

## Centroid Acorn CNC12 v.4.14 Release Notes 3-14-19

- **CNC setup Wizard has been rewritten:**
  - Rewritten to work in conjunction with CNC12 while CNC12 is running and requires Acorn to be powered up, and connected, with good heart beat.
  - Is now launched inside of CNC12 in the utility menu.
  - Will now auto scale to match CNC12 screen size, with options for start-up size in the Wizard.
  - Uses an all new tree style navigation for easier navigation of the various setup menus.
- CNC12 no longer requires the Wizard to run first before running CNC12. The default “bench test” PLC program, i/o map and default “bench test” CNC configuration is loaded into CNC12 upon very first boot up so, CNC12 is ready to run in bench test mode immediately without having to run the wizard first.
- A new CNC configuration “Preference” Menu has been added to Wizard. The new Preferences menu contains controls to allow users to pick and choose their preferences on certain aspects of CNC12 operator functionality.
- Axis Auto Homing with Auto Squaring support added to Wizard with an all new Axis Homing and Squaring menu. The Axis Pairing with Auto squaring Wizard setup menu will now automatically generate Auto Squaring home programs for paired axes based on users selections in the setup menu. With support for HomeAll, Individual Home Inputs, NC or NO switches. Link added to Wizard to the new Axis Pairing setup guide. See Axis Pairing and Auto Squaring Guide for more information on how to use this new Wizard feature click here.  
[http://www.centroidcnc.com/centroid\\_diy/downloads/acorn\\_documentation/paired\\_axes\\_acorn\\_user\\_guide.pdf](http://www.centroidcnc.com/centroid_diy/downloads/acorn_documentation/paired_axes_acorn_user_guide.pdf)
- Eliminated competing English to Metric auto conversions by the Wizard and CNC12. V4.14 Wizard will not Auto Convert values from Inch to MM. Now if user selects Metric, the Wizard expects users to enter metric values. And if the user select “Imperial” (Inches) the Wizard expects the user to enter Inch values. This puts the responsibility for the correct English or Metric values to be entered by the user.  
MM and Imperial Notes:
  - The Wizard default Max Rate, Fast Jog, Slow Jog and Jog increment are Inch values, it is up to the user to set these values to MM values when using MM mode.
  - Be sure to select MM or Imperial as soon as you open the Wizard.
- “Load last job” is now configurable from the Wizard. User can now choose whether CNC12 is to load the last g code part program (“Job”) that was run upon reboot/restart OR load a default “no\_job\_loaded.txt” file that will protect user from accidentally starting the last job when pressing cycle start to set home.
- G28 and G53 can now have a feed rate specified with them use “L” letter code. G28 L25 = move to G28 position at 25 inches per minute. This is useful to control the speed of the return points when used for parking the machine or when used in a g code program.
- Wireless MPG (CWP-4) macro buttons 1,2,3 and 4 now have their own dedicated macros designations and are easily editable from the Wizard. Bonus: this also frees up Auxiliary keys for other uses.
- Park functionality is now controllable by a Macro, user can now override default action with their own custom macro which is editable from the Wizard.
- % feedrate maximum override is now configurable from the Wizard
- % feedrate override minimum threshold to evoke feed hold is now configurable from the Wizard
- Display distance to go DRO is now configurable from the Wizard
- Added axis brake output and logic to Wizard output drop down list for any axis.
- Keyboard jogging legend is now movable dock-able/undockable, minimize/maximize etc.. and printable.
- A 100 KHZ option for step rate frequency in is now selectable from the Wizard. (Useful for lower step rate drives and establishing a baseline while bench testing)
- Bench test defaults to 100khz step frequency for maximum drive compatibility

- VCP now remembers state of spindle range VCP selection. hi, med, low etc after a power cycle or cnc12 restart
- Default limit/home switch wiring on the wizard i/o map now defaults to the preferred "HomeAll" method. HomeAll with NC switches is the preferred Acorn homing method.
- Changed name of "ToolTouchOff" to "ToolTouchOffTriggered" to eliminate confusion over the name.
- Added "ToolTouchOffDetect"
- Active G codes display option is now added to Acorn CNC12 and selectable in the Wizard
- Allow Cycle Start In Run Menu is user configurable. Yes or No to allow cycle start in Run Menu. Adds convenience of being able to start a G code program from the Run menu.
- Probe Detection Wizard input section fixed at Normally Closed. Touch Probe input type "blanked out" in I/O map, input type now selected in Probe setup menus. Wizard probe setting bugs fixed that caused problems for certain probe combinations. Wizard Normally Closed Touch Probe support improvements. See this doc for details. [http://www.centroidcnc.com/centroid\\_diy/downloads/acorn\\_documentation/acorn\\_probe\\_setup.pdf](http://www.centroidcnc.com/centroid_diy/downloads/acorn_documentation/acorn_probe_setup.pdf)
- Acorn Probe Definitions Setup Guide created (and added link to Wizard) for clarification of terminology and shows examples of Acorn Probe hookups. [http://www.centroidcnc.com/centroid\\_diy/downloads/acorn\\_documentation/acorn\\_probe\\_setup.pdf](http://www.centroidcnc.com/centroid_diy/downloads/acorn_documentation/acorn_probe_setup.pdf)
- PLC program "FirstAxisLimitHomeOK" false tripped message after VCP reset bug fixed
- Work Coordinate lockout feature has been added to CNC12. Parameter 45 now controls WCS lockout, see CNC12 manual parameters section for how to use this new parameter.
- The CNC12 error message log (msg\_log.txt) was inadvertently reporting Acorn Free while Acorn Pro was in use. This had no effect on performance, simply reporting wrong software level in the message text file. The correct software level is now being reported by the message log.
- The VCP Aux 8,9,10 and 11 are pre assigned in Mill and Lathe with place holder Macros that are user editable for most any task.
- Mill Home Graphic changed to "generic" graphic that is not machine specific.
- Misc bug and omission fixes, Wizard generic OUTPUT1,2,3,4,5,6,7,8 mcodes now deactivate on Estop, 4 axis true simultaneous added back into Pro Level (was inadvertently left out), M91/92 now "time out" when home switch doesn't clear during the home cycle.
- VCP Limit Switch Defeat button now displays on VCP whether or not user has limit switches defined
- Improvements to the DB25 mapping menu, be sure to check this menu when upgrading and select whether you are using the DB25 or ScrewTerminals for step and direction connections.
- F5 CAM now goes straight to Intercon
- Update DMM dyn2/4 default settings to match required drive configuration. Be sure to choose DB25 in the DB25 mapping menu for DYN2, and "Screw Terminal" for DYN4 in the DB25 mapping menu. (DYN2/DYN4 will be separated in as their own drive type selections v4.18)
- Fixed issue where a resume after a TOOL CHECK would not work if the job was loaded from a USB stick or network location and the file load options were set to copy to the hard drive. A workaround for this problem is to reload the same job from the hard drive location.
- Pressing jog + or jog - on the mpg now sets fast/slow jog correctly the first time.
- Joined USB Xkeys and ShuttleXpress into one drop-down named "USB Operator Control Pad"
- Fixed issue where lube low faults were not working because the PLC source had the program logic commented out.

- Added "debug" start CNC12 icon in the CNCM/CNCT directories that Ping both Ethernet ports before starting CNC12
- Changed "Initializing MPU" message to "Establishing communications with Acorn...". Changed "Please restart CNC12 and then power cycle Acorn.\nPress any key to exit" to "Unable to establish communications with Acorn.\nPlease check Windows Firewall, Ethernet Cable, and Acorn Heartbeat.\nPress any key to exit."
- Manual CSR unintentionally was left out of v4.12 Free and Pro..added CSR manual functionality back into CNC12 Free and Pro
- Added Axis Brake logic to Wizard, so user now has option to control an external axis brake, electromechanical, pneumatic or hydraulic via the Wizard.
- Added BBG Heartbeat LED repeater function to Acorn Power LED
- 4<sup>th</sup> axis VCP Jog buttons added to Lathe
- C axis added back into Lathe Pro which was inadvertently left out of v4.12
- Fixed bug where C axis Jog labels would not show up on VCP
- Manual Paired Axis homing will now instruct the operator to align machine before homing.
- Fixed a bug where labeling an axis 'N' does not prevent movement with the wireless mpg.
- Acorn Free now allows axis 4 gcode movement (single axis)
- CncSkinning documentation now is included in installation and is now located in c:\cncm\CncSkinningDocumentation
- Start button now works in Run menu. Pressing it starts a job, then exits run menu and this functionality is selectable in the Wizard.
- A forced by the Wizard shut down of CNC12 has been removed if there are not plc changes which require a shut down, still it is a good idea to always restart CNC12 after using the Wizard to "pick up" any changes made by the Wizard.
- Only one instance of Wizard can be active at one time in v4.14 to reduce user confusion.
- Wizard now shows live connection to CNC12 and is required.
- Combined both Clearpath drive selections into one choice as both the 800 and 6400 models use the exact same Acorn CNC12 cnc configuration and wiring.