

WASATCH SOFTRIP SP[®] FILM PRINTING PREPARATION

The following document will help prepare Wasatch SoftRIP SP to print quality films using Epson printers. Many controls explained below may not be available for all printer models. It is recommended to have the manufacturer's documentation on the printer's operation, an 8X power loupe (at minimum), and a precision measuring instrument at least 1010 millimeters in length with millimeter markings. Be sure to completely read and become familiar with the following instructions before proceeding.

Loading Media and Optimal Printer Condition

Once the film is loaded on the printer:

- For Epson x880 model printers and older, make sure the **Paper** setting on the front panel of the printer is set to **Standard**
- For Epson x900 model printers and newer, make sure the **Paper** setting on the front panel of the printer is set to a pre-defined media type

NOTE: We recommend **NOT selecting a custom media type** on the front panel of the printer as this will nullify the media settings sent from Wasatch SoftRIP SP.

Since the condition of the printer is critical for producing quality films, it is recommended that the printer be in optimal operating condition. It may be a good idea to 'Initialize' the settings from the front panel of the printer prior to following the steps below. Print the nozzle check test pattern from the printer's front panel to check for deflected or clogged nozzles and run cleanings as necessary.

Determining Media Thickness

On the latest models of Epson printers, the controls on the front panel of the printer can be used to determine the appropriate setting for media thickness. In the **Custom Paper** settings, there is an option to print a **Thickness Pattern**. This is the recommended method for determining the appropriate media thickness setting to place in Wasatch SoftRIP SP. For specific information on how to access this control for a particular model of Epson printer, please see the manufacturer's documentation.

Accessing the **Paper Thickness** control requires setting the **Paper Type** to **Custom #1** temporarily to access the control and print the target. Once the target has been printed, input the appropriate value from the target when prompted on the front panel. Use the **<- left arrow key** to back out of the custom paper menus and be sure to reselect **Standard** or a pre-defined media type before continuing.

Examine the resulting print closely. An 8X power loupe (or stronger) is recommended for this step. Find the result where the upper and lower column of dots line up the best. Use this number when setting the media thickness in Wasatch SoftRIP SP. More information regarding setting the media thickness in Wasatch SoftRIP SP is detailed later in this document.

Setting Up Wasatch SoftRIP SP

In the Wasatch SoftRIP SP **Print Setup** window (Illustration 1), choose the Epson printer model being used, set the Imaging Configuration to **none**, select the appropriate physical connection, and enable **Hairlines**. This will prevent registration errors that can result from the Epson firmware feature which skips quickly past blank lines.

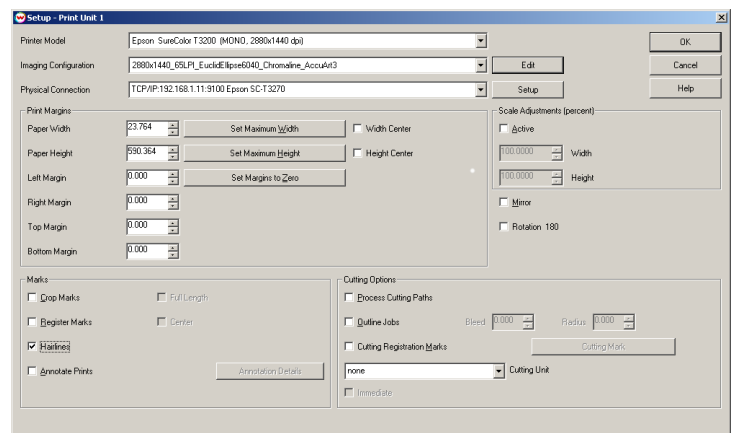


Illustration 1

Next, click the **Edit** button next to the Imaging Configuration drop-down menu and click the **Properties** button to open the Printer Properties window.

For **Print Mode**, choose from one of the mono modes and select the desired resolution and dot size. For more information about choosing the appropriate resolution and dot size for the film, ink, and printer being used, please contact your Wasatch SoftRIP SP dealer or Wasatch technical support.

The next step is to provide Wasatch SoftRIP SP with the settings related to the physical characteristics of the film being used. In the **Printer Properties** window, open the **Media** tab (Illustration 2) and do the following:

- Choose the media type selected on the front panel when the film was loaded. If **Standard** was selected on the front panel of the printer, select Premium Glossy Photo Paper in Wasatch SoftRIP SP or some other standard media type. **Do not select Third-party Media or Plain Paper.**
- Set **Paper Thickness** to the thickness of the film determined above. If the **Paper Thickness** control is not available on the front panel of the printer, the thickness of the material can be found on the specifications sheet included with the film or from the film manufacturer.
- Set **Platen Gap** to the lowest value available that will print without striking the printed material. We recommend choosing the absolute minimum setting available when printing films to minimize the distance ink will travel before striking the film.
- Check the control for **Send Paper Feed Calibration Value** and set the initial value to **0.00**. Additional steps for adjusting media feed are detailed later in this document.

Click **OK** to exit the Printer Properties window and then click the **Color Transforms** button. In the bottom right corner, select **Wasatch Precision Rosette Screens**. Click the **Halftone Properties** button and generate and/or select an appropriate rosette pattern from the **Screen** drop-down menu (Illustration 3) that matches the selected printer resolution and the desired LPI, angles, and dot shape. For more information on dot shapes, visit www.wasatch.com/rosette.html.

Once the above steps are complete, click **OK** for each open window and save the new Imaging Configuration when prompted. We recommend providing a detailed name that includes resolution, dot size, LPI, dot shape, and the name of the film being used. For example, 2880x1440_65LPI_EuclidEllipse6040_Chromaline_AccuArt3.

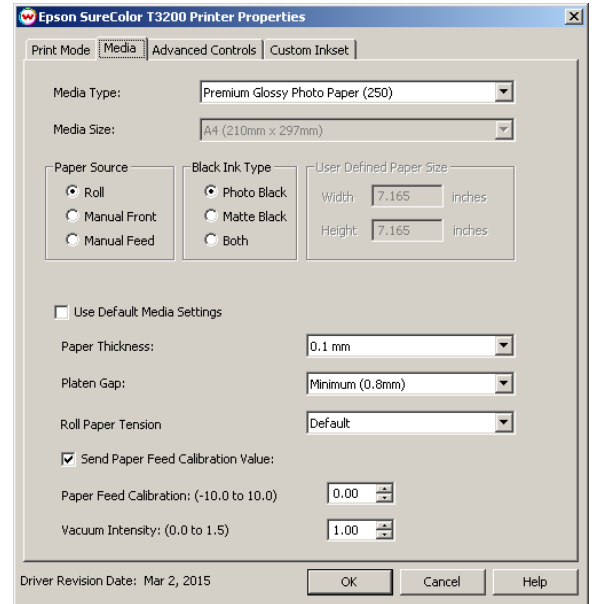


Illustration 2

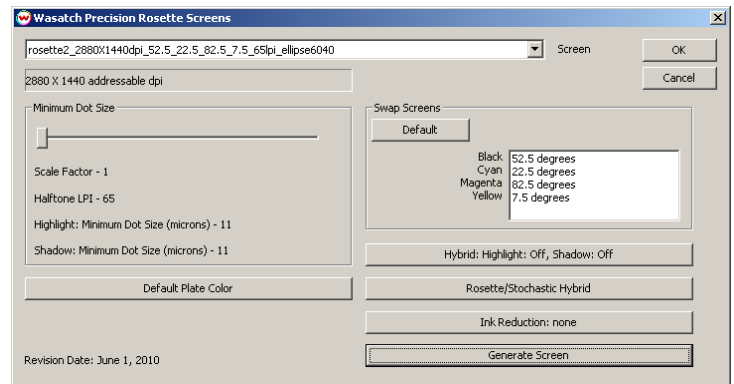


Illustration 3

Media Feed Adjustments

The final step is to adjust the printer’s pinch roller to feed the film precisely between printed passes. It is critical to adjust this ‘media feed’ to create films of a consistent size. If difficulties arise when aligning plates, following these steps will help adjust the printer to produce precisely sized prints each time.

In order to complete these steps, we recommend using a metal measuring tape or other precise measuring instrument capable of measuring lengths of at least 1010 millimeters.

Contained in Wasatch SoftRIP SP is a **1000mm.ps** file that will need to be printed at its native size and orientation for this step (1000mm-neg.ps for negative workflows). Find this file in **C:\psfiles** and open it in the **Job** window (Illustration 4) in Wasatch SoftRIP SP. Once open, RIP and print this file in the feed direction (vertical orientation) of the printer and measure the resulting print as accurately as possible.

If the printed 1000 millimeter line is short, the compensating value will be negative. If the line is long, then positive.

For example, if the measured print were 997 millimeters, the compensating value to place in the Wasatch SoftRIP SP controls would be -3.0. If the measured length were 1003 millimeters, the compensating value would be 3.0.

Enter this value under the **Media** tab on the **Printer Properties** window into **Paper Feed Calibration**, replacing the 0.00 value previously entered. Once this value has been entered, click **OK** on all open windows and save the changes as a new Imaging Configuration.

NOTE: Optionally, to verify that the compensating value entered into Wasatch SoftRIP SP is accurate, reprint the 1000 millimeter line after the steps above have been completed and measure to confirm that the resulting printed line is 1000 millimeters.

Once the steps above have been completed, Wasatch SoftRIP SP will be ready to produce quality films.

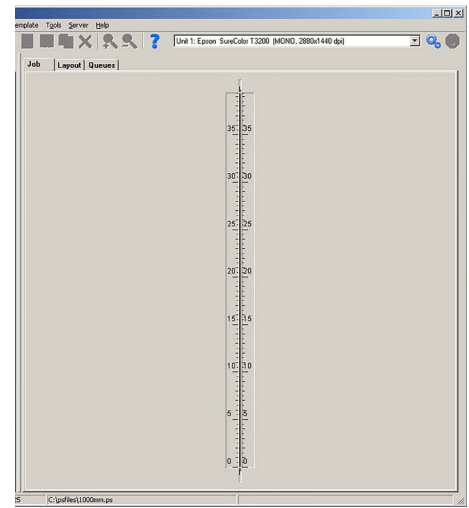


Illustration 4

Film Calibration

The steps below outline the process in which to use a transmissive densitometer, like the X-Rite 361T or any similar device, to obtain measurements from a standard SoftRIP film target to linearize film output by Status T Density or Dot Area Percent. There are additional instructions below if linearizing a negative film process is desired.

Basic Film Calibration (Linearization) Instructions:

- In the Calibration Curves window, click **Options** to access the **Densitometry Options**. Whether inputting Status T Density measurements or Dot Area Percent measurements obtained from your densitometer, this control needs to be set to **Linearize Density**. Click **OK**.
- Click on the **Densitometers** drop-down menu and select **Hand Entry of Densitometry**.
- When prompted to select the target, choose the menu option appropriate for the target that was used to obtain the measurements. If one of the standard SoftRIP targets from the c:\psfiles folder was used, keep the **Default** selection and click **OK**. (Illustration 5)
- Enter the measurements from darkest at the top to lightest at the bottom. (Illustration 6)
- Click **OK** when complete and save the changes as part of an Imaging Configuration.

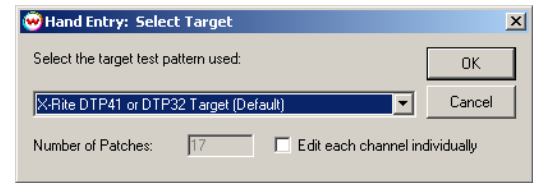


Illustration 5

Optional: Converting From Density Calibration To Dot Area Percent Calibration

To convert the already input density measurements to perform a Dot Area Percent calibration, do the following:

- Click **Options** in the Calibration Curves window to access the Densitometry Options.
- Select **Linearize Dot Area (Convert Density Measurements to Dot Area)** and click **OK**.
- Click **Original** to access the measurements and click **OK** to close the measurement window and convert the displayed curve to reflect the change from Density to Dot Area Percent Calibration.
- Click **OK** when complete and save the changes as part of an Imaging Configuration.

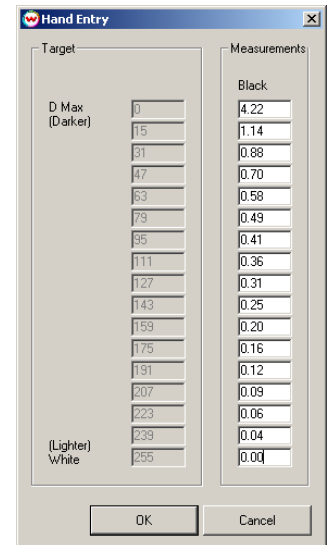


Illustration 6

Additional Notes On Calibration

- If printing negative films, it is recommended to enable the **Make Negative** control in the Printer Properties window prior to all steps.
- If converting a positive film process to a negative film process where measurements have already been entered into the Calibration window, from darkest at the top to lightest at the bottom, click **Convert to Negative Linearization** from the Curves drop-down menu to convert the positive curve to a negative curve.