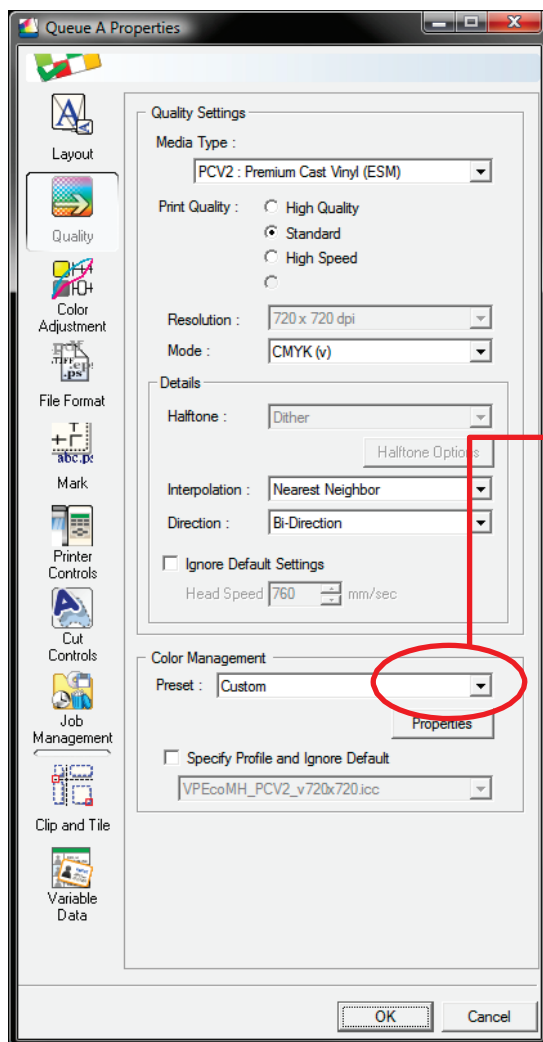


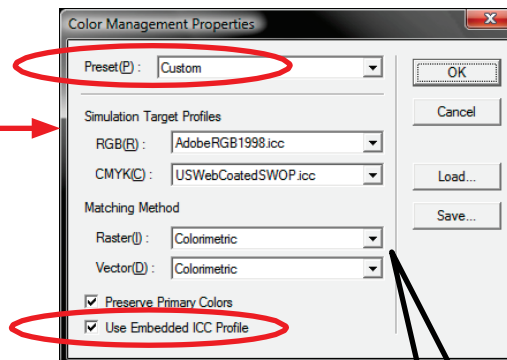
Color Management Presets in Roland VeraWorks

Color management settings can be customised in [Color Management Properties].

Color Management Properties



- There are 8 types of Color Management settings pre-configured for most common color workflows.
- [Custom] allows the combination any available settings.
- Support for embedded profiles.



Perceptual
Colorimetric
Saturation
Absolute
Calibration and Ink Limit
Calibration

Preset	Simulation Target Profiles (*.icc)		Matching Method		Preserve Primary Colors	Use Embedded ICC Profile
	RGB	CMYK	Raster	Vector		
Pre-Press U.S	AdobeRGB1998	USWebCoatedSWOP	Colorimetric	Colorimetric	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pre-Press Europe	↓	EuroscaleCoated	↓	↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pre-Press Japan	sRGB ColorSpaceProfile	JapanStandard	↓	↓	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MAX Impact	Roland_SignRGB	Roland_SignCMYK	↓	↓	<input type="checkbox"/>	<input type="checkbox"/>
Sign & Display	AdobeRGB1998	JapanStandard	↓	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAX Density U.S.	↓	USWebCoatedSWOP	Colorimetric	Calibration and Ink Limit	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MAX Density Japan	↓	JapanColor97	↓	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Density Control Only	↓	JapanStandard	Calibration and Ink Limit	↓	<input type="checkbox"/>	<input type="checkbox"/>
Custom	-	-	-	-	-	-

Simulation Profile and How It Affects the Output

1) Differences between each RGB input profiles

a) sRGB Color Space Profile:

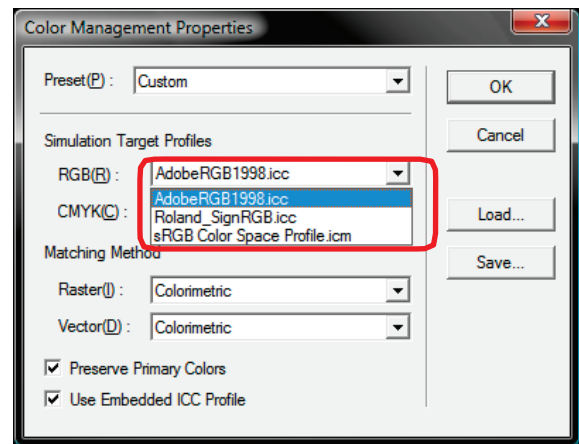
This profile represents an average computer monitor. The color gamut is relatively small and may clip important areas in the printable color space. It also produces relatively flat looking colors.

b) AdobeRGB1998:

It is the most recommended RGB working space for a wide variety of printing applications. It also produces relatively bright images.

c) Roland_SignRGB

This Roland profile has a color gamut that is slightly bigger than the AdobeRGB 1998 and is designed to produce vivid and saturated colors.



2) Differences among each CMYK Input Profiles

a) DIC_Standard_Color_SFC_1_0_2:

This is a standard DIC color profile and produces colors with good contrast.

b) EuroscaleCoated/EuroscaleUncoated:

This is the European Prepress Standard color - profile based on Euroscale.

c) JapanColor97:

This is the Japanese Prepress Standard color - profile. It produces overall saturated colors.

d) JapanStandard:

Profile created by Adobe for the Japanese Prepress. It generates slightly light colors.

e) Roland_SignCMYK

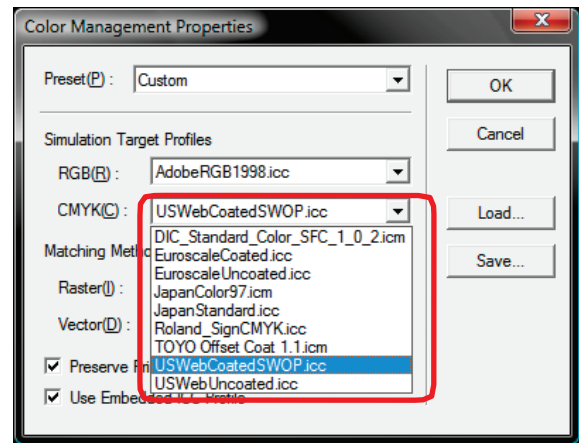
This Roland profile has a color gamut that is bigger than SWOP and is designed to produce vivid and saturated colors.

f) TOYO Offset Coat 1.1:

Toyo Ink Standard Color profile. It generates slightly light colors.

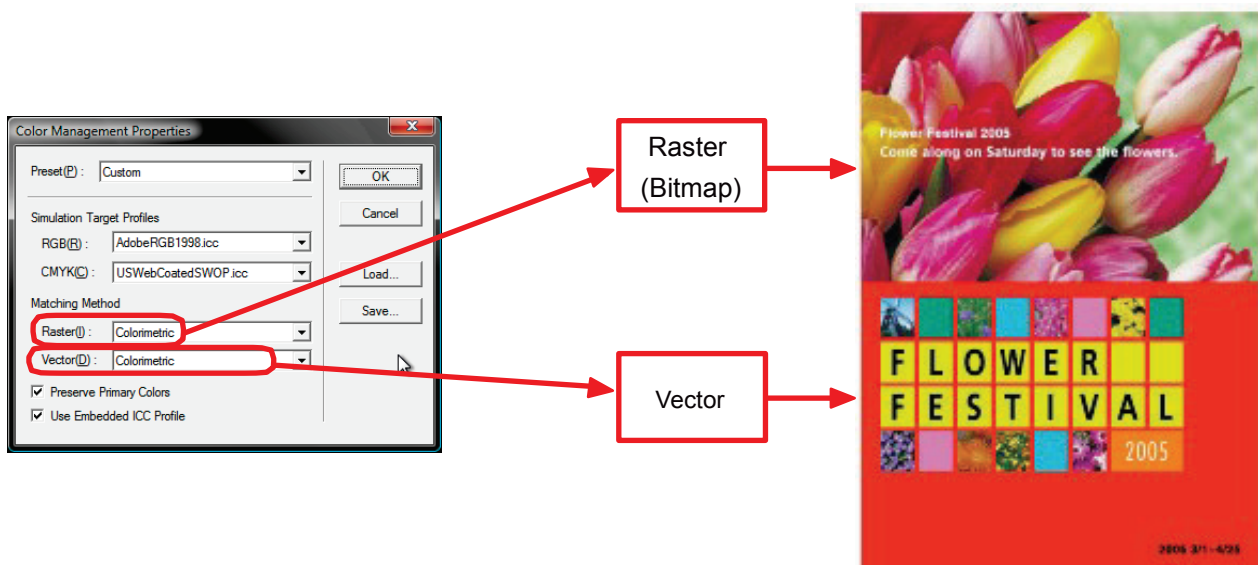
g) USWebCoatedSWOP/USWebUncoated:

US Prepress SWOP Standard Color Profile. It is the most common CMYK profile used in United States.



Role of Matching Methods and its Effects

VersaWorks has the ability to process bitmap (Raster) and Vector data separately.



1) Guide to Matching Methods

a) Guide to Rendering Intents (Matching Method)

[Perceptual]:

Converts the color to look natural to the human eyes. This is best for photographic images.

[Colorimetric]:

Produces more accurate colors than [Perceptual].

[Saturation]:

Color conversion ideal for graphs and pie charts with priority in the vividness of colors.

[Absolute]:

Not commonly used. Used mainly for proofing.

b) Guide to Proprietary Conversion Methods Available in VersaWorks

[Calibration and Ink Limit] and [Calibration] differ from the methods described in a) in a way that the colors are printed as is in the input data. No ICC profile is applied and no matching is performed. Therefore, it should only be used for vector data and not for bitmaps (raster).

[Calibration and Ink Limit]:

Uses the ink limit information from the media avoiding the oversaturation even with CMYK composite colors with 300% of ink. Note that oversaturation may still occur if you are not using the media which the profile was created for.

[Calibration]:

Ink is not limited and it may oversaturate around 250% or more. Also puddling may occur. Note that on some media, puddling can even cause the color density to drop.



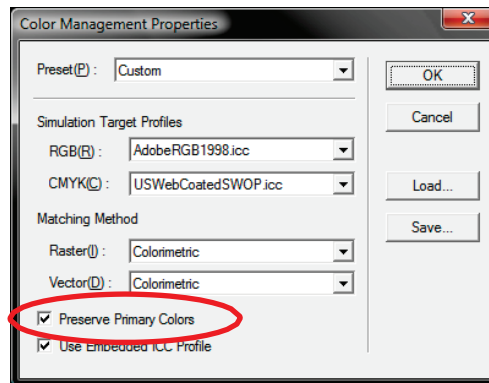
When printing files which include objects with transparency overlapping other objects, the matching method should be both set to the same method such as **Colorimetric**

2) Printing Pure Colors

Check the option **[Preserve Primary Colors]** when you want to print colors avoiding the mixing of secondary colors.

This will suppress the mixing of unwanted colors, preserving the purity of colors.

Selecting **[Perceptual]** or **[Saturation]** will produce colors that are slightly faded and **[Calibration]** will produce dark colors. **[Colorimetric/Absolute]** will produce colors with good balance.



What is secondary color?

Even though colors are defined as pure colors such as C100 or Y100 in Illustrator, the matching method in the RIP may cause other colors to be added in the output. This additional unspecified color is called secondary color.



Data = Y100



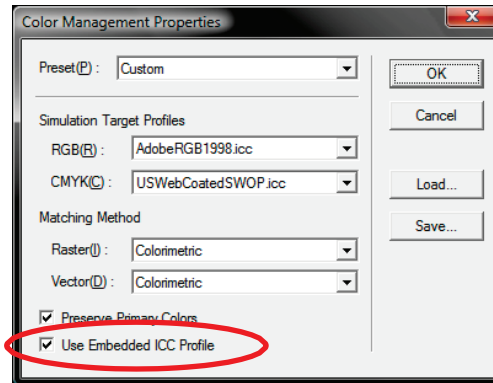
Output with
Secondary Color



Preserve Primary Color

3) Using Embedded Profiles

When profiles are embedded in the images, check the option [Use Embedded ICC Profile]. This will replicate the color settings used in the creation of image eliminating the need to set the matching input profiles in VersaWorks, providing output that better matches the color tone of original image.



Recommended Color Management Settings

1) [Simulation Target Profiles]

[RGB]

- Use **[AdobeRGB1998]** which provides wider color gamut.

[CMYK]

- Use **[USWebCoatedSWOP]** which is the standard for the US Pre-press.

2) [Matching Method]

[Raster]

- Use **[Colorimetric]** if the images were prepared for pre-press.
- Use **[Perceptual]** if you want output with vivid colors.

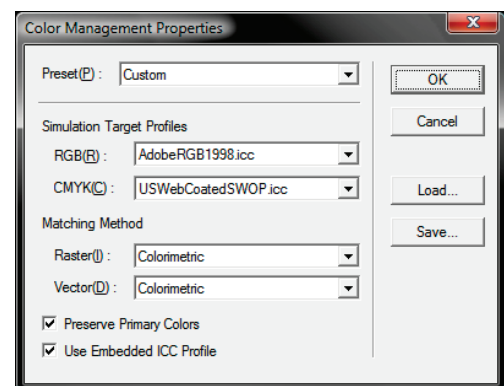
[Vector]

[Colorimetric]:

This is the most recommended setting. This option will produce smooth gradients with good tonal range (remember to check the **[Preserve Primary Colors]** option).

[Calibration and Ink Limit]:

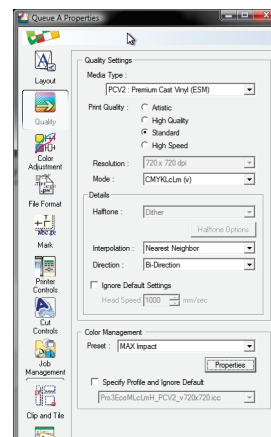
This will produce richer colors than [Relative] and the ink limit will ensure that the ink will not bleed. However there will be no color matching and the colors will be printed as they are defined in the original file. Also puddling may appear in some colors.



Recommended Color Management Settings 2

Select the Preset [MAX Impact].

Selecting this will automatically set the [Simulation Target Profiles] and [Matching Method].



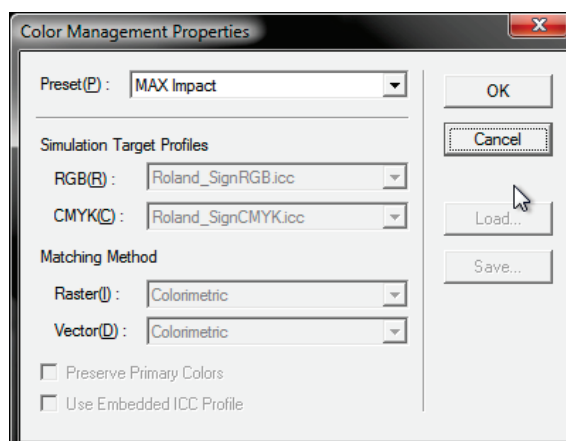
1) [Simulation Target Profiles]

[RGB]

[Roland_SignRGB.icc] with slightly wider color gamut than AdobeRGB1998.

[CMYK]

[Roland_SignCMYK.icc] with wider color gamut than USWebCoatedSWOP.



2) [Matching Method]

[Raster] & [Vector]

[Colorimetric]

[Preserve Primary Colors] and [Use Embedded ICC Profiles] are unchecked.



What is puddling?

When the media is not compatible or the amount of ink is too high, the ink will not penetrate into the media and will stay on top of the surface. This makes the printed surface look as if the ink drops are accumulating.



Good



Excessive ink accumulation