Scitex FB550 and FB750 Printers

User's Guide

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1   Introduction

Operating requirements

Electrical

- Make sure the line voltage meets the requirements. See Specifications on page 103 for details.

- Use the supplied power cord. Plug it directly into a grounded electrical outlet. Do not lengthen the power cord with an extension cord; the resulting drop in voltage could damage the printer.

- To maintain vacuum to the printheads during printer power-down or unexpected power outages, use the auxiliary 24 volt power supply (included in the accessory kit with universal power adapters). Connect the 24 VDC jack on the vacuum assembly to either of two options:

  ◦ UPS — Customer-supplied uninterruptable power supply, output 100-240 VAC, 50/60 Hz, minimum of 15 watts of power, provides battery backup to the vacuum system in the event of a power failure.

  ◦ Wall outlet — 100-240 VAC, 50/60 Hz, provides temporary power to the vacuum system when it is necessary to power down the printer for service. See Appendix A, Technical Specifications, for details.

- Connect printer to its own electrical circuit. Do not connect the RIP, auxiliary power supply, or UPS into the same circuit as the printer.

Environmental

- Make sure the room is well ventilated, with a temperature and relative humidity within specifications. Optimal printing occurs within these ranges. See Specifications on page 103 for details.

- The high power UV light emitted by the curing lamps reacts with oxygen and produces ozone. This formation tends to be greatest during lamp startup. The printer should be operated in a well-ventilated area to avoid minor effects such as headaches, fatigue, and dryness of the upper respiratory tract. Normal air movement will mix the ozone with fresh air, causing it to revert back to oxygen.

- Store media and ink in an area with similar temperature and humidity conditions as the printer.

- Locate the printer so that it can be connected to the RIP with the specified cable.

- Locate the printer on a flat, level floor.

- Locate the printer where its normal operating noise will not disturb quiet work areas.

- DO NOT install the printer near humidifiers, refrigerators, fans, water faucets, heaters or similar equipment.

- DO NOT install the printer in areas where the temperature changes abruptly, such as near air conditioners, in the path of direct sunlight, or near open doors or windows.

- DO NOT expose the printer to flames or dust.

RIP

The printer receives print jobs from a supported raster image processor (RIP). The RIP is installed and connected during the printer installation process.

Important operating notes

- UV CURE INK IS PERISHABLE. Unlike other inks used in wide format printing, UV cure ink has a limited shelf life. White ink has a six month shelf life from the date of manufacture. Plan to rotate your ink stock and use it promptly by the date printed on the ink box.

  ⚠ **CAUTION:** When the UV lamps are switched off, they undergo a controlled cool-down cycle. Sudden removal of power from hot lamps, such as disconnecting the power cord or from a power outage, can result in overheating and permanent damage. The lamps should be switched off only via the printer software.

  📝 **NOTE:** A customer-supplied UPS will not support the UV cool-down cycle.

- The media supply may be wound either printed-side-out or printed-side-in, but the takeup must be loaded printed-side-in.

- The default head height is set to 2.2 mm (0.085 in) above the media. (The space below the carriage will measure 1.78 mm (0.070 in) due to the printhead protection frame around the outside of the carriage.) The head height can be adjusted up or down at the control panel (**Printing** > **Options**).

- The Media Wizard stores a set of operational parameters for predefined and user-defined media types. When you load a new media type, select an existing Media Wizard set, or create a custom set. Media Wizard parameter sets can be selected at any time from the control panel.

- Wear cotton gloves when loading media to prevent fingerprints that could show after printing. You can use a 90% solution of isopropyl alcohol (IPA) to clean fingerprints and reduce static electricity on synthetic media (allow to dry five minutes before printing).

- DO NOT reprint over any output that has not completely cured (for example, due to a UV lamp malfunction).

- DO NOT rest or store a media roll on end, or you could cause edge creases that could strike the printheads during printing. To avoid bowing, store sheet-fed media flat, not standing on end.

- DO NOT set heavy objects on the power cord or printer cable; do not bend the cables or force them into contorted positions.

- DO NOT place heavy objects anywhere on the printer.

- Since automatic head maintenance cannot occur when the printer is powered down, keep the printer powered on at all times if possible. The printer will enter a power-saving Sleep Mode if idle for a user-defined period of time. If automatic head maintenance does not occur for an extended period, manual purging may be necessary to restore the printheads to working condition (see Startup and check jet health on page 114). If all power is lost to the printer, ink will drip from the printheads due to loss of printhead vacuum, collect on the bottom of the carriage, and drip into the printer or onto the media drive belt. Keep the printer connected to a UPS to prevent vacuum loss to the printheads (see Electrical on page 2).

- If the printer will be completely powered down for an extended period (such as over a long holiday period), all printheads should be emptied of ink (see Printhead Procedures under Maintenance menu on page 41) and the bottom of the carriage cleaned. To resume printing, the printheads must be refilled with ink, purged, and restored to working condition. See User cleaning on page 74 and Startup and check jet health on page 114 for instructions.

Safety warnings

- UV light — The ultraviolet (UV) curing lamps emit high power UV light. The printer must be operated with all safety shielding installed to protect the operator from eye and skin damage. When operated according to manufacturer's instructions, safety glasses or other protective clothing are not necessary.

- Mechanical hazards — Keep fingers away from carriage and media path. Do not exceed the maximum weight load of the input or output tables, as printed on the label.

- Ink — Read and practice safety guidelines as outlined in the Material Safety Data Sheet (MSDS) for the ink, and post the document in the work area as required by prevailing law. Avoid any contact with skin and eyes. Provide adequate general and local exhaust ventilation. Avoid breathing vapors. Respirator protection may be required under exceptional circumstances when excessive air contamination exists. None of the component substances have established exposure standards per OSHA, NIOSH, or ACGIH. Collect waste ink in container provided. Dispose of ink according to MSDS and local regulations. Keep the waste-ink spigot closed during printing.

- Special ventilation is not required to meet US OSHA requirements on occupational exposure to VOCs from the HP UV-curable inks used with the printer. Special ventilation equipment installation is at the discretion of the customer; no specific HP recommendation is intended. Customers should consult state and local requirements and regulations.

- Electrical — WITH THE POWER SWITCH IN THE OFF POSITION, POWER MAY STILL BE SUPPLIED TO THE PRINTER COMPONENTS. To completely cut power from the printer, you must unplug the power cord from the power outlet.

- Ozone — The high power UV light emitted by the curing lamps and ionizer bar reacts with oxygen and produces ozone. This formation tends to be greatest during lamp startup. The lamps include ozone filters to reduce ozone production. The printer should be operated in a well-ventilated area to avoid minor effects such as headaches, fatigue, and dryness of the upper respiratory tract. Normal air movement will mix the ozone with fresh air, causing it to revert back to oxygen.

- Hazardous waste — THE PRINTER ELECTRONICS ASSEMBLY CONTAINS A LITHIUM BATTERY DEVICE. THERE IS A DANGER OF EXPLOSION IF THE BATTERY IS INCORRECTLY REPLACED. The battery must be replaced only by authorized service providers, and must be replaced only with the same or equivalent type. Dispose of this lithium battery device in accordance with local, state (or province), and Federal (or country) solid waste requirements.

Quick tour

Figure 1-1 Input side
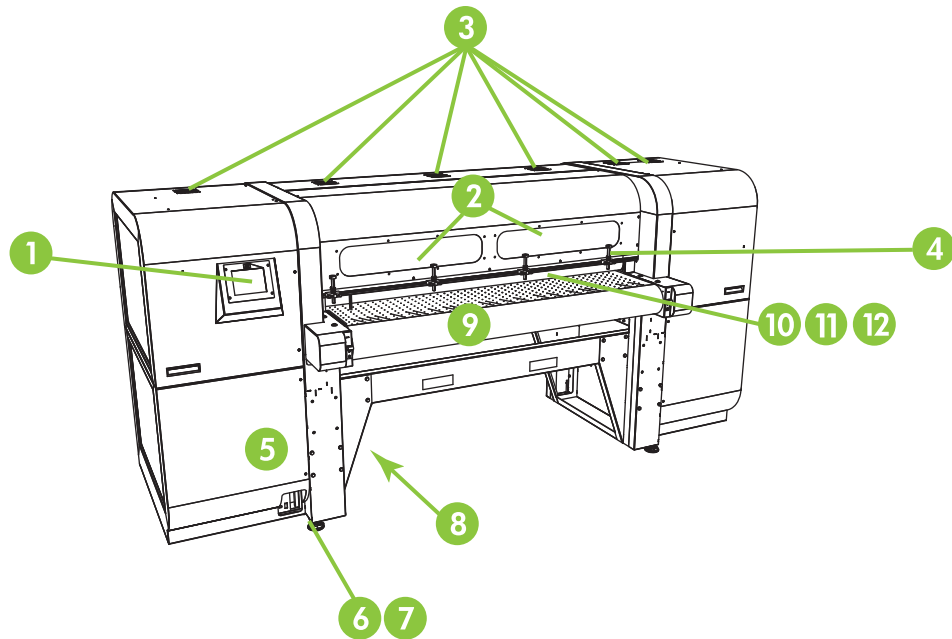
1. Touch-screen control panel

2. UV-filtered observation windows

3. Exhaust vents

4. Rigid media alignment pins

5. Electronics box (inside enclosure)

6. Data ports

7. Main power switch

8. Main power, takeup system power inlet ports, serial number and regulatory label (on lower enclosure)

9. Media drive belt

10. Media input roller (inside cover)

11. Media alignment bar (inside cover)

12. Media output roller (inside cover)

13. Profiler docking station

Figure 1-2 Ink supply compartment
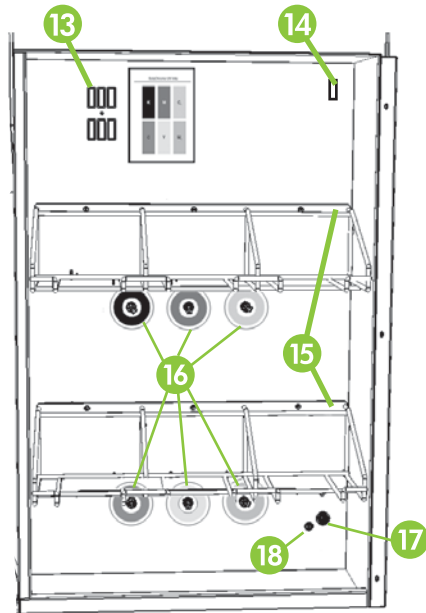
14. Ink homogenizer power outlet

15. Ink supply rack

16. Ink connections

17. Vacuum system auxiliary power inlet

18. Vacuum adjustment knob (factory adjustment, do not change)

Figure 1-3 Output side
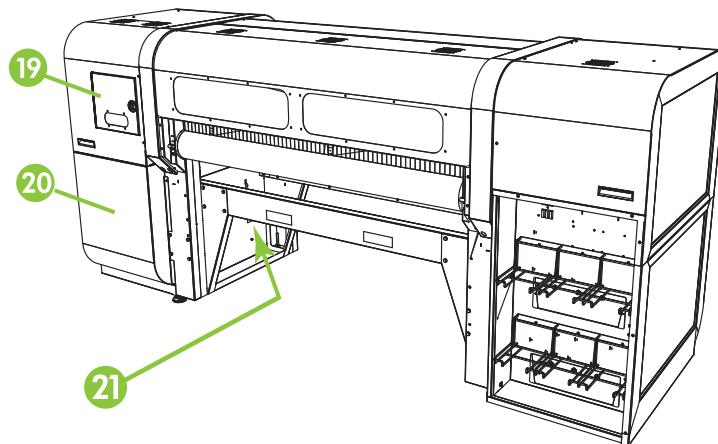
19. Service station and printhead carriage access door

20. Printhead maintenance vacuum (inside enclosure)

21. Waste ink spigot

Special features

Printheads

- Printheads — variable drop size, piezoelectric printheads.

Ink system

- Off-Head System (OHS) — Bulk ink boxes with integrated filters. No-drip quick connectors simplify ink box replacement.

- Onboard vacuum system — Provides vacuum to maintain negative printhead pressure.

- Patented automated printhead service station — Fully maintains the health of the printheads while idle or in service, without operator intervention.

- HP White Ink Homogenizer — Part of the optional white ink upgrade accessory kit, keeps white pigments dispersed for optimal print quality. The white ink upgrade option and white ink cartridge are required to print with white ink. See Order accessories on page 73 and Order ink supplies on page 24 for ordering information.

Media handling

- Automatic head height — Printer automatically sets the correct head height above sheet-fed media.

- Automatic media width sensing — Automatically detects the width and position of sheet-fed media, for precise image placement (for detectable media, otherwise the manual method can be used).

- Built-in static charge abatement — Ionizer bars help dissipate static electric charge from synthetic media.

- Rigid media tables feature a flip-up top for space-saving storage: it flips up for use, and down for storage.

- Optional extension tables can be added to the ends of the standard tables to handle longer sheets of media. See Order accessories on page 73 for ordering information.

- Optional roll-fed media supply and takeup system with table-top roll holder is available for handling roll-fed media. See Order accessories on page 73 for ordering information.

Calibration

The printer uses a high-resolution digital imaging sensor (camera) and embedded software to align the printheads, and to detect and replace missing jets. Manual and automatic calibrations are available.

- AutoSet calibration — Automatically aligns printheads bidirectionally for precise positioning of inkjet pixels, and runs AutoJet.

- AutoJet calibration— Compensates for most lost or misfiring jets by locating them and using substitute jets without slowing printing speed.

Performance and ease-of-use

- Media Wizard — Stores and recalls a set of operating parameters by media type and print mode, for optimal printing performance. Includes a set of predefined settings for standard media. You can also create and save custom settings for other media.

- Edge-to-edge printing — Provides the look of "full bleed" prints without trimming.

- Stored jobs — Stores print jobs on the printer's internal hard disk drive for subsequent reprinting without having to resend it from the RIP.

- Simplified control panel interface — Touch-screen control panel with graphical interface presents frequently-used functions. A menu provides access to less-frequently used functions and troubleshooting help.

- User assistance — Control panel features online help, interactive procedures, scheduled cleaning reminders, and diagnostics to assist the user, reducing training and troubleshooting time.

- HP Embedded Web Server — By entering the printer's IP address into the address bar of any web browser on your local area network, you can view printer status, change certain settings, upgrade the printer firmware, and download system log files.

Use the HP Embedded Web Server

When the printer is connected to your local area network (LAN), you can enter the printer's IP address into the address bar of your web browser to display printer status, set the internal date and time of the printer, download a log file, update the printer firmware, and transfer a custom Media Wizard definition.

Connect to the HP Embedded Web Server

To connect to the Embedded Web Server, open a web browser on any computer connected to the same network as the printer, and enter the printer's IP address into the browser (http://[ip-address]). The printer's IP address is displayed on the System screen of the printer's control panel. When the browser connects to the printer, the Embedded Web Server displays its home page.

Display the printer status

To display the printer status, including media type loaded and amount of ink remaining, select the printer status option from the Embedded Web Server menu.

Display the current control panel image

To display an image of the screen that is currently displayed on the control panel, select the option from the Embedded Web Server menu.

Set the date and time

To set the printer date and time, select this option from the Embedded Web Server menu. Enter the current date and time as specified on this screen, and click the Set Time button.

📝 **NOTE:** To ensure the proper scheduling of automatic maintenance operations and times and dates in event logs, verify the correct local time on the printer, and adjust as needed for daylight savings time changes if observed at your location.

Download a printer events file

The printer maintains a continuous log of its operations and settings in plain text files, which it stores on its internal hard disk drive. These files are useful for troubleshooting. To access these files, select the Get Printer Events Files option from the Embedded Web Server menu. From the list of files, click the link to the file you want to view or save to your computer.

Update the printer software

HP occasionally issues new versions of the embedded software (printer firmware). After obtaining an update file, you can use the Embedded Web Server to install it onto the printer.

From the Embedded Web Server, select the Update Printer Software option from the menu. Follow the onscreen instructions to upload and install the software update.

Transfer a custom media definition

The Media Wizard enables you to define custom media definitions, in addition to the standard definitions that are supplied with the printer. You can use the Embedded Web Server to download a custom media definition from a printer to your computer, then upload it to a different printer.

When you select Retrieve Custom Media File from the web server, the web server displays a list of custom media definitions that exist on the printer. Select one of these definitions, and it is saved to your computer.

To send a custom media definition to a printer, enter its IP address into the web browser. When you choose Select Custom Media File to Install from the web server, the web server prompts you to browse to and enter the name of the file you want to send to the printer. When you click Send, the file is sent to the printer. After the printer receives the file, it should be visible on the printer's control panel in the list of media.

Display job accounting information

Select Job Accounting to display information for each print job, such as date and time printed, and amount of media and ink used.

Display printer usage data

Select Printer Usage to display the cumulative amounts of sheet-fed media, roll-fed media, and ink used for the life of the printer.

2 Configure and load media

- [Configure media](#)
- [Work with the rigid media tables](#)
- [Load rigid media](#)
- [Load roll-fed media with table-top roll holder](#)

Configure media

Before the printer will accept a print job, it must be configured for a specific media type. The currently-configured media type, if any, is displayed on the Home page of the control panel.

1. If the control panel displays the media type you intend to load, press **Load** and go to Load rigid media on page 14. Otherwise, continue to the next step.

2. In the Activity Tray on the control panel, press the **Media** icon. The Media screen appears.

    See Use the control panel on page 34 for a complete description of the control panel screens and options.

3. Press **Configure**.

    The **Select Media to Load** menu appears.

4. Press a media name, or **Create Media Type**.

    The list of media types ends with the option **Create Media Type** (page down to the end of the list by pressing the page down button).

    ●   If you press a media name, a list of settings appears for you to review. See Media Wizard on page 11 for a description of the settings.

    ●   If you press **Create Media Type**, the control panel prompts you to select a standard media type to use as a starting point for the new media type settings. After you select a standard media type, the control panel prompts you for a name for the new media type, then a list of settings appears for you to review and change if necessary.Media Wizard on page 11 for a description of the settings.

    ☼ **TIP:**   Start by using one of the standard media types. If you are not using a standard media type, select the standard media type that most closely matches the media you are using. Then only if necessary, create a new media type using the standard type you selected as a starting point, and adjust it as needed.

5. Review and change (for previously-created custom media types only) the media settings as needed.

6. Press **Out** or **Proceed** once or twice until the printer displays the prompt "Load media now?"

7. Press **No** to save your configuration and cancel the load process, or press **Yes** and proceed to Load rigid media on page 14 or Load roll-fed media with table-top roll holder on page 19.

📝 **NOTE:**   When you create a custom media type on the printer, in order to print on the new media type, you must also add the new media type using Media Manager for the Onyx RIP, or EasyMedia for the Caldera RIP. Refer to the documentation for your RIP for instructions.

Media Wizard

To view or delete settings for an existing media type, press **Media** > **Wizard**. The Media Wizard also lets you create a media type without configuring it as the currently-loaded media.

For each media type, the Media Wizard stores the following settings (as indicated, some settings apply to either roll-fed or sheet-fed media only):

●   **General Media Settings**

To change the general media settings, press **Media** > **Wizard** > **Create Media Type** > **Proceed** > select closest media type > **Proceed** > enter media name > **Proceed** > **Proceed** > **Yes** > **Change General Media Settings**.

◦ **Vacuum Fan Level** — Adjusts the amount of vacuum at the media drive belt. Observe the media as the fan speed changes. If the media is lifting off the belt, increase the fan speed. If the media advance seems impeded by the vacuum, decrease the fan speed.

◦ **Feed Method** — **Roll-fed** (with optional supply and takeup system installed) or **Cut Sheet**.

◦ **Weight** — Sets the media belt drive motor and media advance amount to handle **Light** (up to 22 kg (50 lb)) or **Heavy** (22–113 kg (50–250 lb)) media.

⚠ **CAUTION:** The input and output tables are rated at a maximum load of 68.0 kg (150 lb). Do not exceed this maximum load.

◦ **Misc Settings**

  • **Use Rollers** — Sets whether the Input and Output media rollers are used (**Yes**) or not used (**No**) with the Flat Media setting (see Load rigid media on page 14). When set to **Yes**, the rollers will move up or down as needed to be just above the surface of the media. When set to **No**, the rollers will move to their highest point and remain there.

  • **Detectable to Printer** — If **Yes**, the media sensor and image sensor will be used. If **No**, the media sensor and image sensor will not be used (with clear films, for example).

  • **Conductive** — Sets whether the ionizer bar is used.

• **Print Mode Specific Settings** — For custom media types, this screen enables you to adjust the settings for each print mode and color set combination. See Available print modes on page 26 for a detailed description of print modes and color sets.

To change the print mode specific settings, press **Media** > **Wizard** > **Create Media Type** > **Proceed** > select closest media type > **Proceed** > enter media name > **Proceed** > **Proceed** > **Yes** > **View Print Mode Specific Settings**.

◦ **Print Mode** — Select the print mode whose settings you want to change.

◦ **Color Set** — Select the color set whose settings you want to change.

◦ **Change Print Mode Specific Settings** — Change settings for the print mode and color set you selected.

  • **Select UV Lamp Power** — A high lamp power setting increases ink curing power, important at high speeds and for older lamps that are losing their intensity; a low setting for newer lamps extends their life.

    Closing the shutter on the trailing lamp blocks the UV light from the lamp, which allows the drop of jetted ink to spread out more before it is cured, resulting in a glossier look to the print. The color profile used must take this into account for accurate color matching.

  • **Select Print Delay** — A longer printing delay helps dissipate heat from heat-sensitive substrates, while a shorter delay speeds printing throughput.

Work with the rigid media tables

Figure 2-1 Output (1) and input (2) tables
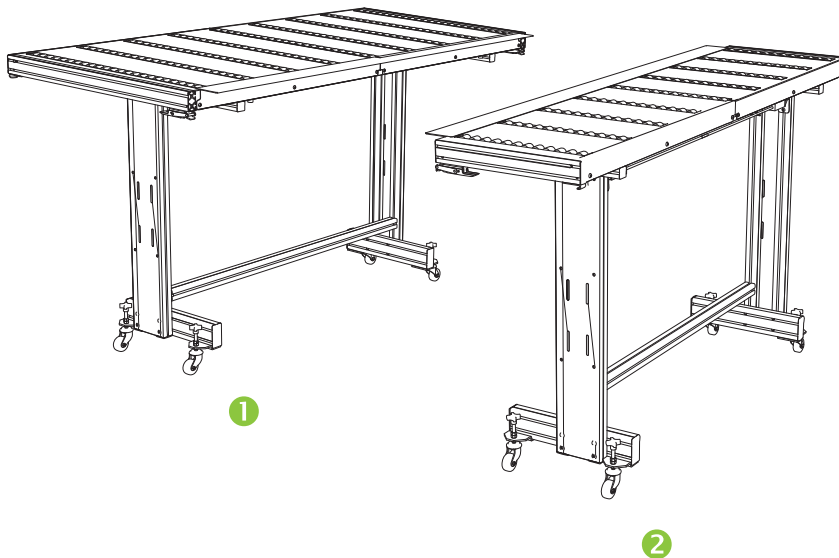
The printer includes a set of standard input and output tables for rigid media handling: one for the input side of the printer, and one for the output side. These tables are assembled, installed and leveled when the printer is installed. The tables are designed to be used only when the tabletop is in the horizontal position and latched to the printer. The latches, see (1) Figure 2-2 Table latches and release cable on page 13, are needed for safety, print quality, and to provide a ground path to discharge the electrostatic charge from synthetic media.

The tabletop can be pivoted to a near-vertical position to save space during storage. After detaching the tables from the printer, release the tabletop latches by pulling the release cable, see (2) Figure 2-2 Table latches and release cable on page 13, under the tabletop. To return the tabletop to its operating position, pivot the table top down and press down firmly to engage the latches.

Figure 2-2 Table latches and release cable
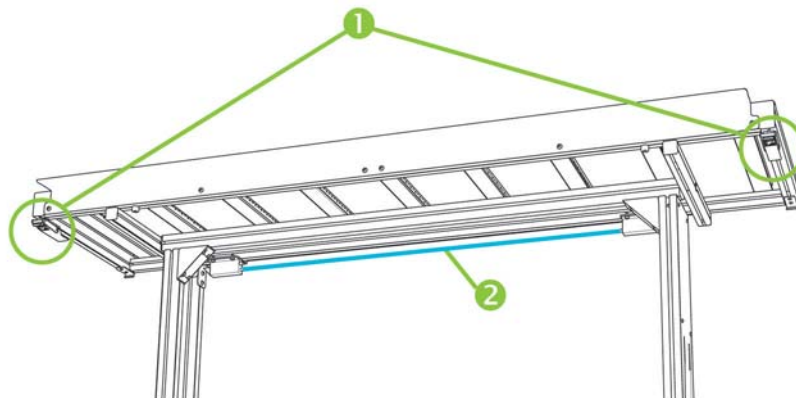
Optional extension tables are also available as accessories. When properly assembled and attached to the ends of the standard tables, the extension tables enable safe and reliable handling of large media sheets. During use, the extension tables must be latched to the standard tables for safety, print quality, and to provide a ground path to discharge the electrostatic charge from synthetic media. When not attached to the

standard tables, the extension table tops are designed to pivot into the storage position under their own weight.

⚠ **CAUTION:** The standard and accessory extension tables are intended for use only when attached to the printer as described in these instructions. When not in use, the tables should be stored with the table tops folded in the storage position. Use caution when operating the table tops and moving the tables, to avoid personal injury or damage to property.

📝 **NOTE:** If the accessory tables were properly leveled when they were installed, they should not have to be leveled again. If sheet-fed media feed problems occur, make sure the accessory tables are securely latched to the standard tables, and verify that the tables are level. Check for level over the fixed support assembly first, then over the folding support, and adjust the table wheels up or down as necessary.

Load rigid media

📝 **NOTE:** See Table A-2 Media sizes on page 104 for a list of supported media sizes.

1. If the rigid media tables are not already installed, position the input and output tables at each end of the media drive belt, and engage the attachment latches to the printer. Make sure that the pivoting table tops are securely latched in the operating position.

    📝 **NOTE:** If you have the optional roll-fed media accessory installed, remove the foam press rollers. The foam press rollers are not used with rigid media.

2. At the end of the Configure Media process (see Configure media on page 11), press **Yes** on the control panel; or press **Home** > **Load Media**.

    Before you can load, you must configure the media as explained in Configure media on page 11.

3. Select one of the following media rollers options, then press **Proceed**:

    ●   Flat Media — If the rollers were set to "Yes" in the media configuration (see Configure media on page 11), the rollers will move up or down as needed to be just above the surface of the media. If the rollers were set to "No", the rollers will remain at their highest point and will not be used. In either case, the full imageable length of the sheet is available for printing.

    ●   Warped Media, Hold Down — When a sheet is loaded, the leading edge is advanced so that it is underneath the output roller. Printing is allowed only until the trailing edge of the sheet has reached the input roller. The imageable area of the sheet is reduced by 65.4 cm (25.8 in) from both the leading and trailing edges.

    ●   Short Media — Enables printing on sheets that are not long enough to reach the output roller and thickness sensor at the same time. The media length must be at least 22 cm (8.5 in).

    📝 **NOTE:** The media rollers are lowered to just above the media with any force or pressure, other than their own weight. They are designed to hold down lighter weight media with at most a moderate amount of warping. They may have no effect on heavier, badly warped media. For best results, use the flattest available media.

4. Select the approximate thickness or enter the exact thickness of the media you are loading, then press **Proceed**.

5. Load the sheet of media onto the input table, sliding it forward against the media alignment bar (under the printhead carriage rail), then left along the media alignment bar until the media touches the leftmost alignment pin.

6. Press **Sheet Ready** on the control panel, or **Cancel** to cancel the media load process.

☀ **TIP:** Before you press Sheet Ready, you can press **Turn On Lamps** on the control panel to initiate their warm-up cycle while you complete the subsequent steps in the load process. This will enable printing to begin sooner than if you allow the lamps to be turned on automatically. You can also change the head height at this time.

7. Enter the number of sheets:

   ● Single sheet

   ● N-UP Sheet Feed (Same Dimensions) — For two or more sheets of the same size loaded at once across the width of the printer

   ● N-UP Sheet Feed (Different Dimensions) — For two or more sheets of different sizes loaded at once across the width of the printer

8. Select the media length from the list, or enter a length manually, then press **Proceed**.

   The printer measures the media, and the control panel displays a summary screen of the settings you specified.

9. Press **Proceed** to confirm that the media has loaded.

   The Home page appears.

10. Send a print job from the RIP or print a Stored Job from the printer.

    For multiple copy jobs ejected to the output side of the printer, the printer control panel will prompt for the next sheet a short time before the previous sheet is done printing. Load the subsequent sheet against the media alignment bar, and press Sheet Ready on the control panel. The printer prints on the next sheet and will use the same option settings on all of the copies in the print job.

Use the camera to locate the sheets

The on-carriage camera is used to locate the position of each sheet as part of the load process. To specify load options:

1. On the Printing page, press **Options**.

2. From the Options menu, press **Measure Media**.

   The Measure Media Frequency menu appears:

   ● Measure only on first load — Only the first row is measured, and those measurements are used for all subsequent rows. Use the alignment pins to locate the sheets in subsequent rows. This speeds throughput by eliminating the measurement step for each row.

   ● Measure on all loads — Each sheet in every row of sheets will be measured, and reported to the server. This aids in accurate placement of edge-to-edge images. In this mode, use of the alignment pins is unnecessary.

   ● Don't measure media — Does not measure the sheets, for fastest throughput. Use only if there are wide margins on all four sides, or for transparent media, which the printer cannot detect. Use the alignment pins to locate the sheets.

3. Press a Measure Media option.

   When you select a Measure Media option, the **Measure Media Type** menu appears. This enables you to select a trade-off between image placement accuracy and throughput.

   - Minimal — Measures the media width once, locates leading edge near the user side on subsequent loads.

   - Standard — Measures the media width once, estimates skew by locating the leading edge near the user and service sides on subsequent loads.

   - One Edge — On first load, measures both edges; on subsequent loads, measures the left edge only.

   - Maximal — On every load, measures the media width at two points to estimate skew, finds the leading edge near the user side.

   If the print job has wide margins, you can increase throughput with Minimal or One Edge. For edge-to-edge printing, increase accuracy by selecting Standard or Maximal.

4. Press a **Measure Media Type** option.

   After you select a Measure Media Type option, a message appears to remind you to load the same number of sheets with every N-UP group, until they have all been printed. Press Proceed to dismiss this message and return to the printer options menu.

Quick Load

After printing is complete, you can reload a sheet of the same media type and dimensions without reconfiguring the media. Use Quick Load or Load:

NOTE: This option is available if you select **Measure only on first load** from the Measure Media Frequency menu (see Use the camera to locate the sheets on page 15).

1. Press **Load** on the Home Page screen.

   The control panel displays a menu with a Quick Load and Load option.

   - To load a sheet of media with the same media type with the same dimensions as the previous job, press **Quick Load**.

   - To load a sheet of media with the same media type with the same dimensions as the previous job, but different flatness, thickness, or number of N-UP sheets, press **Load**. The control panel allows you to respecify these options.

2. Place the media onto the media drive belt, and push it flush against the media alignment bar, then left along the media alignment bar until it touches the leftmost alignment pin.

   At this point, the control panel allows you to adjust the vacuum fans and head height off the media.

3. Press **Sheet Ready** on the control panel.

   The printer is ready to receive the next job from the RIP or Stored Jobs on the printer.

Multi-sheet N-Up

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.
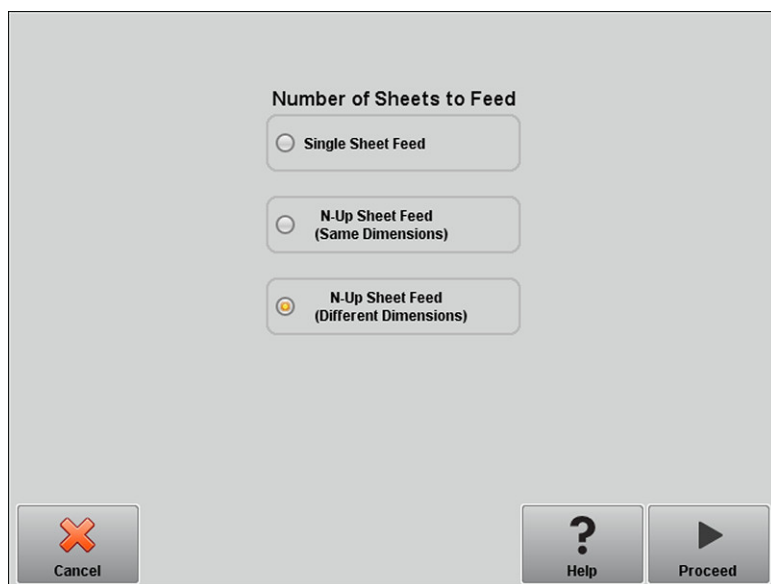
NOTE: When printing multi-sheet N-Up on media that cannot be detected by the printer's media sensor (black, dark colored, reflective, or clear), the sheets in each row must be spaced equally.

This type of printing works best with an image that has wide margins on all four edges, but edge-to-edge printing is also possible by carefully matching the dimensions of the image(s) to the dimensions of the media sheets. Margins can be defined by the RIP or can be set and adjusted on the printer.

To enable, select one of the **N-Up Sheet Feed** options 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 7.6 cm (3 in) apart from each other. Use the alignment pins if you will be printing multiple rows.

Number of Sheets to Feed

○ Single Sheet Feed

○ N-Up Sheet Feed
(Same Dimensions)

◉ N-Up Sheet Feed
(Different Dimensions)

Cancel   Help   Proceed

Table 2-1 Supported sheet configurations

	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

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.

Load roll-fed media with table-top roll holder

If the optional roll-fed media supply and takeup system with table-top roll holder is installed on the printer, you can print on roll-fed media in the following way.

NOTE: See Table A-2 Media sizes on page 104 for a list of supported media sizes.

1. If installed, detach the rigid media output table from the printer, and set it aside.

2. Install the table-top roll holders into the holes on the input table, allowing the media to be loaded centered on the printer.

3. Load media onto the table-top roll holder, spooling off the top, with the media centered.

    NOTE: The table-top roll holder supports only print side out.

    NOTE: To prevent fingerprints from showing on printed output, wear gloves while handling the media.

4. Configure the media as explained in Configure media on page 11. At the end of the Configure Media process, press **Proceed** on the control panel.

    OR

    If the media is already configured, from the Home page of the control panel, press **Load**.

    NOTE: Be sure to enter the correct media thickness. The printer can detect the thickness of sheet-fed media only if the media is loaded under the media thickness sensor, which is located at the user end of the carriage rail. For roll-fed media (if enabled), use the manufacturer's specification or use a caliper to measure the thickness.

5. As prompted by the control panel, ensure that only a single foam roller is being used and is in the storage position. Pull media from the spool and feed it into the printer, use the forward and backward buttons and fans on and off selector on the control panel to assist. Then press **Proceed**.

6. Place the foam roller into its operating position and advance the media past the output roller. Then press **Proceed**.

7. Return the foam roller to its storage position, ensure that the vacuum fans are off and hold the Advance Media button for several seconds to assist in media tracking. Press **Proceed** to continue.

8. Place the foam roller into the operating position and make any final positioning adjustments. Press **Proceed**.

9. On the Select Thickness Units screen, press the option that corresponds to the units you will use.

10. Enter the media length or press **Cancel** for an undefined length.

   The printer measures the media width.

11. On the Front Page screen, press **Proceed**.

   The Front Page screen appears on the control panel.

Use the camera to locate the media

For roll-fed media, you can choose between two levels of precision for finding the left (user end), and right (service end) edges of the media.

1. On the Printing page, press **Options**.

2. From the Options menu, press **Measure Media**.

   The Measure Media Frequency menu appears. This enables you to select a trade-off between image placement accuracy and throughput.

   ● **When loading** — Locates the left and right edges only when loading a roll of media.

   ● **Before each copy** — Locates the left and right edges of the media before each print. This enables the printer to compensate for any "drifting" of the media, and print the image at the correct location.

      Check Media Skew — the printer measures the skew of the media when measuring the width when the media is loaded or reloaded. The feature is disabled when **Before each copy** is enabled.

3. Press a **Measure Media Type** option.

   The Options menu reappears.

3   Load inks

- [Load inks](#)

- [Order ink supplies](#)

NOTE: UV inks have a limited shelf life. The Warranty Ends date listed on the ink box label should be taken into account when ordering inks, rotating ink in inventory, and planning print jobs. Printing with an ink supply after this date may result in substandard image quality.

Load inks

The amount of ink in the ink supply box is tracked by the printer software and recorded on its corresponding profiler. The control panel displays a bar graph with the ink levels in each ink box. When the control panel shows that the ink is low, replace the ink box with a full ink box of the same color, and replace the profiler.

NOTE: You may want to wear gloves (latex or nitrile) and have a paper towel handy to catch the drops of ink that may fall from the ink tube connection during this procedure.

Figure 3-1 Ink boxes (both styles of connectors can be used with the printer)

Unload an empty ink box

1. Remove the profiler.

2. Lift the box out of its holder and turn the box upside down so the ink tube is pointing up.

3. Grasp the metal connector where the ink tube enters the printer, and push it up to release the ink supply tube.

4. Remove and dispose of the ink box (refer to the Material Safety Data Sheet for proper disposal procedures).

Load a full ink box

1. Open the new ink box and locate the supply connector.

2. Locate and remove the profiler, and set aside until step 5.

3. Shake, invert and install the ink box into position in the holder, so the ink supply tube is at the bottom of the box.

   NOTE: The pigments in the inks can settle to the bottom of the ink box during storage. To reduce inaccurate color in prints, invert and vigorously shake the ink box for at least one minute before installing it into the printer.

4. Insert the ink tube connector into the metal connector on the printer.

    The position for each ink color is shown on a label below each ink box and next to the profiler docking station. The white ink box has a split "Y" supply line that connects the box to two ink ports on the printer (Light Cyan/White and Light Magenta/White).

5. Install the profiler in the corresponding docking station slot.

NOTE: Printing with white ink requires you to install the optional White Ink Upgrade Kit and then perform a white ink conversion. See Order accessories on page 73 for ordering instructions.

Order ink supplies

You can order the following ink supplies for your printer.

Table 3-1 Ink cartridges

Cartridge	Part number
HP FB250 3L Cyan Scitex Ink Cartridge	CH216A
HP FB250 3L Magenta Scitex Ink Cartridge	CH217A
HP FB250 3L Yellow Scitex Ink Cartridge	CH218A
HP FB250 3L Black Scitex Ink Cartridge	CH219A
HP FB250 3L Light Cyan Scitex Ink Cartridge	CH220A
HP FB250 3L Light Magenta Scitex Ink Cartridge	CH221A
HP FB251 2L White Scitex Ink Cartridge	CQ123A
HP FB794 3L Cyan Scitex Ink Cartridge	G0Y93A
HP FB794 3L Magenta Scitex Ink Cartridge	G0Y94A
HP FB794 3L Yellow Scitex Ink Cartridge	G0Y95A
HP FB794 3L Black Scitex Ink Cartridge	G0Y96A
HP FB794 3L Light Cyan Scitex Ink Cartridge	G0Y97A
HP FB794 3L Light Magenta Scitex Ink Cartridge	G0Y98A

Table 3-2 Cleaning supplies

Printhead flush	Part number
HP UV Printhead Flush	CH122A

4 Printing jobs

Available print modes

You select a print mode for each print job at the external RIP. Refer to the RIP documentation for instructions. Stored jobs can be printed in the mode originally specified by the RIP, or in any other mode at the same resolution as it was sent from the RIP.

The printer can print in several different modes for the combination of image quality and speed that you require. The modes are named after their intended applications. The higher-quality modes are meant for closer viewing. The faster modes are meant for viewing from longer distances. Maximum speeds shown in the table are for jobs with six colors, four colors, or four colors plus white spot printing. White flood fills print at approximately 45% the other color modes.

NOTE: Printing with white ink requires you to install the optional White Ink Upgrade Kit and then perform a white ink conversion. See Order accessories on page 73 for ordering instructions.

Table 4-1 FB550 print modes and maximum print speeds

|	Print mode	Maximum speed, CMYKcm, CMYK, CMYK+W Spot	Maximum speed, white flood
1	Photo Plus: Near offset quality, saturated colors, backlit applications Viewing distance: Less than 1 m (3 ft)	4.6 m²/h (50 ft²/h)	2.8 m²/h (30 ft²/h)
2	Photo: Photo gloss, saturated colors, backlit applications Viewing distance: Less than 1 m (3 ft)	9.2 m²/h (99 ft²/h)	4.2 m²/h (46 ft²/h)
3	Indoor Signage Plus: Higher quality point-of-purchase (POP) Viewing distance: 1–2 m (3–6 ft)	12.6 m²/h (135 ft²/h)	5.6 m²/h (60 ft²/h)
4	Indoor Signage: Standard point-of-purchase (POP) Viewing distance: 1–2 m (3–6 ft)	18.5 m²/h (199 ft²/h)	8.6 m²/h (93 ft²/h)
5	Outdoor Signage Plus: Medium viewing distance signage Viewing distance: 2–3 m (6–10 ft)	22.4 m²/h (241 ft²/h)	9.3 m²/h (100 ft²/h)
6	Outdoor Signage: Longer distance viewing signage (not available for white ink jobs) Viewing distance: 3–5 m (10–16 ft)	31.5 m²/h (339 ft²/h)	
7	Express: Very long distance viewing (not available for white ink jobs) Viewing distance: Greater than 5 m (16 ft)	38.9 m²/h (419 ft²/h)	

Figure 4-1 Quality and speed of each print mode (FB550)
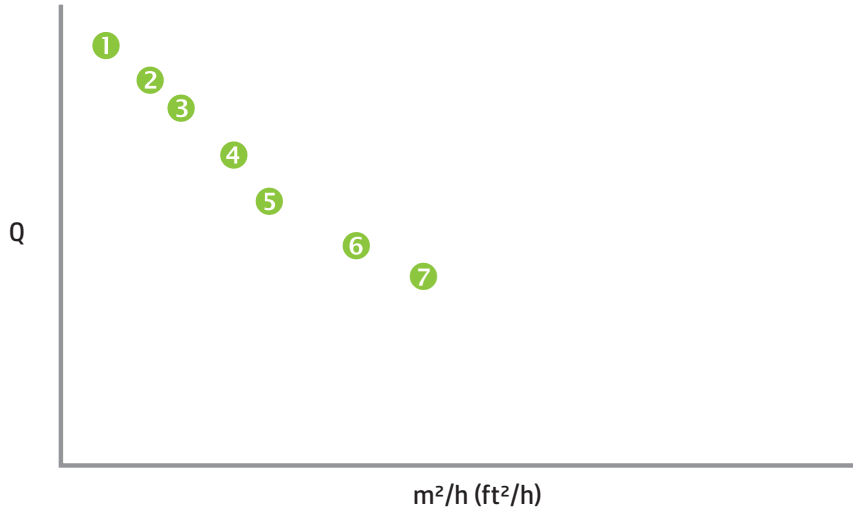
Table 4-2 FB750 print modes and maximum print speeds

	Print mode	Maximum speed, CMYKcm, CMYK, CMYK+W Spot	Maximum speed, white flood
1	Photo Plus: Near offset quality, saturated colors, backlit applications Viewing distance: Less than 1 m (3 ft)	5.2 m²/h (56 ft²/h)	3.1 m²/h (34 ft²/h)
2	Photo: Photo gloss, saturated colors, backlit applications Viewing distance: Less than 1 m (3 ft)	10.3 m²/h (110 ft²/h)	4.7 m²/h (51 ft²/h)
3	Indoor Signage Plus: Higher quality point-of-purchase (POP) Viewing distance: 1–2 m (3–6 ft)	14.3 m²/h (154 ft²/h)	6.4 m²/h (69 ft²/h)
4	Indoor Signage: Standard point-of-purchase (POP) Viewing distance: 1–2 m (3–6 ft)	22.1 m²/h (227 ft²/h)	9.9 m²/h (106 ft²/h)
5	Outdoor Signage Plus: Medium viewing distance signage Viewing distance: 2–3 m (6–10 ft)	25 m²/h (269 ft²/h)	10.4 m²/h (112 ft²/h)
6	Outdoor Signage: Longer distance viewing signage (not available for white ink jobs) Viewing distance: 3–5 m (10–16 ft)	35.3 m²/h (380 ft²/h)	
7	Express: Very long distance viewing (not available for white ink jobs) Viewing distance: Greater than 5 m (16 ft)	43.6 m²/h (469 ft²/h)	
8	Billboard: Billboards, far away (not available for white ink jobs) Viewing distance: Far away	85 m²/h (915 ft²/h)	

Figure 4-2 Quality and speed of each print mode (FB750)
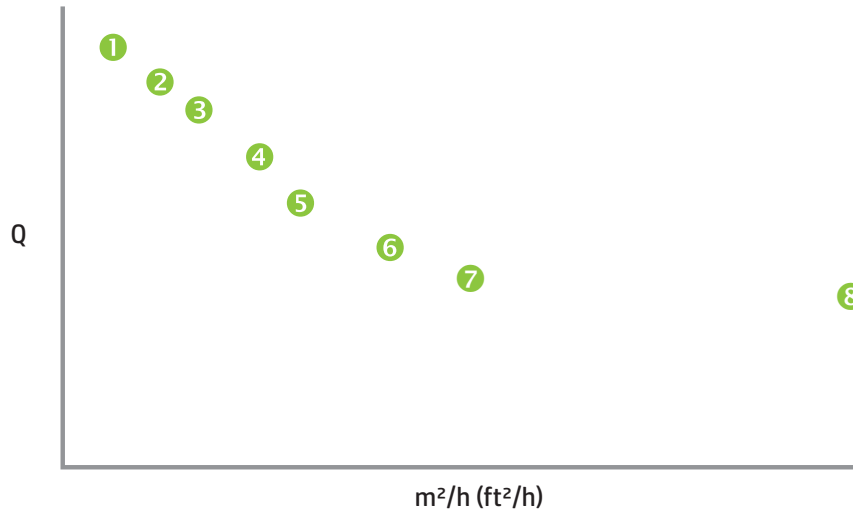
Stored jobs

When you send a print job to the printer, you can save the job automatically on the printer's hard disk drive, on a rotating first-in-first-out (FIFO) basis. You can "lock" a job to prevent it from being rotated out, but this reduces the amount of space available for subsequent jobs to be saved. You can also save a stored job without printing it until you print it from the control panel, or only print the job without saving it.

The printer can store up to 96 sheet-fed or roll-fed jobs. These jobs are retained on the printer's disk, even when the printer power is cycled on and off. When the number of stored jobs reaches the printer's storage capacity, subsequent print jobs will be printed but not stored.

If a job is too large to be saved, it is simply discarded from memory after printing. If a complete print job has been received from the RIP and you cancel the print, it will still appear in the Stored Jobs listing.

Stored jobs can be viewed and managed from the control panel.

Thumbnail screen

To print or manage stored jobs, press **Jobs** on the Home or Printing page. On this page, you can view thumbnail images of the various jobs. Locked jobs (protected from automatic deletion) are identified by a padlock icon on the thumbnail image.

From the Stored Job thumbnails screen, you can perform these operations on the print job:

- Press **Set Filter** to set a filter.

- Press **Multiple Select** to select multiple jobs for a subsequent operation.

- Press **Information** for the following kinds of information.

  ◦ Press **Max Sizes** to view the total image area that can be stored at each combination of resolution and color set.

  ◦ Press **History** to view a log of stored jobs activity.

- Press **Settings** to specify how jobs are stored and printed. These settings are saved even when the printer is restarted.

◦ Press **Job Storage Mode** to choose whether jobs are printed and/or saved.

- **Print & Save** — Prints the job and saves it to disk.

- **Save Only** — Saves the job to disk without printing it. In this mode, the background color of the Stored Jobs section on the Home Page screen turns green.

- **Print Only** — Prints without saving the job to disk.

◦ Press **Job Storage Sorting** to choose how jobs are sorted.

- Press **2-Sided / Multi Image N-Up** to set up a two-sided or multi-image N-Up print job using stored jobs. The printer prompts you to select the stored jobs that you want to use. All jobs must have the same color set and resolution.

  When printing two-sided, side one of the sheet is ejected to the input side of the printer, and you are prompted to flip over and reload the sheet to print side two. After printing, the sheet is ejected to the output side of the printer.

  ☼ **TIP:** When printing a two-sided print job from the stored jobs on the printer, and the Auto Eject feature is disabled (set to "Off" under **Printing page > Options > Eject Settings**), Auto Eject is enabled or the printer prompts you to change the Print Position setting before printing proceeds. This is because double-sided printing by definition uses the Auto Eject feature. If necessary, you can print the sides as two single-sided jobs, turning the sheet over between sides.

Properties screen

To view the properties of a Stored Job, or to print a Stored Job, press the job's thumbnail image. From the Stored Job properties screen, you can perform these operations on the print job:

- To print the job, press **Load & Print**. The printer will prompt you for the number of copies to print. If you have multiple sheets loaded, each copy will print on a separate sheet, and the printer will prompt for additional sheets until the number of copies requested have been printed. You can print the job in any print mode that use the same resolution as the original job.

- To adjust the right, left, leading, or trailing margins, press **Margin Settings**. The leading and trailing margins are applied to sheet-fed and roll-fed print jobs.

- To change the print mode of a job, press **Print Mode**. You can only change the mode to one that uses the resolution at which the job was RIPed. To print the job at a different resolution, re-send the job from the RIP at the new resolution.

- To delete the job, press **Delete**.

- To lock or unlock the job, press the appropriate button. Locking a job prevents it from being deleted, but subtracts from the available memory for Stored Jobs.

☼ **TIP:** If you want to print on a media type that is different from the media specified in a Stored Job, or if you will re-linearize the printer, do not reprint the Stored Job. For the best color, re-send the job from the RIP instead.

When printing a job, the printer checks that the currently loaded media matches the media type that was loaded when the job was stored. If different, a warning is raised. You can choose to not print the job, or ignore the warning and print anyway.

Printing on a media type or in a print mode that is different from the original job may result in a color shift.

TIP: While a print job is being received by the printer and saved to its internal hard disk (a process called "spooling,") you can switch the UV lamps on or off as desired, rather than wait for the entire job to be spooled.

Position and eject options

The sheet-fed printing option **Position/Eject**, on the Printer Options menu, enables you to control how images are positioned and whether the automatic sheet eject feature is enabled. By selecting Auto Eject Off, you can save media by combining print jobs that are smaller than the sheet size onto the same sheet, instead of on separate sheets. In this mode, you can print the jobs one after the other, or "nest" them across the width of the media in rows. Position/Eject is available when the printer is configured for sheet-fed media.

- Position options — For print jobs with a width that is less than the width of the media, you can control where the image is positioned (flush left, flush right, centered, or nested).

- Eject options — For sheet fed jobs, you can control whether the media is ejected after each job to the output side, input side, or not automatically ejected (Auto Eject Off).

- Nested output — When you set Eject to **Auto Eject Off**, and Position to **Nested**, the print jobs are nested onto the media until all jobs are printed or there is no more room on the sheet.

Figure 4-3 Position options with Auto Eject Off
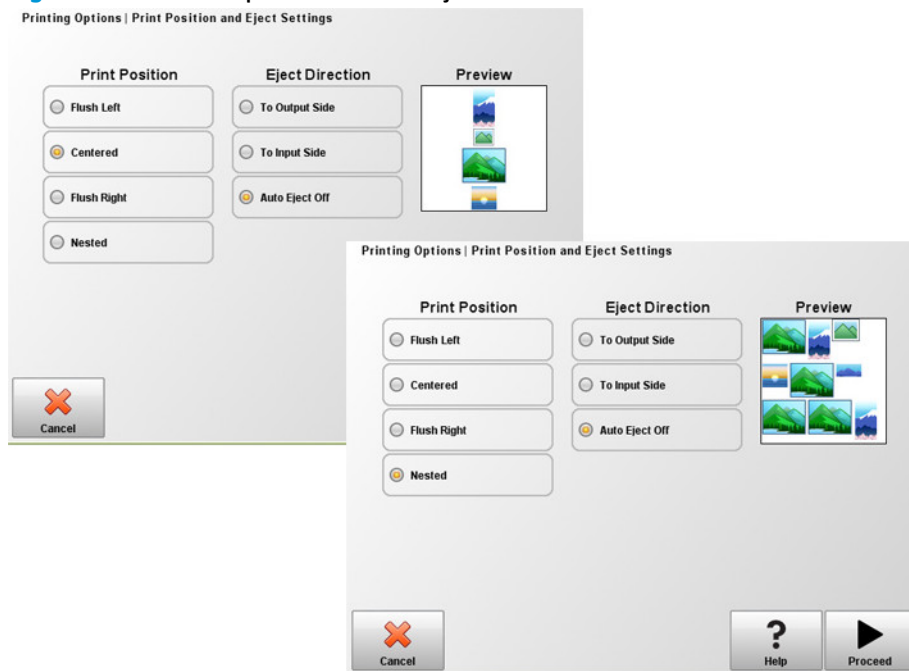
Printing tips

⚠ **CAUTION:** Synthetic media commonly used for inkjet printing can build up a static charge, especially in environments with low relative humidity. This charge can pose an electrostatic discharge (ESD) hazard to persons, the printer, and other equipment. It can be safely discharged by draping a grounded chain or tinsel over the top of the media, or by wiping the media with a solution of 90% isopropyl alcohol and allowing it to dry for five minutes before printing. A relative humidity of 40%-60% will greatly reduce problems with static electricity.

- Rigid cut-sheet media — Use only flat, unwarped, undamaged sheets, with parallel opposite edges and 90° corners. For optimal image quality, use smooth-surfaced media. Images printed on porous media will lack fine detail.

- Curing continues for 24-48 hours — The UV ink will continue to cure for a day or two after printing. Maximum durability and adhesion is achieved when the ink is fully cured.

- If you print on the media drive belt, clean the ink off the belt as soon as possible. The longer that ink remains on the belt, the more difficult it is to remove. To remove ink from the belt, moisten the ink with isopropyl alcohol, let stand for a few minutes, and wipe with a paper towel. Carefully remove any flaked ink from the area.

- To avoid printing on the media drive belt when printing edge-to-edge (0 margin) jobs, you can affix dark-colored masking tape on the belt where the sides of the media will be. Remove or replace the tape periodically as ink accumulates on the tape.

- Do not attempt to adjust the vacuum level for the printheads. It has been factory adjusted for best performance.

- Printing on reflective media will reflect UV light onto the printheads, which will cure the ink over time and clog the ink jets. To minimize this:

  ◦ Do not keep reflective media loaded on the printer when not in use.

  ◦ Perform a manual purge after printing on reflective media.

  ◦ Visually inspect the printheads via the service door for ink buildup or ink curing, If observed, clean the printheads (see Clean the printheads on page 79).

- To load reflective media, the General Media Setting **Visible to Printer** should be set to **Visible**.

- To reduce printing artifacts when printing on Corrugated Plastic (Coroplast) or Polystyrene (Sintra) sheets, try creating a custom media type with the lamps set to Low, Low. Note that this setting could reduce the gloss of the print.

5 Use white ink

With the white ink option available from HP, you can replace the light magenta and light cyan inks with white ink, resulting in four colors of ink plus white ink. This enables you to print with white ink using various techniques.

Printing with white ink may require special preparation of the image to be printed or special setup in the RIP. Refer to the documentation provided with the application software and RIP for step-by-step procedures.

- [White ink option overview](#)
- [Types of white ink printing](#)
- [White ink maintenance](#)

White ink option overview

White ink printing is available as an option that can be delivered with a new printer or as a field upgrade to an existing printer. If the option is delivered with a new printer, it is installed with the new printer. In the case of a field upgrade, the option is designed to be installed either by a service technician or by the customer operator.

The white ink option consists of two parts (see instructions that accompany the kit for detailed instructions):

- White ink option upgrade — A one-time process that upgrades the printer to a white-ink capable printer

- White ink conversion — Replaces the existing light cyan and light magenta inks in the printer with white ink.

Refer to the White Ink Upgrade Kit Installation Instructions, HP part number CQ114–90006, included in the white ink upgrade accessory kit, for detailed instructions for the upgrade and conversion.

Types of white ink printing

Many different design effects can be achieved with white ink that would not be possible otherwise, especially when printing on dark, colored, metallic, or clear media. There are three basic design techniques for printing with white ink:

- Under-fill — A solid rectangle (or irregular shape) of printed white ink that is cured, then a color image is printed on top of it. When used on a non-white, transparent, or reflective surface, this can provide better color saturation or allow colors that are similar to the media color to be visible.

- Over-fill — A color image is printed and cured, a solid rectangle (or irregular shape) of white ink is printed on top of it. This is most often printed on clear media to create a sign that is viewed on a light box (for example, a shopping mall map, airport advertisement, or bus stop signage). When viewed from the opposite side of the media on which it was printed, the image must be reversed (mirrored) in the RIP or application software before printing.

- Spot color — Any white shape (including text) that is cured with and in the same plane as the rest of the artwork, rather than in a separate plane or layer. In conventional (analog) offset or screen printing, this might be called a "knockout," because none of the colors are overprinted.

  📝 NOTE: When printing a CMYK or CMYKcm image without a white under-fill on non-white media, color saturation may be reduced, depending on the color of the media used.

White ink maintenance

- HP White Ink Homogenizer — White inks used in wide-format printing have pigments that have a tendency to settle over time. The printer's white ink option incorporates a vibrating homogenizer base that keeps the white ink pigments in suspension without operator intervention.

- Printhead — The automatic printhead servicing (purging and wiping) must be supplemented with manual printhead cleaning, to enable optimal print quality.

- Shelf life — The white ink has a maximum shelf life of six months from date of manufacture. Replace the white ink after the Warranty Ends date printed on the box.

6 Use the control panel

Overview

The touch-screen control panel shows you the printer's current status, and enables you to interact with the printer, respond to an error condition, and configure options.

The control panel is organized into pages of related functions. To switch between the pages, press the corresponding icon at the bottom of the screen (the Activity Tray, see Figure 6-1 Home page on page 35).

The control panel provides various forms of online user assistance: online help, interactive procedures, scheduled cleaning reminders, and diagnostics.

Home page

Figure 6-1 Home page

The Home page is displayed when the printer is first powered on. To switch to the Home page from another page of the software, press the Home icon in the Activity Tray.

1	Ready icon — Displays when the printer is ready to print. One or more Warning informational messages may be present (see Attention messages on page 36), but printing can proceed.
2	Media detection status — Indicates whether media is detected. The media sensor can only detect the presence of white or light-colored media. Clear or reflective media cannot be detected. In this case, you must enter the media width manually when prompted by the control panel.
3	Network status — Indicates whether the printer is connected to the local area network.
4	Ink levels — Shows the current ink level for each color.
5	Printer status — Indicates whether the printer is ready to print, and lists any error messages. ● Media — Name of the currently configured media. ● UV Lamps — When printing, lamp intensity levels are displayed. Icons show the lamp status: black=off, yellow=on, blinking=warming up.

| 6	Jobs — Displays the Stored Jobs feature. See Stored jobs on page 28 for details.
7	**Sleep/Wake** mode — **Sleep** unloads the media, powers down the UV lamps, ionizer bar, printheads, carriage, ink pumps, and media drive motors, but maintains vacuum to the printheads to prevent ink leakage. The fans over the service station also continue to run. **Wake** powers up the printer components. The printer goes into sleep mode automatically after a user-defined period of time, and "wakes" automatically when a print job is received or a printer operation is performed from the control panel.
	NOTE: If printhead vacuum is ever lost, the ink in the printheads will seep onto the service station. (Vacuum loss will not result in additional ink being drawn out of the ink supply boxes.)
	To prevent ink leakage during an unexpected power outage, use the vacuum system's 24 volt auxiliary power supply and connect it to an uninterruptable power supply (UPS). See Appendix A for specifications. It is not necessary to connect the entire printer to a UPS, only the vacuum system needs to be connected to avoid ink seepage.
8	**Configure**, **Load**, **Eject** buttons — Depending on whether media is configured and loaded, the appropriate buttons are displayed.
9	Activity Tray — Press any icon here to switch between control panel pages.
10	Attention icon — Displays when the printer issues an Action message, which you must address before printing can continue.
11	**View Attentions** — Press to view Warning or Action messages .

Attention messages

The printer issues an Attention message to inform you of a condition that needs your attention. There are three types of Attention messages:

- **Actions** — An error condition that stopped printing or will prevent printing from starting. You must correct the error before the printer will be ready to print. The Attention icon blinks between yellow and red when the message is new. After you read the message, the icon turns red.

- **Warnings** — A condition that, if left unaddressed, could result in substandard prints or a condition that will require an action before printing can continue. Any action on your part is optional. The Attention icon blinks between yellow and red when the message is new, After you read the message, the Attention icon turns into the Ready icon unless an Action message is present.

- **Errors** — Detailed error information for technical support personnel. These messages do not halt printing and require no action from the user.

When the printer issues one of these messages, press **View Attentions** on the Home page to display a list of message titles, and select a title to display a detailed cause-and-recovery screen.

The messages are dismissed by correcting the condition, or by pressing the applicable button on the Detail screen.

Figure 6-2 Home page with Attention message and View Attentions button
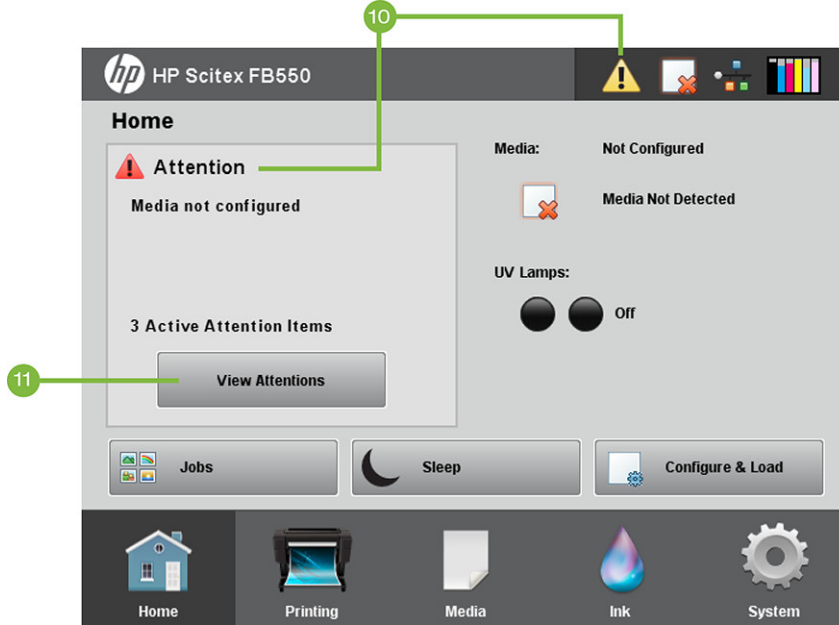
Printing page

Figure 6-3 Printing page

To switch to the Printing page, press the Printing icon in the Activity Tray at the bottom of the screen.

1	Status messages
	• Stored Jobs status — Current mode (print and save, print only, save only), number of stored jobs, number of locked jobs. See Stored jobs on page 28 for details.
	• UV Lamps
2	**Jobs** — Displays the Stored Jobs feature. See Stored jobs on page 28 for details.
3	**Options** — Displays the Printer Options menu. See Printing Options menu on page 38 for details.

4	**Calibrate** — Displays the Calibrate Printer menu. See [Calibrate the printer on page 49](#) for details.
5	**Turn On Lamps/Turn Off Lamps** — Enables you to manually switch the UV curing lamps on and off.

Printing Options menu

- **Print Position and Eject Direction** — This menu option controls two related functions that enable you to control how print jobs are positioned on sheet-fed media, and how to eject the sheets:

  - **Print Position** — When the printed image does not span the entire width of the media, positions the printed image flush left (nearest the control panel or user side), flush right, centered, or nested on the media (if **Auto Eject Off** is selected).

  - **Eject Direction** — You can choose whether the media is ejected to the output or input side after each job prints, or disable automatic eject.

  See [Position and eject options on page 30](#) for further details.

- **Space Between Prints** (roll-fed) — Sets the blank space between print jobs, between 0–25 cm (0–10 in).

- **Measure Media** (sheet-fed) — For cut-sheet media, you can choose various levels of precision for finding the left (user-end), right (service-end), and front edges of the media.

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

  - **Measure only on first load** — Measure only once, after you configure the media; 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

  Then select a measurement type:

  - **Minimal** — Measures the width of the media once and finds the front right edge; no skew detection. Choose **Minimal** for fastest throughput.

  - **Standard** — Measures the width of the media once, and finds the front edge in two places to estimate skew

  - **One Edge** (available when **Measure on all loads** is selected) — 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.

  - **Maximal** — Measures the width of the media in two places to estimate skew. Choose **Maximal** for greatest precision and skew detection when printing edge-to-edge.

- **Measure media** (roll-fed) — For roll-fed media, you can choose various levels of precision for finding the left (user end), and right (service end) edges of the media.

- ◦ **When loading** — Locates the left and right edges only when loading a roll of media.

- ◦ **Before each copy** — Locates the left and right edges of the media before each print. This enables the printer to compensate for any "drifting" of the media, and print the image at the correct location.

- **Use Ionizer Bar** — Sets whether to use the ionizer bar to reduce the electrostatic charge on synthetic medias (the default setting is on or enabled). You may want to disable the ionizer in humid environments where electrostatic charge is not present on the media, or to reduce the wear on the ionizer's discharge electrodes. The ionizer bar is powered on only during media load, printing, and when the lamps are on.

- **Use Thickness Sensor** — Sets whether to use the automatic media thickness sensor, or to prompt you to manually enter the thickness.

- **Head Height off Media** — Automatically raises the rail to set the printhead clearance from the media, at the height you specify. A lower height reduces overspray, but increases the chances for a head strike on the media. Bidi calibration is automatically adjusted for changes in this value.

- **Print White Space** — Provides the option of causing the printer to advance the media past unprinted space in the document file without the usual "printing" carriage motion. The printer will finish curing any printed areas before skipping this space. This option increases the printer's effective speed (throughput).

- **Quality Check** — When enabled, prevents printing from occurring if more than a certain number of missing or misfiring jets are not replaced by working jets. You can specify whether the printer asks you whether to stop printing with a Warning message, or if printing stops automatically without a Warning.

- **Increase UV Lamp Power** — When the printer is no longer fully curing the ink on prints, use this option to incrementally increase the lamp power. If the power needs to be increased again, create a custom media and set the UV Lamp Power to Medium or High, or replace the bulbs (the bulbs should be replaced in pairs). In this case, the printer will warn you that the print may not fully cure until the bulbs are replaced. (**Printing Page > Options > Increase UV Lamp Power**)

- **Unidirectional Print Direction**

- **Use Fast Print Speed** — Enables faster printing when using Indoor Signage Plus and Indoor Signage print modes. It is set to **Yes** by default, but you can turn it off by selecting **No**.

Media page
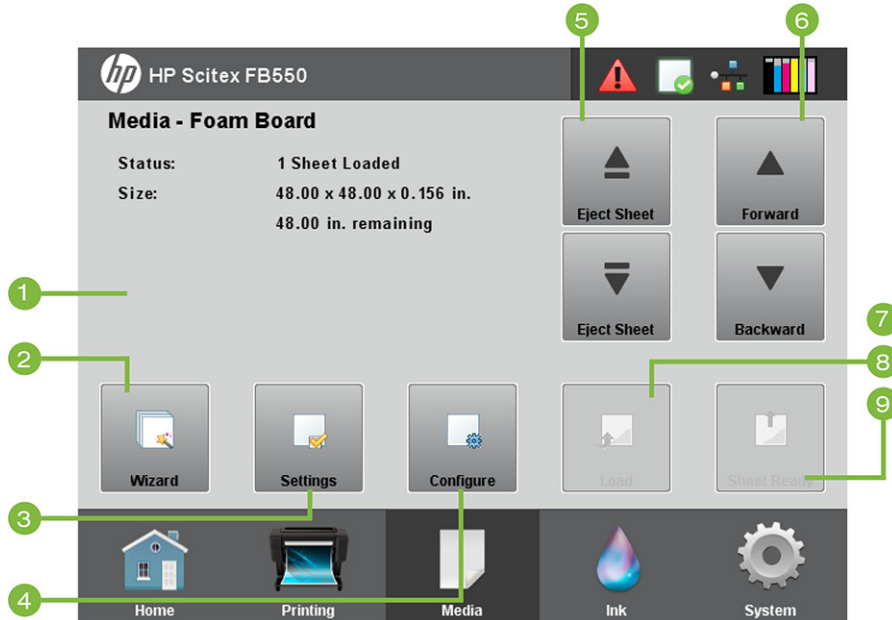
To switch to the Media page, press the Media icon in the Activity Tray at the bottom of the screen.

1	Media information — Media name, size, print area, printable length
2	**Wizard** — Displays the Media Wizard. See Configure media on page 11 for details.
3	**Settings** — Enables you to adjust media handing and printing settings.
4	**Configure** — Configures the printer for a media type. See Configure media on page 11 for instructions.
5	**Eject Sheet** buttons (when sheet fed media is loaded) — Ejects the media sheet to the input our output side of the printer.
6	Media advance buttons — Press the ▲ button to advance the media forward. Press the ▼ button to reverse the media back.
7	**Advance to cut** — When roll-fed media is loaded, advances the media toward the output side far enough so that it can be cut from the supply roll.
8	**Load/Unload** — Depending on whether media is configured and loaded, loads or unloaded the currently configured media.
9	**Sheet Ready** — When a sheet of the currently configured media is in the load position, press this button to continue the load process.

Media Settings menu

To display the Media Settings menu, press **Settings** on the Media page.

- **Change General Media Settings**. For instructions, see Configure media on page 11.

- **View Print Speed Specific Settings**. For instructions, see Media Wizard on page 11.

Ink page
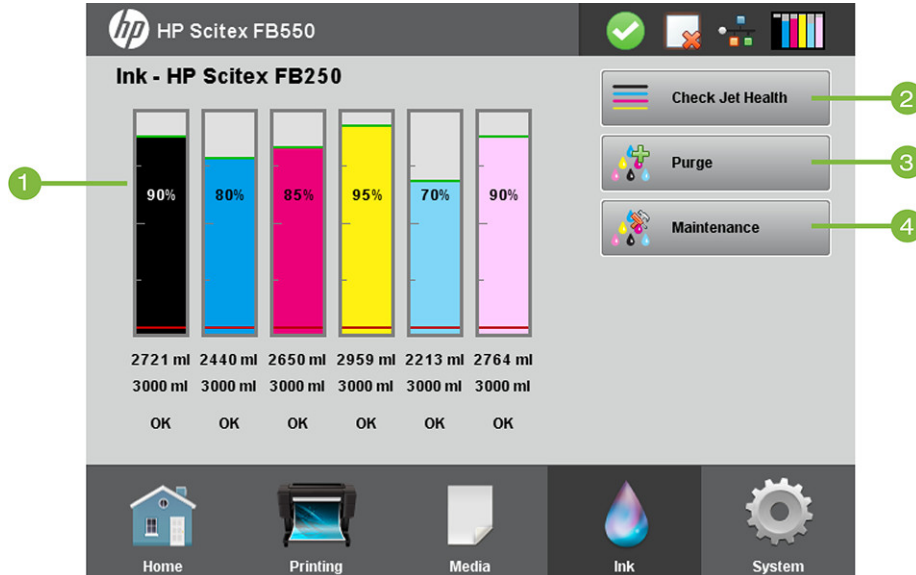
To switch to the Ink page, press the Ink icon in the Activity Tray at the bottom of the screen.

1	Ink levels and status — Displays the amount of ink remaining in a bar graph and numerical display, the capacity of the ink supply, and ink status.
2	**Check Jet Health** — Fires all jets by printing a test pattern. This is a good way to inspect and prepare the jets for printing after they have been idle.
3	**Purge** — Purges the printheads to help recover missing jets. You can purge all colors or any combination of colors, Standard or enhanced Performance purges, and print a prime bars pattern to see whether jets are recovered after each purge.
4	**Maintenance** — Displays the Maintenance menu (see Maintenance menu on page 41).

Maintenance menu

- **Check Jet Health** — Prints a test pattern that shows working and non-working jets.

- **Perform An Air Purge** — Purges the printheads with air to clear ink clogs. You can select the printheads to purge, and whether to perform a Standard or Performance purge (the Performance purge is more effective but expels more ink).

- **Access Carriage** — Moves the printhead carriage to the center of the rail for inspection.

- **Print Recover Jets Pattern** — Prints a special pattern designed to recover missing inkjets. After printing this pattern, the Check Jet Health pattern is printed.

- **Printhead Procedures**

  ◦ **Load Ink in All Heads** — Fills all printheads with ink. Typically used only when installing a new printer.

  ◦ **Fill Heads with Ink** — Fills the printheads that you select with ink.

  ◦ **Empty Heads (Fill With Air)** — Fills the printheads that you select with air.

- **Ink Filter Counts** — The printer's ink filters will eventually become clogged and need to be replaced. You can view the volume of ink that has passed through each filter by selecting this option. The service technician will reset these counts after replacing the ink filters.

- **Purge Type** — Sets the purge type used when you press **Purge** on the Home Page screen: Standard or Performance. Performance is more effective, but uses more ink than Standard uses.

- **Low Ink Warning** — Defines the amount of ink remaining at which the printer will display a "low ink" message on the control panel.

- **Set Auto Purge & Wipe Interval** — You can set the number of prints after which the printer will automatically perform a purge and wipe of the printheads. This is intended to keep the jets working during an extended period of unattended printing on roll-fed media (for example, overnight).

- **Idle Spit While Printing** (white ink only) — You can choose whether to have the white ink spit ink into the service station when printing non-white areas. The default is **Off**, since most white print jobs include flood fills with white throughout and will not need idle spitting.

- **Upgrade Printer For White Ink Use** — This option is displayed before the white ink upgrade option has been installed. It enables you to install the white ink upgrade. See the instructions included in the white ink option accessory kit for details.

- **Change Color Set** — This option is displayed after the white ink upgrade option has been installed. It enables you to convert the printer from six-color printing to four-color plus white printing.

System page

To switch to the System page, press the **System** icon in the Activity Tray at the bottom of the screen.

1	About screen

- Printer model

- Embedded software (firmware) version

- IP address — Enter this address in your RIP to send print jobs to the printer, and web browser to access the Embedded Web Server.

2	**Tools** — Displays the Tools menu. See Tools menu on page 43 for details.
3	**Settings** — Enables you to enable printer options and adjust various warning timers. See Settings menu on page 44 for details.
4	**Language Selection** — Switches the control panel language. Language Selection on page 44 for details.
5	**System Information** — Displays several pages of status information for diagnostic and support purposes.
6	**License** — Displays the printer software license agreement.

Tools menu

These are less-frequently used functions such as **User Diagnostics** that enable the operator to diagnose a problem, **Service Printer** functions for use by authorized technicians, and the ability to **Print Menus** (the entire menu structure) for reference.

User Cleaning and Maintenance

For detailed instructions, see User cleaning on page 74.

- Maintenance Reminders — Displays a list of scheduled maintenance tasks, the intervals in number of hours of printing for each task, and the elapsed printing time since the task was last performed.

User Diagnostics

User Diagnostics presents an interactive troubleshooting program to diagnose problems before calling technical support. It walks you through a series of tests and checks for certain printer functions. The printer asks you to make observations or run simple tests to help it diagnose problems and suggest corrective actions. It has the following sections:

- Carriage Motion

- Rail Motion

- Calibration

- Verify H2H Y Alignment

- Print Quality

- Service Station

- UV System

- Vacuum Pressure

- Hard Drive

- LVDS

- Print Diagnostic Plot — Prints a pre-RIPed job for troubleshooting.

- Warnings and Actions List — Table of all actions and warnings with cause and recovery

Service Printer

You can access troubleshooting data from the Embedded Web Server. Click **Get Printer Events Files**, then click **InfoSettingsFile.txt**. The file opens in the Web browser, and you can save it for reference or transmission to technical support personnel.

Print Menus

This option prints all of the menu options in a hierarchical tree format for reference.

Settings menu

- **Localization** — Sets **English** or **Metric** units of measure, **Time** and **Date** formats, **Vacuum Pressure** units, and **Language** for data displayed by the control panel.

- **Sleep Wait Time** — Sets the period of time to wait for a print job before going into sleep mode.

- **UV Lamps Idle Time** — Sets the amount of time the lamps will stay on after printing before they are automatically turned off by the printer. The idle time can be set from 1 to 15 minutes. Increase the idle time if you are printing several jobs and waiting for the lamps to warm up between prints. Decrease the idle time if printing single jobs.

- **Attention Sorting** — Enables you to sort the attention message display by **Severity** or **Chronologically**.

- **Auto Maintenance Time** — Defines the time of day at which automatic maintenance is performed.

  📝 **NOTE:** Verify that the printer's internal clock is set to the correct local date and time, or automatic maintenance may occur at an unexpected time. See for instructions.

- **Expert/Novice Messages** — **Novice** mode displays all prompts and instructions. **Expert** mode presents a streamlined subset of these messages for faster throughput. The default is **Novice** mode.

- **Printer Name** — Displays a keypad to change the printer name displayed on the control panel.

- **Network** — Enables you to choose whether to use DHCP or manually configure a static IP address (**System page > Settings > Network**). A static IP address makes it easier to bookmark the printer's HP Embedded Web Server in a Web browser, since the address will not change when the printer is restarted or its DHCP lease terminates. The printer's current IP address is shown on the control panel System page.

- **Customer Involvement Program** — Enables you to sign up for the Customer Involvement Program and configure your participation.

- **Restore All Defaults** — Restores all printer configuration settings to their factory default values. Printhead calibration values are not reset by this option.

Language Selection

Pressing this button allows you to change the language in which the control panel is displayed. A Localization button also appears on the Language selection screen for access to Localization options (units of measure, date and time formats, etc.). These options are also available via the Localization menu (**System page > Settings > Localization**).

System Information

Pressing this button displays multiple pages of system information for troubleshooting and support.

License

Pressing this button displays the printer software license agreement.

Menu tree

This menu tree reflects version 4.03 of the embedded printer software. Refer to the Release Notes for more recent versions. Options marked with (*) are dynamically hidden depending on whether roll-fed printing is enabled.

Printing page

Printing Options

- Print Position and Eject Settings

- Space After Internal Prints

- *Measure Media (sheet-fed)

- Use Ionizer Bar

- Use Thickness Sensor

- Head Height off Media

- Print White Space

- Quality Check

- Increase UV Lamp Power

- Unidirectional Print Direction

- Use Fast Print Speed

Calibrate Printer

- Auto Calibrations

  ◦ AutoBidi Calibration

  ◦ Auto Head X Calibration

  ◦ AutoJet Calibration

  ◦ Full AutoSet

  ◦ AutoSet Summary

- Manual Calibrations

  ◦ Media Feed Calibration

  ◦ Manual Bidi Registration

  ◦ Printhead X Calibration

  ◦ Manual Jet Mapping

- ◦ Jet Status Lines

- ◦ Default Registration Data

- Unfixed Jets Report

Media page

Media Wizard

- Create Media Type

- Delete Media Type

- View Media Type

- Set Sort Method

Ink page

Maintenance

- Check Jet Health

- Perform An Air Purge

- Access Carriage

- Print Recover Jets Pattern

- Printhead Procedures

  - ◦ Load Ink In All Heads

  - ◦ Fill Heads with Ink

  - ◦ Empty Heads (Fill with Air)

- Ink Filter Counts

- Purge Type

- Low Ink Warning

- Set Auto Purge & Wipe Interval

- Upgrade Printer for White Ink Use (if printer has not been upgraded for white ink)

- Change Color Set (if printer has been upgraded for white ink)

System page

Tools

- User Cleaning and Maintenance

  - ◦ Clean and Lube Carriage Rail Strips

  - ◦ Clean Carriage Encoder Strip

- ◦ Clean Printheads
- ◦ Clean Carriage Home Sensor
- ◦ Clean Service Station Wiper Rails
- ◦ Clean Service Station Wiper
- ◦ Clean Carriage Wheels
- ◦ Vacuum Carriage Bottom
- ◦ Replace UV Lamp Filters
- ◦ Clean Electronics Box Fan Filters
- ◦ Replace Service Station Wiper
- ◦ Clean Ionizer Needles
- ◦ Drain Waste Ink Container
- ◦ Clean Media Thickness Sensor
- ◦ Clean Cover Exhaust Fans
- ◦ Replace UV Lamp Bulbs
- ● User Diagnostics
  - ◦ Carriage Motion
  - ◦ Rail Motion
  - ◦ Calibration
  - ◦ Verify H2H Y Alignment
  - ◦ Print Quality
  - ◦ Service Station
  - ◦ UV System
  - ◦ Vacuum Pressure
  - ◦ Hard Drive
  - ◦ LVDS
  - ◦ Print Diagnostic Plot
  - ◦ Warnings and Actions List
- ● Service Printer (for service provider use only)
- ● Print Menus
- ● Top Gutters

Printer Settings

- Localization
    - Units of Measure
    - Time Format
    - Date Format
    - Vacuum Pressure Units
    - Language
- Sleep Wait Time
- UV Lamps Idle Time
- Attention Sorting
- Auto Maintenance Time
- Expert/Novice Messages
- Printer Name
- Network
- Customer Involvement Program
- Restore All Defaults

7 Calibrate the printer

- When to calibrate
- AutoJet
- Automatic calibrations
- Manual calibrations
- Unfixed Jets Report
- Linearization

When to calibrate

When to run	Calibration	Function
When loading a new media (but not when loading a new roll or sheet of the same media)	Linearization (see RIP documentation for instructions).	Linearization of colors for accurate color matching.
Horizontal Banding	Media Feed	Calibrates the media advance.
Poor output quality (apparent misregistration of colors, banding)	Auto Calibrations	Calibrates the position of ink droplets in relationship to each other and corrects for individual jets not operating properly. You can also run the Manual Calibrations if necessary (they are more accurate).
When printheads have been moved or replaced (by an authorized service provider)	Auto or Manual Bidirectional, Head-to-Head, Saber angle, and Y calibration (all performed by the authorized service provider)	Head calibrations. Run Manual when calibrating transparent or other media that the onboard digital image sensor cannot calibrate.
If Auto Calibrations do not improve print quality, or if printing on transparent or other media that cannot be detected by the printer	Manual Calibrations	Aligns printheads, allows you to map out specific inkjets. Not normally needed except when printing on "invisible" media.

AutoJet

AutoJet detects individual inkjets that are misfiring or not firing at all. During subsequent printing, the printer compensates for these jets by using other jets in their place, ensuring maximum print quality without reducing print speed.

You can also identify and map missing jets manually from the Manual Calibrations menu (see Manual Jet Mapping on page 55). You may want to manually map weak or misdirected jets that AutoJet does not detect and substitute.

Jet replacement is not available in Express mode.

To run AutoJet:

● Select AutoJet Calibration from the Auto Calibrations menu (see Automatic calibrations on page 51), or

☼ **TIP:** AutoJet does not work with transparent media, nor with many translucent media. In this case, run Manual Jet Mapping, or map jets on opaque media before loading transparent/translucent media for printing.

1. Press **Calibrate** from the Printing page, then press **Auto Calibrations > AutoJet Calibration** in the menu.

2. The printer prints the AutoJet test pattern.

3. The printer reads the AutoJet test pattern and maps any missing jets to available working jets.

   The control panel shows the progress of this operation as the percentage completed.

4. The printer prints an AutoJet report.

NOTE: The AutoJet calibration requires that the printheads are in correct alignment. If AutoJet maps out a large number of jets even though there are no obvious jetting problems, the printhead Y calibration (a factory calibration) may need to be performed again. In this case, contact HP or your authorized service provider.

Automatic calibrations

The printer's piezo printheads are aligned by the installer. Head and bidirectional calibrations should be necessary only rarely (for example, when the heads have been moved within the carriage or replaced).

1. Press **Calibrate** from the Printing page, then press **Auto Calibrations** in the menu.

2. Select one of the Auto Calibrations.

    *   AutoBiDi (bidirectional) Calibration — Ensures that every working jet fires at precisely the same location (regardless of the carriage direction of travel).

    *   Auto Head X (head-to-head) Calibration — Ensures that the printheads are in alignment relative to each other.

    *   AutoJet Calibration — Locates and substitutes missing jets for working jets (see AutoJet on page 50).

    *   Full AutoSet — Runs all three calibrations in sequence. The printer prints a test pattern then reads it and makes the necessary adjustments or jet substitutions. After completing the calibrations, a report is printed that shows:

        ◦   Calibration results — A summary such as SUCCESSFUL CALIBRATION or an error message

        ◦   Header showing the date and time, software version, and printer type

        ◦   Calibration detail — The calibration data for each head. The AutoJet detail reports how many jets were mapped out by AutoJet, how many are permanently mapped out by the operator, and whether the head is usable (from a jetout standpoint) in the various print modes. The higher quality modes use jet replacement, so they can print successfully with a greater number of jets out than Billboard mode.

    *   AutoSet Summary — When enabled, a table of the results of the Full AutoSet calibration is printed after the AutoSet test patterns. When you enable the AutoSet Summary, you can show or hide the detailed calibration data.

Manual calibrations

When you run the calibrations from this menu, you evaluate the calibration test patterns visually and enter the calibration values via the control panel.

▲   Press **Calibrate** from the Printing page, then press **Manual Calibrations** in the menu.

The Manual Calibration menu consists of these options:

*   **Media Feed Calibration** — Calibrates the media advance accuracy for band-free printing. Visual and (for rigid media only) camera-assisted calibrations are available.

*   **Manual BiDi Registration** — The manual version of AutoBiDi Calibration.

*   **Printhead X Calibration** — The manual version of Auto Head X Calibration.

*   **Manual Jet Mapping** — The manual version of AutoJet.

- **Jet Status Lines** — Print a quick test pattern to see which jets are out.

- **Default Registration Data** — Sets all registration data to zero.

After calibration and jet mapping, perform a linearization or color calibration (as supported by the RIP). See .

📝 **NOTE:** The manual BiDi and X head calibrations are time-consuming and can be error-prone, but is necessary when calibrating transparent media or other media that the printer's digital image sensor cannot calibrate.

Media Feed Calibration

This calibration allows you to calibrate the accuracy of the media advance. Inaccurate media advance can result in blank spaces between print swaths (too much advance) or overlapping swaths (too little advance).

1.   On the Manual Calibrations menu, press **Media Feed**.

2.   Select the calibration method and press **Proceed**. Depending on the loaded media, some options may not be displayed.

     990 mm (39 in) calibration — Sheet fed only, uses the printer's onboard image sensor for precise adjustments. If the media feed needs larger adjustments, use the ruler-measured calibrations first. Use for maximum accuracy.

     510 mm (20 in) calibration — Sheet fed only, uses the printer's onboard image sensor for precise adjustments. If the media feed needs larger adjustments, use the ruler-measured calibrations first. Use to conserve media.

     900 mm (34 in) calibration — Prints a 900 mm (34 in) test pattern so you can verify its length with an accurate metal ruler. Cut the pattern from the media web, then measure and adjust the media advance as needed until the pattern is exactly 900 mm (34 in) long.

     250 mm (10 in) calibration — Prints a 250 mm (10 in) test pattern so you can verify its length with an accurate metal ruler. This is not as precise as the 900 mm (34 in) calibration, but it uses less media. Measure and adjust the media advance as needed until the pattern is exactly 250 mm (10 in) long.

     The image-sensor based calibration (sheet-fed media only) prints a reference pattern, ejects the media, and prompts you to rotate and reload the media so the pattern can be measured. To account for the slight variability in the media feed mechanism, repeat these calibrations three to five times to obtain the best calibration. The software allows you to position the patterns anywhere on the sheet so you can print multiple iterations on the same sheet.

     Input MFN — Enter the Media Feed Number that was displayed after a previous media feed calibration, to return to that setting without performing the calibration again.

☀ **TIP:** To achieve the best results from the ruler-measurement calibrations: Use a good-quality ruler with accurate marks. Use a ruler that is in the same units as the pattern selected. (Do not attempt to use a metric ruler to read an English-units pattern or vice-versa.) Use a ruler that is at least as long as the pattern you are measuring. (Do not attempt to add up shorter ruler measurements to achieve the total length of the pattern.)

To avoid ruler issues, use the image-sensor based calibration.

Figure 7-1 Media feed calibration pattern
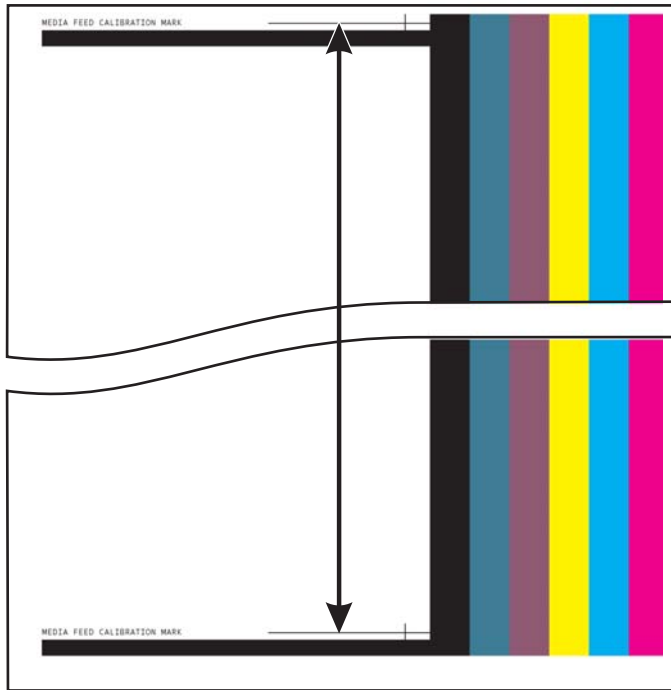
Manual BiDi Registration

Bidirectional registration is a method to align each of the printheads so that dot placement is accurate in both directions along the X axis (along the direction of printhead travel).

The bidirectional registration pattern consists of a series of vertical lines. Half the pixels in this pattern are printed in one direction, half of them in the other direction. When the pixels are accurately aligned, the pattern is clear. When the dots are not aligned, the pattern appears fuzzy and ill-defined.

NOTE: AutoBiDi Calibration is the automatic version of this calibration. Try AutoBiDi first before running this manual calibration (see Automatic calibrations on page 51).

1. Press **Calibrate** on the Printing page, then press **Manual Calibrations** in the menu.

2. Press **Manual Bidi Registration** to proceed.

   The control panel displays this prompt:

   Print a manual bidi registration page?

3. Press **Yes**.

   The control panel displays controls that enable you to position the registration pattern on the media. This enables you to feed the same sheet of media into the printer multiple times without overprinting previous patterns. For best quality when printing on rigid sheet-fed media, position the pattern approximately 20 cm (8 in) from the edge.

4. Use the control panel controls to position the pattern, then press **Proceed**.

   The printer prints the registration pattern, then prompts you to advance the media so you can inspect it.

5. Advance the media by pressing **Move Belt Forward**, then press **Proceed**.

    The control panel displays this prompt:

    Bidi registration Head 1: 0

6. Examine the BiDi Registration pattern for the current head, and determine which pattern is the closest to perfectly aligned.

    Use a printer's loupe (10X magnification or higher) to select the pattern, since the lines in the patterns may be difficult to see.

7. Press the ▲ or ▼ control panel keys repeatedly until the number next to the pattern that is closest to aligned perfectly is displayed.

    For example, if pattern +2.0 is the closest aligned, press **Proceed** to change the display to:

    Bidi registration Head 1: +2

    If a printhead is extremely out of alignment, there may be no pattern in alignment. Since the vertical bars are nominally five pixels apart, you can add +10 or –10 to a pattern number to shift the colored bars right or left by one black bar. Alternatively, you can perform the BiDi Registration repeatedly, which will move the head in smaller increments, until the head is aligned.

8. Press the ▲ button.

    The control panel message increments the head number by one.

9. Repeat steps 4 through 6 for each of the heads.

    When you have entered registration values for all heads, the control panel displays this message:

    Registration Successful

Printhead X Calibration

Precise positioning of each drop of ink is essential for optimal print quality. This is possible only if you register all printheads in the printhead assembly to each other in the X (along the length of the platen) direction.

This is a two-part process:

*   Print a registration pattern.

*   Enter the X registration data for each head.

📝 **NOTE:** This is the manual version of AutoH2H Calibration (see).

1. Press **Calibrate** from the Printing page, then press **Manual Calibrations** in the menu.

2. Press **Printhead X Calibration** in the menu.

    The control panel asks whether you want to print a manual head-to-head calibration page.

    *   If you need to print a new calibration pattern, press **Proceed**. The printer prints a calibration page.

        When the calibration page has printed, the control panel displays this prompt:

Take readings from left side of pattern.

- If you have a calibration pattern from a recent print, you can use it to calibrate the heads. Press **Cancel** and go to the next step. (For best results, do not use a previously-printed pattern, print a new pattern.)

3.   Press **Proceed**.

The control panel displays this message:

X Direction Registration Head 2: +0

4.   Examine the X direction pattern (in the left-hand group of patterns) for the current head, and determine which pattern of colored and black lines are the closest to perfectly aligned.

Use a printer's loupe or magnifying glass (10x magnification or higher) if the patterns are difficult to see.

5.   Press the ▲ or ▼ control panel keys repeatedly until the number next to the pattern that is closest to aligned perfectly is displayed.

For example, if pattern -1 is the closest aligned, press the ▼ button to change the display to:

X Direction Registration Head 2: -1

If a printhead is extremely out of alignment, there may be no pattern in alignment. Since the black vertical bars are five pixels apart, you can add +5 or -5 to a pattern number to shift the colored bars up or down by one black bar. Alternatively, you can repeatedly perform the X calibration, which will move the head in smaller increments, until the head is aligned.

6.   Press **Proceed**.

The control panel message increments the head number by one.

7.   Repeat steps 4 through 6 for each of the heads.

When you have entered registration values for all of the patterns, the control panel displays this message:

Registration successful.

Manual Jet Mapping

Jets that are missing or misfiring are usually detected by the AutoJet calibration. Alternatively, you can map out jets manually using the Manual Jet Mapping function. You may want to manually map weak or misdirected jets that AutoJet does not substitute.

☼ **TIP:**   AutoJet is the automatic version of this calibration (see <u>AutoJet on page 50</u>).

TIP: For best results, print the prime bars and purge the printheads as necessary to ensure the maximum number of working jets. See <u>Ink page on page 41</u> for instructions.

1.   Press **Calibrate** from the Printing page, then press **Manual Calibrations** in the menu.

2.   Press **Manual Jet Mapping** in the menu.

The control panel displays this message:

Print Jet Map?

If you have a calibration pattern from a recent print, you can use it to calibrate the heads. Press **Cancel** and go to the next step. Otherwise, press **Proceed**.

The printer prints a jet map test pattern.

If a line segment is missing or broken, the jet number shown next to it is out. A code letter if present provides further information:

- R ⎯ No replacement
- S ⎯ User disqualified "soft" jetout
- H ⎯ User disqualified "hard" jetout
- D ⎯ Disqualified (and replaced) by AutoJet

3. When the calibration pattern has printed, the control panel displays a menu with the following options:

- Report individual soft bad jets ⎯ Enables you to report a "soft" bad jet, which can be automatically reenabled if AutoJet finds it working.
- Report individual hard bad jets ⎯ Enables you to report a "hard" bad jet, which will not be checked or reenabled by AutoJet.
- Clear individual bad jets ⎯ Enables you to clear (mark as good) a jet.
- View current bad jets ⎯ Lists the bad jets on a given printhead.
- Clear all bad jets for a head ⎯ Clears (marks as good) all jets on a selected head currently marked as unusable.
- Clear all bad jets ⎯ Clears (marks as good) all jets currently marked as unusable.

A "soft" bad jet is a jet that you believe is temporarily out, based on past performance. A "hard" bad jet is a jet that you believe is permanently out.

Select an option and follow the corresponding procedure below.

Report Individual Bad Jets

When you select Report Individual Bad Jets, the control panel displays the following prompt:

Head 1: Press Proceed to report a bad jet.

1. Press ▲ and ▼ to select a head number, then press **Proceed** (▶).

   The control panel displays a numeric keyboard that you can use to enter the number of the bad jet.

2. Enter the jet number, then press **Enter**.

3. When you are finished entering jet numbers, press **Cancel**.

   The control panel displays the head selection message again.

4. Press ▲ and ▼ to select the next head number, then press **Proceed** (▶).

5. Repeat steps 2 through 4 for each head containing bad jets you want to report.

6. When you are finished reporting bad jets, press **Cancel**.

   The control panel displays the previous menu.

Clear Individual Bad Jets

When you select Clear Individual Bad Jets, the control panel displays the following prompt:

Head 1: Press **Proceed** (▶) to clear a bad jet.

1. Press ▲ and ▼ to select a head number, then press **Proceed** (▶).

   The control panel displays a numeric keyboard that you can use to enter the number of the bad jet.

2. Enter the jet number, then press **Enter**.

3. When you are finished entering jet numbers, press **Cancel**.

   The control panel displays the head selection message again.

4. Press ▲ and ▼ to select the next head number, then press **Proceed**.

5. Repeat steps 2 through 4 for each head containing bad jets you want to clear.

6. When you are finished clearing bad jets, press **Cancel**.

   The control panel displays the previous menu.

View Current Bad Jets

When you select View Current Bad Jets, the control panel displays the following prompt:

Head 1: Press Proceed to view bad jets.

1. Press ▲ and ▼ to select a head number, then press **Proceed** (▶).

   The control panel displays a message that lists the bad jets by number.

2. Press **Proceed** (▶) to return to the head selection screen.

3. Repeat steps 1 and 2 for each head you want to check for bad jets.

4. When you are finished viewing bad jets, press **Cancel**.

   The control panel displays the previous menu.

Clear All Bad Jets for a Head

When you select Clear All Bad Jets for a Head, the control panel displays the following prompt:

Head 1: Press Proceed to clear all bad jets.

1. Press ▲ and ▼ to select a head number, then press ▶ (Proceed).

   The control panel asks you to confirm your selection.

2. Press ▶.

   The control panel asks whether you want to clear the hard bad jets as well as the soft bad jets. A "soft" bad jet is a jet that you believe is temporarily out, based on past performance. A "hard" bad jet is a jet that you believe is permanently out.

3. Press ▶ to clear the hard and soft jets. Press X to clear the soft jets only.

   The control panel reports the number of jets that were cleared on the selected printhead.

4.   Press ►.

      The head selection screen appears.

5.   Repeat steps 1 through 4 for any other printhead, or press n to return to the menu.

Clear All Bad Jets

When you select Clear All Bad Jets, the control panel displays the following prompt:

Are you sure you want to clear ALL reported bad jets?

- Press **Cancel** to cancel this function, or

- Press **Proceed**. The control panel displays this message:

      Do you want to clear the hard bad jets?

- Press **No** to clear the soft bad jets only, or

- Press **Yes** to clear both the hard and soft jets.

The control panel displays this message:

All reported bad jets have been cleared.

▲   Press **Proceed** (►).

      When you have finished mapping jets, the following summary appears on the control panel:

      x soft jets currently reported bad. x hard jets currently reported bad. x new soft bad jets reported. x new hard bad jets reported. x previous soft bad jets cleared. x previous hard bad jets cleared.

      where x is the number of jets.

Default Registration Data

This option enables you to reset bidi registration, head-to-head registration, or jet mapping data, or any combination of them. After running this option, the deleted calibration values must be reestablished by running the calibrations.

Unfixed Jets Report

The Unfixed Jets Report displays a table showing, for each print mode, which colors are printing with non-working inkjets that are not being automatically replaced with working jets by AutoJet mapping ("unfixed" inkjets). For each combination of ink color and print mode, "No" means there are no unfixed jets, "Yes" means there are unfixed jets.

Linearization

As the density of an image varies from highlights to shadows, or from lighter to darker tints, the printer should accurately reproduce these areas in a predictable, or linear, fashion. The process of linearization (or color calibration) involves printing and reading color test patches, and calibrating the printer to ensure that the expected and printed densities will match. This in turn will ensure optimal color matching.

Color calibration is a feature of the RIP connected to the printer. Refer to the documentation that accompanies the RIP for further information.

8 Specialty printing options

How to print selective gloss

Sselective gloss is a special application that shows both gloss and matte effects in the same print.

This section describes a method that can extend the profitability and versatility of your printer. Its application is at your own risk.

Only operators technically experienced with the RIP and the printer are recommended to try it. If in doubt, contact your local printer service provider.

1. You must create gloss and matte media profiles for the material that is going to be used. Depending on the media absorption and print mode, the gloss result may vary. For this reason, it is your responsibility to check print results in advance with different configurations (print mode and media).

    During the creation of the matte and glossy profiles, it is important to uncheck the Detectable setting.

    Creating a gloss media type requires closing the shutter of the trailing lamp. As the trailing lamp will be off, there will be a delay between printing and curing (polymerization), which allows the drop of ink to expand, and thus to create the glossy effect.

2. From the control panel's Home screen, press the **Media** icon.

3. Press **Configure**.

4. Press **Create Media Type**.
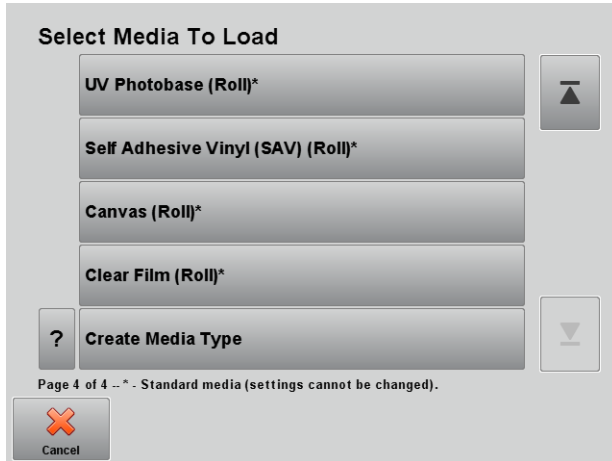
5. As mentioned in the following screens, the new media type must be created from a standard one. It is important to choose the proper media in order to have the correct settings. So, it is highly recommended to create a gloss media profile for all the different substrates you would like to use for this purpose.

⚠ **CAUTION:** Incorrect media settings may directly affect printer performance and print quality, and create risky situations such as printhead crashes.

New media types must be created from a standard media type. Press Proceed to select a standard media type.
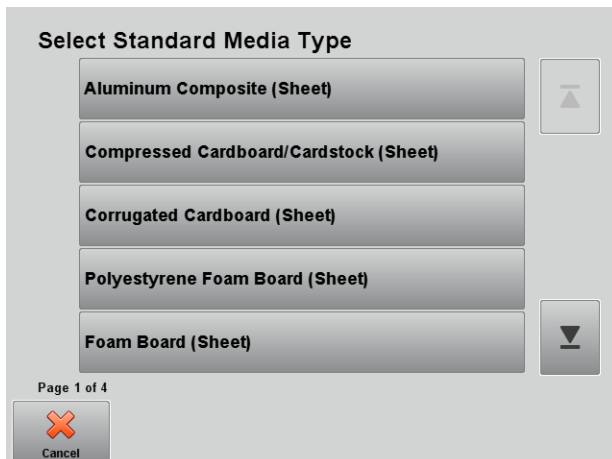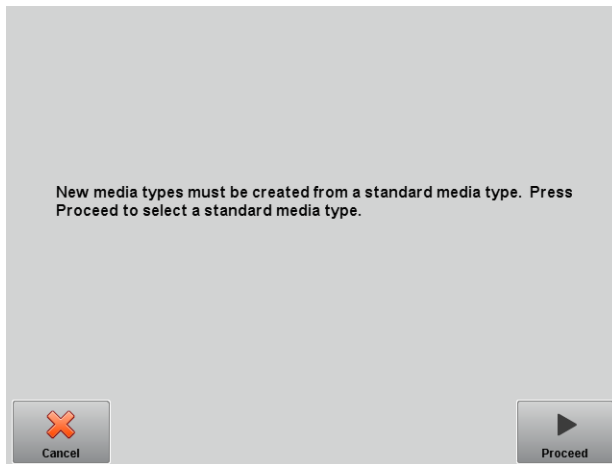
6. Enter the media name. In this example, a new gloss mode is created from a standard Foam Board.

7. Press **View Print Mode Specific Settings**.

8. Press **Change Print Mode Specific Settings**.

9. Check the option **Shutter Trailing Lamp** for all print modes.

10. Press **Change General Media Settings** to uncheck the Detectable setting for matte and glossy.

11. Save the changes.

12. Repeat for other media types that you intend to use.

Follow a similar procedure to create matte media profiles; but, in this case, uncheck **Shutter Trailing Lamp** for all print modes.

1. Select your matte media profile.

2. Load the media at the 0 position.

3. Select the job and print.

4. Select your gloss media profile.

5. Reload the media at the same 0 position.

6. Select the second job and print.

Be careful to use the same width, length, and position every time. And load carefully for proper alignment. Multi-sheet printing is not recommended; single-sheet printing is preferred for the best alignment between different loads.

How to print relief texture

This section describes a method that can extend the profitability and versatility of your printer. Its application is at your own risk.

Only operators technically experienced with the RIP and the printer are recommended to try it. If in doubt, contact your local printer service provider.

There are two ways to print relief texture:

- Print a background image and then print the texture on top of it.

- Print the texture on colored media.

The following example shows the creation of wallpaper with relief texture.

Background   Texture   Final
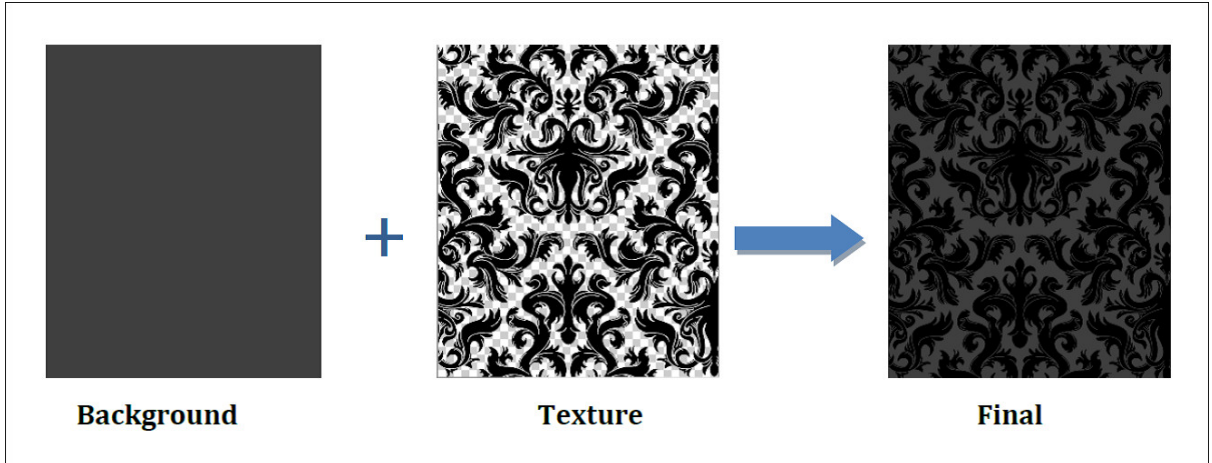
1. Create two files: one with the background image (if needed), and the other with the texture.

2. Texture is achieved by changing the linearization curves and ink limit of the media profile. The basis is the same for every RIP, but the details may vary. Procedures for Caldera and Onyx RIP software are described below.

Caldera RIP

1. Select your texture file from the image bar and drop it onto your printer driver.

2. Click the color settings icon.
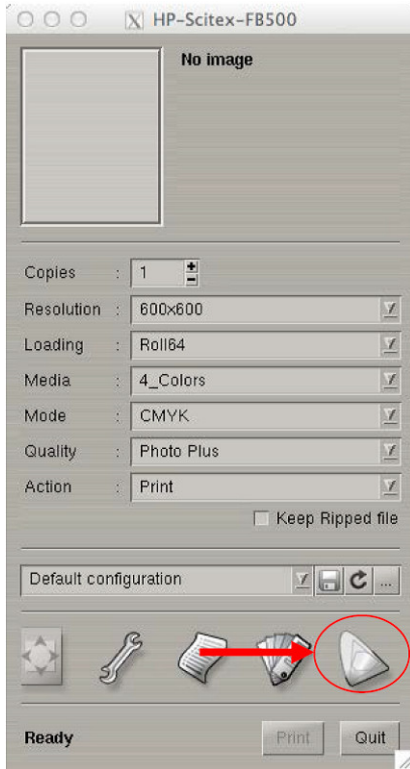
3. Go to the **Output** tab and the linearization curves section. Click the … button to edit.
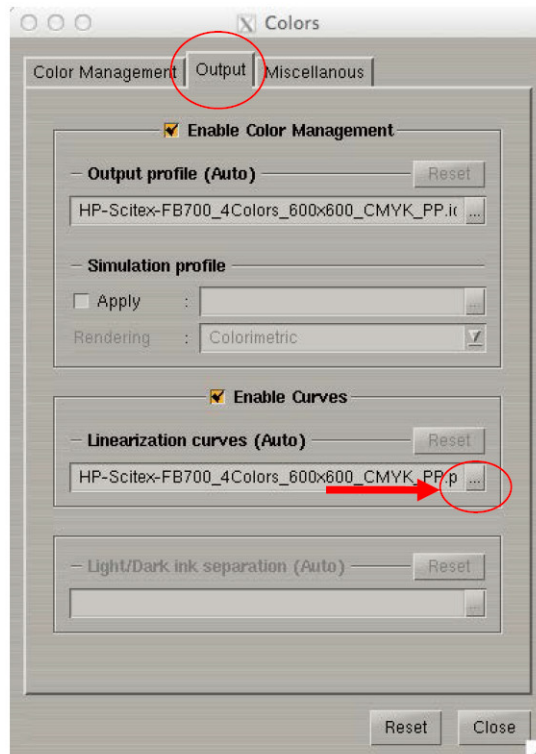
4. You will now see the current linearization curve of your selected media profile. In order to create the relief effect, you must alter the four primary colors (CMYK). To do so, click the up-arrow icon about five times and change the ink limit to 400% in order to reach an acceptable level of relief. Or you can drag each point to the level you need.

Original curves   Modified curves
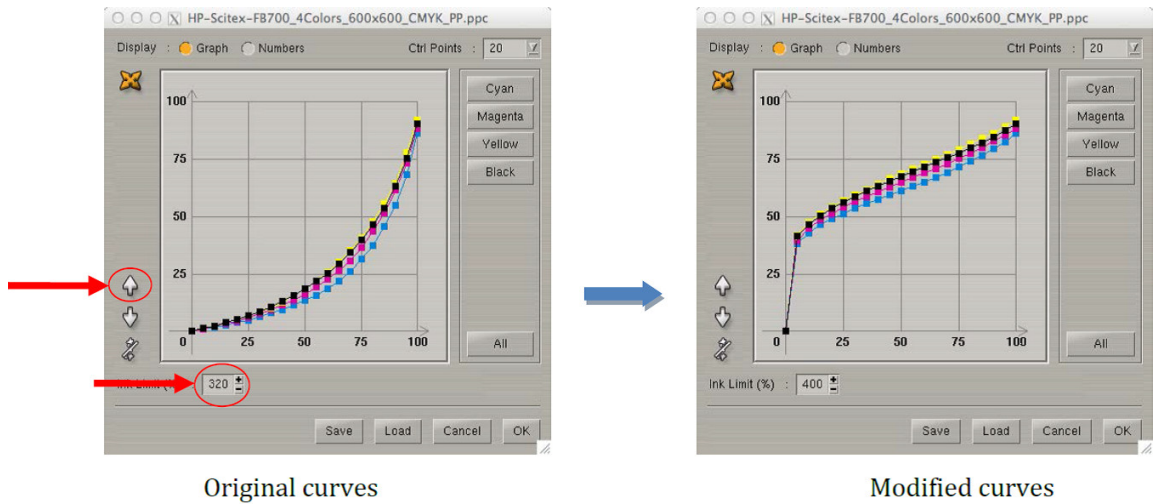
NOTE: The linearization curves field is now set as **Untitled.ppc**. This is the modified curve. You can save it by clicking **Save** if the level of relief is satisfactory.

5. When you have finished, press **OK**, close the color settings window, and print.

Once you have completed your texture job, remember to load the original linearization curves back if you want to print normally. To do this, click the **Reset** button in the **Output** tab.

TIP: You can have two different configurations of your current printer driver settings and easily swap between the background and the texture mode. To do so, in the main printer driver window, save your texture settings as a new preset.

Onyx RIP

1. Open your texture file in the Job Editor.

2. Go to the **Color Correction** tab.
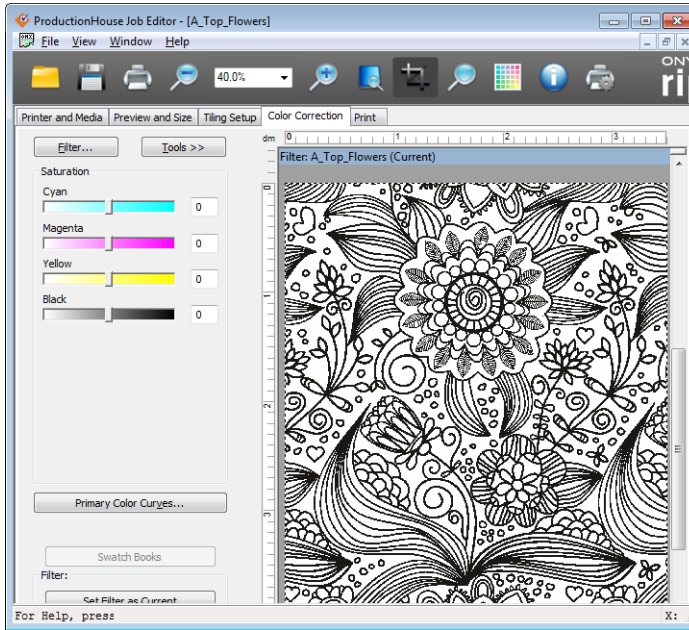
3. Press the **Filter** button and then the **Manager** button.
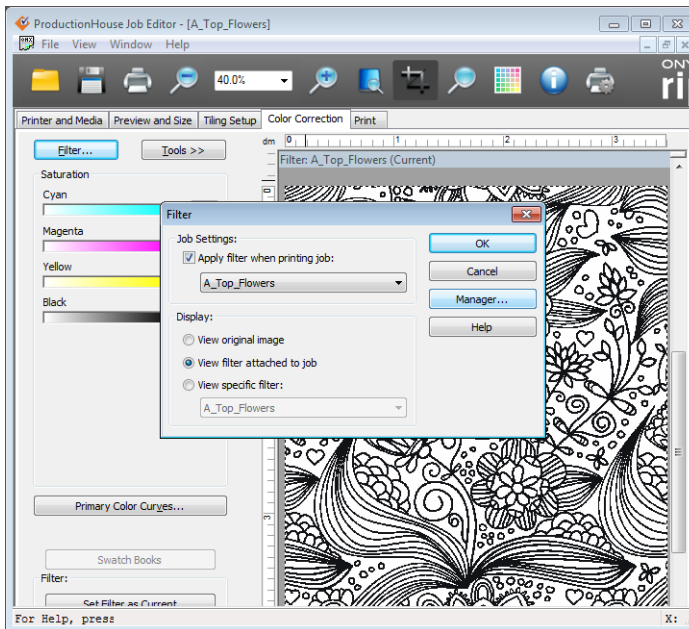
4. Create a new filter with a name such as "Texture Filter", and select it.
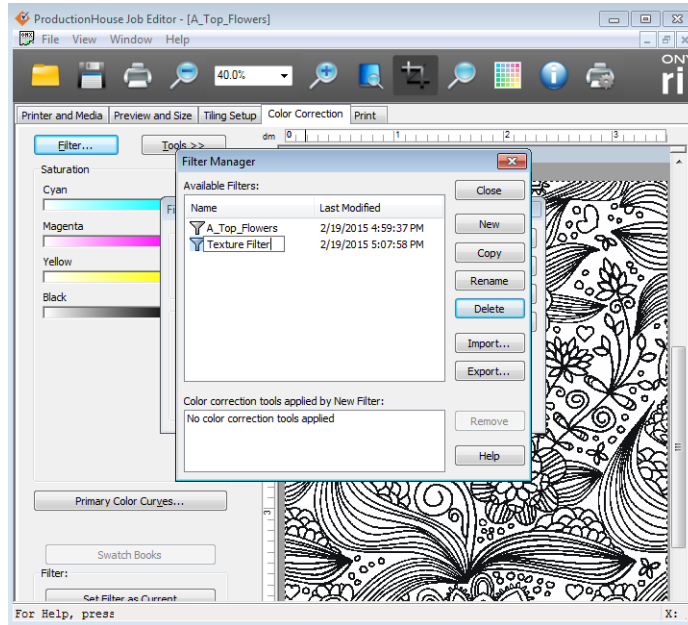
5. Press the **Primary Color Curves** button.
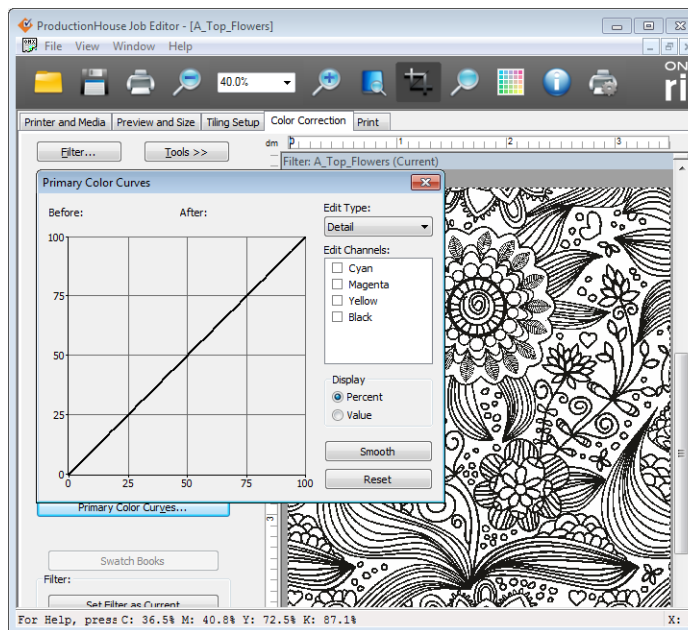
6. Select all the colors and the **Lines** option in the Edit Type drop-down menu. Drag the point up to saturate the output for each color.
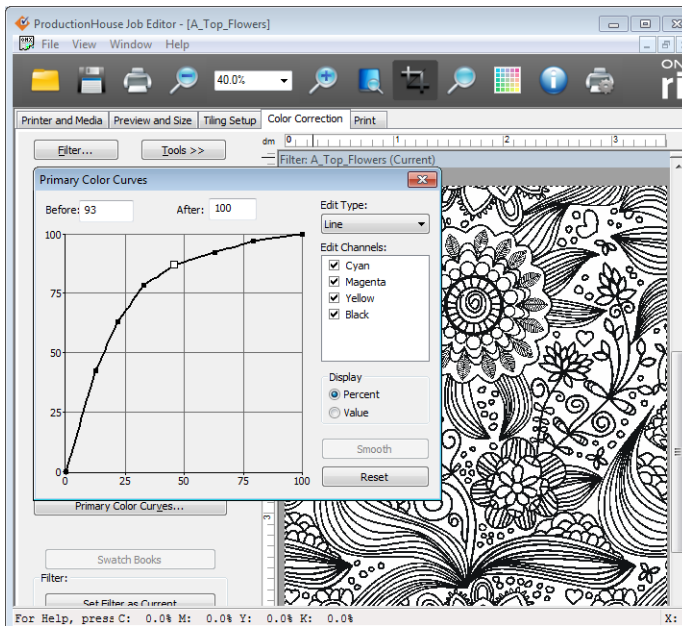
7. Close the window and set all saturations to 100%.
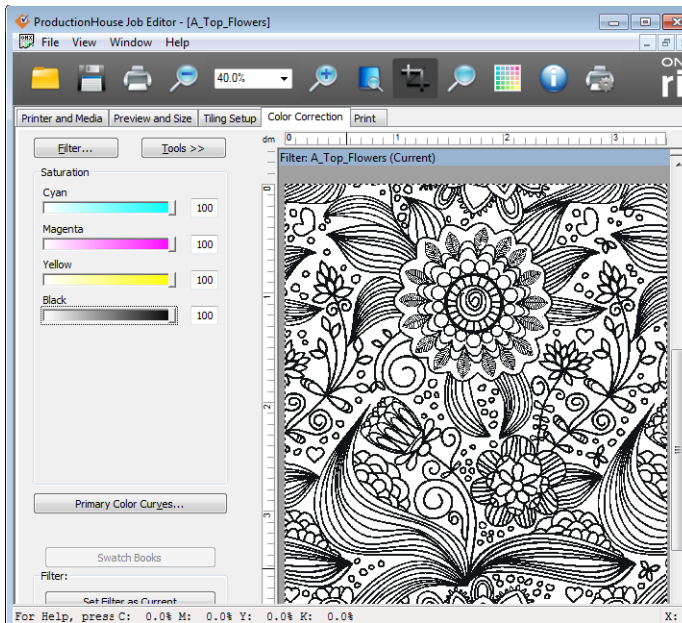
8. Press the **Set Filter as Current** button at the bottom of the screen. Your settings are saved in your Texture filter.

9. Export it to save it in your computer.
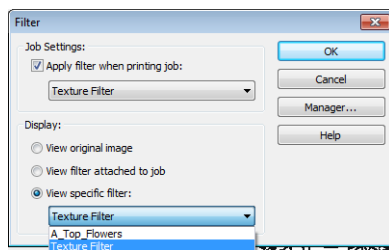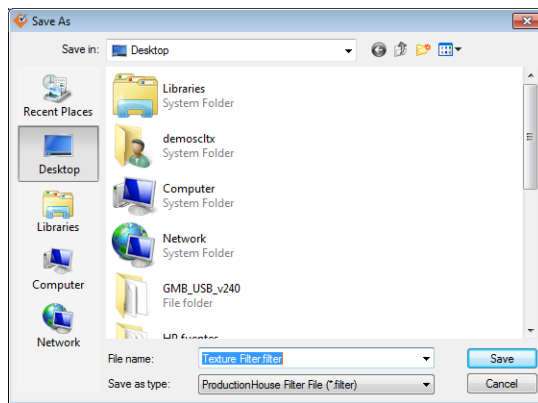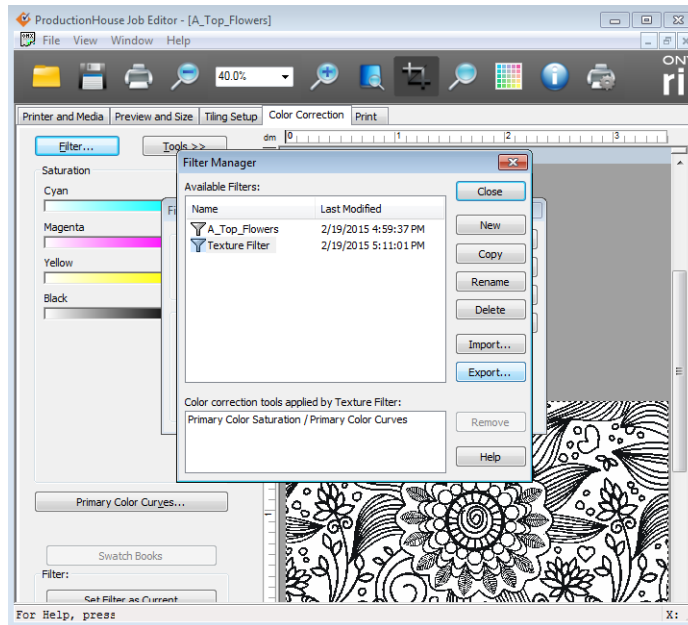
10. When you open a new job, you can select your texture filter and the image will automatically take its settings.

11. Submit your image to be printed.

Media handling

● Texture on a background

- Load the media and print the background.

- Reload the media at the same position and print the texture on top of the background.

- **Texture on colored media**

    - Load and print as a normal job.

NOTE: As you are adding layers of C, M, Y, K, you will always have a black texture. If you want a colored texture, you will need to create a file with a layer of white underflood with the color you want. Bear in mind that adding the extra white and colored layer can reduce the adhesion of the ink to the media.

9   Accessories

Order accessories

You can order the following accessories for your printer. For more information about the cleaning kit, see User cleaning on page 74.

Name	Product number
HP Scitex FB5xx/FB7xx White Ink Upgrade Kit	CQ118A
HP FB251 2L White Scitex Ink Cartridge	CQ123A
HP Scitex FB550/950 Printer Cleaning Kit	CQ121A
HP UV Replacement Bulb	CH231A
HP Scitex FB550 Roll Printing Kit	L6E80A
HP Scitex FB750 Roll Printing Kit	L6E81A
HP Scitex FB550 Extension Table	L5D70A
HP Scitex FB750 Extension Table	L5D71A

10 User cleaning

Schedule of tasks

The parts and supplies required for these procedures may be purchased as a kit (HP product number L1Q41-60034). Consistent and proper use of this kit will contribute to optimal printer performance, extend lamp and printhead life, reduce the number of service calls, increase image quality, and reduce the potential for output artifacts.

Follow the cleaning schedule or clean as needed (depending on frequency of use and amount of dust and airflow around the printer). The printer displays maintenance reminders on the control panel according to this schedule or actual in-service time, as appropriate. A summary of all service intervals can be seen at **System> Tools> User Cleaning and Maintenance** .

Table 10-1 Schedule of cleaning tasks

Task	Frequency (hours)		Required tools
	CMYKcm	CMYKW	
Clean and lubricate rail strips on page 77	40	20	Oiled cloth kit One or two lint-free cleaning cloths Cleaning fluid
Clean the carriage encoder strip on page 78	40	20	One lint-free cleaning cloth Cleaning fluid
Clean the printheads on page 79	40	20	Three lint-free cleaning cloths One pair of gloves Cleaning fluid
Clean the carriage home sensor on page 81	80		Long-stick swab Cleaning fluid
Clean the service-station wiper rails on page 82	80	40	One grease pack One pair of gloves One cotton swab Cleaning fluid
Clean the service-station wiper on page 83	80	40	One lint-free cloth One pair of gloves Cleaning fluid
Clean the carriage wheels on page 84	40		Three long-stick swabs Cleaning fluid
Vacuum the bottom of the carriage on page 87	80		
Replace the UV lamp filters on page 88	250		Lamp filter kit
Clean the electronics box filters on page 89	250		Vacuum cleaner
Replace the service station wiper on page 90	250		Wiper blade Phillips screwdriver

Task	Frequency (hours)		Required tools
	CMYKcm	CMYKW	
Clean ionizer needles on page 91	250		Ionizer cleaning brush
Drain waste ink container on page 92	40	20	Waste ink container
Clean the media thickness sensor on page 93	250		One lint-free cloth Cleaning fluid
Clean the cover exhaust fans on page 94	250		Vacuum cleaner
Replace the UV lamp bulbs on page 94	500–1000		Two HP UV Replacement Bulb Kits

Substitute cleaning procedures for air quality regulatory compliance

The various Air Quality Management Districts in California may have rules that restrict the use of cleaning solvents containing Volatile Organic Compounds (VOCs). This document provides alternative cleaning procedures for printers located in the areas of California where the use of solvents containing VOCs is restricted. These revised procedures supersede any previous instructions, guidelines, or recommendations issued by HP regarding the cleaning or maintenance of the relevant printers in California. Maintenance procedures that do not involve the use of VOCs for cleaning are not affected.

Printers located in California should not be cleaned using SolaChrome-UV Printhead Flush, HP UV Printhead Flush (HP product number CH122A) or isopropyl alcohol (IPA) unless other VOC compliance measures are in place. This includes the use of any product samples which came with the printer when it was purchased. Dispose of any remaining Printhead Flush in accordance with applicable regulations.

The compliant alternative liquid for cleaning and maintaining this printer is: Methyl Acetate (CAS# 79-20-9), at least 98% pure, undiluted.

Follow these safety guidelines when handling parts and cleaning chemicals:

- When handling parts and cleaning liquids use appropriate personal protective equipment (PPE) as prescribed in the Material Safety Data Sheet (MSDS). This includes the use of safety goggles, chemical protective gloves, and other protective personal clothing. Additional useful information may also be provided on websites operated by the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health.

- Only those components originally designated for cleaning with Printhead Flush or IPA should be cleaned with the alternative cleaning liquid.

- Methyl Acetate is a flammable liquid; read and adhere to the instructions in the MSDS document for safe handling and storage. State and local agencies or fire departments may impose additional requirements.

- Follow all health, safety and environmental protection regulations when using any solvents to clean or maintain the printer. An agency that administers health and safety regulations within the State of California is the Department of Industrial Regulations, Division of Occupational Safety and Health (Cal-OSHA).

- Minimize the quantity of cleaning liquid used during maintenance to avoid spills, contamination, or harm to printer parts. Carefully moisten cleaning cloths or swabs with the cleaning liquid, and ensure

that none of it drips onto the printer. Any excess or residual liquid should be removed by cleaning the area with a dry cloth. Failure to clean off any residual cleaning liquid could cause damage to the printer, or could adversely affect the printer's level of image quality.

- Disposal of waste must be in accordance with applicable regulations.

Clean and lubricate rail strips

CMYKcm — 40 Hours

CMYKW — 20 Hours

Ink dust and debris can accumulate on the carriage-wheel strips. These particles become obstacles and friction for the carriage wheels, which can appear as repeating output anomalies on the printed media.

📝 **NOTE:** Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 1) Clean and Lube Carriage Rail Strips**.

2. Press **Proceed** to continue.

3. Remove output table and open the output-side door.

   Opening the output-side door will disable the carriage servo, allowing the carriage to be moved manually.

4. Using a lint-free cloth and isopropyl alcohol, clean the top carriage-wheel strip from end to end on the rail (moving the carriage to clean the full length of the rail).

5. Lubricate the top carriage-wheel strip from end to end on the rail (moving the carriage to clean the full length of the rail).

   The included oiled rags can be reused until there is no clear surface remaining on the rag (rags should be replaced every 3 months). Clean these surfaces weekly or more frequently, depending on the amount of debris in the environment.

⚠ **CAUTION:** Do not add additional oil to the lubrication cloths. The cloths are created to distribute a very thin film of oil. If too much oil is deposited, oil pockets can cause friction with the carriage wheels, which will produce output anomalies.

Figure 10-1 Top carriage-wheel strip
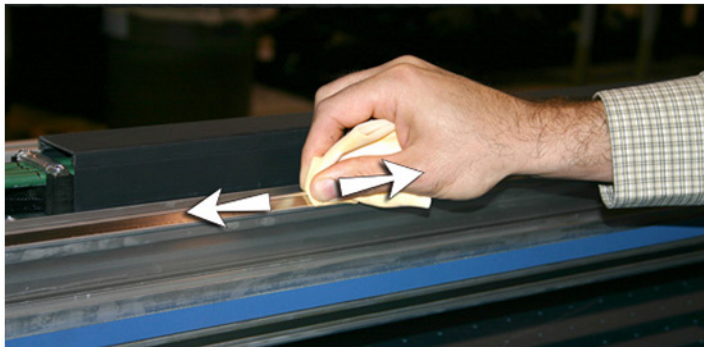
6. Lubricate behind the top area of the rail where the carriage wheels contact.

Figure 10-2 Back of top carriage-wheel strip

7. Using a lint-free cloth and isopropyl alcohol, clean the lower carriage-wheel strip from end to end on the rail (moving the carriage by hand to clean the full length of the rail).

8. Lubricate the lower carriage-wheel strip from end to end on the rail (moving the carriage by hand to lubricate the full length of the rail).

NOTE: Even if the oiled cloth appears clean, it should be discarded every 3 months so that the oil does not become sticky.

Figure 10-3 Lower carriage-wheel strip
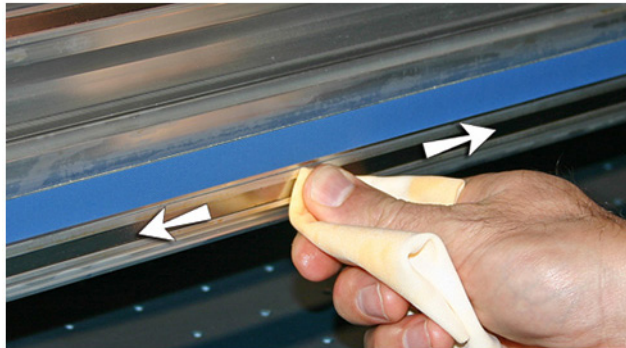
9. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the carriage encoder strip

CMYKcm — 40 Hours

CMYKW — 20 Hours

Ink dust and debris can accumulate on the encoder strip and block accurate reading of the encoder marks by the carriage encoder reader.

NOTE: Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 2) Clean Carriage Encoder Strip> In**.

2. Press **Proceed** to continue.

3. Remove output table and open the output-side door.

   Opening the output-side door will disable the carriage servo, allowing the carriage to be moved manually.

4. Wipe the top of the encoder strip using a lint-free cloth moistened with diluted IPA (Isopropyl alcohol), cleaning the entire length of the strip.

   Use common rubbing alcohol, which is 70% isopropyl alcohol and 30% water.

   Figure 10-4 Cleaning the encoder strip
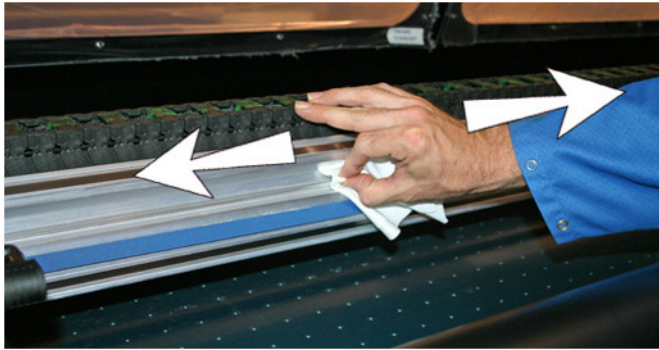
   📝 **NOTE:** Wipe only the top of the encoder strip. Encoder information on the underside can be worn off by cleaning.

5. Move the carriage by hand to clean the encoder strip section behind the carriage. This enables you to clean the entire encoder strip from end to end.

6. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the printheads

CMYKcm — 40 Hours

CMYKW — 20 Hours

📝 **NOTE:** Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 3) Clean Print Heads**.

2. Process **Proceed** to continue.

3. Open the service door to access the carriage over the service station.

⚠ **CAUTION:** Wear protective gloves, such as latex, to protect your hands from being stained with ink.

CAUTION: Wear safety glasses to protect your eyes from ink and head flush that may splash into your eyes.

Figure 10-5 Reaching the printheads through the access door

4. Saturate a lint-free cloth with printhead flush solution.
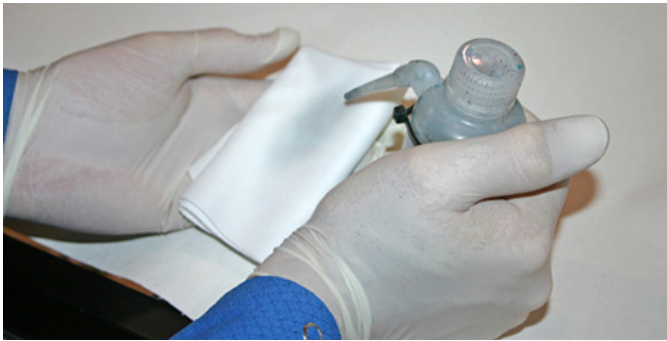
5. For each color, press a clean portion of the cloth with two fingers, on one printhead, and draw the cloth across the printheads toward you (see the following figure).

📝 **NOTE:** To avoid pushing debris into the printhead orifice, make sure each wipe is done with a clean area of the cloth. The cloth should be saturated with head flush.

Figure 10-6 Wiping printheads

6. Clean the bottom of the pen plate (see the previous picture) using a lint-free cloth saturated with head flush.

7. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

8. Select **Ink> Purge** from the control panel.

9. Select **Ink> Check Jet Health** from the control panel upon purge completion.

10. Examine the jet health pattern for missing jets. If a printhead has missing jet, repeat steps 1 through 9.

Clean the carriage home sensor

CMYK — 80 Hours

CMYKW — 40 Hours

The home sensor is located at the user end of the carriage, between the lamp assembly and the carriage side plate (on the upper input side of the carriage). Ink dust and debris can accumulate in the thin slits of the optical sensor and cause errors.

NOTE: Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Clean Carriage Home Sensor**.

2. Press **Proceed** to continue.

   The printer raises the printhead carriage rail, lowers the output roller, and centers the carriage.

3. Remove the output table and open the output-side door.

   Opening the output-side door disables the carriage servo, allowing the carriage to be moved manually.

4. Locate the home sensor (A in photo below).

   Figure 10-7 Carriage home sensor location
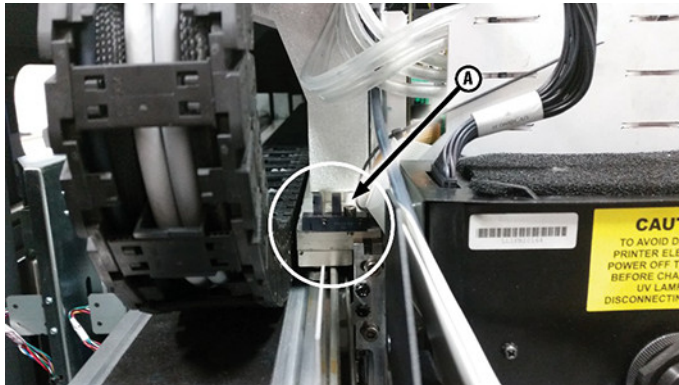
5. Locate the front and back slots of the optical sensor.

   Figure 10-8 Detail view of carriage home sensor
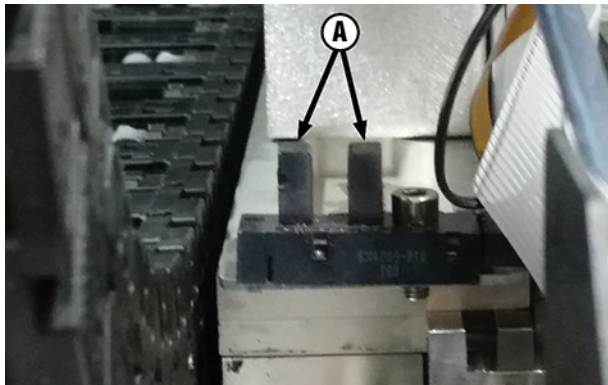
6. Using a long cotton swab saturated with isopropyl alcohol, clean the front and back slots by inserting the swab into the opening from the user side of the printer.

⚠ **CAUTION:** Insert the swab from the bottom of the sensor to avoid pushing debris into the slots. Insert the swab moving from the bottom upwards. Do not wipe across the slots, as this will force debris into the openings.

Figure 10-9 Cleaning the home sensor
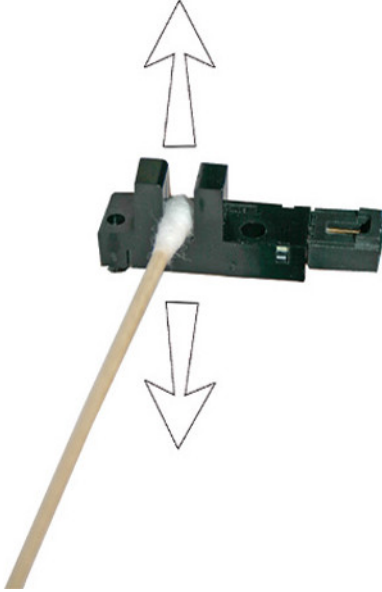
7. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the service-station wiper rails

CMYKcm ⎯ 80 Hours

CMYKW ⎯ 40 Hours

Cleaning and lubricating the wiper rails keeps the wiper motion moving smoothly for best cleaning performance.

📝 **NOTE:** Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Clean Service Station Wiper Rails**.

2. Press **Proceed** to continue.

3. Open the service door on the output side of the printer.

4. Using a cloth moistened with printhead flush, wipe ink and debris from the top of the service station.

Figure 10-10 Cleaning the top of the service station

5. Using a lint-free cloth, clean both of the wiper rails on both sides of the wiper carriage.

   Clean the exposed rails on all sides, moving the wiper carriage to clean the full length of the rails.

Figure 10-11 Cleaning rails
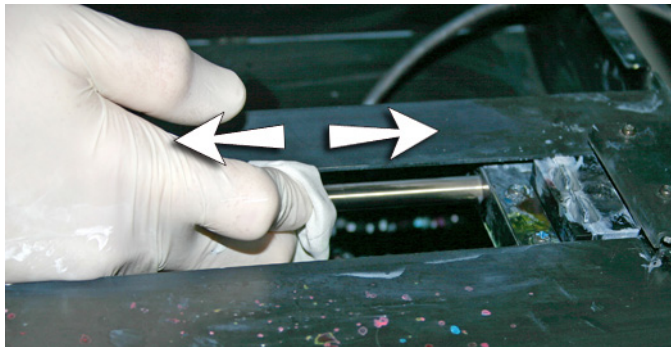
6. When prompted by the control panel, close the access door and press **Proceed**.

7. Wait for the wiper carriage to move, then open the access door.

8. Apply a dab of grease (supplied) onto a cotton swab.

9. Apply the grease to both rails, making sure to grease the entire surface of the rail (top, bottom, and sides).

10. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

    When you press **Proceed**, the printer resets the maintenance counter and moves the wiper carriage back and forth on the rails to spread the lubricant evenly.

Clean the service-station wiper

CMYKcm ⎯ 80 Hours

CMYKW ⎯ 40 Hours

Clumps of ink can accumulate around the wiper blade. If not cleaned off, the wipers can press the clumps of ink into the printhead orifices, which can clog the printhead jets.

NOTE: Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Clean Service Station Wiper**.

2. Press **Proceed** to continue.

3. Wear gloves, for example latex gloves, to protect your hands from ink.

4. Using a lint-free cloth saturated with printhead flush (do not use isopropyl alcohol), wipe both sides of the rubber wiper.

   Figure 10-12 Service-station wiper blade
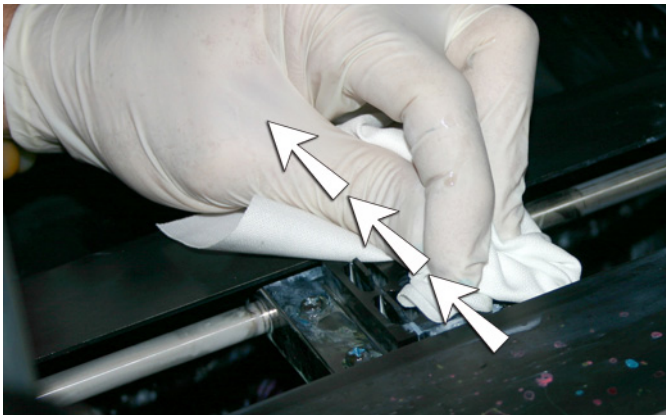
5. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the carriage wheels

CMYKcm — 40 Hours

CMYKW — 40 Hours

Ink dust and debris can accumulate on the carriage wheels. These particles become obstacles and friction for the carriage wheels, which can cause repeating output anomalies on the printed media.

NOTE: Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

There are eight carriage wheels to clean (A to H in the figure below).

Figure 10-13 Location of carriage wheels
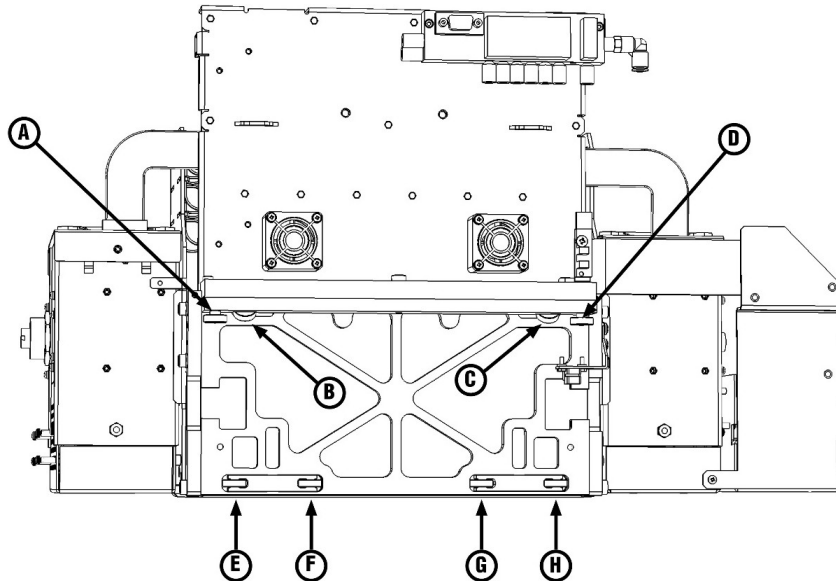
1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 7) Clean Carriage Wheels**.

2. Press **Proceed** to continue.

    The rail and the output roller will raise to the maximum height. You can move the carriage to any position on the rail that is convenient for cleaning.

3. Remove output table and open the output-side door.

    Opening the output-side door will disable the carriage servo, allowing the carriage to be moved manually.

4. Clean the top service-end wheel by placing an Isopropyl alcohol-moistened cotton swab against the side of the wheel (A in photo below) and moving the carriage back and forth about 10 cm (4 in).

    Figure 10-14 Location of carriage wheels
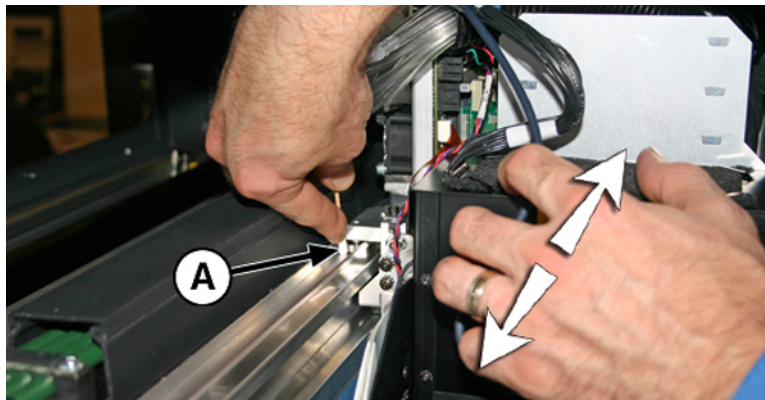
5. Clean the top user-end carriage wheel with an isopropyl alcohol-moistened cotton swab.

Figure 10-15 Cleaning carriage-wheel with cotton swab

6. Clean the top slanted wheels by inserting an isopropyl alcohol-moistened cotton swab into the opening above the (A) wheels and moving the carriage back and forth. Perform the same process for each wheel on the user and service-end of the carriage.

Figure 10-16 Cleaning slanted carriage-wheels with cotton swab (1 of 2)
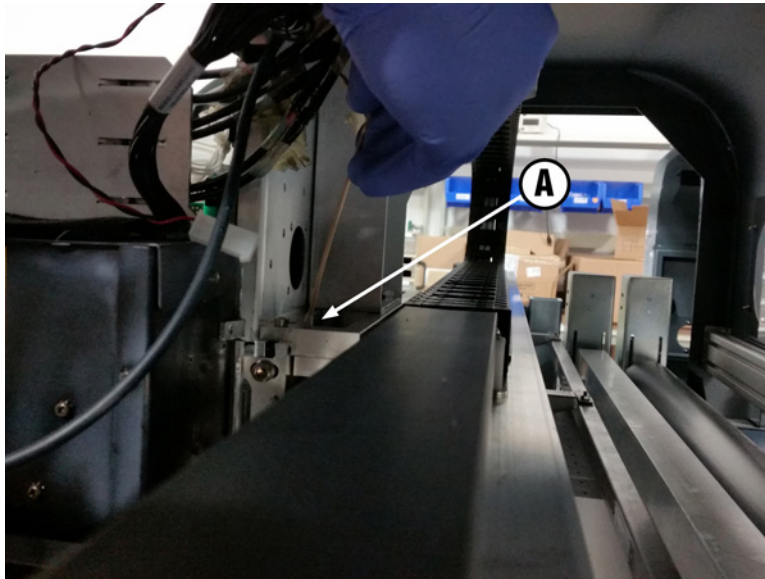
Figure 10-16 Cleaning slanted carriage-wheels with cotton swab (2 of 2)
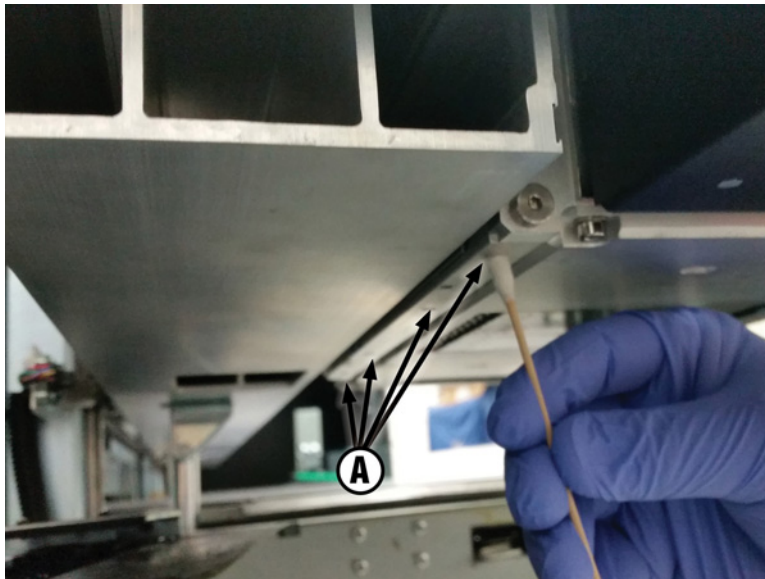
7. Clean the four lower carriage wheels by inserting isopropyl alcohol moistened cotton swab into the four access holes located beneath the carriage and moving the carriage back and forth.

8. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Vacuum the bottom of the carriage

CMYKcm — 80 Hours

CMYKW — 80 Hours

Clumps of ink and debris can accumulate around the printheads, where the service station's printhead wiper does not reach. This routine uses the printer's internal printhead vacuum cleaner to clean as much of this surface area as possible. This reduces the possibility of ink debris moving from the edge of the printhead orifice area onto the printhead, which can clog jets.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Vacuum Carriage Bottom**.

2. Press **Proceed** to continue.

3. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

After this procedure, you are recommended to clean the wipers; see .

Replace the UV lamp filters

CMYKcm — 250 Hours

CMYKW — 250 Hours

Lamp filters keep ink dust and other debris from entering the air-cooled lamp area. If the filters become clogged, the lamps may overheat, reducing the life of the bulbs. Overheating causes printing to stop, which can ruin a print job.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Replace UV Lamp Filters**.

2. Press **Proceed** to continue.

   The printer centers the printhead carriage.

3. Remove the output table and open the output-side door.

   Opening the output-side door disables the carriage servo, allowing the carriage to be moved manually.

4. Remove the original air filters for both carriage lamps (B in photo below).

   Figure 10-17 Lamp air filter
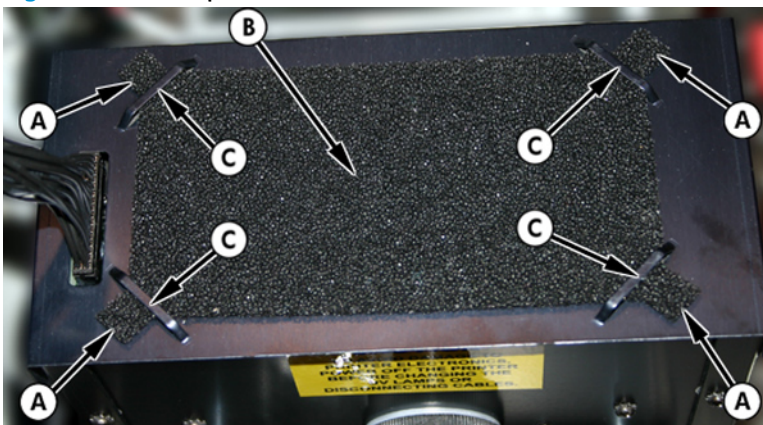
5. Install the new air filters by inserting the corner tabs (A in above photo) under the corner slots (C in above photo) on top of the lamps.

6. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the electronics box filters

CMYKcm — 250 Hours

CMYKW — 250 Hours

Electronics box fan filters keep dust and other debris from entering the air-cooled area of the electronics box. If the filter becomes clogged, the electronics may overheat, causing performance errors. There are two air intake fans to clean. One is located near the power switch on the user end of the printer (input side). The other is located in the middle area under the printer chassis where the power cord attaches to the user end.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Clean Electronics Box Fan Filters**.

2. Press **Proceed** to continue.

3. Vacuum the dust and debris from the front of the fan on the input side of the electronics box, located behind the user-end enclosure in the area indicated by (A) in the figure below.

   If the chassis wheels are still attached to the printer, rotate the wheel out of the way as shown below.

   Figure 10-18 Cleaning the electronics box fan filter on the input side
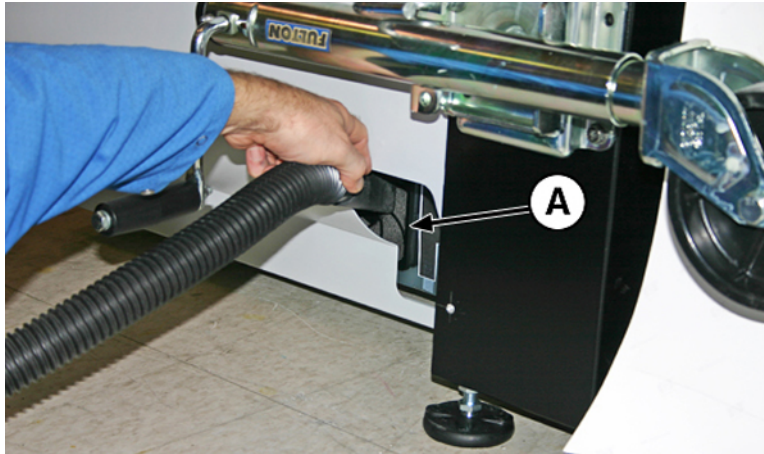
4. Vacuum the filter (A in the photo below) located under the printer's chassis near the power cord attachment point, and remove dust from the surrounding area.

Figure 10-19 Cleaning dust from the electronics box fan filter
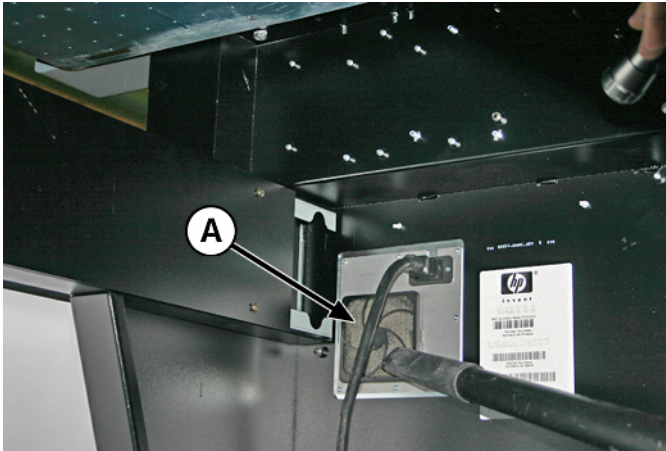
5. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Replace the service station wiper

CMYKcm — 250 Hours

CMYKW — 250 Hours

The wiper blade deteriorates with use. Replacing the wiper blade periodically restores the wiping to optimal performance and wiper height.

📝 **NOTE:** Replace the wiper according to the schedule in Table 10-1 Schedule of cleaning tasks on page 75. The wiper replacement schedule is calculated to be frequent enough to avoid the need for wiper-height calibrations between replacements. If the wipers are not making adequate contact with the printheads, contact your service provider to calibrate the wiper height.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 11) Replace Service Station Wiper**.

2. Press **Proceed** to continue.

3. Open the service door to access the service station.

4. Remove the screw (A in the figure below) that secures the wiper clamp to the wiper assembly.

Figure 10-20 Service station wiper assembly

5. Separate the two wiper clamp halves and remove the original wiper.

6. Install the replacement wiper blade in the orientation shown below.

Figure 10-21 Wiper, clamp and screw

7. Secure the wiper blade clamp to the wiper assembly using the original screw.

8. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean ionizer needles

CMYKcm – 250 Hours

CMYKW – 250 Hours

Ink dust and debris can collect on the ionizer needles, which degrades its ability to eliminate static. Cleaning the needles keeps the ionizer bar in good condition.

1. Select from the control panel **System** > **Tools** > **User Cleaning and Maintenance** > **Clean Ionizer Needles**.

2. Press **Proceed** to continue.

The printer moves the rail for easier access to the ionizer bar.

3. Remove the output table and open the output-side door.

4. Using the brush supplied with the printer (shown in the photo below), clean the ionizer needles beneath the ionizer bar.

   The ionizer bar is between the input roller and the alignment bar on the input side of the printer.

   Figure 10-22 Cleaning ionizer needles with the supplied brush
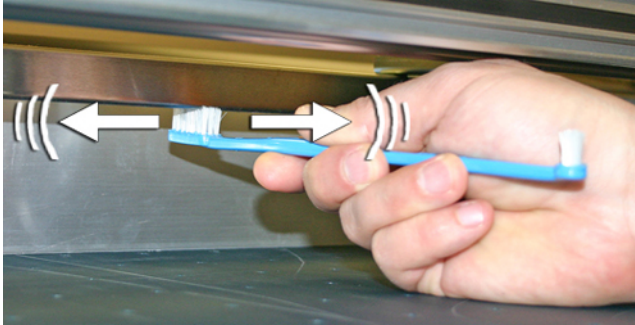
   The needles (A in the photo below) run the length of the ionizer bar.

   Figure 10-23 Ionizer needles
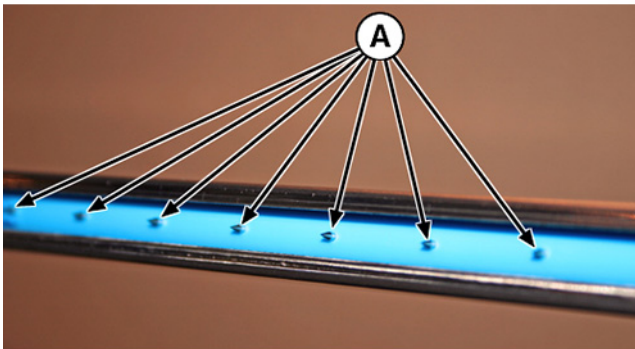
5. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Drain waste ink container

CMYKcm — 40 Hours

CMYKW — 20 Hours

Waste ink accumulates in the service station until drained. Depending on printer use and ink service frequency, the service station may need to be drained more often, a Warning or Action in the Attention Queue alerts you when necessary. Dispose of the collected ink according to local regulations.

1. Place the waste ink container (included with the printer) beneath the waste ink spigot, under the media drive belt at the service-end of the printer.

2. Select from the control panel **System> Tools> User Cleaning and Maintenance> 13) Drain Waste Ink Container**.

3. Press **Proceed** to continue.

4. Turn the spigot (A in the photo below) to the open position

Figure 10-24 Waste ink bottle and spigot

5. Turn the spigot to the closed position after the waste ink has drained.

Figure 10-25 Waste ink spigot in the closed position

⚠ **CAUTION:** The drain spigot must remain closed during printing and service station use. An open spigot affects the vacuum level in the service station and will degrade service station performance if left open.

6. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the media thickness sensor

CMYKcm ‒ 250 Hours

CMYKW ‒ 250 Hours

The media thickness sensor is located on the carriage rail, on the user-end behind the rail. Debris on the media thickness sensor roller can result in inaccurate measurements. Clean the roller to keep the sensor operating correctly.

📝 **NOTE:** Users of printers in California must disregard all references to the Printhead Flush or IPA in the instructions or when displayed on the control panel. Instead, the alternative cleaning liquid specified at the beginning of this section must be used.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 14) Clean Media Thickness Sensor**.

2. Press **Proceed** to continue.

3. Clean the media thickness sensor roller by manually turning the roller with your finger while applying the cloth to the roller surface using a lint-free cloth that is saturated with IPA (isopropyl alcohol).

Figure 10-26 Use a lint-free cloth while moving the media thickness sensor roller
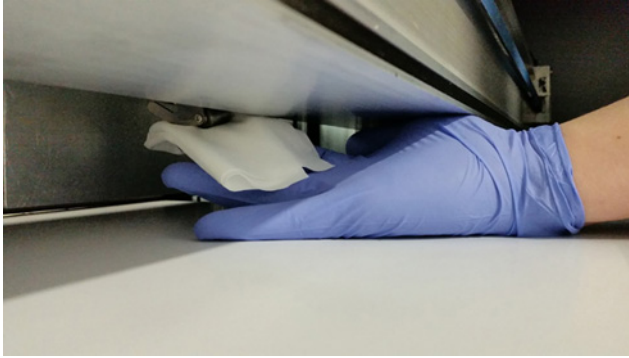
4. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Clean the cover exhaust fans

CMYKcm – 250 Hours

CMYKW – 250 Hours

Cover exhaust fans keep the printer running at optimal temperatures by drawing warm air generated by the electric components away from the printer. There are finger guards for each fan where debris can build up, cleaning these finger guards will prevent the debris from falling onto printed output. Fans are located along the top of the printer on both end-caps and on the output door cover.

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 15) Clean Cover Exhaust Fans**.

2. Press **Proceed** to continue.

3. Remove output table and open the output-side door.

4. Vacuum the dust and debris from each fan guard.

5. To reset the maintenance counter for this task and complete the procedure, press **Proceed**.

Replace the UV lamp bulbs

CMYKcm – 500–1000 Hours

CMYKW – 500–1000 Hours

The UV ink curing lamp bulbs will gradually emit light of diminishing intensity with use. To compensate, increase the power settings to the lamp. (From the control panel **Printing> Options> Increase UV Lamp Power**). The UV bulbs are warranted for 500 hours, but by operating them at a low power initially, and increasing the power only when necessary to ensure a full curing of the ink, a service life of 1000 hours is possible.

Replace both bulbs at the same time, so that both bulbs emit light of equal intensity. Order two of HP product number CH231A, HP UV Replacement Bulb Kit. The replacement procedure is as follows:

1. Select from the control panel **System> Tools> User Cleaning and Maintenance> 16) UV Lamp Bulbs> In**.

2. Press **Yes** to continue or **No** to cancel.

    The printer positions the rail and carriage for replacing the bulbs.

3. Select from **Both Lamps**, **Service-end Lamp** or **User-end Lamp** (it is recommended to replace both bulbs at the same time).

4. Press **Proceed** to continue.

    This resets the lamp service hours counter to zero hours.

5. Power down the printer using the power switch as instructed on the control panel.

    ⚠ **CAUTION:** DO NOT attempt to access the UV Lamps without first powering down the printer.

    📝 **NOTE:** DO NOT disconnect the main power cable from the print: this ensures that the proper vacuum is maintained to the printheads, which prevents ink from leaking out.

6. Wait five minutes to allow any existing current to drain from the capacitors.

7. Remove output table and open the output-side door.

8. Remove the user-end upper lamp assembly.

    a. Disconnect the auxiliary cable (A in the figure below) from the top of the user-end lamp.

        Figure 10-27 Auxiliary cable
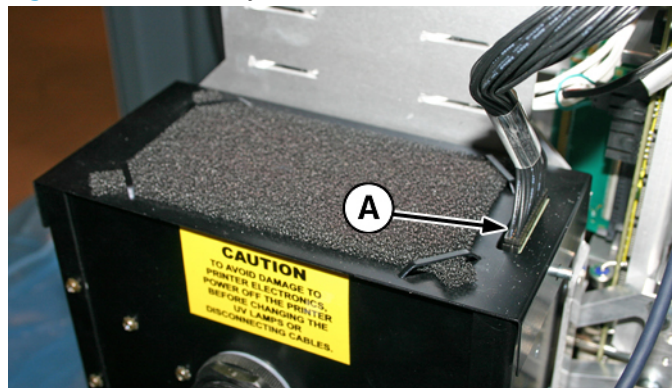
b. Remove the lamp power cable from the side of the lamp (A in the figure below) by turning the coupling counterclockwise.

Figure 10-28 Lamp power cable
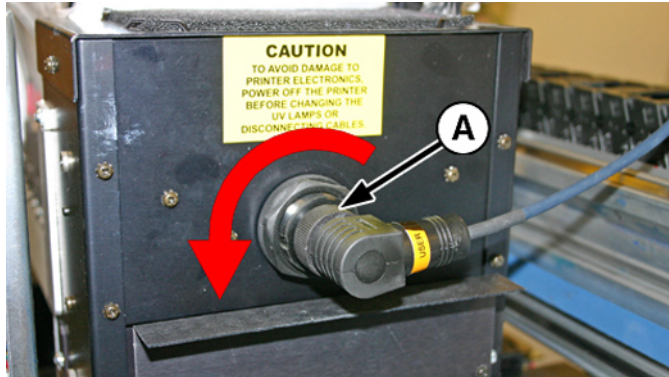
c. Remove the four screws (A and B in the following figure) that secure the upper lamp assembly to the lower lamp assembly.

Figure 10-29 User-end screws
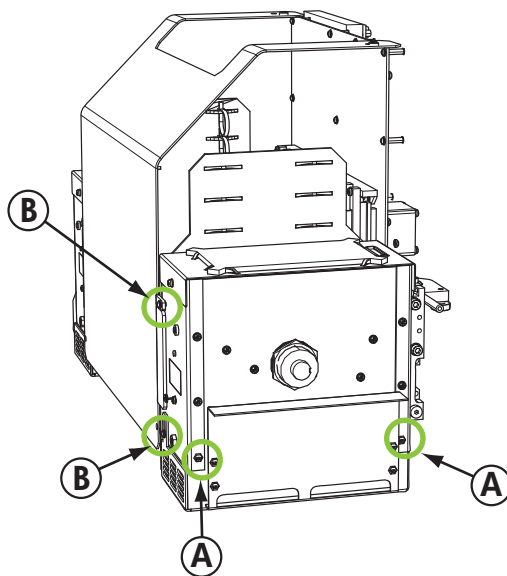
d. Lift up to remove upper lamp assembly from the lower lamp assembly.

Figure 10-30 User-end screws
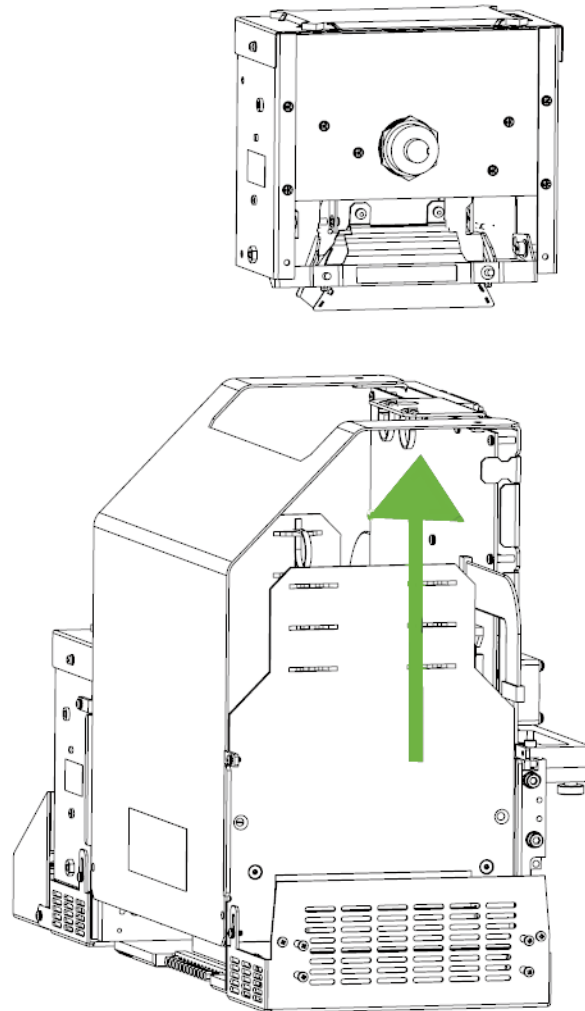
9. Remove the service-end upper lamp assembly.

   a. Disconnect the auxiliary cable (A in the figure 27) from the top of the user-end lamp.

   b. Remove the lamp power cable from the side of the lamp (A in the figure 28) by turning the coupling counterclockwise.

c. Remove the four silver screws (A and B in the following figure) that secure the upper lamp assembly to the lower lamp assembly.

Figure 10-31 Service-end screws
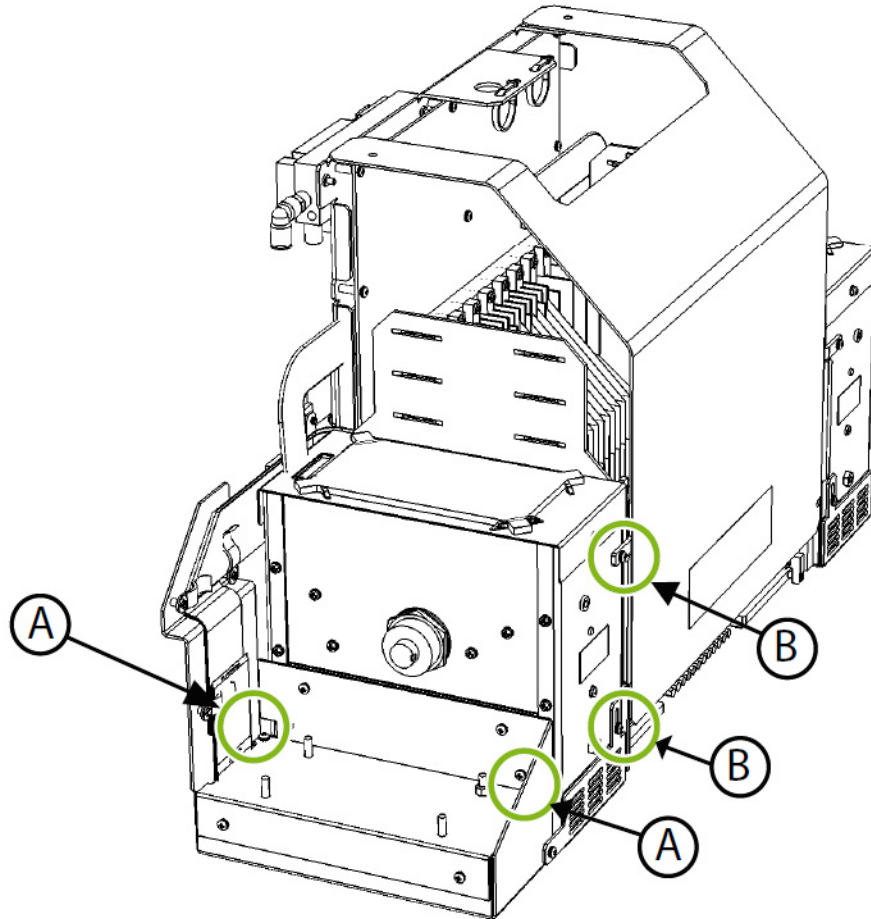
d. Lift up to remove the upper lamp assembly from the lower lamp assembly.

10. Remove the old UV lamp bulb

📝 **NOTE:** Wear cotton gloves to protect the reflector and replacement bulb from fingerprints, which would reduce bulb life and reflector efficiency.

a. Pull the spring-loaded clamp (A) from the side of the lamp reflector (B) as shown below.

Figure 10-32 Spring-loaded clamp
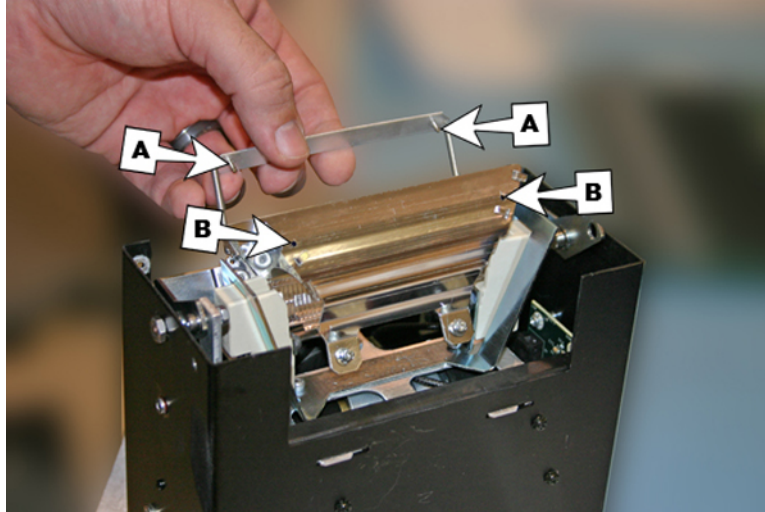
b. Loosen the two screws that hold the two reflectors together until the outside reflector can be removed.

Figure 10-33 Reflector screws
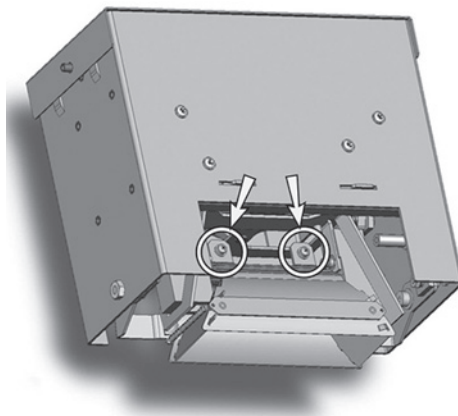
📝 **NOTE:** The reflector screws are captive screws and are not meant to be fully removed. If you do fully remove the screws, take care that the screws do not drop into the lamp assembly.

📝 **NOTE:** Do not bend any of the tabs on the reflectors.

c. Push the lamp bulb to one side slightly (against the spring), and lift it from the upper lamp assembly.

Figure 10-34 Removing the bulb
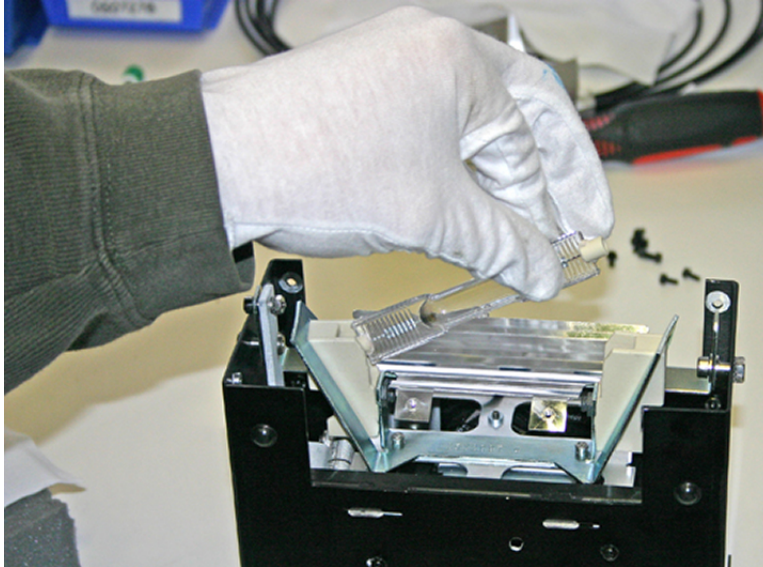
Material disposal: mercury lamps

This HP product contains the following materials that might require special handling at end-of-life: Mercury is present in UV lamps. Disposal of mercury can be regulated because of environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (EIA) (http://www.eiae.org).

11. Install the new UV lamp bulbs

a. Insert the replacement bulb into the upper lamp assembly, pressing it to the left, then down into place as illustrated in the following figure.

Figure 10-35 Installing the bulb
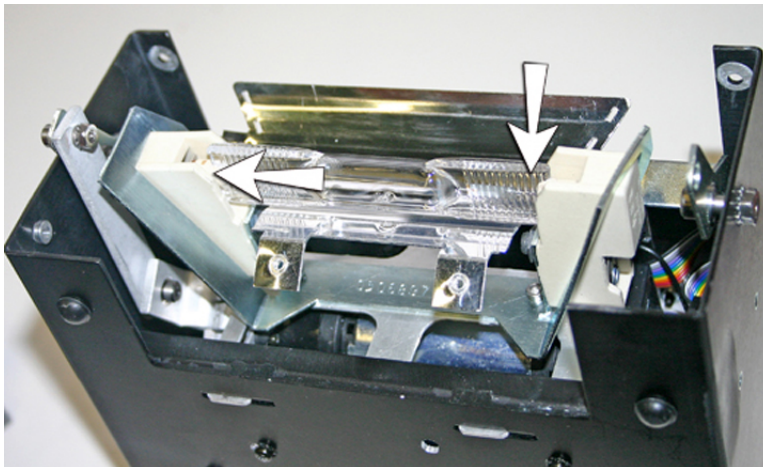
b. Tighten the two screws that hold the reflectors together (see for screw locations).

c. Insert the spring-loaded clamp's dowels (A and B below) into the reflector.

Figure 10-36 Inserting the dowels into the reflector
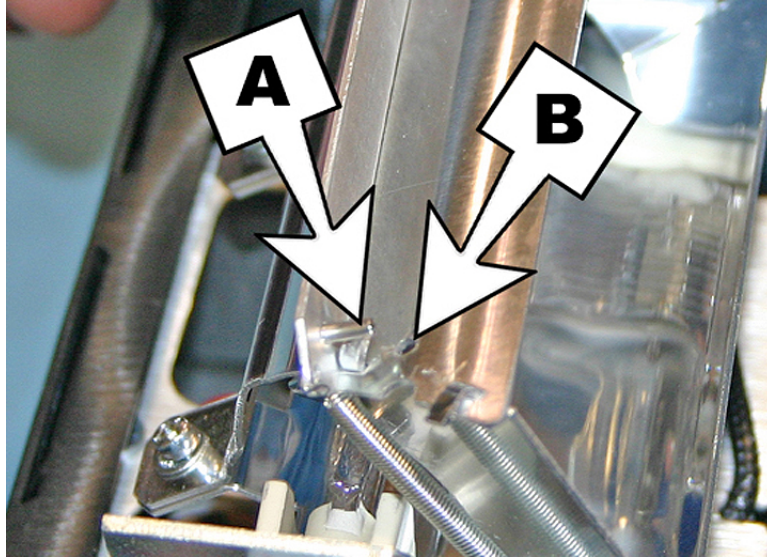
12. Re-install the user-end upper lamp assembly

   a. Slide the upper lamp assembly into the lower lamp assembly lining up the screw hole locations.

   b. Secure the upper lamp assembly to the lower lamp assembly using the original two lower screws on the user-end of the carriage (A in Figure 10-29 User-end screws on page 96).

   c. Install the two screws that secure the upper lamp assembly to the carriage side plate (B in Figure 10-29 User-end screws on page 96 for locations).

   d. Connect the auxiliary cable to the top of the lamp. See Figure 10-27 Auxiliary cable on page 95.

   e. Connect the lamp power cable to the side of the lamp. See Figure 10-28 Lamp power cable on page 96.

Troubleshooting upper lamp assembly installation

● If you have difficulty fitting the upper lamp assembly back into the lower lamp assembly, loosen the four screws indicated below. Re-fasten screws once assembly has been installed.

Figure 10-37 Loosening screws to ease installation
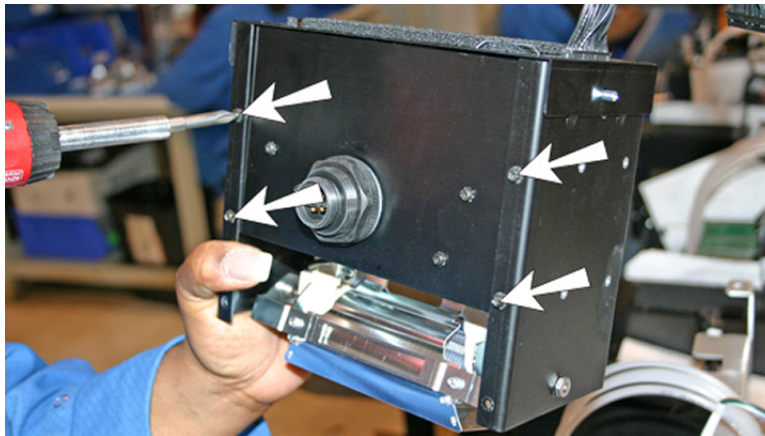
- If the upper lamp assembly is still difficult to install, squeeze the side of the lower lamp assembly to bend the side in about 0.8 mm (0.013 in) as shown in the figure below.

Figure 10-38 Squeeze the sides of the lower lamp assembly
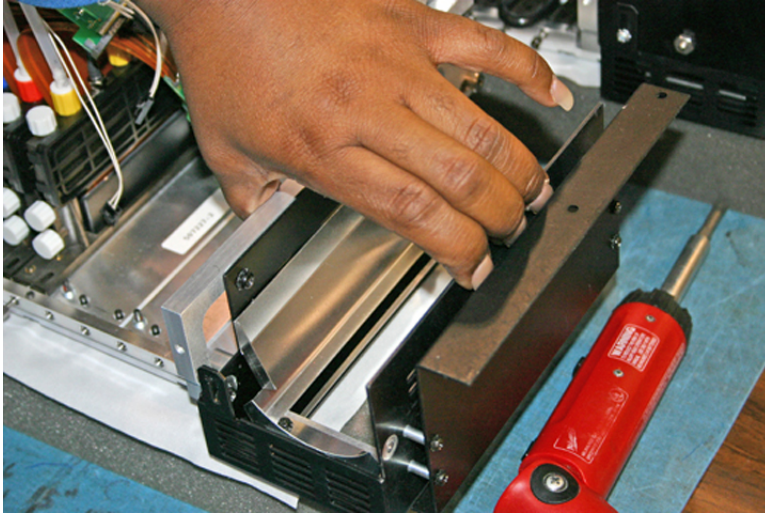
A Specifications

- Functional specifications
- Physical specifications
- Power specifications
- Environmental specifications

Functional specifications

Table A-1 HP Scitex UV pigment ink supplies

Printheads	Two printheads per color: Cyan, Magenta, Yellow, Black, Light Cyan, Light Magenta. White ink option replaces Light Cyan and Light Magenta with White.
Ink cartridges	Cartridges containing 3 liters of ink: Cyan (CH216A), Magenta (CH217A), Yellow (CH218A), Black (CH219A), Light Cyan (CH220A), Light Magenta (CH221A). Cartridges containing 2 liters of ink: White (CQ123A)

Table A-2 Media sizes

	Minimum	Maximum (FB550)	Maximum (FB750)
Media thickness	0.127 mm (0.005 in)	64 mm (2.5 in)	64 mm (2.5 in)
Sheet size with standard input and output tables	Width: 15 cm (6 in)	Length: 1.2 m (48 in) Width: 1.6 m (64 in)	1.2 m (48 in) 2.5 m (98 in)
Sheet size with standard tables and optional accessory extension tables	Length: 22 cm (8.5 in) Width: 15 cm (6 in)	Length: 3 m (120 in) Width: 1.6 m (64 in)	Length: 3 m (120 in) 2.5 m (98 in)
Maximum sheet-fed media weight	N/A	68 kg (150 lb)	68 kg (150 lb)
Sheet flatness	Perfectly flat	±0.5 mm (0.02 in)	±0.5 mm (0.02 in)
Roll width	15 cm (6 in)	164 cm (64.5 in)	250 cm (98.4 cm)
Roll diameter	N/A	23 cm (9 in) diameter on 7.6 cm (3 in) core	23 cm (9 in) diameter on 7.6 cm (3 in) core
Roll weight	N/A	82 kg (180 lb)	82 kg (180 lb)
Roll length (with optional table-top roll holder)	N/A	10 m (33 ft)	10 m (33 ft)

Table A-3 Functional specifications

Print resolutions	RIP supports print modes that include resolutions of 1200×600, 600×600, and 600×300 dpi
Minimum margins	Set by the RIP, can be set to 0 (edge-to-edge) on rigid and roll-fed media
Technology	UV curable inkjet
UV energy source	Dual shuttered UV lamps
Ink drop	Variable size
Printheads	12
Cleaning solution	HP UV Printhead Flush, 1-liter bottle Within California: Methyl Acetate (CAS# 79-20-9).

Physical specifications

Table A-4 Dimensions and weights

	FB550	FB750
Printer dimensions (assembled)	Height: 153 cm (60 in)	Height: 153 cm (60 in)
	Width: 325 cm (128 in)	Width: 412 cm (162 in)
	Depth: 141 cm (56 in)	Depth: 141 cm (56 in)
	Depth with optional roll-to-roll accessory installed: 161 cm (63.4 in)	Depth with optional roll-to-roll accessory installed: 161 cm (63.4 in)
Input table dimensions	Height: 102 cm (40 in)	Height: 102 cm (40 in)
	Width: 175 cm (69 in)	Width: 262 cm (103 in)
	Depth: 52 cm (21 in)	Depth: 52 cm (21 in)
	Height (folded): 113 cm (44 in)	Height (folded): 117 cm (46 in)
	Depth (folded): 39 cm (17 in)	Depth (folded): 39 cm (17 in)
Output table dimensions	Height: 102 cm (40 in)	Height: 102 cm (40 in)
	Width: 175 cm (69 in)	Width: 262 cm (103 in)
	Depth: 89 cm (35 in)	Depth: 81 cm (32 in)
	Height (folded): 132 cm (52 in)	Height (folded): 135 cm (53 in)
	Depth (folded): 39 cm (17 in)	Depth (folded): 39 cm (17 in)
Extension tables dimensions (each table)	Height: 102 cm (40 in)	Height: 102 cm (40 in)
	Width: 175 cm (69 in)	Width: 262 cm (103 in)
	Depth: 165 cm (65 in)	Depth: 89 cm (35 in)
	Height (folded): 180 cm (71 in)	Height (folded): 135 cm (53 in)
	Depth (folded): 57 cm (23 in)	Depth: (folded): 57 cm (23 in)
Weights (assembled)	Printer: 720 kg (1586 lb)	Printer: 814 kg (1905 lb)
	Input table: 32 kg (70 lb)	
	Output table: 38 kg (83 lb)	
	Extension tables (each): 59 kg (130 lb)	

Power specifications

Table A-5 Printer power specifications

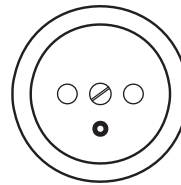| Input voltage	200—240 VAC, single phase
Input frequency	50/60 Hz
Maximum load current	12 A

Required electrical circuit (North America/Japan)	200–240 VAC, 20 Amps, 60 Hz, single phase, with NEMA L6-20R locking wall receptacle

NEMA L6-20R
Receptacle
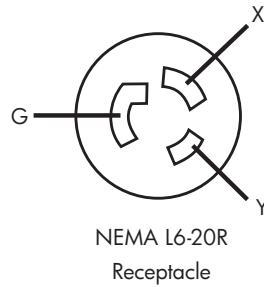
Required electrical circuit (Europe)	230 VAC, 16 Amps, 50 Hz, single phase, with CEE 7/4 or CEE 7/7 wall receptacle
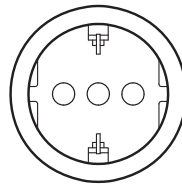
CEE 7/4   CEE 7/7

Required power cord	The printer can use any of the following 4.5 m (14.8 ft) power cords:

- USA: HP part number 8120–6903

- Europe: HP part number 8120–6899

- Cord without connector to electric outlet (for use with customer-supplied connector): HP part number 8120–6895

Optional auxiliary power for ink system vacuum	When configured as shipped, if the power cord to the printer is removed, power to the ink system vacuum is removed. If the printer standby power switch is switched off, but the power cord is not removed, power to the vacuum is preserved. The ink system vacuum maintains the negative pressure required for printing operation and prevents ink dripping from the printheads when the printer is idle.

You can preserve power to the ink system vacuum during power outages by connecting the supplied power cord (length: 137 cm (4.5 ft)) from the auxiliary power connection (below the ink box racks) to one of the following:

- Wall outlet — 100–240 VAC, 50/60 Hz, provides temporary power to the vacuum system when it is necessary to remove power from the printer for service.

- UPS — Customer-supplied uninterruptable power supply, output 100–240 VAC, 50/60 Hz, minimum of 15 watts of power, provides battery backup to the vacuum system in the event of a power failure. UPS is connected to the electric wall outlet.

Environmental specifications

Table A-6 Printer environmental specifications

Operating conditions	Temperature: 20 to 30°C (68 to 85°F)
	Relative Humidity: 20−80%, non-condensing (40−60% recommended to avoid static electricity on synthetic media that occurs below 40%, and buckling on paper-based media over 60%.)
	Maximum operating altitude: 3000 m (10,000 ft)
Storage conditions	Temperature: −34 to 49°C (−30 to 120°F)
	Relative Humidity: 10−80%, non-condensing

B Troubleshooting

This appendix explains how to prevent and diagnose printing problems and provides information about getting help from Hewlett-Packard.

For other software-specific troubleshooting procedures, refer to your application software documentation or the other documentation listed on page iv of this manual.

- Troubleshooting checklist
- Warranty claims
- CallMe@hp
- HP Customer Care

Troubleshooting checklist

Before you troubleshoot your printer, make sure that it is properly installed as described in Introduction on page 1.

Follow the steps in this checklist to isolate and resolve printing problems.

1. Does the printer's power come on?

YES: Go to question 2. NO: Check the following:

- The power cable may not be plugged into an electrical outlet.

- If the printer is plugged into a surge protector, the surge protector may not be connected to power, or it may be switched off.

- The circuit into which the printer is connected may be switched off at the circuit breaker.

2. Did the start-up sequence of the control panel end by displaying the Home Page screen similar to the one shown in Home page on page 35?

YES: Go to question 3. NO: Check the following:

- There may be a hardware problem with the printer's internal components. Follow the diagnostic routine on the control panel to determine the problem. Write down any error codes and call technical services as directed by the control panel.

3. Can you send a file from the RIP to the printer?

YES: Go to question 4. NO: Check the following:

- The network cables may not be securely connected to the RIP computer, printer, and network switch or wall outlet. Check the cable connections and try again.

4. Can you send (print or download) a document from a client computer to the server?

YES: Go to question 5. NO: Check the following:

- The connection from the client to the local area network may not be configured correctly. See your system administrator for assistance.

- The Ethernet cable between your computer or network and the RIP computer may not be securely connected at both ends.

- Your computer may not be working properly. Run an application that you know works correctly and print to be sure.

- The computer's port may not be working properly. Print to another output device that you know works correctly (and is not connected to the RIP) to check this.

5. Is the print quality good?

YES: Then the problem is not covered in this checklist. Contact Technical Services. NO: Check the following:

- Banding or general poor image quality — The printheads may need to be calibrated (see Calibrate the printer on page 49). One or more inkjets may be clogged or not firing (see Ink page

on page 41). The media advance may need to be recalibrated (see Media Feed Calibration on page 52).

- Inaccurate color or under- or over-saturated output — the wrong color profile may be selected at the RIP. Refer to the documentation that accompanies the RIP.

- Inaccurate color or lack of detail — one or more inkjets may be clogged or not firing (see Ink page on page 41).

  Since automatic head maintenance cannot occur when the printer is powered down, keep the printer powered on at all times if possible. If automatic head maintenance does not occur for an extended period, manual purging may be necessary to restore the printheads to working condition.

- Noisy carriage motion or repeating print artifacts — Noisy carriage motion can be eliminated by cleaning (see Clean and lubricate rail strips on page 77 or Clean the carriage wheels on page 84). If the carriage wheels develop flat spots due to non-use, use the Carriage Motion Troubleshooter to restore their shape (from the System page of the control panel, see **Tools > User Diagnostics> Carriage Motion**).

- Media buckling or media feed problems — the wrong media could be selected in the Media Wizard (see Configure media on page 11). The media may not have been loaded squarely (see Configure and load media on page 10).

- Head strike — if the printhead is striking the media, check how the media is tracking from the supply spindle. The sides of the media should be parallel to the sides of the printer, with no wrinkling or buckling. If necessary, reload the media. See Load rigid media on page 14 for instructions. Also check the Media Wizard to see whether the correct media is selected (see Configure media on page 11).

Warranty claims

The printer is covered by a manufacturer's limited warranty, which includes the printheads.

For more information about warranty claims, contact HP (see next page for contact information).

CallMe@hp

CallMe@hp is a suite of tools that enables communication between you and your HP support organization. CallMe@hp uses a web-based interface to provide live chat (similar to instant messaging), file exchange, and even remote control of your computer to allow the Support Agent immediate and first-hand understanding of your printer.

If you receive your printer support directly from HP, CallMe@hp may be employed at any time at the request of your HP support representative. If you receive your printer support through a dealer, reseller, or other third-party, CallMe@hp may be employed when circumstances require direct communication between your third-party support and HP, but again only at the request of an HP support representative.

Refer to the documentation CD-ROM disc that comes with the printer for more information:

- CallMe@hp Network Security Guide, which discusses the technology used in CallMe@hp as it relates to network security concerns

- Getting Started with CalMe@hp, which provides an explanation and examples of how the features of CallMe@hp work.

HP Customer Care

In case of any question or problem, you should approach your local HP Authorized Representative for consultancy and support. However, if required, you can contact HP directly by using the following methods.

NOTE: For up-to-date contact information, please visit http://www.hp.com/go/graphicarts.

North America

Tel: 800 925 0563

Fax: 952 943 3695

E-mail: cs.custsup@hp.com

Europe, Middle East, and Africa

Tel: +32 2 7283444

Fax: +31 207157536

E-mail: LF.MV.Support@hp.com

Asia and Pacific

Tel: +852 8103 2666

Tel: 00 801 85 5945 (Taiwan only, toll-free)

Fax: +852 2187 2218

E-mail: hsap.carecenter@hp.com

Latin America

Please dial Option 2/Option 6 from the selection menu.

Argentina: 5411 470 816 00

Brasil: 52 55 5258-9922

Chile: 562 436-2610 / 800 360 999

Colombia: 571 602 9191 / 01 8000 51 4746 8368

Costa Rica: 0 800 011 0524

Dominican Republic: 1 800 711 2884

Guatemala: 1 800 999 5105

Honduras: 800 0 123 / 1 800 711 2884

Mexico: 52 55 5258-9922

Nicaragua: 1 800 0164 / 800 711 2884

Panama: 001 800 711 2884

Peru: 511 411 2443 / 0 800 10111

El Salvador: 800 6160

Venezuela: 58 212 278 8666 / 0 800 474 68368

CC LAR Nextel: (5255) 1088 0884; ID 52*20115*51

CC LAR e-Mail: carecenter.ipglf.lar@hp.com

CC LAR Fax: +52 55 5258 6377

C   Image quality tips

- [Startup and check jet health](#)
- [RIP settings](#)
- [Color matching](#)

Startup and check jet health

This section shows you how to configure your printer for best quality printing.

Start with the printer in good working order

These techniques will be much less likely to work if you are not using a printer that is in good working order:

- The printer was properly installed by an HP-authorized service technician, in a facility and environment that meets HP specifications as published in the Site Preparation Guide.

- The printer has the latest version of the embedded software (firmware) installed.

- The printer hardware is working, and has been properly maintained as outlined during operator training.

- The printheads are calibrated (bidirectional, head-to-head, head height, printhead X calibration); see Calibrate the printer on page 49 for instructions.

- The media feed is calibrated with the media on which you will be printing. See Media Feed Calibration on page 52 for instructions.

- There is sufficient ink installed and available for resupply. The Warranty Ends date marked on the ink packaging has not passed.

- The number of service hours for the leading and trailing lamps are within 20% of each other. If one lamp has significantly more hours than the other lamp, the appearance of prints may change unexpectedly, To correct this, the lamps can be exchanged with each other or replaced.

- The external RIP is installed and communicating with the printer, and the operator is familiar with its use.

- Avoid touching the media during printing.

Load media correctly

Follow these guidelines when loading media:

- Use only media that is clean, flat, and undamaged.

- Keep the printer's environment within the specifications published in the Site Preparation Guide. In particular, an environment with a relative humidity below 40% can result in high levels of static electricity, while a relative humidity above 60% can cause some medias to absorb moisture and develop an uneven (non-flat) shape or curl. Both conditions can cause printing problems.

- In low-humidity environments, use static charge abatement measures when handling synthetic media (vinyl banner, plastic boards), such as grounded copper tinsel, isopropyl wipes, or anitstatic spray.

- Select the Media Wizard settings that match the media you will use. The Media Wizard entry you select may not be named with the exact media name, but one that has similar characteristics allowing use of the same Media Wizard settings (including vacuum fans, lamp intensity and swath delay). If possible, select a default Media Wizard set that has been tested and validated; these are indicated by an asterisk (*). All other Media Wizard entries are user-generated and can be modified when needed.

- Configure and load media as described in Configure media on page 11.

- Wipe down synthetic media with IPA before printing to reduce static charge, and remove fingerprints and dust, which could become visible in the print.

Check jet health

At the beginning of the day's printing, verify that all of the inkjets are either firing or have been substituted by another working jet.

1. Load media, then press **Check Jet Health** on the control panel's Ink page.

2. Run a Purge & Wipe.

    From the control panel's Ink page, press **Purge**.

3. Print the **Check Jet Health** pattern again.

4. Compare the print with the previous day's (or most recent good) Prime Bars print.

    ●   If today's Check Jet Health print is comparable to the previous day's print, you may want to verify jet replacement by pressing **Check Jet Health** from the Ink page. If all jets are working or replaced, you are ready to select printer settings.

    ●   If today's Check Jet Health print shows noticeably more broken or missing lines than the previous day's print, run the AutoJet calibration (from the Printing page, press **Calibrate**, then select **Auto Calibrations > AutoJet Calibration** from the menu). Then run a Check Jet Health pattern once or twice until the missing lines have printed or are replaced.

        If the Check Jet Health pattern does not improve after performing these steps two or three times, or if a large number of adjacent jets cannot be recovered, one of the following may be necessary:

        ◦   Inkjets may need to be manually mapped out (Printing page > Calibrate > Manual Calibrations > Manual Jet Mapping)

        ◦   Printheads may be damaged

        ◦   Service station may need to be calibrated

        ◦   Contact your service representative for further assistance.

RIP settings

For detailed operating instructions, refer to the RIP user guide.

Choose a resolution

The print resolution is determined by the print mode (see). There is no resolution setting on the printer.

●   For most images, use a 600×600 dpi print mode.

●   If a grainy image is acceptable (when viewed from a longer distance or as a draft, for example) and faster print speeds are desired, use a 600×300 dpi print mode.

●   For more saturated colors or printing on clear or backlit media, use a 1200 × 600 dpi print mode.

Choose a color profile

●   Select the profile that matches the media name, or most closely matches the material, you are using.

●   For accurate color matching, perform a color calibration (linearization) at least once for each media.

Color matching

The accuracy of color reproduction by the printer is the result of the interaction of numerous factors, listed below. Correction of errors in color reproduction may involve adjustments in more than one of these factors.

- Installation and initial calibrations (performed by an authorized service technician)

  - Head height

  - Printheads Y calibration

  - BiDi calibration

  - Printhead X calibration

- Ongoing maintenance (performed by the operator) — Clogged or misfiring jets caused by lack of regular cleaning

- Ink — Settling of pigments, ink that is past its Warranty Ends date, bad batch

- Color sets and print modes — Printing with different color sets (six or four colors plus white), and different print modes

- RIP issues — Linearization, color profiling, different methods for using light cyan and light magenta, settings such as Grey Color Removal (GCR)

- Profile matching — Match the color profile used by the RIP to create the RIP file with the print mode (see Available print modes on page 26) used to print the image.

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