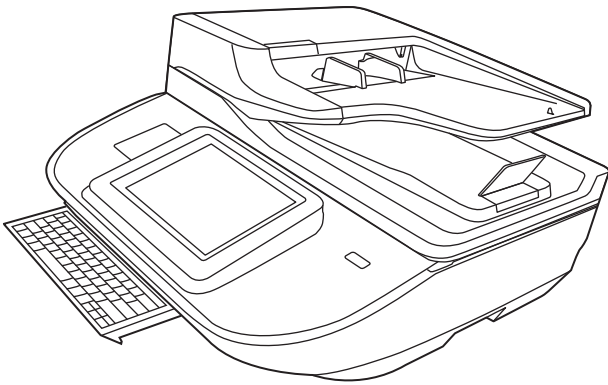


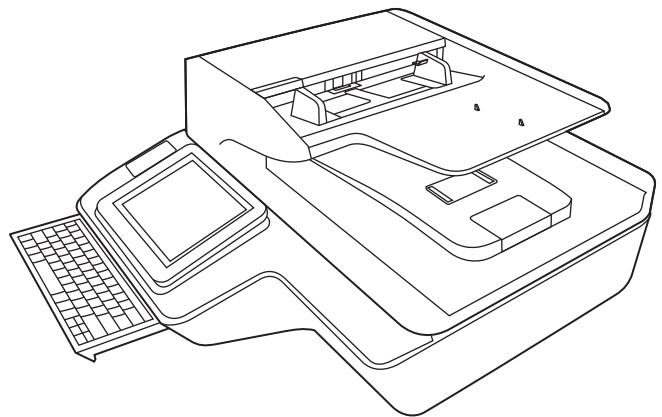


HP Digital Sender Flow 8500 fn2 Document Capture Workstation and HP ScanJet Enterprise Flow N9120 fn2 Document Scanner

Troubleshooting Manual



8500 fn2



N9120 fn2



www.hp.com/go/DSFlow8500fn2
www.hp.com/support/sjflowN9120fn2



HP Digital Sender Flow 8500 fn2 Document
Capture Workstation, HP ScanJet Flow
N9120 fn2 document scanner

Troubleshooting Manual

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1 Theory of operation

- [For additional service and support](#)
- [Basic operation](#)
- [Document feeder system](#)

For additional service and support

HP service personnel, go to the Web-based Interactive Search Engine (WISE) at <https://support.hp.com/wise/home>.

At these locations, find information on the following topics:

- Install and configure
- Product specifications
- Up-to-date control-panel message (CPMD) troubleshooting
- Solutions for product issues and emerging issues
- Remove and replace part instructions and videos
- Service advisories
- Warranty and regulatory information

To access HP PartSurfer information from any mobile device, go to <http://partsurfermobile.hp.com/> or scan the Quick Response (QR) code below.



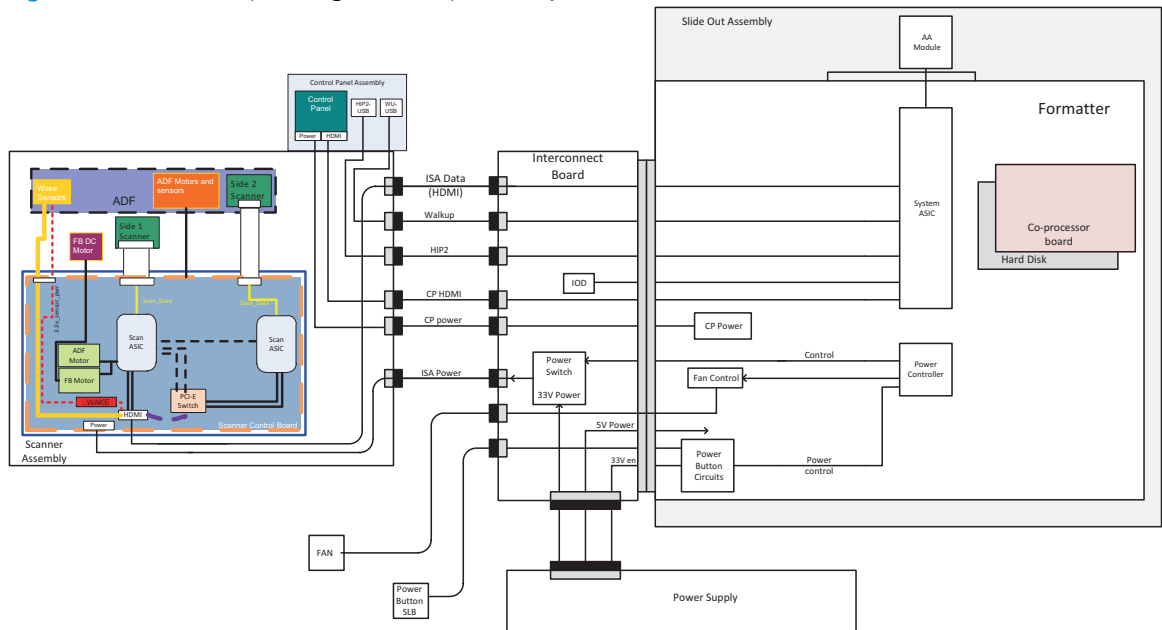
Basic operation

The product routes all high-level processes through the formatter, which processes the scan image, controls the power supply, and communicates with the host computer.

The basic product operation comprises the following systems:

- The engine-control system, which includes the power supply and the formatter printed circuit assembly (PCA)
- The pickup, feed, and delivery system, which uses a system of rollers and belts to transport the paper through the product

Figure 1-1 Relationship among the main product systems



Document feeder system

Document feed system

This section describes the following:

- Sensors in the document feeder
- Document feeder paper path
- Simplex single-pass scanning
- Electronic duplexing (e-duplex) single-pass scanning
- Deskew operation
- Document feeder hinges

The product supports single-pass electronic duplexing (e-duplex) scans. Two separate scan modules scan the front-side and back-side of an e-duplex page in a single pass through the document feeder.

The document feeder supports a smart background, which auto-crops and adjusts the image extents.

Sensors in the document feeder

The document feeder contains the following sensors:

- **ADF paper present sensor:** Detects whether a document is present in the document feeder. If paper is present in the document feeder when scans are performed, the product scans the document using the document feeder. If no paper is present when scans are performed, the product scans the document using the scanner glass.
- **ADF Y (length) sensor:** Detects whether a legal-size original is present in the document feeder.
- **ADF jam cover sensor:** Detects whether the document feeder cover is open or closed.
- **ADF paper path deskew sensor:** Detects the top of the page as it enters the deskew rollers.
- **Ultrasonic media sensor for multi-page detection:** Detects a successful page feed from the document feeder tray.

 **NOTE:** This sensor uses ultrasonic sound to detect a multi-page paper feed.

- **Paper path sensor 1:** Detects the top of the page as it approaches the front-side scan module (document feeder glass).

Figure 1-2 Document feeder sensors

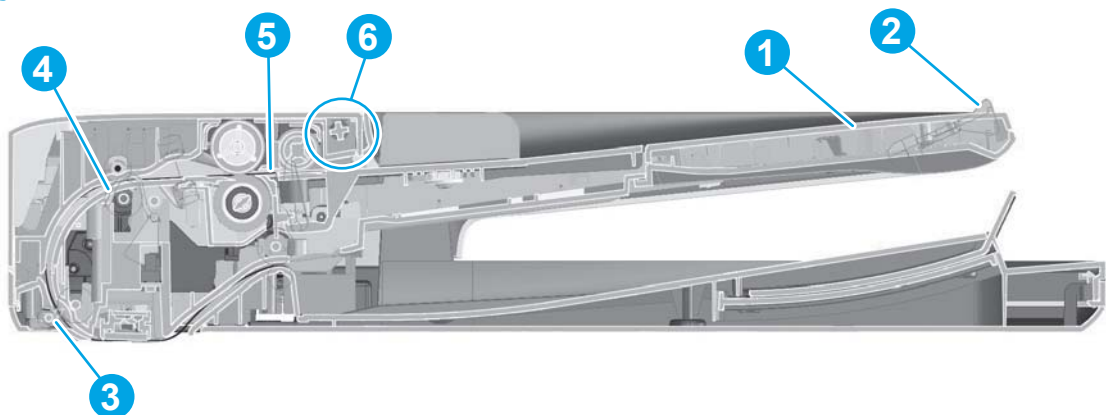


Table 1-1 Document feeder sensors

| Item | Description |
|------|---|
| 1 | ADF Y (length) sensor (9210 fn2 model only) |
| 2 | ADF Y (length) sensor |
| 3 | Paper path sensor 1 |
| 4 | ADF deskew sensor |
| 5 | ADF paper present sensor |
| 6 | ADF jam cover sensor |

Document feeder paper path

Figure 1-3 Document feeder paper path

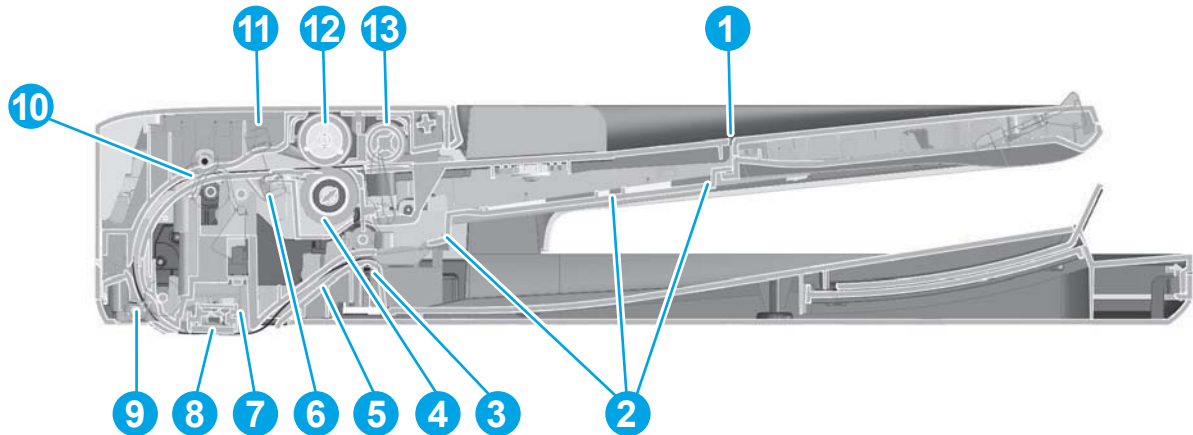


Table 1-2 Document feeder paper path

| Item | Description | Item | Description |
|------|-------------------------|------|---|
| 1 | Input tray | 8 | Front-side scan module NOTE: This scan module (document feeder glass) is located in the scanner base. |
| 2 | Lift plate | 9 | Prescan drive roller |
| 3 | Exit drive roller | 10 | Deskew drive roller |
| 4 | Separator roller | 11 | Ultrasonic media sensor |
| 5 | Post-scan roller | 12 | Pick roller |
| 6 | Ultrasonic media sensor | 13 | Pre-pick roller |
| 7 | Back-side scan module | | |

Document feeder simplex operation

Following is the basic sequence of operation for a document feeder simplex job.

1. The ADF jam cover sensor detects when the cover door is in the closed position.
2. The ADF paper present sensor activates when paper is loaded onto the input tray.
3. The feed motor rotates to raise the lift plate and starts to pick the loaded paper.
4. The ADF multi-pick (ultrasonic) sensor activates when the leading edge of the media is driven past the sensor. The product firmware registers a successful pick operation.
5. The ADF paper path deskew activates when the leading edge of the paper passes it. The product firmware registers the leading edge of the paper position.
6. The leading edge of the paper drives into the nip point of the deskew drive roller and the deskew pinch rollers. This creates a buckle of paper by the nip point for pick-skew correction.
7. The deskew motor rotates the deskew drive roller to pull the paper into the prescan drive roller.

8. The pick motor stops turning and allows both the pick and feed roller to turn freely while the paper is pulled in by the deskew drive roller.
9. The feed motor rotates to drive the paper into the prescan front-side sensor. The firmware registers the leading edge position of the paper as the multi-pick sensor activates.
10. The feed motor continues to rotate and drive the leading edge of the paper through the preset distance from the multi-pick sensor to the front-side scan zone. The scanner begins the scanning and data retrieval process.
11. The ADF multi-pick (ultrasonic) sensor deactivates when the trailing edge of the paper passes the sensor. The firmware registers the trailing edge of the paper position.
12. The feed motor continues to rotate and drive the trailing edge of the paper through the preset distance from the ADF multi-pick (ultrasonic) sensor to the front-side scan zone. The scanner ends the scanning and data retrieval process.
13. The feed motor continues to rotate and ejects the trailing edge of the paper into the output bin.
14. One of the following occurs:
 - If the scan is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to lower the input tray.
 - If the scan is not complete, the ADF paper present sensor is active. The product firmware detects additional pages in the input tray and the process repeats.

Document feeder e-duplex operation

Following is the basic sequence of operation for a document feeder duplex scan.



NOTE: For an e-duplex scan, the background scan operation begins immediately after the simplex sequence of operation ends.

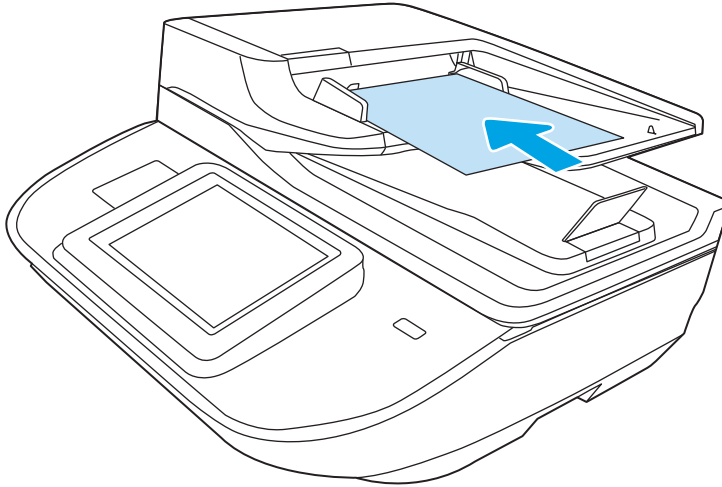
1. The feed motor continues to drive the paper until the leading edge activates the prescan back-side sensor. The product firmware registers the position of the leading edge of the paper.
2. The feed motor continues to rotate to drive the paper through the back-side sensor, which begins scanning and retrieval of the data.
3. The prescan back-side sensor deactivates when the trailing edge of the paper passes it. The product firmware registers the trailing edge of the paper position.
4. The feed motor continues to rotate to drive the trailing edge of the paper past the back-side scan zone.
5. One of the following occurs:
 - If the scan is complete, the ADF paper present sensor deactivates. The feed motor reverses rotation to raise the pick roller.
 - If the scan is not complete, the ADF paper present sensor is active. The product firmware detects additional pages in the input tray and the process repeats.

Deskew operation

Sliding side guides on the input tray make sure that the paper stack is correctly aligned at the center of the input tray when paper is loaded in the tray.

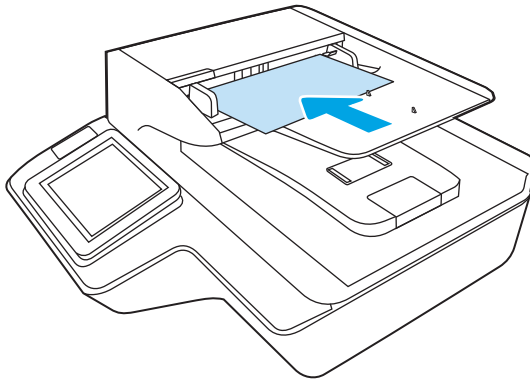
- **8500 fn2:** The correct position of the loaded paper is the long edge parallel with the direction of travel into the document feeder paper path.

Figure 1-4 Paper orientation—8500 fn2



- **9120 fn2:** The correct position of the loaded paper is the long edge perpendicular to the direction of travel into the document feeder paper path.


Figure 1-5 Paper orientation—9210 fn2



The document feeder further reduces paper skew due to improper loading of paper in the input tray by buckling the paper to create a paper buffer.

The document feeder aligns the leading edge of the paper parallel with the deskew drive rollers before it is driven further into the document feeder paper path.

Document feeder hinges

 **NOTE:** The left and right document feeder hinges are different parts. During repairs, they must be clearly identified and installed in the correct orientation. The parts are keyed so they cannot be installed in the wrong position.

The ADF hinges have springs that store energy that assist the user when opening the scanner lid. It is important to hold the ADF carefully when tipping the scanner in order to prevent the ADF from opening unexpectedly.

The document feeder hinges allow positioning the assembly vertically above the scanner glass to accommodate the placement of books and other objects up to 25 mm (1.0 in) in height on the scanner glass. The document

feeder still closes (the bottom of the document feeder is kept parallel to the scanner glass) and allows the product to operate.

The document feeder hinges provide height adjustment of 25 mm (1.0 in) when a maximum downward force of 4.5 kg (10 lb) is applied at the front edge of the assembly, with the fulcrum (such as the spine of a book) centered on the scanner glass and parallel to its long axis.

The document feeder will withstand a downward force of at least 4.5 kg (10 lb) applied at the front edge center of the assembly—when the fulcrum (such as the spine of a book) is located anywhere on the scanner glass and perpendicular to its long axis—without breaking, deforming, detaching or experiencing performance degradation.

The document feeder hinges support the assembly in the open position and prevent the document feeder from suddenly closing in a damaging or loud manner.

The hinges can hold the document feeder static in all positions higher than 100 mm (3.93 in); measured at the front of the assembly. Less than 2.3 kg (5 lb) of force is required to open or close the document feeder.

The hinges allow the document feeder to open to an angle of between 60° and 80° from the horizontal position (this angle will not allow the product to tip over).

Figure 1-6 Document feeder open (book mode)

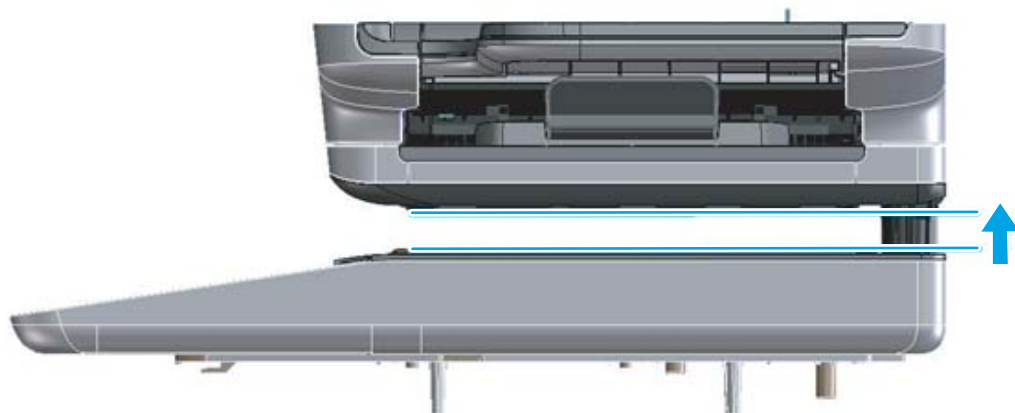


Figure 1-7 Document feeder open (60° to 80°)



2 Solve problems

- [For additional service and support](#)
- [Solve problems checklist](#)
- [Troubleshooting process](#)
- [Tools for troubleshooting](#)
- [Solve paper handling problems](#)
- [Solve wired network problems](#)
- [Service mode functions](#)
- [Product firmware updates](#)
- [Solve email problems](#)
- [Solve fax problems](#)

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To access HP PartSurfer information from any mobile device, go to <http://partsurfermobile.hp.com/> or scan the Quick Response (QR) code below.



Solve problems checklist

- [Solve problems checklist](#)
- [Check the configuration page](#)
- [Check the menu map page](#)
- [Check current settings page](#)
- [Check the usage page](#)
- [Check the event log page](#)
- [Pre-boot menu options](#)
- [Remote Admin](#)

Solve problems checklist

If the product is not correctly functioning, complete the steps (in the order given) in the following checklist. If the product fails a checklist step, follow the corresponding troubleshooting suggestions for that step. If a checklist step resolves the problem, skip the remaining checklist items.

1. If the control panel is blank or black, check the following before proceeding:
 - Check to make sure that the product is not in Sleep mode.
 - Check the power cable.
 - Check that the power is turned on.
 - Make sure that the line voltage is correct for the product power configuration. (See the label that is on the back of the product for voltage requirements.) If a power strip is in use, and its voltage is not within specifications, connect the product directly into the electrical outlet. If it is already connected into the outlet, try a different outlet.



NOTE: The following conditions indicate that the product has frozen while in Sleep mode. Opening a door or tapping the control panel causes the product to wake up from Sleep mode.

- The control panel Home  button LED is illuminated.
- The power switch LED flashes once every three to five seconds.

If the control panel is not responding to touch, or if it appears black or blank, try the following:

- a. Turn the product power off, and then on again.
- b. Verify that the control panel is correctly functioning by accessing the control panel diagnostics. See the control panel checks section of this manual.



TIP: The LED on the formatter will blink if the control panel is not detected or the cables are not properly seated.

If the control panel does not respond to the diagnostic button, try the following:

- Try scanning from a host computer. Does the product scan a test page?
 - Is the product HP Embedded Web Server (EWS) accessible?
 - Turn the product power off.
 - Reseat the cable connections on the bottom of the control panel assembly and the control panel connectors at the formatter.
 - Turn the product power on, and then check for functionality of the control panel by tapping the touchscreen control panel.
- c. If the error persists, replace the control panel assembly.
2. The control panel should indicate a [Ready](#), [Paused](#), or [Sleep mode on](#) status. If an error message displays, resolve the error.
3. For network connection errors, check the cables.
- a. Check the network cable connections between the product and the computer or network port. Make sure that the connections are secure.



NOTE: The network LEDs should be illuminated and flashing.

- b. Make sure that the cables are not faulty by trying different cables, if possible.
- c. Check the network connection. Verify that the port is active.
4. View the configuration page. If the product is connected to a network, an HP Jetdirect page also is available.
- a. From the Home screen on the product control panel, select [Reports](#).
- b. Select [Configuration/Status Pages](#).
- c. Select [Configuration Page](#).
- d. Select [View](#).
- If the page does not display correctly, the problem is with the product hardware.
 - If the page displays correctly, the product hardware is working. The problem is with the host computer, with the product driver, or with the program.

5. Verify that the document feeder rollers are not at their end-of-life.



TIP: If a maintenance item needs to be replaced, order the part number provided below.



NOTE: HP long-life consumables and maintenance kit life specifications are estimations. Actual individual life/yield during normal use varies depending on usage, environment, media, and other factors. Estimated life is not an implied guarantee or warrantable.

- Document feeder maintenance kit; estimated life: 150,000 pages
 - 5851-7202

6. Verify that the correct scan software for this product is installed. The software can be downloaded from this website: www.hp.com/support/sjflowN9120fn2 or www.hp.com/go/DSFlow8500fn2.
7. Scan a short document from a different program that has worked in the past. If this solution works, the problem is with the program. If this solution does not work (the document does not scan), complete these steps:
 - a. Try scanning the job from another computer that has the product software installed.
 - b. If the product is connected to the network, connect the product directly to a host computer with a USB cable. Redirect the product to the correct port, or reinstall the software (make sure to select the new connection type).

Check the configuration page

1. From the Home screen on the product control panel, select [Reports](#).
2. Select [Configuration/Status Pages](#).
3. Select [Configuration Page](#).
4. Select [View](#).

Check the menu map page

To more easily navigate individual settings, view the complete menu system.

1. From the Home screen on the product control panel, select [Reports](#).
2. Select [Configuration/Status Pages](#).
3. Select [Settings Menu Map](#).
4. Select [View](#).

Check current settings page

Viewing the current settings page provides a map of the user configurable settings that might be helpful in the troubleshooting process.

1. From the Home screen on the product control panel, select [Reports](#) .
2. Select [Configuration/Status Pages](#).
3. Select [Current Settings Page](#).
4. Select [View](#).

Check the usage page

The usage page provides counts of all paper sizes that have passed through the product and view lists whether they were simplex or duplex scans.

1. From the Home screen on the product control panel, select [Reports](#) .
2. Select [Configuration/Status Pages](#).
3. Select [Usage Page](#).
4. Select [View](#).

Check the event log page

Reviewing the event log might be helpful in the troubleshooting process. For more information, see the Interpret control panel messages and event log entries section in the product troubleshooting manual.


Check the event log from the Troubleshooting menu

1. From the Home screen on the product control panel, select [Support Tools](#).
2. Select [Troubleshooting](#).
3. Select [Event Log](#).

Check the event log from the Service menu

1. From the Home screen on the product control panel, select [Support Tools](#).
2. Select [Service](#).
3. On the sign-in screen, select the [Service Access Code](#) option from the drop-down list.
4. Enter the following service access code:
 - 10850017 (8500 fn2)
 - 10912017 (N9210 fn2)
5. Select [Sign In](#).
6. Select [Event Log](#). The event log displays on the screen.

Clear the event log

1. From the Home screen on the product control panel, select [Support Tools](#).
2. Open the [Service](#) menu.
3. On the sign-in screen, select [Service Access Code](#) from the drop-down list.
4. Enter the following service access code:
 - 10850017 (8500 fn2)
 - 10912017 (N9210 fn2)
5. Select [Sign In](#).
6. Select [Event Log](#).
7. Select the Trash icon , and then select [OK](#).

Pre-boot menu options

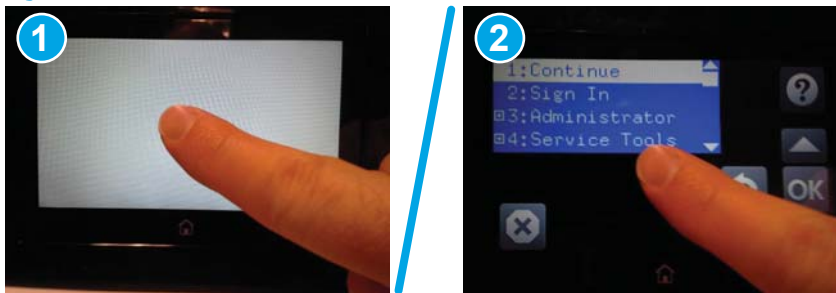
The menus are available prior to the product initializing.

⚠ CAUTION: The option (products with a hard-disk drive only) performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Open the Pre-boot menu

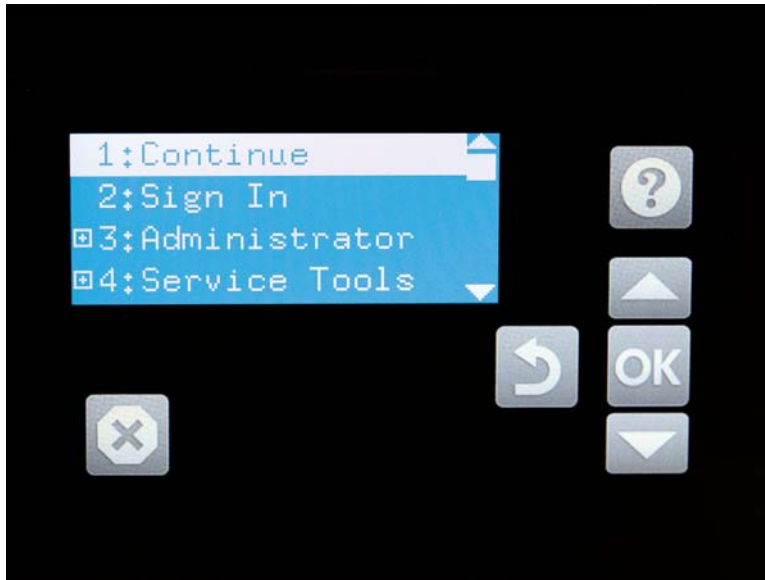
1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-1 Open the Pre-boot menu



3. On the **Pre-boot** menu screen, use the following buttons to navigate the tests.

Figure 2-2 Pre-boot menu



Use this button to see more information about a selected item.



Use this button to scroll up through menu items.



Use this button to select a highlighted menu item.



Use this button to scroll down through menu items.



Use this button to go back to the previous menu.



Not used.



Use this button to exit a diagnostic test.

4. Use the arrow buttons on the touchscreen to navigate the menu.
5. Use **OK** to select a menu item.

Cold reset using the Pre-boot menu

⚠ CAUTION: This procedure resets all product configurations and settings to factory defaults (customer configurations and settings are lost).

1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-3 Open the Pre-boot menu



3. Use the ▼ button to highlight the +3:Administrator item, and then select **OK**.
4. Use the ▼ button to highlight the +8:Startup Options item, and then select **OK**.
5. Use the ▼ button to highlight the 2 Cold Reset item, and then select **OK**.
6. Select Back ↵ to return to the main Pre-boot menu and highlight the 1:Continue item, and then select **OK**.

📝 NOTE: The product will initialize.

📝 NOTE: Some of the pre-boot options in the following tables are not supported by the current version of the product firmware and are included for information only. Future versions of firmware will support these options.

Table 2-1 Pre-boot menu options (1 of 7)

| Menu option | First level | Second level | Third level | Description |
|---------------|-------------|--------------|-------------|---|
| Continue | | | | <p>Selecting the item exits the menu and continues the normal boot process.</p> <p>If a selection is not made in the initial menu within 30 seconds, the product returns to a normal boot (the same as selecting Continue).</p> <p>If the user navigates to another menu, the timeout does not apply.</p> |
| Sign In | | | | Enter the administrator PIN or service PIN if one is required to open the menu. |
| Administrator | | | | <p>This item navigates to the submenus.</p> <p>If authentication is required (and the user is not already signed in) the prompt displays. The user is required to sign in.</p> |

Table 2-1 Pre-boot menu options (1 of 7) (continued)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|-----------------------------------|---|-------------|---|
| | Download | Network USB Device USB Thumbdrive | | This item initiates a Pre-boot firmware download process. A USB Thumbdrive option will work on all FutureSmart products. USB or Network connections are not currently supported. |
| | Format Disk | | | This item reinitializes the disk and cleans all disk partitions. CAUTION: Selecting the item removes all data. A delete confirmation prompt is not provided. The system is not bootable after this action and a 99.09.67 error displays on the control panel. A firmware download must be performed to return the system to a bootable state. |
| | Partial Clean | | | This item reinitializes the disk (removing all data except the firmware repository where the master firmware bundle is downloaded and saved). CAUTION: Selecting the item removes all data except the firmware repository. A delete confirmation prompt is not provided. CAUTION: This procedure resets all product configurations and settings to factory defaults (customer configurations and settings are lost). This allows a user to reformat the disk by removing the firmware image from the active directory without having to download new firmware code (product remains bootable). |
| Administrator (continued) | Change Password Clear Password | | | Select this item to set or change the administrator password. Select the item to remove a password from the control panel menus. Before the password is actually cleared, a message will be shown asking to confirm that the password should be cleared. Select to confirm the action. When the confirmation prompt displays, select to clear the password. |

Table 2-2 Pre-boot menu options (2 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|-------------|--------------|-------------|---|
| Administrator (continued) | Manage Disk | Clear disk | | Select the item to enable using an external device for job storage. Job storage is normally enabled only for the Boot device. This will be grayed out unless the 99.09.68 error is displayed. |
| | | Lock Disk | | Select the item to lock (mate) a new secure disk to this product. The secure disk already locked to this product will remain accessible to this product. Use this function to have more than one encrypted disk accessible by the product when using them interchangeably. The data stored on the secure disk locked to this product always remains accessible to this product. |

Table 2-2 Pre-boot menu options (2 of 7) (continued)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|----------------------------|----------------------------|---------------|---|
| | | Leave Unlocked | | Select the item to use a new secure disk in an unlocked mode for a single service event. The secure disk that is already locked to this product will remain accessible to this product and uses the old disk's encryption password with the new disk. The secure disk that is already locked to this product remains accessible to this product. |
| | | Clear Disk Pwd | | Select the item to continue using the non-secure disk and clear the password associated with the yet-to-be installed secure disk. CAUTION: Data on the missing secure disk will be permanently inaccessible. |
| | | Retain Password | | Select the item to use the non-secure disk for this session only, and then search for the missing secure disk in future sessions. |
| | | Boot Device | Secure Erase | Select the item to erase all of the data on the disk and unlock it if required. This might take a long time. NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command is a one-pass overwrite, which erases the entire disk including firmware. The disk remains an encrypted disk. |
| Administrator (continued) | Manage Disk (continued) | Boot Device (continued) | Erase/Unlock | Select the item to cryptographically erase all data on the disk and unlock the disk to allow a user to gain access to it from any product. NOTE: The system will be unusable until the system files are reinstalled. It erases the encryption key. The encryption key is erased, so the disk becomes a non-encrypted disk. |
| | | | Get Status | This item provides disk status information if any is available. |
| | | | Use Secondary | Select the item to boot the product from the eMMC memory instead of the hard disk drive (HDD). |

Table 2-3 Pre-boot menu options (3 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|----------------------------|-----------------|--------------|--|
| Administrator (continued) | Manage Disk (continued) | Internal Device | | Select the item to erase the internal device or get a status about the internal device. |
| | | | Secure Erase | Select the item to erase all of the data on the disk and unlock it if required. This might take a long time. NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk. |

Table 2-3 Pre-boot menu options (3 of 7) (continued)

| Menu option | First level | Second level | Third level | Description |
|-------------|-------------|-----------------|--------------|---|
| | | | Erase/Unlock | Select the item to cryptographically erase all of the data on disk and unlock the disk to allow the user to gain access to it from any product. NOTE: The system will be unusable until the system files are reinstalled. The HP High Performance Secure Hard Disk is erased. |
| | | | Get Status | This item provides disk status information if any is available. |
| | | External Device | | Select the item to erase the external device or get status about the external device. |
| | | | Secure Erase | Select the item to erase all of the data on the disk and unlock it if required. This might take a long time. NOTE: The system will be unusable until the system files are reinstalled. The ATA secure-erase command erases the entire disk, including firmware. The disk remains an encrypted disk. |
| | | | Erase/Unlock | Select the item to cryptographically erase all of the data on disk and unlock the disk to allow a user to gain access to it from any product. NOTE: The system will be unusable until the system files are reinstalled. The encryption key is erased, so the disk becomes a non-encrypted disk. |
| | | | Get Status | This item provides disk status information if any is available. |

Table 2-4 Pre-boot menu options (4 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|---|----------------|-----------------|---|
| Administrator (continued) | Configure LAN NOTE: This configuration is only active when the Pre-boot menu is open. | IP Mode [DHCP] | | The network can be configured to obtain the network settings from a DHCP server or as static. Use this item for automatic IP address acquisition from the DHCP server. |
| | | | IP Address | Use this item to manually enter the IP addresses. |
| | | | Subnet Mask | Use this item to manually enter the subnet mask. |
| | | | Default Gateway | Use this item to manually enter the default gateway. |
| | | | Save | Select the item to save the manual settings. |

Table 2-5 Pre-boot menu options (5 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|-----------------|--------------|-------------|---|
| Administrator (continued) | Startup Options | | | Select the item to specify options that can be set for the next time the product is turned on and initializes to the state. |

Table 2-5 Pre-boot menu options (5 of 7) (continued)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|--------------------------------|---------------------------------|-------------|---|
| | | Show Revision | | <p>Not currently functional: Select the item to allow the product to initialize and show the firmware version when the product reaches the state.</p> <p>Once the product power is turned on the next time, the item is unchecked so that the firmware revision is not shown.</p> |
| | | Cold Reset | | <p>Select the item to clear the IP address and all customer settings. (This item also returns all settings to factory defaults.)</p> <p>NOTE: Items in the menu are not reset.</p> |
| | | Skip Disk Load | | Select the item to disable installed third-party applications. |
| | | Skip Cal | | Select the item to skip the product calibration for the very next power-initialization cycle only. |
| | | Lock Service | | <p>CAUTION: Select the item to lock the menu access (both in the menu and the menu).</p> <p>Service personnel must have the administrator remove the setting before they can open the menu.</p> |
| | | Skip FSCK | | Select the item to disable Chkdisk/ScanVolume during startup. |
| Administrator (continued) | Startup Options (continued) | First Power | | <p>Not currently functional: This item allows the product to initialize as if it is the first time it has been turned on.</p> <p>For example, the user is prompted to configure first-time settings like date/time, language, and other settings.</p> <p>Select this item so that it is enabled for the next time the product power is turned on.</p> <p>When the product power is turned on the next time, this item is unchecked so that the pre-configured settings are used during configuration, and the first-time setting prompt is not used.</p> |
| | | Embedded Jetdirect Off | | <p>Select the item to disable the embedded HP Jetdirect.</p> <p>By default this item is unchecked so that HP Jetdirect is always enabled.</p> |
| | | WiFi Accessory Jetdirect Off | | Select the item to disable the wireless accessory. |

Table 2-6 Pre-boot menu options (6 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|-------------|--------------|-------------|---|
| Administrator (continued) | Diagnostics | | | Diagnostic items are useful to diagnose hardware components and their interface connections. Use these items to troubleshoot specific hardware components, and the interface between them and other components. |
| | | Memory | Do Not Run | Use the item to exclude the diagnostic when executing multiple diagnostics. |

Table 2-6 Pre-boot menu options (6 of 7) (continued)


| Menu option | First level | Second level | Third level | Description |
|------------------------------|----------------------------|---------------------|-------------|---|
| | | | Short | Use the item to select a brief memory test. NOTE: This test requires about 4 minutes to execute. |
| | | | Long | Use the item to select an extended memory test. NOTE: This test requires about 20 minutes to execute. |
| | | Disk | Do Not Run | Use the item to exclude the diagnostic when executing multiple diagnostics. |
| | | | Short | Use the item to select a brief firmware self-test. NOTE: This test requires about 2 or 3 minutes to execute. |
| | | | Long | Use the item to select an extended firmware self-test. NOTE: This test requires about 60 minutes to execute. |
| Administrator (continued) | Diagnostics (continued) | Disk (continued) | Smart | Use the item to select a very brief test that checks the drive self-monitoring analysis and reporting technology (SMART) status—the drive detects and reports reliability indicators to help anticipate disk failures (SMART status). |
| | | | Optimized | Use the item to select a test that checks the active sectors on the disk. NOTE: This test requires about 30 minutes to execute. |
| | | | Raw | Use the item to select a test that checks every sector on the disk. NOTE: This test requires about 50 minutes to execute. |
| | | IOD | Do Not Run | Use the IOD item to verify the integrity of the island of data (IOD) and the formatter PCA connections. |
| | | | ReadWrite | |
| | | Run Selected | | Select the Run Selected item to execute a selected test. NOTE: If more than one test is selected, they are executed in sequence. |

Table 2-7 Pre-boot menu options (7 of 7)

| Menu option | First level | Second level | Third level | Description |
|------------------------------|----------------|--------------|-------------|--|
| Administrator (continued) | Remote Admin | Start Telnet | | <p>The item allows a service technician to access to the product Pre-boot menu remotely, and to navigate the menu selections from a remote location.</p> <p>IMPORTANT: A Remote Admin connection must be initiated by a person that is physically present at the product.</p> <p>This person will also need to provide a randomly generated PIN to the remote service technician.</p> <p>NOTE: For more information about using the function, see Remote Admin on page 27.</p> |
| | | Stop Telnet | | |
| | | Refresh IP | | |
| | System Triage | Copy Logs | | <p>If the product will not boot to the state, or the diagnostic log feature found in the menu is not accessible, then use the item to copy the diagnostic logs to a USB flash drive at the next product start up.</p> <p>The files can then be sent to HP to help diagnose the problem.</p> |
| | Change Svc PWD | | | Use this item to change the Service menu personal identification number (PIN). |
| | Reset Svc PWD | | | If the Service menu personal identification number (PIN) has been changed, use this item to reset it to the original PIN. |
| Service Tools | Reset Password | | | Use this item to reset the Pre-boot administrator password. |
| | Subsystems | | | For manufacturing use only. Do not change these values. |

Remote Admin

The Remote Admin feature allows remote access to the product Pre-boot menu (BIOS environment). The product functions as a telnet server, which uses the telnet networking protocol to transmit text data. Any computer (with telnet installed and enabled) can function as the telnet client to remotely display and interact with the Pre-boot menu.

 **IMPORTANT:** While the Remote Admin function allows remote access to the Pre-boot menu, for security reasons the Remote Admin connection must be initiated by a person who is physically present at the product.

This section describes the following Remote Admin items.

- [Required software and network connection](#)
- [Connect a remote connection](#)
- [Disconnect a remote connection](#)

Required software and network connection

Before using the Remote Admin feature, make sure that the telnet network protocol is installed, and enabled, on the remote telnet client computer.


 **NOTE:** This section describes enabling and configuring the telnet feature for computers using a Windows® operating system.

HP recommends that the telnet client computer be a Windows-based system. However, there are other operating systems that support the telnet network protocol. For information about enabling and configuring the telnet network protocol for other operating systems, see the owner's manual for that operating system.

Telnet client

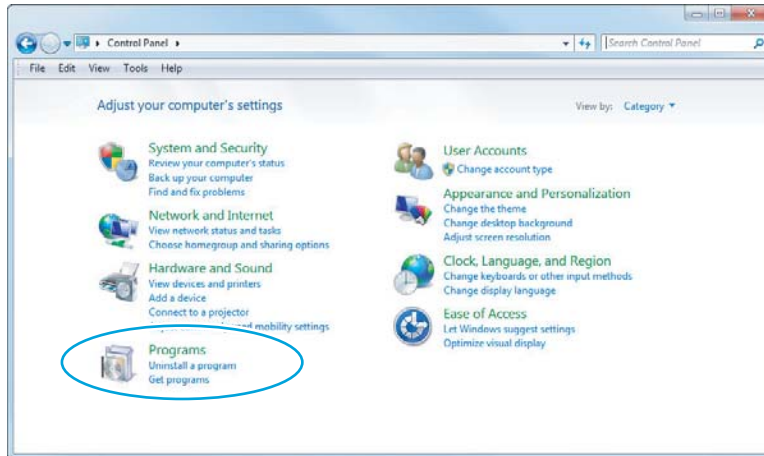
Enable the Windows telnet client

All computers using the Windows operating system have the telnet client installed. However, the telnet client function might not be enabled by default.

 **NOTE:** The figures and menus in this section are for the Windows 7 Enterprise® operating system. Screens and menu selections might vary slightly for other operating systems.

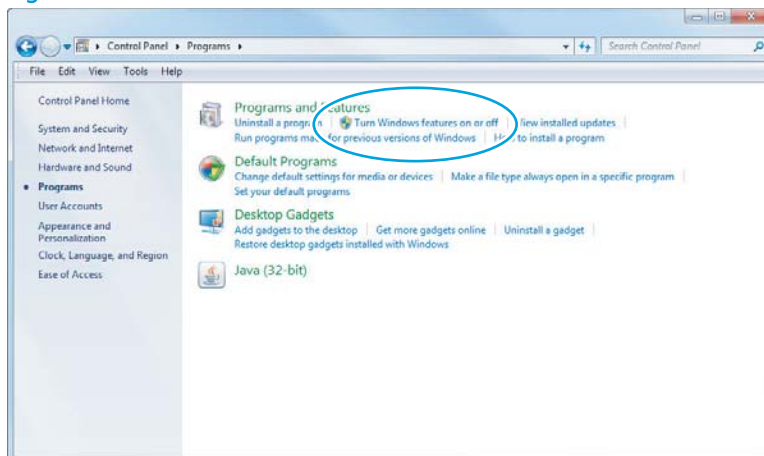
1. Use the **Start** menu to open the **Control Panel**, and then click the **Programs** item to select it.

Figure 2-4 Open the Control Panel



2. Click the **Turn Windows features on or off** item to select it.

Figure 2-5 Turn Windows features on or off



3. In the **Windows Features** box, scroll to **Telnet Client**. If the check box is not checked, click the box to select it, and then click the **OK** button.


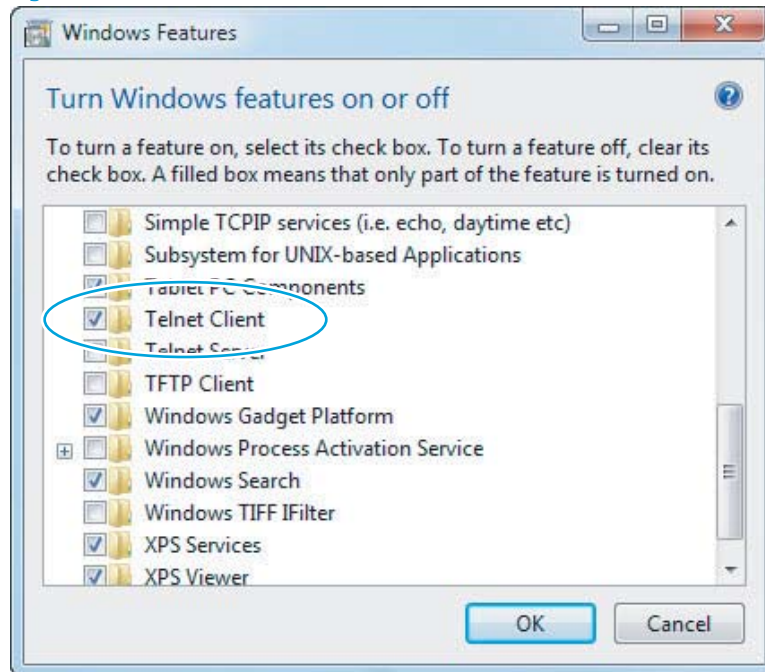
 **TIP:** If the check box is already checked, then the telnet client function is already enabled. Click the **Cancel** button.

Figure 2-6 Enable the telnet client feature



Network connection


The telnet client computer must be on the same network as the product. The Remote Admin function cannot be accessed through a network firewall or other remote access network security programs.

If a private network is not accessible, ask the network administrator to set up a virtual private network (VPN) connection to the network.

Connect a remote connection

Start the telnet server function at the product

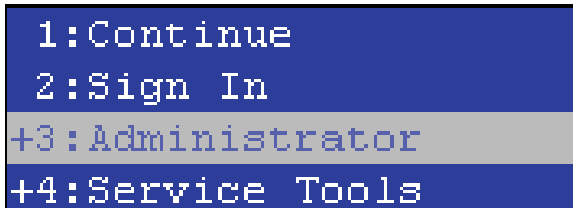
For security reasons, the Remote Admin feature must be initiated by a person who is physically present at the product. The following steps must be performed by a person who is physically present at the product.

 **NOTE:** This person might need to sign in with an administrator or service password depending on how the product is configured.

1. Turn the product off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

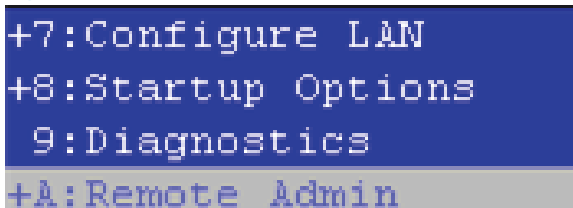
- Use the arrow buttons on the touchscreen to scroll down and highlight the **+3:Administrator** item, and then touch the **OK** button to select it.

Figure 2-7 Select the +3:Administrator item



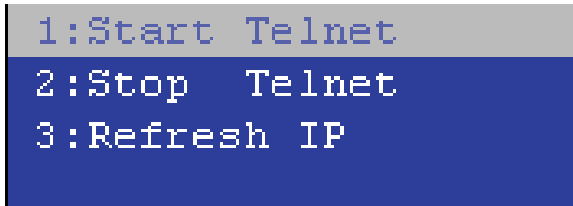
- Use the arrow buttons on the touchscreen to scroll down and highlight the **+A:Remote Admin** item, and then touch the **OK** button to select it.

Figure 2-8 Select the +A:Remote Admin item



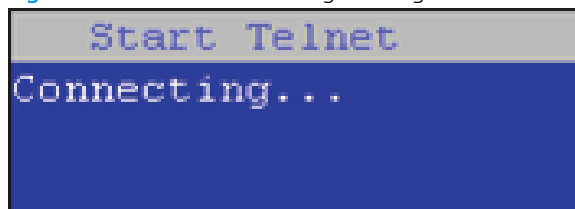
- Use the arrow buttons on the touchscreen to scroll down and highlight the **1:Start Telnet** item, and then touch the **OK** button to select it.

Figure 2-9 Select the 1:Start Telnet item



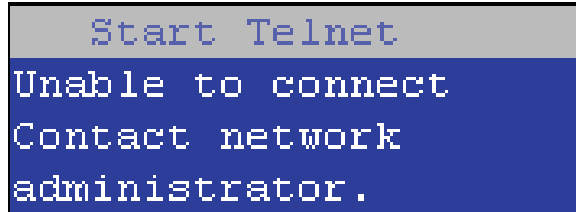
- Do one of the following
 - If a connecting message displays briefly, go to step [7](#).

Figure 2-10 Telnet connecting message



- If an error message displays, use the steps below to identify the problem.

Figure 2-11 Telnet error message

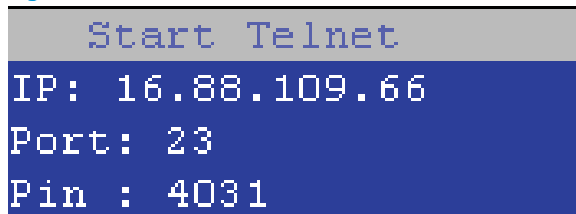


- a. The product network cable is not correctly connected.
 - b. The BIOS LAN settings are incorrect.
 - o The product should be configured to use a static IP address, but is configured to use DHCP instead.
 - o The product is configured to use a static IP address, but the IP address is incorrect.
 - c. The product is correctly configured to use DHCP, but the DHCP server is not turned on or is malfunctioning.
7. When the product telnet server function is initialized, the following screen appears. Use the information on this screen to connect the remote telnet client computer to the product.

 **NOTE:** The product is now ready to receive remote telnet client commands.

- **IP:** The static or dynamically allocated IP address for the product.
- **Port:** The standard telnet port (23).
- **Pin:** A randomly generated 4-digit personal identification number (PIN).

Figure 2-12 Telnet server function initialized

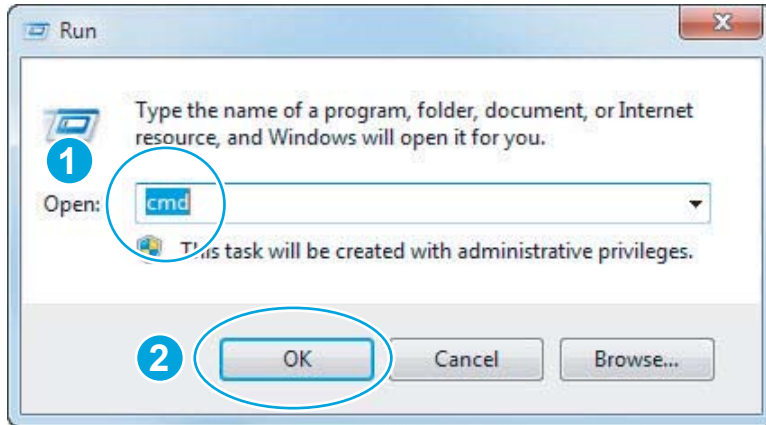


Start the telnet client function at the remote computer

The following steps establish a Remote Admin connection from a remote computer to the product.

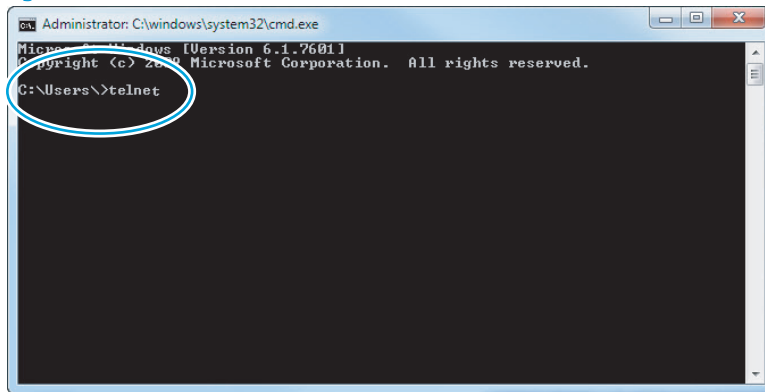
1. From the **Start** menu click **Run** to open a dialog box, type `cmd` in the **Open** field, and then click the **OK** button to open a Windows command window.

Figure 2-13 Open a command window



2. From any displayed directory, type `telnet` at the prompt, and then press the **Enter** key.

Figure 2-14 Start a telnet session



3. Type `<IP ADDRESS>` at the telnet prompt, and then press the **Enter** key.

 **NOTE:** For `<IP ADDRESS>`, substitute the IP address that was displayed in step 7 in [Start the telnet server function at the product on page 29](#).


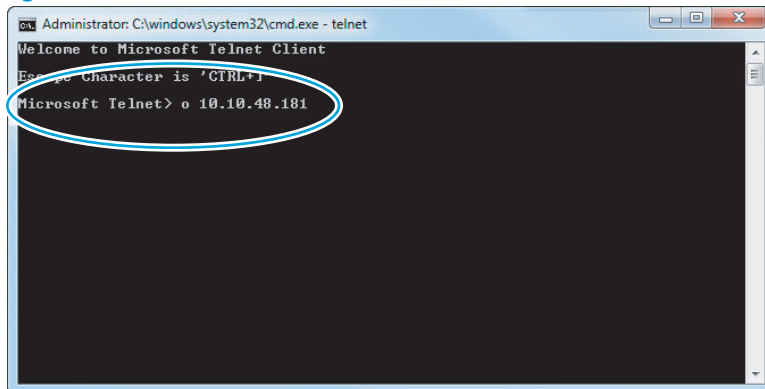
 **TIP:** If the telnet connection fails to establish a connection, the product is probably behind a firewall or on a different network than the remote telnet client computer. See [Network connection on page 29](#).

Figure 2-15 Establish a telnet connection



4. Type the PIN that was displayed in step 7 in [Start the telnet server function at the product on page 29](#) at the prompt, and then press the **Enter** key.


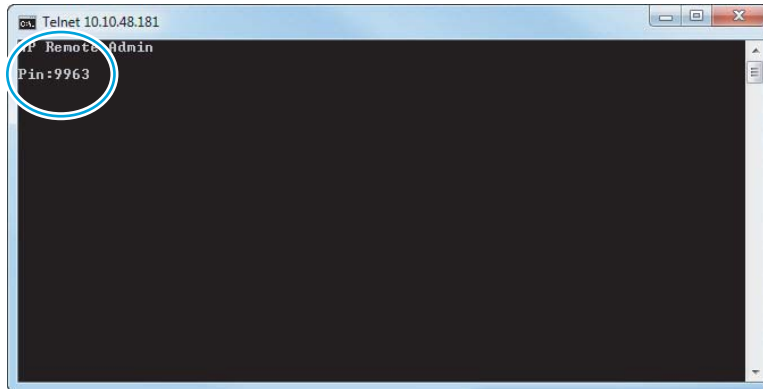

 **IMPORTANT:** Make sure to type the PIN correctly. After five incorrect PIN entries, the product terminates the Remote Admin connection. The Remote Admin feature must be re-initiated at the product. See [Start the telnet server function at the product on page 29](#).

Figure 2-16 Enter the PIN

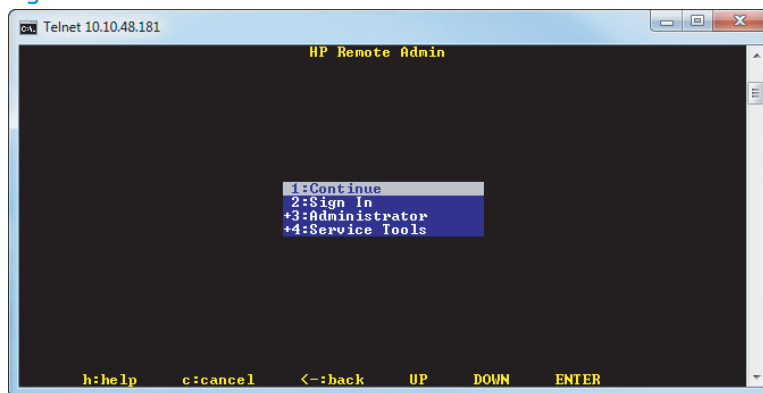


5. The following screen displays when the correct PIN is entered and the Remote Admin connection is successful. For information about the Pre-boot menu and options, see [Pre-boot menu options on page 18](#).

 **NOTE:** Because a Remote Admin connection is an unsecure telnet network protocol connection, the following Pre-boot menu items are disabled for the remote telnet client computer.


- The **+3:Administrator** menu **4:Change Password** item.
- The **+3:Administrator** menu **5:Clear Password** item.
- The **+3:Administrator** menu **6:Disk Manage** item.

Figure 2-17 Remote Admin window



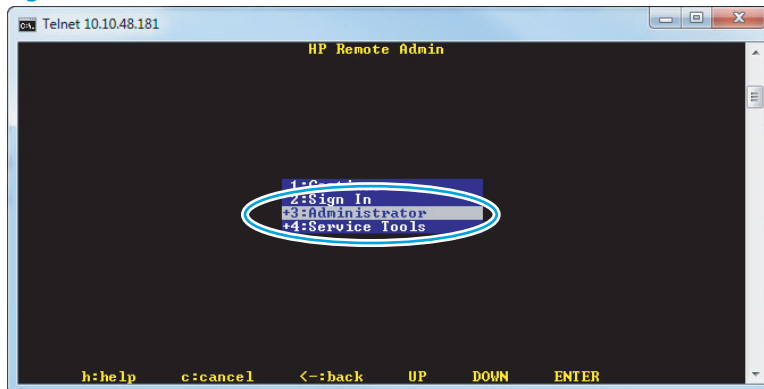
Disconnect a remote connection

The Remote Admin connection can be terminated from the product control panel or the remote telnet client computer.

 **NOTE:** The following procedure describes terminating a Remote Admin connection from the remote telnet client computer.

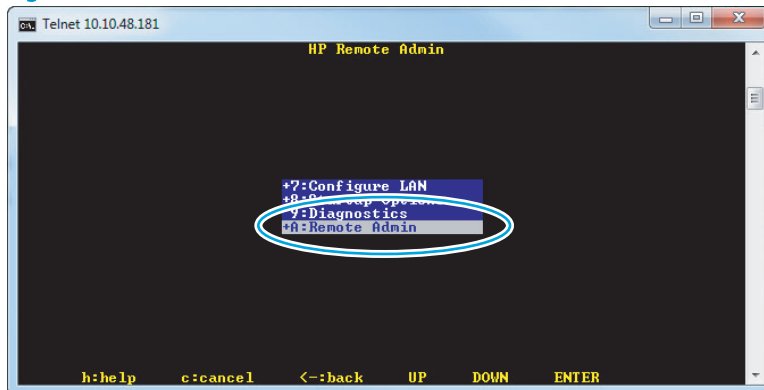
1. From the Pre-boot main menu, use the arrow buttons on the keyboard to scroll down to the **+3:Administrator** item, and then press the **Enter** key.

Figure 2-18 Access the administrator menu




2. Use the arrow buttons on the keyboard to scroll down to the **+A:Remote Admin** item, and then press the **Enter** key.

Figure 2-19 Access the remote admin menu



3. Use the arrow buttons on the keyboard to scroll down to the **2:Stop Telnet** item, and then press the **Enter** key. The Remote Admin connection between the product and the remote telnet client computer terminates.

 **IMPORTANT:** The product remains in the Pre-boot menu. Have the person that is physically present at the product do the following:

- Touch the Back button  to return to the main Pre-boot menu and highlight the **1:Continue** item, and then touch the **OK** button. The product will continue to initialize.

Figure 2-20 Terminate the telnet connection



Troubleshooting process

Determine the problem source

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. This section contains a pre-troubleshooting checklist to filter out many possible causes of the problem. A troubleshooting flowchart helps you diagnose the root cause of the problem. The remainder of this chapter provides steps for correcting problems.

- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart guides you to the section of this chapter that contains steps for correcting the malfunction.

Before beginning any troubleshooting procedure, check whether the configuration page reveals any configuration errors.

Troubleshooting flowchart

This flowchart highlights the general processes that you can follow to quickly isolate and solve product hardware problems.

Each row depicts a major troubleshooting step. A “yes” answer to a question allows you to proceed to the next major step. A “no” answer indicates that more testing is needed. Go to the appropriate section in this chapter, and follow the instructions there. After completing the instructions, go to the next major step in this troubleshooting flowchart.

Table 2-8 Troubleshooting flowchart

| | | | |
|------------------------------------|--|------|---|
| 1 Power on | Is the product on and does a readable message display? | | Follow the power-on troubleshooting checks. See Power subsystem on page 37 . After the control panel display is functional, see step 2. |
| | Yes ↓ | No → | |
| 2 Control panel messages | Does the message Ready display on the control panel? | | After the errors have been corrected, go to step 3. See the control panel messages document (CPDM) on the product support website. |
| | Yes ↓ | No → | |
| 3 Event log | Open the Troubleshooting menu and view the event log to see the history of errors with this product. Does the event log display? | | If the event log does not display, check for error messages. See the control panel messages document (CPDM) on the product support website. If paper jams inside the product, clear the jam. See the clear paper jams section of the product troubleshooting manual. If error messages display on the control panel when you try to view the event log, see the control panel messages document (CPDM) in the product troubleshooting manual. After successfully viewing and evaluating the event log, see step 4. |
| | Yes ↓ | No → | |
| 4 Information pages | Open the Reports menu and view the configuration pages to verify that all the accessories are installed. Are all the accessories installed? | | If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, see step 5. |
| | Yes ↓ | No → | |
| 5 Interface | Can the customer scan successfully from the host computer? | | Verify that all I/O cables are connected correctly and that a valid IP address is listed on the HP Jetdirect configuration page. If error messages display on the control panel when you try to view the event log, see the control panel messages document (CPDM) on the product support website. When the customer can scan from the host computer, this is the end of the troubleshooting process. |
| | Yes. This is the end of the troubleshooting process. | No → | |

Power subsystem

Power-on checks

The basic product functions should start up when the product is connected into an electrical outlet and the power switch is pushed to the *on* position. If the product does not start, use the information in this section to isolate and solve the problem.

If the control panel display remains blank, random patterns display, or asterisks remain on the control panel display, perform power-on checks to find the cause of the problem.

Power-on troubleshooting overview

During normal operation, a cooling fan begins to spin briefly after the product power is turned on. Place your hand over the vents at the rear of the product, next to the formatter, or on the rear of the scanner. If the fan is operating, you will feel air passing out of the product. You can lean close to the product and hear the fan operating.

If the fan is operating correctly, the next troubleshooting step is to isolate power, formatter, and control panel problems.

If the control panel is blank when you turn on the product, check the following items:

1. Make sure that the product is connected directly into an active electrical outlet (not a power strip) that delivers the correct voltage.
2. Make sure that the power switch is in the *on* position.
3. Make sure that the fan runs briefly, which indicates that the power supply is operational.
4. Make sure that the control panel display wire harness is connected.
5. Make sure the power switch is in the on position, and then verify that the heartbeat LED is blinking.
6. Remove any external solutions, and then try to turn the product on again.

Troubleshooting a blank display, black display, no display, or no power situation

Customers usually report that the control panel display is not showing anything. It is very important to collect as much information as possible from the customer about the issue to help resolve it.

Following are some product behaviors the customer might encounter:

- The control panel is completely blank (no LEDs or back light).
- The control panel is blank, but there might be LEDs illuminated.
- The control panel is blank (LEDs are on or flashing) and the back light is on (but no text is visible).

Following are some possible causes of a blank control panel display:

- No power to the product.
- The control panel contrast setting is not correctly adjusted.
- The formatter connector(s) are not fully seated into the connector(s) on the DC controller.
- The memory DIMM is missing, faulty, incorrectly installed, or is not fully seated.
- A faulty component is installed on the formatter (for example a memory DIMM, fax PCA, network PCA, USB device, or other component).
- The formatter is defective.
- The control panel connector is not fully seated, or the control panel is defective.
- The DC controller is defective.

Following are some questions to ask the customer:

- Was the product newly installed or has the product been properly functioning?
 - For a new install, investigate to see if there was any shipping damage to the product.
 - Did the customer notice any damage to the shipping box or any visible damage to the product?
- What happened just prior to the control panel going blank?
 - Was the product serviced recently?
 - Has a power outage recently occurred?
 - Has a lightning storm recently occurred?
 - Did the customer recently add a memory DIMM or install a third-party component?
- Make sure to get a complete description of the failure.
 - Is the control panel display completely blank (might be faint text and no back light)?
 - Is the control panel display back light on?
 - Are any of the LEDs (Ready, Data, or Attention) illuminated?

Recommended actions


If the control panel display is completely blank (no LEDs illuminated or no back light) check to see if the product is getting power. Listen for fans or any product initialization sounds when the power is turned on.

If there are no signs of power, then perform the following:


1. Make sure that the product is plugged directly into an active electrical outlet (not a power strip or interruptible power supply) that delivers the correct voltage.

 **TIP:** Try using a different power cable if possible.

2. Turn the product power on, and make sure that the fan(s) run briefly (this indicates that the power supply is operational).
3. Turn the product power off.
4. Make sure that the control panel display wire harness (and/or flat cable) is properly connected (and fully seated), and then turn the product power on again.
5. Verify the status LEDs are illuminated, but the control panel display is blank. If applicable: Check if the contrast setting is adjusted to very low. If so, try turning the contrast knob to see if the control panel display becomes visible.
6. From a host computer, try a scan job.


 **NOTE:** If the job correctly scans, then the problem is most likely to be a defective control panel.

7. Turn the product power off, and then make sure that the memory DIMM is installed in the correct slot and is fully seated.

 **NOTE:** For some products, there may be more than one memory DIMM installed. Some products have third-party solutions/applications that use memory.

8. Remove all of the components/accessories installed on the formatter (for example, hard drive, solid-state drive, memory DIMM(s), network PCA, USB devices, or other devices).

- Make sure that the formatter is fully seated.
- Take out or disconnect all removable components on the formatter (SSD, HDD, or other devices).


 **IMPORTANT:** This is important because the formatter or a component on the formatter might be defective or shorted which causes the product to lose power.

9. Reinstall the components on the formatter, and then reinstall the formatter.

Make sure that all of the connectors on the formatter are correctly connected and fully seated.

10. Turn the product power on, and then check the control panel display.

11. If the product control panel is properly working, replace each removed component (one at a time) to determine which one is causing the problem.

 **CAUTION:** Turn the product power off, and then on again, after replacing a component on the formatter.

12. If the control panel display is still blank after performing the above troubleshooting steps, replace the formatter.

Control panel checks

 **NOTE:** The product includes a diagnostic test mode for the control panel.

- [Control panel diagnostics](#)
- [Control panel diagnostic flowcharts](#)

Control panel diagnostics

- [Touchscreen diagnostic mode](#)
- [Control panel system diagnostics](#)

Touchscreen diagnostic mode

Use the diagnostics in this section to test the control panel hardware and embedded firmware. These tests are useful for checking control panel functionality independent of the product control panel system diagnostics. To test the control panel using the system diagnostics, see [Control panel system diagnostics on page 45](#).

1. Locate the diagnostic-tests access button on the back of the control panel.

Figure 2-21 Diagnostic-tests access button




2. Press the diagnostics-access button. Repeatedly pressing the button cycles through the available diagnostics.

Figure 2-22 Press the diagnostics-access button



3. A yellow screen appears (after the first press of the button) indicating that the control panel firmware is version A (a magenta screen indicates version B firmware).

 **NOTE:** If a different color appears on the screen, contact your global business unit (GBU) to determine the firmware version.


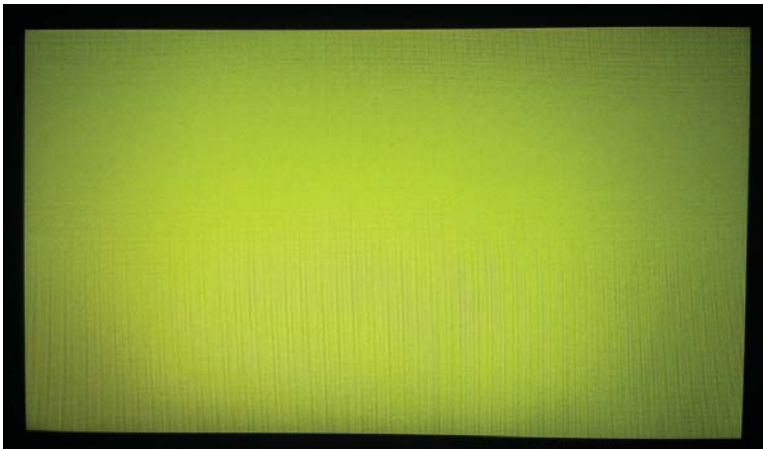
 **TIP:** After 4 seconds of inactivity, the diagnostic mode times out and is exited.

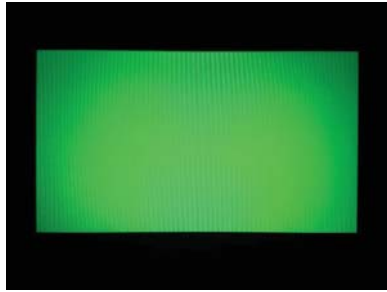
Figure 2-23 Control panel version A yellow screen



4. Touch the screen to cycle the screen through the following:
 - A red screen.



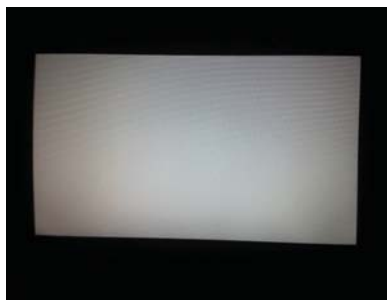
- A green screen.



- A blue screen.



- Five brightness levels of a white screen.



- A final black screen.

💡 **TIP:** When the final black screen displays, press the Home button to cycle through the diagnostic screens and test its functionality.



5. Press the diagnostic-tests button with the black screen displayed to exit the diagnostic mode.

Control panel system diagnostics

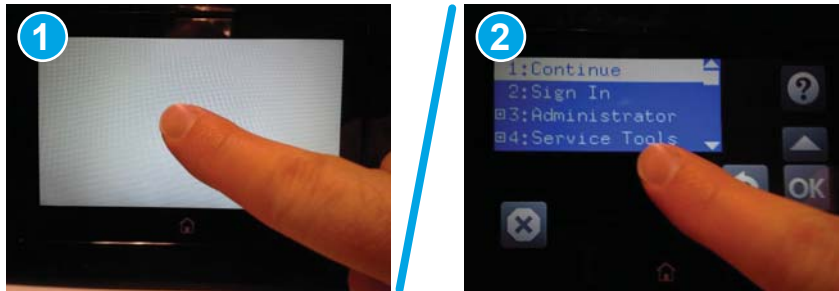
Use the diagnostics in this section to test the control panel hardware and display using the product firmware system diagnostics.

- [Open the control panel system diagnostic tests](#)
- [Screen test](#)
- [Touch test](#)
- [SoftKey test](#)
- [Backlight test](#)
- [Sound test](#)
- [Keyboard test](#)
- [Version](#)

Open the control panel system diagnostic tests

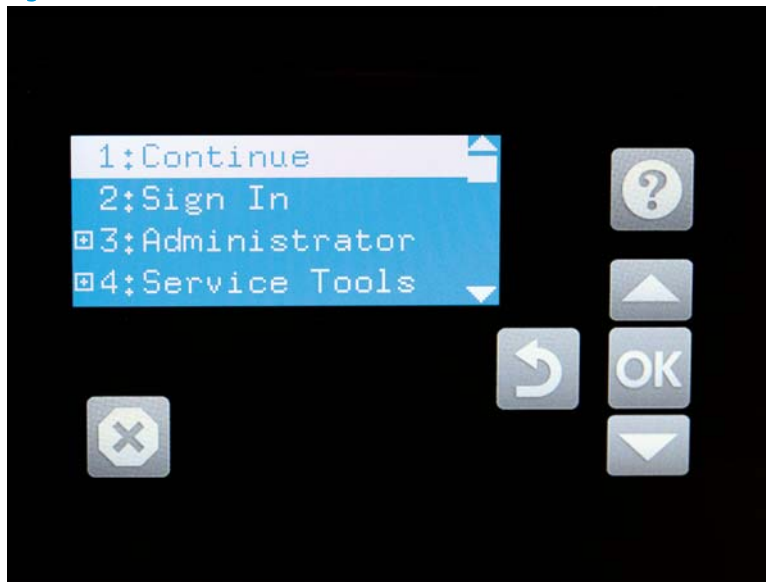
1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-24 Open the Pre-boot menu



3. On the [Pre-boot](#) menu screen, use the following buttons to navigate the tests.

Figure 2-25 Pre-boot menu



Use this button to see more information about a selected item.



Use this button to scroll up through menu items.



Use this button to select a highlighted menu item.



Use this button to scroll down through menu items.



Use this button to go back to the previous menu.



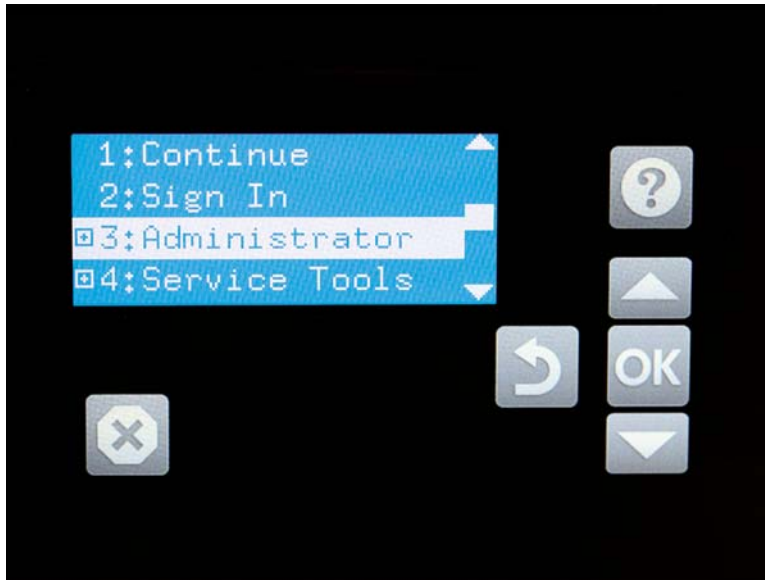
Not used.



Use this button to exit a diagnostic test.

4. Use the ▼ button to scroll to +3 Administrator, and then select OK.

Figure 2-26 Access the Administrator menu



5. Use the ▼ button to scroll to +E CP Diagnostics, and then select OK.

 **NOTE:** An administrator password might be required to continue.

Figure 2-27 Access the CP Diagnostics menu



Screen test

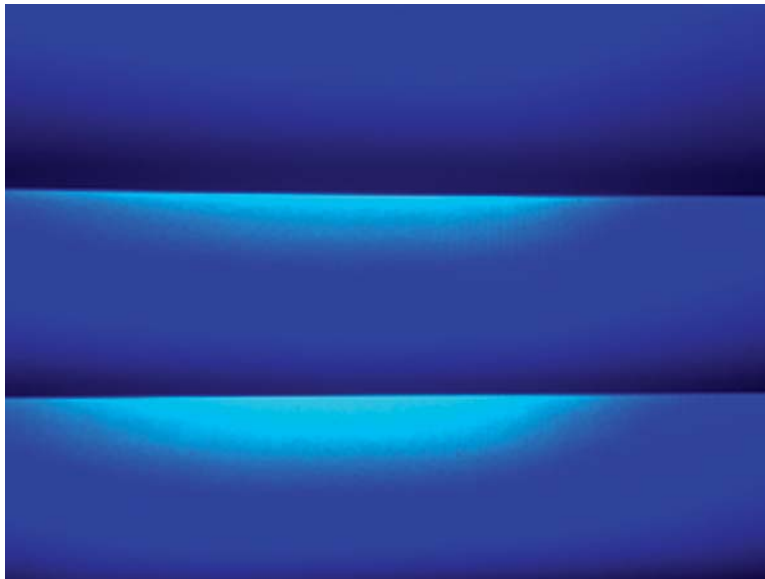
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. With 1 Screen Test highlighted, select OK.

Figure 2-28 Open the screen test



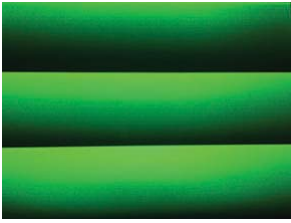
3. The blue vertical gradient screen appears.

Figure 2-29 Blue vertical gradient screen

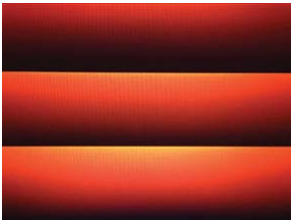


4. Tap the touchscreen to scroll through the remaining test screens.

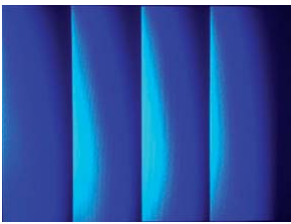
 **NOTE:** Select the Home button to exit the test.



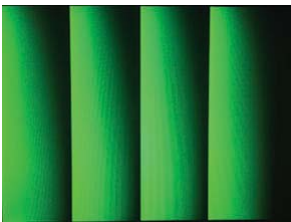
Green vertical gradient



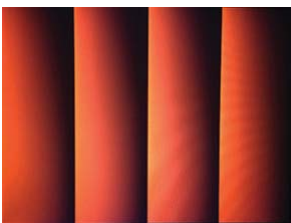
Red vertical gradient



Blue horizontal gradient



Green horizontal gradient



Red horizontal gradient



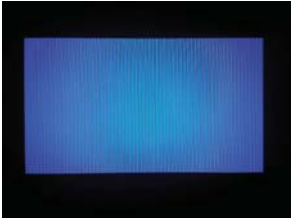
Blue with black horizontal interlaced



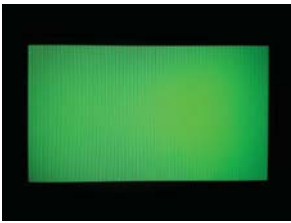
Green with black horizontal interlaced



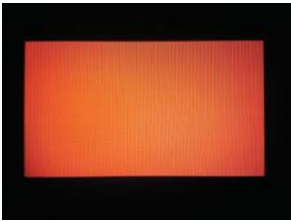
Red with black horizontal interlaced



Blue with black vertical interlaced



Green with black vertical interlaced



Red with black vertical interlaced



Black with white center



White with black center



Checkerboard



Multicolor stripes

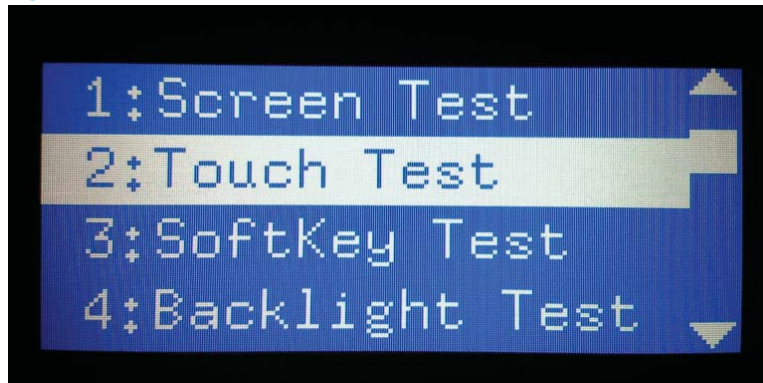


Blue green grid meshing

Touch test

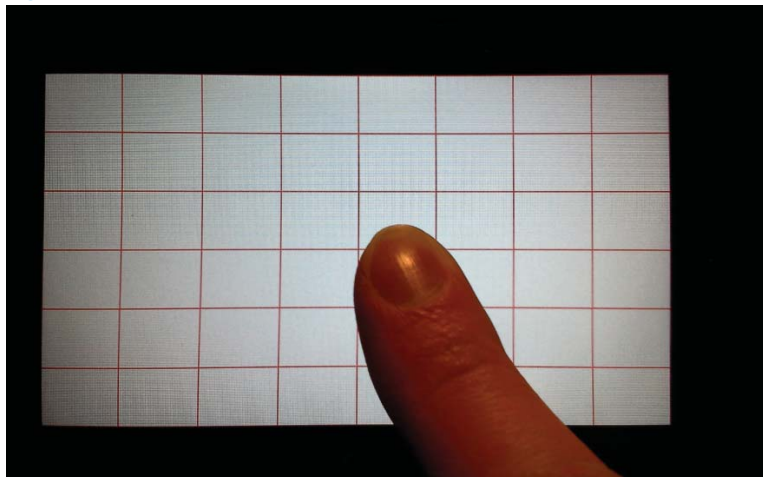
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Use the ▼ button to scroll to 2 Touch Test, and then select OK.

Figure 2-30 Open the touch test



3. Use your finger to touch the white grid on the display.

Figure 2-31 Touch the white grid



4. A mark appears on the grid where it was touched.


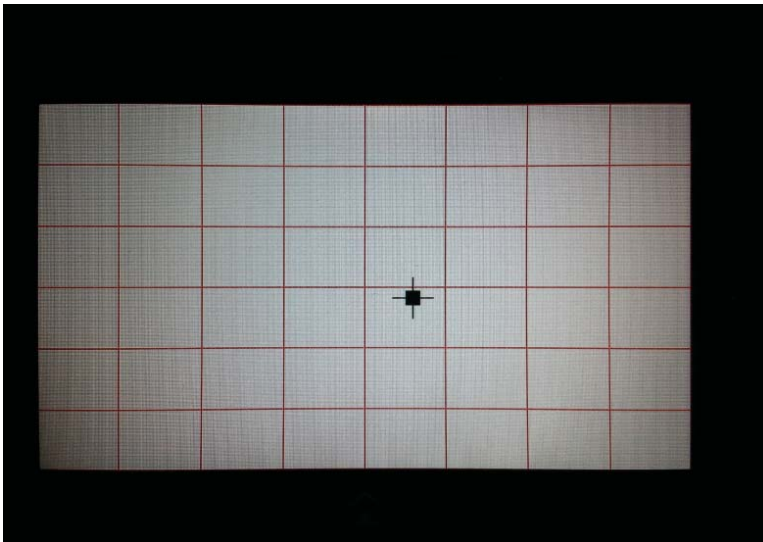
 **NOTE:** Select the Home button to exit the test.

Figure 2-32 Verify the mark



SoftKey test

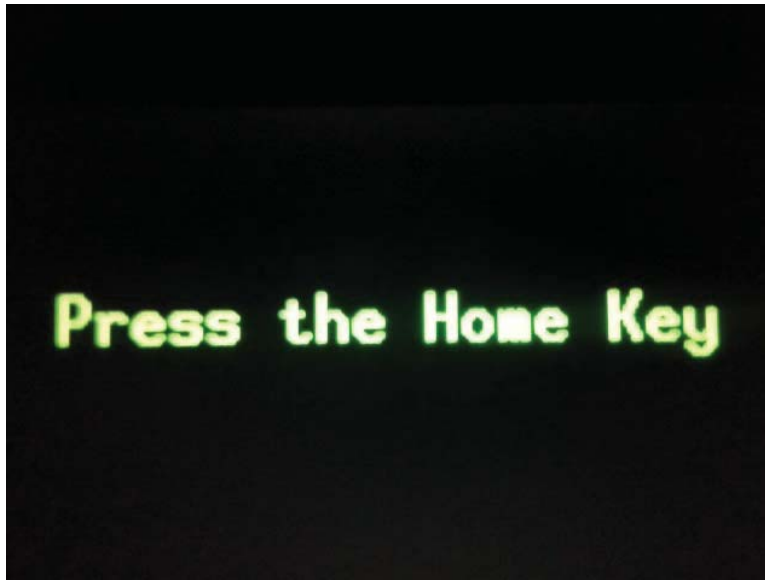
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Select 3 SoftKey Test, and then select OK.

Figure 2-33 Open the softkey test



3. When prompted, select the Home button.

Figure 2-34 Select the Home button

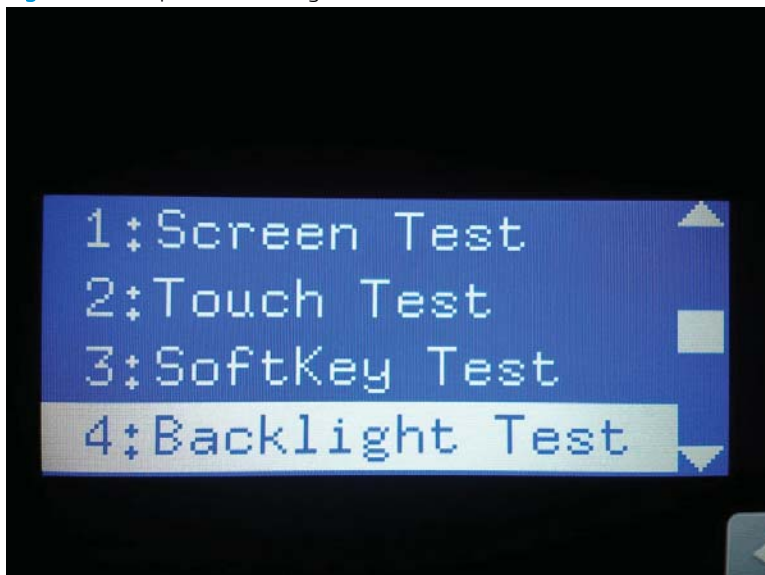


4. If the test is successful, the Home screen appears on the display.

Backlight test

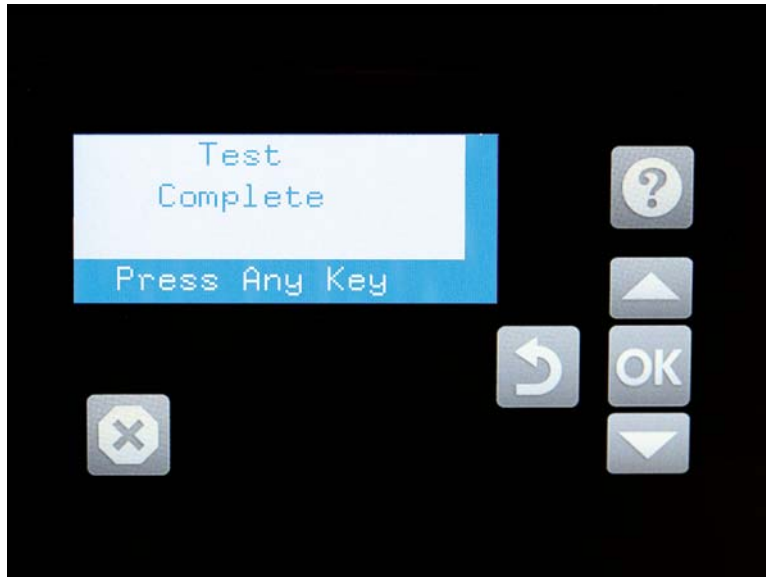
1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Use the ▼ button to scroll to 4 Backlight Test, and then select OK.

Figure 2-35 Open the backlight test



3. After selecting the [4 Backlight Test](#), the screen automatically dims, and then returns to full brightness. Select any key to exit the test.

Figure 2-36 End of the backlight test



Sound test

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Select [5 Sound Test](#), and then select [OK](#).

After selecting the [5 Sound Test](#), the product emits a series of audible tones.



 **NOTE:** Select any key to exit the test.

Figure 2-37 Open the sound test

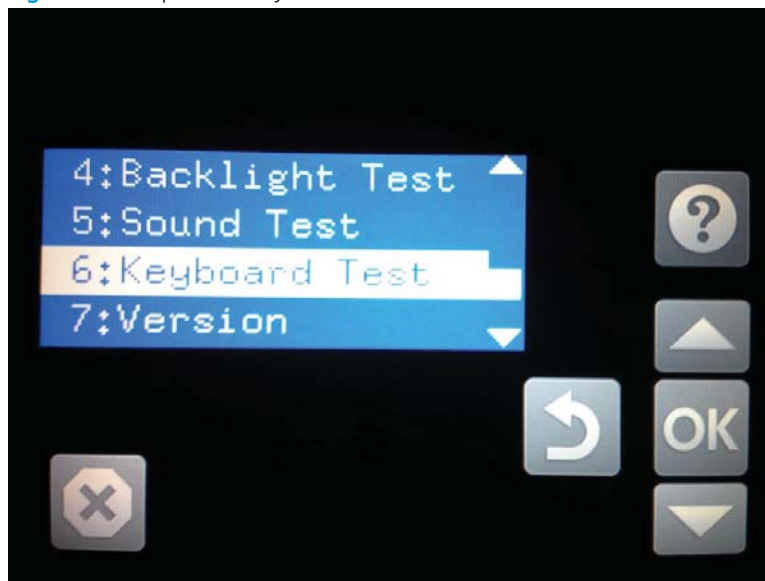


Keyboard test

 **IMPORTANT:** HP does not recommend turning the product power off during the control panel system diagnostic tests.

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Select **6 Keyboard Test**, and then select **OK**.


Figure 2-38 Open the keyboard test




3. When prompted, press any key on the keyboard. That letter will display on the control panel, which means the keyboard is working properly.

Version

1. Open the control panel system diagnostic tests. See [Open the control panel system diagnostic tests on page 45](#).
2. Select **7 Version**, and then select **OK**.

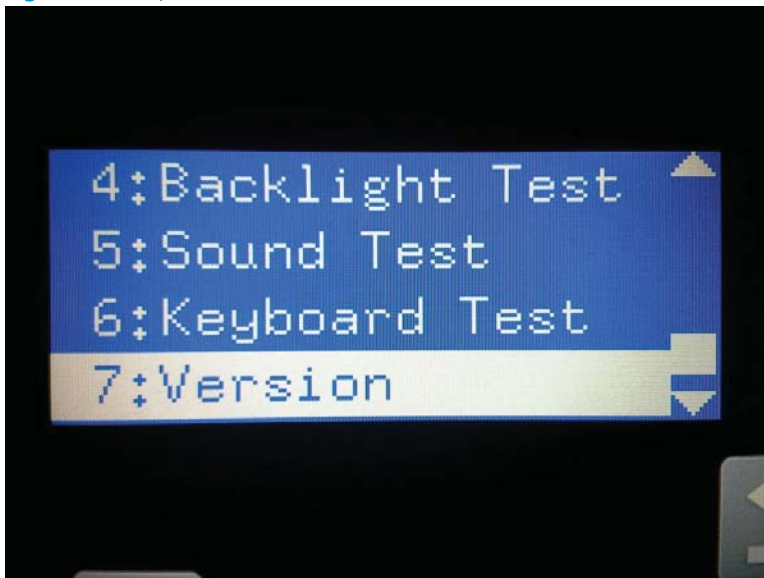
 **NOTE:** Select any key to exit the test.

Select **7 Version** to view the following types of information:

 **NOTE:** The following types of information are for the control panel only, not the product.

- Panel ID
- Hardware (version)
- Firmware (version)
- KB Hw (version)
- KB Firm (version)
- LCD Vendor
- Touch Controller Version

Figure 2-39 Open the Version screen



Control panel diagnostic flowcharts

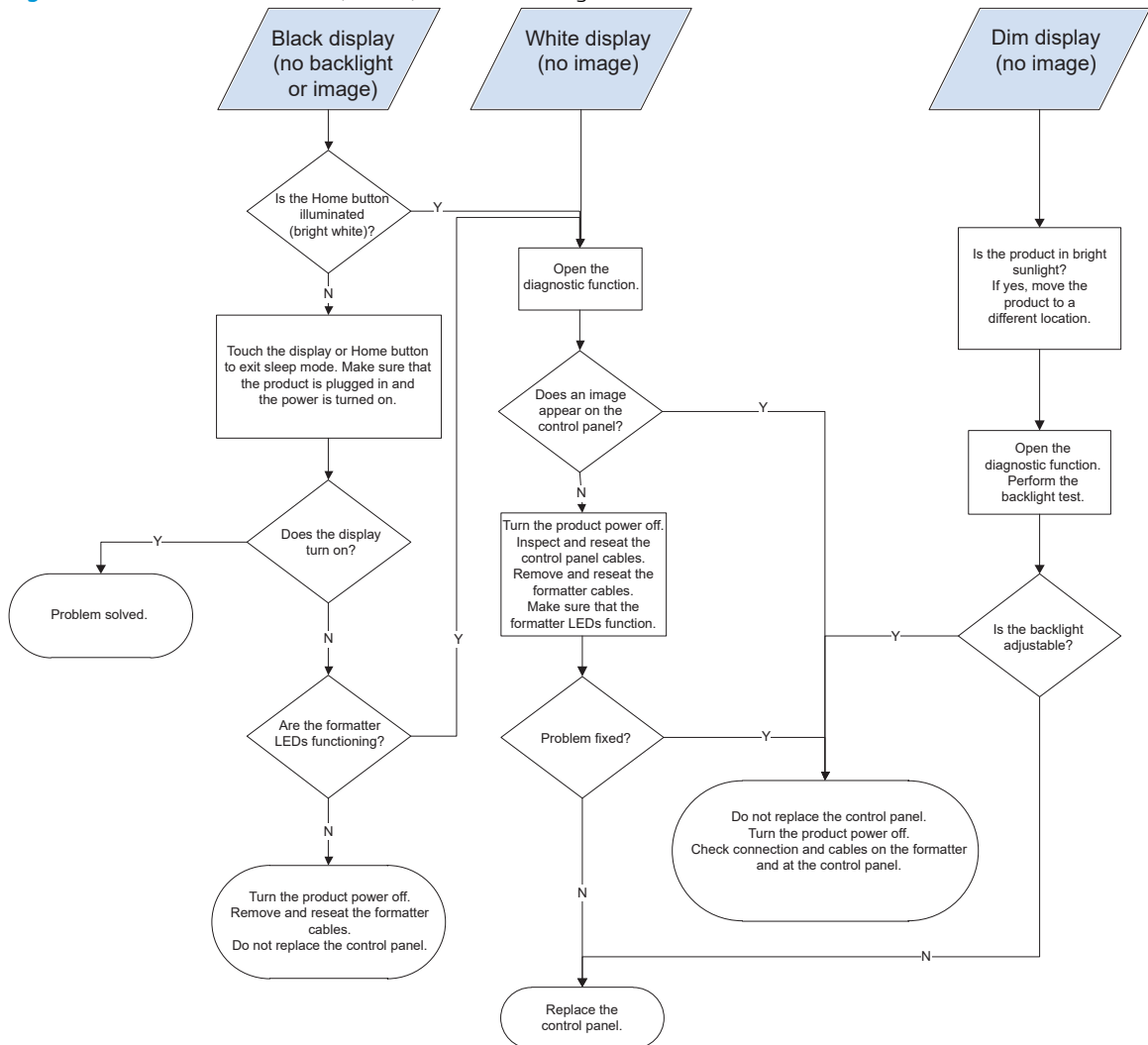
Use the flowcharts in this section to troubleshoot the following control panel problems.

- Touchscreen is blank, white, or dim (no image).
- Touchscreen is slow to respond or requires multiple presses to respond.
- Touchscreen has an unresponsive zone.
- No control panel sound.
- Home button is unresponsive.
- Hardware integration pocket (HIP) is not functioning (control panel functional).

Touchscreen black, white, or dim (no image)

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

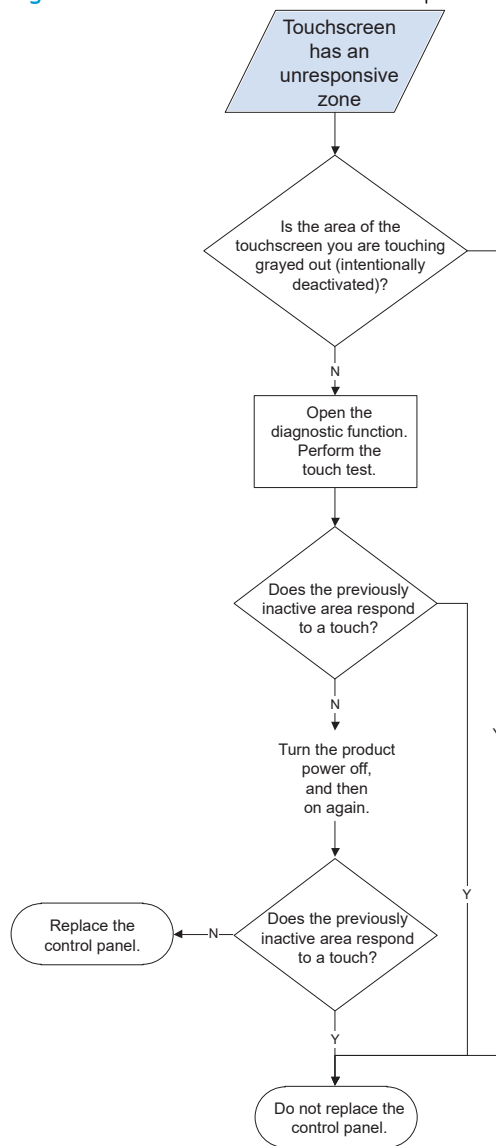
Figure 2-40 Touchscreen blank, white, or dim (no image)



Touchscreen has an unresponsive zone

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

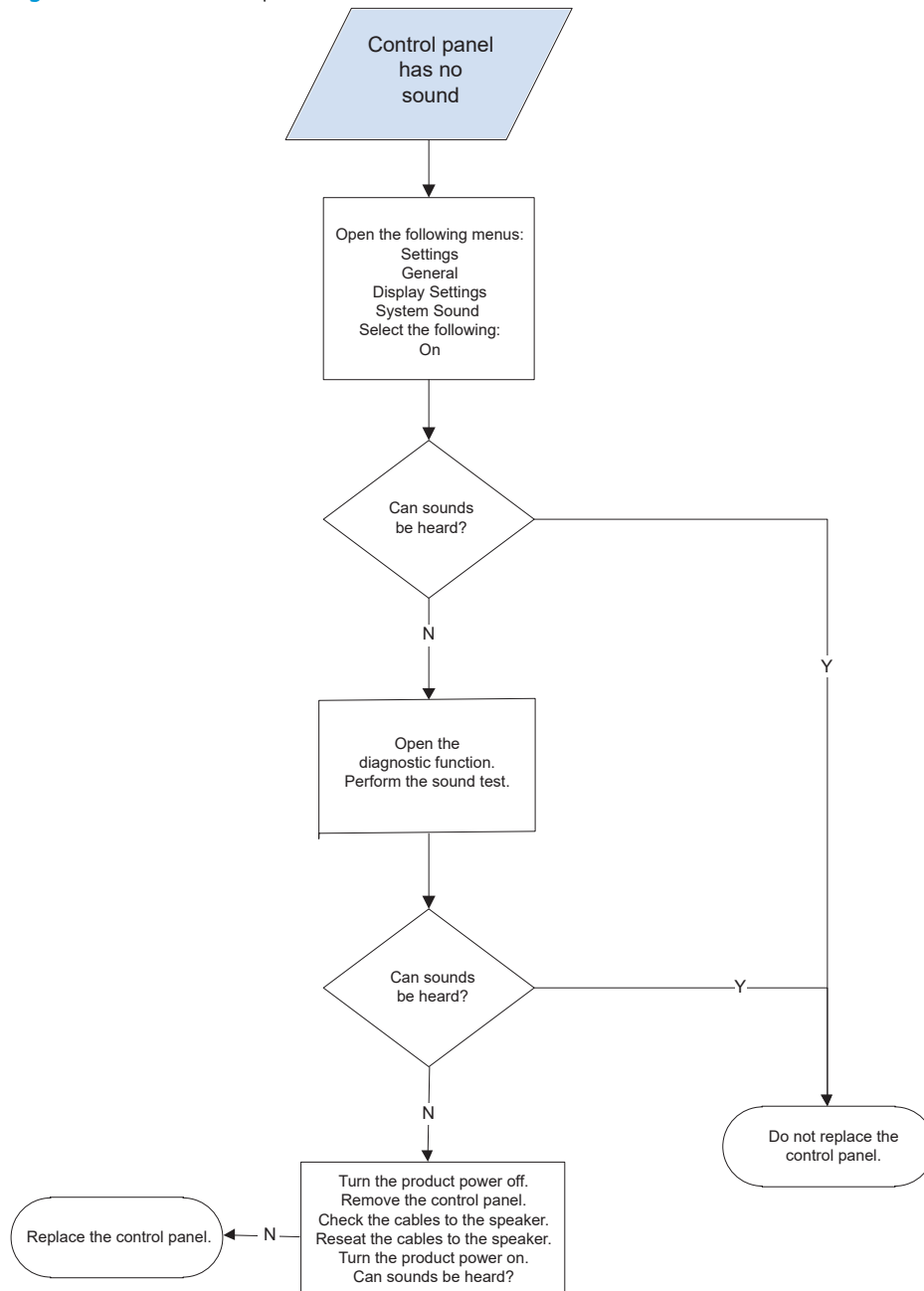
Figure 2-41 Touchscreen has an unresponsive zone



No control panel sound

 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

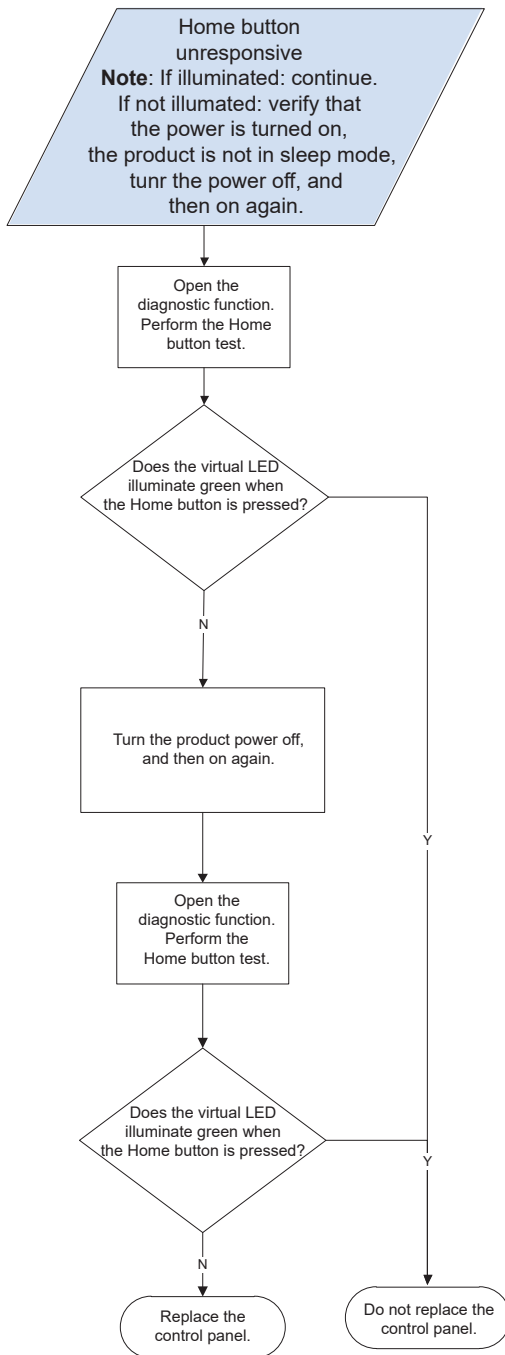
Figure 2-42 No control panel sound



Home button is unresponsive

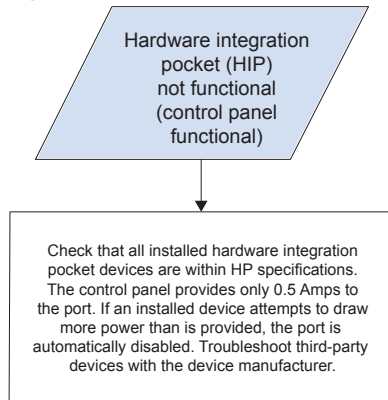
 **NOTE:** To open the diagnostic function, press the button on the back of the control panel.

Figure 2-43 Home button is unresponsive



Hardware integration pocket (HIP) is not functioning (control panel functional)


Figure 2-44 Hardware integration pocket (HIP) is not functioning (control panel functional)



Scanning subsystem

Calibrate the scanner

Use this procedure to properly position the scanned image on the page.

 **TIP:** This adjustment might be required after the scanner or document feeder is replaced.

1. From the Home screen on the product control panel, select [Support Tools](#).
2. Select [Maintenance](#).
3. Select [Calibration/Cleaning](#), and then follow the instructions provided on the screen.

Tools for troubleshooting

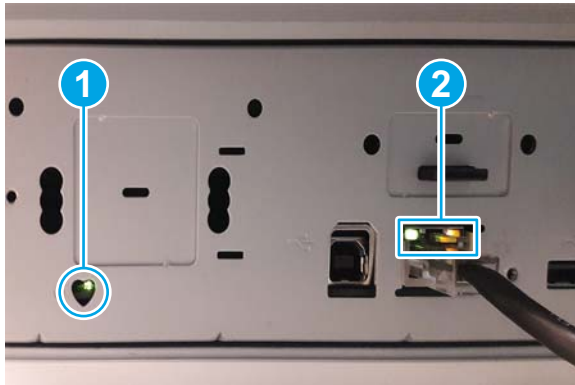
Individual component diagnostics

Tools for troubleshooting: LED diagnostics

LED, engine, and individual diagnostics can identify and troubleshoot product problems.

Understand lights on the formatter

Two LEDs on the formatter indicate that the product is functioning correctly.



- 1 Heartbeat LED
- 2 HP Jetdirect LEDs

Heartbeat LED

The heartbeat LED indicates that the formatter is functioning correctly. While the product is initializing after it is turned on, the LED blinks rapidly, and then turns off. When the product has finished the initialization sequence, the heartbeat LED pulses on and off.

The following table describes the heartbeat LED operation while the product is executing the firmware boot process.

NOTE: When the initialization process completes, the heartbeat LED should be illuminated solid green.

If after initialization, the heartbeat LED is not solid green, see [Table 2-10 Heartbeat LED, product operational on page 65](#).

Table 2-9 Heartbeat LED, product initialization

| Product initializing state | Heartbeat LED, normal state | Heartbeat LED, error state |
|---|--|--|
| No power (power cable disconnected or power switch off) | Off | Not applicable |
| Power on (immediately after the power switch pressed) | Red, solid <ul style="list-style-type: none">Duration should be 1 second or less | Red, solid <ul style="list-style-type: none">Firmware error; problem finding hardware and booting the serial peripheral interface flash memory |

Table 2-9 Heartbeat LED, product initialization (continued)

| Product initializing state | Heartbeat LED, normal state | Heartbeat LED, error state |
|---|--|---|
| | | <ul style="list-style-type: none"> – Boot process halted <p>Replace the formatter.</p> |
| Serial peripheral interface (SPI) flash memory boot | Green, solid | <p>Red, solid</p> <ul style="list-style-type: none"> • Firmware error; problem corrupt or missing SPI flash memory <ul style="list-style-type: none"> – Boot process halted <p>Replace the formatter.</p> |
| HW checks on board DRAM | Green, solid | <p>Red, solid</p> <ul style="list-style-type: none"> • Power on self check failure <ul style="list-style-type: none"> – Boot process halted <p>Replace the formatter.</p> |
| Control panel connection initializes | Green, solid NOTE: Control panel communication successful. If an error occurs, a message should appear on the control panel display. | <p>Yellow, fast flash</p> <ul style="list-style-type: none"> • Formatter to control panel connection failed <ul style="list-style-type: none"> – Boot process continues <p>Check the cables between the formatter and control panel for damage. Make sure that the cables are fully seated.</p> |
| Pre-boot menu available (including diagnostics) | Green, solid | <p>Red, solid</p> <ul style="list-style-type: none"> • Diagnostic failure <ul style="list-style-type: none"> – Follow diagnostic instructions <p>Turn the power off, and then on again to restart the initialization process.</p> |
| Accessing disk for firmware image | Green, solid NOTE: If applicable, disk error messages appear on the control panel display. | <p>Yellow, fast flash</p> <ul style="list-style-type: none"> • Control panel not connected |
| Firmware boot | Green, solid NOTE: If applicable, error messages appear on the control panel display. | <p>Yellow, fast flash</p> <ul style="list-style-type: none"> • Control panel not connected |
| Product operational | Green, heartbeat blink NOTE: If applicable, error messages appear on the control panel display. | <p>Yellow, fast flash</p> <ul style="list-style-type: none"> • Control panel not connected |

Table 2-9 Heartbeat LED, product initialization (continued)

| Product initializing state | Heartbeat LED, normal state | Heartbeat LED, error state |
|---|------------------------------------|---|
| 49.xx.yy error or initialization freezes | Not applicable | LED off NOTE: An error message might appear on the control panel display. Eventually a formatter connection missing message will appear. Turn the power off, and then on again to restart the initialization process. If the error persists, perform a firmware upgrade. |
| Control panel connection interrupted after the product is operational | Not applicable | Yellow, fast flash • Control panel not connected |
| Flat flexible cable (FFC) between the formatter and DC controller is not connected or damaged | Not applicable | Yellow, solid • Formatter to DC controller connection failed Check the cable between the formatter and DC controller for damage. Make sure that the cable is fully seated. |
| Sleep Mode | Green, slow blink | Not applicable |
| Approaching Sleep Mode | Green, slow blink | Not applicable |
| Wake up from Sleep Mode | Follows initialization progression | Follows initialization progression |
| Approaching wake up from Sleep Mode | Follows initialization progression | Follows initialization progression |

The following table describes the heartbeat LED operation when the product completes the firmware boot process and is in the state.

Table 2-10 Heartbeat LED, product operational

| LED color | Description |
|-----------|---|
| Green | <ul style="list-style-type: none"> • Normal operation <ul style="list-style-type: none"> – Formatter is operating normally – Firmware is operating normally – Control panel is connected |
| Yellow | <ul style="list-style-type: none"> • Formatter cannot connect to the control panel <ul style="list-style-type: none"> – Check control panel connections – Verify control panel functionality |
| Red | <ul style="list-style-type: none"> • Formatter error or failure |

Table 2-10 Heartbeat LED, product operational (continued)

| LED color | Description |
|-----------|---|
| | <ul style="list-style-type: none">– Serial peripheral interface (SPI) flash memory boot error– Power on self test (formatter) failed– Diagnostic (formatter) failed |
| Off | <p>TIP: The heartbeat LED is off if the power cable is disconnected, the product power switch is in the off position, or the product is in Sleep Mode.</p> <ul style="list-style-type: none">• Firmware or system freeze– Check control panel for an error message– Control panel failure <p>NOTE: This condition is not usually caused by a formatter failure. Turn the power off, and then on again. If the error persists, perform a firmware upgrade.</p> |

HP Jetdirect LEDs

The embedded HP Jetdirect print server has two LEDs. The yellow LED indicates network activity, and the green LED indicates the link status. A blinking yellow LED indicates network traffic. If the green LED is off, a link has failed.

For link failures, check all the network cable connections. In addition, try to manually configure the link settings on the embedded print server by using the product control panel menus.

1. From the Home screen on the product control panel, select [Settings](#).
2. Open the following menus:
 - [Networking](#)
 - [Ethernet](#)
 - [Link Speed](#)
3. Select the appropriate link speed, and then select [OK](#).

Scanner tests

Use these diagnostic tests to manually test the document feeder and scanner sensors.

Scanner tests

This section lists the sensors available in the [Scanner Tests](#).

Use the scanner tests

The [Manual Sensor Test](#) screen shows the sensor name, sensor state (active or inactive), and the number of times the sensor has been toggled (activated).

1. From the Home screen on the product control panel, scroll to and select the [Support Tools](#) button.
2. Open the following menus:
 - [Troubleshooting](#)
 - [Diagnostic Tests](#)
 - [Manual Sensor Test](#)
3. Select the sensor name on the [Manual Sensor Test](#) screen to display a sensor location graphic on the control panel display.
4. Activate the desired sensor, and then check the control panel display to verify the sensor state (active or inactive).
 - The [State](#) virtual LED next to the sensor number and sensor name illuminates green when the sensor is active.
 - The [Toggle](#) virtual LED next to the sensor number and sensor name illuminates green after the sensor is activated and increments by one each time the sensor is interrupted (activated or deactivated).

For example, opening and closing the flatbed cover increments the [Flatbed Cover Toggle](#) item count two times—once when the door is opened, and once when the door is closed.

5. Select [Reset](#) to reset the [Toggle](#) count item.

-or-

Select the [Cancel](#) button to exit the [Manual Sensor Test](#) screen, and then select the [Cancel](#) button again to return to the [Diagnostic Tests](#) menu.

Scanner sensor tests

- [ADF paper present](#)
- [ADF Y \(length\)](#)
- [ADF jam cover](#)
- [ADF paper path deskew](#)
- [ADF paper path pick success](#)

- Flatbed Y (length)
- Flatbed cover

Control panel menus

You can perform basic product setup by using the control panel menus. Use the HP Embedded Web Server for more advanced product setup. To open the HP Embedded Web Server, enter the product IP address or host name in the address bar of a web browser.

 **NOTE:** Where applicable, the product displays a [View](#) button.

- [Reports menu](#)
- [Settings menu](#)
- [Scan menu](#)
- [Support Tools menu](#)

Reports menu

To display: At the product control panel, select [Reports](#).

Table 2-11 Reports menu

| First level | Second level | Values | Description |
|----------------------------|--------------------------|----------------|---|
| Configuration/Status Pages | Settings Menu Map | Cancel View | Shows a map of the entire control panel system and the selected values for each setting. |
| | Current Settings Page | Cancel View | Shows a summary of the current settings for the product. This might be helpful if you plan to make changes and need a record of the present configuration. |
| | Configuration Page | Cancel View | Shows the product settings and installed accessories. |
| | How to Connect Page | Cancel View | Shows the network information typically needed to connect the product to a network. |
| | Usage Page | Cancel View | Shows a count of all paper sizes that have passed through the product; lists whether they were simplex, duplex, monochrome, or color; and reports the page count. |
| | File Directory Page | Cancel View | Shows the file name and folder name for files that are stored in the product memory. |
| | Web Services Status Page | Cancel View | Shows the detected Web Services for the product. |

Settings menu

To display: At the product control panel, select the [Settings](#) menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-12 Settings menu


| First level | Second level | Third level | Fourth level | Fifth level | Values | Description | | |
|-------------|--|------------------|----------------|--------------------------------------|---|---|---|--|
| General | Date/Time Settings | Date/Time Format | Date Format | | DD/MM/YYYY | Use the Date/Time Settings menu to specify the date and time and to configure date/time settings. | | |
| | | | | | MM/DD/YYYY | | | |
| | | | | | YYYY/MM/DD | | | |
| | | | | | Time Format | | 12 hour (AM/PM) | Select the format that the product uses to show the date and time, for example 12-hour format or 24-hour format. |
| | | | | | | 24 hours | | |
| | | | | Date/Time | Date | | Select the date from a pop-up calendar. | Select the date, time and time zone that the product uses. |
| | | | | | | Time | Select the time from a pop-up keypad. | |
| | | | | | | Time Zone | Select the time zone from a list. | |
| | | Energy Settings | Sleep Schedule | A list of scheduled events displays. | Select an event from the list to edit it. | | For the selected event, change the time and days settings as desired. | Use to configure the product to automatically wake up or go to sleep at specific times on specific days. Using this feature saves energy. NOTE: You must configure the date and time settings before you can use this feature. |
| | | | | | | | Done | |
| | Select the Trash  icon to delete the event. | | | | | | | |
| | | New event | Event Type | | | Select whether to add or edit a Wake event or a Sleep event, and then select the time and the days for the wake or sleep event. | | |
| | | | | Time | | Set the wake or sleep event time parameters. | | |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|------------------------|--------------------------------|-------------------------------|---|-------------|---|--|
| General (continued) | Energy Settings (continued) | Sleep Schedule (continued) | New event (continued) | Event Days | Select days of the week from a list. | Set the wake or sleep event day parameters. |
| | | Sleep Settings | Sleep After Inactivity | | Range: 1 to 118 minutes | Set the number of minutes after which the product enters Sleep or Auto Off mode. Select the existing number to open the virtual keypad, and then increase or decrease the number of minutes. |
| | | | Auto Off After Sleep | | Default = 0 minutes | |
| | | | Select one of these items: | | | |
| | | | <ul style="list-style-type: none"> HP Auto Off/ Auto On (Wake on most events) Shut down (Wake on power button only) | | | |
| | Display Settings | Display Brightness | A sliding bar displays with the indicator set in the middle. Move the indicator with your finger to select the desired brightness and then select Done. | | | Use to specify the intensity of the LCD control panel display. |
| | | System Sound | | | On* Off | Use to specify whether you hear a sound when you touch the screen or press buttons on the control panel. |
| | Language Settings | Language | | | Select from a list of languages that the product supports. | Use to select a different language for control panel messages and specify the default keyboard layout. When you select a new language, the keyboard layout automatically changes to match the factory default for the selected language. |
| | | | Keyboard Layout | | Each language has a default keyboard layout. To change it, select from a list of layouts. | Select the default keyboard layout that matches the language you want to use. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|------------------------|---------------------------------|-----------------------|--------------|-------------|---|---|
| General (continued) | Display Settings (continued) | Information Screen | | | Show connection information* | Use this menu item to display or hide connection information on the Home screen. |
| | | | | | Hide connection information | |
| | | Display Date and Time | | | Yes* | Select whether to display or hide the date and time on the control panel Home screen. |
| | | | | | No | |
| | | Inactivity Timeout | | | Range: 10-300 seconds Default = 60 seconds | Specifies the amount of time that elapses between any activity on the control panel and when the product resets to the default settings. When the timeout expires, the control panel display returns to the Home menu, and any user signed in to the product is signed out. |
| | | Clearable Warnings | | | Display during job* Display until cleared | Use this feature to set the period that a clearable warning displays on the control panel. If the On setting is selected, clearable warnings appear until the Clearable Warnings button is pressed. If the Job setting is selected, clearable warnings stay on the display during the job that generated the warning and disappear from the display when the next job starts. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|------------------------|---------------------------------|--------------------|--------------|-------------|---|---|
| General (continued) | Display Settings (continued) | Continuable Events | | | Auto-continue (10 seconds)* Touch "OK" to continue | Use this option to configure the product behavior when the product encounters certain errors. If the Auto-continue (10 seconds) option is selected, the job will continue after 10 seconds. If the Touch OK to continue option is selected, the job will stop and require the user to select the OK button before continuing. |
| | Auto Recovery | | | | Enabled Disabled* | The product attempts to rescan jammed pages when sufficient memory is available. This is the default setting. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|------------------------|------------------------|-------------|--------------|-------------|----------------------|--|
| General (continued) | Enable AutoSend | | | | Disabled* Enabled | <p>Browse to the HP Embedded Web Server AutoSend configuration page for advanced set up and the HP online Privacy Statement Information.</p> <p>Use the Enable AutoSend menu to enable or disable the AutoSend feature. The AutoSend feature enables your product to periodically send product configuration information including serial number, event logs, page usage counts and supplies status information to HP web addresses (URLs), or e-mail addresses. Information sent to HP is used to improve products and services, and to monitor the product if you have a relationship with HP that provides you such services.</p> |
| General (continued) | Reset Factory Settings | | | | Cancel Reset | <p>Select Reset to reset current user-specified default settings to the factory default settings.</p> |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|-------------------|--|--|--------------|-------------|--------|--|
| Scan/Digital Send | <p>Email Settings</p> <p>Network Folder Settings</p> <p>SharePoint Settings</p> <p>Scan to USB Drive Settings</p> <p>NOTE: The same options are available for each of these features, except where noted.</p> | <p>Email Setup</p> <p>NOTE: Email Settings only</p> | | | | <p>Use to configure settings that apply to sending documents through email or saving documents to a network folder or USB drive.</p> <p>The Email Setup Wizard feature configures the product to send scanned images as email attachments. To open the product HP Embedded Web Server and set up the email notification server, enter the product IP address into a web browser.</p> |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|----------------------------------|--|---------------|--------------|-------------|--|--|
| Scan/Digital Send (continued) | Email Settings Network Folder Settings SharePoint® Settings Scan to USB Drive Settings (continued) | Image Preview | | | Make optional* Require preview Disable preview | <p>Defines the default job options for each function. If you do not specify the job options when creating the job, the default options are used. For complete setup, go to the HP Embedded Web Server by typing the IP address of the product into a web browser.</p> <p>Use the Image Preview feature to scan a document and display a preview before completing the job. Select whether this feature is available on the product.</p> <p>Make optional: The feature is optional, depending on the user who is signed in.</p> <p>Require preview Previews are required for all users.</p> <p>Disable preview: Previews are disabled for all users.</p> |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|----------------------------------|--------------------------------|----------------------------------|--------------|-------------|--|---|
| Scan/Digital Send (continued) | Digital Sending Software Setup | Allow Use of a DSS Server | | | Disabled | Configure how the product interacts with the HP Digital Sending Software (DSS) server. HP DSS handles digital sending tasks, such as faxing, emailing, and sending scanned documents to a network folder or USB storage device. Use the Allow Use of a DSS Server and Allow Transfer to New DSS server options to configure the product to use HP DSS. |
| | | Allow Transfer to New DSS server | | | Enabled* | |
| Fax | Fax Send Settings | Image Preview | | | Make optional Require preview Disable preview | Use the Image Preview feature to control the image preview behavior. <ul style="list-style-type: none"> • Make optional: Previews are optional for all users. • Require preview: Previews are required for all users. • Disable preview: Previews are disabled for all users. |
| Networking | Ethernet | TCP/IP | Host Name | | Use the arrow buttons to edit the host name. NPIXXXXXX* | An alphanumeric string, up to 32 characters, used to identify the product. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|-------------|--------------|-------------|---------------|---------------|---|--|
| | | | IPv4 Settings | Config Method | Bootp DHCP* Auto IP Manual | <p>Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server.</p> <p>Bootp (Bootstrap Protocol): Use for automatic configuration from a BootP server.</p> <p>DHCP (Dynamic Host Configuration Protocol): Use for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, the DHCP Release menu and the DHCP Renew menu are available to set DHCP lease options.</p> <p>Auto IP: Use for automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically.</p> <p>If you set this option to the Manual setting, use the Manual Settings menu to configure TCP/IPv4 parameters.</p> |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description | |
|-------------|--------------|-------------|---------------|---------------|---------------|---|--|
| Networking | Ethernet | TCP/IP | IPV4 Settings | Default IP | Auto IP* | Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP). | |
| (continued) | (continued) | (continued) | (continued) | | Legacy | | |
| | | | | | | <p>NOTE: This feature assigns a static IP address that might interfere with a managed network.</p> <p>Auto IP: A link-local IP address 169.254.x.x is set.</p> <p>Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect products.</p> | |
| | | | | | DHCP Release | Yes | |
| | | | | | | No* | |
| | | | | | DHCP Renew | Yes | |
| | | | | | | No* | |
| | | | | | Primary DNS | Range: 0-255 Default = xxx.xxx.xx.xx | Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server. |
| | | | | | Secondary DNS | Range: 0-255 Default = 0.0.0.0 | Specify the IP address (n.n.n.n) of a Secondary DNS Server. |
| | | | | IPV6 Settings | Enable | Off | Use this item to enable or disable IPv6 operation on the print server. |
| | | | | | | On* | |
| | | | | | | <p>Off: IPv6 is disabled.</p> <p>On: IPv6 is enabled.</p> | |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|---------------------------|-------------------------|-----------------------|------------------------------|---------------|---|--|
| Networking (continued) | Ethernet (continued) | TCP/IP (continued) | IPV6 Settings (continued) | Address | <ul style="list-style-type: none"> Manual Settings • Enable • Address | Use this item to enable and manually configure a TCP/IPV6 address. |
| | | | | DHCPV6 Policy | <ul style="list-style-type: none"> Router Specified Router Unavailable* Always | <p>Router Specified: The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPV6 server.</p> <p>Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPV6 server.</p> <p>Always: Whether a router is available, the print server always attempts to obtain its stateful configuration from a DHCPV6 server.</p> |
| | | | | Primary DNS | <ul style="list-style-type: none"> Range: 0-255 Default = xxx.xxx.xx.xx | Specify the IP address (n.n.n.n) of a Primary Domain Name System (DNS) Server. |
| | | | | Secondary DNS | <ul style="list-style-type: none"> Range: 0-255 Default = 0.0.0.0 | Specify the IP address (n.n.n.n) of a Secondary DNS Server. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|---------------------------|-------------------------|-----------------------|--------------|-------------|---|--|
| Networking (continued) | Ethernet (continued) | TCP/IP (continued) | Proxy Server | | Select from a provided list. | Specifies the proxy server to be used by embedded applications in the product. A proxy server is typically used by network clients for Internet access. It caches Web pages, and provides a degree of Internet security for those clients. To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets. For some networks, you might need to contact your Internet Service Provider (ISP) for the proxy server address. |
| | | | Proxy Port | | Range: 1-65535 Default = 0080 | Enter the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535. |
| | | | Idle Timeout | | Range: 0-3600 Default = 0270 | The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout). |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|-------------|--------------|-------------|--------------------|-------------|-----------------------------------|--|
| | | Security | Secure Web | | HTTPS Required* HTTPS Optional | Select HTTPS Required to require web browsers to use the secure HTTPS protocol when communicating with the product via the HP Embedded Web Server (EWS). |
| | | | IPsec | | Keep Disable* | Enable or disable the IPsec data authentication protocol for the product. |
| | | | 802.1x | | Reset Keep* | Enable or disable the IEEE 802.1x networking authentication protocol for the product. |
| | | | Announcement Agent | | Enable* Disable | Enable or disable the HP Announcement Agent feature for the product. The Announcement Agent sends an announcement to a configuration server when the product first connects to the network. The configuration server then sends the pre-established configuration settings to the product. |

Table 2-12 Settings menu (continued)

| First level | Second level | Third level | Fourth level | Fifth level | Values | Description |
|-------------|--------------|-------------|----------------|-------------|---|---|
| | | | Reset Security | | Yes No* | Use this menu item to reset the product security settings. |
| | | Link Speed | | | Auto* 10T Half 10T Full 10T Auto 100TX Half 100TX Full 100TX Auto 1000T Full | The link speed and communication mode of the print server must match the network. The available settings depend on the product and installed print server. CAUTION: If you change the link setting, network communications with the print server and network product might be lost. |

Scan menu

In the following table, asterisks (*) indicate the factory default setting.

Table 2-13 Scan menu

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------|-------------------------|--------------------------|--------------|---------------------|--|
| Scan to Email | | | | | |
| Scan to Network Folder | Folder Paths | | | | |
| | File Name | | | | |
| | Quick Sets and Defaults | | | | |
| | Options | File Type and Resolution | | | |
| | | Original sides | | 1-sided* 2-sided | Use to describe the layout for each side of the original document. First select whether the original document is scanned on one side or both sides. Then select the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is scanned on both sides, also select the 2-sided format that matches the original document. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------|--------------|---------------------|--------------|--|--|
| Scan to Network Folder | Options | Color/Black | | Automatically detect color or black* | Use to enable or disable color scanning. |
| (continued) | (continued) | | | Automatically detect color or gray | Automatically detect color or black: When pages without color are detected, the product creates an image of the page in 1-bit black if other settings allow. If the other settings don't allow (File Type, for example), the image is in grayscale. |
| | | | | Color | |
| | | | | Black/Gray | |
| | | | | Black | |
| | | | | | Automatically detect color or gray: When pages without color are detected, the product creates an image of the page in grayscale. Select this option for the best image quality for non-color pages. |
| | | | | | Color: Scans documents in color. |
| | | | | | Black/Gray: Scans documents in grayscale. |
| | | | | | Black: Scans documents in black and white with a compressed file size. |
| | | Original Size | | Select from a list of supported sizes. | Use to describe the page size of the original document. |
| | | Content Orientation | Orientation | Automatically Detect | For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation. |
| | | | | Portrait* | |
| | | | | Landscape | |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|---------------------------------------|------------------------|------------------|--------------------|--------|--|
| Scan to Network Folder (continued) | Options (continued) | Image Adjustment | Darkness | | Use to improve the overall quality of the scanned document. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors. |
| | | | Contrast | | Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page. |
| | | | Background Cleanup | | Adjust the Background Cleanup setting if you are having trouble scanning a faint image. |
| | | | Sharpness | | Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother. |
| | | | Automatic Tone | | The product automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|---------------------------------------|------------------------|--------------------------|--------------|---|---|
| | | Optimize Text/Picture | | Text Mixed* Printed picture Photograph | <p>Text: Use for documents that contain mostly text. This option is also best suited for scanning documents with highlighter marks.</p> <p>Mixed: Use for documents that contain a mix of text and graphics</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazines clippings or pages from books.</p> <p>Photograph: Use for photographic prints.</p> |
| Scan to Network Folder (continued) | Options (continued) | Erase Edges | | Apply same width to all edges (checkbox to enable or disable) Top Edge Bottom Edge Left Edge Right Edge | Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean. |
| | | Cropping Options | | Do not crop* Crop to content Crop to paper | Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content. |
| | | Automatically Straighten | | Off* Automatically Straighten on | Enable this feature prior to scanning to automatically straighten the scanned image when pages are skewed during scanning. |
| | | Blank Page Suppression | | Off* Suppress blank pages | Use to prevent blank pages in the original document from being included in the output document. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|---|-----------------------------|-----------------------|--------------------|---|--|
| | | Multi-feed Detection | | On* Off | This setting stops the scanning process if it detects multiple-page feeds through the document feeder. |
| | | Create Multiple Files | | Disabled Enabled | Enable this item to scan pages into separate files based on a specified page limit. A page is one side of an original document. JPEG and TIFF have a limit of one page per file. |
| Scan to Network Folder (continued) | Options (continued) | Notification | | Do not notify* Notify when job completes Notify only if job fails E-mail | Configure to receive notification about the status of a about document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully. E-mail: Select to receive the notification to an email account. |
| | | | Include Thumbnail | | Select Include Thumbnail to receive a thumbnail image of the first page of the job in your notification. |
| | | | Notification Email | | E-mail: Select to receive the notification in an email. Select the text box following Email Address , and then type the email address for the notification. |
| Scan to USB Drive | Destination Job Name | | | | |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|--------------------------------------|--------------|--------------------------|---|--|---|
| Scan to USB Drive (continued) | Options | File Type and Resolution | PDF PDF/A (Archivable) Searchable PDF (OCR) Searchable PDF/A (OCR) JPEG TIFF MTIFF XPS Text (OCR) Unicode Text (OCR) RTF (OCR) HTML (OCR) CSV (OCR) | <p>NOTE: Not all of the following options are available for all file types.</p> <p>Resolution</p> <p>Quality and File Size</p> <p>High Compression (smaller file)</p> <p>PDF Encryption</p> <p>OCR Language</p> <p>Color/Grayscale TIFF/MTIFF Compression</p> <p>Black TIFF/MTIFF Compression</p> | <p>NOTE: Not all of the following options are available for all file types.</p> <p>Resolution: Choose from a list of resolution settings.</p> <p>Quality and File Size: Choose from High (large file), Medium*, or Low (small file).</p> <p>High Compression (smaller file): Checkbox to enable* or disable.</p> <p>PDF Encryption: Checkbox to enable or disable. Password is required if enabled.</p> <p>OCR Language: Choose from a list of languages.</p> <p>Color/Grayscale TIFF/MTIFF Compression: Choose from LZW, TIFF 6.0, and TIFF (Post 6.0)</p> <p>Black TIFF/MTIFF Compression: Choose from Automatic, G3, G4, and LZW</p> |
| | | Original sides | | <p>1-sided*</p> <p>2-sided</p> | <p>Use to describe the layout for each side of the original document. First select whether the original document is scanned on one side or both sides. Then select the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is scanned on both sides, also select the 2-sided format that matches the original document.</p> |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|----------------------------------|------------------------|---------------------|--------------|--|--|
| Scan to USB Drive (continued) | Options (continued) | Color/Black | | Automatically detect color or black* | Use to enable or disable color scanning. |
| | | | | Automatically detect color or gray | Automatically detect color or black: When pages without color are detected, the product creates an image of the page in 1-bit black if other settings allow. If the other settings don't allow (File Type, for example), the image is in grayscale. |
| | | | | Color | |
| | | | | Black/Gray | |
| | | | | Black | |
| | | | | | Automatically detect color or gray: When pages without color are detected, the product creates an image of the page in grayscale. Select this option for the best image quality for non-color pages. |
| | | | | | Color: Scans documents in color. |
| | | | | | Black/Gray: Scans documents in grayscale. |
| | | | | | Black: Scans documents in black and white with a compressed file size. |
| | | Original Size | | Select from a list of supported sizes. | Use to describe the page size of the original document. |
| | | Content Orientation | | Automatically detect | For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation. |
| | | | | Portrait* | |
| | | | | Landscape | |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|----------------------------------|------------------------|------------------|--------------------|--------|--|
| Scan to USB Drive (continued) | Options (continued) | Image Adjustment | Darkness | | Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors. |
| | | | Contrast | | Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page. |
| | | | Background Cleanup | | Adjust the Background Cleanup setting if you are having trouble copying a faint image. |
| | | | Sharpness | | Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother. |
| | | | Automatic Tone | | The product automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|----------------------------------|------------------------|--------------------------|--------------|---|--|
| Scan to USB Drive (continued) | Options (continued) | Optimize Text/Picture | | Text Mixed Printed picture Photograph | <p>Optimizes the output for a particular type of content. You can optimize the output for text, printed pictures, or a mixture.</p> <p>Text: Use to optimize the text portion of the copy when text and/or pictures are on the original.</p> <p>Mixed: Use for documents that contain a mix of text and graphics.</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazine clippings or pages from books.</p> <p>Photograph: Best suited for making copies of printed pictures.</p> |
| | | Erase Edges | | Apply same width to all edges Top Edge Bottom Edge Left Edge Right Edge | <p>Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean.</p> |
| | | Cropping Options | | Do not crop Crop to content Crop to paper | <p>Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content.</p> |
| | | Automatically Straighten | | Off* Automatically Straighten on | <p>Enable this feature prior to scanning to automatically straighten the scanned image when pages are skewed during scanning.</p> |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|----------------------------------|------------------------|---------------------------|-------------------|---|--|
| Scan to USB Drive (continued) | Options (continued) | Blank Page Suppression | | Off* Supress blank pages | Use to prevent blank pages in the original document from being included in the output document. |
| | | | | On* Off | This setting stops the scanning process if it detects multiple-page feeds through the document feeder. |
| | | Create Multiple Files | | Disabled Enabled | Enable this item to scan pages into separate files based on a specified page limit. A page is one side of an original document. JPEG and TIFF have a limit of one page per file. |
| | | Notification | | Do not notify Notify when job completes Notify only if job fails Print E-mail | Configure to receive notification about the status of a sent document. Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully. Print: Select to print the notification at this product. E-mail: Select to receive the notification to an email account. |
| | | | Include Thumbnail | | Select Include Thumbnail to receive a thumbnail image of the first page of the job in your notification. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|----------------------------------|------------------------|-----------------------------|--------------------|-----------------------------------|---|
| Scan to USB Drive (continued) | Options (continued) | Notification (continued) | Notification Email | | E-mail: Select to receive the notification in an email. Select the text box following Email Address , and then type the email address for the notification. |
| Scan to SharePoint® | Quick Sets | | | Select from a list of quick sets. | <p>NOTE: To use this menu, you must first enable Scan to SharePoint® from the product's Embedded Web Server (EWS) and then set up at least one Quick Set. Log in as Administrator on the EWS and select the Scan/Digital Send tab to find these options.</p> <p>Use Scan to SharePoint® to scan a document and save it to a SharePoint® site.</p> <p>To specify a SharePoint® path, select Load, and then select a Quick Set.</p> |
| | Filename | | | | |
| | Options | File Type and Resolution | | | |
| | | Original sides | | 1-sided* 2-sided | Use to describe the layout for each side of the original document. First select whether the original document is scanned on one side or both sides. Then select the Orientation setting to indicate whether the original has portrait or landscape orientation. If it is scanned on both sides, also select the 2-sided format that matches the original document. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------------------|------------------------|---------------------|--------------|--|--|
| Scan to SharePoint® (continued) | Options (continued) | Color/Black | | Automatically detect color or black | Use to enable or disable color scanning. |
| | | | | Automatically detect color or gray | Automatically detect color or black: When pages without color are detected, the product creates an image of the page in 1-bit black if other settings allow. If the other settings don't allow (File Type, for example), the image is in grayscale. |
| | | | | Color | |
| | | | | Black/Gray | |
| | | | | Black | |
| | | | | | Automatically detect color or gray: When pages without color are detected, the product creates an image of the page in grayscale. Select this option for the best image quality for non-color pages. |
| | | | | | Color: Scans documents in color. |
| | | | | | Black/Gray: Scans documents in grayscale. |
| | | | | | Black: Scans documents in black and white with a compressed file size. |
| | | Original Size | | Select from a list of supported sizes. | Use to describe the page size of the original document. |
| | | Content Orientation | Orientation | Automatically Detect | For some features to work correctly, you must specify the way the content of the original document is placed on the page. Portrait orientation means the short edge of the page is along the top. Landscape orientation means the long edge of the page is along the top. In the Orientation area, select whether the original document has a portrait or landscape orientation. |
| | | | | Portrait* | |
| | | | | Landscape | |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------------------|------------------------|-----------------------|--------------------|--|--|
| Scan to SharePoint® (continued) | Options (continued) | Image Adjustment | Darkness | | Use to improve the overall quality of the copy. Adjust the Darkness setting to increase or decrease the amount of white and black in the colors. |
| | | | Contrast | | Adjust the Contrast setting to increase or decrease the difference between the lightest and darkest color on the page. |
| | | | Background Cleanup | | Adjust the Background Cleanup setting if you are having trouble copying a faint image |
| | | | Sharpness | | Adjust the Sharpness setting to clarify or soften the image. For example, increasing the sharpness could make text appear crisper, but decreasing it could make photographs appear smoother. |
| | | | Automatic Tone | | The product automatically adjusts the Darkness , Contrast , and Background Cleanup settings to the most appropriate for the scanned document. |
| | | Optimize Text/Picture | | Text Mixed Printed picture Photograph | <p>Text: Use for documents that contain mostly text. This option is also best suited for scanning documents with highlighter marks.</p> <p>Mixed: Use for documents that contain a mix of text and graphics.</p> <p>Printed picture: Use for line drawings and preprinted images, such as magazines clippings or pages from books.</p> <p>Photograph: Use for photographic prints.</p> |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------------------|------------------------|--------------------------|--------------|---|--|
| Scan to SharePoint® (continued) | Options (continued) | Erase Edges | | Apply same width to all edges (checkbox to enable or disable) Top Edge Bottom Edge Left Edge Right Edge | Use this menu item to remove blemishes, such as dark borders or staple marks, by cleaning the specified edges of the scanned image. In each of the text boxes enter the measurements, in millimeters or inches, for how much of the top edge, bottom edge, left edge, and right edge to clean. |
| | | Cropping Options | | Do not crop Crop to content Crop to paper | Use this menu item to automatically crop the scan for digital sending. Use the Crop to content option to scan the smallest possible area that has detectable content. |
| | | Automatically Straighten | | Off* Automatically Straighten on | Enable this feature prior to scanning to automatically straighten the scanned image when pages are skewed during scanning. |
| | | Blank Page Suppression | | Off* Suppress blank pages | Use to prevent blank pages in the original document from being included in the output document. |
| | | Multi-feed Detection | | On* Off | This setting stops the scanning process if it detects multiple-page feeds through the document feeder. |
| | | Create Multiple Files | | Disabled* Enabled | Enable this item to scan pages into separate files based on a specified page limit. A page is one side of an original document. JPEG and TIFF have a limit of one page per file. |

Table 2-13 Scan menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|------------------------------------|------------------------|--------------|--------------------|---|--|
| Scan to SharePoint® (continued) | Options (continued) | Notification | | Do not notify Notify when job completes Notify only if job fails Print E-mail | Configure to receive notification about the status of a sent document Do not notify: Turns off this feature. Notify when job completes: Select to receive notification for this job only. Notify only if job fails: Select to receive notification only if the job is not sent successfully. Print: Select to print the notification at this product E-mail: Select to receive the notification to an email account. |
| | | | Include Thumbnail | | Select Include Thumbnail to receive a thumbnail image of the first page of the job in your notification. |
| | | | Notification Email | | E-mail: Select to receive the notification in an email. Select the text box following Email Address , and then type the email address for the notification. |

Support Tools menu

Maintenance menu

 **NOTE:** Where applicable, the product displays a [View](#) button.

Backup/Restore menu

To display: At the product control panel, select the [Support Tools](#) menu, select the [Maintenance](#) menu, and then select the [Backup/Restore](#) menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-14 Backup/Restore menu

| First level | Second level | Third level | Values | Description |
|--------------|--------------|-------------|---|---------------------------------------|
| Back up Data | Back up Data | | Back up Now Cancel | Initiate a backup. |
| Restore Data | | | Insert a USB flash drive that contains the backup file in to the USB port near the control panel. | Restore data from an external source. |

Calibration/Cleaning menu

To display: At the product control panel, select the [Maintenance](#) menu, and then select the [Calibrate/Cleaning](#) menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-15 Calibrate/Cleaning menu

| First level | Second level | Values | Description |
|-------------------------------|-----------------------|--------|--|
| Clean Document Feeder Rollers | Set Cleaning Interval | | Set the automatic cleaning interval for the document feeder rollers. |
| | Clean Now | | Start the roller-cleaning process immediately. |

USB Firmware Upgrade menu

To display: At the product control panel, select the [Support Tools](#) menu, select the [Maintenance](#) menu, and then select the [USB Firmware Upgrade](#) menu.


Insert a USB storage device with a firmware upgrade bundle into the USB port, and follow the on-screen instructions.

Troubleshooting menu

To display: At the product control panel, select the [Support Tools](#) menu, and then select the [Troubleshooting](#) menu.

In the following table, asterisks (*) indicate the factory default setting.

Table 2-16 Troubleshooting menu

| First level | Second level | Third level | Fourth level | Values | Description |
|--------------------------|----------------------------|-----------------------|---|---|---|
| Reports | Configuration/Status Pages | Settings Menu Map | | View | Shows a map of the entire control panel system and the selected values for each setting. |
| | | | | Cancel | |
| | | Current Settings Page | | View | Shows a summary of the current settings for the product. This might be helpful if you plan to make changes and need a record of the present configuration. |
| | | | | Cancel | |
| | | Configuration Page | | View | Shows the product settings and installed accessories. |
| | | | | Cancel | |
| | | How to Connect Page | | View | Shows the network information typically needed to connect the product to a network. |
| | | | | Cancel | |
| Usage Page | | View | Shows a count of all paper sizes that have passed through the product; lists whether they were simplex, duplex, monochrome, or color; and reports the page count. | | |
| | | Cancel | | | |
| File Directory Page | | View | Shows the file name and folder name for files that are stored in the product memory. | | |
| | | Cancel | | | |
| Web Services Status Page | | View | Shows the detected HP Web Services for the product. | | |
| | | Cancel | | | |
| Event Log | | | | View | Use to view a list of the 50 most recent events in the event log. For each event, the log shows the error number, page count, error code, and description or personality. |
| | | | | Trash  | |


The Trash icon  is available only after you sign in. Use the Trash icon to clear the event log.

Table 2-16 Troubleshooting menu (continued)

| First level | Second level | Third level | Fourth level | Values | Description |
|---------------------------|--------------------|-------------|--------------|--|---|
| Diagnostic Tests | Manual Sensor Test | | | Select from a list of available components. Reset | Test the product sensors and switches for correct operation. Each sensor is displayed on the control panel screen, along with its status. Manually trip each sensor and watch for it to change on the screen. |
| | Continuous Scan | | | 2-sided | Run a continuous scan test to determine where an issue occurs within the scan process. |
| Generate Debug Data | | | | Start Cancel | Enable this item in order to create files that contain information about the product that can help identify the cause of problems. |
| Retrieve Diagnostics Data | | | | | |

Service menu

To display: At the product control panel, select the [Support Tools](#) menu, and then select the [Service](#) menu.

The [Service](#) menu is locked and requires a personal identification number (PIN) for access. This menu is intended for use by authorized service personnel. See the Service mode function section in the product troubleshooting manual.

Control panel message document (CPMD)

Control panel messages and event log entries

The CPMD is not provided in this service manual. The CPMD for this product is available on the HP Service Access Workbench (SAW) website. Click [Service Access Workbench](#) to access the website, and then search by product name. The CPMD is available to channel partners through the HP Channel Services Network (CSN).

Solve paper handling problems

- [Product feeds incorrect page size](#)
- [Product will not duplex or duplexes incorrectly](#)
- [Product does not pick up paper or misfeeds](#)
- [Clear paper jams](#)

Product feeds incorrect page size

Table 2-17 Product feeds incorrect page size

| Cause | Solution |
|--|---|
| The correct size paper is not loaded in the tray. | Load the correct size paper in the tray. |
| The correct size paper is not selected in the software program or scan driver. | Confirm that the settings in the software program and scan driver are correct, because the software program settings override the scan driver and control panel settings, and the scan driver settings override the control panel settings. |
| The correct size paper is not selected in the product control panel. | From the control panel, select the correct size paper. |
| The guides in the tray are not against the paper. | Verify that the paper guides are touching the paper. |

Product will not duplex or duplexes incorrectly

Table 2-18 Product will not duplex (scan 2-sided jobs) or duplexes incorrectly

| Cause | Solution |
|--|---|
| The duplex job is trying to use unsupported paper. | Verify that the paper is supported for duplex scanning. |
| The scan software is not set up for duplex scanning. | Set up the scan software to enable duplex scanning. |

Product does not pick up paper or misfeeds

Use the following procedures if the product will not pick or misfeeds paper.

The product does not pick up paper

If the product does not pick up paper from the document feeder input tray, try these solutions.

1. Open the product and remove any jammed sheets of paper.
2. Load the input tray with the correct size of paper for the job.
3. Make sure the paper size and type are set correctly on the product control panel.
4. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.

5. Check the product control panel to see if the product is waiting for an acknowledgment to the feed the paper manually prompt. Load paper, and continue.
6. The pickup and separation rollers might be contaminated. Clean the rollers with a lint-free cloth dampened with warm water.

The product picks up multiple sheets of paper

If the product picks up multiple sheets of paper from the tray, try these solutions.

1. Check that all the rollers are in place and that the roller doors and automatic document feeder (ADF) hatch are closed.
2. The pages might not be placed correctly. Straighten the pages and adjust the paper guides to center the stack.
3. Verify that there are no pieces of paper, staples, paper clips, or other debris in the paper path.
4. Clean the paper path to help reduce misfeeds. If misfeeds still occur, clean the rollers. If misfeeds still occur, replace the rollers.
5. Use only paper that meets HP specifications for this product.
6. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
7. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides to the appropriate indentation in the tray.
8. Make sure the scanning environment is within recommended specifications.

Paper does not feed automatically

If the product is not feeding pages automatically, try these solutions.

- Reload the pages into the document feeder, and ensure that they make contact with the rollers.
- Make sure that the automatic document feeder (ADF) hatch is securely latched. Open the ADF hatch, and then close it by pressing firmly.
- A problem with the product hardware might exist. Follow this procedure to test the product:
 1. Ensure that the power cord is securely connected between the product and a live electrical outlet or surge protector.
 2. If the power supply is connected to a surge protector, ensure that the surge protector is plugged into an outlet and turned on.
 3. Press and hold the power button for 10 seconds to turn off the product, and then disconnect the power cord.
 4. Wait 30 seconds.
 5. Reconnect the power cord to the product, and then press the power button.
 6. Try to rescan.

Clear paper jams

- [Paper path jam sensor locations](#)
- [Auto-navigation for clearing paper jams](#)
- [Experiencing frequent or recurring paper jams?](#)
- [Clear paper jams in the document feeder](#)

Paper path jam sensor locations

 **NOTE:** Use the figures below to identify the locations of sensors where reoccurring jams are found.

Figure 2-45 Document feeder jam sensors

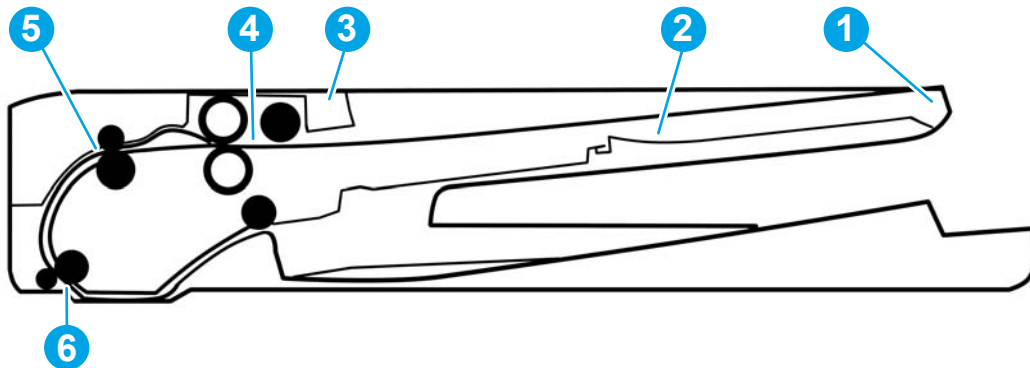


Table 2-19 Document feeder, sensors block diagram

| Item | Description |
|------|-------------------------------------|
| 1 | Length sensor |
| 2 | Length sensor (9210 fn2 model only) |
| 3 | Jam cover sensor |
| 4 | Paper present sensor |
| 5 | Deskew sensor |
| 6 | Paper path sensor |

Auto-navigation for clearing paper jams

The auto-navigation feature assists in clearing jams by providing step-by-step instructions on the control panel. When you complete a step, the product displays instructions for the next step until you have completed all steps in the procedure.

Experiencing frequent or recurring paper jams?

To reduce the number of paper jams, try these solutions.

- Use only paper that meets HP specifications for this product.
- Make sure that the document feeder input tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.

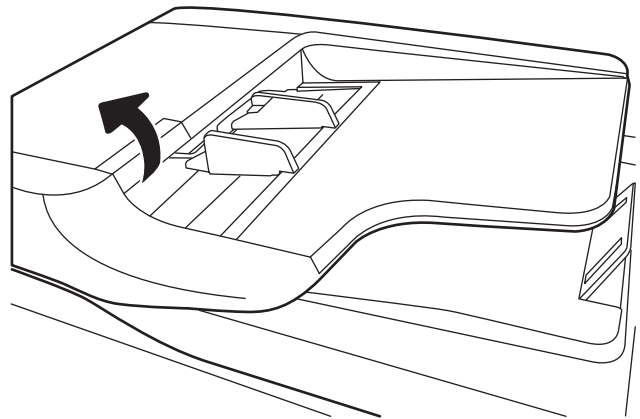
- Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
- If you are scanning heavy, embossed, or perforated paper, manually feed sheets one at a time.
- Make sure the product environment is within recommended specifications.

Clear paper jams in the document feeder

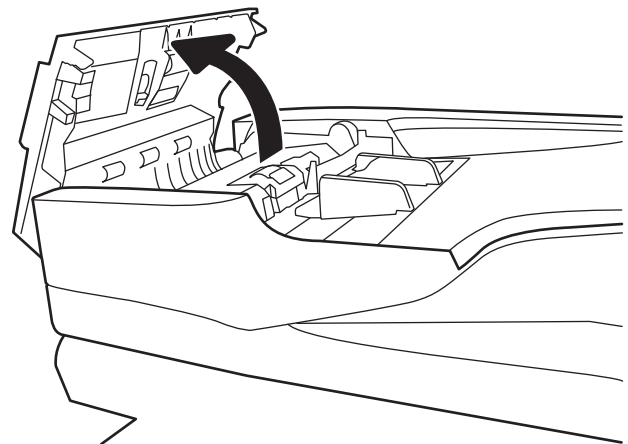
Use the following procedure to check for paper in all possible jam locations related to the document feeder. When a jam occurs, the control panel might display a message and an animation that assists in clearing the jam.

- **31.13.XX Jam in Document Feeder**

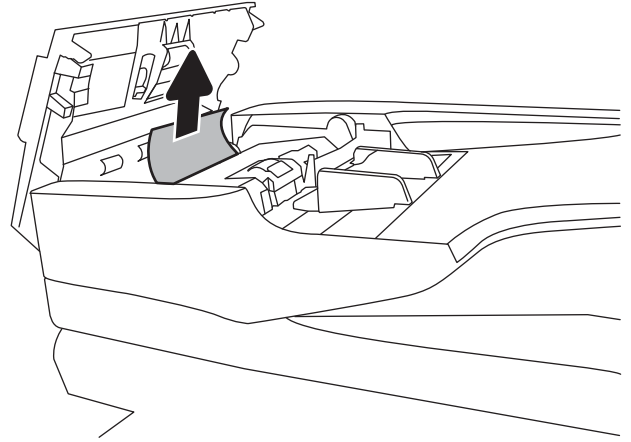
1. Lift the document-feeder latch.



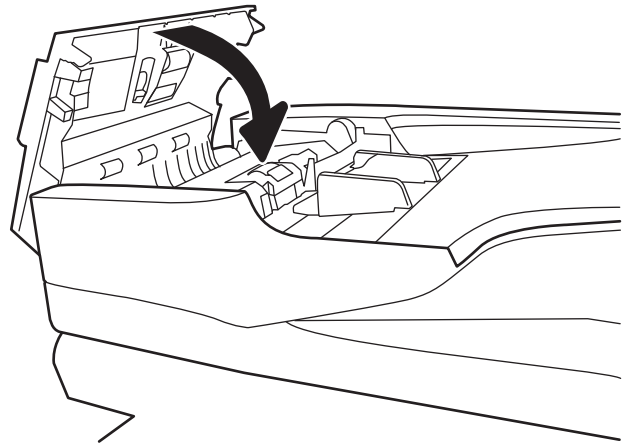
2. Open the document-feeder cover.





3. Gently remove any jammed paper.



4. Close the document-feeder cover.



-
-  **NOTE:** To avoid jams, make sure the guides in the document feeder input tray are adjusted tightly against the document. Remove all staples, paper clips, or tape from original documents.
 -  **NOTE:** Original documents that are printed on heavy, glossy paper can jam more frequently than originals that are printed on plain paper.
-

Solve wired network problems

Introduction

Certain types of problems can indicate there is a network communication problem. These problems include the following issues:

- The periodic loss of ability to communicate with the product
- The product cannot be found during software installation
- A periodic failure to scan



NOTE: If you have been experiencing intermittent loss of network connectivity, first update the product firmware. For instructions on how to update the product firmware, go to <http://support.hp.com>, search for your product, and then search on “update the firmware.”

Check the following items to verify that the product is communicating with the network. Before beginning, display a configuration page from the product control panel and locate the product IP address that is listed on this page.

- [Poor physical connection](#)
- [The computer is unable to communicate with the product](#)
- [The product is using incorrect link and duplex settings for the network](#)
- [New software programs might be causing compatibility problems](#)
- [The computer or workstation might be set up incorrectly](#)
- [The product is disabled, or other network settings are incorrect](#)



NOTE: HP does not support peer-to-peer networking, as the feature is a function of Microsoft operating systems and not of the HP scan drivers. For more information, go to Microsoft at www.microsoft.com.

Poor physical connection

1. Verify that the product is attached to the correct network port using a cable of the correct length.
2. Verify that cable connections are secure.
3. Look at the network port connection on the back of the product, and verify that the amber activity light flashes indicating network traffic, and the green link-status light is continuously lit indicating a network link.
4. If the problem continues, try a different cable or port on the hub.

The computer is unable to communicate with the product

1. Test network communication by pinging the network.
 - a. Open a command-line prompt on your computer.

- For Windows, click **Start**, click **Run**, type `cmd`, and then press [Enter](#).
 - b. Type `ping` followed by the IP address for your product.
 - c. If the window displays round-trip times, the network is working.
2. If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the product, and the computer are all configured for the same network (also known as subnet).

The product is using incorrect link and duplex settings for the network

HP recommends leaving these settings in automatic mode (the default setting). If you change these settings, you must also change them for your network.

New software programs might be causing compatibility problems

Verify that any new software programs are correctly installed and that they use the correct scan driver.

The computer or workstation might be set up incorrectly

1. Check the network drivers, scan drivers, and the network redirection settings.
2. Verify that the operating system is configured correctly.

The product is disabled, or other network settings are incorrect


1. Review the product's configuration/networking pages to check the status of the network settings and protocols.
2. Reconfigure the network settings if necessary.

Service mode functions

- [Service menu](#)
- [Product resets](#)
- [Format Disk and Partial Clean functions](#)

Service menu


The [Service](#) menu is PIN-protected for added security. Only authorized service people have access to the [Service](#) menu. When selecting [Service](#) from the list of menus, the product prompts the user to enter an eight-digit personal identification number (PIN).

 **NOTE:** The product automatically exits the [Service](#) menu after about one minute if no items are selected or changed.

Open the Service menu

1. From the Home screen on the product control panel, select [Support Tools](#).
2. Open the [Service](#) menu.
3. On the sign-in screen, select [Service Access Code](#) from the drop-down list.
4. Enter the following service access code for the product:
 - 10850017 (8500 fn2)
 - 10912017 (N9210 fn2)
5. Select [Sign In](#).

The following menu items appear in the [Service](#) menu:

| First level | Second level | Value | Description |
|--------------|---|-------|--|
| Event Log | View | | View or clear the event log. |
| | Trash  | | |
| Cycle Counts | Total Engine Cycles | | Set the page count that was stored in NVRAM prior to installing a new formatter. |
| | Refurbish Cycle Count | | Use this item to record the page count when the product was refurbished. |


| First level | Second level | Value | Description |
|------------------|----------------|--------------------------|---|
| Scanner Settings | Edge to Adjust | Glass: Rear edge | Select which edge of the scanner glass or document feeder to adjust. |
| | | Glass: Left edge | |
| | | ADF: Leading front edge | |
| | | ADF: Leading back edge | |
| | | ADF: Trailing front edge | |
| | | ADF: Left side front | |
| | | ADF: Left side back | |
| | Adjustment | Range: -20 to 20 | Select the edge adjustment amount. |
| Serial Number | | | Set the serial number. |
| Service ID | | | Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty. |

Product resets

Restore factory settings

Introduction

Use one of the following methods to restore the scanner to the original settings from the factory.



 **NOTE:** Restoring factory settings sets most of the scanner settings to their factory defaults. However, some settings are not changed, such as language, date, time, and some network configuration settings.

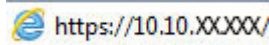
Method one: Restore factory settings from the scanner control panel


1. From the Home screen on the scanner control panel, swipe until the [Settings](#) menu displays. Select the [Settings](#) icon to open the menu.
2. Open the following menus:
 - [General](#)
 - [Reset Factory Settings](#)
3. Select [Reset](#).
A verification message advises that completing the reset function might result in loss of data.
4. Select [Reset](#) to complete the process.

 **NOTE:** The scanner restarts automatically after the reset operation completes.

Method two: Restore factory settings from the HP Embedded Web Server (network-connected products only)

1. Open the HP Embedded Web Server (EWS):
 - a. From the Home screen on the scanner control panel, select the Information  icon, and then select the Network  icon to display the IP address or host name.
 - b. Open a web browser, and in the address line, type the IP address or host name exactly as it displays on the scanner control panel. Press the **Enter** key on the computer keyboard. The EWS opens.



 **NOTE:** If the web browser displays a message indicating that accessing the website might not be safe, select the option to continue to the website. Accessing this website will not harm the computer.

2. Open the **General** tab.
3. On the left side of the screen, click **Reset Factory Settings**.
4. Click the **Reset** option.

 **NOTE:** The scanner restarts automatically after the reset operation completes.

Restore the service ID

Restore the service ID

When replacing the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates:

1. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: $2002 - 1990 = 12$. $YY = 12$.
2. Subtract 1 from 10 (October is the tenth month of the year): $10 - 1 = 9$.
 - Multiply 9 by 30: $9 \times 30 = 270$ or add 17 to 270: $270 + 17 = 287$. Thus, $DDD = 287$.


Convert the service ID to an actual date

Use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows:

1. Add 1990 to YY to get the actual year that the product was installed.
2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month.
3. The remainder from the calculation in step 2 is the date.

Using the Service ID 12287 as an example, the date conversion is as follows:

1. $12 + 1990 = 2002$, so the year is 2002.
2. 287 divided by $30 = 9$ with a remainder of 17 . Because there is a remainder, add 1 to 9 to get 10, which represents October.
3. The remainder in step 2 is 17, so that is the date.
4. The complete date is 17-October-2002.

 **NOTE:** A six-day grace period is built into the date system.

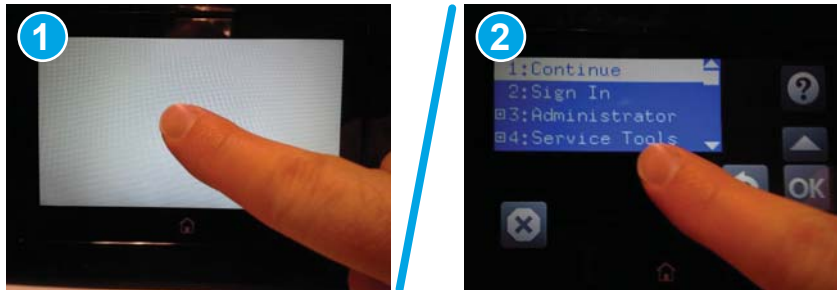
Cold reset

Execute a cold reset


 **CAUTION:** This procedure resets all product configurations and settings to factory defaults (customer configurations and settings are lost).

1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-46 Open the Pre-boot menu



3. Use the ▼ button to highlight the +3:Administrator item, and then select the OK button.
4. Use the ▼ button to highlight the +8:Startup Options item, and then select the OK button.
5. Use the ▼ button to highlight the 2 Cold Reset item, and then select the OK button.
6. Select Back ↵ to return to the main Pre-boot menu and highlight the 1:Continue item, and then select the OK button.

 **NOTE:** The product will initialize.

Format Disk and Partial Clean functions

Active and repository firmware locations


The firmware bundle consists of multiple parts. The main components are the Windows CE Operating System and the product/peripheral firmware files.

There are two locations/partitions on the hard drive where the firmware components are stored:

- The Active, where the operating system and firmware currently are executing.
- The Repository, the recovery location.

If the Active location is damaged, or a [Partial Clean](#) was performed, the product automatically copies over the OS and firmware files from the Repository location and the product recovers.

If both the Active and Repository locations are damaged, or a [Format Disk](#) was performed, then both locations are gone and the error message **99.09.67** displays on the control panel display. The user must upload the firmware to the product in order for it to function again.

 **CAUTION:** The [Format Disk](#) option performs a disk initialization for the entire disk. The operating system, firmware files, and third party files (among other files) will be completely lost. HP does not recommend this action.

Partial Clean

The [Partial Clean](#) option erases all data from the partitions, except for the firmware repository where a backup copy of the firmware file is stored. This allows the disk drive to be reformatted without having to download a firmware upgrade file to return the product to a bootable state.

Characteristics of a Partial Clean

- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.
- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
- For previous HP products, a Hard Disk Initialization is similar to executing the [Partial Clean](#) function for this product.

 **CAUTION:** HP recommends backing up product configuration data before executing a [Partial Clean](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Maintenance](#) menu.

Reasons for performing Partial Clean

- The product continually boots up in an error state.

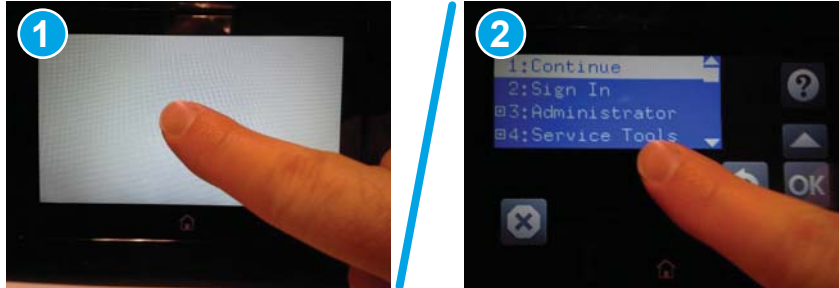
 **NOTE:** Try clearing the error prior to executing a [Partial Clean](#).

- The product will not respond to commands from the control panel.
- Executing the [Partial Clean](#) function is helpful for troubleshooting hard disk problems.
- To reset the product by deleting all solutions and customer-defined settings.
- The product default settings are not properly working.

Execute a Partial Clean

1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-47 Open the Pre-boot menu



3. Use the ▼ button to highlight the +3:Administrator item, and then select the OK button.
4. Use the ▼ button to highlight Partial Clean and then touch the OK button.
5. Select the OK button again.
6. Select the Home button to highlight Continue, and then select the OK button.


 **NOTE:** The product initializes.


Format Disk

The [Format Disk](#) option erases the entire disk drive.

 **CAUTION:** After executing a [Format Disk](#) option, the product is *not* bootable.

Characteristics of a Format Disk


- Customer-defined settings, third-party solutions, firmware files, and the operating system are deleted.
-
-  **NOTE:** Rebooting the product *does not* restore the firmware files.
-
- Rebooting the product restores the firmware files from the Repository location, but does not restore any customer-defined settings.
 - After executing the [Format Disk](#) function, the message **99.09.67** displays on the control panel.
 - After executing the [Format Disk](#) function, the product firmware must be reloaded.

 **CAUTION:** HP recommends not using the [Format Disk](#) option unless an error occurs and the solution in the product service manual recommends this solution. After executing the [Format Disk](#) function, the product is unusable.

HP recommends backing-up product configuration data before executing a [Format Disk](#) to retain customer-defined settings (if needed). See the [Backup/Restore](#) item in the [Maintenance](#) menu.

Reasons for performing Format Disk

- The product continually boots up in an error state.

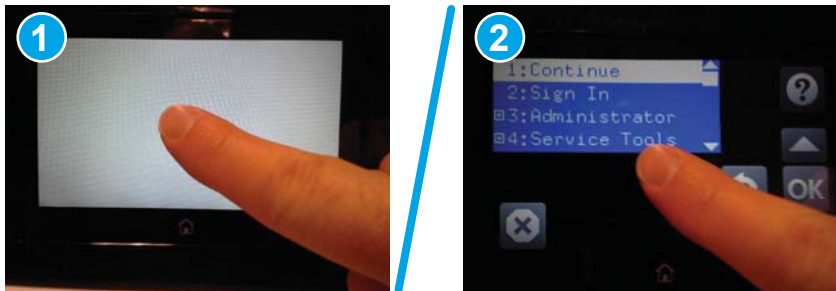
 **NOTE:** Try clearing the error prior to executing a [Format Disk](#).

- The product will not respond to commands from the control panel.
- Executing the [Format Disk](#) function is helpful for troubleshooting hard disk problems.
- To reset the product by deleting all solutions and customer-defined settings.


Execute a Format Disk

1. Turn the product power off.
2. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.

Figure 2-48 Open the Pre-boot menu



3. Use the ▼ button to highlight the [+3:Administrator](#) item, and then select the [OK](#) button.
4. Use the ▼ button to highlight [Format Disk](#), and then select the [OK](#) button.
5. Select the [OK](#) button again.

 **NOTE:** When the [Format Disk](#) operation is complete, reload the product firmware.

Product firmware updates

To download the most recent firmware upgrade for the product, go to www.hp.com/support.

- [Determine the installed firmware version](#)
- [Perform a firmware upgrade](#)

Determine the installed firmware version

Check the configuration page to determine the installed version of firmware.

1. From the Home screen on the product control panel, select [Reports](#).
2. Select [Configuration/Status Pages](#).
3. Select [Configuration Page](#).
4. In the [Device Information](#) section, find the firmware date code and revision.


Firmware date code and firmware revision examples

- 20170518 (firmware date code)
- 2458102_685625 (firmware revision)

Perform a firmware upgrade

The firmware bundle is a .bdl file. This file requires an interactive upgrade method. Use one of the following methods to upgrade the firmware for this product.

HP Embedded Web Server

 **NOTE:** The firmware update might take 10 minutes or longer based on the input/output (I/O) transfer rates and the time it takes for the product to reinitialize.

1. Open an Internet browser window.
2. Enter the product IP address in the URL line.
3. Select the **General** tab, and then select the **Firmware Upgrade** link.

 **NOTE:** If a warning screen displays, follow the instructions for setting an administrator password from the **Security** tab

4. Browse to the location that the firmware upgrade file was downloaded to, and then select the firmware file. (The file has a .bdl file extension.) Select **Install** to perform the upgrade.

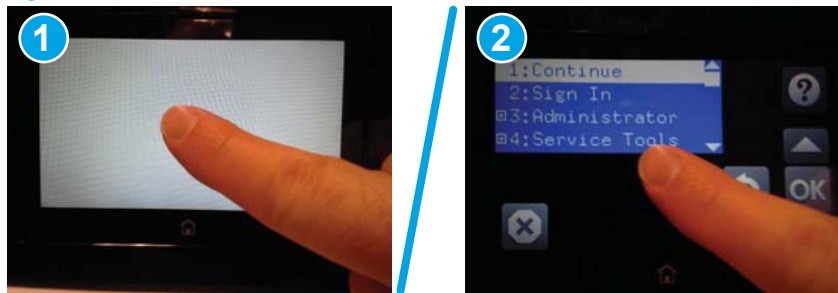
 **NOTE:** Do not close the browser window OR interrupt communication until the HP Embedded Web Server (EWS) displays the confirmation page.

5. Select **Restart Now** from the EWS confirmation page, or use the power switch to turn the product off, and then on again.
6. After the product reinitializes, view a configuration page and verify that the latest firmware version has been installed.

USB flash drive (Pre-boot menu)

1. Copy the .bdl file to a portable USB storage accessory.
2. Insert the USB storage accessory into the USB port on product.
3. Turn the product power off.
4. Turn on the product and immediately start tapping the middle of the touchscreen until the blue Pre-boot menu displays.


Figure 2-49 Open the Pre-boot menu



5. Select the ▼ button to highlight +3 Administrator, and then select OK.
6. Select the ▼ button to highlight +1 Download, and then select OK.
7. Select the ▼ button to highlight USB Thumbdrive, and then select OK.
8. Several .bdl files might be listed. Use the arrow buttons to highlight the .bdl file that you downloaded, and then select OK.

 **NOTE:** Wait while the file transfers. The upgrade process can take 10 minutes or longer to complete. When the transfer is complete, the message **Complete** displays on the control panel.

9. Press and hold the power button for 10 seconds to turn off the product. Remove the USB storage accessory, and then turn the product on. Wait for several minutes while the product initializes.

 **NOTE:** If the upgrade was unsuccessful, try transferring the firmware upgrade file again.

10. If you created a backup of the product data prior to replacing the hard drive, restore the data from the device or network location where the backup was saved.

USB flash drive (control-panel menu)



NOTE: You must have access to the local administrator password to complete this task.

USB flash drives that are not using a FAT32 format, or do not have a CD formatted partition, might not be recognized by the product. If the product does not recognize a USB flash drive, try using a different USB flash drive.

1. From the Home screen on the control panel, select [Reports](#), and then select [Configuration/Status Pages](#).
2. Select [Configuration Page](#), and then select [View](#). The report lists the current firmware revision number.
3. See www.hp.com/support, search for your product, and then look for a link to download files to see if there is a newer firmware version available.
4. Copy the new firmware file to a USB storage device, and then plug the USB device into the USB port beside the control panel.



CAUTION: Make sure to leave the USB storage device plugged into the USB connector until all upgrades are installed, the product has rebooted, and the Home screen is displayed on the control panel.

5. From the Home screen, select [Support Tools](#), select [Maintenance](#), and then select [USB Firmware Upgrade](#).
6. Select the firmware upgrade bundle on the USB storage device, and then select [Install](#).

The upgrade process can take a few minutes.

7. If prompted, select [Yes](#) to restart the product.

Starting the product after a firmware upgrade might take up to 20 minutes.

8. If necessary, repeat the previous three steps to install a second upgrade.

Solve email problems

Email troubleshooting information is not provided in this service manual. This information is available on the HP Service Access Workbench (SAW) Web site. Go to <http://h41302.www4.hp.com/km/saw/home.do>, and then use "email troubleshooting" as the search term.

Solve fax problems

Fax troubleshooting information is not provided in this service manual. This information is available on the HP Service Access Workbench (SAW) Web site. Go to <http://h41302.www4.hp.com/km/saw/home.do>, and then use "fax troubleshooting" as the search term.

A Certificates of volatility

- [Certificates of volatility—8500 fn2 models](#)
- [Certificates of volatility—N9120 fn2 models](#)

Certificates of volatility—8500 fn2 models

Figure A-1 Certificate of volatility—8500 fn2 (1 of 2)

| Hewlett-Packard Certificate of Volatility | | | | |
|---|----------------------------|---|--|--|
| Model: HP Digital Sender Flow 8500 fn2 Document Capture Workstation | Part Number: L2762A | Address: No.2727, JinKe Road, Zhang Jiang Hi-Tech Park, Pudong, Shanghai, China 201203 | | |
| Volatile Memory | | | | |
| Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (SRAM, DRAM, etc): DDR3 - DRAM | Size: 2.5GB | User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Function: Operation system and scan buffer | Steps to clear memory: When the unit is powered off, the memory is erased. |
| Type (SRAM, DRAM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Type (SRAM, DRAM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Non-Volatile Memory | | | | |
| Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (Flash, EEPROM, etc): IOD EEPROM | Size: 32KB | User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Function: Store customer setting data for backup/restore | Steps to clear memory: There are no steps to clear this data. |
| Type (Flash, EEPROM, etc): Flash | Size: 4MB | User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Function: Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images. | Steps to clear memory: There are no steps to clear this data. |
| Type (Flash, EEPROM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Mass Storage | | | | |
| Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (HDD, Tape, etc): HDD | Size: 320GB | User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Function: OS and user data | Steps to clear memory: Firmware update |
| Type (HDD, Tape, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| USB | | | | |
| Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below | | | | |
| Scan jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled. | | | | |
| Can any data other than scan upload be sent to the USB device)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below | | | | |
| Diagnostic service logs can be uploaded. | | | | |
| RF/RFID | | | | |
| Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below | | | | |
| Purpose: | | | | |
| Frequency: | | | Bandwidth: | |
| Modulation: | | | Effective Radiate Power (ERP): | |
| Specifications: | | | | |

Figure A-2 Certificate of volatility—8500 fn2 (2 of 2)

| Other Transmission Capabilities | | | |
|---|---|--|------------------------------|
| Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below: | | | |
| Purpose: | | | |
| Frequency: | | Bandwidth: | |
| Modulation: | | Effective Radiate Power (ERP): | |
| Specifications: | | | |
| Other Capabilities | | | |
| Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below: | | | |
| Purpose: | | | |
| Specifications: | | | |
| Author Information | | | |
| Name: Technical Marketing | Title: Technical Marketing Engineer | Email: technical.marketing@hp.co m | Business Unit: PL4X |
| | | | Date Prepared: 29 March 2017 |

Certificates of volatility—N9120 fn2 models

Figure A-3 Certificate of volatility—N9120 fn2 (1 of 2)

| Hewlett-Packard Certificate of Volatility | | | | |
|---|------------------------|---|--|--|
| Model: HP ScanJet Enterprise Flow N9120 fn2 Document Scanner | Part Number: L2763A | Address: No.2727, JinKe Road, Zhang Jiang Hi-Tech Park, Pudong, Shanghai, China 201203 | | |
| Volatile Memory | | | | |
| Does the device contain volatile memory (Memory whose contents are lost when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (SRAM, DRAM, etc): DDR3 - DRAM | Size: 2.5GB | User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Function: Operation system and scan buffer | Steps to clear memory: When the unit is powered off, the memory is erased. |
| Type (SRAM, DRAM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Type (SRAM, DRAM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Non-Volatile Memory | | | | |
| Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (Flash, EEPROM, etc): IOD EEPROM | Size: 32KB | User Modifiable: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Function: Store customer setting data for backup/restore | Steps to clear memory: There are no steps to clear this data. |
| Type (Flash, EEPROM, etc): Flash | Size: 4MB | User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Function: Contains the boot code and factory product configuration data required for the device to function. User modifications are limited to downloading digitally signed HP firmware images. | Steps to clear memory: There are no steps to clear this data. |
| Type (Flash, EEPROM, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| Mass Storage | | | | |
| Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe the type, size, function, and steps to clear the memory below | | | | |
| Type (HDD, Tape, etc): HDD | Size: 320GB | User Modifiable: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Function: OS and user data | Steps to clear memory: Firmware update |
| Type (HDD, Tape, etc): | Size: | User Modifiable: <input type="checkbox"/> Yes <input type="checkbox"/> No | Function: | Steps to clear memory: |
| USB | | | | |
| Does the item accept USB input and if so, for what purpose (i.e Print Jobs, device firmware updates, scan upload)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below | | | | |
| Scan jobs, HP digitally signed firmware upgrades, 3rd party application loading. USB ports can be disabled. | | | | |
| Can any data other than scan upload be sent to the USB device)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes please describe below | | | | |
| Diagnostic service logs can be uploaded. | | | | |
| RF/RFID | | | | |
| Does the item use RF or RFID for receive or transmit of any data including remote diagnostics. (e.g. Cellular phone, Bluetooth) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below | | | | |
| Purpose: | | | | |
| Frequency: | | Bandwidth: | | |
| Modulation: | | Effective Radiate Power (ERP): | | |
| Specifications: | | | | |

Figure A-4 Certificate of volatility—N9120 fn2 (2 of 2)

| Other Transmission Capabilities | | | |
|---|---|--|------------------------------|
| Does the device employ any other methods of non-wired access to transmit or receive any data whatsoever (e.g. anything other than standard hard wired TCP/IP, direct USB, or parallel connections)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below: | | | |
| Purpose: | | | |
| Frequency: | | Bandwidth: | |
| Modulation: | | Effective Radiate Power (ERP): | |
| Specifications: | | | |
| Other Capabilities | | | |
| Does the device employ any other method of communications such as a Modem to transmit or receive any data whatsoever? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes please describe below: | | | |
| Purpose: | | | |
| Specifications: | | | |
| Author Information | | | |
| Name: Technical Marketing | Title: Technical Marketing Engineer | Email: technical.marketing@hp.co m | Business Unit: PL4X |
| | | | Date Prepared: 29 March 2017 |

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