

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

INTERNET

www.cadlink.com

www.signlab.com

E-MAIL

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

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INTRODUCTION TO METALLIC INK DESIGN GUIDE

Printing with metallic inks involves more consideration than simply choosing CMYK inks or spot colors for your designs. Metallic inks are typically printed in addition to a regular design, so as to enhance the overall effect and create stunning prints. This guide highlights the technical aspects that you need to understand with respect to printing with metallic inks, and detailed examples show how to construct effective metallic ink designs in your SignLab for VersaWorks.

VERSIONS OF VERSAWORKS

It is good practice to have your VersaWorks patched to the latest version. Our examples were developed using VersaWorks 4.1.2, and it was found that versions earlier than 4.1.1 had workflow issues.

CHECKING WHETHER A JOB REQUIRES METALLIC INK

For a selected job in VersaWorks, the **Document Information** will list extra inks under **Special Items** (Fig. 1).



Fig. 1 - Under **Special Items**, both white ink and metallic silver ink are listed.

TWO CATEGORIES OF METALLIC COLORS

Roland uses a specific naming convention to distinguish between CMYK inks and metallic inks. As such, there are two categories of “named colors” that use metallic ink: Explicit and Process.

EXPLICIT NAME METALLIC COLORS

An explicit name color indicates a specific metallic hue, as opposed to being a blend with CMYK. For example, when printing an object with RDG_MetallicSilver, the object color will simply be metallic silver, and no CMYK will be printed.

If there is a need to also print an area of the page with CMYK, then you need a second object that defines the CMYK, and the two objects would be printed as part of a combined job. In such a case, the RDG_MetallicSilver object would typically be positioned behind the CMYK object.

Like RDG_MetallicSilver, there are two other explicitly named colors: RDG_WHITE and RDG_GLOSS. If you have a Roland printer with white or gloss ink, then you can use their special name designations in the same manner as you would RDG_MetallicSilver. All three RDG_MetallicSilver, RDG_WHITE and RDG_GLOSS can all be found in the SignLab for VersaWorks palettes.

PROCESS NAME METALLIC COLORS

A process name color (aka, metallic process color) indicates a specific metallic hue that is printed in combination with CMYK. As such, there are a multitude of combinations, and you can create your own. Preset metallic process colors (i.e., MT+CMYK) can be found in the “Roland Metallic Color.pal” and “Roland Metallic Color System Library.pal” palettes (located in the SignLab install directory).

METALLIC COLOR PALETTES

The **Roland Metallic Color** palette contains the primary metallic colors such as:

- RVW-MT-Gold
- RVW-MT-Silver
- RVW-MT-Green

There are twelve of these colors, and “MT” in the name indicates that they will print with metallic ink. Each of these colors will print using the CMYK values displayed in SignLab + 50% Metallic.

The **Roland Metallic Color System Library** palette contains around 250 colors and they will have names like

- RVW-MT-01K
- RVW-MT-04R

Again, the “MT” indicates printing with metallic ink. However, printing will occur with either 100% metallic or 50% metallic, depending on the terminating letter code:

- Ending with A to J will print with 100% metallic
- Ending with K to T will print 50% metallic

In SignLab, the CMYK values are indicated in the **Edit Color** dialog (double-click the color).

In VersaWorks, the CMYK and MT values can be inspected via **Edit** menu >> **View Color Settings**. You can also print sample metallic charts using the **Media** menu command.

Note: Creating a new library allows you to create your own metallic named colors.

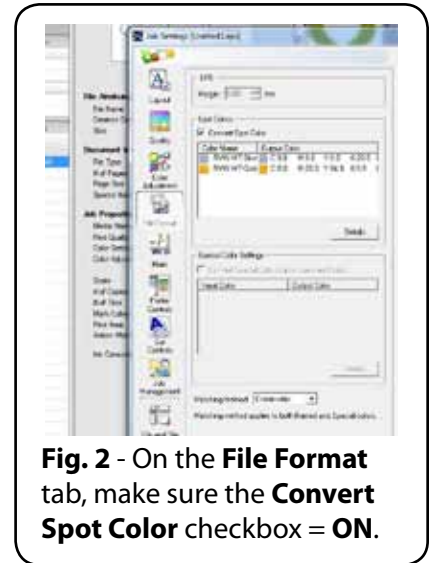


Fig. 2 - On the **File Format** tab, make sure the **Convert Spot Color** checkbox = **ON**.

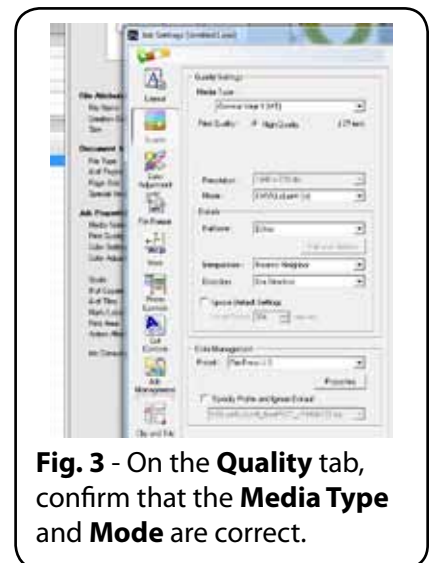


Fig. 3 - On the **Quality** tab, confirm that the **Media Type** and **Mode** are correct.

PRINTING METALLIC INKS IN VERSAWORKS

Before printing with metallic ink, you must first select a media type that supports such ink.

1. In VersaWorks, double-click the job.
2. The **Job Settings** dialog will open.
3. On the **File Format** tab, confirm that the **Convert Spot Color** option is **ON** (Fig. 2).

Without enabling this option, then any process metallic colors will not print metallic, even if the print preview appears correct.

4. Click the **Quality** tab (Fig. 3).
5. From the **Media Type** drop-list, choose a media that has “MT” in its name, which indicates that it supports

metallic ink.

6. For **Print Quality**, there will be two options to choose from: High Quality and High Quality (layered).
7. The **Mode** name will be of the form CMYKLcLmMt, where the “MT” indicates that it is appropriate for printing metallic.

INSPECTING THE PREVIEW

Before starting any print job, it is worthwhile to inspect the print preview to ensure that the metallic ink is being printed in the expected regions of the media.

1. Change the **Mode** from CMYKLcLmMt to MetallicSilver.
2. The preview should now show a gray-checked preview that indicates the location and volume of metallic ink that will be printed.

Note: It is critical that the **File Format** tab >> **Convert Spot Color** option = **ON**, otherwise metallic inks will not print, regardless of the preview.

3. When you have finished inspecting the preview, restore the proper **Mode**.

CHOOSING THE JOB OUTPUT METHOD

There are three methods of printing with metallic inks: Mixed Pass, Layered Mode, and Two Pass. Each method has different benefits according to the job size and how extensively metallic ink is being applied.

MIXED PASS

Mixed Pass will print the metallic ink and CMYK inks in the same printing passes (i.e., either within the same region of the media, or different regions of the media).

Pros:

- This is the fastest method.
- This method allows for unattended printing (i.e., queue multiple jobs and just leave them to print).

Cons:

- Any region that is a mixture of both metallic and CMYK inks will NOT obtain a satisfactory metallic effect, as compared to the other methods.

Comments:

- Only use Mixed Pass when the metallic ink is being printed in areas that are devoid of CMYK inks. This includes the CMYK component of process metallic colors.
- Use a **Print Quality** = High Quality, and set the **Mode** = CMYKLcLmMt

LAYERED MODE

Layered Mode will print the metallic inks and CMYK inks in the same print passes, except each will only use HALF of the available print head nozzles. The first half of the nozzles will print metallic inks, and the second half for CMYK inks. When printing, the metallic ink is laid down first, and then the CMYK inks are laid down immediately after.

Pros:

- Prints the CMYK inks above the metallic inks, as opposed to mixing them.
- Regions that contain both metallic and CMYK inks obtain a good metallic effect.
- Avoids registration issues that could have occurred by printing metallic and CMYK in separate passes.
- This method allows for unattended printing (i.e., queue multiple jobs and just leave them to print).

Cons:

- This is the slowest method because of how the print head nozzles are shared.

Comments:

- Use a **Print Quality** = High Quality [Layered], and set the **Mode** = CMYKLcLmMt.

Two Pass

Two Pass is a manual activity, where the job is first printed with metallic inks only, then the media is rewound for printing a second pass that is composed of CMYK inks only.

Pros:

- Obtains the best metallic effect when combined with CMYK. This occurs because more time is allowed for the metallic ink to dry before the CMYK is applied.
- Faster than Layered Mode, though much slower than Mixed Pass.

Cons:

- For large print areas, registration errors can potentially occur due to rewinding for the CMYK pass.
- Due to the need to manually rewind the media, this method is not suitable for unattended print runs.

Comments:

- To use the Two Pass method, you must send the job twice. Make note of the following procedure:
 1. For the metallic ink pass, set **Print Quality** = High Quality, and set the **Mode** = MetallicSilver.
 2. On the **Cut Control** tab, set **Return to origin after print** option = **ON**.
 3. Proceed with the metallic ink pass.
 4. After the metallic ink pass is complete, set the **Mode** = CMYKLcLm (**NOT** CMYKLcLmMt).
 5. On the **Cut Control** tab, set **Return to origin after print** option = **OFF**.
 6. Proceed with sending the CMYK pass.

COMPARISON OF PRINTING TIMES

As part of an in-house test, we tested the time required to complete a representative job using each of the three methods. Of course, these times would differ from your own jobs, though they should give you a sense of the comparable time required by each method.

Method	Time Required (minutes)
Mixed Pass	12
Layered Mode	42
Two Pass	29

TUTORIAL 1: SIMPLE METALLIC EFFECTS WITH BITMAPS

In this tutorial, we will apply a metallic effect to a bitmap image, and then add a metallic soft shadow to some text.

PART 1 - CREATE A DUPLICATE

1. From a new SignLab workspace, choose **Options** menu >> **Palette** >> **Load** >> **New**, and choose the “Roland Metallic Color.pal” palette.
2. Use **File** menu >> **Import** to load the “MT Hands.jpg” file from the clipart directory.
3. Choose **Options** menu >> **SignLab Setup** >> **General Preferences**.
4. Set both **Duplicates** fields to zero.
This will cause duplicates to be positioned directly above their originals.
5. Click **OK** to close the **General Preferences** dialog.
6. Select the bitmap and choose **Edit** menu >> **Duplicate** [Ctrl + D].

PART 2 - KNOCK OUT THE PINK BACKGROUND

7. Notice that the bitmap background is a faint pink, which (for the duplicate) needs to be removed (Fig. 4).
8. Choose **Image** menu >> **Fluid Mask**.
If you are new to Fluid Mask, then video tutorials are available through www.cadlink.com >> **InfoSource**.
9. After a brief pause, FluidMask will identify common regions within the image.
10. Choose the **Delete Local Brush** [Shift + D].
11. Click the pink backgrounds, so that they become red to indicate that they will be removed.
It should be sufficient to click once in the top portion, and then click in the bottom portion.
12. Choose **Image** menu >> **Auto-Fill With Keep**.
Green = keep, red = delete, and blue = transition areas between red and green (Fig. 5).
13. Choose **Image** menu >> **Create Cut-Out** [Ctrl + U]. This will remove the red background.
14. Choose **File** menu >> **Save and Apply** [Ctrl + S]. The modified bitmap will be sent back to SignLab.
15. In SignLab, the modified duplicate will still be selected, as indicated by “Alpha Bitmap” in the SmartBar.

The background will still appear pink because the original image is showing through from directly below the modified duplicate.

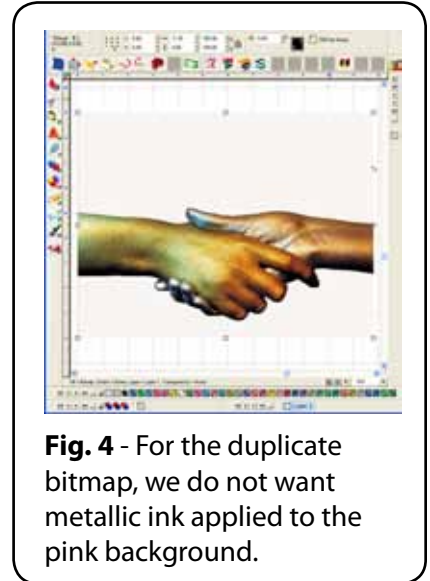


Fig. 4 - For the duplicate bitmap, we do not want metallic ink applied to the pink background.

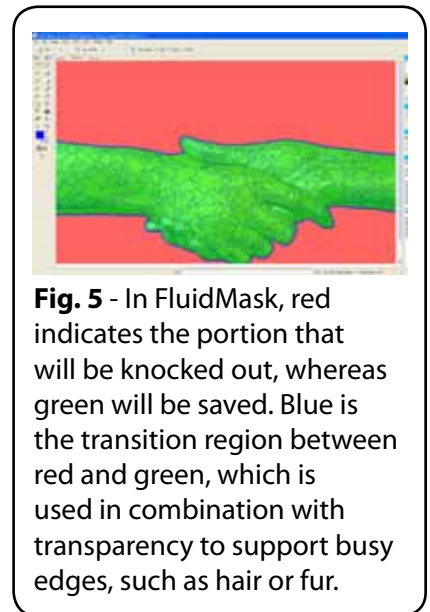


Fig. 5 - In FluidMask, red indicates the portion that will be knocked out, whereas green will be saved. Blue is the transition region between red and green, which is used in combination with transparency to support busy edges, such as hair or fur.

PART 3 - SETTING THE METALLIC INK

Now that the background has been knocked out, we want the remaining portion of the image to print with metallic ink.

16. With the duplicate still selected, choose **Transform** menu >> **Render to Multitone Bitmap** (Fig. 6).
17. Tick the **Spot colors only** checkbox.
18. Clear the **Keep original** checkbox.
19. From the color picker, choose the RGB_MetallicSilver color (SC 195).
20. At this point, the image is set to print using metallic ink. However, the shadow regions are now 100% metallic, which when printed with the CMYK will print too much ink (i.e., this can be a problem drying on some media).
21. Next to the color picker, click the graph icon.
22. The **Tone Reproduction Curve** dialog will open, displaying a liner curve from the bottom-left to the upper-right.
23. Click the bottom-left corner and drag it up 3 grid markers. This will reduce the ink to about 70%.
24. Click the middle of the curve, and drag down by about 1.5 grid markers (Fig. 7). This will increase the amount of ink in the midtones, thereby improving the skin colors.

Note: As an alternative to manually editing the curve, there is a preset curve available “MT Multitone curve1.CCF” in the **UsefulMultitoneCurves** directory.

25. When the curve is ready, click **OK** to close the **Tone Reproduction Curve** dialog.
26. In the SmartBar, click **Apply** to finish editing the multitone bitmap.

PART 4 - ARRANGING LAYERS

Though not a requirement, it can be easier to manage metallic jobs by arranging the components onto separate layers in the **Sheet Layer** palette.

27. In the **Sheet Layer** palette, double-click **Layer 1**.
28. The **Sheet Layer** dialog will open (Fig. 8).
29. Click the **Add** button. This will create **Layer 2**, and the multitone bitmap will be on **Layer 2**.
If the multitone bitmap had not been selected, then select it now and then click **Layer 2** (i.e., place it on Layer 2).
30. With the multitone bitmap selected, choose **Arrange** menu >> **Order To Back** [Ctrl + B]. This will move the metallic ink portion of the job to behind the CMYK portion.
31. While pressing the **[Ctrl]** key, click **Layer 2** to disable it.
32. Select the original full-color bitmap that is on **Layer 1**.



Fig. 6 - Converting the bitmap to multitone allows us to use metallic inks instead of CMYK.



Fig. 7 - The **Tone Reproduction Curve** is used to adjust the quantity of ink that is laid down in the shadows, midtones and highlights.

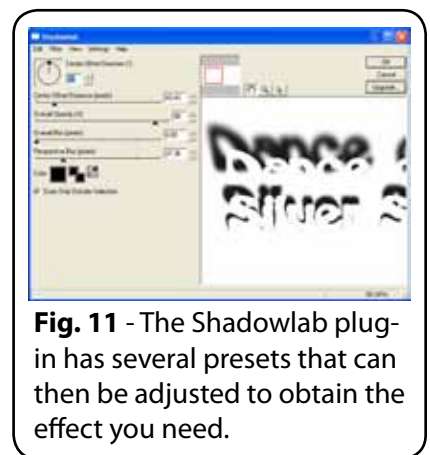
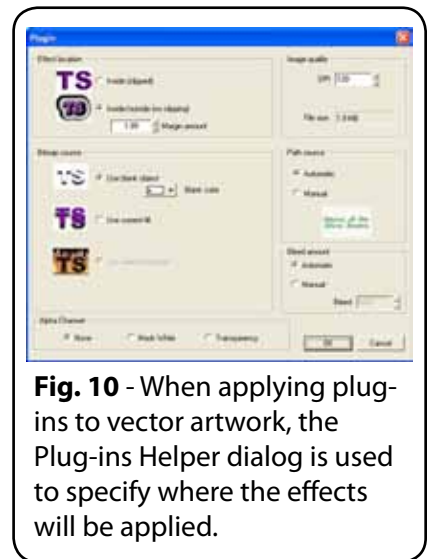
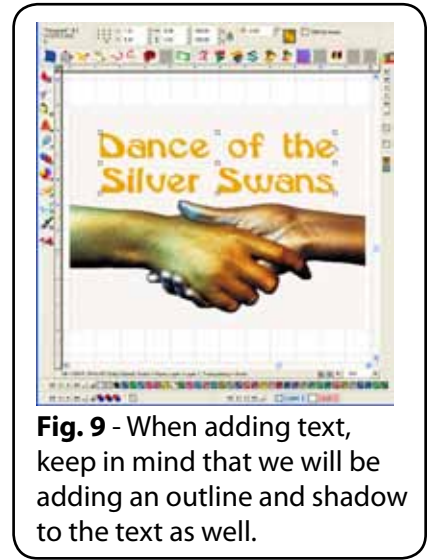


Fig. 8 - When creating a new sheet layer, your current selection will be automatically moved onto that layer.

PART 5 - ADDING METALLIC TEXT WITH A SOFT SHADOW

For this example, let's position some text to accompany the hands.

33. From the **Text Tools** flyout, choose **Text Compose** and then click above the hands to place a text entry point.
34. Use the following text attributes:
 - Height** = 1.00" (25 mm)
 - Typeface** = MOONL VEF font
 - Color Picker** = RVW-MT-Gold (SC 196)
 - Typed Text** = "Dance of the Silver Swans" on two lines, centered above the hands (Fig. 9).
35. Click the **Select** tool to finish editing the text.
36. Choose **Transform** menu >> **Outline**, and use the following settings:
 - Clear the **Inline** checkbox
 - For the **Outline** color picker, choose RVW-MT-Green (SC 201)
 - Outline Thickness** = 0.06" (1.5mm)
37. Click **Close** to finish editing the outline.
38. Use **[Shift + F3]** to clear your selection.
39. While pressing **[Shift]**, click the RVW-MT-Green in the **Job Palette** (SC 201). This will select the outline.
40. Choose **Image** menu >> **Eye Candy 4000** >> **Shadowlab**.
41. The **Plug-ins Helper** dialog will open (Fig. 10). Use the following settings:
 - Effect location** = Inside/outside (no clipping)
 - Bitmap source** = Use blank object
 - Alpha Channel** = None
 - Path source** = Automatic
 - Bleed amount** = Automatic
42. Click **OK** to continue.
43. The **Shadowlab** dialog will open (Fig. 11). Use the following settings:
 - Choose **Settings** menu >> **Cast On Wall**.
 - Set the **Center Offset Distance** = 30
44. Click **OK** to apply the settings. A shadow bitmap (RGB) will be created, though the white background of this bitmap will overlap the hands.



PART 6 - CROPPING THE SHADOW BITMAP

There will now be a shadow bitmap (RGB) behind the text. Before converting this shadow to use a metallic ink, first crop the shadow bitmap to prevent it from overlapping the hands.

45. Double-click the shadow bitmap to enter bitmap editing mode.
46. At the far-left of the SmartBar, click the **Rectangle Select** tool.
47. Drag a selection marquee to indicate the portion that should be cropped away.
48. Click the **Crop Region** button (Fig. 12).
49. Click the **Close** button.

PART 7 - SETTING A SILVER SHADOW

50. With the shadow bitmap selected, choose **Transform** menu >> **Render to Multitone Bitmap**.
51. Clear the **Keep original** checkbox.
52. From the color picker, choose the RGB_MetallicSilver color (SC 195).
53. Next to the color picker, click the graph icon.
54. The **Tone Reproduction Curve** dialog will open.
55. Click the “load preset” icon and choose “MT Multitone curve1.CCF” from the **UsefulMultitoneCurves** directory.
56. Click **OK** to close the **Tone Reproduction Curve** dialog.
57. In the SmartBar, click **Apply** to finish editing the shadow bitmap.
58. In the **Sheet Layer** palette, press **[Ctrl]** and click **Layer 2** to make the sheet layer active again.
59. With the shadow bitmap still selected, click **Layer 2**.
60. The shadow bitmap will now be on **Layer 2**.

PART 8 - GROUPING LAYER 2

61. Press **[Ctrl]** and then click **Layer 1**, so that only the metallic silver bitmaps on **Layer 2** are visible (Fig. 13).
62. Select both of these bitmaps, and then choose **Layout** menu >> **Group** **[Ctrl + G]**.
63. Choose **Arrange** menu >> **Order To Back** **[Ctrl + B]**.
64. Use **[Shift + F3]** Clear the current selection.
65. Press **[Ctrl]** and then click **Layer 1** to activate it again (Fig. 14).

The job is now ready for sending to VersaWorks via the **File** menu >> **Print to Roland VersaWorks** command.

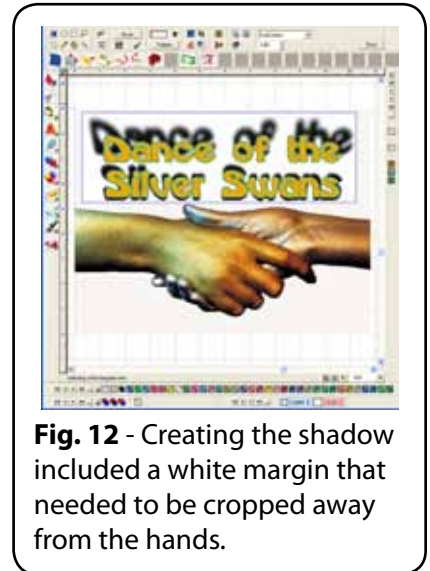


Fig. 12 - Creating the shadow included a white margin that needed to be cropped away from the hands.

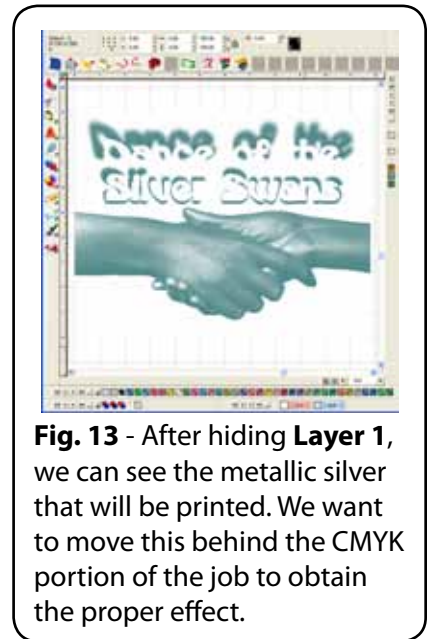


Fig. 13 - After hiding **Layer 1**, we can see the metallic silver that will be printed. We want to move this behind the CMYK portion of the job to obtain the proper effect.

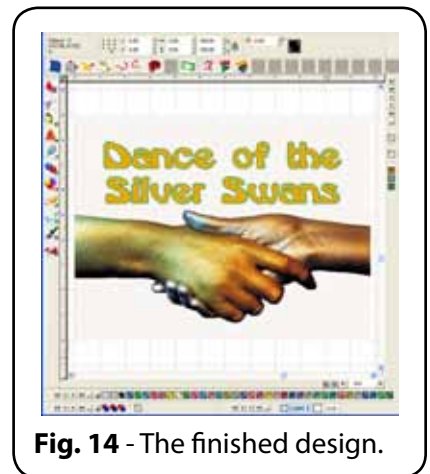


Fig. 14 - The finished design.

TUTORIAL 2: METALLIC EFFECTS FOR SPECIFIC IMAGE COLORS

In this tutorial, FluidMask is used to apply metallic ink to specific hues of a bitmap, so that the metallic effect highlights specific regions, rather than the bitmap as a whole.

PART 1 - CREATE A DUPLICATE

1. From a new SignLab workspace, choose **Options** menu >> **Palette** >> **Load** >> **New**, and choose the “Roland Metallic Color.pal” palette.
2. Use **File** menu >> **Import** to load the “Boat.JPG” file from the clipart directory (Fig. 15).
3. Choose **Options** menu >> **SignLab Setup** >> **General Preferences**.
4. Set both **Duplicates** fields to zero.
This will cause duplicates to be positioned directly above their originals.
5. Click **OK** to close the **General Preferences** dialog.
6. Select the boat bitmap and choose **Edit** menu >> **Duplicate** [Ctrl + D].

PART 2 - KNOCK OUT THE SHADOW REGIONS

We want to add metallic to both the wake of the boat, and all other highlights in the water. However, we do not want metallic on the boat itself or its immediate wash.

7. Go **Image** menu >> **Fluid Mask**.
If you are new to Fluid Mask, then video tutorials are available through www.cadlink.com >> **InfoSource**.
8. After a brief pause, FluidMask will identify common regions within the bitmap.
9. Choose the **Rectangular Patch** tool (R).
10. Drag a marquee that encloses the entire bitmap.
11. The **Color Workspace** dialog will appear, which shows the distribution of shadows, midtones and highlights within the bitmap (Fig. 16).
12. Within the **Color Workspace** dialog, click-and-drag from the far-right bar, such that all but the five far-left bars are selected (Fig. 17).
In other words, select all hues EXCEPT the shadow regions.
13. At the top-left of the **Color Workspace** dialog, click the green bucket. This will tag the selection with a green KEEP mask.
14. Choose **Image** menu >> **Auto-Fill with Delete**.
Once this is done, red indicates portions of the bitmap that will be removed, and blue indicates transition areas between red and green.
15. Choose **Image** menu >> **Create Cut-Out** [Ctrl + U]. This will preview the result on the **Cut-out** tab.
16. In the toolbox, change the **Background Color** from blue to black. This will allow you to identify any issues when creating the cut out.

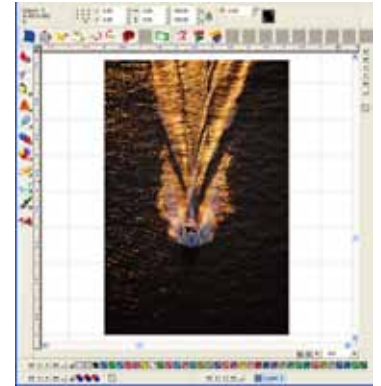


Fig. 15 - We want a metallic effect to all the highlights, except for the boat itself and its immediate wake.

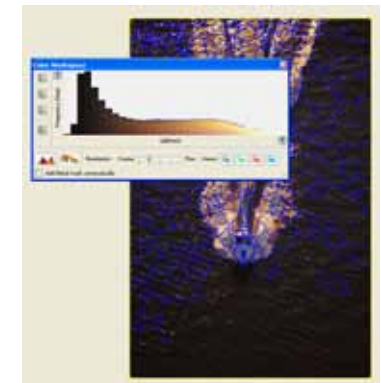


Fig. 16 - The **Color Workspace** dialog is a histogram of the bitmap hues (i.e., shadows, midtones and highlights).

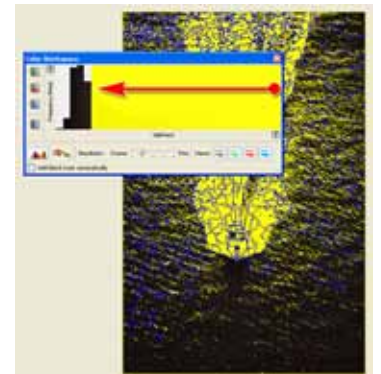


Fig. 17 - Click-and-drag to select the highlights and midtones. The yellow overlay indicates selected hues.

PART 3 - FINE SELECTION OF THE MIDTONES AND HIGHLIGHTS

At the moment, both the boat and its immediate wash will be printed with metallic ink, but we want to prevent this.

17. Click the **Workspace** tab, such that the red, green and blue masks are visible.
18. Use the **Zoom Tool** (Z) to magnify the boat and its immediate wash.
19. Choose the **Erase Exact** brush (E), and remove all green from the boat and its immediate wash.
20. Choose the **Rectangular Patch** tool (R) again.
21. Drag a rectangular marquee to enclose only the boat and immediate wash (i.e., where you have removed the green mask).
22. In the bottom-left of the **Color Workspace** dialog, click the **Show 2D Color Map** button. This will provide greater control for the color selection (Fig. 18).
23. Choose the **Color Sampler** tool (S).
24. Click a portion of the wash that should be kept. Notice that all pixels of that hue are given a yellow highlight to indicate they are selected (Fig. 19).
25. The selected hue is also given a yellow highlight in the **Color Workspace** dialog.
26. At the top-left of the **Color Workspace** dialog, click the green bucket to tag the selection with a green KEEP mask.
To correct mistakes, use the **Undo** command [Ctrl + Z].
27. Continue selecting portions of the wake and assigning a green keep mask (Fig. 20).
When clicking with the **Color Sampler** tool, use [Shift] to add hues to the current selection.
28. When you have finished assign the green keep mask, choose **Image** menu >> **Auto-Fill with Delete**.
29. Choose **Image** menu >> **Create Cut-Out** [Ctrl + U].
30. Choose **File** menu >> **Save and Apply** [Ctrl + S]. The modified bitmap will be sent back to SignLab (Fig. 21).
31. In SignLab, the modified duplicate will still be selected, as indicated by "Alpha Bitmap" in the SmartBar.

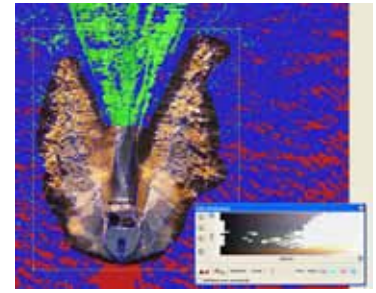


Fig. 18 - After erasing the green mask from around the boat, use the **Color Workspace** dialog to perform more exact selection of the midtones and highlights that you want to keep.

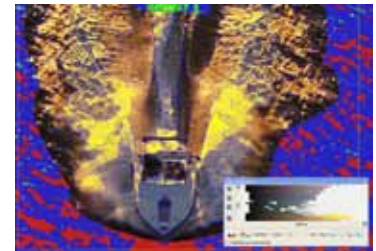


Fig. 19 - When clicked with the **Color Sampler** tool, selected hues have a yellow highlight. Press [Shift] to add more hues to the selection.

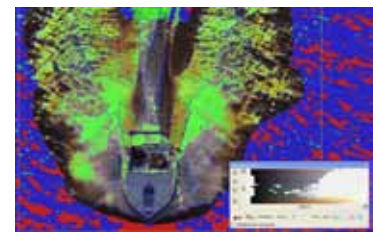


Fig. 20 - On the **Color Workspace** dialog, click the green bucket to add the keep mask to your selection. This can be done incrementally, until you are sure you have all the midtones and highlights.

PART 4 - ADJUSTING THE LIGHTNESS VALUES

Before converting the modified duplicate to a multitone bitmap, we want to make an image adjustment to ensure that the highlight areas receive 100% metallic ink. Without this adjustment, anything that was pure white would not receive metallic ink.

32. Choose **Image** menu >> **CADlink** >> **Easy Color Adjustments**.
33. The **Easy Color Adjustments** dialog will open (Fig. 22).
34. Set the **Lightness** = -100
35. Click **OK** to close the dialog.

PART 5 - ADDING A STRONG METALLIC GLINT

At this point, the duplicate bitmap is now solid black, so that even the (previously) faintest portions will receive 100% metallic.

- This will cause all the highlights in the original bitmap to have a strong metallic glint.
 - By utilizing the transparency mask from FluidMask (the blue mask between the red and green), the tips of the waves have been maintained as shades of gray. As such, the tips of the waves will get less metallic, which prevents the metallic effect from being overdone in these areas.
36. With the duplicate bitmap selected, choose **Transform** menu >> **Render to Multitone Bitmap**.
 37. Confirm that the **Keep original** checkbox = **OFF**.
 38. From the color picker, choose the RGB_MetallicSilver color (plate 195).
 39. Next to the color picker, click the graph icon.
 40. The **Tone Reproduction Curve** dialog will open.
 41. Click the “load preset” icon and choose “MT Multitone curve1.CCF” from the **UsefulMultitoneCurves** directory.
 42. Click **OK** to close the **Tone Reproduction Curve** dialog.
 43. In the SmartBar, click **Apply** to finish editing (Fig. 23).
 44. With the duplicate bitmap selected, choose **Arrange** menu >> **Order To Back** [Ctrl + B]. This will move the metallic ink portion of the job to behind the original bitmap.

The job is now ready for sending to VersaWorks via the **File** menu >> **Print to Roland VersaWorks** command.

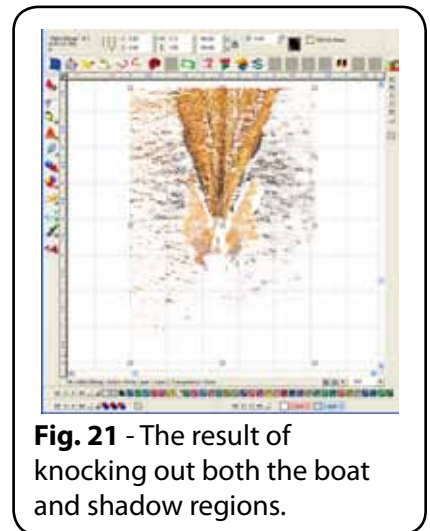


Fig. 21 - The result of knocking out both the boat and shadow regions.

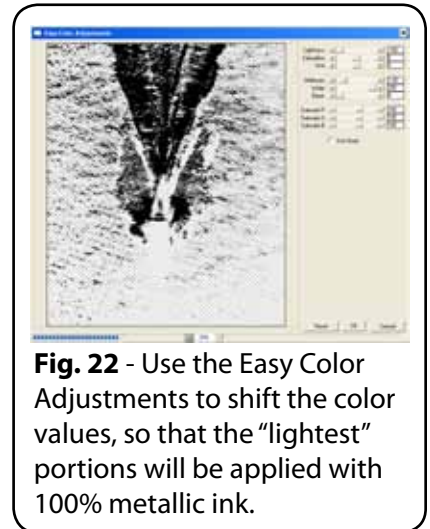


Fig. 22 - Use the Easy Color Adjustments to shift the color values, so that the “lightest” portions will be applied with 100% metallic ink.

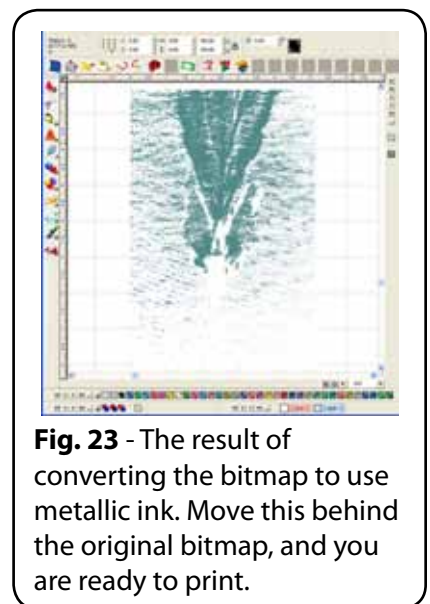


Fig. 23 - The result of converting the bitmap to use metallic ink. Move this behind the original bitmap, and you are ready to print.

TUTORIAL 3: TEXT EFFECTS AND USING TRANSPARENCY

There is a common prohibition against combining metallic inks and transparency because the printing process causes transparency to go through a flattening process that converts any spot colors (i.e., metallic) to process. However, SignLab is designed to treat RDG_MetallicSilver, RDG_WHITE and RDG_GLOSS as special cases.

Note: For process metallic colors, such as RVW-MT-Gold, it is best to avoid using these in combination with transparency. It is technically possible, though dependent upon knowing how and where the process metallic will be used with respect to the transparency. As such, it is recommended to avoid combining process metallic colors with transparency entirely.

Now, in this example, we are going to create some metallic text effects, and then consider how to combine metallic and transparency in the same job.

PART 1 - CREATE A DUPLICATE

1. In SignLab, use **File** menu >> **Open** to load the “Clipart start.CDL” file from the clipart directory (Fig. 24).
 - Note that this file uses the standard VersaWorks palette that includes RDG_MetallicSilver, but does not include any process metallic colors.
 - Unlike the previous tutorials, this file is composed of an assortment of vector shapes and bitmap images.
 - Also note that the Sheet Layer palette has been configured with two layers: “Color” and “Metallic” (Fig. 25).
2. Choose **Options** menu >> **SignLab Setup** >> **General Preferences**.
3. Set both **Duplicates** fields to zero.

This will cause duplicates to be positioned directly above their originals.

4. Click **OK** to close the **General Preferences** dialog.
5. Clear the current selection [**Shift + F3**].
6. In the **Job Palette**, press [**Shift**] and then click the yellow color plate. This will cause the yellow frame shape to become selected.
7. Choose **Edit** menu >> **Duplicate** [**Ctrl + D**].

PART 2 - ADD A METALLIC FRAME

8. In the Shop Palette, click RDG_MetallicSilver (SC 2) to set the fill color of the yellow frame shape.

In this tutorial file, the RDG_MetallicSilver should be at the far-left of the palette. Otherwise, the **Find Color** dialog can be used (**Options** menu >> **Palette** >> **Find Color** >> **Look In Shop Palette**).
9. In the Shop Palette, double-click the RDG_MetallicSilver color plate.
10. The **Edit Color** dialog will open.
11. Set the **Tint** field = 50 %
12. Click the **Add** button to create “RDG_MetallicSilver 50%” in the **Shop Palette**.

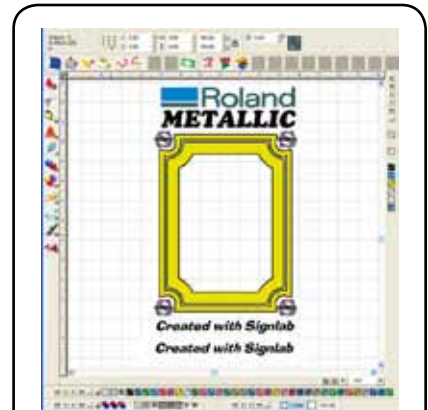


Fig. 24 - The “Clipart start” file contains an assortment of vector shapes and bitmap images.

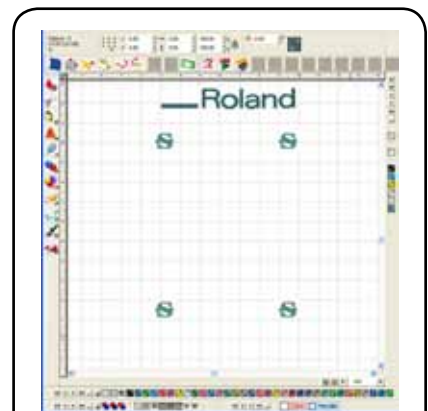


Fig. 25 - Use [**Ctrl + click**] to hide the **Color** layer, thereby revealing objects on the **Metallic** layer.

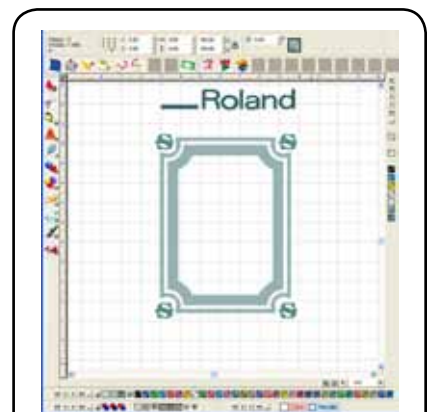


Fig. 26 - After creating a 50% metallic frame shape, this is how the objects on the **Metallic** layer will appear.

13. The selected frame shape will automatically be applied with the “RDG_MetallicSilver 50%” (i.e., it will print with 50% metallic ink).
14. With the frame shape still selected, click the **Metallic** layer in the **Sheet Layer** palette.
15. Choose **Arrange** menu >> **Order To Back** [Ctrl + B].

If you want to inspect your progress, use [Ctrl + click] to temporarily hide the **Color** layer (Fig. 26). On the **Metallic** layer, there should be metallic ink for the Roland logo, the four SignLab logos, and the frame.

PART 3 - ADD METALLIC TEXT

16. Select the word “METALLIC”.
17. Choose **Edit** menu >> **Duplicate** [Ctrl + D].
18. Set the duplicate’s fill color to the “RDG_MetallicSilver 50% ” tint that you created previously.
19. Click the **Metallic** layer, so that the duplicate is moved to the **Metallic** layer.
20. Choose **Arrange** menu >> **Order To Back** [Ctrl + B], which places the duplicate behind the original.

PART 4 - CREATE A METALLIC CHROME EFFECT

21. Again, select the word “METALLIC” (not the duplicate we just created).
22. Choose **Image** menu >> **Eye Candy 4000** >> **Chrome**.
23. The **Plug-ins Helper** dialog will open (Fig. 27). Use the following settings:
 - Effect location** = Inside (clipped)
 - Bitmap source** = Use blank object
 - Alpha Channel** = None
 - Path source** = Automatic
 - Bleed amount** = Automatic
24. Click **OK** to continue.
25. The **Chrome** dialog will open (Fig. 28).
26. Choose **Settings** menu >> **Liquid metal**.
27. On the **Basic** tab, use the following settings:
 - Ripple Thickness** = 4
 - Ripple Width** = 35
28. On the **Lighting** tab, set the **Highlight Size** = 80
29. Click **OK** to complete the chrome effect (Fig. 29).

PART 5 - CREATING TRANSPARENT TEXT

In the following sections, we are going to combine a transparency text effect with a motion blur done in metallic ink. For starters, we will create some transparent text.

30. Along the bottom of the design, there are two “Created with SignLab”

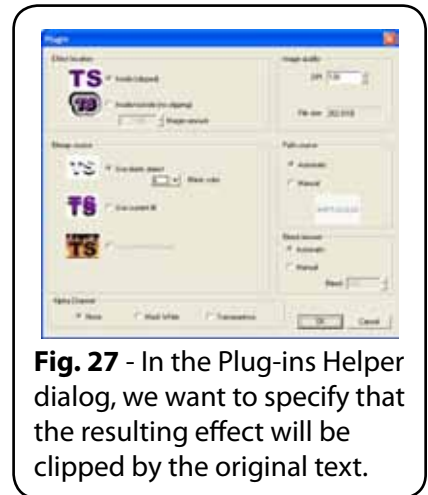


Fig. 27 - In the Plug-ins Helper dialog, we want to specify that the resulting effect will be clipped by the original text.

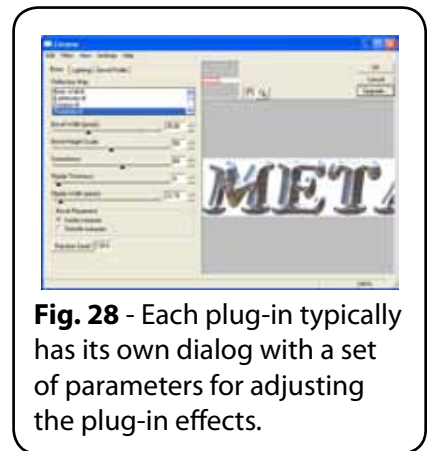


Fig. 28 - Each plug-in typically has its own dialog with a set of parameters for adjusting the plug-in effects.

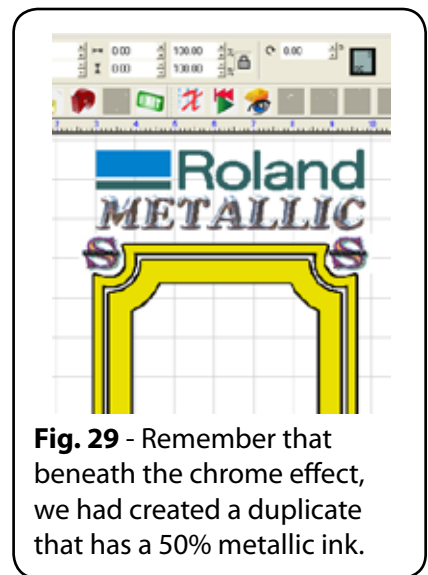


Fig. 29 - Remember that beneath the chrome effect, we had created a duplicate that has a 50% metallic ink.

text shapes. Select the first one (the one above the other).

31. Choose **Transform >> Render Contour Bitmap**.
32. The **Contour Bitmap** dialog will open (Fig. 30). Use the following settings:
 - Set the **DPI** = 300
 - Click the **Constant slope** option
33. Click **OK** to continue.
34. The **Render Contour Bitmap** controls will appear in the SmartBar.
35. Clear the **Keep original** checkbox.
36. Click **Apply** to continue.

This will convert the text into a contour bitmap that has a centerline fade along the letters.
37. Select the contour bitmap that you just created.
38. Choose **Image** menu >> **Mode >> RGB**.
39. Choose **Image** menu >> **Alpha Channel >> Mask White**.

White will become completely transparent, and the grays will form the transparency effect (Fig. 31).
40. The transparency effect will initially be somewhat faint. However, this is fixed by doing ONE application of **Image** menu >> **Alpha Channel >> Make More Visible**.

PART 6 - ADDING A BLUR EFFECT

41. Select the second “Created with SignLab” text shape.

Notice that this text is already grouped with a white rectangle, which has been prepared so that the motion blur can extend beyond the text bounds.
42. Choose **Transform** menu >> **Render to Bitmap**.
43. Use the following SmartBar settings:
 - Set **Color Depth** = Full Color
 - Set **Resolution** = 150 dpi
 - Clear the **Keep original** checkbox
 - Clear the **Use Transparency** checkbox
44. Click **Apply** to create the bitmap.
45. Click the **Select** tool. The bitmap should still be selected.
46. Choose **Image** menu >> **Filters >> Blur >> Motion Blur**.
47. In the **Filter Bitmap [Motion Blur]** dialog (Fig. 32), use the following:
 - Set the **Blur effect** = 45
 - Set **Angle** = 0
 - Tick the **Unidirectional** checkbox
48. Click **OK** to complete the blur effect.

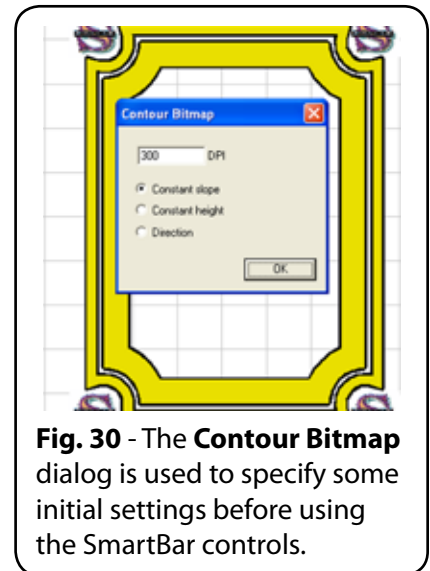


Fig. 30 - The **Contour Bitmap** dialog is used to specify some initial settings before using the SmartBar controls.

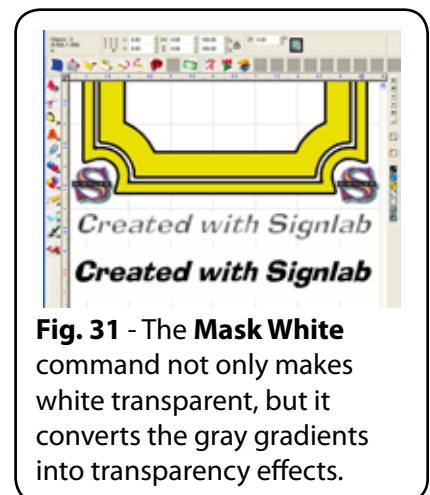


Fig. 31 - The **Mask White** command not only makes white transparent, but it converts the gray gradients into transparency effects.

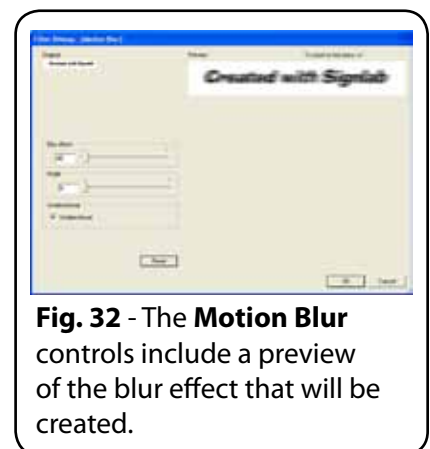


Fig. 32 - The **Motion Blur** controls include a preview of the blur effect that will be created.

PART 7 - ADD METALLIC TO THE BLUR

49. With the blur bitmap selected, choose **Transform** menu >> **Render to Multitone Bitmap**.
50. Tick the **Spot colors only** checkbox.
51. Clear the **Keep original** checkbox.
52. From the color picker, choose the RGB_MetallicSilver color (SC 2).
53. Next to the color picker, click the graph icon.
54. The **Tone Reproduction Curve** dialog will open, displaying a linear curve from the bottom-left to the upper-right.
55. Click the bottom-left corner and drag it up 5 grid markers to half way (Fig. 33). This will reduce the metallic ink to about 50%.
56. Click **OK** to close the **Tone Reproduction Curve** dialog.
57. In the SmartBar, click **Apply** to finish editing the multitone.
58. Click the **Metallic** sheet layer, so that the metallic blur bitmap is on the same layer as the other metallic ink objects.
59. Choose **Arrange** menu >> **Order To Back** [Ctrl + B].
60. Position the metallic blur bitmap beneath the transparent text bitmap (Fig. 34). There is no need to be exact with this, though you can use guides for precision.

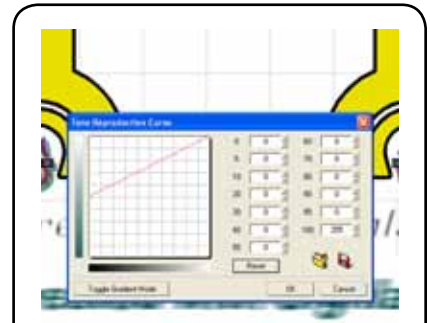


Fig. 33 - Drag the left end of the curve up 5 grid markers, which reduces the overall metallic ink by about 50%.

PART 8 - THE SILVER GIRL

In the following steps, we will duplicate the Silver Girl bitmap and prepare it for printing metallic ink. However, wherever metallic ink is printed, we want to avoid any CMYK inks from being printed.

61. Use **File** menu >> **Import** to load the “Silver Girl.jpg” file from the clipart directory (Fig. 35).
62. With the girl bitmap selected, click the **Color** sheet layer.
63. Choose **Edit** menu >> **Duplicate** [Ctrl + D].
64. Choose **Image** menu >> **Fluid Mask**.
65. Choose the **Rectangular Patch** tool (R).
66. Drag a marquee that encloses the entire bitmap.
67. The **Color Workspace** dialog will appear, which shows the distribution of shadows, midtones and highlights within the bitmap.
68. In the bottom-left of the **Color Workspace** dialog, click the **Show 2D Color Map** button. This will provide greater control for the color selection.
69. Within the **Color Workspace** dialog, click-and-drag to select the entirety of the three far-right columns.
In other words, select all highlights within the bitmap.
70. At the top-left of the **Color Workspace** dialog, click the red bucket. This will tag the selection with a red DELETE mask.



Fig. 34 - To complete the effect, position the metallic blur bitmap beneath the transparent text bitmap that was created earlier.

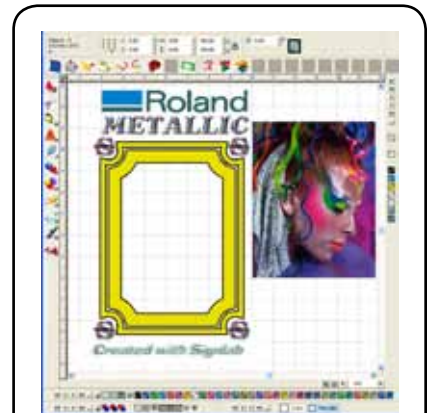


Fig. 35 - Before combining the imported girl bitmap with the frame, we want to use FluidMask to knock out some of the image bitmap.

71. Within the image, click the light-blue areas (not dark blue), and likewise click the red bucket to give them a red DELETE mask (Fig. 36).

Note: If you inadvertently apply a red mask to portions that you want to keep, then simply carry on for now, and we can make corrections later.

72. When you are done applying a red mask to the light-blue areas, choose **Image** menu >> **Auto-Fill with Keep**.
73. At this point, the **Keep Exact Brush (K)** can be used to restore any portions that you want to keep as printed CMYK color. For example, the curl of hair in the top-right corner.
74. When you are satisfied with the green mask, choose **Image** menu >> **Create Cut-Out [Ctrl + U]**.
75. Choose **File** menu >> **Save and Apply [Ctrl + S]**. The modified bitmap will be sent back to SignLab.
76. In SignLab, the modified bitmap will still be selected, as indicated by “Alpha Bitmap” in the SmartBar.



Fig. 36 - Using FluidMask to apply red DELETE mask to light blue regions.

PART 9 - INVERTING ONE OF THE BITMAPS

At this point, we have a version of the girl bitmap that has transparent areas where metallic ink will show through. Now we want an inverted version that will allow CMYK inks to show through.

77. Choose **Image** menu >> **Alpha Channel** >> **Split**.
This will split the modified bitmap into two separate bitmaps, one of which is the transparency information, and the other representing the CMYK portion of the print job.
78. After the split, both of the resulting bitmaps are selected. However, clear your selection and then select the top-most bitmap (the grayscale).
The grayscale bitmap represents the transparency information that existed prior to the split.
79. Choose **Edit** menu >> **Duplicate [Ctrl + D]** to create a duplicate of the grayscale bitmap.
80. At this point, you have four bitmaps: the original, the one edited in FluidMask, and two grayscales. Arrange them side-by-side, so that you can easily distinguish them (Fig. 37).
81. Select the grayscale that will be combined with the original bitmap.
82. Choose **Image** menu >> **Color Adjustments** >> **Invert**.
83. Press **[Shift]** and then click the original bitmap, so that both it and the inverted bitmap are selected.
84. Use **[Alt + 7]** to center the two bitmaps upon each other.
85. Choose **Image** menu >> **Alpha Channel** >> **Combine**.
This will create the bitmap that we later use for applying metallic ink.
86. Select the other two bitmaps, use **[Alt + 7]** to center them, and then choose **Image** menu >> **Alpha Channel** >> **Combine** (Fig. 38).
This bitmap will represent the CMYK-only portion of the image.



Fig. 37 - After duplicating the grayscale bitmap, we need to invert one and combine it with the original.

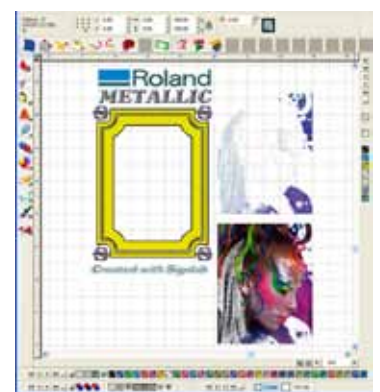


Fig. 38 - We now have one bitmap for the metallic-only portion of the job, and one bitmap for CMYK-only.

PART 10 - CREATE A METALLIC INK BITMAP

87. Select the bitmap that represents the metallic-only portion of the job.
88. Choose **Image** menu >> **CADlink** >> **Easy Color Adjustments**
89. Use the following **Easy Color Adjustments** dialog settings:
 - At the bottom of the dialog, adjust the zoom to 33%.
 - Set the **Saturation** = -100 (this prepares the bitmap hues for conversion to grayscale before applying metallic ink)
 - Set the **Black** = 20 (this causes the white areas to have some metallic ink, otherwise white would have zero ink)
 - Set the **Midtones** = 0.40 (increase the darkness of regions)
90. Click **OK** to apply the dialog settings (Fig. 39).
91. With the metallic-only bitmap selected, choose **Transform** menu >> **Render to Multitone Bitmap**.
92. Confirm that the **Keep original** checkbox = **OFF**.
93. From the color picker, choose the RGB_MetallicSilver color (SC 2).
94. In the SmartBar, click **Apply** to finish editing.
95. Click the **Metallic** sheet layer, so that the metallic-only bitmap is on the same layer as the other metallic ink objects.
96. Choose **Arrange** menu >> **Order To Back** [Ctrl + B].
97. Select both of the girl bitmaps.
98. Use [Alt + 7] to center the bitmaps. The metallic-only bitmap should be behind the CMYK-only bitmap.
99. Again, choose **Arrange** menu >> **Order To Back** [Ctrl + B].
100. Position the bitmaps within the yellow frame (Fig. 40).

PART 11 - CHECKING THE ORDER OF METALLIC INK OBJECTS

101. Clear the current selection.
102. Press [Ctrl] and then click the **Color** sheet layer (Fig. 41).
103. Notice that there is some overlap between some of the objects, particularly the shadows of the SignLab logos, and the “Created with SignLab” shadow.
104. Select the four SignLab shadow logos, then choose **Arrange** menu >> **Order To Back** [Ctrl + B].
105. Select the “Created with SignLab” shadow, then choose **Arrange** menu >> **Order To Back** [Ctrl + B].
106. Press [Ctrl] and then click the **Color** sheet layer to reveal it again.

The job is now ready for sending to VersaWorks via the **File** menu >> **Print to Roland VersaWorks** command.

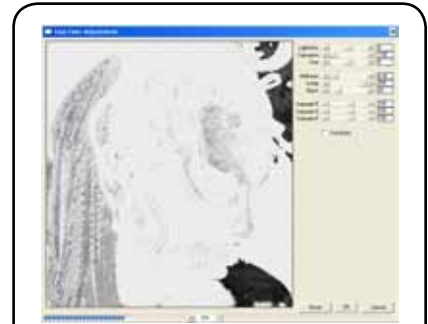


Fig. 39 - Use some **Easy Color Adjustments** prior to converting the bitmap for printing metallic inks.



Fig. 40 - The result after positioning the bitmaps within the yellow frame.



Fig. 41 - Use [Ctrl + click] to hide the **Color** sheet layer, so that the metallic ink objects can be inspected.

TUTORIAL 4: USING METALLIC INKS WITH VECTOR OBJECTS

In this tutorial, we have a design that is composed of vector shapes. We will demonstrate the ease of incorporating metallic inks into such a design, and how to prevent the metallic inks from causing color shifts in overlapped shapes.

PART 1 - DRAG-AND-DROP COLOR SUBSTITUTIONS

1. From a new SignLab workspace, choose **Options** menu >> **Palette** >> **Load** >> **New**, and choose the “Roland Metallic Color.pal” palette.
2. Use **File** menu >> **Import** to load the “Jordan.CDL” file from the clipart directory.
3. With no objects selected, click-and-drag RDG_MetallicSilver (SC 195) and drop it on the gray (P 208) in the Job Palette.
This will cause all gray objects to instead be assigned with metallic silver.
4. Repeat this color substitution by dragging RVW-MT-Gold (SC 196) onto the process green (P 210).

PART 2 - KNOCKING OUT UNDERLYING SHAPES

At this point, the background flag has been changed to print metallic silver in two corners, and metallic process gold in the other two. However, the design is not ready for printing because the metallic inks will cause a color shift in the text and graphics that are positioned above the flag, and the red will appear dull (Fig. 42).

5. Press **[Ctrl + A]** to select the entire design.
6. From the **Weld Tools** flyout, choose **Basic Weld**.
7. A basic color weld will occur, which causes vector shapes to “knock out” portions of underlying shapes (Fig. 43).

The job is now ready for sending to VersaWorks via the **File** menu >> **Print to Roland VersaWorks** command.



Fig. 42 - Care must be taken when assigning metallic inks to the flag because this will produce a color shift due to how VersaWorks processes metallic ink.

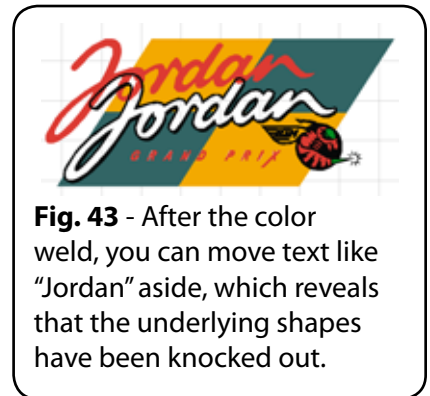


Fig. 43 - After the color weld, you can move text like “Jordan” aside, which reveals that the underlying shapes have been knocked out.