Managing Print Direction for Match Mural Printing

Common Issues with Large Format Ink Jet

- Printing alignments vary across the web.
- Media does not always transport in-line.
- On solvent printers, temperature varies across the web.
- Media buckling can cause screening changes, color bands.
- Color can shift across the web.

Reasons for Color Shift

There are as many reasons for a slight color shift to occur across the width of the platen as there are printers available. Two common reasons are:

- In bi-direction printing, the return pass is printed closer in time on one side of the web than on the other.
- Temperature may vary across the platen on solvent printers

Many other causes are suspected for color shifting. For the purpose of this paper, we will assume the problem exists in all work, and deal with managing the effect to remove it visually from printed material.
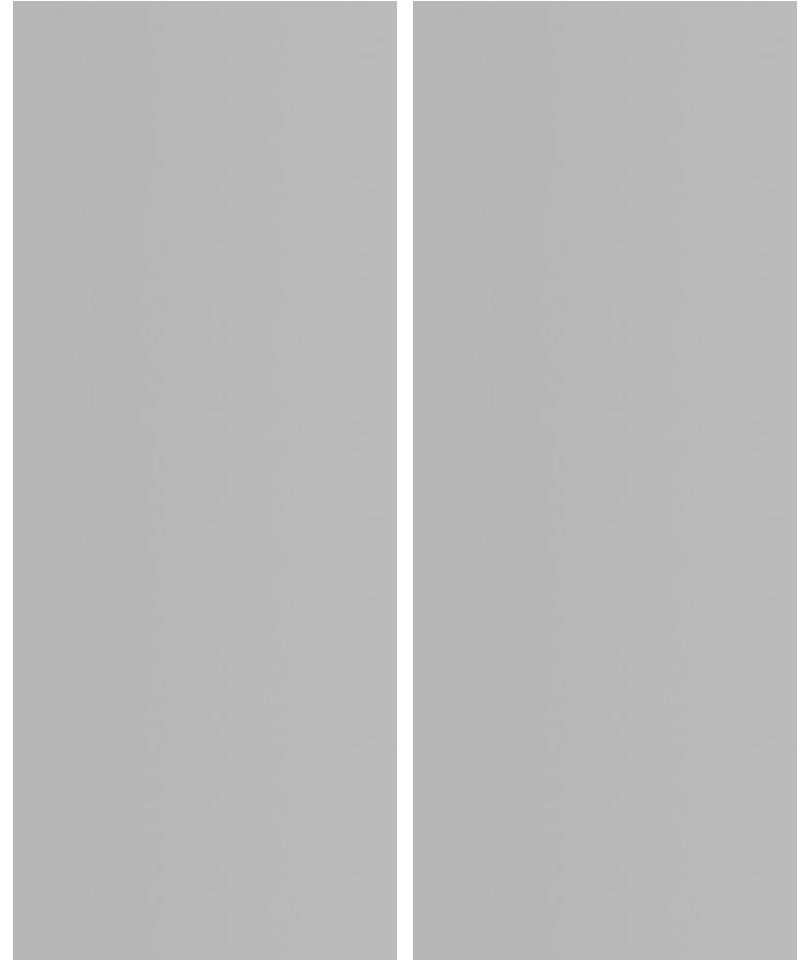
I Don't See Any Color Shift

- Typical color shifts are very slight - in the range of 1 to 2 percent at most.

- Busy photo or graphical backgrounds will not reveal a slight shift.

- A single, evenly-colored sheet will not reveal a shift unless the sides are compared.
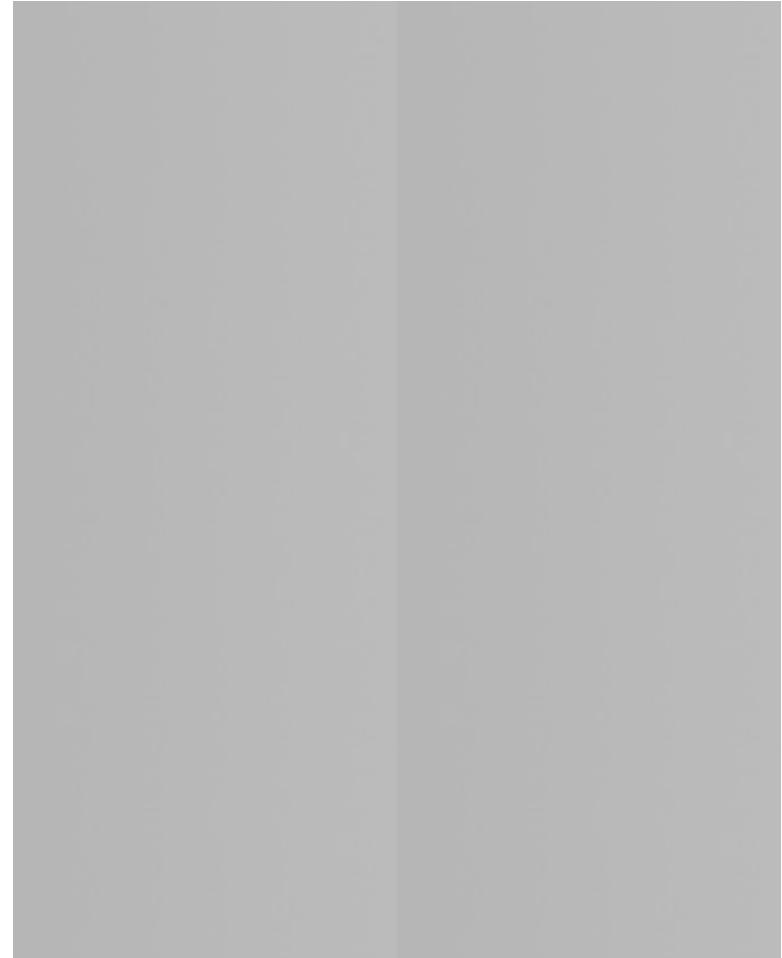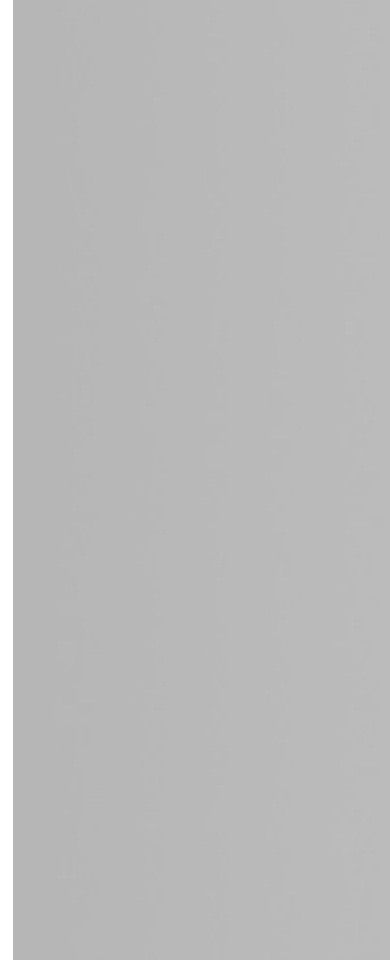
I Don't See Any Color Shift

- Even in a case where two identical panels are viewed close to each other, the shading across the web is barely noticeable.

I Don't See Any Color Shift

- Shading becomes a problem when panels are joined.
- Bringing the two images into contact, as they would be at installation, will reveal a "shading effect" which results from the visualization of the slight color shift that occurs across the printing web.

Managing Shading Between Panels

The most effective solution to managing shading between panels is to print each adjacent panel in the opposite direction.

For example, print all odd numbered panels from top-to-bottom and print all even panels from bottom-to-top.

This method works to assure that the joined sides of adjacent panels are printed on the same side of the printer.

It's not as complicated as it sounds !

Managing Shading

The three panels at the right were all printed in the same direction on the printer. They appear normal until they are brought together.
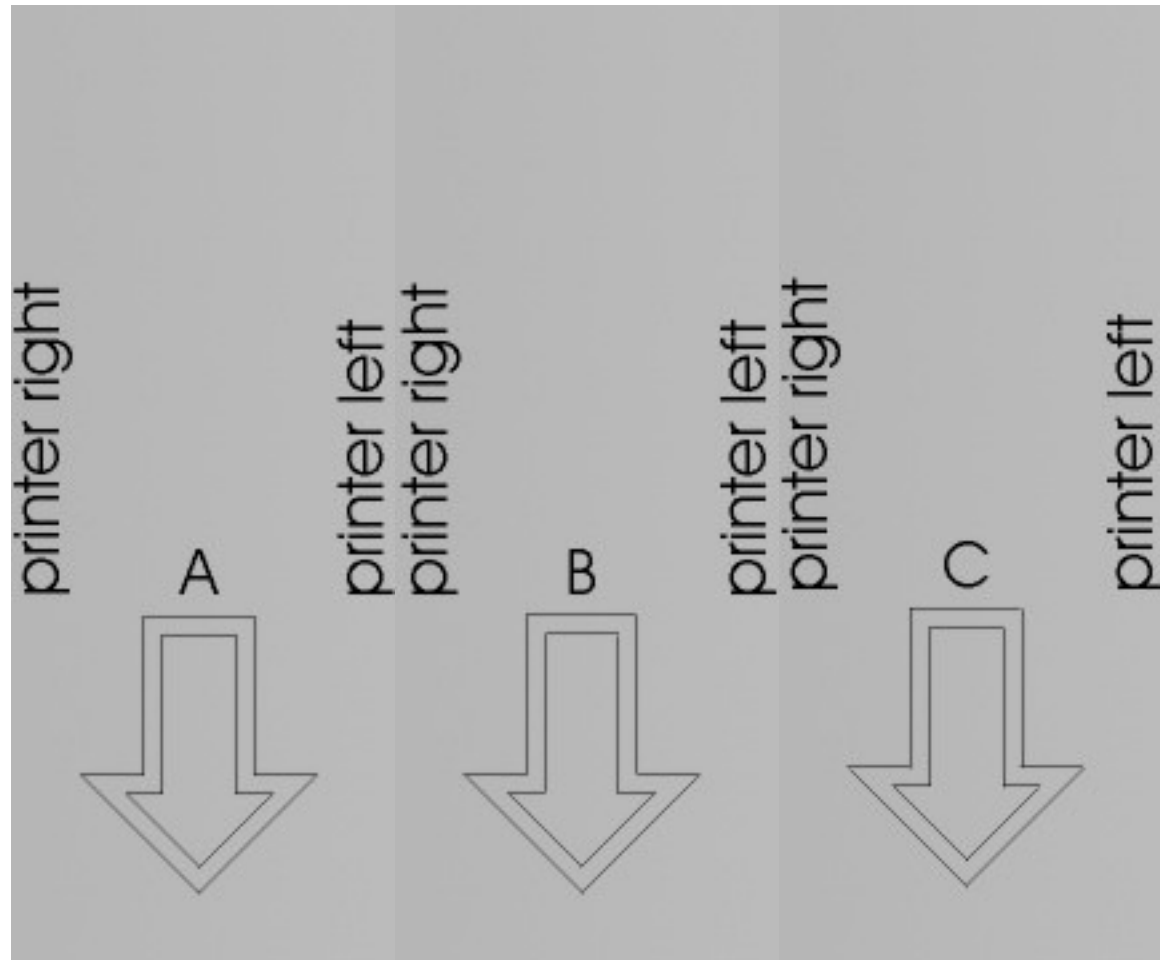

printer right · A · printer left

printer right · B · printer left

printer right · C · printer left
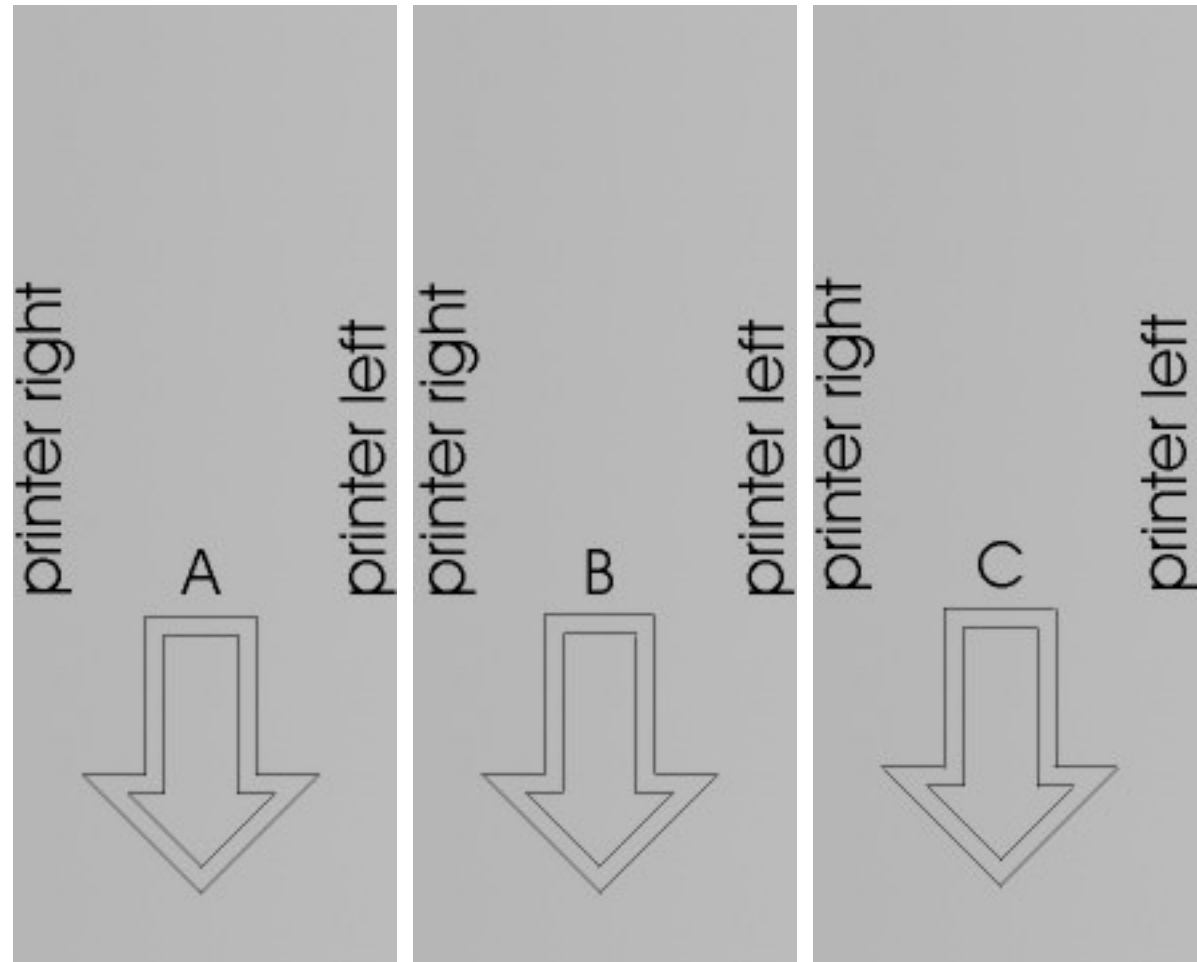
Managing Shading

Bringing the panels together clearly reveals shading.

printer right

A

printer left
printer right

B

printer left
printer right

C

printer left

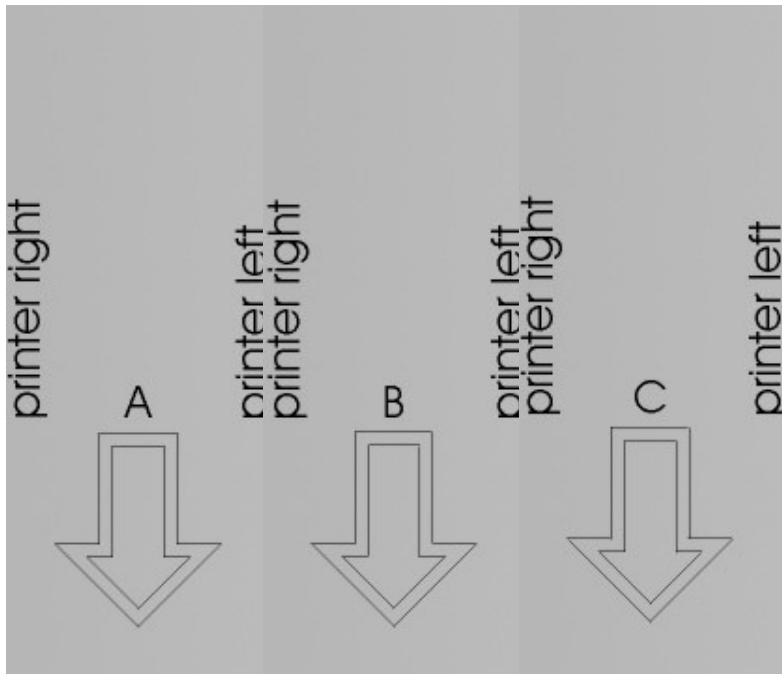(c) dreamScape, Roysons Corp. 09-2008

Managing Shading

The solution in this case is to print panel B in the opposite direction so that the side of A printed on printer left will adjoin the side of B printed on printer left. Etc.
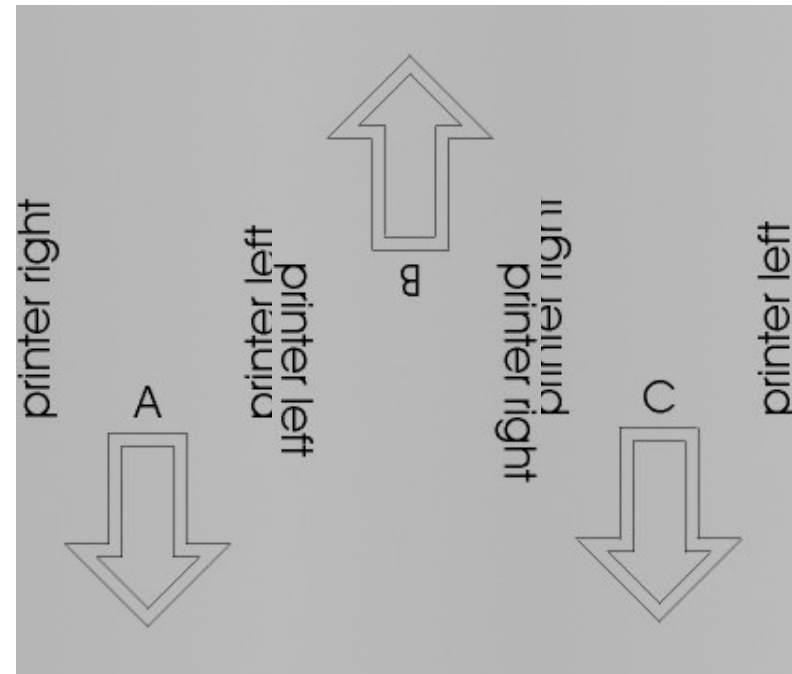

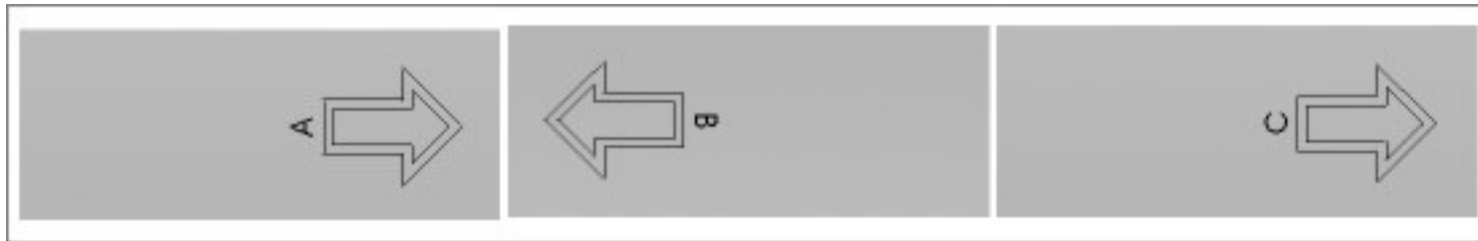(c) dreamScape, Roysons Corp. 09-2008

Managing Shading

Shading is obvious

Shading is not apparent

Printing to Manage Shading

- Set up your RIP software to print each consecutive panel in the opposite direction

- If you prepare individual panels, rotate odd panels 180 degrees compared to even panels before printing.

Work coming off of the printer should like something like this.

Test Shading on Your Work

Image on the left is to be printed in three panels as illustrated on the right.

The top of the image contains sky which must match across the entire mural.

Test Shading on Your Work

Crop the image to a relatively small height, making sure to select your crop through a region of the image that you suspect or have seen to be sensitive to shading.

Print these small crops with and without alternate rotation and put the pieces together for inspection.

Test Shading on Your Work

Images printed like this ….

Produced some shading

Test Shading on Your Work

Rotating the center component ...

Controls the visual effect of shading