

Performance Series, Workstation Series & H-8308p

Firmware Update Guide ■■■

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1 Upgrade Utility and Printer Firmware Requirements

1. pw Thermal Printer Upgrade Utility

- a. Download the pw Series Firmware Upgrade Utility. (www.datamax-oneil.com/download).
 - If you have connected your Performance Series printer via USB you will also need the pw Series Intermediate Upgrade Utility, if firmware version is prior to 13.03.08, but after 12.08.20.
 - **NOTE: This is not required for the Workstation Series or H-8308p.**
- b. Once the download is complete, unzip the file and then double click the .msi file. Follow the on-screen setup to install the pw Series Firmware Upgrade Utility. If you downloaded the Intermediate Upgrade Utility, do the same for it.

NOTE: The pw Series Firmware Upgrade Utility does not require the installation or use of a Windows printer driver. The same applies for the Intermediate Upgrade Utility.

2. Printer Firmware

- a. Access the latest printer firmware download for the given printer model.
 - [Performance Series Firmware](#)
 - [Workstation Series Firmware](#)
 - [H-8308p Firmware](#)
- b. Extract the files from the download .zip file to a convenient folder location on the host computer.

NOTE: The resulting folder will also contain the following subdirectory: “upgrade.”

3. Initial Preparation

- a. **IMPORTANT! For LAN connections record the printer IP address before starting the upgrade process.** This will facilitate recovery should an error occur.
 - **Performance Series/H-8308p:** via front panel of the printer; **Select Info > Network Info > Ethernet IP.**
 - **Workstation Series:** print a System Report by simultaneously pressing the rear button and the right button.
- c. Wireless upgrades are not supported.
- d. Serial upgrades are not supported.

2 Upgrading Firmware via Optional USB Host Port

This process is only applicable to Performance Series printers equipped with the USB Host Option and is the recommended way to upgrade printers with software versions previous to 12.08.20. This method is not preferred for later versions. The Performance Series/H-8308p printer's Firmware can be updated using a USB flash drive (thumb drive) but the subsequent Boot Loader upgrade will require pw Series Firmware Upgrade Utility.

NOTE: The following are not needed for H-8308p.

1. Upgrade via USB Flash Drive

- a. Requirements
 - USB Host option on the printer (USB port located on the front of the printer, in the bottom left corner)
 - USB Flash Drive formatted to FAT32

NOTE: Most, but not all, flash drives are supported.

- b. Connect the USB flash drive to your computer.
- c. After extracting the files from the printer firmware .zip file, copy the "upgrade" subdirectory onto the USB flash drive ensuring that the "upgrade" folder is at the root of the flash drive.
- d. Properly disconnect the USB flash drive from the computer.
- e. Connect the USB Flash Drive to the USB Host port on the printer.
- f. Select **Menu > Tools > Maintenance > Upgrade** on the printer's front panel.
- g. Select the green **Accept** button to start the firmware upgrade process.

CAUTION! DO NOT POWER PRINTER OFF.

NOTE: The upgrade process can take up to 10 minutes.

NOTE: Be patient as the printer performs the firmware upgrade process. Upon completion it will return to the main menu.

- h. After the front panel display returns (showing the main menu), verify that the new version of firmware was properly installed by selecting **Info > System Info** and scrolling down through the list to check the Firmware Version and the Boot Version.

NOTE: If the upgrade fails or does not complete then go to the **Recovery Mode** section of this document.

- i. After the upgrade of the firmware, proceed to the next section and perform only the Boot Loader portion since the firmware portion is already done.

3 Upgrading Firmware via the pw Series Firmware Upgrade Utility

CAUTION! Do not attempt a USB upgrade using the Upgrade Utility if the printer running firmware and boot loader released prior to 13.03.08, use Ethernet instead (or the Intermediate Upgrade Utility).

1. Upgrade via USB Connection

a. Requirements

- USB Connected Printer
- pw Series Intermediate Upgrade Utility (for firmware released prior to version 13.03.08)
- pw Series Firmware Upgrade Utility

b. Download the latest firmware files.

- Extract the files from the downloaded zip file to a location on the local computer that you will be running the pw Series Firmware Upgrade Utility from. Note the location of the file.

NOTE: It is not recommended that the firmware files be saved to a network location.

c. If the current version of firmware is prior to 13.03.08, start the pw Series Intermediate Upgrade Utility application and select the USB option in the Connectivity frame.

- Select the printer from the dropdown list.
- Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.
- Select the **Select Folder** button and browse to the location where you extracted the firmware files in step c.
- Select the upgrade folder and click **Open**.
- Select the **Send to Printer** button to start the upgrade process.
- When the upgrade completes, restart the printer and continue on with the next step.

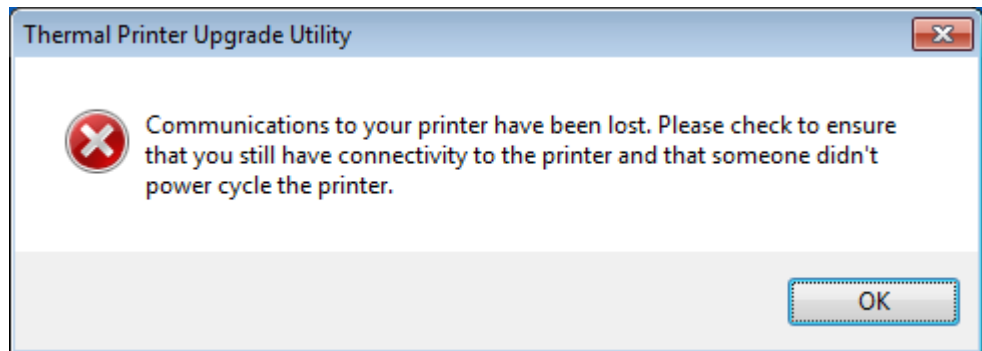
NOTE: If the upgrade fails or does not complete then go to the **Recovery Mode** section of this document.

- d. If the current version of firmware is 13.03.08 or later, start the pw Series Firmware Upgrade Utility application and select the USB option in the Connectivity frame.
- Select the printer from the dropdown list.
 - Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.
 - Select the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin) located in the downloaded folder and select **Open**.
 - xxxxxx = printer's board ID information (ex. – 104584)
 - a. 104584 = Performance Series Printers
 - b. 106085 = Workstation Series Printers
 - c. 512506 = H-8308p Printers
 - nn.nn.nn = date code of the release as year, month, day (12.11.28)
- NOTE:** This file is normally located outside the upgrade folder.
- Select the **Send to Printer** button to start the upgrade process.

CAUTION! DO NOT POWER THE PRINTER OFF.

NOTE: The Boot Loader upgrade process typically completes in less than 10 minutes. The printer will restart once the upgrade has completed.

NOTE: When working with Windows 7 Professional 64-bit, a timing issue may cause the message box shown below and the status message “Boot Loader Upgrade NOT SUCCESSFUL to appear



Click **OK** to clear the message box. The “Transferring Upgrade to Printer” progress bar may cycle through again. After a short wait (up to 15 minutes) the “Upgrading Flash...” progress bar should cycle through as the actual upgrade occurs.

- Boot Loader upgrade status:
 - **Successful:** “**Boot Loader Upgrade COMPLETE**” message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer’s version information and verify that the Boot Loader version information is the same as the file that was sent.
 - **Unsuccessful:** “**Boot Loader Upgrade NOT SUCCESSFUL**” message will be displayed. Leave the printer powered up (**CAUTION! DO NOT POWER PRINTER OFF**) and attempt the Boot Loader upgrade again. If still unsuccessful, contact Technical Support.
- Select the printer from the dropdown list again.
- Select the **Select File** button and browse to the location where the firmware files were extracted.
- Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

NOTE: This file is normally located outside the upgrade folder.

- x.xxxx = printer’s series and model information (e.g., p1120n)
- nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)
- Select the **Send to Printer** button to start the Upgrade process.

CAUTION! DO NOT POWER PRINTER OFF.

NOTE: The Firmware upgrade process can take up to 8-10 minutes.

- Firmware upgrade status:
 - **Successful:** “**Firmware Upgrade COMPLETE**” message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer’s version information and verify that the Firmware version information is the same as the file that was sent.
 - **Unsuccessful:** “**Firmware Upgrade NOT SUCCESSFUL**” message will be displayed. Attempt a recovery using the **Recovery Mode** (see below).

2. Upgrade via Wired Ethernet Connection

CAUTION! Wireless upgrade is not supported.

- a. Requirements
 - Network Connected Printer
 - pw Series Firmware Upgrade Utility
- b. Download the latest firmware files.
- c. Extract the files from the downloaded zip file to a location you can easily find on the local computer that will run the pw Series Firmware Upgrade Utility.

NOTE: It is not recommended that the firmware files be saved to a network location.

- d. Start the pw Series Firmware Upgrade Utility application and select the TCP/IP option in the Connectivity frame.
- e. Select the appropriate printer from the dropdown list or enter the IP Address.
 - If the printer IP Address is unknown, it may be found through the front panel of the printer by selecting **Info > Network Report > Ethernet IP** (Performance Series printer) or by simultaneously selecting the rear button and the right button (Workstation Series printer).
 - Shared printers will not display the IP address of the printer unless you are on the primary computer for that print driver.

- f. Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.

NOTE: Be sure the printer model matches the firmware file being sent.

NOTE: If upgrading the Boot Loader and Firmware, proceed to the next step. If upgrading only the Firmware, proceed to step k.

CAUTION! Make sure the Boot Loader is rev BL13.11.07 or newer, before upgrading the Firmware. If not, you must upgrade the Boot Loader.

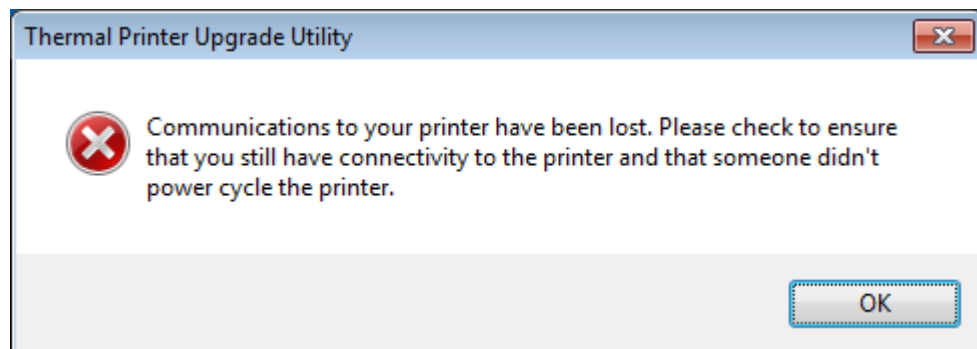
- g. Select the **Select File** button and browse to the location where the firmware files were extracted.
- h. Select the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin) located in the upgrade folder and select **Open**.
 - xxxxxx = printer's board ID information (e.g., 104584)
 - 104584 = Performance Series Printers
 - 106085 = Workstation Series Printers
 - 512506 = H-8308p Printers
 - nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

- i. Select the **Send to Printer** button to start the upgrade process.

CAUTION! DO NOT POWER THE PRINTER OFF.

NOTE: The Boot Loader upgrade process typically completes in less than 10 minutes. The printer will restart once the upgrade has completed.

NOTE: When working with Windows 7 Professional 64-bit, a timing issue may cause the message box shown below and the status message "Boot Loader Upgrade NOT SUCCESSFUL to appear.



Click **OK** to clear the message box. The “Transferring Upgrade to Printer” progress bar may cycle through again. After a short wait (up to 15 minutes) the “Upgrading Flash...” progress bar should cycle through as the actual upgrade occurs.

- j. Boot Loader upgrade status:
 - **Successful:** “**Boot Loader Upgrade COMPLETE**” message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer’s version information and verify that the Boot Loader version information is the same as the file that was sent.
 - **Unsuccessful:** “**Boot Loader Upgrade NOT SUCCESSFUL**” message will be displayed. Leave the printer powered up (**DO NOT POWER PRINTER OFF**) and attempt the Boot Loader upgrade again. If still unsuccessful, contact Technical Support.
- k. Select the **Select File** button and browse to the location where the firmware files were extracted.
- l. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

NOTE: This file is normally located outside the upgrade folder.

 - x.xxxx = printer’s series and model information (e.g., p1120n)
 - nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)
- m. Select the **Send to Printer** button to start the Upgrade process.

CAUTION! DO NOT POWER PRINTER OFF.

NOTE: The Firmware upgrade process can take up to 8-10 minutes.
- n. Firmware upgrade status:
 - **Successful:** “**Firmware Upgrade COMPLETE**” message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer’s version information and verify that the Firmware version information is the same as the file that was sent.
 - **Unsuccessful:** “**Firmware Upgrade NOT SUCCESSFUL**” message will be displayed. Attempt a recovery using the **Recovery Mode** (see below).

3. USB Recovery Mode

NOTES:

- **USB Recovery Mode requires Boot Loader version 13.11.xx or later.**
 - **If issues develop with the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin) contact Technical Support.**
 - **Upgrade Utility program is up and running.**
- a. Power the printer off and connect the USB cable to the rear of the printer.
 - b. Power the printer for 5 seconds, shut down again for 5 seconds.
 - c. Repeat step b.
 - d. While holding the “set defaults” recessed button, power up the printer again. Hold for 3 seconds and then wait for “ready” mode.
 - **Display printers:** The display should show a red recovery screen indicating it is in Recovery Mode.
 - **Non-Display printers:** The LEDs will show a fast alternating flash sequence indicating the printer is in Recovery Mode, waiting for the file to upload.

NOTE: This takes around 2 minutes for the “ready” mode unless there is a network connection. With a network connection, the printer will enter “ready” mode in a few seconds.

- e. Select the USB option in the Connectivity frame.
- f. Select the printer from the dropdown list.
- g. Select the **Select File** button and browse to the location where the firmware files were extracted.
- h. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.
 - x.xxxx = printer’s series and model information (e.g., p1120n)
 - nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

On the menu bar, select **Utility** and then select **Send Recovery CMD**.

NOTE: During Recovery Mode, for models with displays, observe that the screen brightness will change. For non-display models, observe a slow, alternating, flashing LED pattern.

- i. Wait for the printer to restart and boot up (it could take up to 10 minutes).
- j. Recovery Mode Upgrade Status:
 - **Successful:** A “**Firmware Upgrade COMPLETE**” message will be displayed. Click the **Get Printer Info** button to review the printer’s version information to verify it is correct.
 - **Unsuccessful:** “**Firmware Upgrade NOT SUCCESSFUL**” message will be displayed. Try recovery again. If still unsuccessful, contact Technical Support.

4. TCP/IP Recovery Mode (requires connection to network via Ethernet cable)

NOTES:

- Wireless upgrade is not supported.
 - If IP recovery then the user will know or be able to find out the IP Address of the printer.
 - Recovery Mode only works on the firmware file (SWSTx.xxxx_SWnn.nn.nn.bin).
 - IP Recovery Mode requires Boot Loader rev BL12.11.14 or newer.
 - If issues develop with the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin), contact Technical Support.
- a. Insure that the USB port (rear of printer) is disconnected. Power the printer off and connect it to the network via an Ethernet cable.
 - b. Select the TCP/IP option in the Connectivity frame of the Upgrade Utility.
 - c. Previous upgrade attempt via:
 - **TCP/IP:** Requires use of IP address used during initial upgrade attempt above.
 - **USB:** You will need access to the network (i.e., router or location where the IP address of the printer can be found,if not known).
 - d. Once the IP address of the printer is obtained, enter it into the IP address field of the Upgrade Utility.
 - e. Select the **Select File** button and browse to the location of the extracted firmware files.
 - f. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.
 - x.xxxx = printer's series and model information (e.g., p1120n)
 - nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)
 - g. On the menu bar, select **Utility** and then select **Send Recovery CMD**.
 - h. Follow the instructions in the popup windows to prepare the printer for recovery mode.

NOTE: This will be indicated by one of the display results below:

- **Display printers:** The display should show a red recovery screen indicating it is in Recovery Mode.
- **Non-Display printers:** The LEDs will show a rapid alternating flash sequence indicating the printer is in Recovery Mode.

NOTE: During Recovery Mode, for models with displays, observe that the screen brightness will change. For non-display models, observe a slow, alternating, flashing LED pattern.

- i. Wait for the printer to restart and boot up (it could take up to 10 minutes).
- j. Recovery Mode Upgrade Status:
 - **Successful:** A "Firmware Upgrade COMPLETE" message will be displayed. Click the **Get Printer Info** button to review the printer's version information to verify it is correct.
 - **Unsuccessful:** "Firmware Upgrade NOT SUCCESSFUL" message will be displayed. Try recovery again. If still unsuccessful, contact Technical Support.

4 FAQs

1. USB Flash Drive

- a. What is the flash drive formatting requirement?
 - i. The flash drive must be formatted to FAT32.
- b. What should I do if the printer stays on one screen for more than 10 minutes?
 - i. Leave the USB Flash Drive connected to the printer and power cycle the printer. The upgrade process should continue.

2. pw Series Firmware Upgrade Utility

- a. Do we have to upgrade the Boot Loader (BL) first or can we perform the Firmware (SW) upgrade first?
 - If there is no change in the Boot Loader (BL file) version, then there is no need for the Boot Loader to be updated.
 - If there is a new Boot Loader (BL file) version, then it is highly recommend you upgrade the printer with the new Boot Loader file before upgrading to the new Firmware. The Firmware is closely tied to the Boot Loader version it is distributed with.
- b. Do we need to have the print driver installed?
 - No. The print driver is not used for any part of the pw Series Firmware Upgrade Utility process.

5 Contact Info

Technical Support

Phone: 1 (800) 816-9649

Website: www.datamax-oneil.com