



# Bigstuff3 GEN4 ECU Firmware Update Procedure

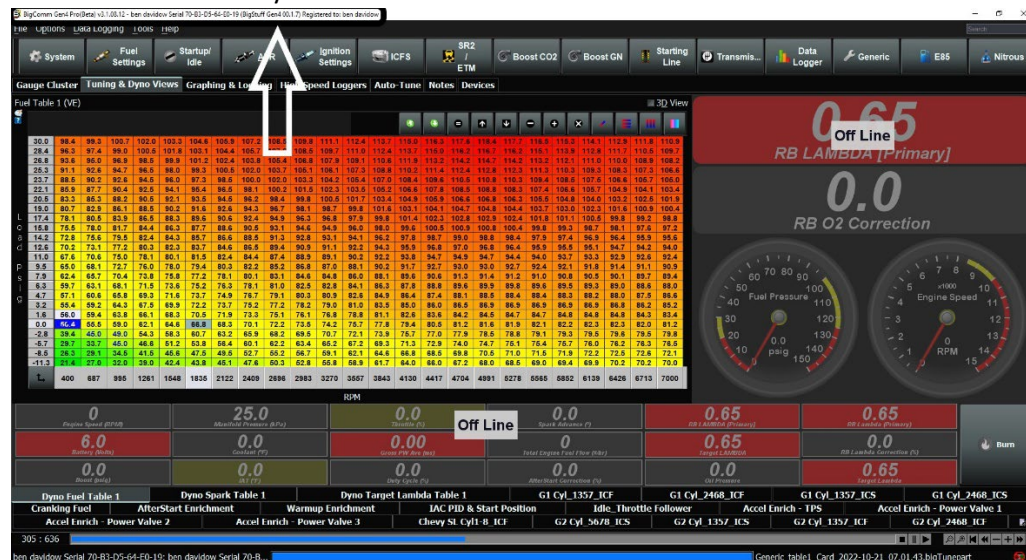
The Bigstuff3 GEN4 ECU firmware update procedure is a very simple process and will update the ECU to the firmware based on which version you are upgrading to. **Please read this entire document** to understand fully how to do this process so you do not run into any issues during the update.

The project in your PC for the ECU you are working with will need the appropriate mainController.ini file in the project in order to work with the new firmware you are going to install. A new mainController.ini file is available at each release of the firmware and will be downloaded for you automatically to the PC if you have internet access after the ECU has been updated. A mainController.ini file is what the ECU uses to ensure the laptop software and the ECU are the correct match for updating the calibration. Bigstuff3 can supply you with the mainController.ini file **BEFORE** you do the update so that there will be no issues during the update process.

If you have any questions about this process, please contact Bigstuff3 **BEFORE** you update so we can make sure you understand how to accomplish the update successfully.

The first step is to confirm which firmware version you have in your GEN4 ECU. In the upper left-hand corner **while working inside your project while online with your ECU** you will see your project name and ECU serial number. Right next to the serial number there is a set of parentheses which will contain your GEN4 ECU firmware version. It will look like (Bigstuff GEN4 00.0.x) with the x being your current firmware version. **IF** you have a 00.0.9 or lower version you will need to update your ECU with firmware version 0 first. Once you are at a newer version than 00.0.9 you will not have to update the firmware twice going forward for future software releases.

See below to confirm your software version ->



If you have a firmware version of 00.0.9 or lower, then you will perform steps 1-10 first and then come back and start at step 3 to get the final firmware version you will be installing. You must install a GEN4.BSF file containing version 0 before you will be able to update the ECU to the higher revision.

**\*IMPORTANT\*** When you download the firmware updates off of our website the firmware file be labeled as GEN4\_Vxx.BSF. This is to indicate which firmware version you are downloading and about to install. You must rename the file to GEN4.BSF by itself before you copy to your SD card. The ECU will only recognize a GEN4.BSF firmware file name and will only start the update process with that firmware name.

**(1)** Go online with ECU using your current project using WiFi or a Ethernet cable and save the current calibration to your project on your laptop.

**(2)** Navigate to the Data Logger section and select SD Card Browser and hit the refresh icon. You will see a list of logs that you can download to your PC if desired. Once you have downloaded the files select all of them and press delete to erase the SD card of all its files. You do not have to download the files on the SD card as you can just erase them if desired.

**(3)** Turn the ignition switch off and remove the SD card from the secondary header connector side of the ECU.

**(4)** Insert the microSD card into your PC using the microSD slot or microSD card adapter. Open the microSD card once it populates on the PC. The card should not be showing any files at this time.

**(5)** Navigate to where the firmware file has been downloaded to your computer. If you downloaded the firmware file off of our website you must rename the file to only show GEN4.BSF. All firmware downloads from the website will have a file name with the current firmware version in it. Once you locate the file and have renamed it to only show GEN4.BSF copy and paste it onto the SD card. **THERE CAN ONLY BE ONE GEN4.BSF FILE ON THE SD CARD.** Go down to the lower right-hand corner of the PC's toolbar and press on the Safely Remove Hardware and Eject Media Icon. Select the SD card by left clicking on it and then remove the SD card from your PC.

**(6)** Reinsert the microSD card back into the GEN4 ECU and listen and feel for the click once it snaps in place.

**(7)** At this time we will need a 12vdc power input to Header 2 Y2 which is not on a switched 12vdc that comes on with the cars ignition switch. We need 12vdc that has constant battery power so that we are applying 12vdc to Header 2 Y2 **BEFORE** the 12vdc ignition is switched on to the ECU. This is in place as the ECU is configured to look for a firmware update file if it sees 12vdc on Header 2 Y2 as it is booting up. If you are not able to provide 12vdc prior to turning on the 12vdc switched ignition to the ECU this update **WILL NOT WORK.**

**(8)** Once you have established a 12vdc power source into Header 2 Y2 turn on this input by applying 12vdc.

**(9)** Turn on the vehicle switched 12vdc input power to the ECU.

**There are a number of ways to know that the ECU is currently updating:**

**(A)** If you are using an electric fuel pump on the low side primary output trigger the fuel pump will **NOT** turn on.

(B) If you have a Racepak UDX or IQ3 dash the display will power up and display all zeros as the current values.

(C) There are two lights on the ECU Ethernet Port on the main engine side of the ECU. The Green LED will be on solid and the orange light will randomly start to blink every 1-3 seconds.

(D) If you do not have any of these ways to check the progress of the update, wait 90 seconds and turn off the vehicles ignition switch as the update will be complete.

(10) Turn off the 12vdc input to Header 2 Y2.

(11) Remove the microSD card from the GEN4 ECU and plug back into your PC. If the SD card folder does not open automatically navigate to the drive and delete the file. Remove the microSD card following the procedure from step 5. Confirm the switched 12vdc is not on to the ECU and reinsert the microSD card back into the ECU at this time.

(12) Turn the switched 12vdc back on to the ECU and go online with the ECU using your choice of connection whether WiFi or Ethernet. The PC's current project will generate a difference report showing all the differences from the factory image to the current project settings. Click on **SEND BIGCOMM GEN4 SETTINGS** which will send all the project data to the ECU. You can watch the download progress in the software in the lower left-hand corner.

(13) Once the calibration download is complete the gauges will start showing values and the PC's project will show that it needs an updated mainController.ini file in order to connect properly. This is a **VERY** important step and the appropriate mainController.ini file needs to be loaded or you will not be able to connect to the ECU. If you have the appropriate mainController.ini file navigate to the area on your PC and copy and paste it into your project. The folder to paste the updated mainController.ini file is located in Windows at:

C:\Users\username\Documents\BigCommGen4Projects\Big Stuff3 Serial 70-B3-D5-64-E0-AB\projectCfg

If you are on WiFi you can also connect to your network and the Bigstuff3 server can automatically load the mainController.ini file when you are prompted to load it into your PC's project.

(20) Turn the switched 12vdc ignition off to the ECU and turn back on once the project shows offline to the ECU. Now when you turn on your ECU it will load the calibration you downloaded and your all set.

**\*PLEASE NOTE\*** If you use another PC after you update the firmware to work on your ECU the mainController.ini file must be the correct match on that PC as well. If you get an error on another PC indicating that the mainController.ini file is wrong do not proceed as you could damage your GEN4 ECU's calibration.

We have a Youtube video explaining this process as well located here ->

[https://www.youtube.com/watch?v=K\\_Tbwk2AP-k](https://www.youtube.com/watch?v=K_Tbwk2AP-k)

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