

24. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.



IMPORTING DESIGNS DIRECTLY INTO VPM

Design files can be imported directly into Visual Production Manager (VPM), without the need to open the files in their original design applications. Use this workflow where you have a design file that must be printed without having access to the original design application. For example, the customer has sent you a design file, and you need to print the file “as is” without importing it into a design application.

Note: The supported image formats are subject to change, though common image formats are supported (e.g., EPS, AI, PDF, BMP, JPEG, TIFF, etc.).

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.

Print&Cut

2. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
3. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
4. Click **OK** to close the **Queue Properties** dialog.

In the Design Application

5. Prepare the print design.

Print&Cut

6. Create a shape that will represent the cutting path.
7. For the cut path shape, assign its fill to None, and assign a hairline stroke that uses the color set in step (3).

8. Save the design file.

For print&cut designs, the file must be saved in a format that supports stroke information (i.e., EPS, AI, PDF, etc.).

In VPM

9. Load the design file using one of the following three methods:
 - a) Choose **File** menu >> **Import File**.
 - b) From the toolbar, click the **Open** button.
 - c) Drag-and-drop the file into the VPM window.

Print&Cut

10. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
11. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

12. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

SENDING JOBS ACROSS A NETWORK

Use this workflow when your design application is on a separate computer from where Visual Production Manager (VPM) is installed. Once this configuration is complete, the **File** menu >> **Print** command will be used to send jobs across the network to VPM.

Note: This workflow uses Windows remote printer sharing. If the design application is installed on a non-Windows computer, then please use the next workflow, “*Sending Jobs from Non-Windows Computers.*”

Note: For Windows remote printer sharing, the computers must be either **BOTH** 32-bit Windows, or **BOTH** 64-bit Windows. Otherwise, a mismatch between 32-bit and 64-bit will cause a Windows driver incompatibility that prevents jobs from proceeding.

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.
2. Choose **Queue** menu >> **Manage Queues**.
3. In the **Control Panel** column, click the **Install** button, such that the queue is available as a print destination for other Windows applications.
4. Click the **Close** button.

Print&Cut

5. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
6. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
7. Click **OK** to close the **Queue Properties** dialog.

Enable Windows Remote Printer Sharing

(On the computer that has VPM)

8. From the **Start** menu, open the Windows **Printers and Faxes** (This is also available through the Control Panel).
9. In the list of printers, the queue name will be listed as one of the available printers.
The **Comments** column will indicate that this is a “CADlink Printer,” and the **Model** column should indicate the printer model.
10. Right-click the queue name, and choose **Sharing** from the drop-list.
11. The **Properties** dialog will open, and the **Sharing** tab will be active.
12. Click the **Share this printer** option.
13. For the **Share** name, type a meaningful name. This name will appear to design computers when they are connecting to the VPM computer.
By default, Windows will initially truncate the share name to eight (8) characters, which is a precaution against incompatible filename lengths with older Windows versions.
14. Click **OK** to close the **Properties** dialog.

Connect to the Shared Printer

(On the computer with the design application)

15. From the **Start** menu, choose **My Network Places** and browse the network to the (remote) computer that has VPM.
16. In the top directory of the remote computer, the shared printer should be listed as a “CADlink Printer.”
17. Right-click the shared printer and choose **Connect** from the drop-list.
18. The printer will now be available through the **File** >> **Print** command of your design application.

Note: In the Windows **Control Panel**, a VPM printer can be identified by opening its **Properties** dialog and inspecting the **Ports** tab.

In the Design Application

19. In the design application, prepare the print design.

Print&Cut

20. Create a shape that will represent the cutting path.

21. For the cut path shape, assign an invisible fill, and create a hairline stroke that uses the color set in step (6).

22. Choose **File** menu >> **Print**.

23. From the **Printer** drop-list, choose the queue that had been designated in step (3).

24. The description for the printer (if any) should indicate that it is a “Visual Production Manager” or “CADlink” destination.

Note: It is possible for printer names to be quite similar to the queue name you have selected. If description does not indicate “Visual Production Manager” or “CADlink,” then check for a similar name from the **Printer** drop-list.

In VPM

Print&Cut

25. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.

26. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

27. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

SENDING JOBS FROM NON-WINDOWS COMPUTERS

This workflow uses a specially designated **Hot Folder** (i.e., a directory on the hard drive). When design files are printed as a file to the Hot Folder, they will be automatically detected by Visual Production Manager (VPM) and processed.

Once configuration is complete, the **File** menu >> **Print** command (or equivalent) will be used to send jobs to VPM. This configuration allows for design applications on non-Windows computers to print directly to VPM.

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

Create an Empty Hot Folder

1. Create an empty directory on your VPM computer, or elsewhere on your network. This will be your **Hot Folder**, which must satisfy the following two conditions:
 - a) The VPM computer must have login permission to read and write to the Hot Folder.
 - b) Your graphic designers must have file access permissions to write/copy files into the Hot Folder.

In VPM

2. From the toolbar, click the **Start Queue** button.
3. Choose **Queue** menu >> **Manage Queues**.
4. In the **Control Panel** column, click the **Install** button, such that the queue is available as a print destination for other Windows applications.
5. Click the **Close** button.
6. Choose **Queue** menu >> **Properties**.
7. Click the **Hot Folders** tab.
8. Tick the **Enable Queue Hot Folder** checkbox, which opens a browse dialog.
9. Browse to the **Hot Folder** that had been designated in step (1). Please note that the **Hot Folder** must be empty when it is initially chosen.
10. Click **OK** to accept the Hot Folder path.

Print&Cut

11. Click the **Color Actions** tab.
12. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.

13. Click **OK** to close the **Queue Properties** dialog.

In the Design Application

14. In the design application, prepare the print design.

Print&Cut

15. Create a shape that will represent the cutting path.
16. For the cut path shape, assign an invisible fill, and create a hairline stroke that uses the color set in step (12).

17. Choose **File** menu >> **Print** (or the equivalent according to the software being used).

If it is permitted by the design software, then the design file can be “printed” to a data file that is placed directly into the **Hot Folder**. In this manner, printing will be seamless because VPM will automatically process the file.

Alternatively, save the design file in a commonly accepted format (e.g., EPS, AI, PDF, BMP, JPEG, TIFF, etc.), and copy the design file into the **Hot Folder**. However, for print&cut designs, the file must be saved in a format that supports stroke information (i.e., EPS, AI, PDF, etc.).

In VPM

Print&Cut

18. In the Active List, the job thumbnail will have a knife icon to indicate that cut data has been located.
19. To see the cut paths in the Visual Print Manager, choose **Show Print and Cut Previews** from the drop-list.

20. If your queue is set to hold received jobs, then select the job and choose to either print, cut or print&cut from the **Jobs** menu.

SENDING JOBS FROM MAC OSX TO VPM

Use this workflow to print directly from Mac OS X applications to a shared Visual Production Manager (VPM) printer under Windows. Once configuration is complete, the **File** menu >> **Print** command will be used to send jobs across the network to VPM.

Note: This workflow uses Windows remote printer sharing in combination with Samba (SMB) networking protocol. For an alternative workflow that uses **Hot Folders**, please refer to the *Sending Jobs from Non-Windows Computers* section.

Note: For Windows remote printer sharing, the computers must be either **BOTH** 32-bit Windows, or **BOTH** 64-bit Windows. Otherwise, a mismatch between 32-bit and 64-bit will cause a Windows driver incompatibility that prevents jobs from proceeding.

In the following procedure, the gray boxes represent steps that are necessary in order to include cut paths with your print job (i.e., to create a print&cut job). If you wish to complete a print-only job, then skip the steps in gray.

In VPM

1. From the toolbar, click the **Start Queue** button.
2. Choose **Queue** menu >> **Manage Queues**.
3. In the **Control Panel** column, click the **Install** button, such that the queue is available as a print destination for other Windows applications.
4. Click the **Close** button.

Print&Cut

5. Choose **Queue** menu >> **Properties** >> **Color Actions** tab.
6. Click **Add Color** to define a specific vector color (CMYK or named) that VPM will recognize as a cut path.
7. Click **OK** to close the **Queue Properties** dialog.

Enable Windows Remote Printer Sharing

(On the Windows computer that has VPM)

8. From the **Start** menu, open the Windows **Printers and Faxes** (This is also available through the Control Panel).
9. In the list of printers, the queue name will be listed as one of the available printers.
The **Comments** column will indicate that this is a “CADlink Printer,” and the **Model** column should indicate the printer model.
10. Right-click the queue name, and choose **Printer Properties** >> **Sharing** tab.
(For older Windows versions, choose **Sharing** from the context menu.)
11. On the **Sharing** tab, click the **Share this printer** option.
12. For the **Share** name, type a meaningful name that has no spaces between words. This name will appear to design computers when they are connecting to the VPM computer.
Do not create a name that has spaces between words because this will cause an authentication error when attempting to send print jobs via Samba networking protocol.
Older Windows may initially truncate the share name to eight (8) characters, which is a precaution against incompatible filename lengths with older Windows versions.
13. Click **OK** to close the **Properties** dialog.

Make Note of the Computer Name and Domain

(Again, on the Windows computer that has VPM)

1. Go **Start** menu >> **Control Panel** >> **System and Security**.
2. Within the **System** section, click “**See the name of this computer**”
3. Make note of the **Computer Name**, which is the unique name that identifies this computer on the network. We will refer to this name later as **computer_name**.
4. Make note of the **Domain**, which is the unique name that has been assigned to the network that the computers belong to. We will refer to this later as **domain_name**.

Note that the **Full computer name** is often listed in the form:

computer_name.domain_name

Add the Shared Printer to Mac OSX

(On the Mac OSX computer that has the design application)

1. Go to **System Preferences**.
2. Click **Print & Fax**.
3. Click the '+' button to open the **Add Printer** dialog.
4. Right-click within the toolbar and choose **Customize Toolbar**.
5. From the selection of icons, drag the **Advanced** icon into the toolbar.
6. Click the **Done** button.
7. Click the **Advanced** button (i.e., the icon that you just added to the toolbar).
8. From the **Type** drop-list, choose **Windows**.
9. In the **URL** field, type the SMB path for the shared printer, which should be in the following form:

smb://user_name:password@domain_name/computer_name/printer_name

Note: After the printer has been shared, the user name and password will be hidden when inspecting the SMB path.

10. For the **Name** field, type a meaningful name that users will recognize as the shared printer (i.e., this name will be the selected printer in **Print** dialogs).
11. From the **Print Using** drop-list, choose **Generic PostScript Printer**.
12. Click the **Add** button.
13. An **Installable Options** page will list hardware options. Click **Continue**.
14. The **Print & Fax** dialog will now list the shared printer.

In the Design Application

19. In the design application, prepare the print design.

Print&Cut

20. Create a shape that will represent the cutting path.
 21. For the cut path shape, assign an invisible fill, and create a hairline stroke that uses the color set in step (6).
22. Choose **File** menu >> **Print**.
 23. From the **Printer** drop-list, choose the shared printer (i.e., which will send jobs to VPM).

EDITING THE SMB PATH IN MAC OSX

If the user name, password, or other part of the SMB path need to be updated, then either you can repeat the procedure for adding a shared printer to Mac OSX, or you can use the following procedure to edit the SMB path:

1. Launch the **Safari** web browser.
2. In the address bar, type the following address: **localhost:631**
3. Browse and select the (VPM) printer that was shared from the Windows computer.
4. Choose **Modify Printer** from the drop-list.
5. The **Current Connect** field should indicate an SMB path in the following form. Note that the previously entered user_name and password are hidden.

smb://domain_name/computer_name/printer_name

6. Click the **Windows Printer via SAMBA** option.
7. Click the **Continue** button.
8. Edit the smb path as desired, and include the user login and password, as follows:

smb://user_name:password@ domain_name/computer_name/printer_name

9. Click the **Continue** button.
10. Click the **Continue** button again.
11. Click the **Modify Printer** button.

CONNECT TO A SHARED WINDOWS DIRECTORY

The following procedure will authenticate a Mac OSX computer to access shared directories on a Windows system, such as a Hot Folder for sending jobs to VPM.

From the Windows Computer

1. Right-click the directory and choose **Properties**.
2. From the **Sharing** tab, choose to share the folder.
3. Click **OK** to accept the **Property** dialog settings.

From the Mac OSX Computer

1. Click the background workspace of the Mac OSX desktop, such that the **Finder** is active.
At the top-left of the desktop, to the left of the **File** menu, there will be a **Finder** menu.
2. Choose **Go** menu >> **Connect to server**.
4. The **Connect to Server** dialog will open.
5. In the **Server Address** field, type the SMB path in the following form:

smb://domain_name/computer_name/printer_name

6. Click the '+' button to add the address to the list of **Favorite Servers**.
8. Click the **Connect** button.
9. Mac OSX will query for login information (tick the checkbox to add this login information to the keychain).
10. A **Finder** window will now display the contents of the shared folder, and the Mac OSX system has access permissions to the shared directory.