

# SignLab for VersaWorks Quick Start



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 SignLab for VersaWorks, then please contact either your assigned dealer, or CADlink directly.

### *INTERNET*

[www.cadlink.com](http://www.cadlink.com)

[www.signlab.com](http://www.signlab.com)

### *E-MAIL*

[sales@cadlink.com](mailto:sales@cadlink.com)

### *UNITED STATES*

500 Main Street

Clinton, MA 01510

Tel: 1-800-545-9581

Fax: (613) 247-1488

### *CANADA*

2150 Thurston Drive

Ottawa, ON K1G 5T9

Tel: (613) 247-0850

Fax: (613) 247-1488

### *EUROPE*

Intech House, Wilbury Way

Hitchin, Herts, U.K. SG4 0TW

Tel: ++44(0) 1462-420222

Fax: ++44(0) 1462-420111

### *GERMANY*

Georg Christoph Neller Str. 3

D-54296 Trier

Tel.: +49 (651) 96644840

Fax.: +49 (651) 96644841

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Written and designed at CADlink Technology Corporation

2150 Thurston Drive, Ottawa, ON, Canada, K1G 5T9

Phone (613) 247-0850

Fax (613) 247-1488

Manual & Package Design by CADlink Marketing and Customer Support.

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## INSTALLING SIGNLAB

Your SignLab for VersaWorks package is provided with an orange USB security dongle to prevent unauthorized use or pirating of the software. This dongle is a flash drive that plugs into a standard USB port of the computer, and it is transparent to other applications. Only SignLab is aware of the device.



Connect your orange dongle **BEFORE** installing your SignLab software!

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Note: The dongle is not required for Trial versions of SignLab for VersaWorks.

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### Policy On Lost Or Stolen Dongles

- The USB dongle provided with SignLab is your proof of purchase. If the dongle is lost or stolen, then that is equivalent to losing the entire software package, and a new package of SignLab must be purchased.
- In the event of a damaged dongle that must be replaced, there is a nominal fee for EXCHANGING a new dongle for the older dongle, where the older dongle must be reclaimed by CADlink.  
This fee is waived where product is still under warranty.
- Regardless, it is recommended that you ensure that your dongle is covered under your business insurance policy.

### Temporary License Files

- License files are included with your USB dongle, which are used to confirm the features within your CADlink products.
- If a replacement dongle is being shipped to you, then you will typically be issued “temporary” license files that will enable you to continue using your CADlink products.
- Temporary license files will cease working after a set criteria, though the expectation is that your replacement dongle will arrive prior to expiry.
- Please note that the replacement dongle will be provided with new “permanent” license files that will replace the temporary license files.

### Storing Your License Files

- In the event of lost license files, there is a nominal administrative fee for issuing replacement license files. The fee is waived if the Free Support period is still active. Otherwise, replacement license file issues are treated like Tech Support requests.
- When CADlink sends you new license files, it is important that you create backups of the license files, so they can be easily located when re-installing your CADlink products on new equipment.
- In the case of the orange USB flash drive dongle, your license files can be stored on the dongle itself. When re-installing your CADlink products, license files upon the dongle will be automatically used.

## PART 1 - PROGRAM INSTALLATION

The following steps are an overview of installing SignLab for VersaWorks, and further information is provided within each stage of the install wizard.

1. Connect the orange USB dongle to your computer.

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**Note:** The dongle is not required for Trial versions of SignLab for VersaWorks.

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2. Insert the SignLab for VersaWorks CD into your CD-ROM drive. The install wizard should “auto start”.

If the install wizard fails to auto start, then start the installation process manually:

- a) From the **Start** menu, choose **Run** to open the **Run** dialog.
- b) Click **Browse** and locate the setup.exe file that is on the CD in the CD-ROM drive.
- c) Click **Open** to choose the setup.exe file, and click **OK** to close the **Run** dialog.

3. Proceed with each stage of the install wizard. Instructions are provided at each stage.
4. When the install wizard is complete, proceed to “Part 2 - Launching SignLab”.

## PART 2 - LAUNCHING SIGNLAB

At this point, you are ready to launch SignLab and output a print and/or cut job. This will confirm that your software and hardware are communicating as expected.

5. From the Windows **Start** menu, launch **SignLab**.
6. 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.
7. Proceed to “Part 3 - Test Output from SignLab to VersaWorks”.

## PART 3 - TEST OUTPUT FROM SIGNLAB TO VERSAWORKS

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.

8. In SignLab, prepare a job that will be used to test output to VersaWorks.

**Print&Cut**

9. Choose **Options** menu >> **SignLab Setup** >> **PostScript Setup**.
10. The **PostScript** dialog will open (Fig. 1).
11. By default, “CutContour” is the name that VersaWorks uses to recognize cut paths in jobs that are received from SignLab.

12. On the SignLab workspace, import or create your design.
13. Choose **File** menu >> **Print to Roland VersaWorks**.
14. When prompted, choose whether the job should go to **Queue A** or **Queue B**.

The job will now be received by VersaWorks.

## INTRODUCTION

SignLab for VersaWorks provides you with high-end layout production tools for preparing and sending your jobs to VersaWorks. 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.

## UNDERSTANDING THE DIFFERENCE BETWEEN PRINT VERSUS PRINT&CUT

If you are new to SignLab, then the following points will summarize how to use the SignLab controls.

### Printing versus Print&Cut

- Both “print only” and “print and cut” jobs can be processed through the **Print to Roland VersaWorks** 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 to Roland VersaWorks** command.

### Contour Cutting versus Print&Cut

- When using the **Print to Roland VersaWorks** 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**.

### VersaWorks

- The **Print to Roland VersaWorks** command will process jobs through your VersaWorks RIP software (either queue A or B).
- Your VersaWorks software should be launched prior to sending the job from SignLab, rather than rely upon Windows to launch VersaWorks 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.



**Fig. 1** - When printing a job, a PostScript file is sent to the VersaWorks RIP software. To ensure that VersaWorks recognizes cut paths, confirm the name used to identify cut paths in the PostScript file.

- 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.

### **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.
- 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.

## FEATURE HIGHLIGHTS FOR SIGNLAB

The following sections highlight key features and functionality that have been added as of SignLab 9:

- Image and Color Support
- Transparency (Opacity) Support
- Send to SignLab Plug-ins
- Contour Path Plug-in for CorelDraw
- Import/Export Files
- Power Tools
- General Feature Improvements

## IMAGE AND COLOR SUPPORT

- ❑ **CMYK Color Management** - Expanded on-screen color management now includes the display of imported CMYK images, which avoids the potential for color shifts between RGB and CMYK color spaces.
- ❑ **CMYK Color Mode** - Likewise, images created within SignLab can be set as CMYK color mode, which expands upon the previous RGB, Grayscale, Indexed Color and Monochrome modes.
- ❑ **CMYK Gradient Fills** - In addition to previous gradient fill tools, new gradient fills have been introduced for specific use with CMYK colors.
- ❑ **Optimized Memory Handling** - Though not an explicit feature, the underlying code within SignLab has been significantly optimized with respect to previous versions, such that manipulation of large images should be noticeably improved.
- ❑ **Publish PDF with Color Matching** - When publishing your design as a PDF proof, you can now specify whether the PDF is for on-screen display, or for a printed proof. This will ensure that the customer sees the expected design colors.

## TRANSPARENCY (OPACITY) SUPPORT

- ❑ **Transparency Support** - For imported design files that contain an alpha channel (i.e., a transparency layer), SignLab can preserve the transparency.
- ❑ **Extended Transparency Tools** - These tools are provided for easy transparency adjustments, such as “make lighter,” “make darker,” or automatically knocking out a white background.
- ❑ **Primer and Highlight Conversion** - Alternatively, if an imported file contains an alpha channel, then SignLab can convert it into primer and highlight settings (as used with spot white color printing).
- ❑ **Transparency Gradient Fills** - These fills create gradient effects that allow the underlying objects to “show through” (Fig. 2).
- ❑ **Improved Fluid Mask Support** - With the introduction of transparency support in SignLab, this enables you to make full use of the Fluid Mask Blend tool when working with difficult foreground subjects, like hair. Resulting images can be positioned with new backgrounds, and the hair regions will blend naturally (Fig. 3).

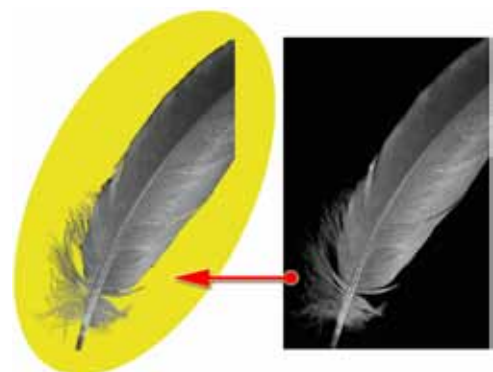
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**Note:** Fluid Mask is an optional add-in that might already be included with your package.

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**Fig. 2** - In this transparency example, a black rectangle is applied with linear transparency, with the handles adjusted to create a dark band at the left. When combined with an image, this creates a black sidebar where text can remain visible against the background.



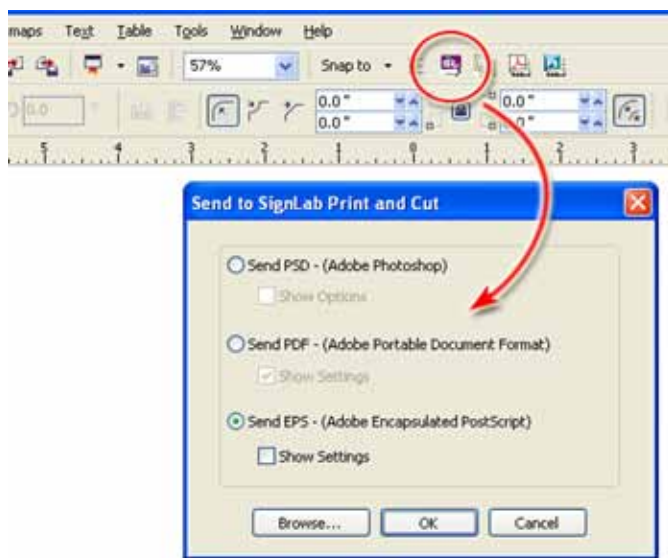
**Fig. 3** - On the right is a stock photo of a feather against a black background. On the left, FluidMask has knocked out the black background, and the resulting image has been placed above a yellow oval shape. Notice how the Blend tool works in conjunction with transparency in SignLab to retain the ruffled details of the feather (particularly at the bottom left).

## SEND TO SIGNLAB PLUG-IN (CORELDRAW)

For CorelDraw X3 and later, the **Send to SignLab** button (Fig. 4) provides an easy means of transferring your CorelDraw design to SignLab, which can be further modified (e.g, contour cut, specialty colors, transparency work, etc.) before output for production.

There are three types of image data that can be used when sending a design to SignLab. The choice of image data is situational, per the design parameters.

- **PDF** - This is often the best choice for maintaining colors as shown in the original CorelDraw design.
- **EPS** - This is the best choice for designs that contain transparency data, such as shadow effects. In SignLab, the **EPS Options** dialog (Fig. 5) will provide further options.
- **PSD** - This option will effectively convert the design to bitmap data, which can be a useful alternative if there are issues with using PDF or EPS.



**Fig. 4** - In CorelDraw X3 and later, click the Send to SignLab button to send your design as either PSD, PDF or EPS data, per your job requirements.



**Fig. 5** - When sending EPS data, SignLab will provide further options as to how the data should be interpreted. For best results, import the data as PDF.

## SEND TO SIGNLAB PLUG-IN (ILLUSTRATOR)

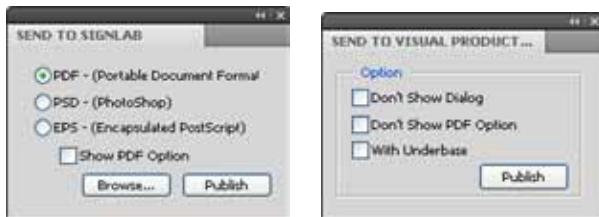
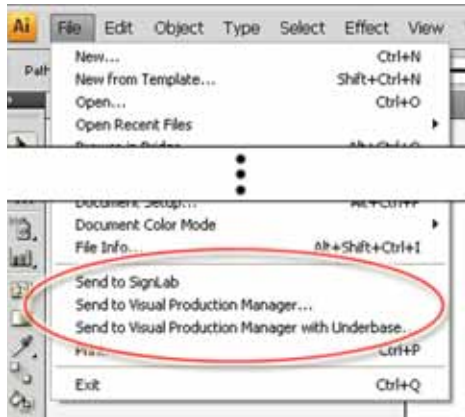
For Illustrator CS and later, the **File** menu >> **Send to SignLab** command is available (Fig. 6), and a palette can be accessed via **Windows** menu >> **Send to SignLab**.

There are three types of image data that can be used when sending a design to SignLab. The choice of image data is situational, per the design parameters.

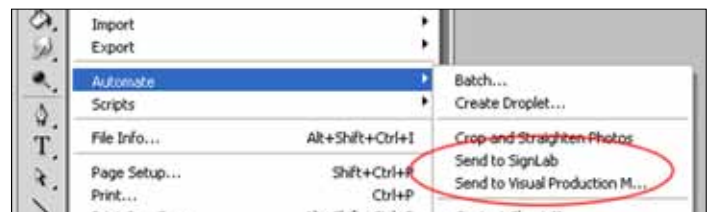
- **PDF** - This is often the best choice for maintaining colors as shown in the original Illustrator design.
- **EPS** - This is the best choice for designs that contain transparency data, such as shadow effects. In SignLab, the **EPS Options** dialog will provide further options.
- **PSD** - This option will effectively convert the design to bitmap data, which can be a useful alternative if there are issues with using PDF or EPS.

## SEND TO SIGNLAB PLUG-IN (PHOTOSHOP)

For PhotoShop CS and later, the **File** menu >> **Automate** >> **Send to SignLab** command is available (Fig. 7). The PhotoShop design will be sent to SignLab as bitmap data, which can then be further modified (e.g, contour cut) before output for production.



**Fig. 6** - In Illustrator (version CS and later), either use the "Send to" plug-ins that are under the **File** menu, or access palette controls under the **Windows** menu.



**Fig. 7** - In PhotoShop (version CS and later), use the "Send to" plug-ins that are under **File** menu >> **Automate**.

## CONTOUR PATH PLUG-IN FOR CORELDRAW

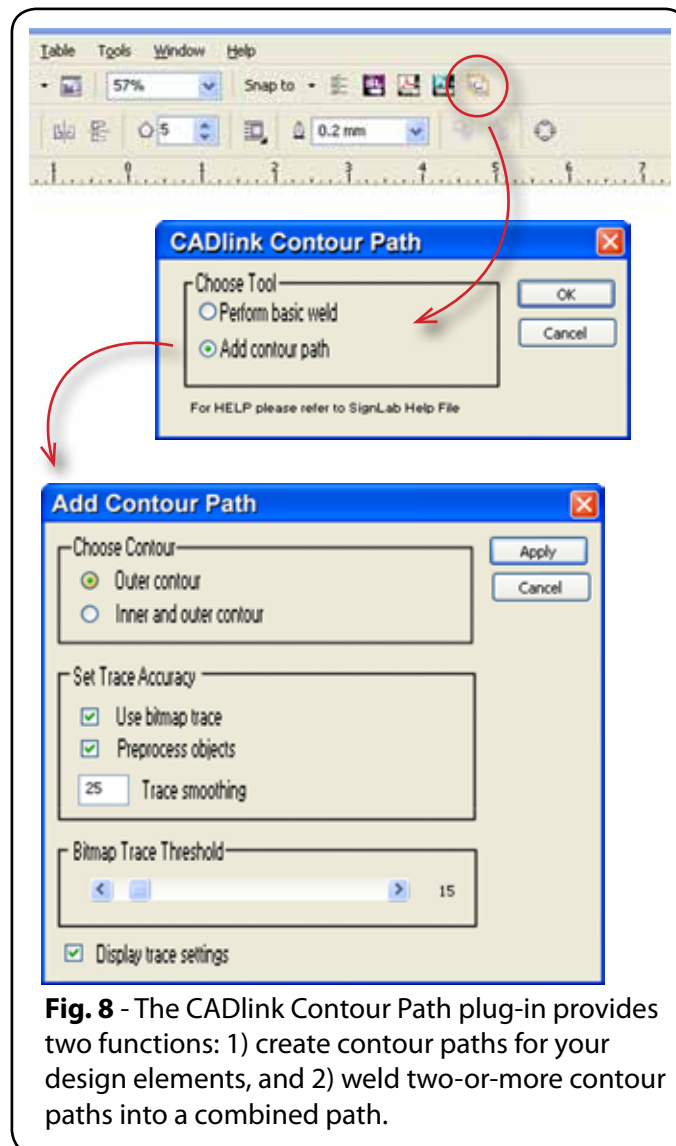
The **CADlink Contour Path** (Fig. 8) button is an aid for CorelDraw users that need a convenient means of defining a contour path that encloses the given design. When the design is brought into either SignLab or VPM, the contour path can be converted into a cut path, which will then be processed as part of a print&cut job.

There are two aspects to the Contour Path plug-in:

- Using the **Add contour path** option, create contour paths based upon the current selection. Paths can be created for both the inner and outer contours of objects.
- After two-or-more contour paths have been created, use the **Perform basic weld** option to combine them. Overlapping paths will be welded to form contiguous paths.

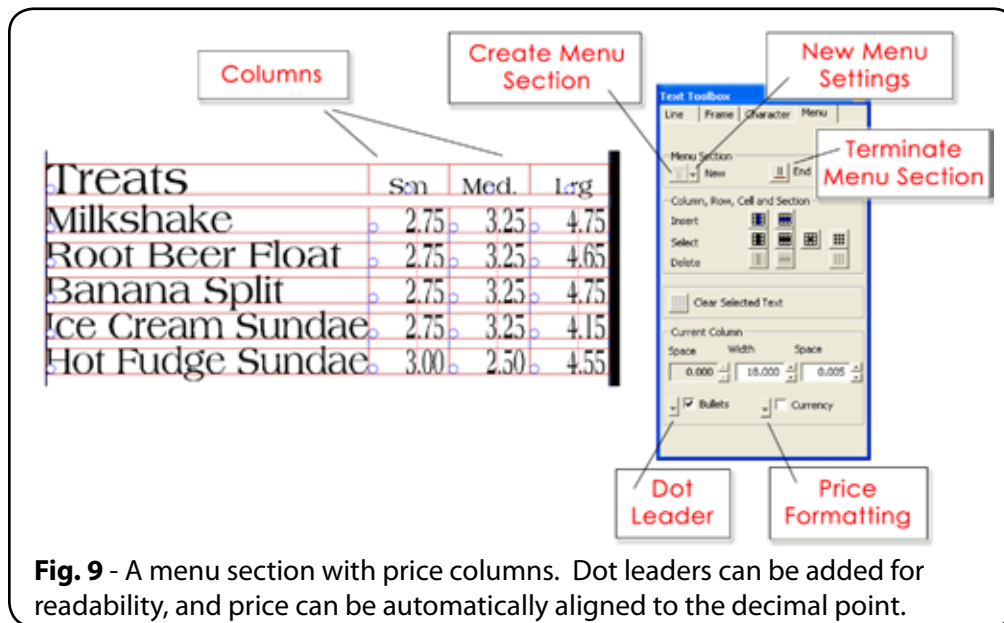
## IMPORT/EXPORT FILES

- **Import and Export Filters** - Ongoing improvement of import and export filters now includes import of PhotoShop (PSD) files.
- **Contour Cut Paths in Linked EPS and PDF Files** - When linking either an EPS or PDF file into a SignLab design, CMYK or RGB colors can be automatically converted into contour cut or halfcut paths.



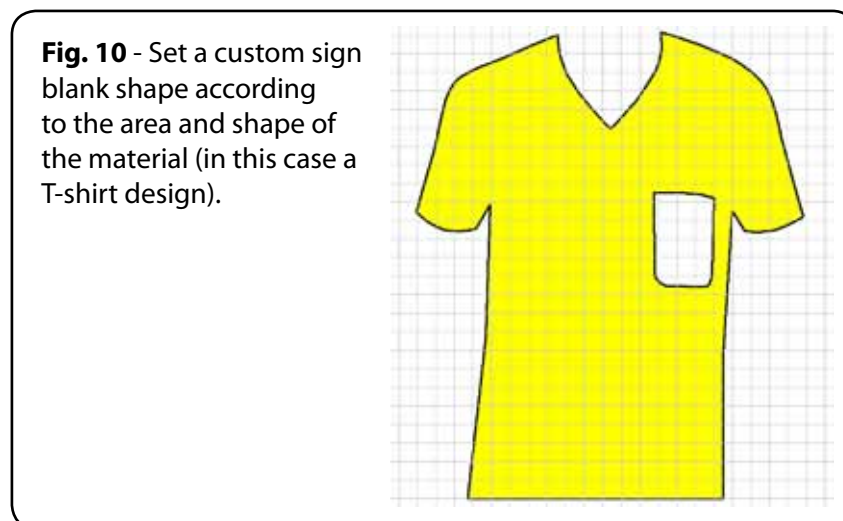
## POWER TOOLS

- **Easy Menu Board Creation** - As part of the new Text Compose interface, interactive tools have been introduced for constructing menu boards, where individual menu sections (Fig. 9) can be placed and resized with ease.
- **Spiral Shape Tool** - In addition to the existing collection of basic shape tools, spiral shapes can now be created. Like other parametric objects, on-screen handles can be used to customize the spiral appearance.
- **Total Area Calculation Tool** - For costing car wraps, select one-or-more objects that represent the physical area that will be wrapped (e.g., car doors, hood, etc. from a vehicle template), and then perform the area calculation.

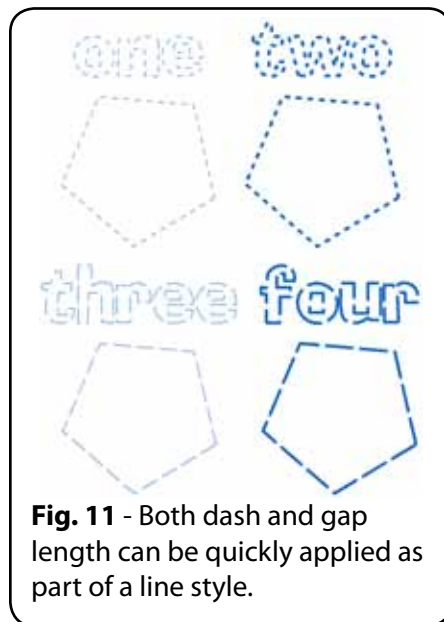


## GENERAL FEATURE IMPROVEMENTS

- **Text Toolbox in Text Compose** - The Text Compose interface has been improved by grouping features into tabs of the Text Toolbox (Fig. 10).
- **Character Picker** - For unusual characters that are difficult to reproduce with a standard keyboard arrangement, use the character picker in Text Compose mode to display and select a desired character.
- **Custom Sign Blank** - As opposed to a simple rectangular sign blank, set a custom sign blank (Fig. 49) that has unusual shapes or contours, such as garments, novelty items, bus windows, or non-rectangular can shapes (e.g., McDonald's 'M').



- **Lasso Select** - As opposed to making selections with a rectangular selection marquee, you can freehand draw an irregular region that will select all of the enclosed objects.
- **Optimized Contour Cut and Vectorization** - The underlying algorithms for generating contour paths and vectorization of images have been optimized, such that previously large jobs can now be completed in a fraction of the time.
- **Job Notes Lookup** - A new search feature has been introduced for browsing and inspecting customer information and job history.
- **New Plug-ins** - The collection of SignLab plug-ins have been expanded with more CADlink and third-party plug-ins.
- **Dotted Line for Strokes** - Create dashed (and dotted) lines that have a specific dash length and space between dashes (Fig. 11).
- **Multiple Stroke Colors** - As opposed to having a solid stroke color, strokes can be composed of a blend between two distinct colors.



**Fig. 11** - Both dash and gap length can be quickly applied as part of a line style.

## CREATING CUT PATHS IN SIGNLAB

SignLab shapes are generally considered to be print-only objects, except when cut paths have been created using the Cut menu tools. Through a variety of means, a print object can either have cut paths applied to its contour, or the object can be converted into a cut path (in effect replacing the original print-only object). Unlike other graphics programs, SignLab is designed to work with print and cut work flows using cut objects, as opposed to using a special color to designate print objects as cut paths. The following workflows show how cut paths can be created:

### RECOGNIZING CUT PATHS IN VERSAWORKS

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 for VersaWorks 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.

1. From the SignLab **Options** menu, choose **SignLab Setup >> PostScript Setup**.
2. The **PostScript** dialog will open.
3. By default, the edit field will indicate “CutContour” as the name that VersaWorks will use to identify cut paths in jobs that are received from SignLab.

### ADDING CUT PATHS TO LINE ART

1. Select the line art for which cut paths will be added.
2. From the **Cut** menu, choose **Contour Cut**.
3. At the far-left of the SmartBar, select the type of cut path that you want to create.  
For example, tick the **Inside/Outside** checkbox to apply the cut path to both the inner and outer contours of the line art.
4. Set the **Corner Style** according to how rounded or sharp the cut paths should be (Fig. 12).

**Fig. 12** - There are three possible corner styles when creating cut paths.



**Point Corner:** Trace all corners to a sharp point



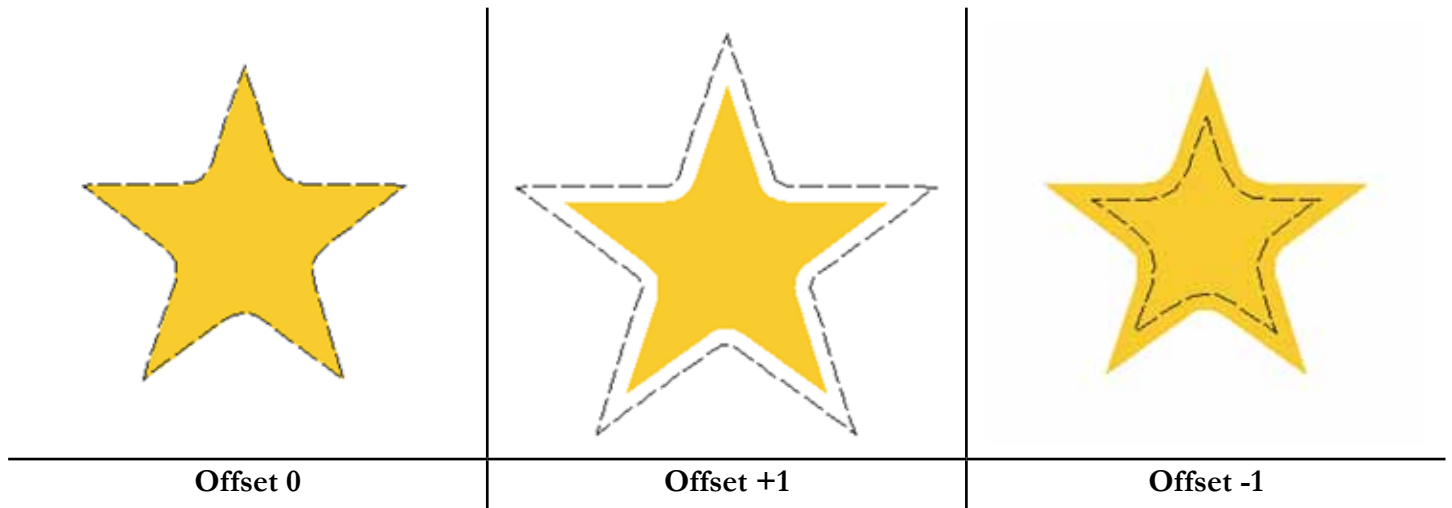
**Round Corner:** Soften the corners to a rounded edge



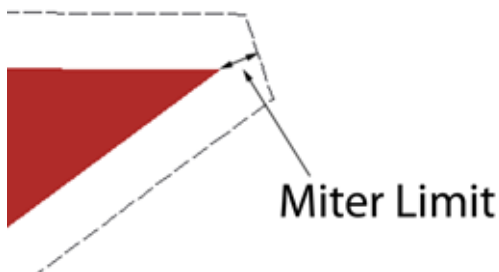
**Miter Corner:** Crop or square the corners

- Set the **Offset** according to how closely the cut path should follow the object contour. An **Offset** of zero will cut flush with the object contour (Fig. 13).

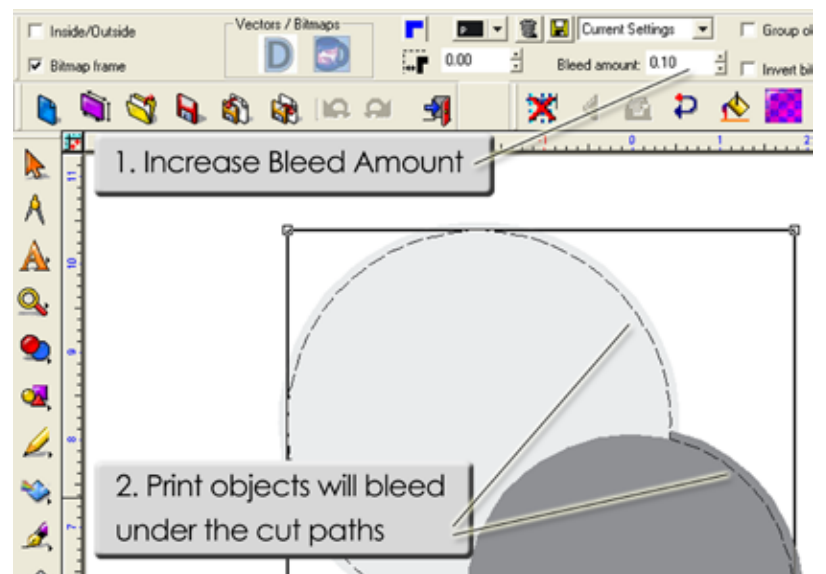
**Fig. 13** - The cut path can be flush with the object, or offset either away or towards the object.



- For the **Miter** corner style, the **Miter Limit** field will appear in the SmartBar. The **Miter Limit** is applied between the corners of the original object and the cut path. This limit is expressed as a percentage of the **Offset amount** (Fig. 14).



**Fig. 14** - When a miter limit is set, sharp corners are clipped at a percentage of the offset amount.



**Fig. 15** - Bleeding causes the objects to become slightly larger, such that they are trimmed by the cut paths. This prevents registration errors from revealing the media color.

- The **Color Picker** is used to indicate the color of the dashed cut paths on the workspace. Select a color that is not already in use in the graphic, so you can distinguish cut paths from other objects.
- If desired, increase the **Bleed Amount**, such that the print objects slightly overlap the cut paths (Fig. 15).
- Click an empty portion of the workspace to finish editing the cut paths.

The cut paths will appear as dashed lines along the contour of the line art.

## ADDING CUT BORDERS WITH HALF CUT

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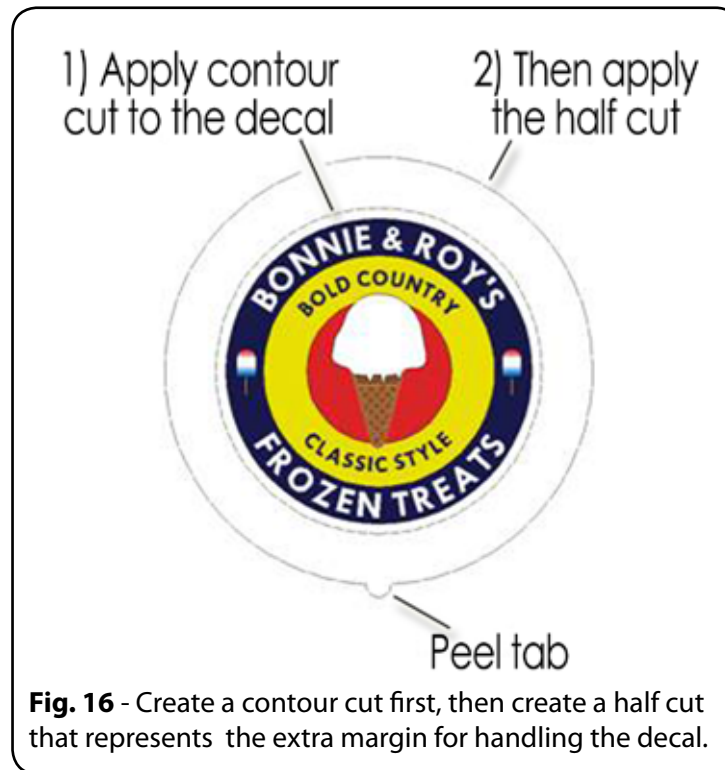
Cut menu >> **Contour Cut** (regular cut paths)

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Cut menu >> **Half Cut** (additional cut paths to create a border for handling)

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The Half Cut feature is used to create contour cut decals that have an additional half cut border around the decal. The border is used for handling the decal, and an optional peel tab can be added to improve the ease of peeling (Fig. 16). The resulting decals would be appropriate for retail consumers as a novelty or promotional sticker.



### CREATING THE HALF CUT

1. Suppose that you have applied cut paths to a design, and a half cut path needed to be added.
2. Select both the design and the cut paths.
3. Choose **Cut menu >> Half Cut**
4. The Half Cut path will be previewed on the workspace as dashed lines, with dashes that are slightly longer than those of the cut paths.
5. From the SmartBar, set the **Offset** (i.e., border thickness) that will be created around the cut paths.
6. Click an empty portion of the workspace to finish editing.
7. In the **Sheet Layer** palette (**View menu >> Palettes**), double-click the **Layer 1** plate.
8. In the **Sheet Layer** dialog, click **Add**.
9. A **Layer 2** plate will be created in the **Sheet Layer** palette.
10. Select the Half Cut path that you previously created.
11. Click the **Layer 2** plate, and the Half Cut path will be moved to the **Layer 2** plate.

### **OUTPUT THE PRINT AND CUT PORTION**

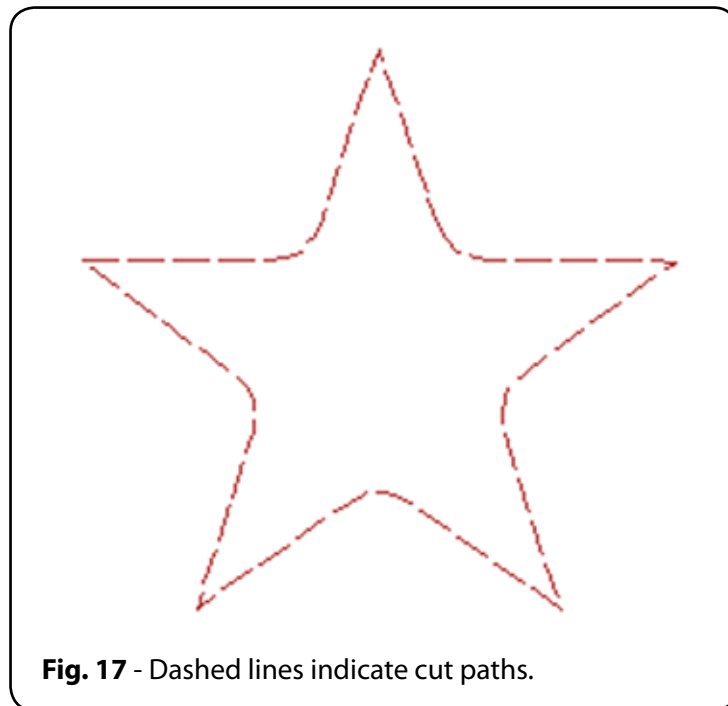
12. Press **[Ctrl]** and then click the **Layer 2** plate.
13. The **Layer 2** plate will appear grayed out, and the half cut path will be hidden.
14. Choose **File** menu >> **Print to VersaWorks**.
15. For a frame of reference, it is recommended that the **Edge of sign blank** option be enabled.
16. Proceed with output of the print and cut job.

### **OUTPUT THE HALF CUT PORTION**

17. Back in SignLab, **[Ctrl + click]** to activate the **Layer 2** plate.
18. Then **[Ctrl + click]** the **Layer 1** plate.
19. Only the half cut path should be visible now.
20. Choose **File** menu >> **Print to VersaWorks**, and again output with the **Edge of sign blank** option be enabled.
21. On the **Cutting Options** tab, set the **Half Cuts** drop-list.

### **CONVERTING LINE ART INTO CUT PATHS**

1. Select the imported line art that you want to convert to a cut path.
2. From the **Cut** menu, choose **Contour Cut On/Off**. The line art shape is now displayed as a series of dashed lines to indicate that it is a cut path (Fig. 17).



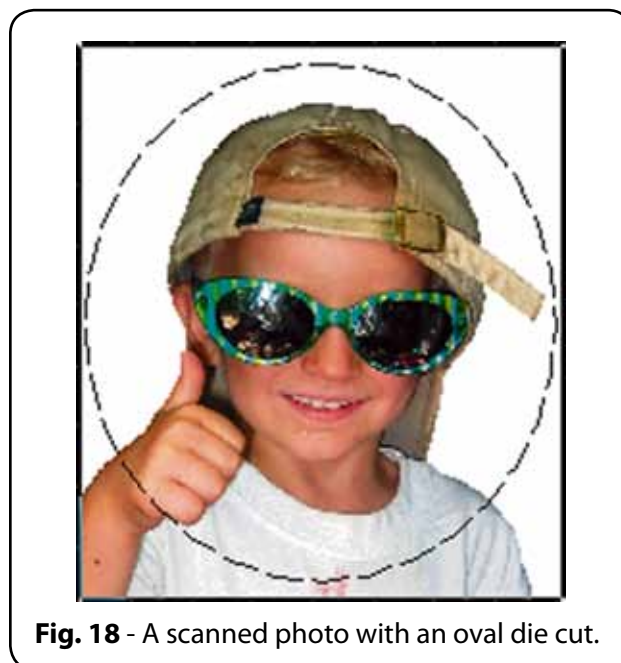
Note that the cut path color will be the same as the original line art fill color. This color does not matter unless you wish to use the **Filter By Color** tool, in which case this allows you to send cut jobs according to cut path color.

To convert a cut path back to the original line art, select **Cut >> Contour Cut On/Off**. However, note that any strokes that had been applied to the original line art will have been discarded.

## CREATING GEOMETRIC DIE CUT SHAPES

To create a geometric cut path that is centered on an image, use the **Cut >> Die Cut** command. Use the **Die Style** drop-list to create a tool path based on preset shapes. For example, you would use this tool to make a cut around a photo.

1. Select the image that you want to add a geometric cut path to.
2. From the **Cut** menu, choose **Die Cut**.
3. At the far-left of the SmartBar is a drop-list for **Die Style** that is used to choose the geometric pattern. The available styles are:
  - Square
  - Rectangle
  - Circle
  - Oval
  - Triangle
  - Polygon
  - Star
  - Pointed Gear
  - Blunt Gear
4. Select a die style from the drop-list. The die cut shape will be centered on the image, and the die cut lines will be dashed to indicate that they are cut paths (Fig. 18).
5. Select a color for the dashed cut paths using the **Color Picker**. The color does not matter unless you wish to use the **Filter By Color** tool, in which case this allows you send cut jobs according to cut path color.
6. The remainder of the SmartBar parameters will depend upon the type of geometric pattern that has been selected for the die cut. Where applicable, these parameters are used to set the height, width, rotation, number of sides, etc.
7. Click **Apply** to finish editing the die cut.



**Fig. 18** - A scanned photo with an oval die cut.

## CUTTING BY COLOR

For cut-only jobs in SignLab, the **SignLab Vinyl** and **SignLab Print and Cut** packages have a **Cut by Color** feature that allows you to output cut paths according to their “fill” color. However, the Cut by Color feature is not available in the **SignLab for VersaWorks** product. Instead, use the following procedure for cutting by color to VersaWorks:

1. Import or create the given design on the SignLab workspace.
2. Assign different fill colors according to how shapes should be grouped when cutting.  
For example, assign a red fill for shapes that should be part of the first cut job, blue for the second cut job, green for the third cut job, and so on.
3. In the **Shop Palette**, make note of the colors that have been assigned.
4. From the **Edit** menu, choose **Select All**.
5. From the **Cut** menu, choose **Contour Cut On/Off**.
6. The shapes will be converted to cut paths.  
Each cut path will still have the fill color that had been assigned prior to being converted into a cut path. This can be confirmed by selected the given cut path and inspecting the color that is shown at the far-right of the SmartBar.
7. In the SmartBar, locate the color that was assigned to the first cut job in step (2).
8. Press the **[ALT]** key and click the given color in the **Shop Palette**. All colors except for the click color will be disabled (i.e., will appear to have a crosshatch pattern).
9. From the **File** menu, choose **Print to VersaWorks**.
10. Only the cut paths with the color clicked in step (8) will be output.
11. Once the cut job has been sent, press the **[ALT]** key and click the given color. All colors in the **Shop Palette** will be enabled.
12. Repeat steps (8) through (11) for each subsequent color of cut paths.

## TRACING CUT PATHS IN IMAGES

The **Cut >> Contour Cut** command is used to create cut paths for images (Fig. 19).

**Fig. 19** - There are three ways in which to create cut paths for images.



1. Create a rectangular cut path around the bounding area of the image.

2. Create an irregular cut path that traces the transition between white and dark portions of the image.

3. Create an irregular cut path that traces the transition along a specific grayscale value in the image.

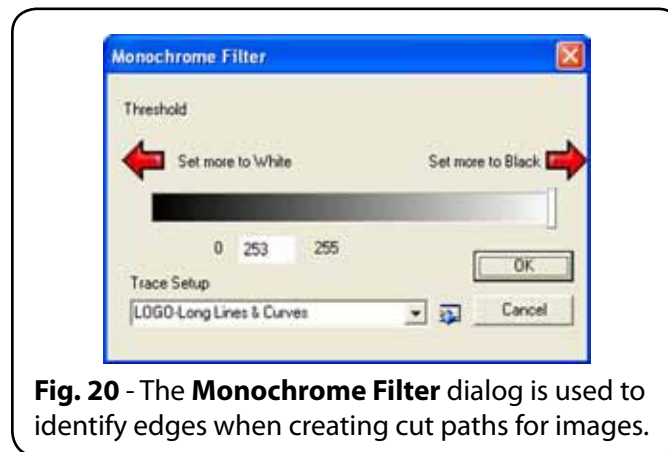
1. Select the imported image that you want to add contour cut paths to.
2. From the **Cut** menu, choose **Contour Cut**.
3. At the far-left of the SmartBar is the **Bitmap frame** checkbox.  
To create a cut path for the rectangular bounds of the image, set the **Bitmap frame** checkbox = **ON**.  
To create a cut path that follow the contour of the image, set the **Bitmap frame** checkbox = **OFF**.
4. At the far-left of the SmartBar is the **Inside/Outside** checkbox. Tick this checkbox to create cut paths for inner contours (i.e., the inner path of the letter 'O'). Otherwise, cut paths will only be created for the outer contours.
5. Set the **Corner Style** according to how rounded or sharp the cut paths should be.

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**Note:** See “Adding Cut Paths to Line Art” on page 16 for more details on the contour cut path settings.

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6. Set the **Offset** according to how you want the cut paths spaced along the image contours.
7. Select a color from the **Color Picker** to use for the dashed cut paths on the workspace. The color does not matter unless you use the **Filter By Color** tool, which outputs cut paths according to their color.
8. Click **Apply** to create cut paths for the image. If the **Bitmap frame** checkbox = **OFF**, then the **Monochrome Filter** dialog will open (Fig. 20). Otherwise, proceed to step (9).  
To trace the contour of an image that has a white background, set the **Threshold** to 255 (move the slider all the way to the right).  
To trace the contour of an image that has a shadow effect, set the **Threshold** somewhere around 200 (move the slider close to the right).
9. Click within an empty portion of the workspace to finish editing the cut paths.



**Fig. 20** - The **Monochrome Filter** dialog is used to identify edges when creating cut paths for images.

### **TIPS WHEN SETTING THE THRESHOLD VALUE**

The **Threshold** value on the **Monochrome Filter** dialog determines the boundary used for cut paths between the light and dark portions of the image. Behind the scenes, SignLab is analyzing a monochrome (i.e. black-and-white) version of the image to determine the discrete boundaries of the image. To improve the process, consider the following:

The image is composed of a fine grid of pixels. Each pixel in the image has a brightness that ranges from 0 to 255. A brightness that is close to 0 is considered to be near white (maximum lightness), whereas a brightness that is close to 255 is considered to be near black (maximum darkness).

For each pixel in your image, a brightness lower than the **Threshold** will be considered to be white, and a brightness above the **Threshold** will be considered to be black.

## TRACING IMAGES USING FLUID MASK

**Note:** Fluid Mask also has its own help documentation, and tutorial videos are available from the Fluid Mask web site ( [www.vertustech.com](http://www.vertustech.com) ).

**Note:** For more examples of using FluidMask, also see the *SignLab for VersaWorks Metallic Ink Design Guide*.

Fluid Mask is an intuitive tool for knocking out the background of an image, such as a photo of a person standing before scenery. The process is very much like a paint-by-numbers coloring book, where you paint with a green brush (the **Keep** brush) to indicate the foreground, and paint with a red brush (the **Delete** brush) to indicate background. After the background has been knocked out, a cut path can be created around the foreground.

Suppose that you have a customer photo, such as a JPEG image of their child that was taken using a digital camera (Fig. 21). However, the background of the image is cluttered and needs to be clipped using Fluid Mask.



1. Import the image onto the SignLab workspace, select it, and then choose **Image** menu >> **Fluid Mask**.
2. The Fluid Mask editing mode will launch, and the image will be analyzed in order to automatically identify similar regions of color and texture.  
Several seconds may be required, and the resulting regions will appear much like a paint-by-numbers coloring book.

3. Along the top of the Fluid Mask window are three tabs: **Source**, **Workspace**, and **Cut-out**. The **Workspace** tab should be active.

4. On the left-hand side is the **Tools** toolbar.

5. From the **Tools** toolbar, choose the **Delete Local Brush** tool.

6. With this brush, move the cursor over part of the background image and then left-click.

Notice that regions that were overlapped by the brush have now been filled with a red mask (Fig. 22).

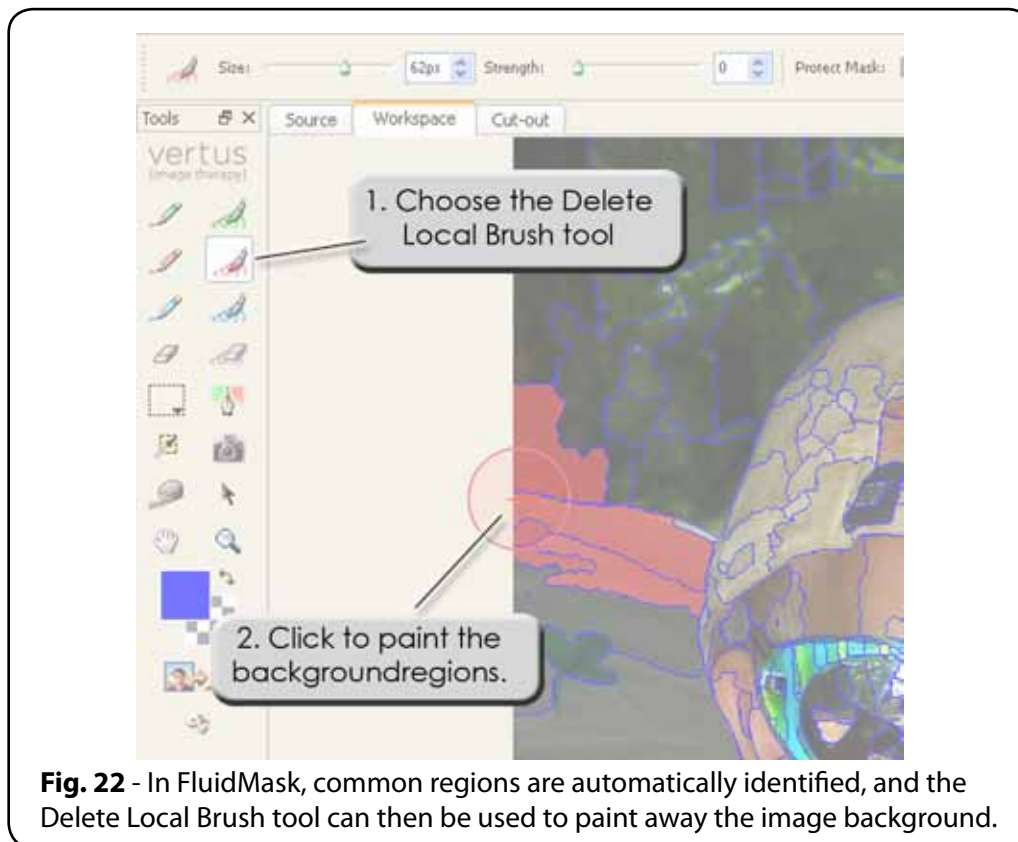
7. Continue to click other portions of the background, such that you are filling in the background with a red mask (i.e., this portion is being marked for deletion).

In addition to clicking, you can also click-and-drag to paint over an area.

8. If necessary, remove the tick from the **Show Object Edges** checkbox. This will hide the regions, such that you can distinguish any portions of the background that were missed.

9. When you have finished painting the background red, choose **Image** menu >> **Auto-Fill Image**.

The foreground of the image will be automatically painted green (i.e., the foreground will be kept).



Also, a blue blurring line will automatically indicate the transition region between red background and green foreground.

The blue blurring brush is used to retain busy edges, such as hair (see Blue for busy edges).

10. From the **Tools** toolbar, click the **Create Cut-Out** button.
11. From the **File** menu, choose **Save And Apply**.
12. The **Fluid Mask** window will close, and the view will return to SignLab.
13. The **Prime** dialog will query whether a primer should be automatically applied to the image. For the sake of this example, choose **No** and click **Close**.
14. The resulting image with clipped image will be placed on the SignLab workspace.
15. To apply a cut path to the clipped image, use the Contour Cut tool.

## COLOR PALETTE SETTINGS

Along the bottom of the SignLab workspace is the Shop Palette. Though a default palette is set by default, other palettes can be set as the default, or new colors can be appended to the end of the palette. For example, when a design is imported, new colors from the imported file will be appended to the end of the Shop Palette. When the design is saved (i.e., Saving a CDL file via **File** menu >> **Save**), the modified palette is stored as part of the design, so that the palette colors will remain consistent in future design editing.

The following sections contain typical scenarios for modifying the Shop Palette.

### SETTING THE DEFAULT PALETTE

1. Go **Options** menu >> **Palette** >> **Load** >> **Set Default**, and choose the palette that should be loaded by default when a new workspace is created.

In the SignLab install directory, palettes are stored within the **Palettes** directory.

2. Start with a fresh SignLab workspace (i.e., **File** menu >> **New**).
3. The new workspace will load the default palette from step (1).

### LOADING A NEW PALETTE

1. Start with a fresh SignLab workspace (i.e., **File** menu >> **New**).
2. Go **Options** menu >> **Palette** >> **Load** >> **New**, and choose the palette that will be loaded for this workspace.

In the SignLab install directory, palettes are stored within the **Palettes** directory.

### APPENDING TO SHOP PALETTE

1. Suppose that you already have a design, and that you want to add one-or-more colors from a color matching palette.
2. Go **Options** menu >> **Palette** >> **Open Manufacturer Palette**, and choose the palette that contains the desired colors.

In the SignLab install directory, palettes are stored within the **Palettes** directory.

3. The new palette will appear as a floating **Manufacturer Palette** that can be used like the regular Shop Palette.
4. Colors can be applied from the Manufacturer Palette as follows:
  - Select a shape and then click the desired color in the Manufacturer Palette. The color will be appended to the Shop Palette.
  - Drag-and-drop a Manufacturer Palette color onto the given shape. The color will be appended to the Shop Palette.
  - Drag-and-drop a Manufacturer Palette color to a specific location on the Shop Palette. The color will be inserted within the Shop Palette.

## MERGING PALETTES

Suppose that you have developed a design and the Shop Palette has been customized with various colors that are used in the design. However, you have decided that you want to merge a new color matching palette with the existing palette, such that the saved CDL file will contain all the colors for future reference.

1. Go **Options** menu >> **Palette** >> **Load** >> **Merge**, and choose the desired palette.

In the SignLab install directory, palettes are stored within the **Palettes** directory.

2. The color from the selected palette will be appended to the Shop Palette.

## FINDING SPECIFIC COLORS

When you know the name of a spot color, but you are having trouble finding that color within the Shop Palette, then use the following procedure:

1. Go **Options** menu >> **Palette** >> **Sort Colors** >> **Move Color to Front**.
2. The **Move Color to Front** dialog will open.
3. From the drop-list, choose the spot color name.
4. Click **OK**, and the color will be moved to the far-left of the Shop Palette.

Note that you can drag-and-drop this color to a different position.

## COLOR MANAGEMENT IN SIGNLAB

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**Note:** When importing designs into SignLab, certain file types support embedded color profiles that can be used with the SignLab Color Management system. For more information about color profiles in files, please refer to Importing Files in the help file.

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Color Management provides on-screen previewing of your designs, such that what you see on-screen will approximate (as best possible for a monitor display) how the design will appear when printed. When the given design is printed, VersaWorks will manage the color reproduction in the finished print.


By default, the color management settings are configured when your SignLab for VersaWorks product is installed. However, to modify the color management settings, use the following procedure:

1. From the **Options** menu, choose **SignLab Setup >> Color Management**.
2. The **Color Management** dialog will open.
3. From the **Settings** drop-list, choose **Custom**.
4. Click the **Advanced** button.
5. For the **Vector RGB** and **Image RGB** drop-lists, the default of CADlink Unified RGB.icm will be appropriate.
6. From the **Printer** profile drop-list, choose **Browse**.
7. A browse dialog open to the default location where VersaWorks color profiles are stored.
8. Choose the desired color profile and click the **Open** button.
9. The view will return to the **Color Management** dialog.
10. Click the **Set Defaults** button.
11. Click **OK** to close the **Color Management** dialog.

### READ THE COLOR VALUE OF A CUSTOMER SAMPLE

A common scenario is where the customer has provided a printed sample of the color that they want, but the precise color value is unknown. It is possible to compare the sample with a swatch book provided for a given color matching system. Alternatively, a spectrometer or colorimeter can be used to measure the sample and create a new Shop Palette color.

1. In SignLab, choose **Options** menu >> **Palette >> Custom Color Creator**.

These palette controls are also available from the Shop Palette context menu .

2. The **Make Custom Colors** dialog will open.
3. To the right of the **Measure** button is a drop-list. Choose the instrument that will be used for taking the measurement.
4. Check that your device is ready to measure the sample.
5. In the **Make Custom Colors** dialog, click the **Measure** button.
6. Beneath the **Add** button, tick the **Add to Shop Palette** checkbox.
7. Click the **Add** button. The **Custom Palette Colors** list will be updated to include the new color.

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**Note:** All of your custom colors are stored in a CustomColors.pal file, which is located in the SignLab \ Palettes directory.

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8. Click **Done** to close the **Make Custom Colors** dialog. The new color will be added to the Shop Palette.

## CREATING CUSTOM SWATCH BOOKS FOR YOUR PRINTER

In SignLab, swatches can be created of the Shop Palette colors. In this manner, you can print your own swatch books that are specific to your loaded inks and media, and create a full range of swatches for specialty or banner material.

1. Start with a fresh SignLab workspace (i.e., **File** menu >> **New**).
2. Go **Options** menu >> **Palette** >> **Load** >> **New**, and choose the palette for which swatches will be created.
3. Go **Options** menu >> **Palette** >> **Create Palette Swatch**.
4. Swatches for the current Shop Palette colors will be generated on the workspace.

The swatches can now be printed and bound as a color reference for your printer.

## CREATE PROCESS COLOR SWATCHES FOR RGB PRINTING

Under the **File** menu, the **Color Swatches** feature can create standard process color swatches for RGB, CMY, or CMYK color values. An easy means of color matching is to print a set of RGB swatches that are specific to the media and inks that are loaded into your printer. These printed swatches can then be stored in a binder for use as a reference when helping the customer to identify the hue that they need. For example, the following procedure shows how to create swatches for RGB.

1. From the **File** menu, choose **Color Swatches** to open the **Color Swatches** dialog.
2. Click the **Standard** option.
3. Click the **RGB** option.
4. Click **OK** to continue.
5. A series of swatches will appear on the workspace.

The speed with which these swatches are generated depends on the speed of your workstation.

The swatches can now be printed and bound as a color reference for your printer. As in the above procedure, it is also possible to create CMY and CMYK color swatches.

- The standard CMYK swatches are similar to the CMY swatches, except that Black is added as a fourth colorant.
- Each swatch is quartered, with 5% black in the top-left, 10% black in the top-right, 20% black in the bottom-left, and 30% in the bottom-right of each swatch.

## IMAGE PREPARATION IN SIGNLAB

In the event that your customer has provided less than adequate artwork, the image processing tools in SignLab can be used to restore the artwork to a professional level for large format printing. Image processing tools are located under the SignLab Image menu. For more information within this help file, please refer to the Working with Images chapter for descriptions of the image processing tools that are available. In particular:

- The **Super Size Image** tool is used to restore quality to low-resolution images, providing significant quality improvements over that of bicubic resampling.
- The **Fluid Mask** tool is an intuitive tool for knocking out the background of an image, such as a photo of a person standing before scenery.

FluidMask is used extensively in metallic ink preparations (See the *SignLab for VersaWorks Metallic Ink Design Guide*).

- **Color Adjustment Tools** provide advanced levels, curves, hue/saturation, etc. controls for performing specific improvements to a given image.
- **Easy Color Adjustments** provide quick filters for cleaning up images.
- **Image Menu Filters** provide a selection of effects that can be applied to images.
- **Plug-ins** support for both Adobe and third-party plug-ins, with included plug-ins from the Richard Rosenman, Redfield, Harry, Alien Skin, and CADlink collections.
- Superior image tracing capability using the **Prepare to Vectorize Wizard**.
- The **GIMP image manipulation** interface that provides professional tools for photo retouching, image composition, and image construction that are similar to PhotoShop in the effects that can be created.

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