

Upgrading to PathPilot® v2.x

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1.1 PRODUCT INFORMATION

Product: This kit includes one PathPilot® v2.0 Upgrade (PN 38249).

1.2 PURPOSE

This document gives instructions on installing the PathPilot® v2.0 Upgrade.

1.3 WHAT'S NEW IN PATHPILOT® V2.X

PathPilot® v2.x includes a new core operating system. While the PathPilot® v2.x operating system has the same features and functionality as PathPilot® v1.9.13, it has a number of improvements, including:

- **Wi-Fi networking.** For information, see "Enabling Internet Connection (Optional)" (page 8).
- **Dropbox stability.** For information, see "Connect to Dropbox (Optional)" (page 8).

When you upgrade PathPilot® from v1.x to v2.x, your ability to complete jobs using your machine should not be affected. If you have problems, we can help. Email support@tormach.com to contact Tormach Technical Support for guidance on how to proceed.

For a complete list of improvements included in PathPilot® v2.x, see tormach.com/pp-updates.

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2.1 PATHPILOT® V2.X UPGRADE PROCEDURE

NOTICE! Because PathPilot® v2.x is a major upgrade, it overwrites the internal drive of the PathPilot® controller. You must complete the upgrade procedures in the order specified. If you do not follow the order listed, you risk losing all G-code files, settings, and tool and offset information.

Complete the upgrade procedure in the following order:

1. "Update to PathPilot® v1.9.x" (below)
2. "Create Backup Files" (below)
3. "Install PathPilot® v2.x" (on the next page)

2.1.1 Update to PathPilot® v1.9.x

Before upgrading to PathPilot® v2.x, you must make sure the PathPilot® controller is updated to the latest version of PathPilot® v1.9.x. The latest version of PathPilot® v1.9.x has settings that improve the backup process, so you must update to this version before backing up your files.

To update to PathPilot® v1.9.x:

1. From the PathPilot® interface, locate the machine configuration and software version, as shown in the following example.



Figure 2-1: Machine configuration and software version in PathPilot®.

2. Make note of the current machine configuration, which you need to re-enter after upgrading.
3. Make note of the current software version.
4. From tormach.com/pp-updates, identify the latest version of PathPilot® v1.9.x available.

5. Depending on the version of PathPilot® installed, do one of the following:
 - If you have the latest version of PathPilot® v1.9.x: Go to "Create Backup Files" (below).
 - If you do not have the latest version of PathPilot® v1.9.x: Go to Step 6.
6. From tormach.com/pp-updates, download the most recent PathPilot® update file.
7. Transfer the PathPilot® update file to a USB drive.
8. On the PathPilot® controller, insert the USB drive.
9. Make sure the PathPilot® controller is powered on.
10. Push in the red **Emergency Stop** button.
11. From the PathPilot® interface, on the **Status** tab, click **Update**.

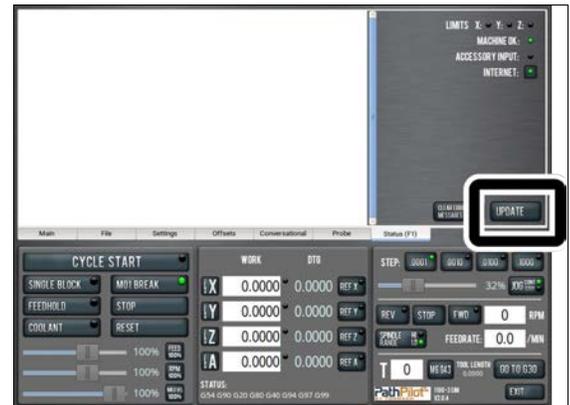


Figure 2-2: Update button on the Status tab.

12. Select the PathPilot® update file on the USB drive, and then click **Update**.
13. Follow the instructions on the screen to restart the PathPilot® controller.
14. When restarted, the PathPilot® v1.9.x interface displays.
15. Go to "Create Backup Files" (below).

2.1.2 Create Backup Files

1. On the PathPilot® controller, insert a blank, formatted USB drive.

NOTE: To prevent errors when backing up and restoring files, only use a blank, formatted USB drive. Do not use the PathPilot® v2.0 Upgrade.

2. From the PathPilot® interface, on the **Main** tab, in the **MDI Line DRO** field, type **ADMIN SETTINGS BACKUP**.

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3. Press **ENTER** on the keyboard.

PathPilot® generates a backup **.zip** file, and the **Admin Settings Backup** dialog box displays.



Figure 2-3: Admin Settings Backup dialog box.

4. From the **Admin Settings Backup** dialog box, specify where on the PathPilot® controller to save the backup **.zip** file.
5. Click **Save**.
The backup **.zip** file is saved on the PathPilot® controller.
6. You must manually transfer the backup **.zip** file — along with other files you want to back up (like G-code programs) — from the PathPilot® controller to a USB drive. From the PathPilot® interface, on the **File** tab, in the **Controller File** window, select the backup **.zip** file and any other files you want to back up.



Figure 2-4: Controller File window on the File tab.

NOTE: Files must have unique names. If they do not, PathPilot® prompts you to overwrite or rename files, or cancel the file transfer.

7. To prevent errors, make sure you do not include the following folders:

- **logfiles**
- **media**

- **ReleaseNotes**
- **subroutines**
- **USB**

8. Click **Copy to USB**.

The files are copied and display in the **USB File** window.

9. From the PathPilot® controller, eject the USB drive.
10. From the PathPilot® interface, click **Exit**.
11. Verify that all files are properly saved. On a device other than the PathPilot® controller, insert the USB drive, and review the list of files on the USB drive.
12. *(Optional)* As an extra precaution, copy all the files onto the device.
13. Go to "Install PathPilot® v2.x" (below).

2.1.3 Install PathPilot® v2.x

1. On the PathPilot® controller, make sure that there are no USB drives inserted.
2. Insert the PathPilot® v2.0 Upgrade.
3. Verify that the red **Emergency Stop** button is pushed in. If it is not, you must push it in.
4. Power off, then power on, the PathPilot® controller.

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- When the PathPilot® controller powers on, repeatedly press **F10**, **F11**, and **F12** on the keyboard in rapid succession until the BIOS boot menu displays.

NOTE: Do not press **F10**, **F11**, and **F12** at the same time. Depending on when you purchased the PathPilot® controller, the exact key required to access the **BIOS** boot menu varies.

A **BIOS** boot menu displays, similar to the following image.



Figure 2-5: BIOS boot menu.

If the **BIOS** boot menu does not display, you must try pressing a different key to access it. Repeat Steps 4 through 5.

- From the **BIOS** boot menu, select the USB device option and press **ENTER** on the keyboard.

For example, select **General UDisk 5.00**.

NOTE: Do not select the option prefaced with **DVD**, **UEFI**, or **WDC**. For example, do not select **UEFI: General UDisk 5.00**. Depending on when you purchased the PathPilot® v2.0 Upgrade, the device name varies.

The **Startup Options** screen displays.

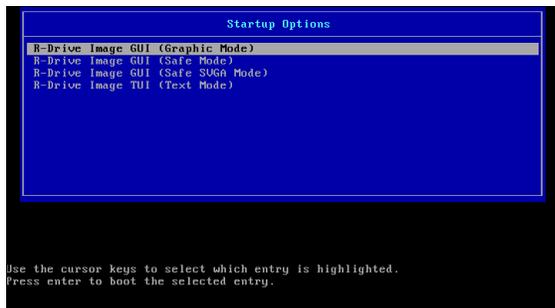


Figure 2-6: Startup Options screen.

If the **Startup Options** screen does not display, you must try selecting a different device to access it. Repeat Steps 4 through 6.

- From the **Startup Options** screen, select **R-Drive Image GUI (Graphic Mode)**.

NOTE: On the **Startup Options** screen, **R-Drive Image GUI (Graphic Mode)** is automatically selected if no action is taken in five seconds.

- Press **ENTER** on the keyboard.

The **R-Drive Image License Agreement** dialog box displays.

NOTE: If the **R-Drive Image License Agreement** dialog box displays and you did not press **ENTER** on the keyboard, this indicates that **R-Drive Image GUI (Graphic Mode)** was automatically selected from the **Startup Options** screen.

- From the **R-Drive Image License Agreement** dialog box, click **Yes**.

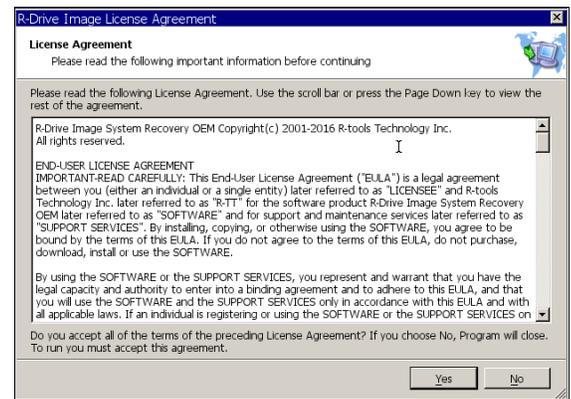


Figure 2-7: R-Drive Image License Agreement dialog box.

An **R-Drive Image** overwrite caution displays.

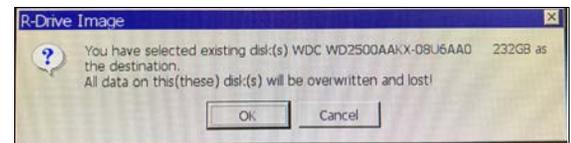


Figure 2-8: R-Drive Image overwrite caution.

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10. Click **OK**.

The the **R-Drive Image System Recovery** window displays.



Figure 2-9: R-Drive Image System Recovery window.

11. From the **R-Drive Image System Recovery** window, click **Start**.

The PathPilot® installation starts and continues for about 10 minutes. When done, an installation confirmation displays.

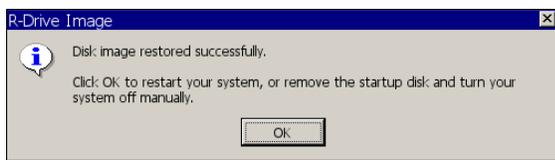


Figure 2-10: Installation confirmation.

12. Click **OK**.
13. From the PathPilot® controller, eject the PathPilot® v2.0 Upgrade.
14. Power off, then power on, the PathPilot® controller.
15. You must configure the PathPilot® controller. Go to "Configuring the PathPilot® v2.x Controller" (page 7).

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3.1 CONFIGURING THE PATHPILOT® V2.X CONTROLLER

To configure the PathPilot® controller, complete the following steps in the order listed:

1. "Select Your Machine in the PathPilot® Interface" (below)
2. "Restore Backup Files" (below)
3. "Enabling Internet Connection (Optional)" (on the next page)
4. "Connect to Dropbox (Optional)" (on the next page)
5. "Enable Automatic Updates (Optional)" (page 10)

3.1.1 Select Your Machine in the PathPilot® Interface

1. From the **Tormach Machine Controller Configuration** screen, select the machine that you are using with the PathPilot® operating system.



Figure 3-1: Tormach Machine Controller Configuration screen.

The PathPilot® interface displays.

2. Go to the next section, "Restore Backup Files" (below).

3.1.2 Restore Backup Files

1. On the PathPilot® controller, insert the USB drive onto which you had copied your backup .zip file and other files.
2. From the PathPilot® interface, on the **Main** tab, in the **MDI Line** DRO field, type **ADMIN SETTINGS RESTORE**.

3. Press **ENTER** on the keyboard.

The **Admin Settings Restore** dialog box displays.



Figure 3-2: Admin Settings Restore dialog box.

4. From the **Admin Settings Restore** dialog box, navigate to the backup .zip file on the USB drive, and then click **Open**. The PathPilot® operating system restores the backup, then restarts.
5. If you backed up any other files onto the USB drive, you must manually transfer the files to the PathPilot® controller. From the PathPilot® interface, on the **File** tab, in the **USB File** window, select the files you want to transfer.



Figure 3-3: USB File window on the File tab.

NOTE: To navigate backward, click **Back**. To navigate to the top level, click **USB**.

6. From the **Controller File** window, select the folder into which you want to copy the files.
7. Click **Copy From USB**.

The files display in the **Controller File** window.

NOTE: Files must have unique names. If they do not, PathPilot® prompts you to overwrite or rename files, or cancel the file transfer.

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8. If desired, you can enable an Internet connection in the PathPilot® controller, which allows you to use Dropbox with PathPilot®, and receive automatic PathPilot® updates. Go to the next section, "Enabling Internet Connection (Optional)" (below).

If you do not want to use these features, you have completed installing and configuring PathPilot® v2.x.

3.1.3 Enabling Internet Connection (Optional)

If desired, you can enable an Internet connection on your PathPilot® controller to receive automatic PathPilot® updates, and save time while completing common tasks, like transferring files with Dropbox instead of a USB drive.

To enable an Internet connection:

1. From the PathPilot® interface, on the **Status** tab, click the **Internet** button.



Figure 3-4: Internet button on the Settings tab.

The **Network Configuration** dialog box displays.

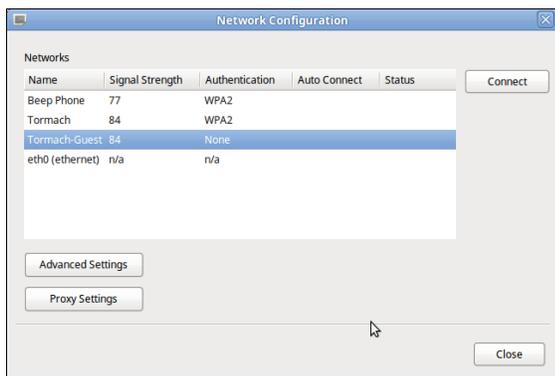


Figure 3-5: Network Configuration dialog box.

2. From the **Network Configuration** dialog box, in the **Networks** list, select the network you want to use, and then click **Connect**.

NOTE: Wi-Fi connection signal strengths are indicated on a scale of **0 to 100**, with 100 being the strongest. PathPilot® continually refreshes the signal levels to help you find the best placement for your Wi-Fi network adapter. Ethernet connections are indicated by a prefix in the format **eth[NUMBER]**. For example, **eth1**.

The PathPilot® operating system connects to the Internet using the network you specified. It continues to detect and connect to the Wi-Fi network, even after power cycles.

3. Once connected, you can use the Dropbox and automatic updates features. Depending on what you want, see the following procedures:
 - "Connect to Dropbox (Optional)" (below)
 - "Enable Automatic Updates (Optional)" (page 10)

3.1.4 Connect to Dropbox (Optional)

NOTE: Dropbox requires an Internet connection. If you haven't yet enabled it, see "Enabling Internet Connection (Optional)" (above).

If desired, you can connect your PathPilot® controller to a Dropbox account to easily synchronize your G-code files, which eliminates the need to transfer them with a USB drive.

NOTE: Dropbox stops synchronizing once the PathPilot® controller's internal drive has less than 500 MB of free space. To avoid this, we recommend that you organize your Dropbox account on a separate computer before you connect Dropbox to the PathPilot® controller. Also, make sure to only store files in the top-level that you want synchronized to your PathPilot® controller.

To connect to Dropbox:

1. From the PathPilot® interface, on the **Main** tab, in the **MDI Line DRO** field, type **ADMIN DROPBOX**.

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2. Press **ENTER** on the keyboard.

The **Dropbox Configuration** application displays.

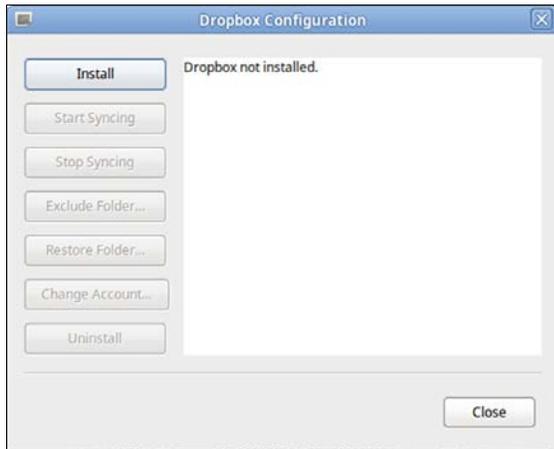


Figure 3-6: Dropbox Configuration application.

3. Click **Install**.

The **Dropbox Installation** dialog box displays.

4. Click **OK**.



Figure 3-7: Dropbox Installation dialog box.

The Dropbox installation starts and continues for about a minute. When done, a web browser displays.

5. From the web browser, sign in or create a Dropbox account. The PathPilot® controller connects to the Dropbox account, creates a local **Dropbox** folder that is visible in **File** tab, and synchronizes the folder.

6. Because Dropbox stops synchronizing once the PathPilot® controller's internal drive has less than 500 MB of free space, we recommend that you exclude large or unrelated folders from synchronization. Click **Exclude Folder...**

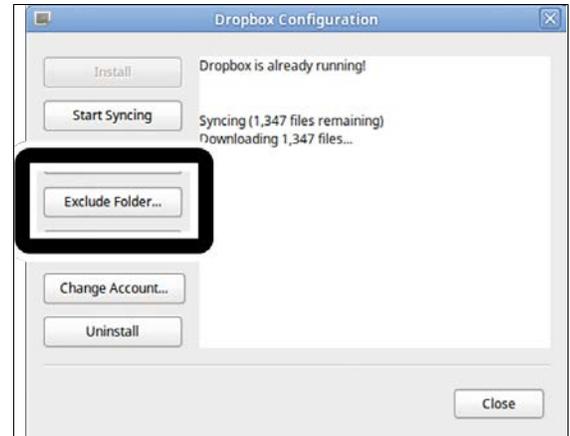


Figure 3-8: Exclude Folder button.

The **Add Folder to Excluded Set** dialog box displays.

7. From the **Add Folder to Excluded Set** dialog box, type the name of the folder to exclude.



Figure 3-9: Add Folder to Excluded Set dialog box.

NOTE: You can only exclude folders, not individual files.

8. Click **OK**.
9. Click **Close**.
The PathPilot® controller is now connected to Dropbox.

3.1.5 Enable Automatic Updates (Optional)

NOTE: Automatic updates require an Internet connection.



If you haven't yet enabled it, see "Enabling Internet Connection (Optional)" (page 8).

If desired, you can enable automatic updates for PathPilot®.

To enable automatic updates:

1. From the PathPilot® interface, on the **Status** tab, click **Update**.

The **Software Update** dialog box displays.



Figure 3-10: Software Update dialog box.

2. From the **Software Update** dialog box, select the **Check online daily for updates; confirmation required for download and installation** checkbox.
3. Click **Close**.

When future updates are available, the **Status** tab displays a notification.

4.1 TROUBLESHOOTING

4.1.1 Reverting from PathPilot® v2.x to v1.x

If you need to restore to a previous version of the PathPilot® operating system, use the PathPilot® Restore DVD (PN 35246) included with your PathPilot® controller. If you do not have the PathPilot® Restore DVD, we can help. Email support@tormach.com to contact Tormach Technical Support for guidance on how to proceed.