



# HP Scitex FB950 Printer

## Release Notes

### **SUMMARY**

Through Version 4.31

HP Confidential © Copyright 2008–2010  
Hewlett-Packard Development Company,  
L.P.

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Part number CH154-90033 Revision B

---

# Table of contents

<b>1 Release notes</b> .....	<b>1</b>
Update instructions .....	1
Version 4.31 .....	1
Release notes .....	1
Version 4.30 .....	2
Release notes .....	2
Regular cleaning is essential for optimal print quality .....	3
Service reminders are set to zero at installation .....	3
Manually clean the printheads (bi-weekly) .....	3
Clean the home sensor (monthly) .....	5
Version 4.20 .....	7
Image quality improvements .....	7
Roll-fed media improvements .....	8
Stored jobs improvements .....	8
Other improvements .....	9
Cleaning Kit .....	9
Version 4.15 .....	9
Version 4.10c .....	10
Stored jobs .....	11
Documentation errata .....	11
Version 3.11 .....	11
Wiper cleaning .....	12
<b>2 Menu tree</b> .....	<b>13</b>



---

# 1 Release notes

## Update instructions

The printer embedded software is updated by copying the new version from the RIP to the printer.

---

△ **CAUTION:** When updating the software from 4.10x, any Stored Jobs will be deleted.

---

1. Make sure the printer is online.
2. Wait until the printer has finished printing.
3. Ensure that media is configured and loaded in the printer (required for the update process, but nothing will print on the media).
4. Locate the update file FB950.BIN (on disc or downloaded from the HP web site).
5. Copy the file to the printer according to the RIP you are using:
  - **HP RIP Software** — Copy the update file to a Hot Folder that is routed to the printer.
  - **Onyx** — Select **Configure Printer** from the top menu bar. Select the **Device** tab and the select **Features**. With **Update Printer Firmware** highlighted, select **Configure**. Finally, locate the update file using the browse for file option, and select **Open**.
  - **Scanvec** — Select **Setup** from the top menu bar, and then select **Color Profile**. Select **Create ICC Output**. Select **Driver Options**. Finally, select **Browse** to locate the update file, and then select **Open**.
  - **Caldera** — Select the printer from the main application box, click the wrench icon, then click the Miscellaneous tab. On this tab, click the button to upgrade the printer software.

---

 **NOTE:** After restarting (or powering up) the printer, it will be approximately 30 seconds before the software displays anything on the control panel.

---

6. Verify the software update.

To display the software version number on the control panel, press the About button on the Front Page screen.

## Version 4.31

### Release notes

- The control panel now alerts the operator to clean the bottom of the carriage after every 40 hours of printing. You may clean the bottom of the carriage more frequently as needed.
- During the printhead service routine, the printheads are vacuumed before they are wiped.
- A potential cause of service station wiper errors during servicing has been eliminated.
- The occasional issue causing partial print swaths to not be fully cured has been fixed in this version.
- Media usage statistics are now more accurate.
- An issue that caused the depriming of printheads during printing has been fixed.

- The ink pumps are now re-enabled after pausing a job, and after a short idle period between jobs.
- AutoJet accuracy has been improved.

## Version 4.30

### Release notes

- NEW Service reminders — reminders for scheduled service and user cleaning tasks are now displayed automatically by the control panel. The timers now count the amount of time that the printer is printing, rather than simply the elapsed time.
- NEW Short media load — this new option 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 between 33 cm (13 in) and 11 cm (4 in). This option is presented during the media load process.
- NEW Verify H2H Y Alignment — enables you to verify whether the printer is configured for “aligned” or “staggered” head-to-head alignment. (**Tools > User Diagnostics > Verify H2H Y Alignment**)
- NEW Ink Filter Counts — this Maintenance menu option enables you to view the printer's ink filter counts and reset them after replacing an ink filter. The printer uses these counts to display filter replacement reminders. (**Tools > Maintenance > Ink Filter Counts**)
- NEW Set Head Vacuum function has been added to the Service Menu to enable resetting the printhead vacuum level (not recommended without guidance from technical support personnel).
- NEW Manually Clean Printheads — positions the printhead carriage to enable you to manually wipe the printheads with a lint-free cloth soaked with printhead flush solution. See [Manually clean the printheads \(bi-weekly\) on page 3](#). (**Tools > Maintenance > Manually Clean Printheads**)
- The speed of the Plus modes has been improved.
- The leading shutter setting for Media Wizard speed groups A and B was adjusted to reduce heat-induced media warping and printhead carriage strikes.
- The media drive vacuum setting for the Media Wizard type Foam Board has been increased to improve media feeding.
- “Reset UV Lamp Hours” was changed to “Change UV Lamp Bulb,” and it now incorporates carriage and roller positioning to enable lamp replacement. (**Tools > Maintenance > Change UV Lamp Bulb**)
- Unidirectional printing now powers off the unused lamp — in bidirectional printing, the shutters can be used to quickly reveal or hide the leading or trailing lamp in either printing direction. In unidirectional printing with one lamp, this alternation is not done, so the unused lamp is now powered off by default (in speed groups A and B) to extend the service life of the bulb.
- Job Settings can now be accessed even if no media is configured.
- At system startup, a control panel message will display when a hard disk drive diagnostic test is being performed.
- When you insert a new ink profiler, a message on the control panel reminds you to shake the corresponding ink box, to redisperse ink components that may have settled during storage.
- When you cancel the printing of a multi-copy Stored Job, the printer now gives you the option of skipping the current copy or all copies.

- When printing a Stored Job, a control panel warning is displayed if the image is larger than the currently-loaded media.
- The Jet-Out Lines pattern now prints at the correct size in all print modes.
- Roll-fed media controls on the control panel now appear only if roll-fed media support is enabled (see menu at **Printer Settings > Support Rollfed**).
- Automatic media measuring is now more accurate.
- Service station calibrations retained — a software issue, which caused service calibration data to be discarded, has been addressed.
- The Default Registration Data function now prompts for head-to-head, bidi and jet data separately, so any one or all can be reset. (**Calibration > Manual Calibrations > Default Registration Data**)
- The yellow printheads now fill more reliably.
- Changes to the media name in the Media Wizard are now saved.
- Updated documentation — User Guide Revision B (HP part number 0706455) and Site Preparation Guide Revision C (HP part number 0706456) released. The User Guide adds new sections on scheduled user cleaning tasks and image quality tips. The Site Preparation Guide includes more detailed information and a simplified description of electrical requirements.

## Regular cleaning is essential for optimal print quality

Regular cleaning of the printer is essential for optimal print quality. The Revision B User Guide (HP part number 0706455) contains complete scheduled maintenance instructions, including manual printhead and home sensor cleaning instructions, which are reprinted below.

The parts and supplies required for these procedures may be purchased separately or in part number CQ168A, HP Scitex FB950 User Cleaning Kit. This will enable the best possible performance and minimize down time due to maintenance-related issues. The kit is designed for quarterly (every three months) use, but maintenance may be required more often with heavy printer usage (refer to the instructions for details). To order, see your HP reseller or representative.

## Service reminders are set to zero at installation

Reminders for scheduled service and user cleaning tasks are now displayed automatically by the control panel. These reminders begin counting the amount of time that the printer is printing after the software is updated in the field, or when a new printer is initially started after it is installed at the user facility. If you are updating the software from a previous version, you should perform all scheduled maintenance immediately to synchronize your printer's actual state with the service reminders. Refer to the Revision B User Guide for instructions.

## Manually clean the printheads (bi-weekly)

1. Move the output-side table away from the printer.
2. From the control panel, select the following:

### **Tools > Maintenance > Manually Clean Printheads**

This will cause the rail and output roller to raise to their highest positions and move the carriage out over the belt.

3. Open the output-side door to access the carriage.

---

△ **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.

---

4. Place a piece of scrap vinyl under the carriage (see A in the photo below). You can use any media that will protect the belt from dripping ink and/or head flush.

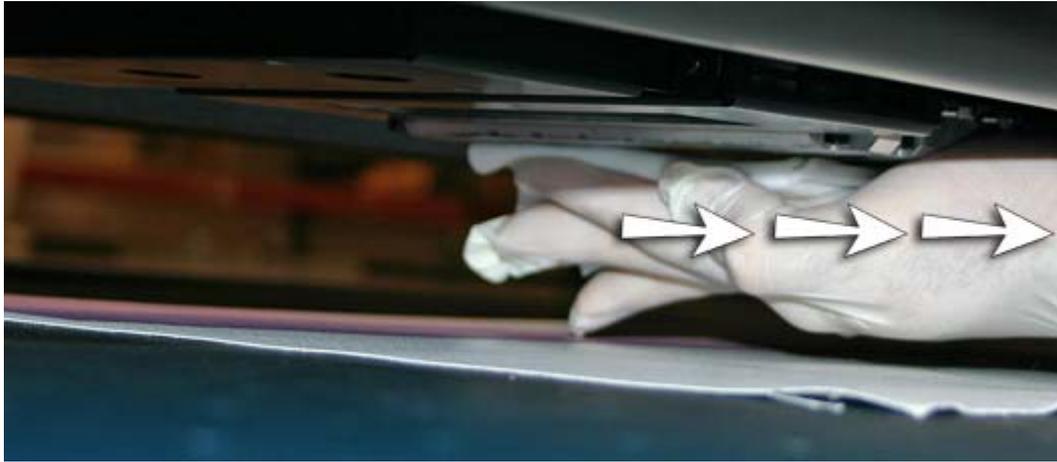


5. Fully saturate a lint-free cloth with head flush solution.



6. For each printhead, use a single finger on a clean area of the saturated lint-free cloth to wipe the printhead orifice from the input-side to the output-side of the carriage.

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 fully saturated with head flush.



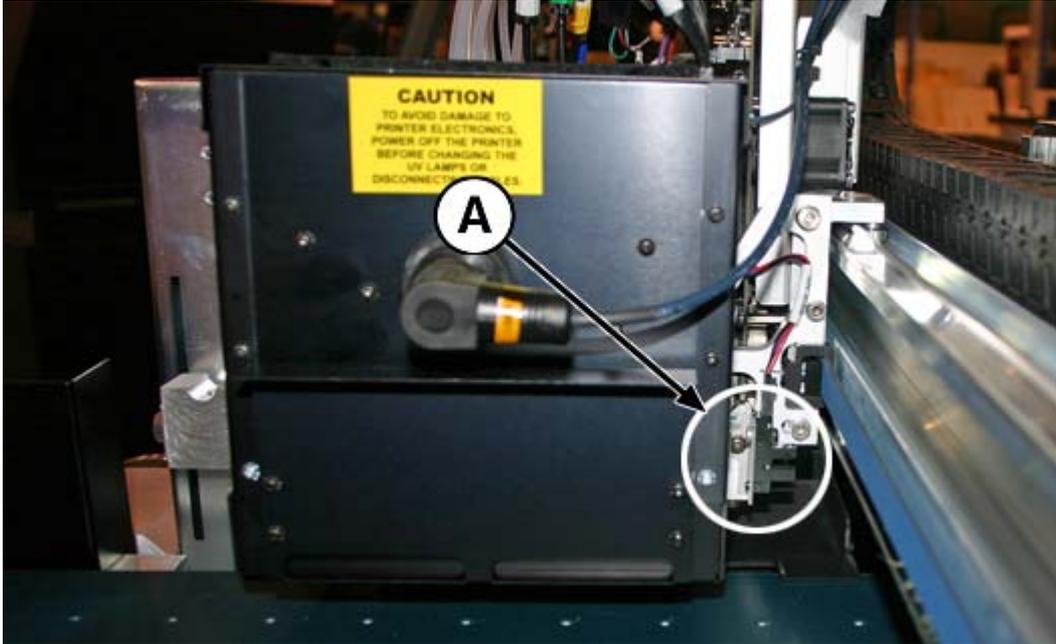
7. From the control panel, select PURGE.
8. When the purge completes, selecting PRIME BARS from the control panel.
9. Examine the prime bars for missing jets. If a printhead has missing jet, repeat steps 6 through 8.

## Clean the home sensor (monthly)

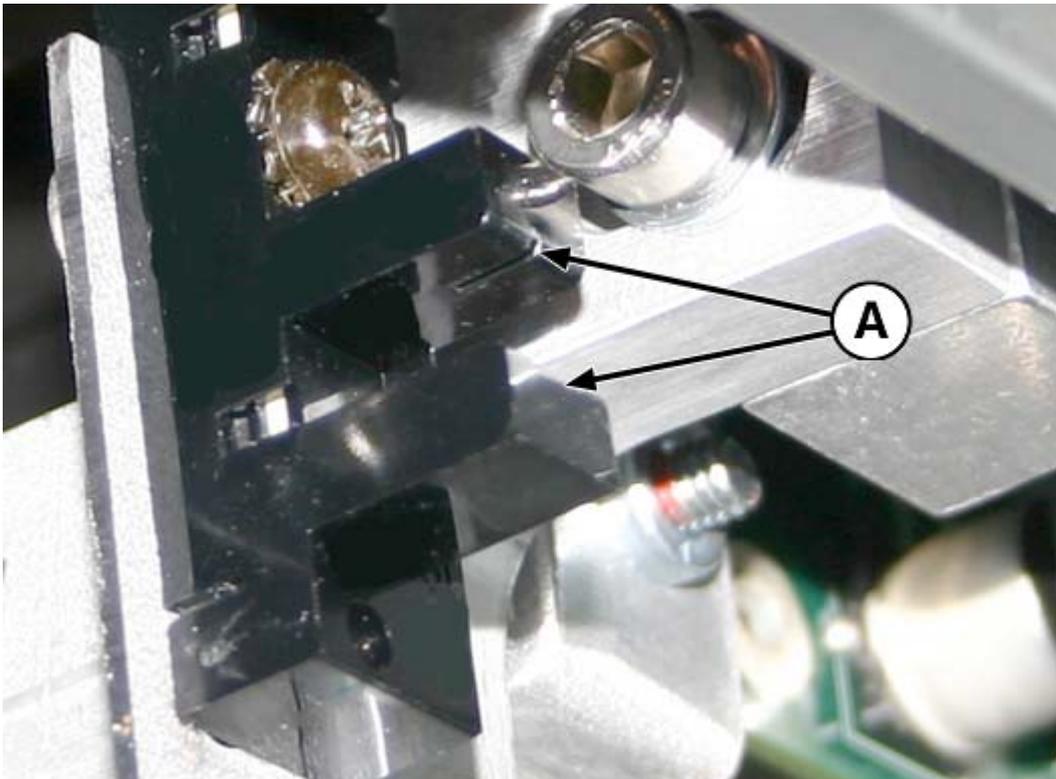
The home sensor is located on the user-end of the carriage between the lamp assembly and the carriage side plate (on the input-side of the carriage). Ink dust and debris can accumulate in the thin slits of the optical sensor and cause errors.

1. Open the output-side door.  
Opening the output-side door will disable the carriage servo, allowing the carriage to be moved manually.
2. Pull the carriage out from the end of the rail to access the home sensor more easily.

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

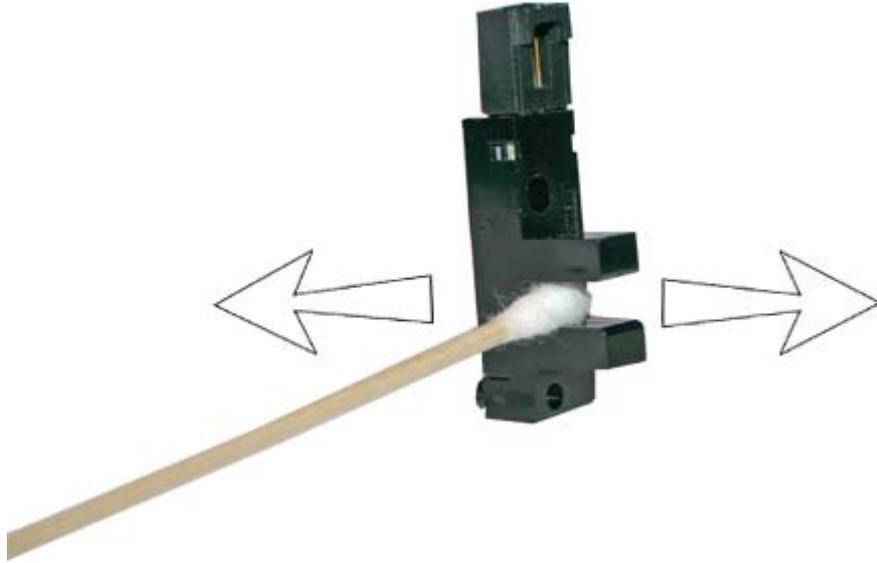


4. Locate the upper and lower slits of the optical sensor.



5. Using a long cotton swab that is saturated in isopropyl alcohol, clean the top and bottom slit by inserting the swab into the opening from the input-side of the sensor (versus inserting from the user-end of the sensor).

△ **CAUTION:** Inserting the swab from the user-end toward the service-end may push debris into the slits. Insert the swab moving from the input-side toward the output-side direction. Do not wipe across the slits, as this will force debris down into the openings.



## Version 4.20

### Image quality improvements

This version of the printer embedded software is designed to work with a Field Modification Kit (FMK) that includes several hardware upgrades, improvements, maintenance tasks, and operator training, all designed to enhance image quality, stability, and performance. Owners of existing field-installed printers should contact their Hewlett-Packard representative to schedule the FMK installation. This version of the software can be installed prior to the FMK, but the software cannot deliver the full

benefits of these improvements until the FMK is installed. After the FMK is installed, a verification print from the customer printer will be sent to Hewlett-Packard Customer Assurance for follow-up.

- AutoJet enhanced precision — AutoJet now measures each jet for its deviation in X axis (direction of carriage motion) from a straight line, and compensates for these deviations when printing. The resulting improvement in printing accuracy produces improved image quality.
- NEW Plus print modes — the new Plus and Plus FineText print modes are designed for improved image quality (reduced gloss banding) with high ink coverage. These are bidirectional print modes (Plus FineText is not available in Billboard mode).
- FMK items — the following items are performed by the service technician during the FMK installation:
  - Version 4.20 embedded software
  - New printhead Y-offset calibration — offsets the printheads in the Y-axis (direction of media feed) to mitigate comb banding. A new item in the User Diagnostics menu, "H2H Y Configuration," prints the Head-to-Head Y-axis pattern, asks you to examine it to determine if the heads are in-line or staggered, then lets you set the registration either way. This enables you to configure the H2H calibration in the case of a software downgrade that is followed by an upgrade.
  - New printhead bracket
  - LCD power connector change — connector moved, new label installed
  - Foot pedal and cable upgrade
  - Shorten the carriage cover fan cable
  - Preventive maintenance service
  - Operator training (mandatory)
  - Verification print, ship print to Hewlett-Packard Customer Assurance (mandatory)

## Roll-fed media improvements

- NEW Automatic image repositioning on roll-fed media — when selected, a new measurement option for roll-fed media, Before Each Copy, locates the right and left 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. (**Settings > Measure Media > Before Each Copy**)
- Out of Media indication is now set properly when using Roll-Fed media.
- The minimum margin between roll-fed jobs is now 0 mm (0 in).
- Margin changes are now saved when the Units of Measure is set to Metric (**Settings > Localization > Units of Measure**).
- Set Roll-Fed Media Control — if media feed errors occur during roll-fed printing, you can now switch between Method A (standard media feed parameters) and Method B via the **Menu > Settings > Set Roll-Fed Media Control** option.

## Stored jobs improvements

- Job Storage Option (Print & Save, Save Only, Print Only) is now saved across printer restarts.
- The job cancellation error while printing a Stored Job in Print Only mode has been fixed.
- Stored jobs will no longer print past the trailing edge of sheet-fed media in certain situations.

- If the number of stored jobs reaches ten, the Job Storage Option will automatically change to Print Only.
- Roll-fed jobs can now be stored in the same way as sheet-fed jobs are stored.

## Other improvements

- Manual Jet Mapping no longer results in false “jets could not be replaced” message.
- The vacuum level displayed on the control panel (Front Page screen) is now shown more accurately, with reduced fluctuations.
- The Vacuum Pressure troubleshooter no longer locks up the software, which required a power cycle to recover.
- Ink levels in the printhead reservoirs are now managed more accurately.
- After the bottom of the carriage is cleaned, the printer repositions the carriage and prompts the operator to clean the service station wipers. Doing so will help ensure that the wipers will effectively clean the printheads. (**Tools > Maintenance > Clean Bottom of Carriage**)
- Due to printhead servicing improvements, heads 1 and 12 are now wiped once instead of twice per service, and the automatic purge-and-wipe routine is performed every 12 hours instead of hourly.
- For improved gloss, the predefined standard Media Wizard settings for the trailing UV cure lamps now default to “shuttered” for the slowest printing speeds (under 14 m<sup>2</sup> (150 ft<sup>2</sup>) per hour, Speed Groups A and B). This can be changed by creating a custom Media Wizard set.
- Before performing a Head-to-Head (Y axis) calibration, the printer will prompt you to load Fome-Cor or other paper-based media for best results.

## Cleaning Kit

The HP Scitex FB950 User Cleaning Kit (part number CQ168A) should be used according to the included instructions to periodically maintain the printer. This will enable the best possible performance and minimize down time due to maintenance-related issues. The kit is designed for quarterly (every three months) use, but maintenance may be required more often with heavy printer usage (refer to the instructions for details). To order, see your HP reseller or representative.

## Version 4.15

- Color sensor functionality has been improved.
- The printer will verify that the service station wipers are moving correctly.
- Carriage motion errors while servicing during printer Sleep Mode will no longer occur.
- Printing while the UV lamps are off will no longer occur.
- The AutoJet calibration for medium cyan and medium magenta jets has been improved.
- Improvements to Auto BiDi calibration have been made.
- Several improvements in how the printer handles Stored Jobs on the internal hard disk drive have been implemented:
  - Stored Jobs are now represented with thumbnail images, so you can identify them visually.
  - Print & Save jobs are now saved at the same time as printing, without any performance degradation compared to printing a previously Stored Job (without saving).

- The presence of an Action message will no longer prevent the saving (spooling) of a Stored Job.
- There is no longer a delay between sheets when printing multi-copy Stored Jobs.
- Errors during unidirectional printing with skipped white space will no longer occur.
- Various errors when printing at 1200x600 dpi have been fixed.
- Improvements to the service station wiping routines have been implemented.
- Photodiode white point errors have been reduced or eliminated.
- Various motor driver board errors have been reduced or eliminated.
- Errors relating to the localized languages for the control panel have been addressed.
- Jets recovered via manual jet mapping were not being accounted for when reporting which print modes could be used without missing jets (Warning message W-PC-4). In this version, after exiting manual jet mapping, the printer will recompute which print modes can be used without missing jets.
- If, during a purge and wipe operation, the wipers failed to wipe the printheads fully, an error message to that effect will display.

## Version 4.10c

- Stored Jobs uses hard disk drive — this version supports the saving (spooling) of print jobs onto the printer's internal hard disk drive. When enabled, as the print job is received from the RIP, it is saved to the hard drive for future reprinting.
  - Stored Jobs are retained through a power off-power on cycle.
  - The printer's memory is no longer used for the Stored Jobs function; however, the Stored Jobs function operates similarly to the previous version as described in Chapter 2 of the *User Guide*.
  - Future software versions will support printing while saving, and thumbnail previews of stored jobs.
- Known issues — the following issues will be addressed in a future version of the embedded printer software:
  - When printing in Unidirectional mode, and Print White Space is off, the print will fail. When printing in Unidirectional mode, set Print White Space to on. (Printer Settings > Print White Space)
  - AutoJet fails to detect some good jets in light cyan and light magenta. Use Manual Jet Mapping instead. (Calibrate Printer > Manual Calibrations > Manual Jet Mapping)
  - Exiting Sleep Mode and purging during Sleep Mode may cause the printer to lock up. If this occurs, restart the printer by turning the power on and off at the power switch (located below the control panel screen near the floor).
  - After a purge, the control panel may display false high or low vacuum warnings. Ignore or reset these messages.
  - During a rigid media load, the input roller may be in the lowered (media height) position rather than raised for easier loading. This may happen if you load a subsequent sheet before the previous sheet has advanced past the media sensor. In this situation, you can still load the media by pushing it under the roller until it is against the media alignment bar. Alternatively you can cancel and restart the media load.

- Media hold-down roller errors 00280003 and 00290003 can be ignored or reset without further action.
- Some text may be truncated in non-English versions of the control panel interface.
- Saving multi-page jobs — you cannot save a multiple-page job to Job Storage.
- Job Storage disabled on printer startup — when you start up the printer and the control panel reports that Job Storage is disabled, there is a disk drive error. Select **Restore Hard Drive to Defaults** from the Service Printer menu. After you restart the printer, any stored jobs will be deleted, but Job Storage will be enabled.

## Stored jobs

You can select from three Job Storage Settings:

- **Print & Save** — prints the job after it has been saved. This will delay the first copy of the print (times will vary depending on RIP used). These times are for typical six-color jobs; four-color jobs take about 30% less time to save than six-color jobs):

Image size	Resolution	Time to save
8 ft x 8 ft (2.4 x 2.4 m)	1200x600 dpi	15 minutes
4 ft x 8 ft (1.2 m x 2.4 m)	600x600 dpi	4 minutes
3 ft x 2 ft (91 x 61 cm)	600x300 dpi	30 seconds

- **Save Only** — saves the job to disk without printing it. In this mode, the background color of the Stored Jobs section on the Front Page screen turns green.
- **Print Only** — prints without saving the job to disk. You may want to use this mode to print larger jobs without waiting for the file to be saved (unless you want to save the file to disk for reprinting later).

You can store a maximum of ten jobs.

Refer to “Stored jobs” in Chapter 2 of the *User Guide* for detailed information.

## Documentation errata

- The minimum length of rigid media that can be loaded and printed by the printer is 13 in (33 cm).
- The printer's serial number is located on a silver label on the user end of the printer, below the media drive belt assembly.

## Version 3.11

- **Area printed** — Corrected the error in which the area printed computation was being done after media ejected, resulting in the “area of the eject” being added to the area printed. If ejecting to the input side, a negative area printed was computed.
- **Image sensor Media Feed** — the “using image sensor” Media Feed menu items are now always visible if cut sheet is configured; previously they were not visible when the image sensor was uncalibrated. If the image sensor height or position is not calibrated and a “using image sensor” Media Feed is selected, the control panel prompts the user to calibrate, then exits back to the menu. (Calibrate Printer > Manual Calibrations > Media Feed Calibration)
- **Pump scheduling** -- high and low vacuum errors, and unwanted ink drops on the user and service side of the printer, have been eliminated.

- Server timeout — error codes 50859962 and 50858082, caused by printer timeout while waiting for the server, have been fixed.
- Head 12 missing jets – this issue has been fixed.
- Memory errors – errors such as “Code 00000005 Out of Memory” have been fixed.
- Carriage/service station/rail interference – the software has been changed to prevent these components from running into each other.
- Turning on lamps before a purge – the following software changes prevent the lamps from turning on, then turning off when the purge starts:
  - Performance Purge leaves the lamps on with media that is less than 0.5 in (12.7 mm) thick.
  - If you load media that is more than 0.5 in (12.7 mm) thick, and a Performance Purge is about to occur:
    - ~ If you press "Turn on Lamps", you will be notified that the purge will shut them back off.
    - ~ If you start an internal print, a server job, or job from job storage, lamps will start after purge is done.

## Wiper cleaning

The printer automatically wiper the printheads and the bottom of the carriage between the printheads with a pair of thin wiper blades similar to windshield wipers. The wiper blades are mounted on a dual rail that is perpendicular to the carriage rail. The interval for wiping between the printheads varies with the amount of printing. Eventually, the wipers will need to be cleaned by hand. If you notice drops of ink or debris on printed output, clean the wipers by moving the printhead carriage away from the service station (**Tools > Maintenance> Access Printheads**) to access the wipers and rails, and wipe them with a lint-free cloth that is moistened with HP UV Printhead Flush. With some experience, you can avoid the contamination of prints from dirty wipers by periodically cleaning the wipers.

When running the **Clean Bottom of Carriage** option from the control panel menu, the wipers will likely need to be cleaned after the procedure. You will need to open the output-side cover, move the carriage away from service station, and clean the wipers and rails as described in the previous paragraph.



---

## 2 Menu tree

This menu tree reflects version 4.30 of the embedded printer software. Options marked with (\*) are dynamically hidden depending on the printer mode. Options in **boldface** are new since the previous version.

### Calibrate Printer

- Auto Calibrations
  - AutoBidi Calibration
  - AutoH2H Calibration
  - AutoJet Calibration
  - Full AutoSet
  - AutoSet Summary
- Manual Calibrations
  - Manual Bidi Registration
  - Printhead X Calibration
  - Manual Jet Mapping
  - Jet Status Lines
  - Media Feed Calibration
  - Print Jet-Out Lines
  - Default Registration Data
- \*AutoTune (Rollfed printing only)

### Printer Settings

- \*Special Modes (sheetfed printing)
  - Edge-To-Edge (Sides Only)
  - Edge-To-Edge (All 4 Edges)
- Margins
- \*Space Between Prints (Rollfed)
- Print Position
- \*Measure Media
- Print White Space
- Head Height off Media
- \*Eject Sheets to Input Side (Sheetfed)
- Purge Type
- Top Gutters

- Quality Check
- Sleep Wait Time
- Expert/Novice Messages
- Localization
  - Units of Measure
  - Time Format
  - Date Format
  - Vacuum Pressure Units
  - \*Language (if second language present)
  - \*Delete Language (if second language present)
- Use Thickness Sensor
- Use Ionizer Bar
- Low Ink Warning
- UV Lamps Idle Time
- Support Rollfed
- Rollfed Media Control [if rollfed is enabled]
- Use Service Station Float
- Printer Name
- Restore All Defaults

#### Tools

- System Information
- Maintenance
  - Access Printheads
  - Perform An Air Purge
  - Print Recover Jets Pattern
  - **Manually Clean Heads**
  - Print Jet-Out Lines
  - Print Media Skew Lines
  - **Change UV Lamp Bulb**
  - **Ink Filter Counts**

- Clean Bottom of Carriage
- Printheads Procedures — Load Ink In All Heads, Fill Heads with Ink, Empty Heads (Fill with Air)
- User Diagnostics
  - Printhead Jet Statistics
  - VideoNet Status
  - VideoNet Connection
  - Carriage Motion
  - Calibration
  - **Verify H2H Y Alignment**
  - Vacuum Pressure
  - Open Loop Actuator Test
  - Open Loop Service Station Test
  - Hard Drive
  - Warnings and Actions List
  - Error History
  - Log Error History
  - Log System Info

\*Warnings & Actions (In Expert Mode only)

Service Printer (for service provider use only)

Print Menus