

Phoenix® Version 7.50.4 Release Notes



Version 7.50.4 Fixes

This release of Version 7 corrects the following items immediately. To achieve this quickly, no additional enhancements have been added to this release. Features that were released in Version 7.50.3 the prior month are described in the remainder of this document.

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| Sensor THC Test lifter button could turn on cut control when “greyed out” | Under certain conditions the Test lifter button for Sensor THC is visible but not accessible. In this state, the text is grey instead of black to indicate that the function is not available. It has been identified internally that if the key is pressed while grey under certain conditions it can unintentionally cause the torch to fire. Additional checks in software have been added to resolve the issue and eliminate these conditions. |
| Intermediate mode operation shows disabled process buttons | Normally when a process has been disabled the buttons are removed from the screen to avoid confusion. In Intermediate mode, the buttons can potentially still be displayed. Additional checks in software have been added to resolve the issue. |
| Incorrect display of Test Lifter button and Timing Diagram Icon | Intermediate mode operation can show the Test Lifter button text incorrectly and removes the Timing Diagram Icon. The software has been modified to correct Test Lifter Text and the Timing Diagram Icon. |

Version 7.50.3 Enhancements

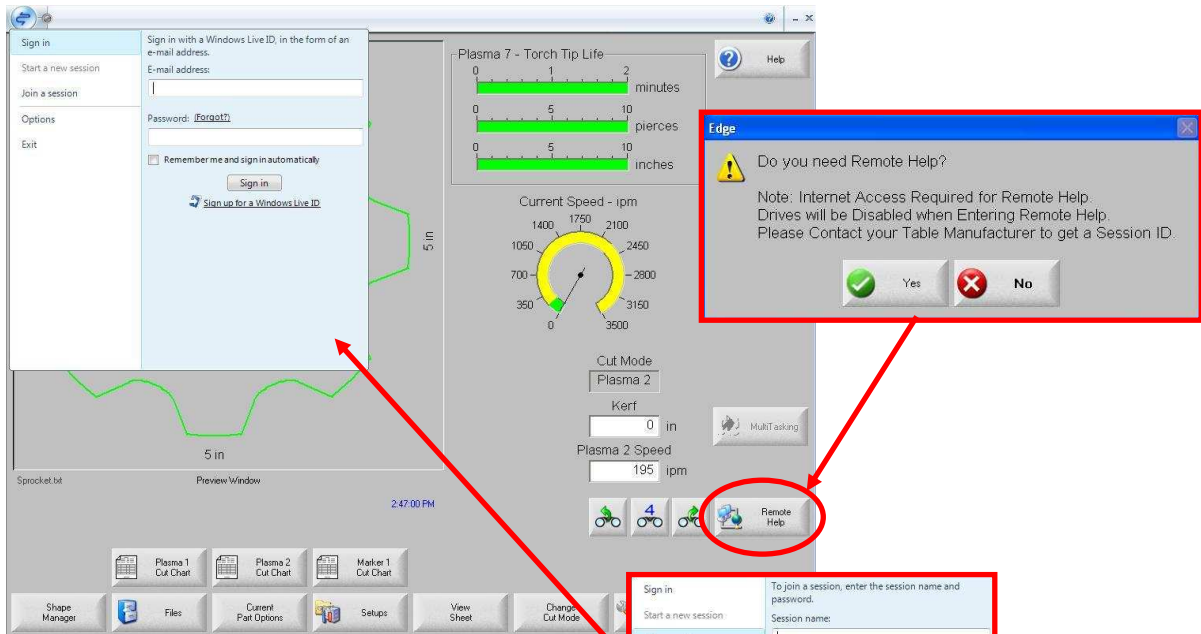
Remote Internet Connectivity for Diagnostics and Training

Support for Remote Help has been added. This utility allows Technical Support contacts to:

- Observe an operator running a machine
- Review software settings
- Exchange part programs and software updates
- Perform HPR diagnostics

Use the blue shift key to access Remote Help.

The operator cannot give control to the remote helper until the machine has been paused or stopped. Feedback is disabled as soon as the remote helper presses any key or mouse button.



To start a Remote Help Session, there must be an internet connection to the CNC. To initiate a session:

- 1) Contact your machine supplier or service agent for a session ID.
- 2) Press the Remote Help key.
- 3) Select Join a Session.
- 4) Enter the session information and connect.
- 5) The on-screen keyboard is optional.

Improved HPR Serial Interface

HPR serial communications have been modified to reduce the chances of HPR overruns and lockups.

The frequency of sleep/wake commands and retries has been reduced to a maximum of every 250 msec.



The retry limit has been reduced from 30 to 3.

When power supplies are disabled, the sleep command is followed by a wake command to prevent PS Link failures.

HPR Error Messaging

Critical HPR error checking has been improved and is performed before motion or part programs are allowed to run.

HPR Error Messages have been improved to include *HPR*, the error code and descriptions.

In addition, errors messages that are displayed on the CNC now include new HPR errors.

HPR Diagnostic Tools

HPR diagnostic tools now support the latest HPR Version T firmware, latest cut charts and last 4 HPR Error Codes Command and diagnostic.

HPR Error History

The HPR Diagnostic screen now shows the last 4 HPR error codes, from left to right with the most recent error code on the left. If there is no currently active HPR Error, the error code to the far left is 0000.

Multiple HPR Dialog Improvements

Additional checks for re-enabling a disabled HPR power supplies have been added. The software now checks for station-enabled HPRs that are PS link disabled, and re-enables them automatically.

The software also now displays a prompt to re-enable any disabled plasma supplies when starting a part program in plasma mode.

HPR Firmware Revision Check

If an HPR is running version 'S' firmware or older, a message now displays to warn that an update of the HPR firmware is needed. This warning is designed to appear if the user enters the HPR Diagnostics screen to view HPR status or errors.

This warning is has been updated to capture all HPR firmware versions that have possible HPR Can or Watchdog Errors.

Support for HSD 130



Created new cut charts and added consumable information for the HSD 130.

DXF Conversion Feature

Added support for the .dxf file format produced by the Corel and Dxf tool

Improved

export functions from CandCNC.com.

Fault Ramp Time Support for Current Type Drives

Support for velocity gain-based fault ramp time if the system is using current loop drives. Now the velocity loop drives the actual velocity to 0 during fault ramp time. No other gain terms are active during fault ramp.

Improved Software Update Features

Users can now perform the following functions without having to reboot the CNC:

- Restore the last version of software
- Upgrade software
- Force software restart after station configuration changes

This support is important for Remote Help because these functions can now be performed while maintaining an active session.

Software Demo

The software demo for PCs no longer requires a Hasp key and is unlimited.

Diagnostic Tool to Simulate Inputs for Technicians using Demo Software

Added "ToggleInput1" password which enables soft key5 to toggle Input 1 On and Off in the following screens:

Align	Cutting
Home Axes	Main Screen
Manual	Manual Options
Pause	

This feature allows Field Service to test customer issues and requests when hardware is not available. "ToggleInput1" Password is temporary, is not retained thru power cycles, and can be used twice in the same session to turn the function on and off.

Easier Viewing and Enabling of Key Log files.

The extension of the key logging files has been changed to .log for easier viewing with a text editor. The Key Log feature is used to view user key presses, system faults and error condition for diagnostic purposes.

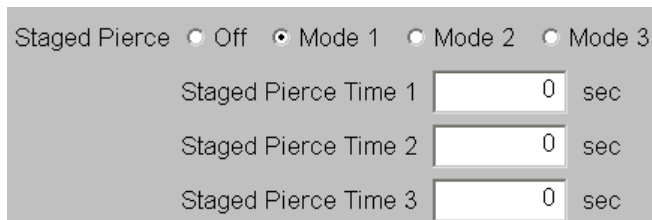
The ENABLEKEYLOG and DISABLEKEYLOG passwords have been added. This allows users to turn key logging on or off if they do not have machine setup (password) access.

New OXY Fuel Pierce Functions

The staged pierce function has been modified to support three modes:

- Mode 1 = Original mode
- Mode 2 = Diagram 1 request
- Mode 3 = Diagram 2 request

Note: This requires specific valve controls for operation.



Improvements to ESSI Speed

In some part programs, the decimal shift is assumed at one or two places

Code Support	for X & Y motion coordinates.
	This feature provides a Speed Code (F code) shift option to allow the user to disable the standard ESSI F code shift. The default is that the shift is enabled to preserve previous ESSI functionality. This option is located in the program codes list box in the setup cut screen.
Sensor THC - Additional Support for Nozzle During Cut Feature	Analog Input Card (AIC) nozzle contact sense 1 and 2 inputs can now be used with the nozzle contact during cut feature in addition to the GPIO – (General Purpose I/O) nozzle contact sense 1-8 inputs.
Improvements to Software Overtravel Feature	Soft limits have been improved to ignore both +/- limits until homing is completed. This allows for coordinate systems that do not include 0 or do not include 0 inside the positive or negative coordinate system. On systems using SERCOS absolute encoders, only a single homing routine is required for X and Y axes. In this case, no additional homing is necessary and the soft limits automatically activate when feedback is enabled for the first time.
	Software over-travels can now be set up to generate a machine fault which stops the part and requires homing (Fault Ramp Time logic) or generates a fast deceleration pause during which the part is not stopped and homing is not required (Fast Stop logic).
Program Support for Burny M Code	EIA translator can now translate a marking, cutting, marking, cutting command sequence when using Burny M codes for marking and cutting, using the following codes: M08 – Marker on M07 – Marker off M04 – Oxy cut on M03 – Oxy cut off M21 – Plasma cut on M20 – Plasma cut off
Plasma Bevel Head Enhancements	Support for rotate hardware over-travels for dual tilt-style bevel heads has been added. Also, tilt and rotate software over-travels for dual tilt bevellers with shortest path M76 are disabled.
Homing Complete Checks	Both X, Y homing and bevel, CBH homing are now being checked to verify that homing has not been paused before the home complete flags are set for these functions. This prevents an operator from running part programs unless the homing functions have been completed without pausing.
Dual Bevel Head Spacing	Support for minimum spacing has changed from 38 to 5 inches for dual transverse. Now that dual transverse can be used without bevel heads, minimum spacing is reduced.

Sensor THC Operational Check

The status message, *No THC's Selected* displays if raise and lower inputs are turned on to Sensor THC's that have not been selected or enabled. This status message displays even if the user is not interacting with the touch screen.

Microsoft Windows XP Service Pack 3

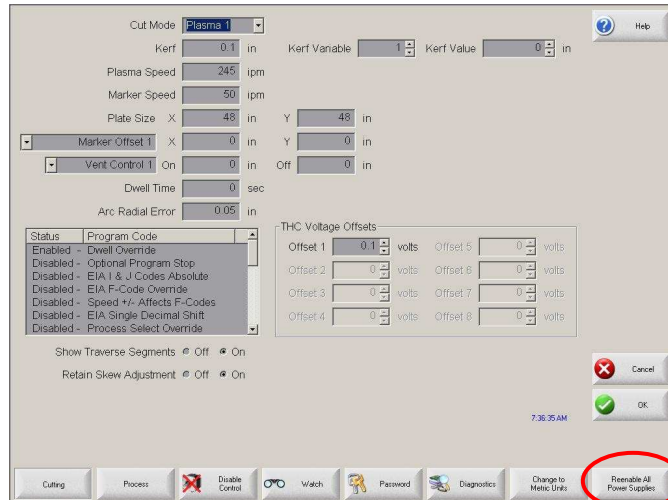
Support for Microsoft Windows XP Service Pack 3 is being shipped on all controls.

Display of Consumable Information for HPR and HD4070 without Requiring a Serial Link

Access to both the cut charts and consumables screens is now available if either an HPR130 or HD4070 is configured in the Station Configuration screen but no serial link is configured.

HPR/HD4070 Link Re-enable Soft Key

The Setups screen now contains a Re-enable All Power Supplies button to re-enable any previously disabled power supplies. This button is only visible and enabled if there are disabled HD4070 and HPR power supplies with auto gas.



New Arc Marker Process

Added support for 50-Amp marking on marker process screens.

Additional Auxiliary Output functions

Added support for Aux Outputs to follow user-defined M codes. Now the first 4 Aux Inputs can follow the state of the M Code commands if the Aux Inputs are off or not defined, as shown below:

- M63 – User Defined 1 On
- M64 – User Defined 1 Off
- M54 – User Defined 2 On
- M55 – User Defined 2 Off
- M56 – User Defined 3 On
- M57 – User Defined 3 Off
- M58 – User Defined 4 Off
- M59 – User Defined 5 On

All other Aux Function I/O commands are set up so the Aux Output follows the Aux Input.

Optional Cut Loss Logic for Multi- Plasma Torch Applications

A Stop on Single Arc Lost setting has been added to the Setup Cut screen. If this new setting is enabled, any Cut Sense Input that is lost for longer than the arc off time during the cut pauses the part program or nest with a Cut Sense Lost message.

Capacitive Oxy Height Control Improvements

Added support for the use of both Sensor OHC and non-OHC lifters. If this configuration is being used, stations must be defined and used using Station Selects, Auto/All Selects, or Manual Selects.

Important: Sensor OHC and non-OHC lifters or stations cannot be used at the same time.

Added support for forward and backup on path inputs for use with other types of front panels and remote pendants.

Version 7.50.3 Fixes

	<p>When pausing and resuming on pierce-only segments, when CutOn and CutOff commands are back to back, the system now forces the CutOff command to be re-executed after resuming.</p>						
HD4070 Clear Error	<p>The Clear Error button is not available for HD4070 applications. The function of the button is no longer blocked in applications that do not use the HD4070.</p>						
Check added to Avoid Fatal Error	<p>Exit instance checks have been added to the worker thread loop to prevent occasional Phoenix errors when the user exits.</p>						
HPR Serial	<p>HPR PS link fail now re-acquires the link for a single HPR link, if the HPR power has been cycled.</p>						
Safety Checks for the Test Drives and Motors Diagnostic Screen	<p>Checks have been added to turn off drive and motor tests that are running when a user presses Estop. This command prevents motion jumps that occur when Estop is released and the system attempts to complete the drive test.</p>						
Correction to Detect Proper Program Code Translation	<p>The system now makes an additional check for M02 or M30 after % signs to prevent switching into LTEC program mode.</p>						
System Check to Avoid Issues created when Multiple Pause Inputs Become Active	<p>If multiple remote pause inputs happen simultaneously, the system now only allows the first Remote Pause command (F10 key) to be issued. The remote pause inputs that are affected are:</p> <table><tr><td>Torch Collision</td><td>Safety Mat</td></tr><tr><td>Fast Stop</td><td>Soft Limits</td></tr><tr><td>Beam Path Interlock</td><td>Remote Pause</td></tr></table>	Torch Collision	Safety Mat	Fast Stop	Soft Limits	Beam Path Interlock	Remote Pause
Torch Collision	Safety Mat						
Fast Stop	Soft Limits						
Beam Path Interlock	Remote Pause						
	<p>Important: Machines must be wired so that multiple inputs are not possible for a single event such as torch collision; only a torch collision should activate the torch collision input.</p>						
Additional Checks for Cut Process When Entering Manual Rip Cut Mode.	<p>Oxy or Plasma 1 modes are now set properly when the Manual screen opens and Rip Cut mode is active.</p>						
HPR Error Messaging Check	<p>Added 2 loops to check station-enabled HPRs, then all HPRs for an error code to prevent incorrect HPR error messages from being displayed, especially in multi-drop mode.</p>						
Contour Bevel Head (CBH) Jog Error Correction	<p>CBH jog motion has been improved to prevent THC motion on axis 5 or 6.</p>						
Screen Title Display Correction	<p>CNC software has been improved so that if you change your process and enter the change consumable section the process title as well as the consumables picture and part number now display correctly.</p>						
Loss of Update Software Button Corrected	<p>The Update Software button is no longer greyed out after a recent letter or alpha version update.</p>						

**Correction for Multiple HPR
Serial Link Support**

The Hold Ignition Off command has been added to multi-dropped power supply checks in plasma state machine lower torch state.

In addition, the marking lower torch state has been updated to be consistent with the plasma lower torch state in which the multi-drop power supply check precedes the preflow checks so that the spirit supply types are consistent in both marking and plasma state machine checks.

**Unintentional Activation of the
OEM Timer Limit**

The OEM limit timer is no longer set to 0 when a password is entered to increase the number of axes.

Also see Tech Memo #60.

THC Raise / Lower Fixes

Raising or lowering torch, or blue status messages are now shown in the manual window even when the system is not in trial mode.

Raise and Lower THC Watch buttons now properly handle error conditions when the THC is not homed. The software now displays messages about the THC at the top and bottom of slide and subsequent raise/lower button presses.

**Loss of Process Timer
Buttons during Multi-Task
Function**

The order of window updates has been changed when the Cutting screen is displayed after multitasking is switched off. If a Preheat or Pierce cycle is still active, the Extend, Set Now and Release buttons are still displayed.

Soft keys are no longer greyed out for the first part if you pause during multitasking.

**Password Access Option
Incorrectly Displayed**

Passwords buttons are now disabled if a part program is active and paused. Shift key access to passwords is also disabled. Password buttons are also now disabled during multitasking.

Teach Trace Watch

Large position middle Watch Window is now hidden for jog keys in Teach Trace.