

Release Notes for PathPilot® v1.9.11

Release Date: April 27, 2017

NOTE:

Updates do not need to be applied sequentially. Download the latest software update to be completely up-to-date on the PathPilot operating system.

Enhancements:

- In rare situations, updates could fail to apply correctly if the PathPilot controller becomes unresponsive while updating. The controller is then non-operational, and displays an error message stating it failed to generate an INI file.

The update process is now more reliable due to several enhancements:

- Improved safety of file system disk cache settings.
- Automatic controller reboot after applying an update.
- Automatic creation of a backup file containing PathPilot settings and tool tables prior to applying an update — the backup file is named *PathPilotBackupSettings-Year-Month-Day.zip* and stored on the USB drive that contains the update file.

In the event of a future hardware failure that requires you to use the PathPilot recovery DVD, use the backup file to restore your PathPilot settings and tool tables: in the PathPilot interface, from the *Main* tab, type *ADMIN SETTINGS RESTORE* in the *MDI* field and click *ENTER* on your keyboard. For more information, refer to the machine *Operator Manual*.

Release Notes for PathPilot® v1.9.10

Release Date: April 21, 2017

IMPORTANT!

In rare situations, transferring files to the PathPilot controller from USB drives or over a network could cause PathPilot to crash and prompt you to install a software update.

This issue is more common if you copy a file from a computer running macOS to the PathPilot controller because macOS creates a hidden metadata file with a “.” prefix for every file copied. For example, if you work with a file named “mygcodefile.nc”, macOS creates a hidden metadata file named “.mygcodefile.nc”.

As a workaround, in the PathPilot interface, the File tab now displays all hidden files. When selecting G-code, ignore all files that start with a “.” prefix and scroll down in the file listing to find the correct file.

We are continuing to work on an improvement for a future PathPilot update, but wanted to provide this workaround now so that you can avoid system crashes.

Enhancements:

- In the *Persistent Controls* section, the version number now always displays next to the EXIT button.
- #1021: Mill/Lathe - USB IO Board: In the *Status* tab, added buttons to control relay state (see **Figure 1**).
- #1241: Lathe - Add left-hand threading to conversational threading.
- #1282: Lathe - Multiple conversational enhancements.

Facing and parting routines: cut to X zero plus the tool corner radius — this helps to remove any pip that may be on the workpiece.

Threading routines:

- **Tab behavior.** Press ENTER in any DRO to move to the next available DRO.
- **Tool radius comments.** All tabs now indicate whether tool radius is used or not.

- #1318: Mill/Lathe - Release Notes: PathPilot release notes are now included in each update to view on the PathPilot controller.

From the PathPilot interface, in the *File* tab, open the *ReleaseNotes* folder. Double-click any PDF file to view the corresponding release notes.

- From the PathPilot interface, in the *Status* tab, added a *Previous Versions* button to the *Update* dialog box to display all prior versions of PathPilot that you have updated to.

This eliminates the need to keep an older version of PathPilot on a USB drive as a backup when updating to the newest version.

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- Expanded the number of holes for *Conversational* drilling or tapping on a mill to 100.

NOTE: the *Circular* feature can support more than 100 holes — it automatically expands the number of rows and generates the correct values.

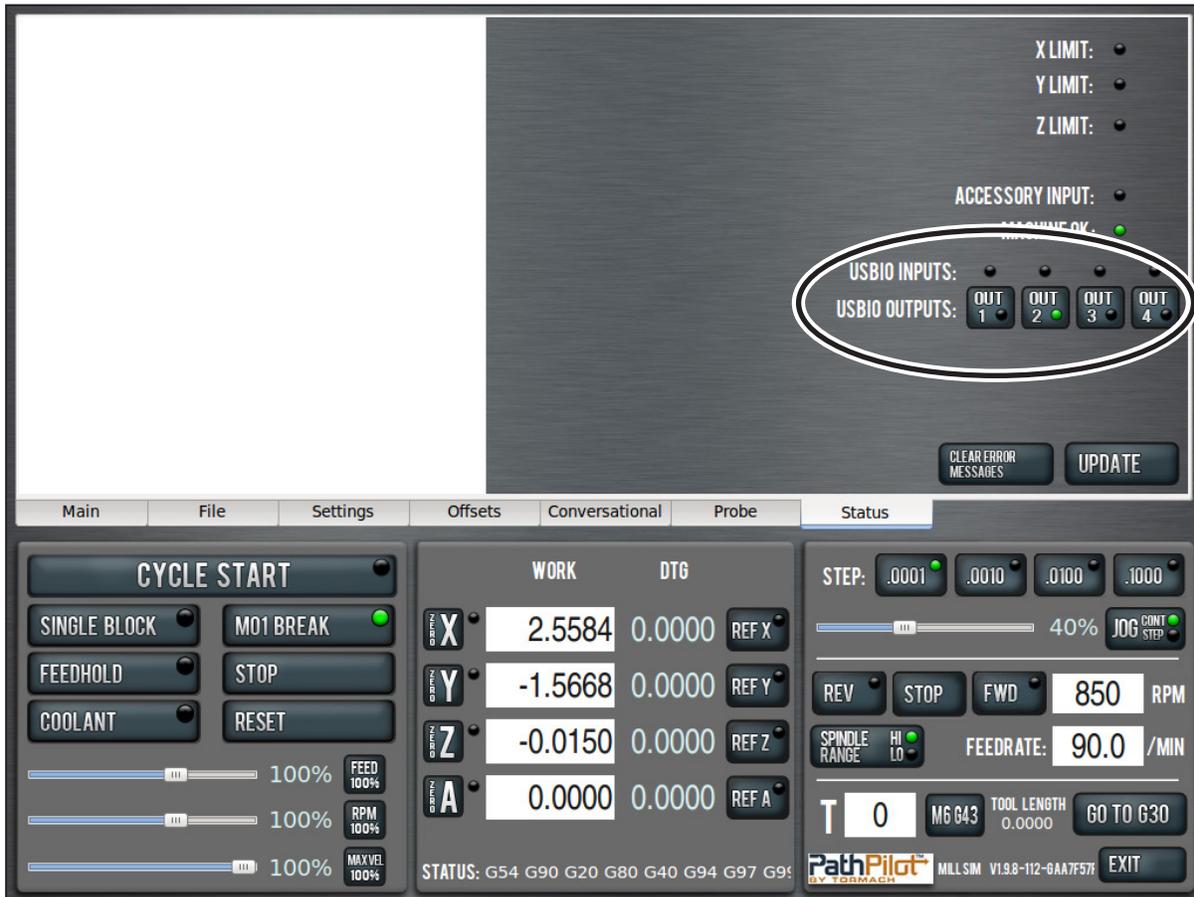


Figure 1

Bug Fixes:

- #152: Lathe - Threading cycle attempted regardless of machine maxvel limits.
During a spindle-synchronized threading move, too high a spindle speed may require an axis to move faster than it is able to move. In this situation, PathPilot now displays a warning message.
- #999: Mill - 4th Axis: *Max Velocity* override does not affect A-axis moves.
- #1099: Mill/Lathe - Conversational: DROs should have only three decimal places of precision in G21.
- #1100: Mill/Lathe - Metric Step Sizes: Change step sizes to 0.0025, 0.010, 0.100, and 1.000.
- #1164: Mill/Lathe - Add ADMIN NETTOOL MDI command for network connectivity troubleshooting.

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- #1173: Mill/Lathe - Degree (°) character in G-code comment makes G-code listing invisible.
- #1209: Mill/Lathe - Thread Tables: User-entered values overwritten on software update.
- #1234: RapidTurn - G64: Add G64 to RS274 startup codes.
- #1301: Mill - SmartCool M8/M9 Python exceptions while G41 is active.
- #1333: Mill - Conversational: Post inserts (Final Pass) comment for every pass.
- #1344: Mill/Lathe - Conversational Job Assignment: Error in entry field during *Insert Step* does not indicate why the code failed to post.
- #1352 / #1355: Mill - Engraving: Not enough significant digits for P and Q.
Conversational engraving G47 P and Q words have only two digits past the decimal point.
- #1353: Mill - Conversational: Circular pocket routine can result in straight plunge on G-code with a small helical entry.
- #1359: Mill/Lathe - Adding an image file reference to M00 M01 comment lines.
Images not appearing in the image file reference to M00 or M01 comment lines when M00 or M01 is the first non-comment line in the G-code file.
- #1374: Mill - Tool Length Offsets Tab: Tool length shown in table does not update when it is changed using the tool setter unless, after making the change, you leave the tab and come back.
- #1375: Mill - Large Files: Tool change or M01 break shows the wrong code and the incorrect Z-depth.
- #1390: Mill - G98/G99: Function opposite of defined behavior of Z return position.
- #1395: Lathe - Tool Offsets: Wrong tip orientation on parting tools.
Selecting the parting tool image sets the tip orientation to 1 or 4; it should set to 2 or 3 — this causes the conversational parting routines to output incorrect Z positions.
- #1397: Mill - Probing subroutines do not cancel G91.
- #1402: Mill - Conversational: Edit of drilling cycle brings up a blank screen in some situations.
- #1413: Mill - Conversational: Tapping with auto-reverse head retracts via G0.
- #1436: Custom thread data files not loading correctly.
- #1440: Tool Offsets: An incorrect tool offset was applied for the current tool when the lathe was powered on.
“G43 H<toolno>” applied the wear pocket, but not the geometry pocket.
- #1469: Lathe: Enable/disable jogging using the keyboard is not working correctly.

Release Notes for PathPilot® v1.9.8

Release Date: January 13, 2017

Enhancements:

- #1340: Mill/Lathe - Work Offset Table: Make table of work offsets editable.

Bug Fixes:

- #1278: Mill - Conversational tapping hole pattern with dwell only the first hole is posted.
- #1332: Mill/Lathe - MDI: The UP arrow cycles backward through MDI history; add DOWN arrow to move forward in history.

Adding an Image to Comment Lines

As an enhancement for code comments, you can now include images when a comment:

- Is on a line containing M00 or M01, **and**
- Contains a file name ending in *.jpg* or *.png*.

If both requirements are met, when PathPilot reaches a programmed M00 or M01 break, it displays the image in the tool path window.

To add an image to a comment line:

1. Add a *.jpg* or *.png* image file to your PathPilot controller in one of the following locations:
 - G-code program file directory
 - G-code program file directory > *images* sub-directory
 - Home directory > *images* sub-directory

NOTE: *File names and directory names are case-sensitive. For example, a sub-directory named "Images" will not work, while a sub-directory named "images" will work.*

2. Program an M00 or M01 break.
3. In the line of G-code containing the M00 or M01 break, enter a comment surrounded by parentheses ().
4. Within the comment, enter the file name of the image, including its *.jpg* or *.png* extension.

Example

```
M01 ( photo_of_my_setup.jpg )
```

For more information on programming with comments, refer to chapter 7, *Programming*.

Editing G-code with Conversational Programming

1. From the *File* tab, select the file and click *Conv. Edit* (see **Figure 2**).

A job assignment editor opens the file in a new window. The left window displays job assignments of a program. The right window displays a preview of the program (see **Figure 3**).

2. Edit the file contents as needed:
 - To change the order in which the steps of the program occur: With the step selected, click *Move Up*, *Move Down*, *Duplicate*, or *Remove*.
 - To create a new job assignment using conversational programming:
 - i. Click *Insert Step*. PathPilot creates the job assignment below the currently selected row, and opens the *Conversational* tab.
 - ii. Click *Insert*.
 - iii. If necessary, edit the job assignment order in the program.
 - To load an existing G-code file into the program:
 - i. Click *Insert File*. G-code files that are hand-written, or generated from CAM software or conversational programming in PathPilot, can be inserted.
 - ii. Navigate to and select the *.nc* file that you want to insert.
 - iii. Click *Open*.
 - iv. If necessary, edit the job assignment order in the program.
 - To edit a job assignment that was created in conversational programming:
 - i. Select the job assignment and click *Conv. Edit*. In the *Conversational* tab, PathPilot opens the relevant tab.
 - ii. Make the desired changes to the job assignment.
 - iii. Click *Finish Editing*.
4. Click *Save*.

The G-code program file is updated.

Tips

- To restore an edited job assignment to its original parameters: Click *Revert*.
NOTE: *Revert* is only available for individual job assignments created in conversational programming.
- To undo all changes made to an entire G-code program: Click *Close*. When prompted, *Close Without Saving*.

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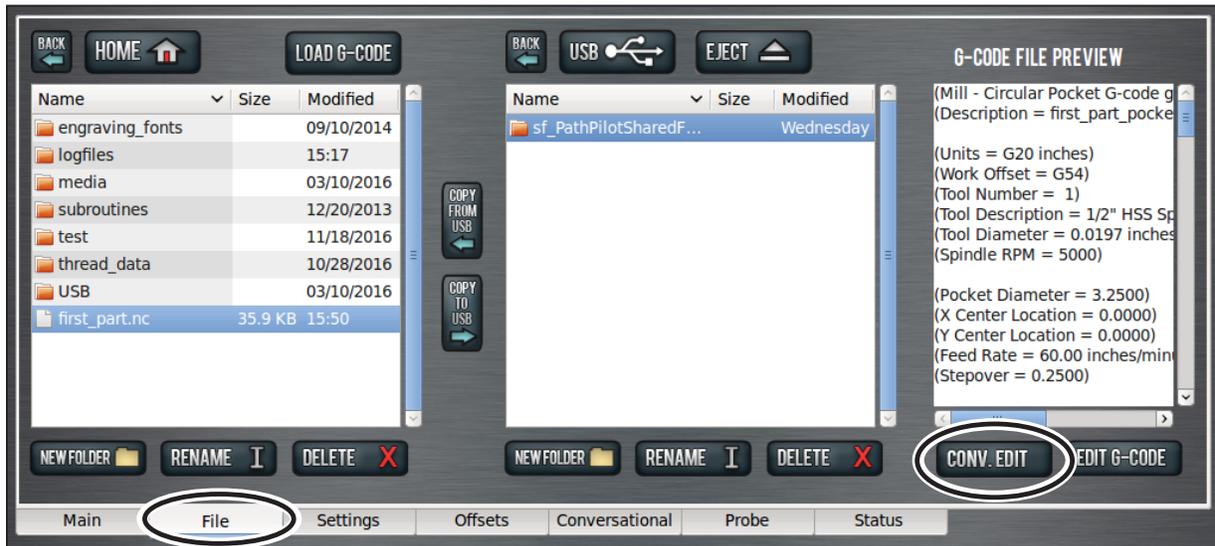


Figure 2

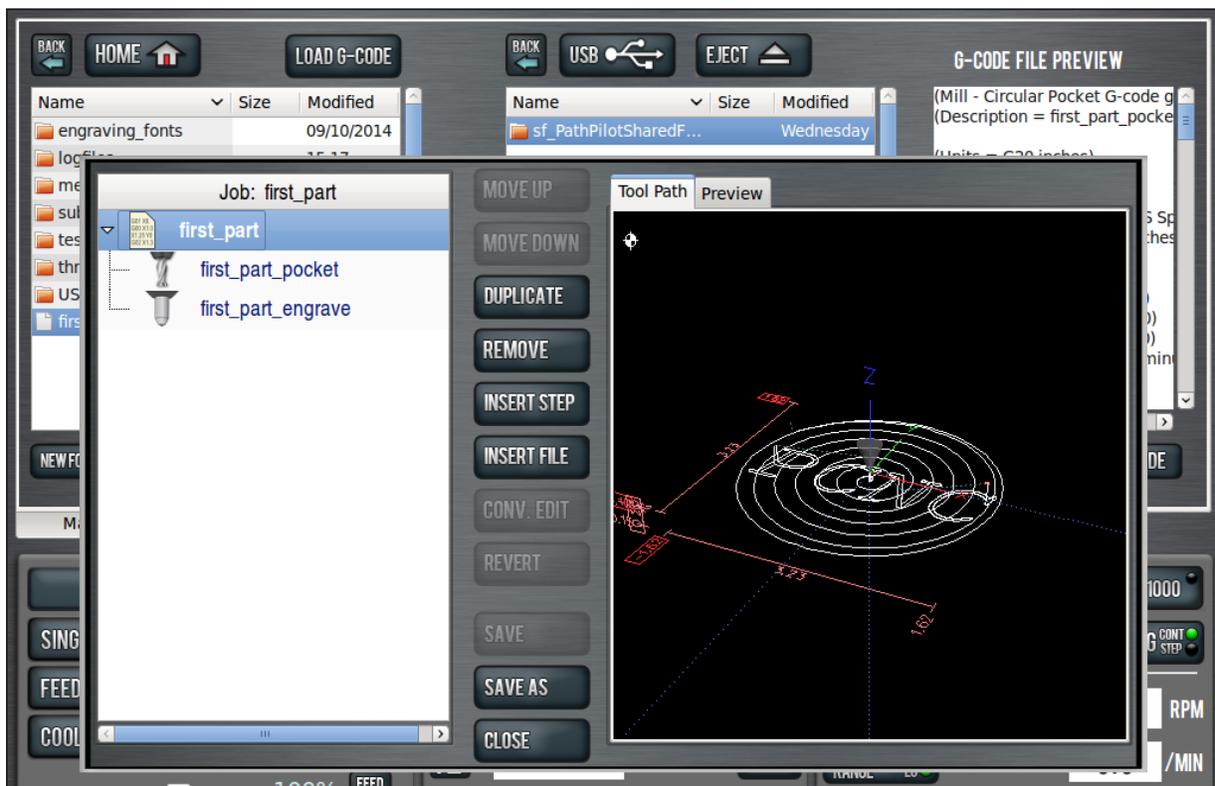


Figure 3

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Updating Software

NOTE:

Updates do not need to be applied sequentially. Simply download latest update file to be completely up-to-date on the PathPilot operating system.

1. Download most recent PathPilot update file (vX.X) at www.tormach.com/updates
2. Transfer the PathPilot update file to a USB drive.
3. Insert USB drive in any open USB port on the PathPilot controller.
4. With the PathPilot controller on and out of *Reset*, click *Update* on the *Status* tab (see **Figure 4**).

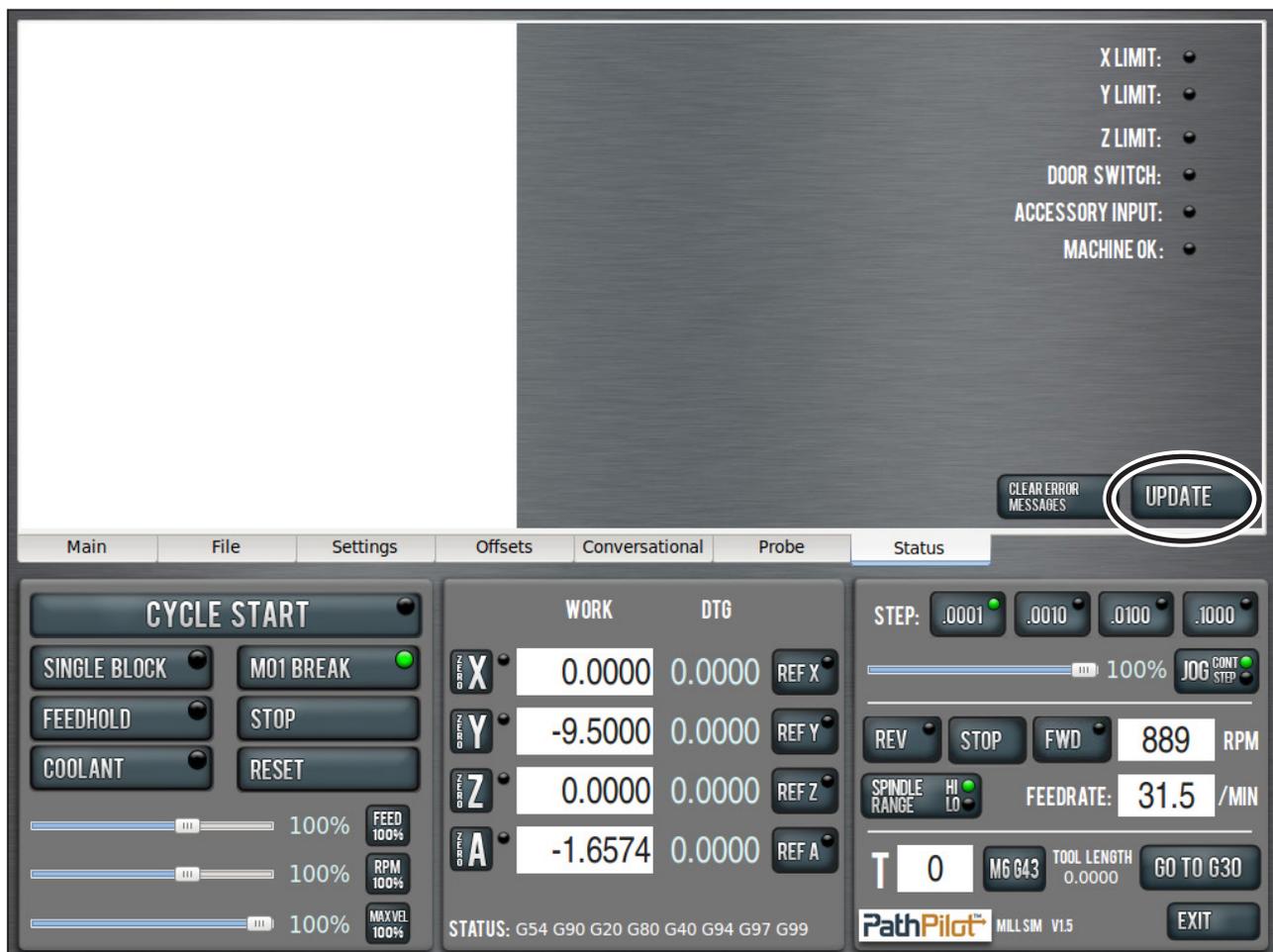


Figure 4

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5. Navigate to the PathPilot update file (vX.X) on the USB drive; click *Update* (see **Figure 5**).

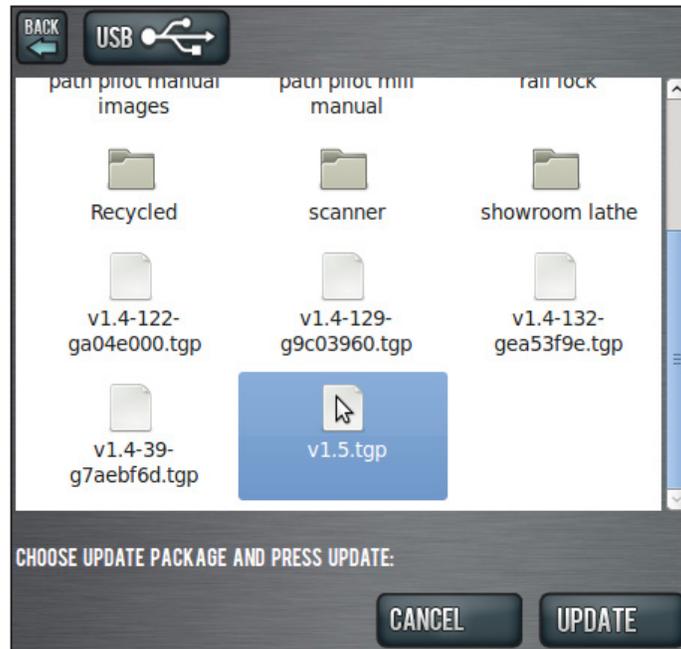


Figure 5

6. When prompted, push red E-stop button (see **Figure 6**) and click *OK*.

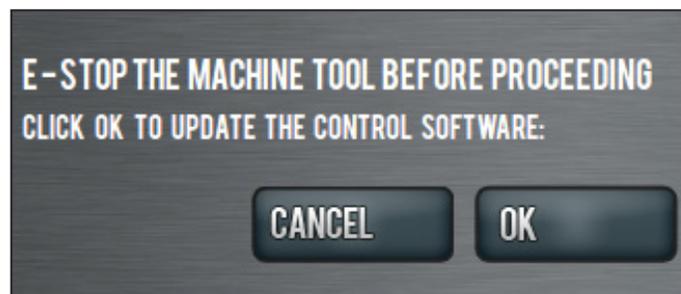


Figure 6