

# Genesis 2.0 Software Revision Log

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## New Features

Version 4.20.0

### Improvements

1. Remote stop and programming compatability with pairing code
2. Additional information on firmware download

### Fixes

1. WiFi scan with a large amount of networks
2. Log file cost adjustment

Version 4.19.0, 4.18.0 - Development releases

Version 4.17.0

### Improvements

1. Fast recovery during a hold setting

### Fixes

1. Improvements to the WiFi communication library

Version 4.16.0 - Development release

Version 4.15.0

### Fixes

1. Firing seconds adjustment

Version 4.14.0

### Fixes

1. WiFi status page updates

Version 4.13.0

### Improvements

2. Change firmware update process to show old and new versions during download and check. Will complete install without additional key press.
3. Added additional information to log files.

### Fixes

1. Log start of hold after down ramp.
2. Fix cone correlation stage moving with the segment when adding or deleting segments from custom program.

## Version 4.12.0

### Improvements

1. Add total firing time to diagnostics
2. Increment firing counter on start (previously incremented after firing had been running for 5 minutes)
3. Non-firing errors added to log file

### Fixes

1. Thermocouple specific corrections
2. Fix for long hold during touch calibration process
3. Zone control error adjustments

## Version 4.11.0

Internal Release

## Version 4.10.0

### Improvements

1. WiFi improvements and prevention of connecting to incompatible networks

### Fixes

1. Download firmware text formatting

## Version 3.2.0

1. Allow glass profiles to be edited in the custom menu with Novice Mode off. To Edit, load a Glass program then press Edit -> Graph -> Table.

## Version 3.3.0

1. Added Relay Health to Menu -> Diagnostics -> Relay Health. Measures the number of on/off cycles of the kiln's relays. Can be reset when the relays are replaced.
1. Added Cost Setup for 3 zone kilns to Menu -> Configuration -> Cost Setup. Input cost per kilowatt hour and wattage for each zone the kiln has to calculate the cost of firing.

## Version 3.6.0

1. Added Edit-on-the-Fly for Custom User Programs. During a Custom User firing, the user can make changes to any segment not already in progress.
2. Added Thermocouple Offset adjustments during a firing. Under Menu -> TC Offsets. Allows adjustment of thermocouple offsets during a firing.

## Version 3.9.0

1. Added Customization menu under Menu -> Customization. Allows the user to select which Custom firing profiles are active. Options are for glass, ceramic or a combination of both.
2. Added Lid Switch input to Menu -> Factory Configuration -> Lid Switch. Allows for Lid Switch control. When this is set to on, the controller will shut power off to the elements,

sound an alarm and give a LID OPEN message if the lid is opened during a firing. When this is set to off, the kiln will continue to fire, even if the lid is opened during the firing.

### Version 3.16.0

1. Added "Download Log File" under Menu -> Configuration -> Communications -> Download Log File. Allows the user to export logged temperature data by time intervals. See manual for instructions for how to download the log files.
3. Improved PID control, with adjustable gain under Menu-> Adjustments -> PID Gain. The default setting for PID Gain is 18 for most brick kilns. It should be set from 4-8 for fiber kilns or when using protection tubes. Consult your kiln manufacturer before making changes to this setting.

### Version 3.17.0

1. Added manual entry of Serial Number under Menu -> Serial Number. This is needed for nonserialized controllers to allow use with the Phone App.
2. Added additional 18 Custom User Programs for a total of 30 user programs under Load -> Custom. User programs 1-12 are 32 segments long and user programs 13-30 are 8 segments long.
3. Added logged events (Start of Ramp, Hold, Diagnostic, Percentage of Power, Error Codes, Lid Open, etc.) to Download Log File. Users can now download the log files by time intervals or by event.

### Version 3.19.0

1. Added the Copy function under Edit. The copy function allows the user to copy the loaded program to one of the 30 Custom User programs. The list of user programs will appear when Copy is pressed.
2. Changed Download Log File to Export Log File under Menu -> Configuration -> Communications -> Export Log File. The function is the same.

### Version 3.22.0

1. Added Manual WiFi setup which allows for manual input of a hidden WiFi network. Found under Menu -> Configuration -> Communications -> Manual WiFi Setup.
2. Additional diagnostic data added to the data collection to track the percent of power used by each section or zone of the kiln.

### Version 3.23.0

1. Fixes only

### Version 3.24.0

1. Went to single log file per firing
2. Added program name to log file

### Version 3.25.0

1. Changed timing of temperature below set point error from 18 seconds to 3 minutes to accommodate activities that require door/lid opening.
2. Added automatic gain control for the PID algorithm

#### Version 3.26.0

1. Added thermocouple noisy reading detection

#### Version 3.27.0

1. Internal Release Only

#### Version 3.28.0

1. Added timeout for firmware download
2. Set board error temperature to 180°F as default
3. Added indefinite hold feature
4. Changes to PID operation
  - 3.1.a.Faster control loop timing
  - 3.1.b.Added dampening factor to compensate for high power kiln
5. Removed fan message at complete for Genesis Mini
6. Changed Error 2 timing to 20 minutes to all for long door openings

#### Version 3.29.0

1. Fixes only

#### Version 3.30.0

1. Fixed error off warning message on start after completed firing
2. Update thermocouple type K offsets

#### Version 4.3.0

1. Make last firing status error message clearer
2. Adjustments for firmware download

#### Version 4.4.0

1. Add WiFi icon shortcut
2. WiFi performance adjustments

#### Version 4.5.0

1. Wifi shortcut menu fix for Novice mode.

#### Version 4.7.0

1. Fixed an issue that would sometimes cause the custom program menu list to become corrupted and result in a soft watch dog error.
2. Added option to set program start code to 1 to bypass the start code requirement. Any number from 2 to 9999 can be used as a start code.

3. Fixed an issue that could lockup the wifi operation if the correct response was not received from the servers.
4. Changed WiFi connection method to pick best signal where there are multiple networks with the same name.
5. Fixed an issue that could delay the standard updates from the controller to the cloud servers. Under some conditions the updates were delayed up to 5 minutes.
6. Changed the WiFi status screen to add more diagnostics and improve the layout. Provides additional information for troubleshooting network issues.
7. Fixed an issue where 'Add Time' and 'Add Temp' would change the displayed set point but the output would not correct for the change.
8. Fixed an issues with user changes to the current program step while firing that prevented those changes from taking effect immediately.
9. Added entries to the firing log for 'Add Time' and 'Add Temp' events.
10. Added entries to the firing log for user program adjustments during ramp and hold.
11. Fixed an issue that caused a temporary 3 to 4 degree drop in the temperature reading
12. after initial powerup.
13. Fixed an issue that caused a large drop in the temperature reading at repower.
14. Fixed an issue with delayed start where repower would cause an immediate start.

#### Version 4.9.0

1. WiFi Updates
    - a. Disable WiFi auto connect
    - b. Add enterprise network detection
    - c. Remove duplicate networks
    - d. Added static DNS option
    - e. Reorder menu items
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## Fixes & Operational Changes

### Version 3.2.0

1. Made program settings view only after delayed start is initiated.
2. Fixed insert segment and delete to end, in table edit mode.
3. Fix storage of firing results
4. Change web data collection rates, 30 sec while firing, not firing but temperature above 200 every 5 minutes, else every 15 minutes or if program changed
5. Fix memory mismatch caused by graphing
6. Change max delay start time to 99 hours
7. Added warning if download version is same as current vers

### Version 3.3.0

1. Bad COE value locks up display
2. Can't cancel dialog from restore TCs, cone offset, or glass
3. Edit a segment setting in glass table then graph and it loses the setting

### Version 3.6.0

1. Corrected bad temperature readings if board temp exceeded 150 giving e-d, e-3 or e-2's. Increased cjc table to 180 and limited board temp to 180

### Version 3.8.0

1. Cannot connect to networks with long name

### Version 3.16.0

1. Fixed incorrect glass profiles in novice mode

### Version 3.19.0

1. Fixed problem with delay start in novice mode
2. Fixed problem with slow down ramp causing E-5
3. Fixed problem with slow up ramp causing E-1

### Version 3.20.0

1. Fixed remote start from KISS.

### Version 3.21.0

1. Fixed overflow problem with fast down ramp to below 70F

### Version 3.22.0

1. Updated WiFi libraries

2. Added factory test routines

#### Version 3.23.0

1. Fixed graphing problem for very long firings
2. Fixed cone correlation function for cone 022

#### Version 3.25.0

1. Fixed WiFi scan issue with large number of SSID's
2. Changed down ramp transition to avoid error 2 with 9999 ramp

#### Version 3.26.0

1. WiFi Problem when special characters in program name
2. Fixed download issue with AT&T hotspots

#### Version 3.28.0

1. Fixed cancel button on firmware update screen
2. Adjust touch screen calibration to improve Genesis Mini touch

#### Version 3.29.0

1. Set last error values to 0 during calibration
2. Fixed cost calculation issue caused by PID changes