

Prinergy Proofing on the Barco Impress

Manually Duplexing Imposed Proofs

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Revision History

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1	3 June 1999	Bob Cook	Creation
2	11 June 1999	Bob Cook	Revision based on Initial Review
3	9 December 1999	DJ Dunkerley	Revison based on customer site visit

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1. INTRODUCTION

This document is intended to assist in the setup of Prinergy 1.1 for imposed proofing to the Barco Impress (aka Gerber Impress) large-format inkjet proofer. Due to the complexity of the problem, there is no generic solution. Instead, each site must be configured individually, especially if using perfector or work & tumble imposition styles. This document explains how to do this.

This document does not provide information on configuring Prinergy for output to generic large-format inkjet proofers such as the Hewlett-Packard 2000 CM. Please refer to the *Connecting Proofing Devices Reference Guide* (03-4057A) for details. You will need this information to set up the basic process plan correctly.

2. FEEDING THE BARCO

Feeding the paper into the Barco Impresse, especially for two-sided imposition proofs, can be tricky for someone who is new to the process.



The key is to secure the special duplex paper to the pins that are made visible by opening the bottom cover. The holes in the side of the duplex paper should match the pins on the roller of the Impresse. Begin threading the paper where the two pins are close together beside the yellow dot (as illustrated above).

For the first side of a two-sided proof, the paper should be threaded with the square holes on the right side (see below). For the second side, the paper should be flipped over so that the square holes are on the left-hand side. Otherwise, the Impresse will deliver a "cannot sense edge of paper" error message and reject the paper.

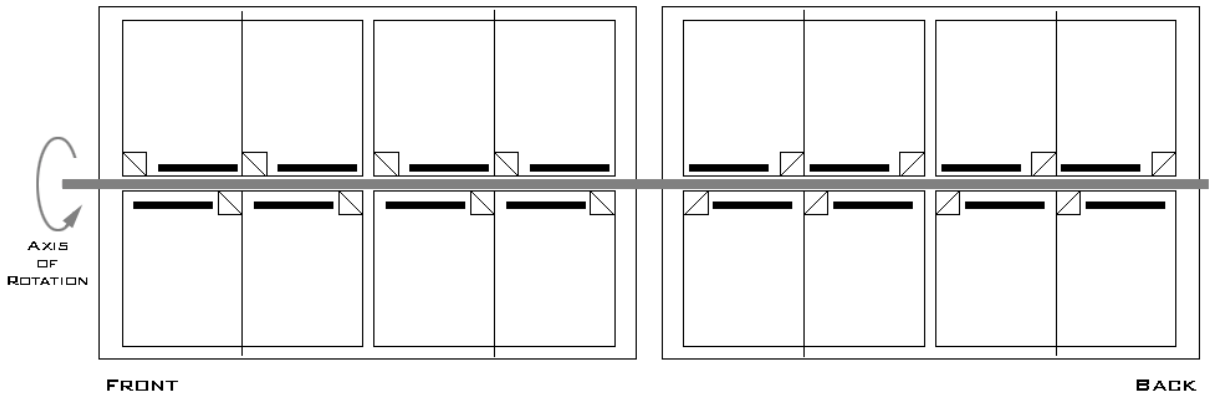


3. IMPOSITION STYLES

There are a few terms used in this document that need to be explained:

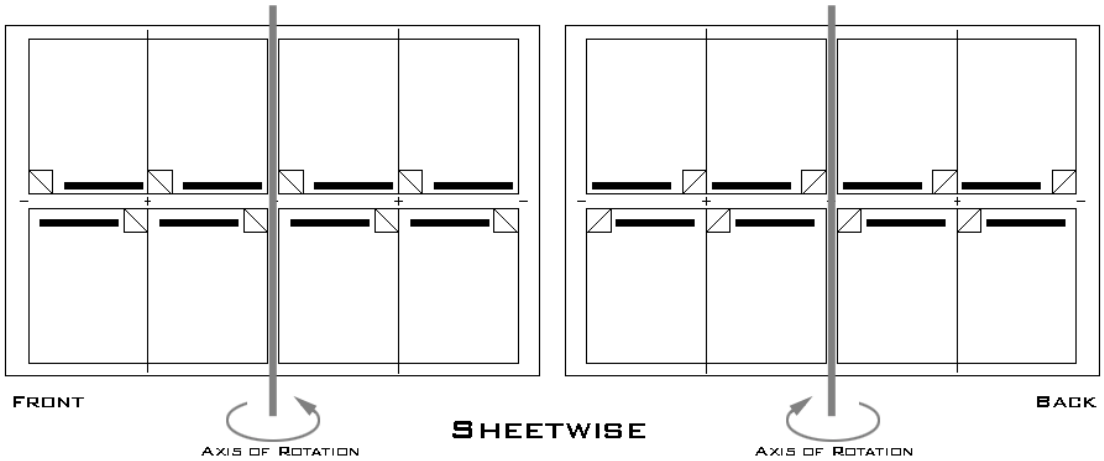
- **Press sheet** refers to the paper fed through the press, whether it be a web (with a specific width and cutoff) or sheetfed press.
- **Plate** refers to the imaged media produced by the final output device, whether plate, film, or some imaging technology. The size of the plate is generally called "media size" in imposition software. This is the size of the output sent to the Impress.

- **Perfector** refers to the folding style also known as Work & Tumble, illustrated below.



PERFECTOR

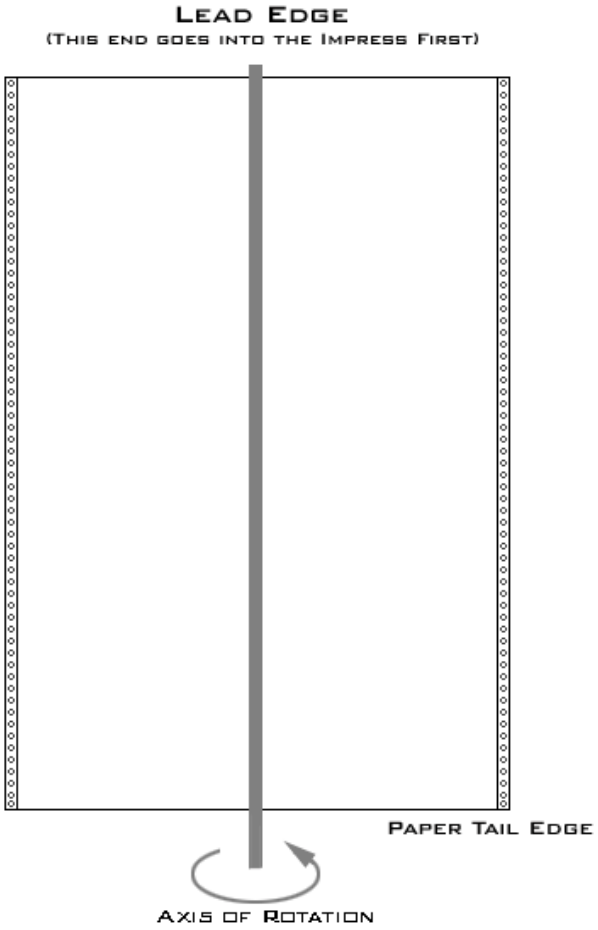
- **Sheetwise** is the folding style also known as Work & Turn.



SHEETWISE

4. THE PROBLEM

The Barco Impress has its own axis of rotation, along the long dimension (perpendicular to the side-to-side motion of the imaging head) of the paper. This is inherent in the mechanical design of the Impress unit, and in the workflow of making a double-sided proof. The Impress always treats front and back in this same way, regardless of how the press sheet or plate is really supposed to be orientated.



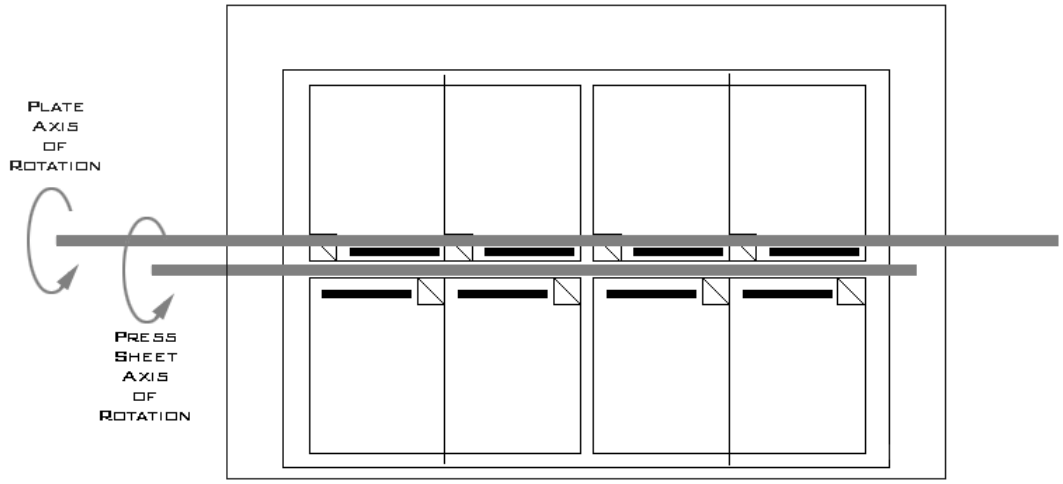
When Prinergy outputs an imposed proof, it outputs the entire plate (or other media).

Aligning the front and back of the same press sheet can be problematic, given that we are proofing the plate, not press sheets. Such problems will occur if:

1. The axis of rotation for the press sheet (and thus the plate) does not match the axis of rotation on the Impress. This cannot be avoided because the plate must be rotated 90° if the width of the plate exceeds 34” (860 mm).

Or:

2. The axis of rotation for the press sheet does not exactly align with the axis of rotation for the plate. This is a problem if the press sheet is not exactly centered within the plate. Here is an example of such a condition with Perfector:



This problem is less likely to occur with Sheetwise.

Note that its possible for both conditions 1 and 2 to be true.

5. THE SOLUTION

5.1 Basic Process Plan Setup

Use the guidelines for configuring the Hewlett-Packard 755 CM (or 2500 CM) model, with the following exceptions:

- Set the **Layout: Media: Width** field to 34”
- Set the **Layout: Center Along Width** to on (checked)

Default process plans included with the Prinergy system should include examples of these. Be sure to *copy* the default plans; do not edit or delete them.

5.2 Determining the Unique Process Plans

You will need different process plans for printing each side of the different types of impositions. The variations:

- Sheetwise vs. Perfector
- Plate Wider than 34” vs. Plate Less Than 34” Wide
- Front vs. Back

Sheetwise and Perfector require printing the same surface twice: once for the front side of the paper and again for the back.

This results in 8 different process plans. Each has a specific value for the **Layout: Orientation** field, as shown in the table below.

Duplicate these 8 process plans for different physical Impress devices (changing the **Device: Output Path** field for each). Do not use the “pooling” features of the Windows NT Print Manager, since that could result in getting the front output to a different device than the back.

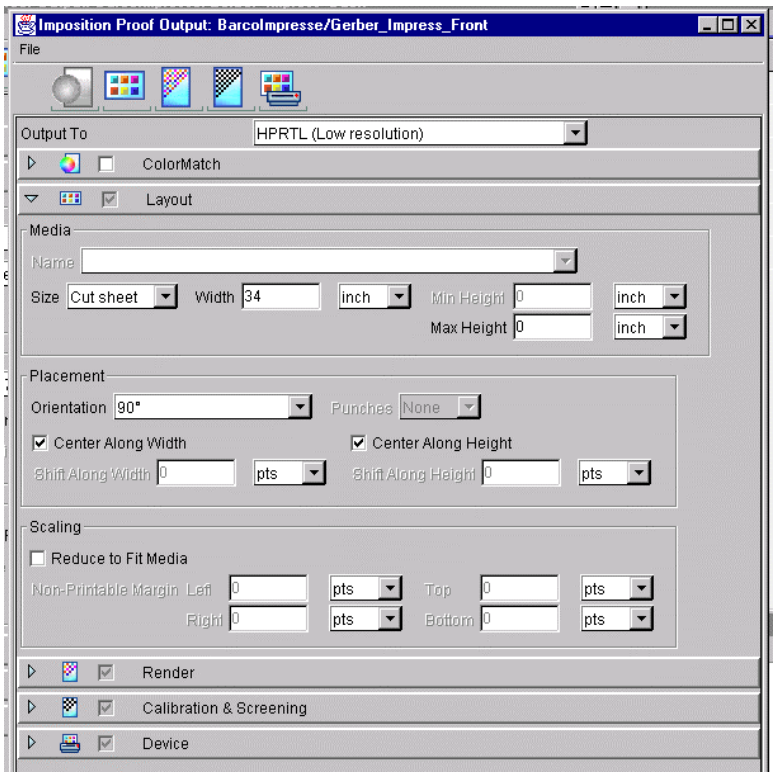
5.3 Chart of Process Plan Parameters

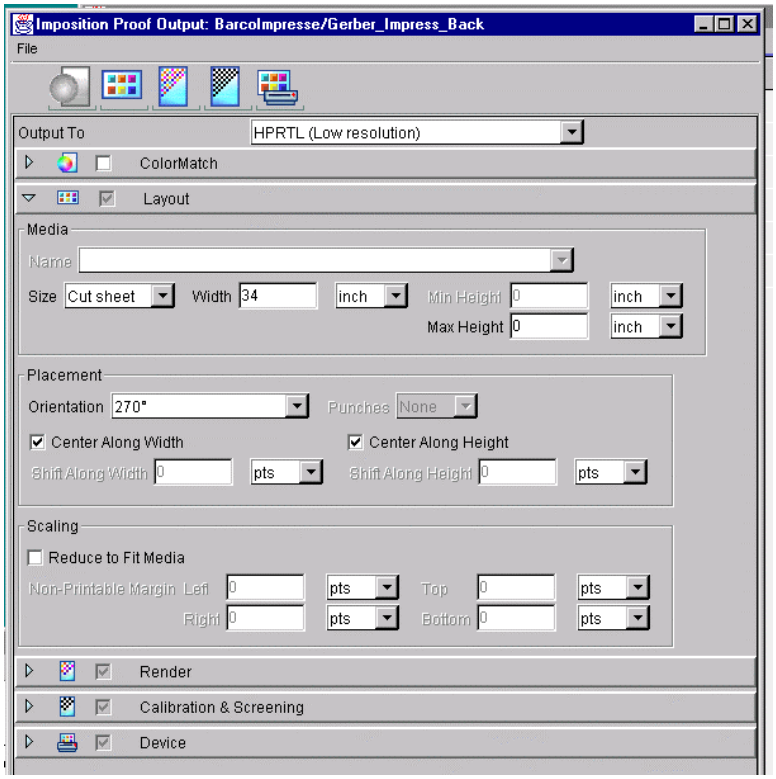
This chart lists the **Layout: Orientation** field entries for each process plan.

Folding Style	Plate Width	Side	Layout: Orientation
Sheetwise	Less than 34”	Front	0°
Sheetwise	Less than 34”	Back	0°
Sheetwise	Greater than 34”	Front	90°
Sheetwise	Greater than 34”	Back	270°
Perfector	Less than 34”	Front	0°
Perfector	Less than 34”	Back	180°
Perfector	Greater than 34”	Front	90°
Perfector	Greater than 34”	Back	90°

5.4 Sample of Process Plan in Use at Customer Site

The following process plans were used to output a Sheetwise signature with a length greater than 34". Note that it was not necessary, in this instance, to perform any manual height/width "shifting."





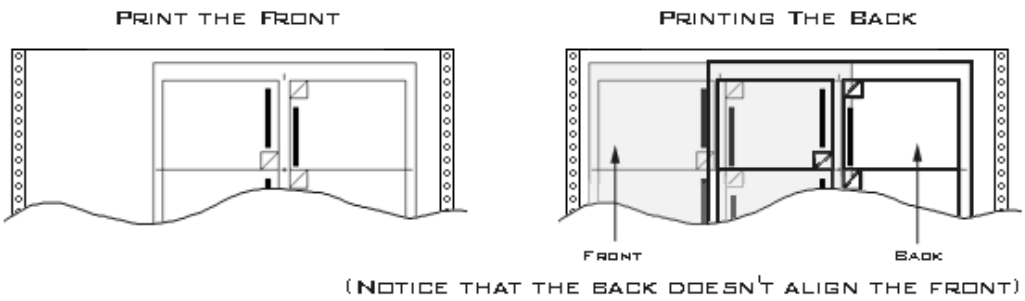
6. CUSTOMIZATIONS FOR EACH SITE

Some specific issues must be addressed at each site:

1. Press sheets using Perfector style are not generally centered within the media. This can be adjusted with the **Layout: Shift Along Width** and **Shift Along Height** fields, based on the media and press sheet sizes. This shift needs to be calculated for each plate size and press sheet size, and could result in a significant number of new process plan combinations. A common solution is to make a second imposition plan that sets the press sheet centered within the media; this second imposition plan can be linked to the same page set as the real imposition plan, preserving the page assignments automatically.

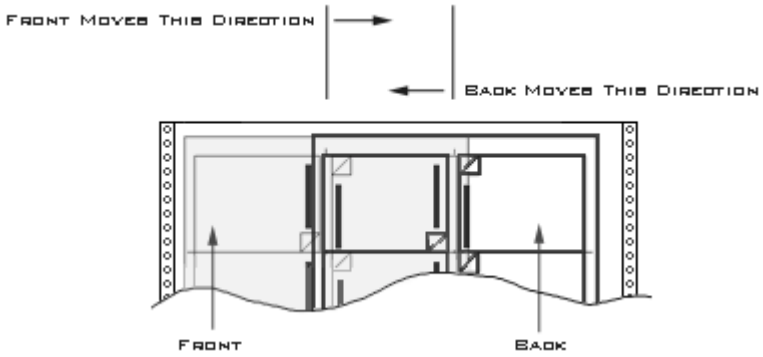
2. Mechanical limitations of the Barco Impress device typically introduce minor errors of front to back alignment. Small adjustments may be necessary, using the **Layout: Shift Along Width** and **Shift Along Height** fields. If using the **Shift Along Width** field, you cannot use the automatic centering option **Center Along Width**. If this is the case, you will need to calculate the **Shift Along Width** value based on the plate size, plus the mechanical shift amount.

   Without any adjustment and with centering turned off, you will see dramatic misalignment, as in this example:



A single value should be used for both the Front and Back side process plans to bring the press sheets into horizontal alignment. To compute the value for the **Shift Along Width**, measure the horizontal difference between a common point on the front and back. Don't use any portion of the page content for alignment purposes: it might not be aligned correctly in the page. Use one of the press sheet center marks from the imposition instead.

Once you have the measured distance, divide by two and enter this value as the **Shift Along Width** value in both the Front and Back process plans. After this value has been entered, the front and back move towards each other. By using a value that is half the distance, the two sides "meet in the middle" like this:



Adjustments for the vertical direction should be made to the back, but not to the front. Measure the difference in vertical alignment, and enter this value as the **Shift Along Height** field for the Back process plan.

7. CONCLUSION

Although difficult, it is possible to use the Barco Impress proofer with Prinergy to achieve double-sided proofing. Extensive setup and testing is required, but the effort is worthwhile.