Centroid CNC12 v5.42.05 Release Notes 7-2-26

- v5.42.xx is FREE for all v5.4 License holders

- v5.42.xx works with older (v5.3 etc) licenses as well, you just don't get any new v5.42 features with a non v5.4 license. Bug fixes for CNC12 are always free so your old license will work with v5.42. Please spend a few bucks on a CNC12 License upgrade to v5.4 so you get the new features of v5.4 that will improve your work flow and help us to continue to improve CNC12. Read more about the industries fairest CNC software license policy here: https://www.centroidcnc.com/centroid_diy/centroid_cnc_software_licensing.html

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1.) Major CNC12 Mill User Interface and User Experience (UI/UX) improvements

- Comprehensive Overhaul of CNC12 Mill Graphics/Text/Colors. All new part setup menu graphics, all new probing menu graphics, new touch probe and tool touch indicator graphics

- New features added such as: measure part zero position with a TT, Probe Stylus Calibration menu, TT indicator graphics in the Tool Offset menu, graphical tool check when in run time graphics mode, home program aware homing graphics, new indicator lights for limit switch tripped, smoothing on, keyboard jogging active, feed hold on, frequency modulation on, laser on, laser power modulation with velocity on, pwm mod on, spindle frequency modulation on,

- images are now transparent .pngs which work with most any background color, cnc12 images are user editable as well (if you wish you can change them to what ever you require :-)

- Improved Intercon Mill post processor for better posting of tool height offset in the G code which results in better G code backplots and RTG (eliminates unexpected lines below Z zero on the graph due to tool height offset values not being taken into account at the right time). Note: You can revert to the old Intercon Post processor if you like, to do that we Added a bit (+32) to machine parameter 3 (Modal Tool and Height Offset Control) to revert to the OLD Post processor so if for some reason you want to use the old one you still can.

- Added a new CNC12 Dashboard indicator light section

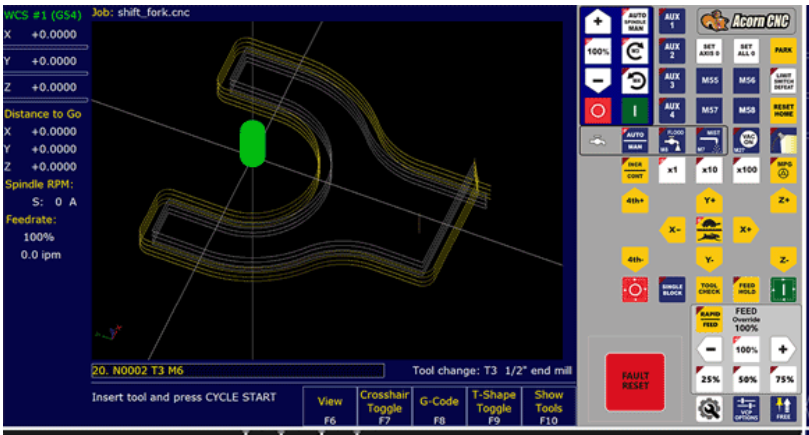
- Improvements to Mill Part Zero Setup Menus

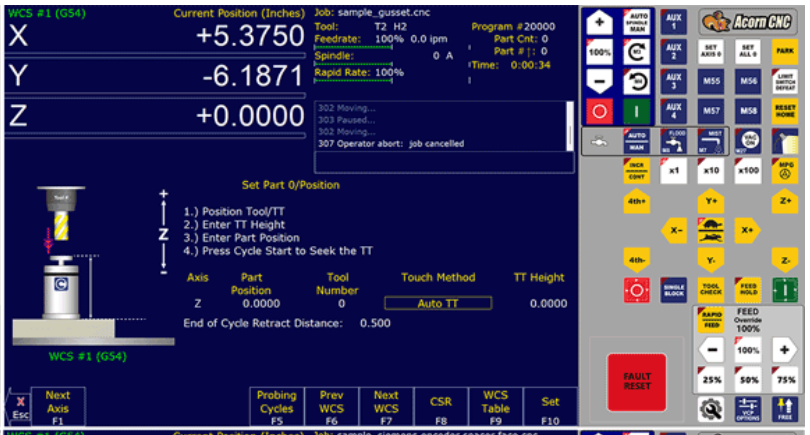
- Added wizard support for @ and M axes

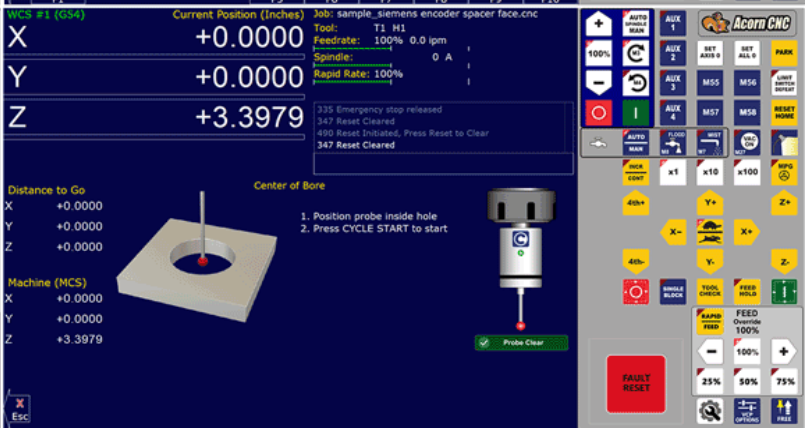
- Creation of Probe Stylus Calibration Menu

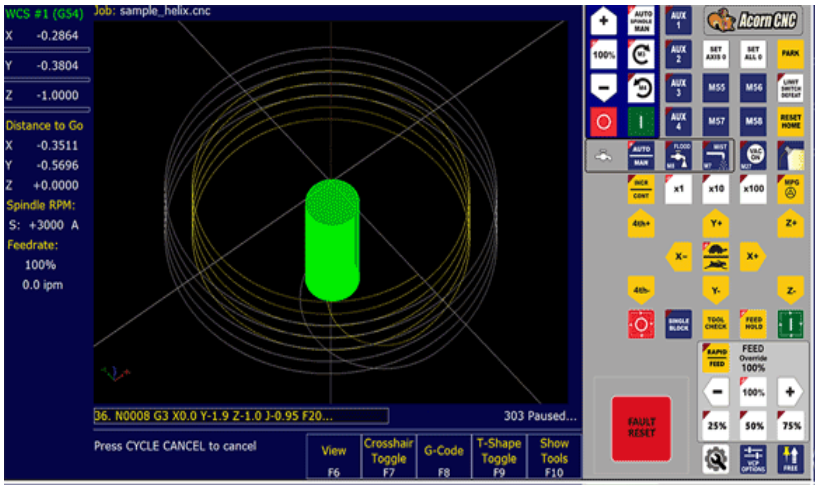
2.) CNC12 Lathe UI/UX improvements

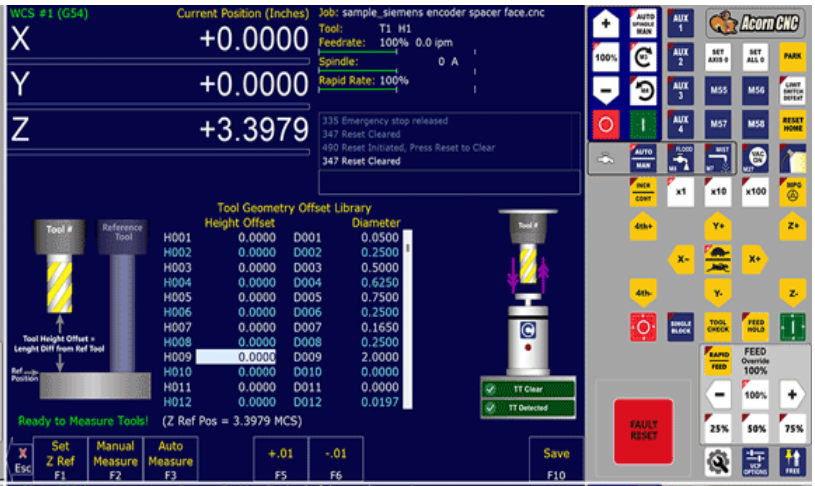
- New improved Homing and other graphics
- Improved color controls for better contrast and UX in all lathe menus
- Introduced Tool Check Return to work more for Lathe can now be a non-Pythagorean movement when resuming a job (P59 bit 2) will move x axis first and then z axis if the tool is marked as ID. Vice versa otherwise

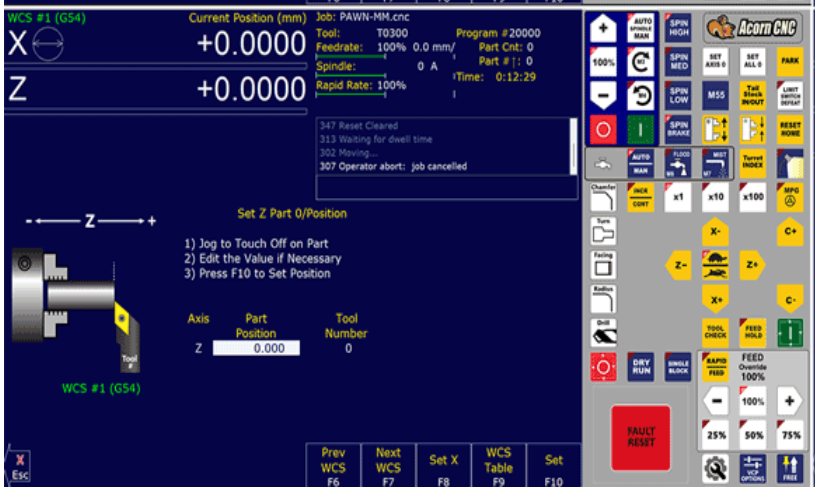






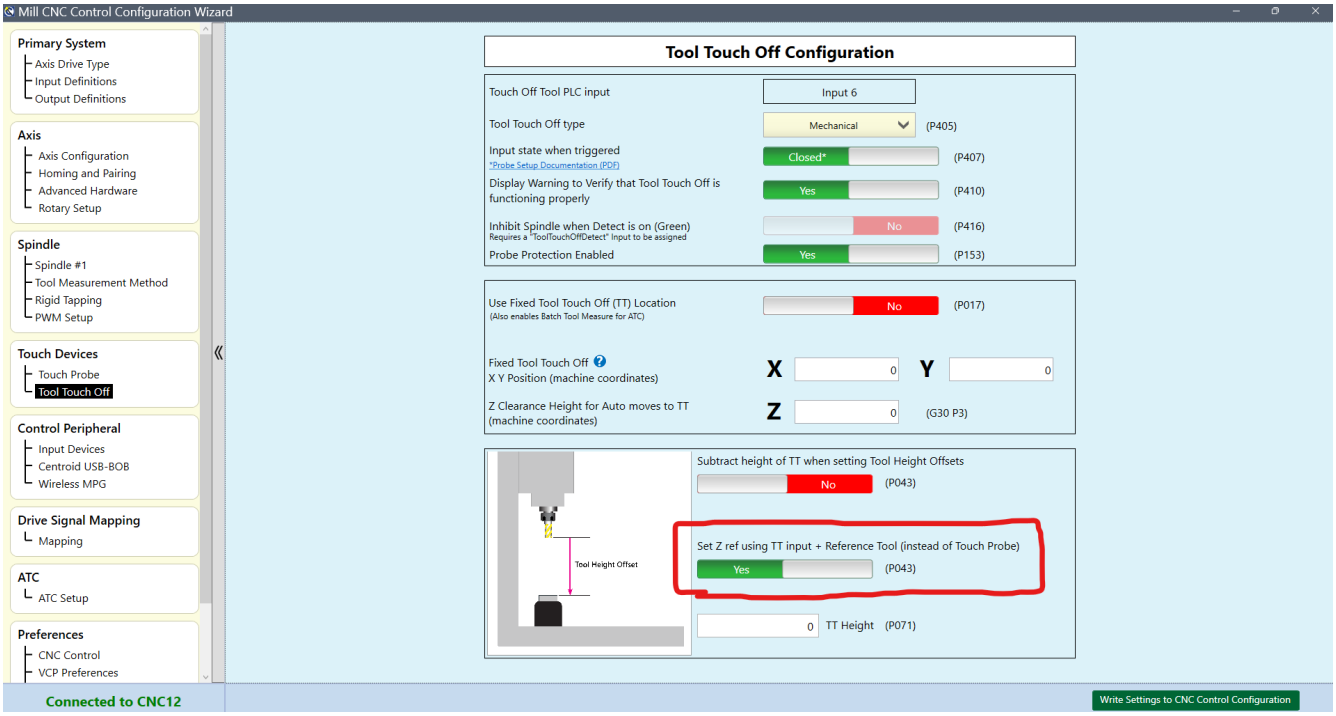






Link to photo album with more v5.42 screen shots. https://photos.app.goo.gl/di6UeLbg35Qi1Ayk9

Added a TT or TP selection to Automatic Reference Position setting when using a Reference tool. Be sure to select which probe (a TT or TP) you'd like to use when setting a Reference Position using a reference tool. You can do this one of two ways 1.) Acorn/AcornSix/Hickory Wizard users can make the selection in the Tool Touch Off Configuration menu -or- using the CNC12 Parameter 43.



The Wizard will Add 2 to P43 value to use the TT (Tool Touch Off) to set the Z Reference Position when this slider is set to Yes.

Wizard adds nothing to P43 value to default to using the TP (Touch Probe) to set the Z reference position. In this case the Touch Probe ***is*** the Reference Tool!

New/Updated CNC12 Parameters for Oak/Allin1DC/Hickory not using Wizard Touch Probe Users. When updating or doing a fresh install it is up to the integrator/installer to adjust all Probing and Tool touch Off related parameters manually when no CNC Setup Wizard is being used! For instance when updating an Oak, Allin1DC, or Hickory (no wizard) systems. Adjust these to your probing preference.

P43 TT for z ref vs. using TP for Z ref. add 2
P44 is TT trigger input #
P257 is TT Detect input #, set to 0 if no tt detect is being used
P410 = 0 to remove optional stop warning for probe function check.

Also, check See and review all probing related Parameters 11-18 and 404-410 before using/testing any touch device.
more details for each are found in the CNC12 operator manuals.

- Bug fixes for all

- Deprecated RunCommand(string command, string cnc12_working_directory, bool require_cycle_start = true) as working directory is no longer required. CNC12 now handles writing of temporary job files

- Fixed bug causing jerky MPG or WMPG movement and position errors at x10 and x100

- Improved Ether1616 communication error event action and reporting.

- Fixed bug where SV_?_AXIS_POWERED system variables (where ? is an axis label) did not reflect the correct axis

- Fixed bug where hitting F5 and F6 simultaneously in the util menu while P4 bit 3 (add 8) was not set would result in the DRO displaying over-top of the Restore Files file selection menu

- Fixed bug where starting a job with 3D-RTG active, pressing "G-code", pressing "Graph", and pressing "Show Tools" would shrink the 3D-RTG graph and expand the F8 Graph

- Fixed bug where nose vector would follow the tool number rather than the offset number in the lathe 3D RTG

- Fixed bug where a slaved 5th axis wouldn't be assigned to the Slaved Home Input in the wizard

- Fixed bug in "Show Tools" where M107 tool prefetch would cause the tool paths to be mislabeled/misassigned on the graph, this bug only occurred with Random Access Tool Changer equipped machines.

- #401 custom error messages will now occur in graph view, if applicable

- Job.RunCommand will error out if temporary job files still exist

- Cycle start from the tool check graph menu will not be stifled by P400 is it is not set to a 1

- Fixed bug where MPG movement would exceed the boundaries defined by limit switches (this fixed bug would show itself on Hickory)

- Fixed bug where Acorn Plasma would require a license to use Software axis pairing

- Added APIBuildRevision and CNC12BuildRevision properties to the API. API and CNC12 build revisions should match while developing applications

- Fixed bug where Restore Report would incorrectly determine a report was not compatible with the current software if a report.txt from an older version of software was present in the report.zip
-Added option to keep last known reference point if reference point set status was lost due to machine unhoming

- Added API call System.CreateReport which will create a CNC12 report in a designated directory

- Keyboard Jogging Active notification moved to indicator board

- Fixed bug where tool offset would follow the tool number rather than the offset number in the lathe 3D RTG

- Removed character limit for messages in the outbound pipe of the API

- Added M2XX message reporting to the outbound pipe of the API

- Fixed a bug where oscillation of the MPG position would prevent jogging, axis switching, etc.

- Fixed bug where M291 required that MPG Offset mode be active in order for it to function properly. This also now resets the offset for all MPGs

- Fixed bug where Hyperlinks in M2XX messages would persist indefinitely

- Fixed bug where MDI would not display M2XX messages as history if a html style tag was included

- Fixed bug where setting skinning words via the API beyond W1 would fail

- Added clearance height to the Z-Axis Part Menu in Mill

- Added new Tool Check Graph Menu. Only available if using 3D-RTG which requires the v5.40 License Upgrade

- Fixed bug where a job loaded from the api would repeat forever because loadcommand.txt could not be deleted due to a file lock

- Added more color definitions for better control of GUI colors

- Fixed bug where Hickory Wizard would set all probes to NC instead of to NO

- Fixed bug where wizard would set a mechanical TT input type to be "Open" when reentering the menu

- Color Picker will now be enabled by default. Centroid 2026 will be the default color scheme

- Fixed bug where the Windows Key would not disable the exclusive focus watchdog in some menus

- Added focusWhitelist.txt which allows non-Centroid applications to be allowed to have focus while the focus watchdog is enabled. This file is read on launch of CNC12. Centroid applications are always whitelisted internally, regardless of their presence within this file.

- PLC Detective: Added search functionality to watch tab.

- Fixed bug where homing order would not be correct when using hardware paired axes after relaunching the wizard

- Fixed bug where "Install over existing" install option would not overwrite old image files in the /bmp folder

- Fixed bug where old router homing image would show up when using autosquaring

- New P322 added. A bitwise parameter that disables the absolute encoder warning that displays when an axis has moved too many counts since the last software exit.

Note that P322 is encoder based similar to P316. Taken from the P316 example:

For example, if the X-, Y-, and Z-axes had absolute encoders and Parameters 308, 309, and 310 were set to the values 7, 8, and 9, then to disable the absolute encoder warning for the X-, Y, and Z-axes this parameter would be set to 448 (2^6 + 2^7 + 2^8).