

# WASATCH COMPUTER TECHNOLOGY, LLC TECHNICAL BULLETIN

## USING WASATCH SOFTRIP FOR DIRECT TO GARMENT PRINTING USING WHITE INK ON A DARK GARMENT

### Printer and SoftRIP Setup

1. Perform a nozzle check and any necessary nozzle cleaning on the printer.

2. Open Wasatch SoftRIP and select **Setup** from the Print menu. Select the Printer Model and the Imaging Configuration in the Print Setup window. You can download the latest SoftRIP imaging configurations here: [www.wasatch.com/downloads.html](http://www.wasatch.com/downloads.html).

3. Select your platen size and the drying time in the **Properties** menu. The drying time setting will pause the printer after the white layer has printed and before the CMYK layer begins. To launch the Properties menu, select **Edit** in the Setup menu, then **Properties (Print Setup > Edit > Properties)**. (Illustration 1)

4. Prepare your image for printing on a dark garment. Our black shirt imaging configurations were created with a spot color replacement which will prevent any ink from printing on a pure black background (RGB 0/0/0, CMYK 0/0/0/100, or CMYK 100/100/100/100). To utilize the spot color replacement, it is recommended to change large black areas of your image to pure black. This will save on ink consumption and keep the hand of your printed garment light.

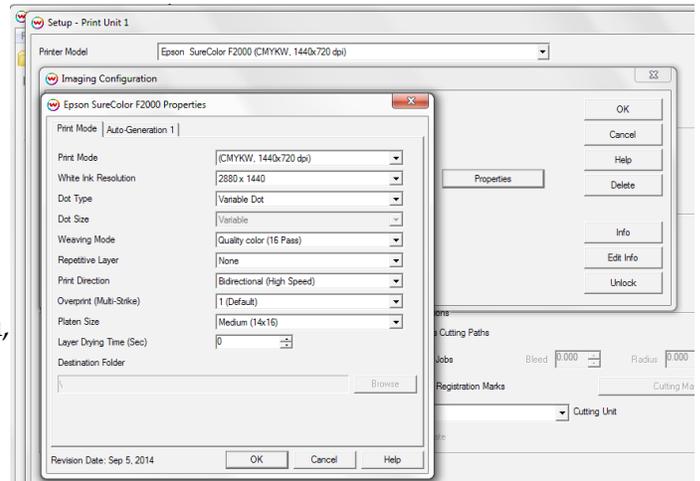


Illustration 1

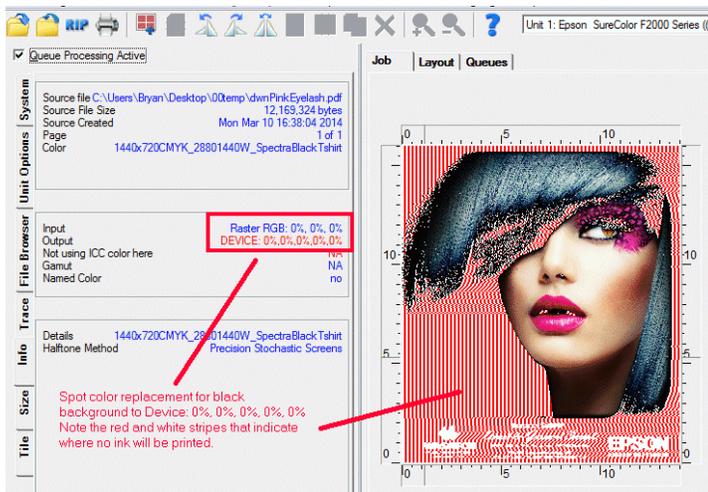


Illustration 2

5. When opening your file for output the preview may appear strange. By default, pure black areas of the file will appear with red and white 'candy striping'. Again, no ink will be printed in this area. (Illustration 2)

6. **RIP and Print** your image. Once SoftRIP has finished RIPing, your image will be sent to the printer where it will be "held" until you are ready to print. When ready, press the **Print** button on the printer to start your print.

One way to prepare your image in SoftRIP is to use Spot Color Replacement or 'Create mask from traced areas'. When working with an image that does not allow for a spot color replacement due to an inconsistent background fill, it is recommended to use 'Create mask from traced areas'. Enable 'Create mask from traced areas' in the Properties menu (**Print Setup > Edit > Properties**). Next, open your image file on the Job tab and select the **Trace** tab on the left edge of SoftRIP's window. Right click and select '**Background Color**'. Set the Tolerance and Choke/Spread controls and then click the **Trace** button. This will create a mask around your image. Any image data outside of the mask will not be printed.

## Pretreating and Printing to a Black Garment

In our testing, we used the Epson SureColor® F2000 White Edition Printer, Epson UltraChrome® DG Ink, Epson Pre-Treatment Fluid, Spectra USA Fine Jersey Tee 3100, and a Geo Knight DK25SP heat press.

Pretreating a dark garment is necessary when using white ink. Pretreatment allows white ink to adhere to and sit on top of the shirt, rather than soaking through the shirt, creating a smooth surface to print. In our testing, we found the following steps should be taken for optimal results.

**For best results we suggest immediately printing on a pretreated garment.**

1. Before the pretreatment is applied, press the garment at **340°F for 10 seconds with 70 PSI**. This step will remove any moisture in the fabric and press down any raised threads.

2. Apply a consistent and even application of Epson Pre-treatment Fluid\*. In our testing, we manually applied the pretreatment with a paint sprayer. When applying the pretreatment, we got the best result when we dressed the garment over something rigid. This helped to only saturate the front of the garment.

Keep in mind that too little pretreatment will cause a weak white and poor adhesion of the white ink to the garment. Too much pretreatment may cause washability issues.



Illustration 3

3. Once the pretreatment is applied, use a hard rubber roller to press the liquid into the fabric, rolling in one direction. Be careful not to crease the garment. (Illustration 3)

4. Using a bristle paint brush, brush the garment in the same direction you were rolling the hard rubber roller. Brush the fabric to ensure no threads are raised above the surface of the garment. Do NOT use a lint roller on the garment at any time. Lint rollers tend to pull threads which can cause printing artifacts.

(Illustration 3)

5. The pretreatment now needs to be cured into the garment with heat. Place the garment on the heat press with a silicon sheet in-between the pre-treated fabric and the heating element. (In our testing we used Exopap Baking Paper.) Press the garment at **340°F for 50 seconds with 40 PSI**. Make sure to not crease the garment when pressing. Any moisture needs to be eliminated from the garment. A damp garment will result in unsatisfactory results. A properly treated garment will provide an even smooth surface for printing.

It is not unusual to see excess moisture running out of the heat press. We recommend protecting your heat press with a Teflon sheet. (Illustration 4)



Illustration 4

6. Next dress the platen with the garment and place the platen facing the correct direction on the printer. In our testing, we dressed the platen in such a way that only one layer of fabric is between the platen surface and print heads. You are now ready to print.

7. Once printing is complete, carefully remove the garment from the platen. Place the garment on the heat press with a silicon sheet in-between the inked surface and the heating element. When placing the silicon sheet on the printed area, be careful not to drag the sheet over the printed area. The ink is wet during this step and prone to smearing. Avoid wrinkles in the fabric below the printed area. Folds or wrinkles under the printed fabric can transfer to the image during the final press. Press the garment at **340°F for 50 seconds with 70 PSI**.

**Keep in mind that the sooner the pretreated garment is printed on the better. Over time garments will absorb moisture in the air which may cause unsatisfactory results when printing.**

\*Epson Pre-Treatment Fluid needs to be mixed 1-to-1 with distilled water.

## FINAL NOTES:

The imaging configurations provided on our website were created at our office in Salt Lake City, Utah. Because environmental factors can affect the direct-to-garment process, you may need to adjust the settings we used so they will work for your specific production environment. The following are some of the factors that may affect your output:

- Humidity (higher humidity typically requires longer press time)
- Pre-press time
- Press time
- Temperature of the press

For more information regarding the settings used for the particular imaging configuration that you have downloaded from the Wasatch website, select the **Info** button displayed on the **Imaging Configuration** window in Wasatch SoftRIP. (Select your imaging configuration in the Print Setup window, and click **Edit > Info**.)