



Enabling Your Ideas

Technical Document

File name: TD10072_PCNC1100_ATC_Machine_Control_Software

Rev: 0813A

Product Identification: PCNC Mills with Automatic Tool Changers

Current Software Install Release: Rel1.3b (Series II 1100), Rel1.2b (Series 3 1100), Rel1.0c (770)

Specification: This document is to track rev changes to Mach 3 for PCNC0 machines that have ATCs installed; it covers Series II and Series 3 1100 mills and all 770 mills.

General Instructions:

1. Download from <http://www.tormach.com/documents.htm>,
2. Open the “Downloads: CAD, CAM, and Machine Software” section, and select **PCNC-1100-ATC Relx.xx.exe** or **PCNC-770-ATC Relx.xx.exe**
3. Run the executable.
4. Reboot the computer after installation.
5. **ATTENTION: Duality Lathe owners:** Updating your mill software will require you to update your lathe software as well. The download for lathe can be found listed with the mill downloads on our website.

Upgrade Instructions:

1. The new installation will delete the contents of the C:\PCNC3 folder. If you have files that you want to preserve in this folder, save them to a different directory before installing the new software. For example, if you have saved G Code files in the C:\PCNC3\GCode folder make sure to save them to a different location if you want to access them after the install.
2. The installation will also overwrite any fine tuning you have done with spindle speed calibration or jog shuttle configuration. This is detailed in chapter 9 of the owner’s manual.
3. Copy the new downloaded installation file to the desk top.
4. Double click the new icon and follow the instructions.
5. Re-boot. **THIS IS MANDATORY!**
6. If you have a Tormach Machine controller, the machine control software (Mach 3) should come up automatically when the computer powers on. Otherwise, to launch the new version of Mach3, click on the PCNC icon with the name “PCNC1100 - ATC” or “PCNC770 – ATC”. Icons associated with previous versions of Mach 3 will not function properly and should be deleted.
7. If your Mach 3 was not launched at computer power up, then you may wish to update the “Startup” folder with this newest version. On most systems the “Startup” folder can be found here: c:\Documents and Settings\user (... or mill operator)\Start Menu\Programs\Startup\. If the Startup folder is not found at this location, do a search on the hard drive for this folder.

Changes made to Mach 3 with PCNC1100-ATC Series II Rel 1.4a, Series 3 1.3a, and 770 1.2a

- Fixed frequent occurrence of scripter compile error messages
- New logic prompts user to double check spindle before tray-in operation if drawbar is up and Mach indicates no tool in spindle

Changes made to Mach 3 with PCNC1100-ATC Rel 1.3b, 1.2b, and 770 1.0c



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- DROs on offsets screen now accept negative numbers
- Improved diagnostics screen with LEDs for tray sensors, VFD Running signal
- M5 (spindle stop) macro no longer pauses axis motion before stop – ATC will not tray in on a moving spindle.

Changes made to Mach 3 with PCNC1100-ATC Rel 1.2

- You no longer need tool zero to be active before editing the tool table
- Updated version of Notepad++ will work with Windows 7
- Boss Center Point Wizard added
- .TAP files are open automatically with Notepad++
- Updated version of PCNC config with options to change probe logic (active high versus active low) and configure 4th axis homing
- Reset now takes system out of feedhold
- Fixed bug in probing routines that may have caused unwanted Z movement if users forgot to select tool 99 (probe) before running probing routines

Prior Changes: Refer to Technical Document TD31108

SPECIAL ITEMS TO NOTE:

1. For people with a Duality Lathe, you must install companion release PCNCDualityRel2.2b.exe for the lathe. VB changes in Mach3 require an update in the lathe application to avoid errors in the threading Visicycles.
2. Severe limitations in the functionality of G41/G42 remain. This is a known limitation and the Mach3 authors are working on it. We recommend against using G41/G42 until Mach3 can fix this.
3. Any non-Tormach plugins you use must be updated. The internal interface to Mach3 has changed and your plugin author must recompile to be compliant to Mach3 V 3.042.xxx.