
Using Perfect Print



R I M A G E[®]



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Introduction


Use this document to create a calibration disc, align Perfect Print, and add custom text or artwork to preprinted labels.

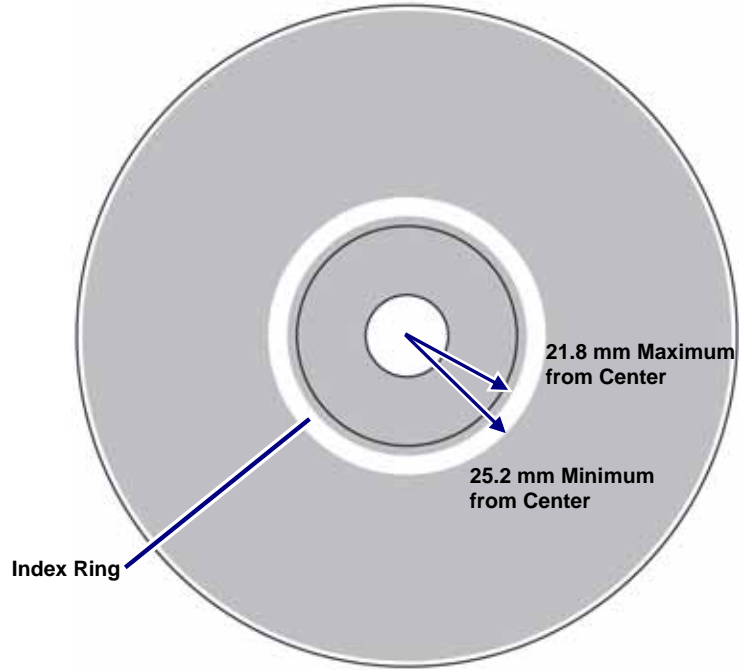
About Perfect Print

- Perfect Print is available only on Producer systems equipped with a Prism Printer and the AutoPrism AutoPrinter.
- When Perfect Print is enabled, the picker on the autoloader uses an index mark to align silk screened and printed images on the disc surface.
- Perfect Print adds about 6 seconds to the print time of each disc.

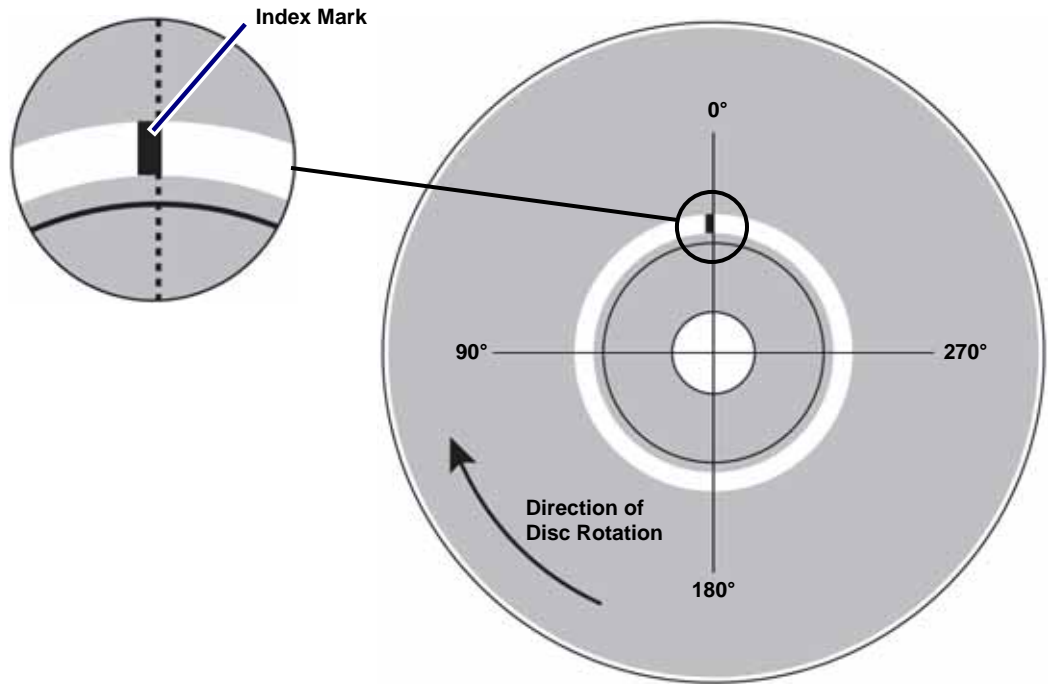
Requirements

 **Note:** Please refer to the images on the following page for a graphical representation of these requirements.

Requirement	Instructions	Comments
Silk Screen Inks	Some silk screen inks may not work with Perfect Print due to the way they reflect light. In addition, silk screen inks may interfere with thermal printing on the discs.	Before ordering a large quantity of silk screened discs, run a test with Perfect Print using the artwork with the silk screened disc.
Index Mark Color	The index mark color must be black.	
Index Mark Size	Minimum width = 1.5 mm (0.059 in) Minimum height = 3.4 mm (0.134 in)	
Index Mark Size and Placement	The index mark can be placed anywhere within the index ring.	The index mark is detected at the leading edge of the mark. Therefore, an index mark at 0 (zero) degrees is not centered but set off to the left side (the right edge is detected first).
Index Ring Color	 Important! The index ring must be highly reflective. This can be accomplished by leaving the disc unscreened in the index ring area or silk screening a white layer.	The index ring must contain only the index mark.
Index Ring Placement	Inner edge maximum distance from center of disc = 21.8 (mm) Outer edge minimum distance from center of disc = 25.2 (mm)	
Background Color	Acceptable background ink colors are white, yellow, magenta, or red.	Cyan may cause Perfect Print to incorrectly align artwork. Using cyan within the index ring is not recommended.
Positioning Accuracy	Angular $\pm 1^\circ$ Horizontal (X) ± 0.75 mm (0.03") Vertical (Y) ± 0.25 mm (0.01")	Silk screen printing systems can hold an image-to-disc registration accuracy of ± 0.1 mm (0.004").
Media	You must use discs that are created specifically for thermal printing.	



Index Ring Size



Index Mark at 0°

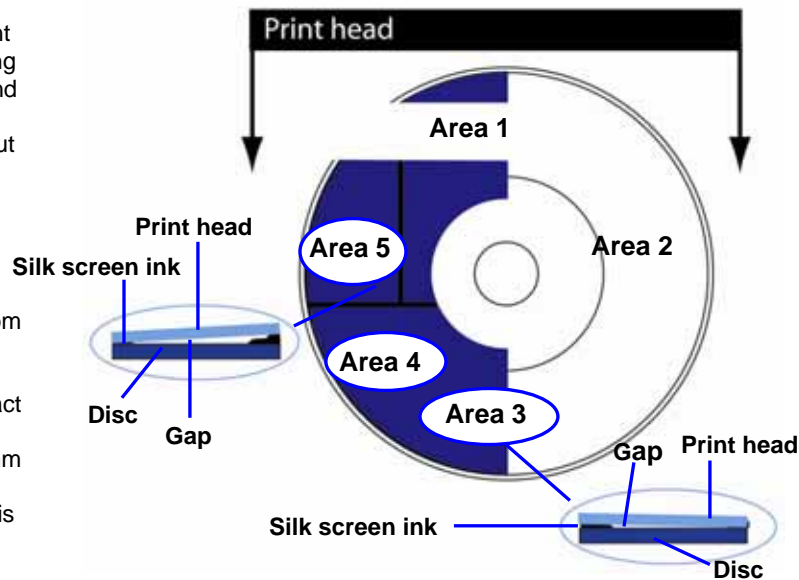
Artwork Placement and Type

Proper placement of silk screened artwork on the disc allows the thermal ink from the printer to adhere to the surface of the disc.

 **Note:** Dithered silk screen patterns and some types of silk screen ink do not allow the thermal ink from the printer to adhere to the disc.


Area 1 – Provides the easiest way to ensure sufficient print pressure by having an open horizontal band spanning the entire width of the disc without any silk screened objects. The print can directly adhere to the surface of the disc.

Area 2 – Is far enough away from the silk screen ink that the print head and ribbon come into contact with the surface of the disc. A distance of 3 mm between silk screened objects and over-print is required.




Area 3 – Is not ideal because the silk screen ink may lift the print head away from direct contact with the disc. See the diagram to the right of Area 3.

Area 4 – Prints well if the solid layer of silk screen ink allows the thermal ink to adhere to it.

 **Important!** Most silk screen inks do not allow the thermal ink to adhere to it.

 **Note:** The silk screen ink must be a solid ink layer, not a dithered pattern.

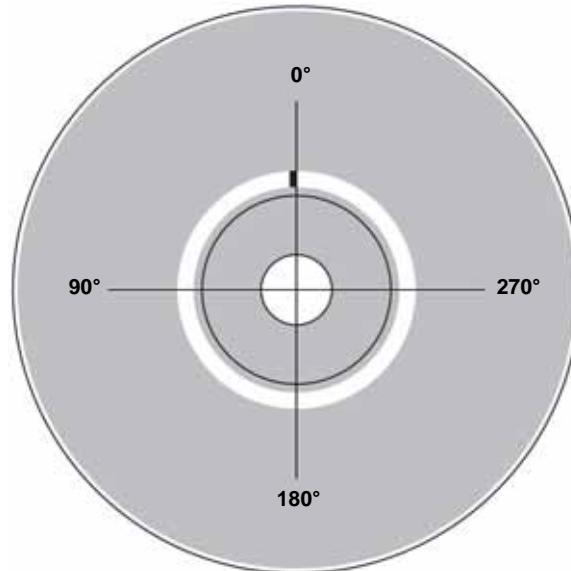
Area 5 – The solid layer of silk screen ink adds some thickness and the silk screen ink pattern adds another layer of thickness. See the diagram to the left of Area 5. This area is not ideal.

 **Note:** Ink thickness can prevent the print head from providing sufficient pressure over the print areas on the underlying disc surface.

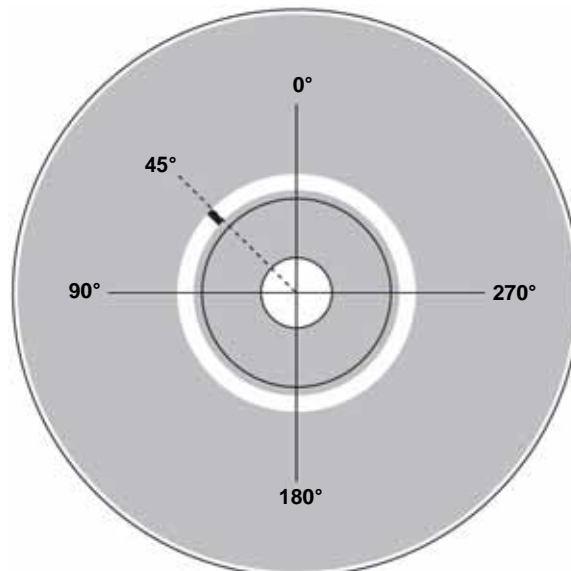
Offset

The Perfect Print offset is the offset angle that specifies the index mark in relation to the artwork. If the offset angle is set to 0 degrees, the index mark is located at the top of the disc. The Perfect Print offset angle starts at the top of the disc and increments counterclockwise. Rimage recommends that all index marks be placed at 0 degrees.

To set the Perfect Print offset, refer to the [Enable Perfect Print](#) section on page 6.



Index Mark at 0 degrees



Index Mark at 45 degrees

Enable Perfect Print

Use this procedure to enable perfect print on your Rimage Producer system or Rimage AutoPrism AutoPrinter.

Producer Systems

If you have a Producer system, enable Perfect Print through QuickDisc.

1. Open QuickDisc.
2. Close the *New Project* window.
3. Select **Preferences**. The *Preferences* window opens.
4. Select **Printing**.
5. Select the **Use Perfect Print** checkbox.
6. If desired, set the offset.



Notes:

- The offset is in 0.25 degree increments.
- Refer to the [Offset](#) section on page 5 for more information.

7. Select **OK**. The *Preferences* window closes.

AutoPrism

If you have an AutoPrism AutoPrinter, enable Perfect Print through the printer driver.

1. Navigate to print properties.
 - In Windows 2000, **navigate:** Start > Settings > Printers. The *Printers* dialog box opens.
 - In Windows XP and Windows Server 2003, **navigate:** Start > Printers and Faxes. The *Printers and Faxes* dialog box displays.
2. Right-click on **Rimage Perfect Image Printer PF**.
3. Select **Properties** from the dropdown list. The *Rimage Perfect Image Printer PF Properties* dialog box displays.
4. Select the **Device Settings** tab.
5. Select **Perfect Print**.
6. Select **Enabled** from the dropdown list.
7. If desired, set the offset.




Notes:

- The offset is in single degree increments.
- Refer to the [Offset](#) section on page 5 for more information.

8. Select **OK** to save the change. The *Rimage Perfect Image Printer PF Properties* dialog box closes.

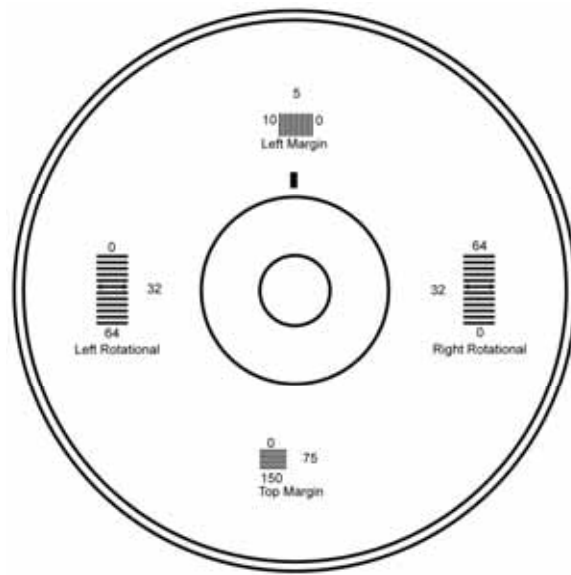
Align Perfect Print

Check Alignment

1. Stop **Production Server** if it is running.
2. **Navigate:** Start > Programs > Rimage > Utilities > Gemini Utilities. *Gemini Transporter Utilities* opens.
3. If you have the Rimage calibration disc (PN 202574-001), place the **disc** in bin 1.
 **Note:** If you do not have the calibration disc, refer to the [Create a Calibration Disc](#) procedure on page 10.
4. In the *Gemini Transporter Utilities* window, select **Calibrate Rotator**. The *Rotational Calibration* window opens.
5. In the *Rotational Calibration* window, select **Test**. The printer prints the alignment marks on the reference grids and the centering marks near the center of the calibration disc. Refer to the image on page 8.


Read the Grid Increments

- The center line on each of the rotational grids is 32. Each line on the rotational grids has a value of 8 (for a total of 64).
- The center line on the top margin grid is 75. Each line on the top margin grid has a value of 25 (for a total of 150).
- The center line on the left margin grid is 5. Each line on the left margin grid has a value of 1 (for a total of 10).



Calibration Disc (Without Alignment Marks)

1. Examine the **rotational grids** and the **alignment marks** to determine the level of adjustment needed. Refer to the images on the following pages.
2. Adjust the alignment as necessary.
 - If the left margin alignment mark does not print at the center line (5) and the top margin alignment mark does not print at the center (75), refer to the [Centering Adjustment](#) procedure on page 8.
 - If the rotational alignment marks do not print at the center line (32) on each side, refer to the [Rotational Adjustment](#) procedure on page 9.


 **Tip:** If you must make both adjustments, for best results, complete the centering adjustment procedure before you complete the rotational adjustment.


Correct the Alignment

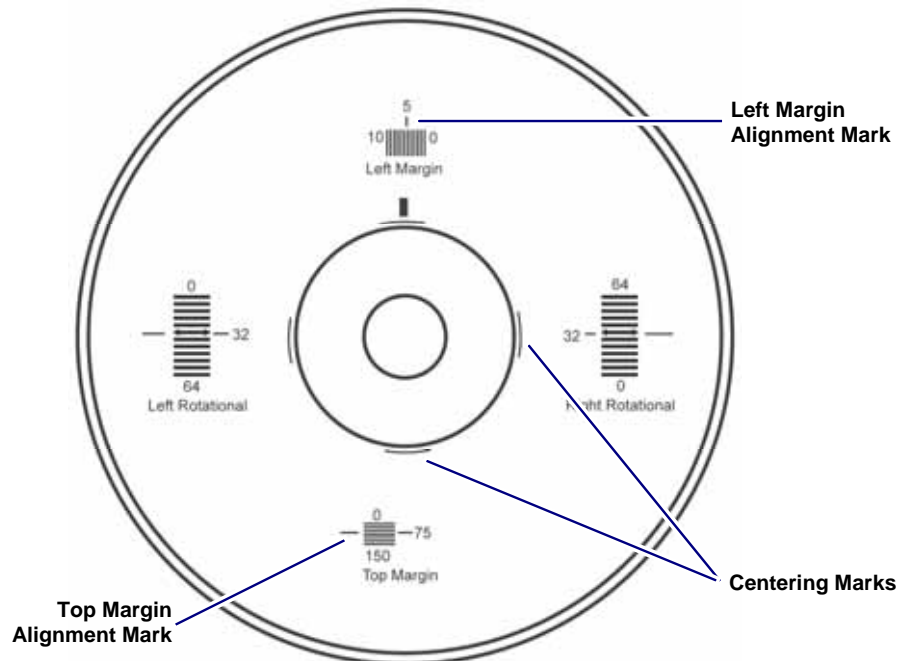
Use the following procedures to correct the centering alignment and the rotational alignment.

Centering Adjustment


1. Examine the positions of the four **centering marks**, the **top margin alignment mark**, and the **left margin alignment mark**.
2. If necessary, correct the **Top Margin** alignment:
 - a. In the **Top Margin** field, enter the value which the top margin alignment mark indicates.


 **Note:** The top margin value can be any value from 0 to 150 in whole number increments. If the alignment mark indicates beyond the 0–150 area, enter 0 or 150.
 - b. Wipe the disc with 99% isopropyl alcohol and a soft cloth to remove the alignment marks from the calibration disc.


 **Note:** If your calibration disc was made on a Prism printer, use a new alignment disc each time.
 - c. Place the **disc** in bin 1.
 - d. If your autoloader has a front door, make sure that the front door is closed.
 - e. In the *Rotational Calibration* window select **Test**. New centering marks print on the calibration disc.
 - f. Repeat steps a – e until the alignment mark prints at the center line (75) of the top margin grid.



3. If necessary, correct the **Left Margin** alignment:
 - a. In the **Left Margin** field, enter the value which the left margin alignment mark indicates.

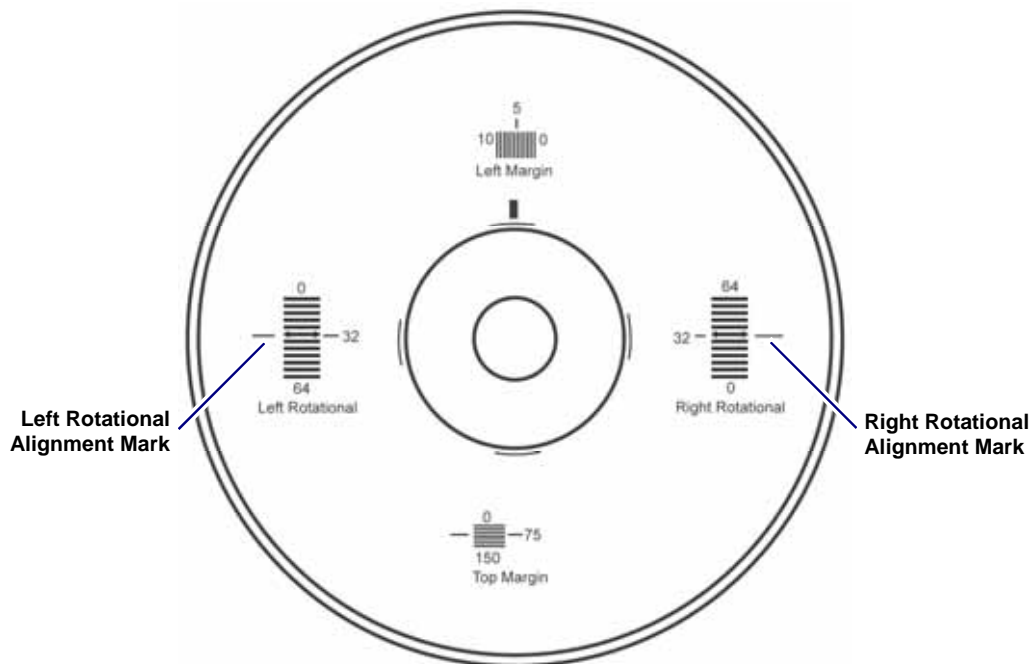
 **Note:** The left margin value can be any value from 0 to 10 in whole number increments. If the alignment mark indicates beyond the 0–10 area, enter 0 or 10.
 - b. Wipe the disc with isopropyl alcohol and a soft cloth to remove the alignment marks from the calibration disc.




 **Note:** If your calibration disc was made on a Prism printer, use a new alignment disc each time.
 - c. Place the **disc** in bin 1.

- d. If your autoloader has a front door, make sure that the front door is closed.
 - e. Select **Test**. New centering marks print on the calibration disc.
 - f. Repeat steps a – e until the alignment mark prints at the center line (5) of the left margin grid.
4. Select **Save Offset** to save the new settings.
 **Note:** The values reset to 5 and 75 when you select **Save Offset**.
 5. When Perfect Print is calibrated, select **Exit**.

Rotational Adjustment

1. Examine the positions of the **rotational alignment marks**.

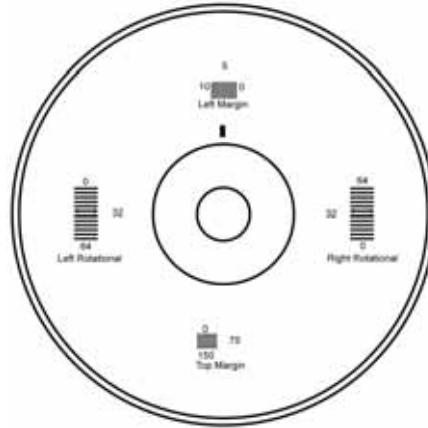


2. In the **Left** field, enter the value which the left alignment mark indicates.
3. In the **Right** field, enter the value which the right rotational alignment mark indicates.
4. Wipe the disc with isopropyl alcohol and a soft cloth to remove the alignment marks from the calibration disc.
 **Note:** If your calibration disc was made on a Prism printer, use a new alignment disc each time.
5. Place the calibration disc in bin 1.
6. Select **Test**. The printer prints alignment marks on the calibration disc.
 **Note:** If your autoloader has a front door, be sure that the front door is closed.
 - If the alignment marks do not print at the center line (32), repeat steps 1– 5 until the alignment marks print at the center line (32).
 - If the left and right rotational alignment marks print above, or both sides print below the center marks, refer to the [Centering Adjustment](#) procedure on page 8.
7. If the alignment mark prints at the center line (32), the disc is calibrated. In the *Rotational Calibration* window, select **Save Offset**.
 **Note:** The values reset to 32 when you select **Save Offset**.

Create a Calibration Disc

 **Important:** You must use a printer that is calibrated to create a calibration disc.

1. Place a blank **disc** in bin 1.
2. Access *Gemini Transporter Utilities*. Refer to steps 1 and 2 in the instructions in the [Check Alignment](#) section on page 7.
3. In the *Gemini Transporter Utilities* window, select **Print Calibration Grid**. The printer prints a calibration disc with an index mark, two rotational grids, and the left and top margin grids, as shown.



Support information

US, Asia/Pacific, Mexico/Latin America

Contact Rimage Services:

www.rimage.com/support.html

Email: http://www.rimage.com/support_form.cfm

Tel: North America: 800-553-8312

Asia/Pacific, Mexico/ Latin America: 952-946-0004

When you contact Rimage Services, please provide:

- Unit serial number and software version.
- Functional and technical description of the problem.
- Exact error message received.

Europe

Contact Rimage Services Europe:

www.rimage.com/support.html

Email: support@rimage.de

Tel: +49-(0) 1805-7462-43

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