



Scitex FB550 and FB750 Printers
Rigid Media Guide

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Table of contents

Introduction	1
Print mode considerations	1
Media Wizard settings	2
Non-white media	2
Media measurement options	3
Edge-to-edge printing	4
Overprinting	4
Two-sided printing	13
Preparing image for two-sided printing	13
Multiple-sheet printing	14
Multi-sheet printing (same dimensions)	15
Multi-sheet printing (different dimensions)	16
Multi-sheet printing without the camera (no automatic edge detection)	16
Rigid media guidelines	17
Rigid media properties	18
Static electricity	18
Reflective media	19
Rigid media details	20
Acrylic sheet	20
Aluminum composite	21
Compressed cardboard or cardstock	22
Corrugated cardboard	23
Corrugated plastic	24
Foam board	25
Foam PVC	26
Glass	27
Plywood	28
Polycarbonate sheet	29
Polystyrene sheet	31
Polystyrene foam board	32
Appendix A – Pre-defined Media Wizard settings	33

Introduction

The purpose of this guide is to provide operators of the HP Scitex FB550 and FB750 printers with recommendations for printing on various types of rigid media. These recommendations provide the best operating instructions under most circumstances, but, due to the variability of print media, there will be situations or scenarios that may require modification of these procedures.

HP Scitex FB550 and FB750 printers work better with some media than with others. Factors such as media flatness, texture, or smoothness, reaction to heat, surface tension, and chemical composition can affect the image quality, the ability of the ink to adhere adequately, and the overall usability for a particular application. Always test new media to determine whether it meets your requirements before purchasing a large quantity.

There are many different types of print media available throughout the world, although brands, selection and quality will vary by region. The information in this document covers a broad range of typical media types that have been tested with the HP Scitex FB550 and FB750 printers, but at the same time this is not a complete list of all compatible media.

Print mode considerations

When selecting a print mode for a specific application, it is important to consider: the level of throughput (speed) desired to complete the job, the viewing distance and quality expectation for the application, and the printing characteristics of the media selected for the job. If a certain print mode selected does not generate the desired result, it may be necessary to select a different print mode.

Viewing distance / Application	Print mode	Print resolution	FB550	FB750
> 30 m / 100 ft	Billboard	600×300 dpi	n/a	85 m ² /h 915 ft ² /h
5–30 m / 16–100 ft	Express	600×300 dpi	38.9 m ² /h 418 ft ² /h	43.6 m ² /h 469 ft ² /h
3–5 m / 10–16 ft	Outdoor Signage	600×300 dpi	31.5 m ² /h 339 ft ² /h	35.3 m ² /h 380 ft ² /h
2–3 m / 6–10 ft	Outdoor Signage Plus ¹	600×300 dpi	22.4 m ² /h 241 ft ² /h	25 m ² /h 269 ft ² /h
1–2 m / 3–6 ft	Indoor Signage ¹	600×600 dpi	18.5 m ² /h 199 ft ² /h	21.1 m ² /h 227 ft ² /h
	Indoor Signage Plus ¹	600×600 dpi	12.6 m ² /h 135 ft ² /h	14.3 m ² /h 154 ft ² /h
< 1 m / 3 ft	Photo ¹	1200×600 dpi	9.2 m ² /h 99 ft ² /h	10.3 m ² /h 110 ft ² /h
	Photo Plus ¹	1200×600 dpi	4.6 m ² /h 49 ft ² /h	5.1 m ² /h 56 ft ² /h

1) These print modes are also available for printing with white ink when the printer is equipped with the optional HP Scitex FB550/FB750 White Ink Upgrade Kit. When printing

white ink using an overflow or underflow, the printing speed will be slightly less than half of what is shown in the table above.

Billboard print mode (FB750 only) – Billboard print mode is intended for creating drafts or proof prints. In certain instances it may be used to produce sellable output as long as the buyer and the seller understand that the viewable distance for output generated in Billboard Print Mode is greater than 100 feet (30 m). Billboard Print Mode does not utilize the printer's jet mapping feature, therefore, any missing or misfiring jets reported or detected using the manual or automatic calibrations will not be substituted with known working jets.

Print resolution – The 600×300 dpi resolution has a slightly reduced color gamut compared with 600×600 dpi.

Gloss / Matte adjustment – The printer is able to adjust how the ink cures to cause it to have a slightly glossy or matte appearance. For matte, both the leading and trailing UV lamps are open during travel of the printhead carriage assembly in either direction. The trailing lamp will begin to cure the ink droplets immediately after being jetted onto the media. For a glossier appearance, the trailing lamp is shuttered during travel in either direction, thereby allowing the ink droplets to spread out slightly before the leading lamp on the following pass begins the curing process.

By default, the print modes Billboard, Express, Outdoor Signage, Outdoor Signage Plus, and Indoor Signage use the matte setting (trailing lamp unshuttered). The print modes Indoor Signage Plus, Photo, and Photo Plus use the gloss setting (trailing lamp shuttered). Two exceptions to this are when the printer is configured to use Foamed PVC media or when printing with white ink. In either of these cases, all print modes use the matte setting. See Appendix B for more detail.

It is possible to control the trailing lamp outside the default modes mentioned above by creating a custom media type in Media Wizard. Note, however, due to the increased curing energy needed, it is recommended to never shutter the trailing lamp when printing with white ink.

Due to the variation in dot gain from matte to gloss, it may be beneficial to use a matching color profile on the RIP. Onyx software provides an extensive set of gloss and matte profiles. For other RIP software, it may be desirable to create a custom profile.

Media Wizard settings

HP Scitex FB550 and FB750 printers have a pre-defined set of common media types stored in the Media Wizard along with the printing parameters tested and determined to be work best in most applications. A list of the pre-defined media and their parameters can be found in Appendix A of this document.

While the printing parameters for these pre-defined media types cannot be changed, it is possible to create a copy, rename it and change the parameters using the printer's Media Wizard. See the *HP Scitex FB550/FB750 User's Guide* for details.

When creating a new media type, choose a media type that best matches the characteristics and change the desired printing parameters. Also, to eliminate Media Mismatch errors, consider creating copies of the media profile in the RIP and renaming it to match the name of new custom media type.

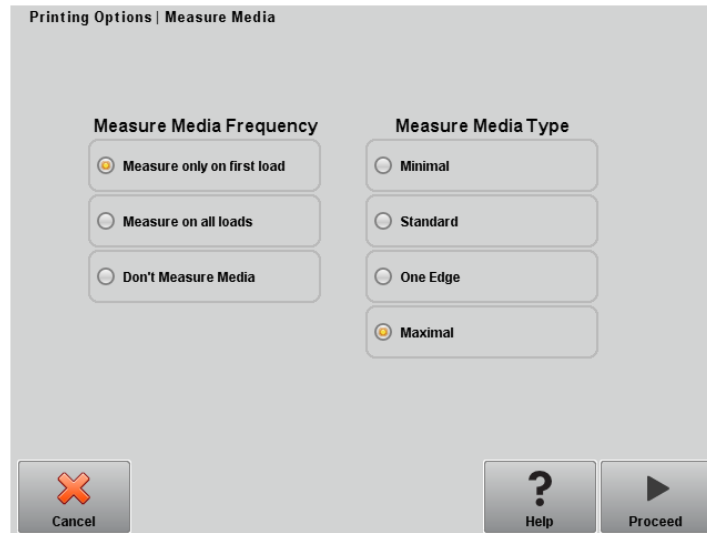
Non-white media

The printer uses a camera on the printhead carriage assembly to detect the placement and size of the media. This camera works best on white or near-white media that provides a strong contrast between it and the transport belt. When using clear or colored media, select or create a media type from the Media Wizard that has the attribute **Detectable by Printer** set to **Off**. When loading

the media, it will be necessary to enter the location of the left (user side) and right (service side) edges of the media according to the Media Measurement Option selection.

Media measurement options

The printer has a camera onboard the carriage that can automatically measure the media. You can choose various levels of precision for finding right, left and leading edges of the media. This option is set on the printer's control panel under Printing > Options > Measure Media.



First, select a measurement frequency (trade-off between precision and speed):

- Measure only on first load — best for fast throughput when precise image placement is not required or when using the media alignment pins
- Measure on all loads — best for precise image placement, such as for N-UP and edge-to-edge printing
- Don't measure media — best for fast throughput when precise image placement is not required and there are very wide margins around the image

Second, select a measurement type:

- Maximal — measures the width of the media in five places, and finds the right and left front edges to estimate skew and detect non-square sheets. This adds a few additional seconds to the media load process, but facilitates the most accurate media placement.
- Standard — measures the width of the media once, and finds the right and left front edges to estimate skew. This is the default setting and is recommended for most applications.
- One Edge — measures the user- and service-end edges on the first sheet, user-end edge only on subsequent sheets, and the front right edge (no skew detection). For single-sheet jobs only, not available for multi-sheet N-UP. Works best on jobs with wider margins.
- Minimal — measures the width of the media once, and finds the front right edge only. This method is fastest but does not provide any feedback regarding possible media skew.

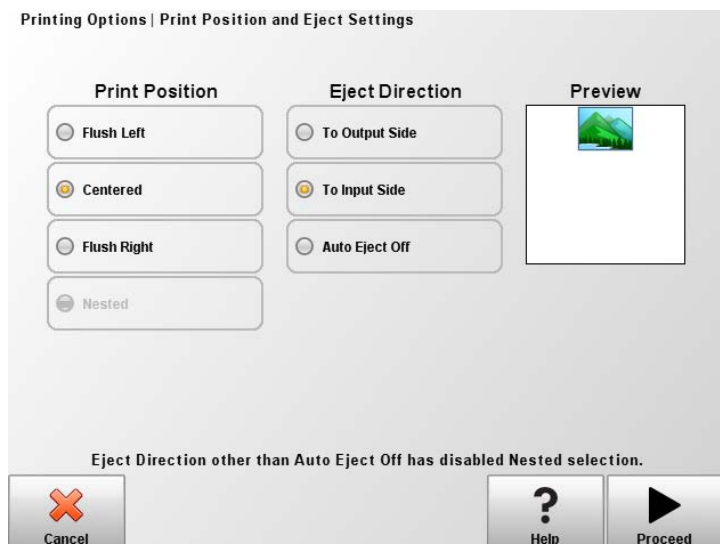
When configuring a media that is transparent, reflective, or colored, use the appropriate media type with **Detectable by Printer** set to **No**. This bypasses automatic media detection and measurement, and the printer will prompt you to enter the coordinates of the right and left edges of the media.

Edge-to-edge printing

Edge-to-edge printing is enabled when the left, right top and bottom margins are set to zero and a job is sent to print that is the same width and height as the media loaded.

The procedures for loading media for edge-to-edge printing are the same for any other media, but these additional considerations should be made:

- “Centered” print position should be used. The Print Position is set on the printer’s control panel under **Printing > Options > Print Position and Eject Settings**.



- The “Maximal” media measurement method is recommended, or “Standard” may be used if the media is square. To set those parameters, go to Printing > Options > Measure Media as shown in the “**Media Measurement Options**” section on [page 6](#).

With the Standard or Maximal media measurement method, the printer will detect if the media is loaded askew and give the option to reload or use as is.

It is recommended to measure the media on all loads for best results. Select this option as shown above in the “**Media Measurement Options**” section on [page 6](#).

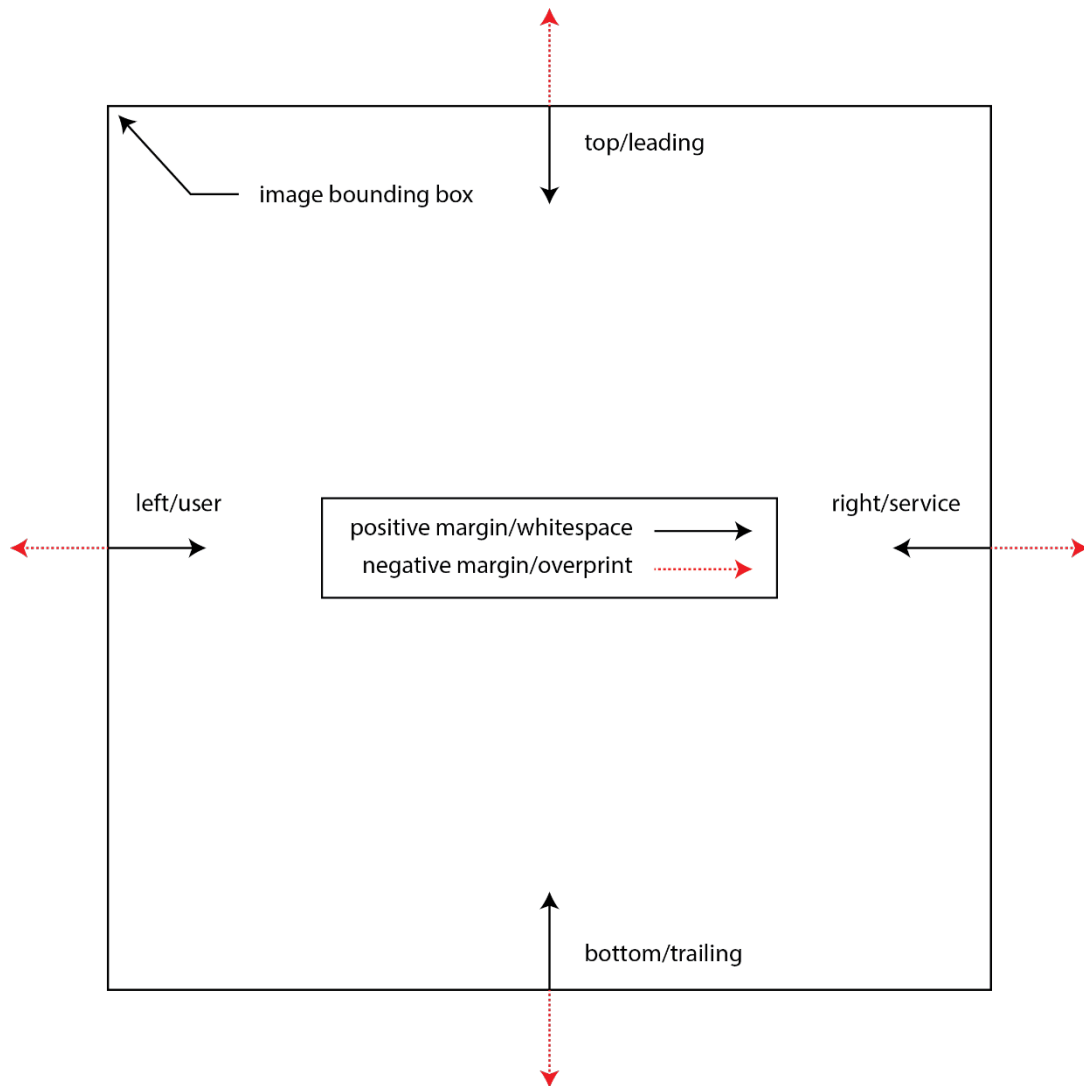
Overprinting

The FB550 and FB750 (as does the FB500 and FB700) allows overprinting on rigid and roll media types with the capability of setting a negative margin to allow for full bleed or overprint. Edge-to-edge printing is usually applied to rigid sheet workflows which this section focuses on but can also be applied to left and right margins on roll media.

Overprinting allows a job to exceed the printable area of the media. Ordinarily (without overprinting) the printer will crop any job that exceeds the printable area of the media. Because some media sheets are not precisely square, overprinting may be necessary to achieve a full-bleed edge-to-edge print.

Margins definition

The following illustration defines how negative and positive margins are applied on the printer.



As shown in the image above:

- **Overprinting** is enabled by setting a negative value for the left/right/top and trailing margin.
- White spaces are enabled by setting a positive value for the left/right/top and trailing margin.

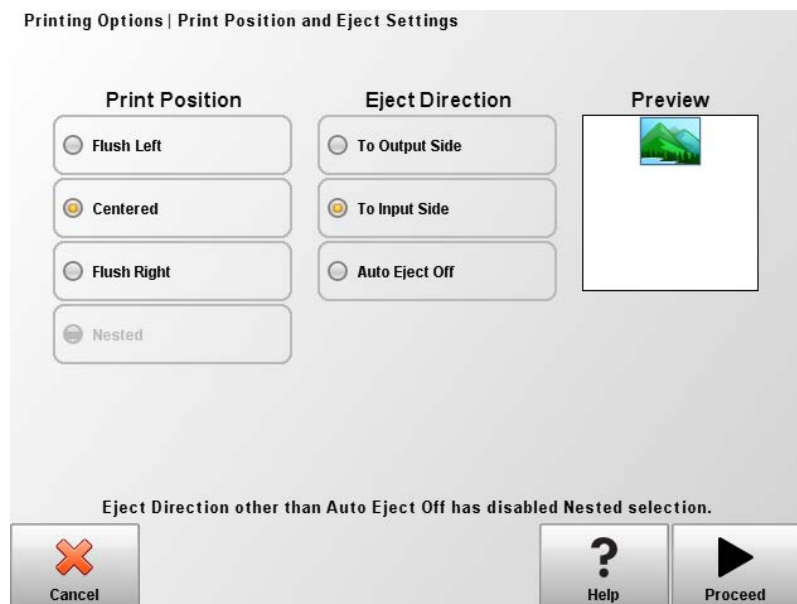
Overprinting procedure

The printer does not alter the job; i.e., enlarge the job or add extra pixels to accomplish overprinting. The job must be resized prior to sending it through the RIP. For best results follow the instructions below:

1. Configure printer for **Save Only**: (Go to Printing > Jobs > Settings > Job Storage Mode) and select Save Only as show in the image below.



2. Set **Print Position** to **Centered**: (Go to “Printing > Options > Print Position and Eject Settings”) and set the print position to **Centered** as shown below.



3. Size the job slightly larger than the media dimensions depending on a variety of factors such as the type of media and its square-ness. A recommendation would be to run a test before a long print run. A good starting point would be to add approximately 3mm/0,125inch to each edge (left, right, leading and trailing).

For example, if the sheet size is 100x100cm (39.4 x 39.4 inch), image could be resized to 106x106cm (39.65 x 39.65 inch).

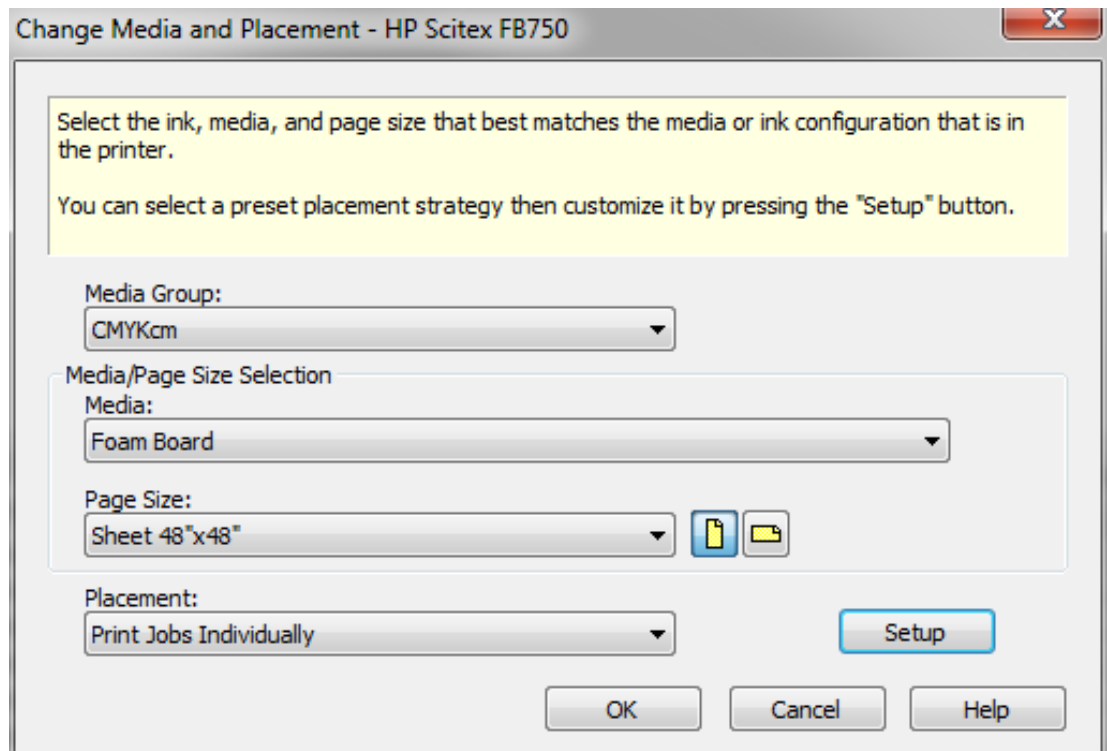
Image should be assembled considering overprint; there are two possibilities:

- a. Size the image accordingly accounting for the needed overprint in a Graphic Design Software, such as Photoshop, Illustrator, etc. and then RIP this image in 1:1 scale.
- b. If image has not been sized considering the overprint in the Graphic Design Software, then resize it in the RIP.

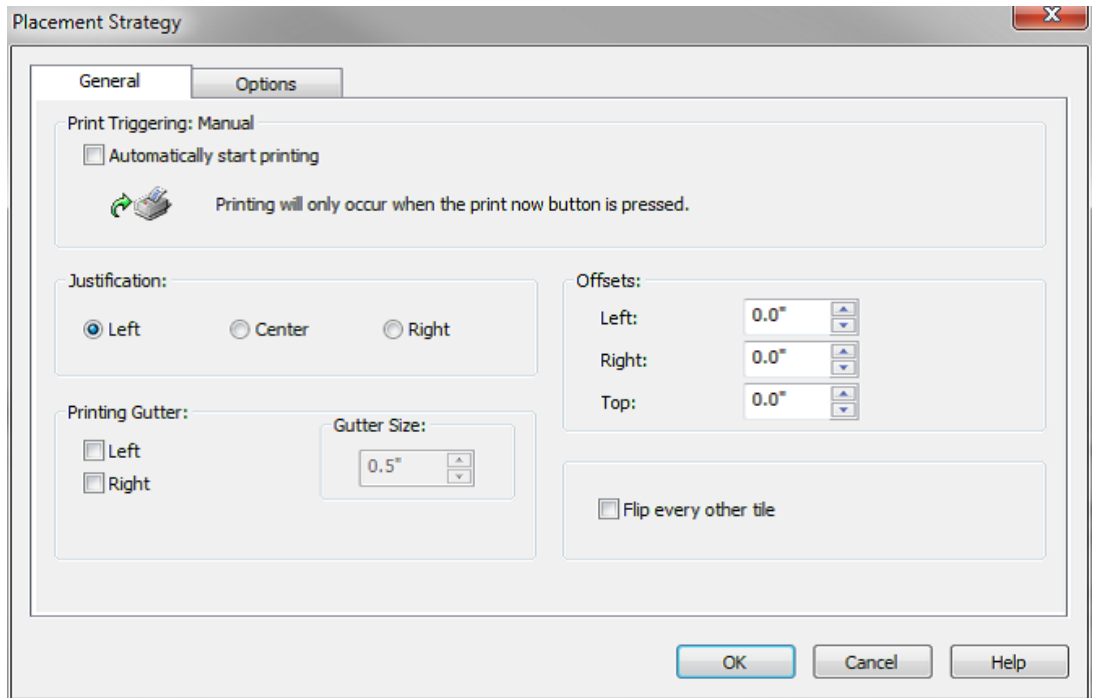
RIPPING procedure is properly explained in detail below for both Onyx and Caldera:

Onyx

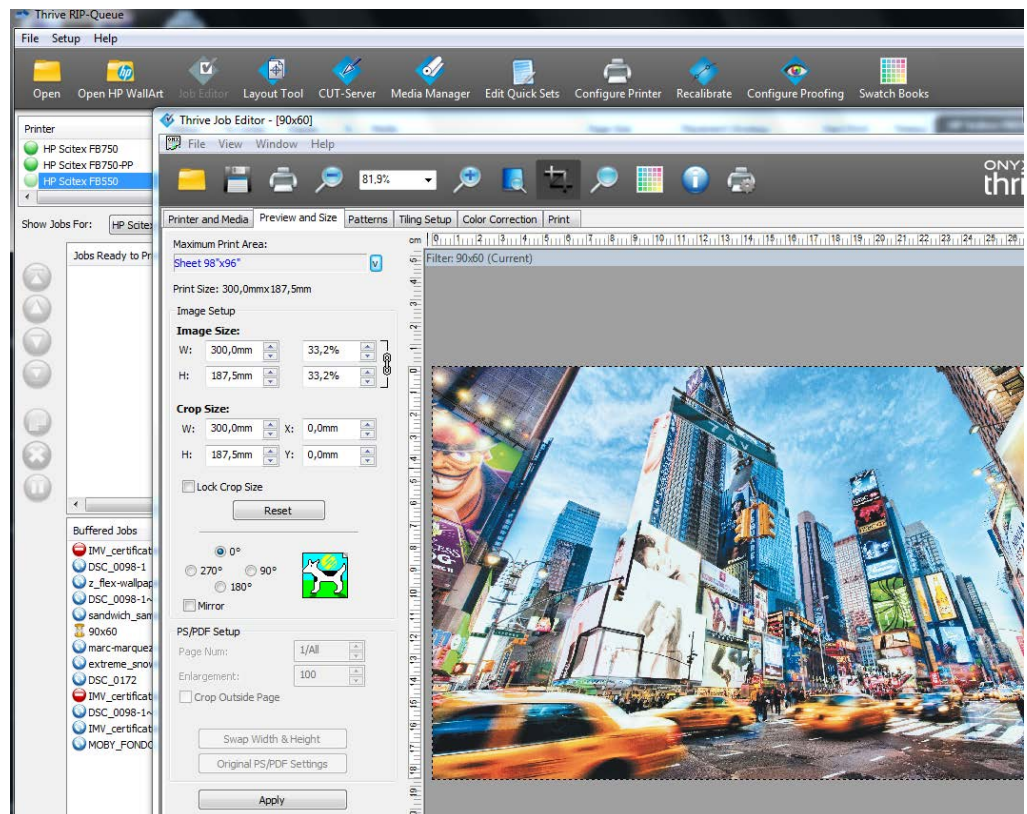
- Configure the **Page Size** and **Placement Strategy**.
- Select your printer from the RIP Queue and select the **Change...** button from the upper right hand corner of the screen.
- Select the appropriate **Media Group** and **Media** type.
- Select a standard **Page Size** or custom page size from the **Page Size** drop-down list box.
- Set **Placement** to **Print Jobs Individually**.
- Click the **Setup** button.



- Set **Justification** to **Left**.
- Ensure **Print Gutters** are not checked.
- All **Offsets** are set to **0**; Offsets in this context will add white space to the job and not utilize printer margins.



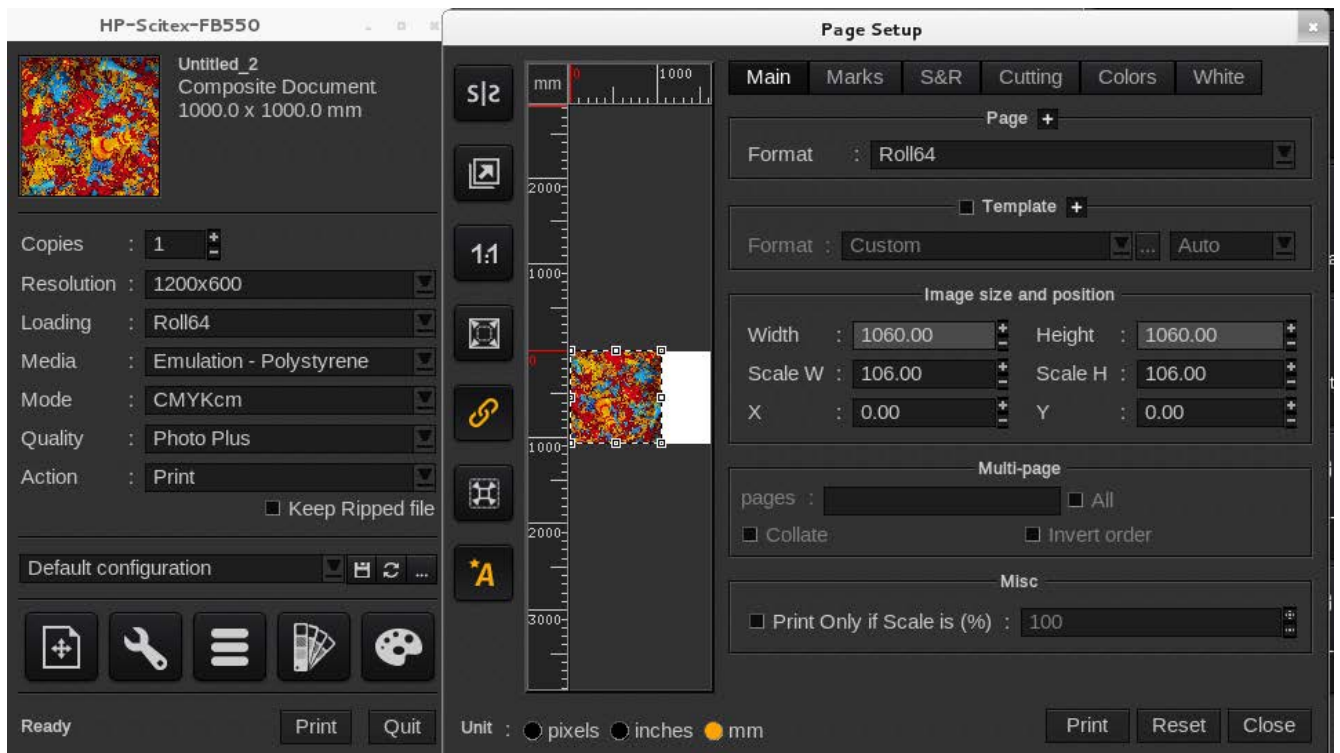
- Open the file in the Job Editor.
- Select the appropriate **Media and Printmode**.
- Go to **Preview and Size** and select the proper Maximum Print Area (sheet or roll) and Size. If needed, set the job slightly larger than the media dimensions, depending on the square-ness of the media. After setting the size and other parameters, click the **Apply** button.



- Go to **Print** and click **Submit** to rip the file.

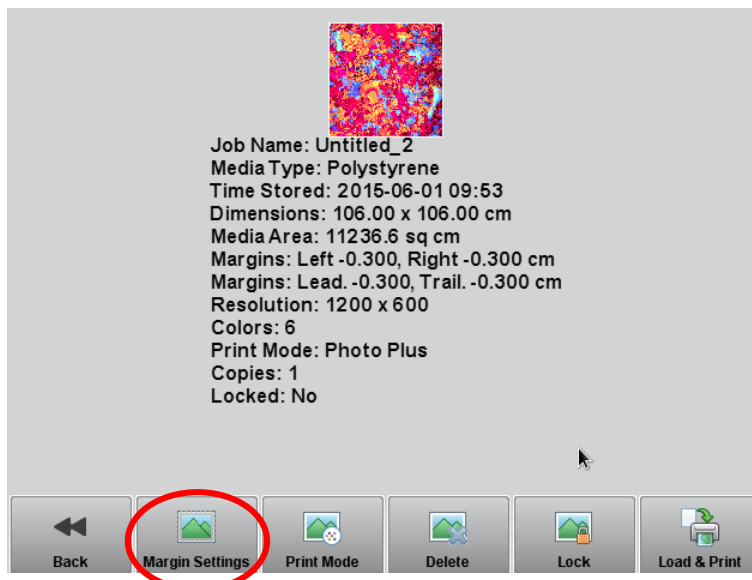
Caldera

- Select the appropriate **Resolution, Loading, Media, Mode** and **Quality**.
- Open the job in **Page Setup**.
- Select proper **Format** and size the job. If needed set the image slightly larger than the media dimensions, depending on the square-ness of the media.
- Confirm **X** and **Y** in **Image size and position** are set to **0.00**.
- Select **Print** to send the job to the printer.

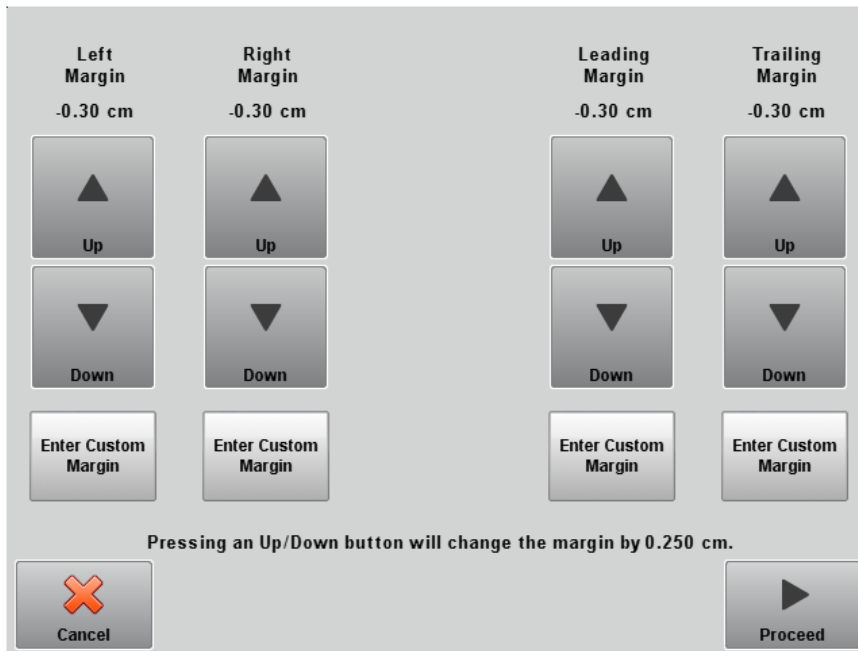


NOTE: there are other paths to adding overprinting to the file via the RIP (the Borderless media option in Onyx and the Bleed option in Caldera), however the **recommendation is to follow the previous steps.**

4. Once jobs are spooled to the printer hard drive select your job (**Printing > Jobs**) and select **Margins**.

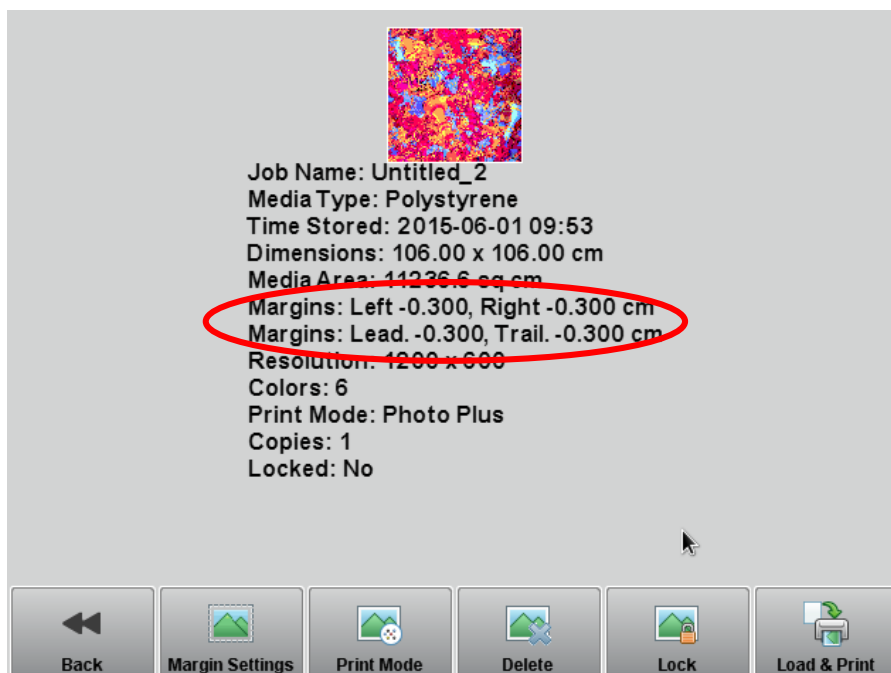


- Set the Left\Right\Leading\Trailing\top margins to negative values according to the added overprint desired, as explained in the first paragraph of step 3 above.



NOTE: Left, Right, Leading and Trailing margins can be adjusted independently by using the up/down arrows or by entering a custom margin with the keypad. It is recommended to use equal Left and Right Margin settings for best results.

You can check if the margins have been set in the job info as you can see below.



- Load the media and Print the stored job.

WARNING: To prevent a build-up of ink on the belt, clean immediately with isopropyl alcohol (IPA). If ink is allowed to continue to cure, it will be necessary to soak the area with IPA before it can be wiped off.

Full bleed printing (maximum printer width)

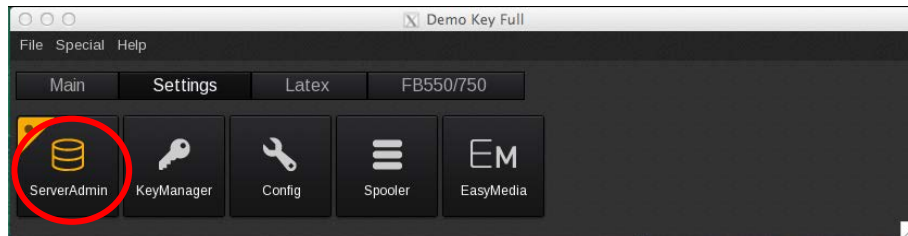
When loading rigid media for edge-to-edge printing the media should be cut to the correct size, have square corners and be loaded properly without the media being skewed or rotated. These are ideal conditions to which there can always be some variation or error; applying overprint will help achieve better results. Follow the steps below to perform full-bleed printing:

1. Create the maximum media width size sheet/roll in the RIP. Maximum width dimensions for the different products are:
 - FB550: 64.6 inches / 1640.8 mm
 - FB750: 98.89 inches / 2511.8 mm

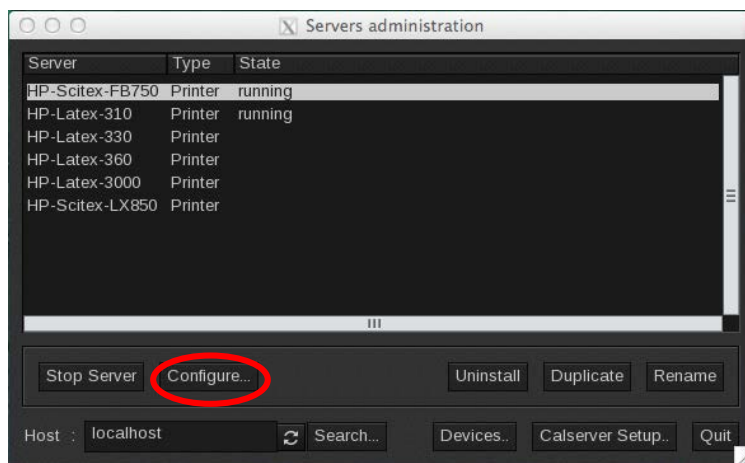
Follow the following steps to create the maximum width sheet/roll in the RIP:

Caldera

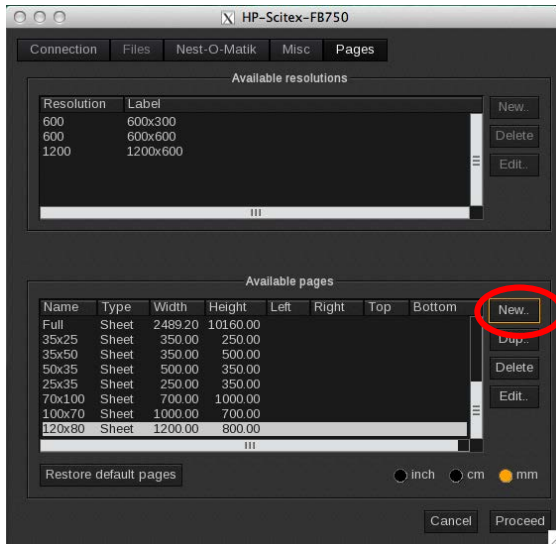
- Go to **ServerAdmin**.



- Select the printer and click **Configure**.

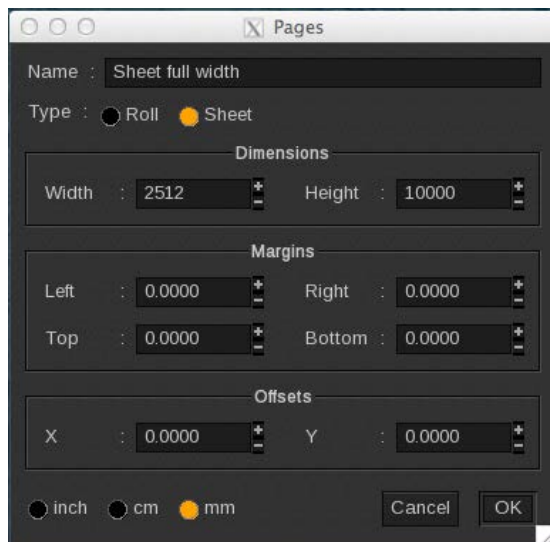


- Create a new sheet/roll (Available pages > New).



- Set the sheet/roll size, enter the maximum width according to printer width (shown above) and click **OK**.

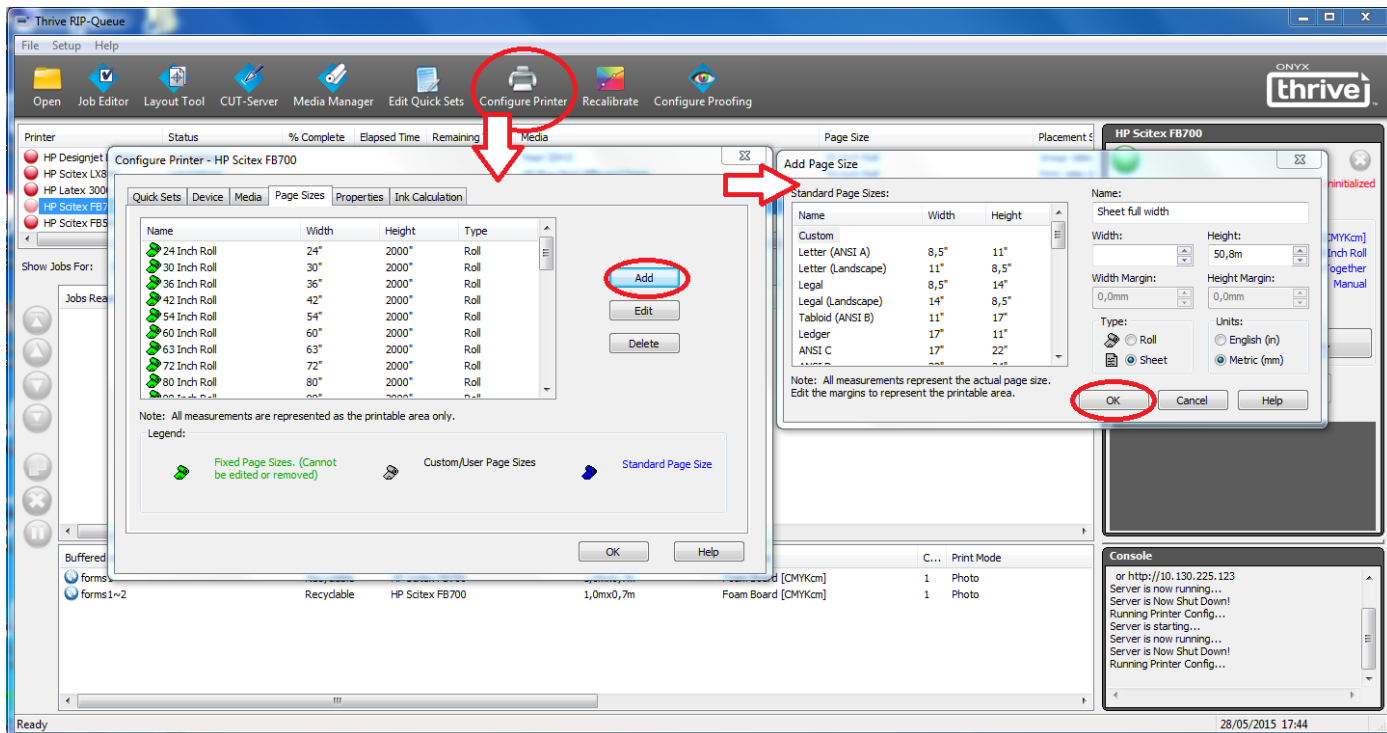
NOTE: keep margins and offset to 0.



Onyx

- Go to **Configure printer**.
- Add a new sheet/roll in Page Sizes.
- Set the sheet/roll size, enter maximum width according to printer width (stated above) and click **OK**.

NOTE: keep margins to 0.



2. Follow the steps already described in the **Overprinting procedure** section on [page 9](#).

Two-sided printing

Two-sided printing is only available for jobs stored in the printer.

The procedure for loading media for two-sided printing is the same as usual, but with these additional considerations:

- a. The **Centered** print position centers both side 1 and side 2 images left to right.
- b. The **Maximal** media measurement method is recommended.
- c. The **Standard** method may be used if the media is square.

CAUTION: The ink on side 1 may not be fully cured. Use caution when reloading it to print side 2, to prevent scratching ink on side 1.

Preparing image for two-sided printing

In most situations, such as signage, the image for the second side will be rotated 180°. Using all of the recommended practices described in this document, the two sides will print with alignment suitable to the application.

For some applications, such as images that will be die-cut to a custom shape, the image should be flipped in the X-axis (side to side) and the media sheet also flipped in the X-axis. This method will achieve the greatest accuracy of alignment on the leading edge of the media.

Multiple-sheet printing



Figure 1: Multiple-sheet printing

Multiple-sheet N-Up allows you to print more than one copy of a single job or multiple jobs on multiple sheets across the belt of either the same or different dimensions, using multiple rows of sheets until the job is complete. Use the built-in media alignment pins for quick positioning of the sheets across the printer's width. Align the left side of each sheet with one of the pins, with a small space from the right edge of the sheet to the next pin, to allow for variations in sheet dimensions. Alternatively, if you position the pins with zero clearance between the sheets and each pin, before each print be sure to raise the pins over the thickness of the sheets; otherwise the sheets could become skewed.

To enable, select the **N-Up Sheet Feed** option when loading media and have the number of sheets you intend to print across the width of the printer in position to be loaded. Sheets must not be more than 3 inches (7.6 cm) apart from each other. Use the alignment pins if you will be printing multiple rows.

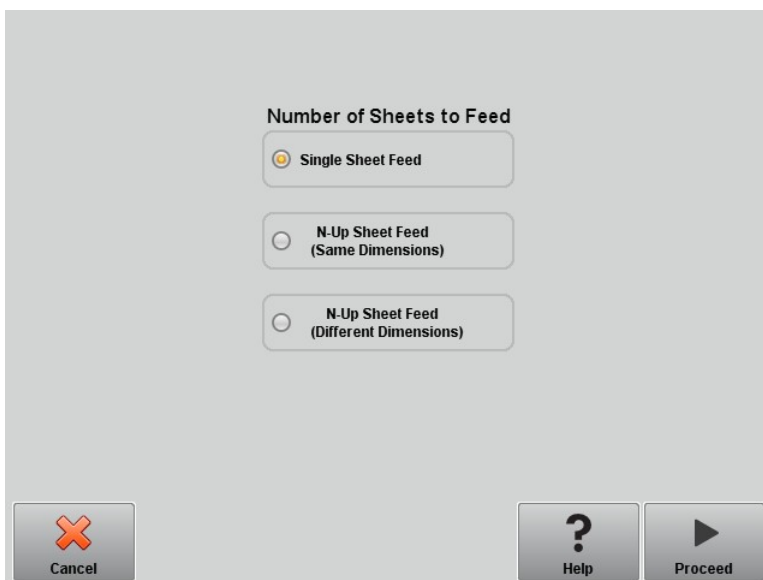


Figure 2: Multiple-sheet options

	Single image	Multi-image	Remaining copy	2-sided	Nesting	Eject settings
Single sheet	Yes (N copies)	No	Yes	Yes	Yes	Input, Output, Off
Multi-sheet (same dimensions)	Yes (N copies)	Yes	Yes	Yes	No	Input, Output
Multi-sheet (different dimensions)	Yes	Yes	No	No	No	Output

See the user's guide for general instructions on configuring and loading rigid media.

Multi-sheet printing (same dimensions)

Multiple copies of a **single image** can be made by setting the quantity to a number equal to or greater than the number of the sheets you loaded. The printer prompts you to load more sheets until the number of copies you specified has been printed. You can print any number of copies in this configuration, even if the total number does not divide evenly into the number of sheets per row. Only the last row may have a different number of sheets.

The **Multi-Image** feature is enabled by selecting the **Print 2-Sided / Multi Image N-Up** button in the lower right corner of the Stored Jobs screen, then selecting **Multi-Image N-Up** in the following screen. Each of the jobs across the belt can be different jobs, but all jobs must have the same color set and resolution. Once the first job is selected, the printer displays jobs with a color set or resolution mismatch with a red border. If a different print mode is desired, or if separate jobs have different print modes but share the same resolution, a single print mode is changeable by selecting **Print Mode** in the summary screen. Enter the number of image groups or 'rows' to be printed and press **Proceed**.

Multi-sheet printing (different dimensions)

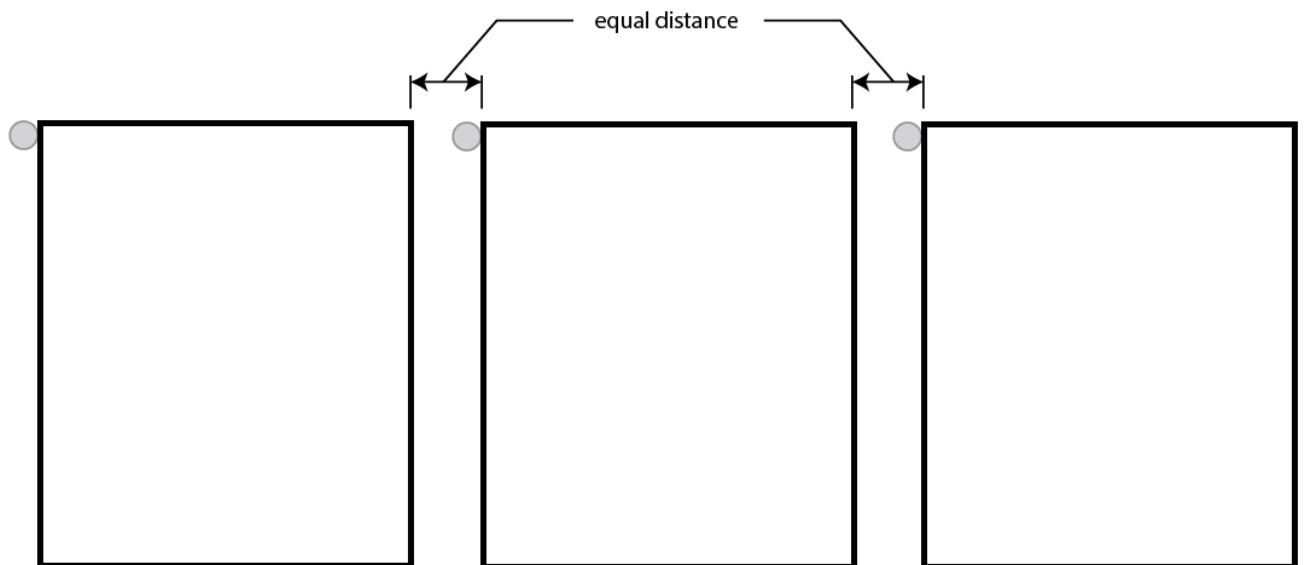
As with multi-sheet printing with the same dimensions, multiple copies of a **single image** can be made by setting the quantity to a number equal to or greater than the number of the sheets you loaded. Because sheets can be of different sizes, and the image of a single size, be careful about job alignment and overprinting onto the belt.

Again, as with multi-sheet printing with the same dimensions, the **Multi-Image** feature is selected from the Stored Jobs screen, following the same process. Because sheets can be of different sizes, and the images of various sizes, be careful about job size and alignment when selecting jobs.

Multi-sheet printing without the camera (no automatic edge detection)

This is the case when printing on media that cannot be detected by the printer's media sensor (black, dark-colored, reflective, or clear) or loading short media. In these media types that don't use the camera to measure the edges the printer uses dimensions entered by the user. This assumes the sheets are properly spaced and lined up against the alignment bar and alignment pins.

The alignment pins must be used for reference and alignment based on equal spacing between the sheets when the camera isn't used. It is recommended to measure the distance between sheets with a measurement device rather than depending on the placement of the pins to avoid error.



NOTE: when printing edge to edge, if media is not properly cut, add overprint to all different images. Follow the step described in the **Overprinting** section on [page 10](#).

Rigid media guidelines

Never use sheets of media that exceed the maximum published weight specification of 150 lb (68 kg).

For materials between 50–150 lb (22–68 kg), choose **Heavy** when selecting media weight in the Media Wizard.

To reduce the risk of damage due to a head strike, do not print on media longer than the tables are designed to support. Optional Extension Tables are available to support longer media.

Maximum media length	FB550	FB750
Standard tables	48 inches (122 cm)	48 inches (122 cm)
Optional extension tables	120 inches (305 cm)	80 inches (203 cm)
Two sets of extension tables	n/a	120 inches (305 cm)

Media tables should be leveled such that the tops of the table rollers are level and coplanar to the flat surface of the media belt.

Ensure that the tables are latched securely to the printer to establish a proper grounding path for any residual static build up on the media.

Print speed may need to be adjusted when using certain materials that deform when subjected to sustained heat (e.g. polystyrene-face foam board). In these cases some combination of a higher vacuum setting, faster print mode, higher-than-standard head height and the addition of a printing delay (**Media > Settings > View Print Mode > Change Print Mode > Select Print Delay**) may be required to achieve the best results.

Rigid media properties

- d. Store media flat, in a clean environment with the same or similar temperature and humidity as the printer.
- e. For best results, individual sheets of media should be flat. Curves in either axis of the media (left to right, or front to back) can lead to head strikes of the carriage on the media. Accuracy of dot placement or overall feed accuracy can also be affected by non-flat media.
- f. For best results, media should have parallel opposite edges with 90° corners. Media that is not square with itself will require extra attention when loading.
- g. Both sides of the material should be clean and dry.
- h. Some substrates may have a surface coating. Certain coatings may cause ink to pool and cure unevenly, yielding poor image quality. Be sure to test coated materials for compatibility before purchasing significant quantities.
- i. Use caution to avoid substrates with bent or damaged edges on the material, especially metal composite and corrugated materials. In addition to the risk of damage due to a head strike, they may create drag or vacuum loss that results in media feed errors or skew.
- j. Warped or bowed media that the vacuum belt system is unable to hold flat against the belt will require the media hold down rollers to be employed in conjunction with Warped Media Mode. Although this reduces the effective print area of the sheet of media, it reduces the risk of damage due to a head strike.

Static electricity

Static electricity is often a problem when working with synthetic materials. These materials are often nonconductive, so static charges cannot dissipate on their own. Besides minor personal discomfort from static shocks, static attracts foreign particles to the media surface that prevent ink from adhering to the media surface. Static can also attract ink droplets to areas of the media surface that were supposed to remain unprinted. Low humidity levels in the printer and media storage environment can exacerbate the issue.

A number of active and passive methods can be employed to minimize static:

- k. Maintain a relative humidity level of 40-60% in both the printer and media storage areas.
- l. Clean the static elimination ionizer bar every 3 months according to the instructions in the *HP Scitex FB550/FB750 User's Guide*.
- m. Drape a conductive material such as copper tinsel over the media stacks and attach it to a grounding point. This will help discharge the static from each sheet as it is removed from the stack.
- n. Wipe down the media surface prior to printing with IPA that has a concentration of 90% or greater. This will remove any foreign particles that were attracted to the media by static.
- o. For extreme static problems, careful use of an antistatic spray may be warranted. Some examples are K2r Static Stopper and Alberto-Culver Static Guard. Lightly spray on, not allowing it to pool on the media. Note that the ink-adhesion properties of some media may be negatively affected by the spray, so use the minimum amount necessary to achieve results. Adhesion decreases approximately 10% and typically occurs on media that already had poor adhesion properties without the spray.

Reflective media

When printing on reflective media, such as polished metal or mirror, additional preparation and maintenance procedures are necessary to minimize UV light being reflected back to the printhead nozzles where it could cure ink, plugging the nozzles.

- p. Select, from the control panel, Ink > Maintenance > Set Auto Purge & Wipe Interval > Auto Purge & Wipe Interval > Between Each Job.
 - q. On flat, stable materials such as glass mirror, lower the printhead height to its minimum 0.065 inch (1.6 mm) value (Printing > Options > Head Height off Media). Remember to change this back to the nominal value of 0.085 inches (2.2 mm) when done printing on reflective media.
 - r. Mask off any areas of the media surface that will not be imaged.
- Perform a manual cleaning of the printheads at the end of each day when reflective materials have been used.

Rigid media details

Acrylic sheet

Brand name example: Plexiglas®

Preparation

- Peel the protective film off one side, leaving the other side protected until finishing or installation of the finished graphic.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.
- Use clean, cotton gloves to avoid fingerprints.

Recommended print modes

- Photo Plus profile for applications that will be viewed from the printed surface. For increased saturation, use Photo – Saturated or Photo Plus – Saturated.
- Indoor Signage Plus or higher quality for applications that will be viewed through the media and either a white ink overflow is used or white backer is applied over the printed surface. Flip the image in the RIP software for view-through applications.
- Photo – Backlit or Photo Plus – Backlit, using either Spot or Overflow modes, for backlit applications.

Printing

- These materials are heavy in larger sizes. Do not exceed 150 lb (68 kg). Use the **Heavy** media setting for sheets over 50 lb (22 kg).
- Depending on end-use application, ink adhesion may be an issue. In addition, white ink overflow applications may develop small localized losses of adhesion. Use of an acrylic primer can improve overall ink adhesion.
- Select **Clear Sheet** when configuring and loading these media.
- Use a Clear Sheet media profile from the RIP software.

Output handling

- Use caution when loading or lifting sheets off the table as the media and ink can be easily scratched.
- Use clean, cotton gloves to avoid fingerprints.

Aluminum composite

Brand name examples: Alumacore™, Alupalite®, Dibond®, Graphic-AL™, Omega-Bond™

Preparation

- Peel the protective film off one side, leaving the other side protected until finishing or installation of the finished graphic.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.
- Ensure the media is flat and there are no damaged corners, edges or ends.

Recommended print modes

- Indoor Signage Plus or Photo profile. For increased saturation, use the Photo – Saturated or Photo Plus – Saturated profile.
- Select **Aluminum Composite** when configuring and loading these media.
- Media placement detection is disabled when using these media. When loading the media, it is necessary to enter the location of the left (user side) and right (service side) edges of the media according to the Media Measurement Option selection.
- If the edges are bent, they should be flattened before imaging. A head height higher than the standard 0.085 inches (2.2 mm) may be necessary to avoid damaged or bowed edges that will interfere with the path of the carriage.
- Use an Aluminum Composite media profile from the RIP software.
- For increased saturation on non-white or brushed aluminum surfaces, use the RIP software's Saturated Rendering Intent option or select Photo – Saturated or Photo Plus – Saturated profile.

Output handling

- Use caution when loading or lifting sheets off the table as the media and ink can be easily scratched.

Known incompatibility

- Avoid using aluminum composite materials, such as Alucobond®, that have a polyvinylidene fluoride (PVDF) surface coating. PVDF-coated materials have reduced ink adhesion and may not work for some applications.

Compressed cardboard or cardstock

Also known as: cover stock, paperboard, pasteboard, tag board

Preparation

- Store media flat, in a clean environment with the same or similar temperature and humidity as the printer. Changes in temperature or humidity will cause the material to warp.
- Some coated sheets may interact with the ink yielding poor image quality. Test coated materials for compatibility before purchasing significant quantities.
- Clean with a lint-free cloth to remove any dust and debris.
- Use gloves when handling the media to avoid transferring fingerprints and oils to the print surface.
- The material can bend and crease easily. Watch for edges that may strike the carriage.

Recommended print modes

- Depending on application, ink coverage and image content, all print modes may print acceptably.

Printing

- Select **Card Stock** when configuring and loading these media.
- Some colored media may not be able to be detected by the onboard camera. If so, create a copy of the Card Stock media using the Media Wizard and change the **Detectable by Printer** option to **No**.
- Use the lowest possible UV lamp power setting to cure the ink.
- Use a Card Stock media profile from the RIP software.
- Some materials are more porous and absorb the ink giving a washed out appearance. Use the RIP software's **Saturated Rendering Intent** option to increase saturation.

Output handling

- Use gloves to avoid transferring fingerprints and oils to the print surface.
- Use caution when lifting it off table to avoid creases.

Corrugated cardboard

Also known as: corrugated fiberboard, box board

Preparation

- Store media flat, in a clean environment with the same or similar temperature and humidity as the printer. Changes in temperature or humidity will cause the material to warp.
- Clean with a lint-free cloth to remove any dust and debris.
- The material can bend and crease easily. Watch for edges that may strike the carriage.

Recommended print modes

- Depending on application, ink coverage and image content, all print modes may print acceptably. Faster print modes are less susceptible to bowing of the media due to heat.

Printing

- Select **Corrugated Cardboard** when configuring and loading these media.
- Some colored media may not be able to be detected by the onboard camera. If so, create a copy of the Card Stock media using the Media Wizard and change the **Detectable by Printer** option to **No**.
- Use the **Warped Media** option when loading non-flat media. Using this option reduces the available print area.
- Use the lowest possible UV lamp power setting to cure the ink.
- Use a Corrugated Cardboard media profile from the RIP software.
- Some materials are more porous and absorb the ink giving a washed out appearance. Use the RIP software's **Saturated Rendering Intent** option to increase saturation.

Output handling

- Use caution when lifting it off table to avoid creases.

Corrugated plastic

Also known as: corrugated or fluted polypropylene

Brand name examples: Corflute[®], Coroplast[®], Correx[®]

Preparation

- The quality of corrugated polypropylene can vary greatly. A corona treatment is generally applied when manufactured to increase the surface tension for better ink adhesion. This corona treatment will diminish over time. Material that has been shipped long distances or stored for an extended period of time will have more problems with ink adhesion.
- This material tends to hold static charge; avoid sliding the media from the stack or carrying across carpeted surfaces.
- Review and follow the steps in the Static Electricity chapter of this guide.
- Ensure that media tables are attached and secured to the printer to provide a grounding path for static loaded material.
- Media is often supplied un-square, so trimming it to square may be necessary for some applications, such as edge-to-edge printing. Make sure all edges are cut clean and are free of burrs and/or excess material.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Recommended print modes

- Depending on application, ink coverage and image content, all print modes may print acceptably.
- Faster print speeds can be obtained without noticeable banding by feeding the media with the flutes in parallel with the printhead carriage motion.

Printing

- Select **Corrugated Plastic** when configuring and loading these media.
- Non-white media may not be able to be detected by the onboard camera. If so, create a copy of the Corrugated Plastic media using the Media Wizard and change the **Detectable by Printer** option to **No**.
- Use the lowest possible UV lamp power setting to cure the ink.
- Media is heat-sensitive. It may require a higher vacuum setting, faster print modes, higher-than-standard head height, and printing delays in some combination to achieve best output.
- Use a Corrugated Plastic media profile from the RIP software.

Output handling

- Ink adhesion improves over 24 hours. Sometimes it is beneficial to wait 24 hours before cutting full-bleed prints.

Foam board

Brand names examples: Fome-Cor®, Kapa®, MightyCore®

Preparation

- Store media flat, in a clean environment with the same or similar temperature and humidity as the printer. Changes in temperature or humidity will cause the material to warp.
- Clean with a lint-free cloth to remove any dust and debris.
- The material is easily susceptible to dents and damages. Watch for corners and edges that may strike the carriage.

Recommended print modes

- Depending on application, ink coverage and image content, all print modes may print acceptably.

Printing

- Select **Foam Board** when configuring and loading these media.
- Non-white media may not be able to be detected by the onboard camera. If so, create a copy of the Foam Board media using the Media Wizard and change the **Detectable by Printer** option to **No**.
- Use the lowest possible UV lamp power setting to cure the ink.
- Media is heat-sensitive. It may require a higher vacuum setting, faster print modes, higher- than-standard head height, and printing delays in some combination to achieve best output.
- Use a Foam Board media profile from the RIP software.

Output handling

- You can usually recover from heat warp by laying the media flat and allowing it to cool.
- Always use a very sharp blade when trimming.
- Substrate is susceptible to dents and it damages more easily than most media types.

Known incompatibility

- Kapa® Color is a series of foam boards with a colored plastic-coated cellucarton covering layer that is known to interact with the ink and have poor image quality.

Foam PVC

Also known as: closed-cell PVC foamboard

Brand names examples: Celtec®, Forex®, Komatex®, Sintra®

Preparation

- If the media has a protective film attached, peel the protective film off of one side, leaving the other side protected until finishing or installation of the finished graphic.
- If one side is smoother than the other, print on the rougher side for best adhesion.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Recommended print modes

- Depending on application, ink coverage and image content, all print modes may print acceptably.

Printing

- Select **Foam PVC** when configuring and loading these media.
- Use a Foam PVC media profile from the RIP software.

Output handling

- No special handling required.
- If ink adhesion is inadequate, print with a higher quality mode and/or wait 24 hours before finishing. Always use a sharp blade when cutting.

Glass

Considerations

- The smooth, non-porous surface of glass does not provide a good interface for ink to adhere making it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the the printed piece to protect it from abrasion.
- Adhesion can be improved with the use of a pre-treatment or primer, such as HP PT40 Specialty Glass Scitex Primer – part number CD571A.

Preparation

- Use a lint-free cloth with a glass cleaner to remove dust or debris. Do not use a detergent.
- Use clean, cotton gloves to avoid fingerprints.
- If a pre-treatment primer is used, apply it according to the instructions and allow it to dry before printing.

Recommended print modes

- Photo Plus profile for applications that will be viewed from the printed surface. For increased saturation, use Photo – Saturated or Photo Plus – Saturated.
- Indoor Signage Plus or higher quality for applications that will be viewed through the glass and either a white ink overflow is used or white backer is applied over the printed surface. Flip the image in the RIP software prior to printing for view-through applications.
- Photo – Backlit or Photo Plus – Backlit, using either Spot or Overflow modes, for backlit applications.

Printing

- Select **Clear Sheet** when configuring and loading these media.
- Media placement detection is disabled when using these media. When loading the media, it is necessary to enter the location of the left (user side) and right (service side) edges of the media according to the **Media Measurement Option** selection.
- Use a Clear Sheet media profile from the RIP software.
- For applications that require fine detail, use the **Fine Text** option and/or lower the printhead height from its nominal 0.085 inch (2.2 mm) setting.

Output handling

- Use clean, cotton gloves to avoid fingerprints.
- Take care when loading or lifting sheets off the table as media and ink can be easily scratched.
- Depending on the end use application, a post treatment may be necessary to minimize risk of surface damage.

Plywood

Examples: Raw, primed or painted plywood, MDO, MDF

Preparation

- Store media flat, in a clean environment with the same or similar temperature and humidity as the printer. Changes in temperature or humidity will cause the material to warp.
- Media is often supplied un-square, so trimming it to square may be necessary for some applications, such as edge to edge printing. Make sure all edges are cut clean and are free of burrs and/or excess material.
- Use compressed air to blow dust and debris from printing surface.

Recommended print modes

- Depending on application, ink coverage, image content and wood surface, all print modes may print acceptably.
- Select **Plywood** when configuring and loading these media.
- Some surfaces are more porous and absorb the ink giving a washed out appearance. Use the RIP software's Saturated Rendering Intent option to increase saturation.
- Non-white media may not be able to be detected by the onboard camera. If so, create a copy of the Plywood media using the Media Wizard and change the **Detectable by Printer** option to **No**.
- Due to the strength and shape memory of wood products the printer may not be able to feed some warped sheets.
- A head height higher than the nominal 0.085 inch (2.2 mm) setting may be necessary to avoid carriage scraping on non-flat materials.
- Use a Plywood media profile from the RIP software.

Output handling

- These materials are heavy in larger sizes. Do not exceed 150 lb. (68 kg).

Polycarbonate sheet

Brand names examples: Lexan®, Makrolon®, Tuffak®

Considerations

- In general, ink adhesion is better on polycarbonate than on acrylic or glass.
- However, the smooth, non-porous surface does make it susceptible to scratches and scraping. Special precautions are necessary in the handling and display the printed piece to protect it from abrasion.
- Adhesion can be improved with the use of a pre-treatment or primer, such as HP PT70 Specialty Polycarbonate Scitex Primer – part number CD574A.

Preparation

- Peel the protective film off one side, leaving the other side protected until finishing or installation of the finished graphic.
- This material tends to hold static charge. Review and follow the steps in the Static Electricity chapter of this guide.
- Ensure that media tables are attached and secured to the printer to provide a grounding path for static loaded material.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.
- Depending on end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Recommended print modes

- Photo Plus profile for applications that will be viewed from the printed surface. For increased saturation, use Photo – Saturated or Photo Plus – Saturated.
- Indoor Signage Plus or higher quality for applications that will be viewed through the glass and either a white ink overflow is used or white backer is applied over the printed surface. Flip the image in the RIP software prior to printing for view-through applications.
- Photo – Backlit or Photo Plus – Backlit, using either Spot or Overflow modes, for backlit applications.

Printing

- Select **Clear Sheet** when configuring and loading these media.
- Media placement detection is disabled when using these media. When loading the media, it is necessary to enter the location of the left (user side) and right (service side) edges of the media according to the **Media Measurement Option** selection.
- Use a Clear Sheet media profile from the RIP software.
- For applications that require fine detail, use the Fine Text option and/or lower the printhead height from its nominal 0.085 inch (2.2 mm) setting.

Output handling

- Use clean, cotton gloves to avoid fingerprints.
- Take care when loading or lifting sheets off the table as media and ink can be easily scratched.

- Depending on the end use application, a post treatment may be necessary to minimize risk of surface damage.

Polystyrene sheet

Examples: High impact polystyrene sheet, HIPS

Preparation

- This material tends to hold static charge; avoid sliding the media from the stack or carrying across carpeted surfaces.
- Review and follow the steps in the Static Electricity chapter of this guide.
- Ensure that media tables are attached and secured to the printer to provide a grounding path for static loaded material.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Recommended print modes

- Indoor Signage Plus, Photo or Photo Plus.

Printing

- Select **Polystyrene** when configuring and loading these media.
- Use the lowest possible UV lamp power setting to cure the ink.
- Media is heat-sensitive, specifically thinner sheets (less than 0.015 inch or 0.4 mm). It may require a higher vacuum setting, faster print modes, higher-than-standard head height, and printing delays in some combination to achieve best output.
- Use a Polystyrene media profile from the RIP software.

Output handling

- If ink adhesion is inadequate, print in a higher quality mode and/or wait 24 hours before finishing. Always use a sharp blade when cutting.

Polystyrene foam board

Brand name examples: Gatorplast®, Kapa® plast, Ultraboard®

Preparation

- This material tends to hold static charge; avoid sliding the media from the stack or carrying across carpeted surfaces.
- Review and follow the steps in the Static Electricity chapter of this guide.
- Ensure that media tables are attached and secured to the printer to provide a grounding path for static loaded material.
- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.
- If an anti-static tack cloth is not available, 90%-or-higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Recommended print modes

- Indoor Signage Plus, Photo or Photo Plus.

Printing

- Select **Polystyrene Foam Board** when configuring and loading these media.
- Media is heat-sensitive. A print delay of 1 second or more is needed to avoid bowing of the media, which can cause contact with the printhead carriage assembly.
- It may also require a higher vacuum setting, faster print modes and higher-than-standard head height in some combination to achieve best output.
- Use the lowest possible UV lamp power setting to cure the ink.
- Use 6 inch (15 cm) leading margin on each sheet or use the **Warped Media** setting to maximize available vacuum to hold sheet flat.
- Use a Polystyrene Foam Board media profile from the RIP software.

Output handling

- Use clean, cotton gloves to avoid fingerprints.
- If ink adhesion is inadequate, print in a higher quality mode and/or wait 24 hours before finishing. Always use a sharp blade when cutting.

Appendix A – Pre-defined Media Wizard settings

Media type name	Feed method	Media weight	Detectable by printer	Use rollers	Conductive	Vacuum fan level	Examples
Aluminum Composite	Sheet	Light	No	Yes	Yes	Medium	Alumacore, Alupalite, Dibond, Graphic-AL, Omega-Bond
Clear Sheet	Sheet	Light	No	Yes	No	Medium	Acrylic, Plexiglas, Glass, Polycarbonate
Compressed Cardboard / Cardstock	Sheet	Light	Yes	Yes	No	High	Tag board, Poster board
Corrugated Cardboard	Sheet	Light	Yes	Yes	No	High	Cardboard, Corrugated fiberboard
Corrugated Plastic	Sheet	Light	Yes	Yes	No	Medium	Coroplast, Correx, Corflute, Polypropylene
Foam Board	Sheet	Light	Yes	Yes	No	High	Fome Core, Mighty Core
Foam PVC	Sheet	Light	Yes	Yes	No	Medium	Sintra, Komatex, Celtec, Forex
Magnetic	Sheet	Light	Yes	Yes	Yes	Medium	Promag
Plywood	Sheet	Heavy	Yes	Yes	No	Off	MDO, MDF
Polystyrene	Sheet	Light	Yes	Yes	No	Medium	Styrene
Polystyrene Foam Board	Sheet	Light	Yes	Yes	No	Medium	Gatorplast, Ultraboard
Backlit Banner	Roll ¹	-	No	Yes	No	Medium	Translucent backlit film, Backlit banner
Frontlit Banner	Roll ¹	-	Yes	Yes	No	Medium	Scrim banner vinyl, PVC flex film
Canvas	Roll ¹	-	Yes	Yes	No	Medium	HP Satin Canvas
Clear Film	Roll ¹	-	No	Yes	No	Medium	Polyester film, Cling vinyl
Photobase	Roll ¹	-	Yes	Yes	No	Medium	HP UV Premium Photobase Paper
Self-Adhesive Vinyl (SAV)	Roll ¹	-	Yes	Yes	No	Medium	Calendered vinyl, Cast vinyl
Textile	Roll ¹	-	Yes	Yes	No	Medium	HP Heavy Textile Banner

1) Available when the optional HP Scitex FB550 or FB750 Roll-to-Roll Upgrade Kit has been installed and enabled