# bootmod3 user manual

Version 2.4 ● 26 October 2021

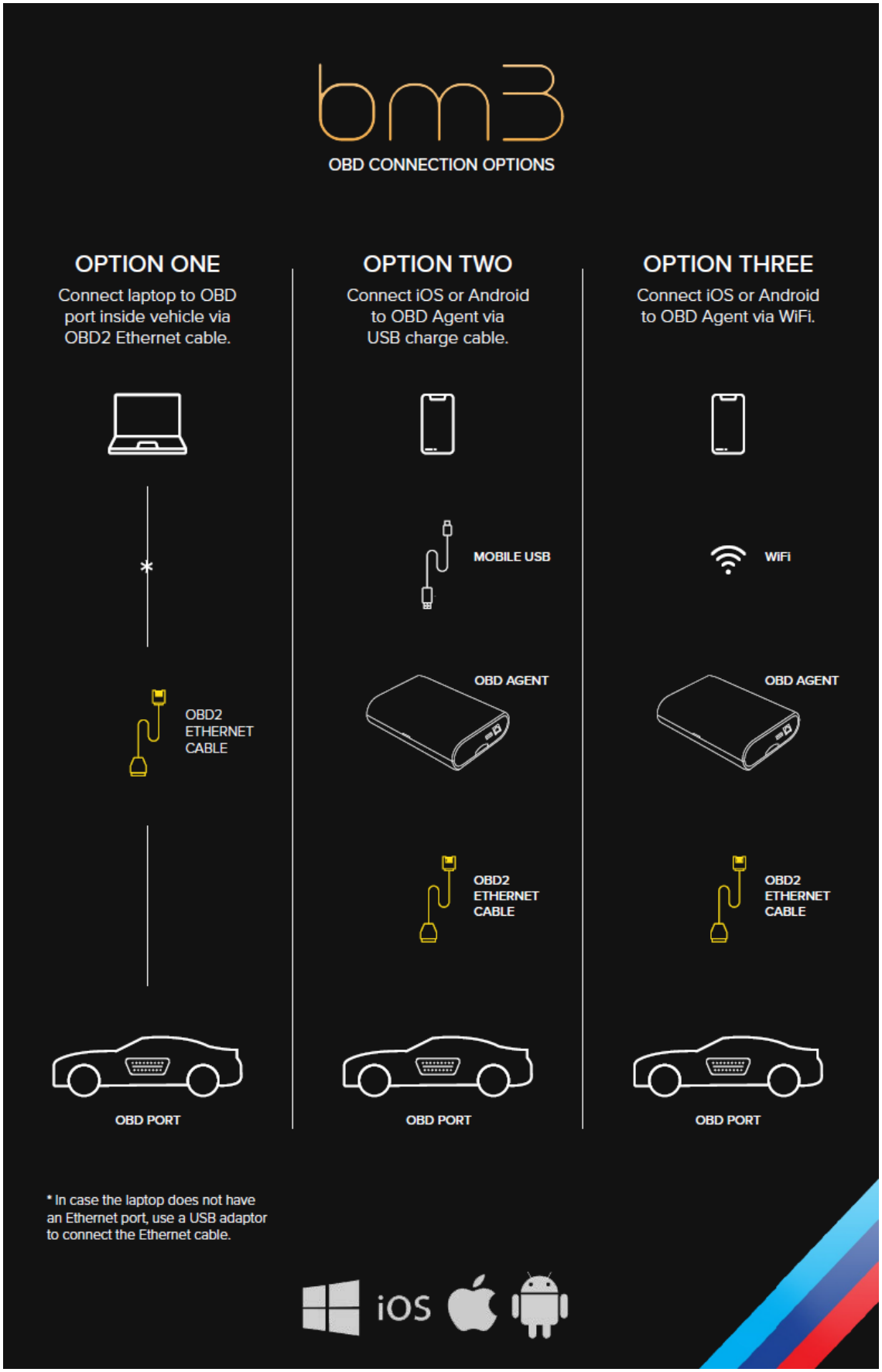
Welcome to the **boodmod3** user manual. **Bootmod3** is the World's first and most advanced BMW F-series flash tuning platform. Here at PTF we have worked tirelessly since 2015 to create a truly unique cloud-based service solution for flash tuning that benefits both end users and tuners in ways prior unimaginable.

The **bootmod3** team is here to support you from the time you purchase your license, during set up, and to answer any questions or concerns you may have using our platform. Please do not hesitate to reach us at sales@protuningfreaks.com or support@protuningfreaks.com. We are committed to making sure you have the best ride possible. Get ready to unleash the BEAST!

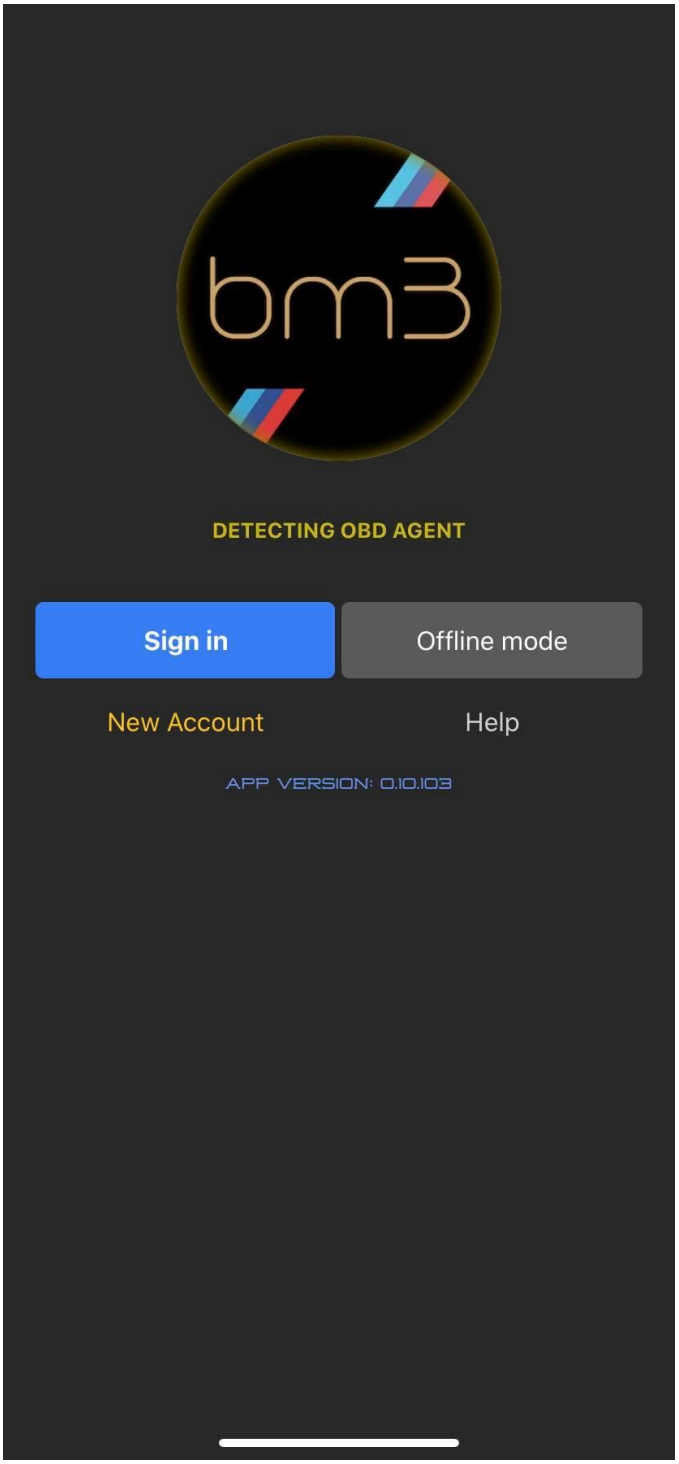
# Revision History

| Date | Version | Description |
|---|---|---|
| October 16, 2018 | 1.0 | Initial draft |
| October 24, 2018 | 1.1 | Appendix Added |
| November 28, 2018 | 1.2 | Further Burble Features Explained |
| January 29, 2019 | 1.3 | Dashboard changes updated |
| January 30, 2019 | 1.4 | Diagnostics screen updated |
| June 6, 2019 | 1.5 | Dashboard changed; map configuration updated |
| October 31, 2019 | 1.6 | Data logs screen adjustment, Map configuration layout, Transmission |
| Nov 4 | 1.7 | Data log config screen added, Startup roar edited. |
| January 28, 2020 | 1.8 | Sign in screen edited, Help Menu added, Tuners sing up edited |
| February 14, 2020 | 1.9 | Map Configuration screen Layout |
| April 27 2020 | 2.0 | Complete New Layout |
| June 1 2020 | 2.1 | EWG and DTC Deactivation added to map configuration screen |
| June 18 2020 | 2.2 | Copy button added to maps, Respond with bin file added to tuner requests |
| September 28, 2020 | 2.3 | Added apple sign in option and HPFP for N63TU/S63TU engine |
| May 11th 2021 | 2.4 | Map Editor, CustomROM added |

# Table of Contents



# 1 Sign in Screen

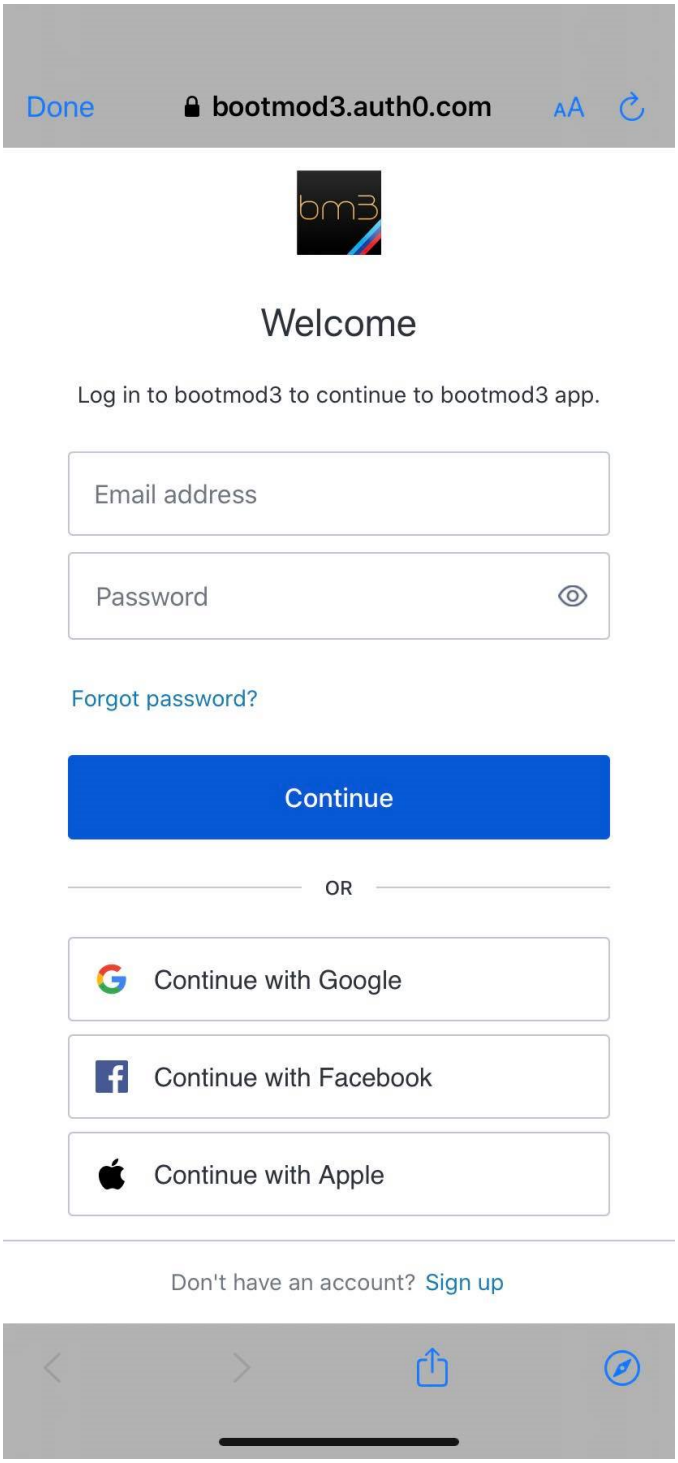



The screen on the left is the first screen that will appear when logged on to www.bootmod3.net or the phone application is opened. This screen can be used to sign in, or to create a new account. By clicking **'Sign in'** or **'New Account',** a new screen will appear (see page 8).

If the OBD Agent is not running in the background **'Detecting OBD Agent'** is what will appear as shown. Once the agent is running, the screen will show a connection including the VIN of the vehicle. The OBD Agent Version and the application version will be visible once the agent establishes a connection. Always make sure both are up to date.

**'Help'** button will be explained in further details in section 15.

**Bootmod3** can also work in offline mode. To enable offline mode, the account must be activated with internet access. '**Offline mode**' button is ONLY active when agent connects to the car (grey until OBD agent connects, then orange for active). Offline mode will be explained in further details, in section 16.



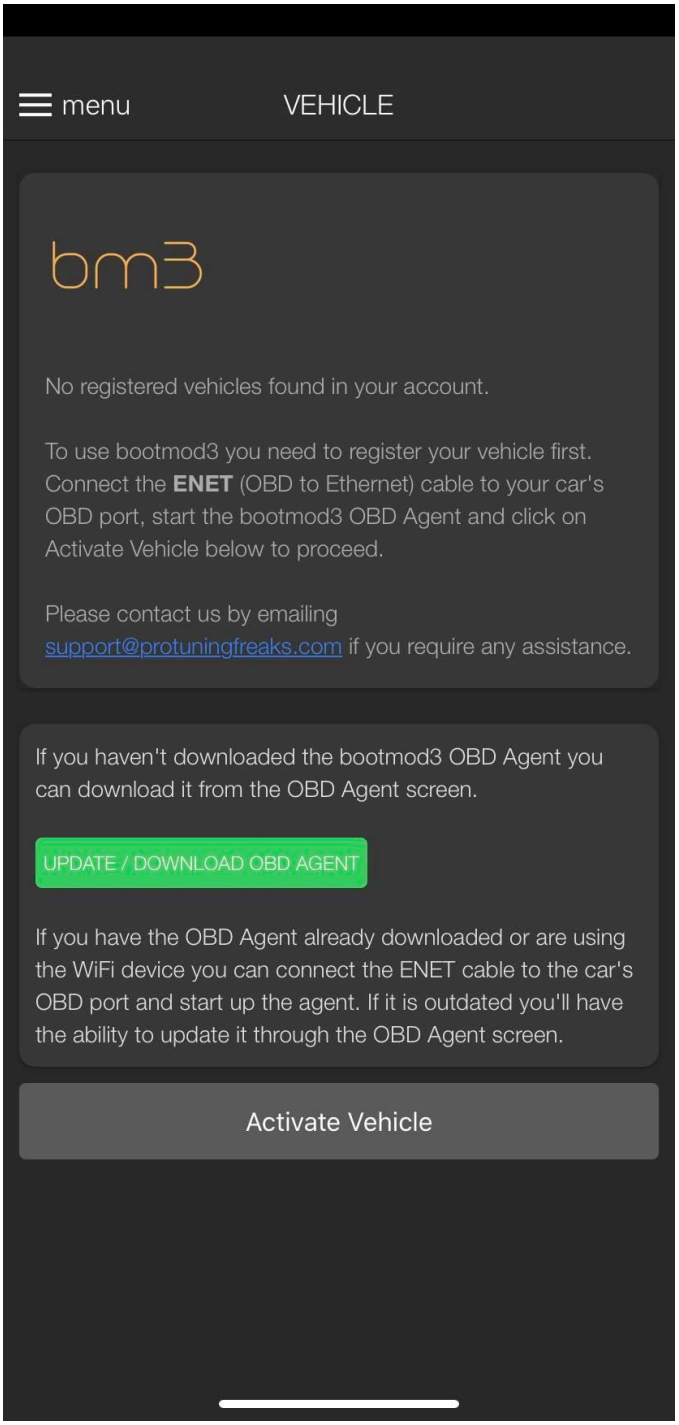

An account can be logged into via Facebook, Google, Apple, or an email address.
**Please note that same log in method will have to be used to access the account.**

To Sign up with a new account, click on the 'Sign Up' tab, at the bottom of the screen and proceed to create the new account.

Once the email address and the password have been entered, click on **'Continue'** to access the account.

In case a password has been forgotten, click on the '**Forgot password?**'. User will need to enter their email address, and we will send an email to reset the password.

# 2 Adding a Vehicle

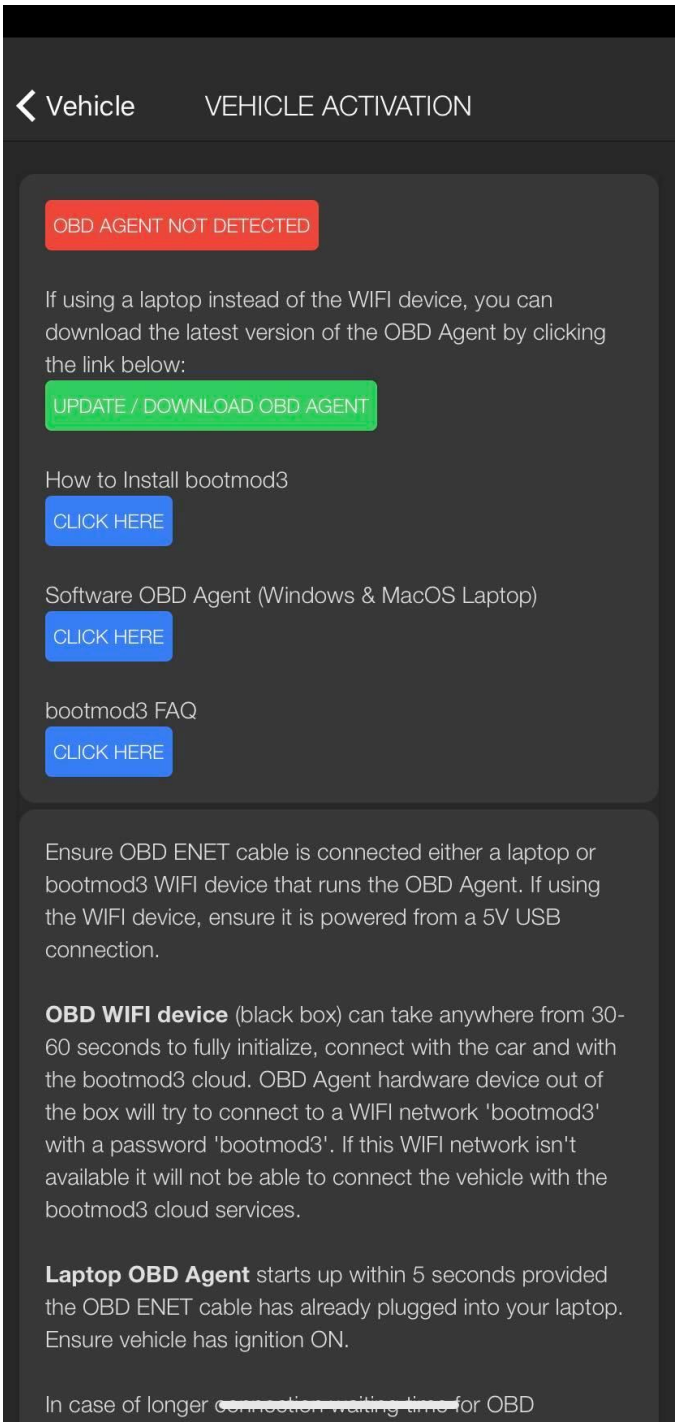



Once successfully logged into the account, the screen on the left will appear. This screenshot indicates that the account has been created and/or logged in successfully, however, there is no vehicle registered to the account.

To use bootmod3, user will need to register a vehicle first. Connect the OBDII ENET cable, to the car's OBD port and start the OBD Agent.

To download the agent, click on the **green** box shown on the screen. The OBD Agent can also be downloaded manually by visiting the website below. www.bootmod3.net/downloads.

By clicking '**Activate Vehicle**' at the bottom, screen on the next page (pg.10) will appear.




This screen indicates that the **OBD Agent** has not been detected.

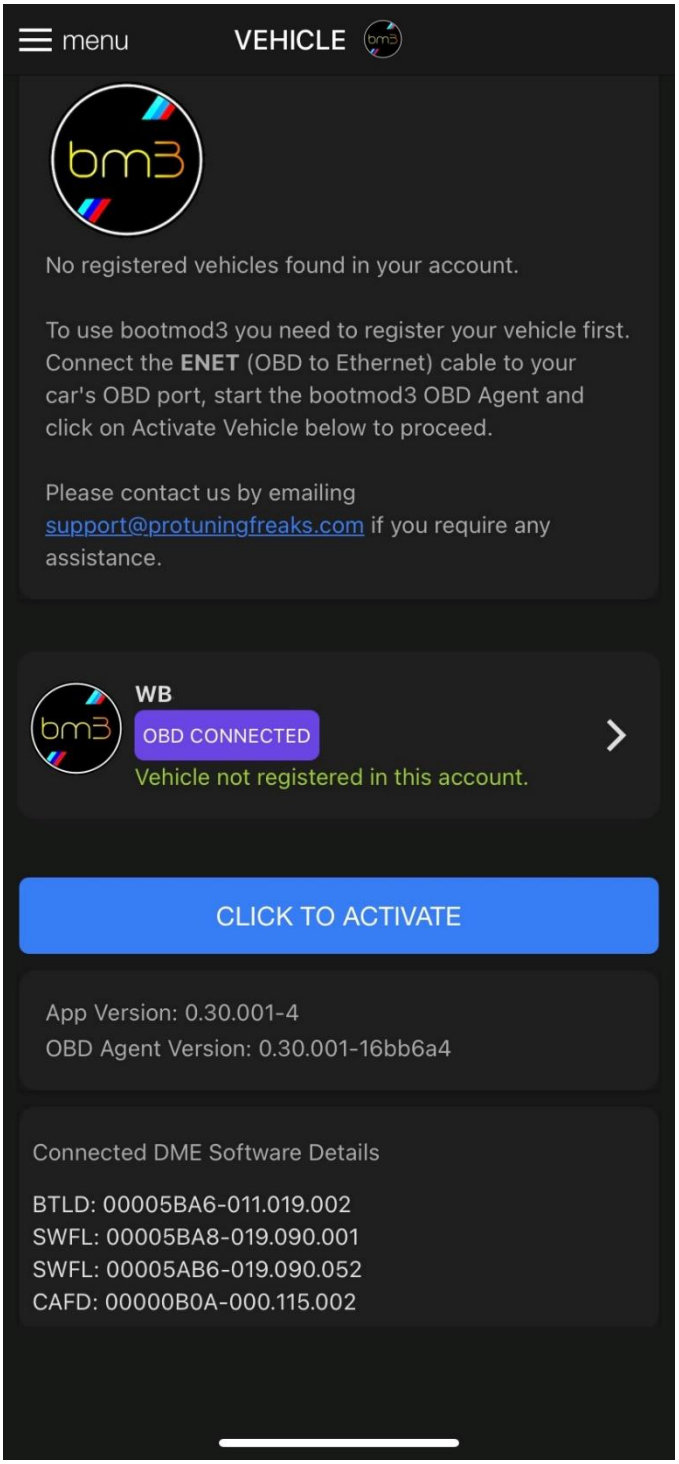
If using a laptop instead of the Wi-Fi Agent Device, the user will be able to download the agent by clicking on the **green** box.

OBD II ENET cable must be connected to the laptop or bootmod3 Wi-Fi Agent that runs the OBD Agent. If using the Wi-Fi device, ensure it is powered from a 5V USB connection.

Below are a few helpful links to get the user started with the installation process.

1. How to Install bootmod3
2. OBD Agent Instructions
3. Bootmod3 FAQ Page

# 2.1 Activating a Vehicle



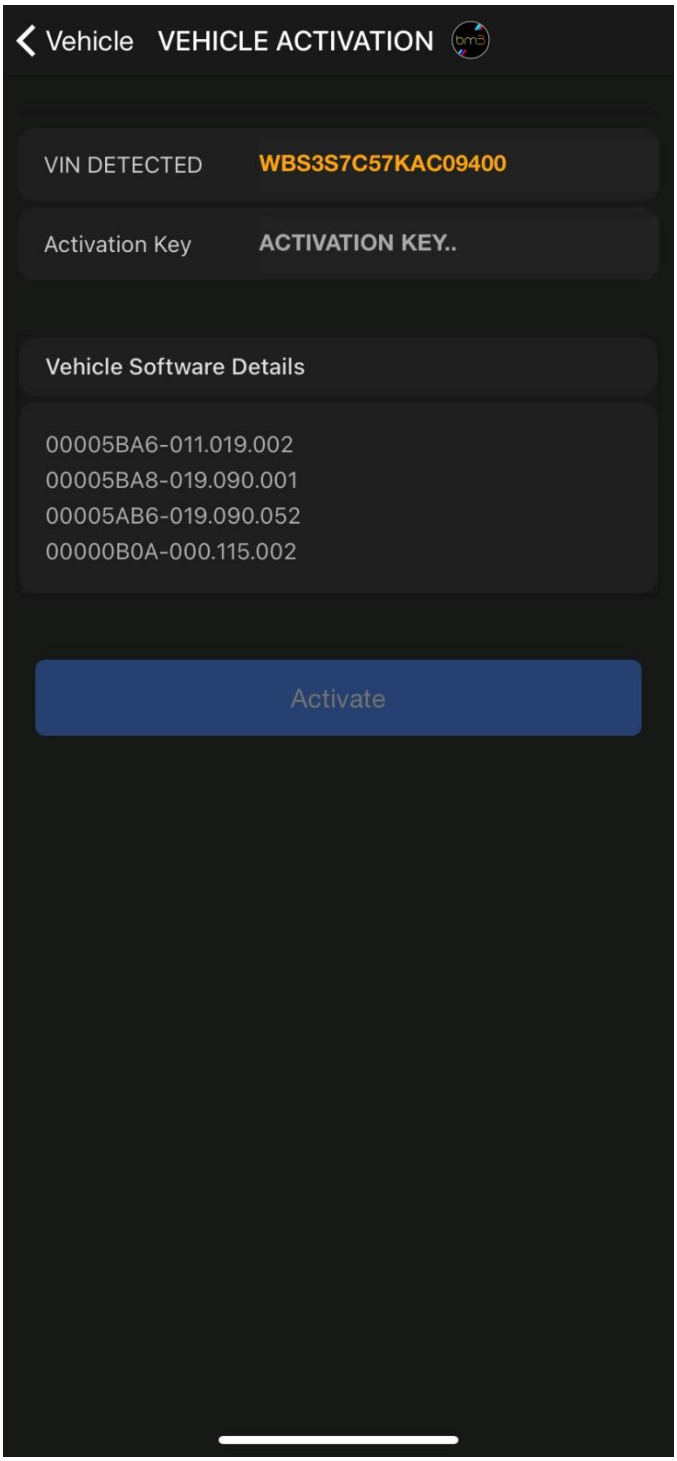

This screen on the left will appear after the vehicle has been successfully connected and the OBD Agent has detected the VIN.

Once an order is successfully processed, a randomly generated activation key is sent to the email provided on checkout.

If for any reason the user does not receive the 'License Activation' email, support@protuningfreaks.com should be contacted for further assistance.

Activation key format is as following:
**20XXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXB7**

By pressing '**Click to Activate**', the screen on the next page (pg. 12) will appear.




Once the vehicle's VIN has been confirmed, the activation key provided in the email is to be entered in the "**Activation Key**" field, below the VIN detected.

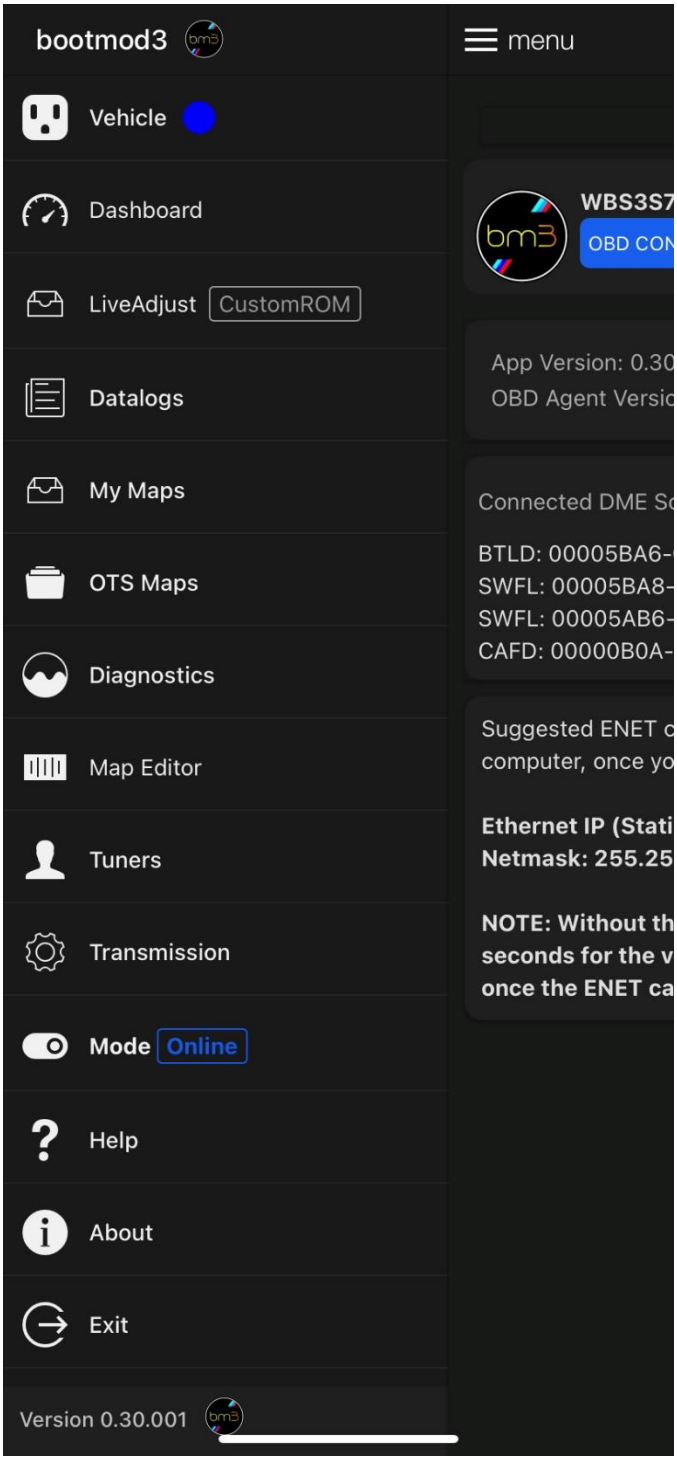
**'Vehicle Software Detail'** must be shown for a successful activation. Ensure the ignition is turned on.

In the case where vehicle software details cannot be identified, please check and ensure the OBDII ENET cable is securely plugged in on both the OBD port and the ENET side.

Once the key has been entered, the user can click on "**Activate**" at the bottom of the screen. After a successful activation, a pop-up "**Success**" screen will appear.

In case of any technical difficulties during the activation process, such as 'VIN NOT RECOGNIZED', or 'DATA NOT SUPPORTED', we strongly recommend reaching out to our support team at support@protuningfreaks.com. For efficiency purposes, please include the order number, full VIN and the screenshot of the vehicle software details in the email.

# 3 Main Menu



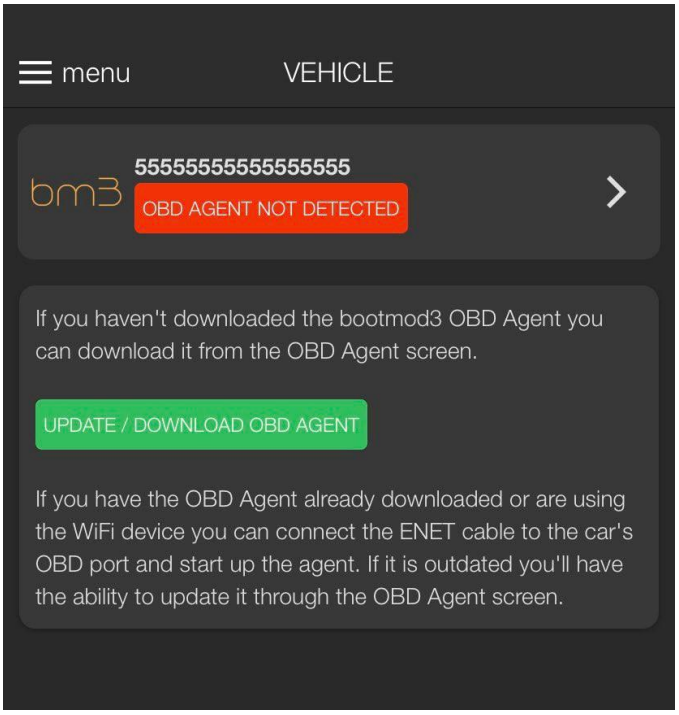

By clicking on the three horizontal lines in the top left of the screen, the **'menu'** will appear, as seen on screenshot.

**Here is where the fun begins!**

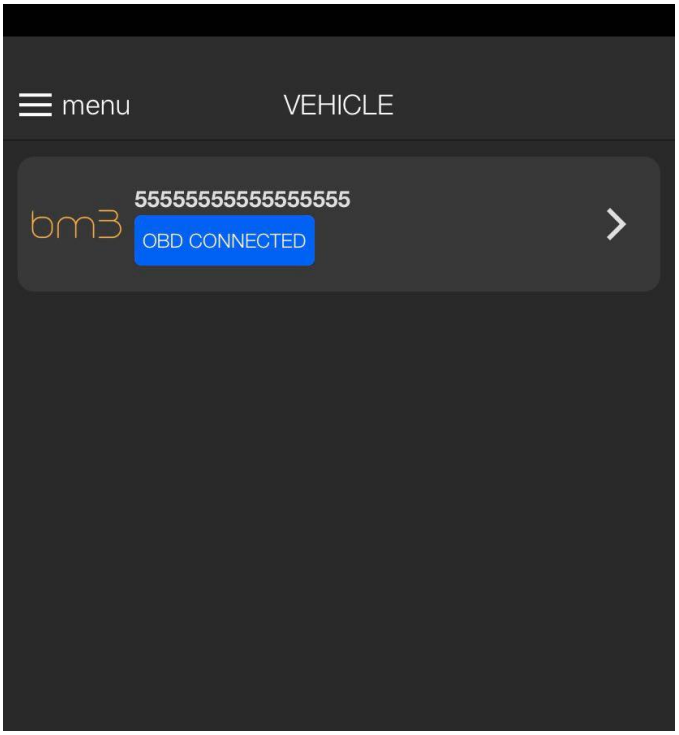
We will explain each sub-menu in detail, demonstrating all functions and purposes.

1. Vehicle
2. Dashboard
3. Live Adjust (CustomROM)
4. Datalogs
5. My Maps
6. OTS Maps
7. Diagnostics
8. Map Editor
9. Tuners
10. Transmission
11. Go Offline Mode
12. Help
13. About
14. Exit

# 4 Vehicle

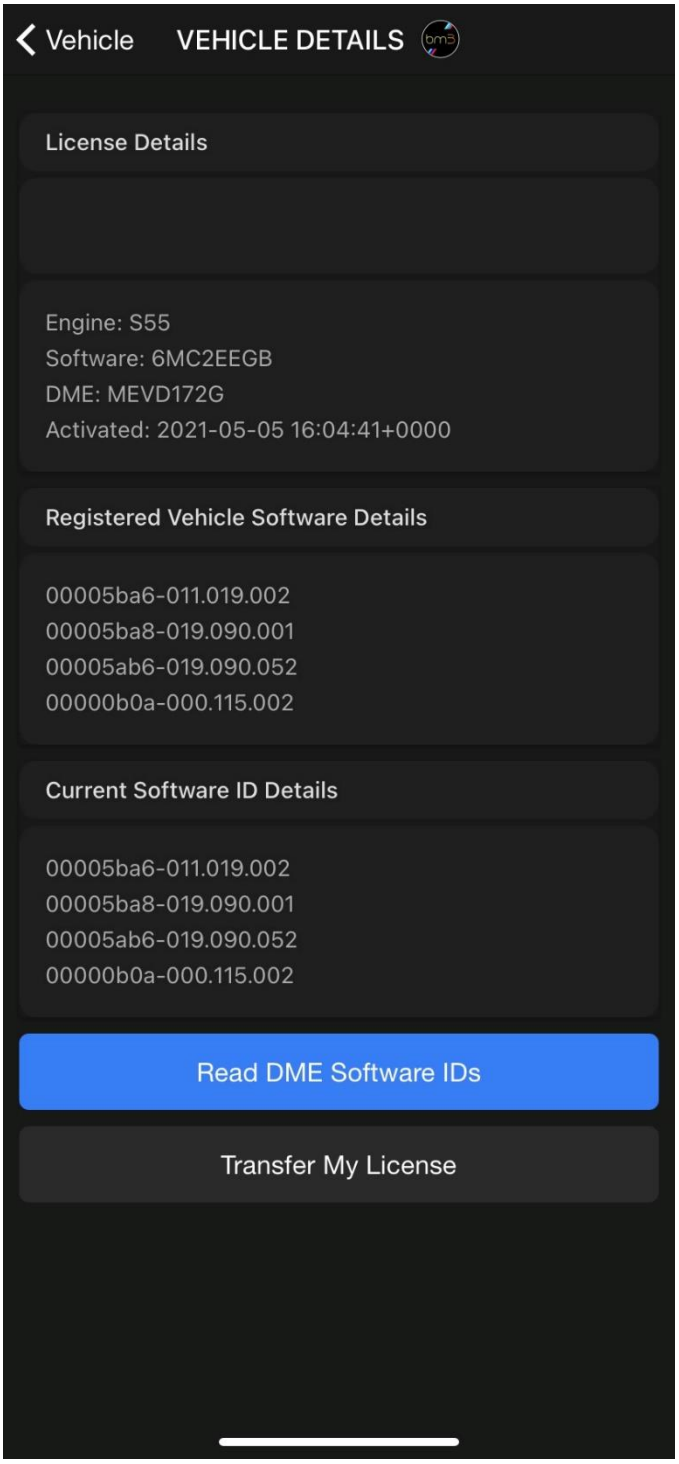



If the OBD agent is not turned on, the red box will appear as shown on the top screenshot. If the OBD agent is outdated or needs to be downloaded, pressing the **green** button will download or update the agent. This only applies for Wi-Fi Agent Device. If using a laptop, the updates of the agent are automatically handled.




Once the connection with the car has been established, the red box will turn blue, and it will say "**OBD CONNECTED**".

By clicking on the arrow to the right of the VIN, the screen on the following page will appear.

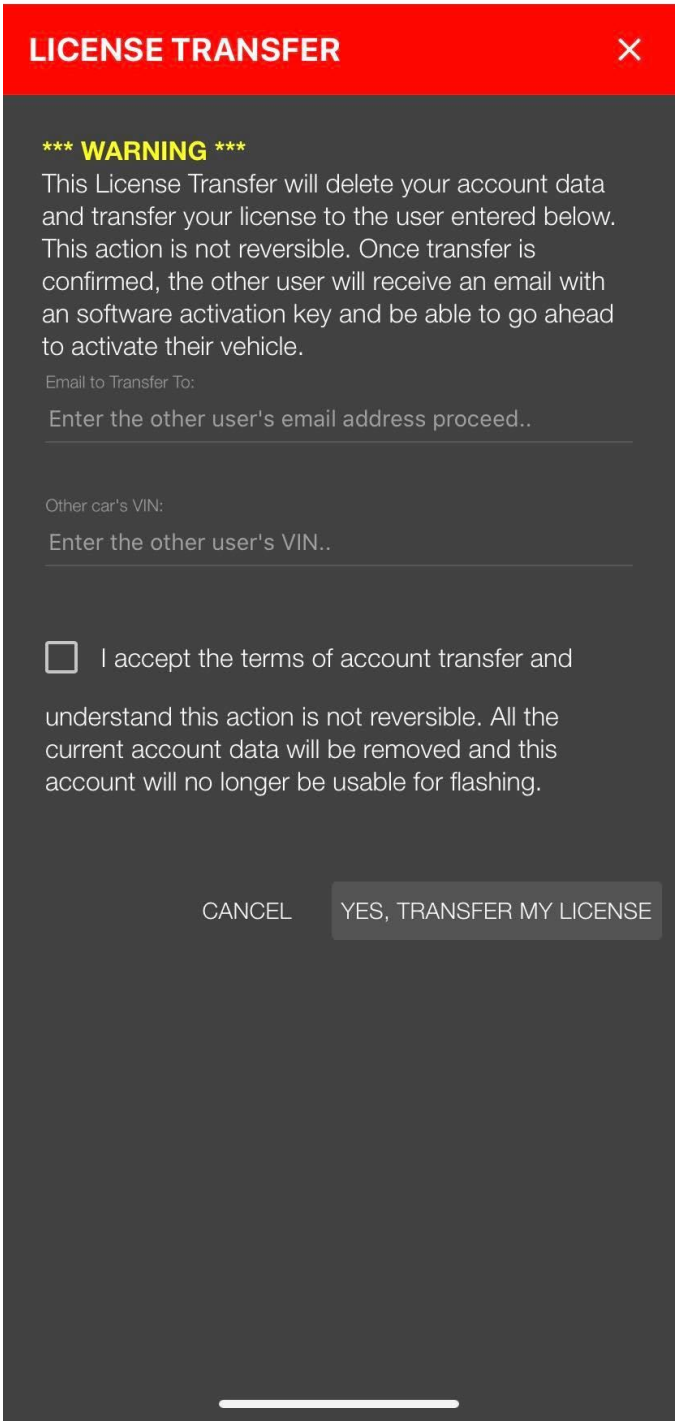



The vehicle details page shows all the information about the registered vehicle.
As shown on the image to the left, underneath the registered VIN, this vehicle is a G-series, B58 engine with the R0C9J754B software.
The DME type is DME86, and the activation date states when the license was activated.

**'Registered Vehicle Software Details'** indicate the versions of software found on the DME.
**Bootmod3** always uses the original software versions that are on the car, unlike some other tools that force all users to use a single version of the software, which causes a mismatch without a way to go back to true stock map, making it more obvious the vehicle had prior tuning applied to it.

**'Current Software ID Details'** represent the current software on the DME and may differ than the **'Registered Vehicle Software Details'**, due to software update (iStep), or if the vehicle has been flashed with another tune using bootmod3 or another flash tool.
Clicking on the **'Read DME Software IDs'** will show both the registered and the current software details.
**'Transfer My License'** is explained on the next page.

# 4.1 License Transfer




Bootmod3 is the only flash solution where the license can be resold and/or transferred by the original owner. Having re-sale value is a great advantage to choosing bootmod3 for tuning which is not available with any other flash tune platform.

License transfer is only available to the original buyer of the software license. It can be only transferred once.

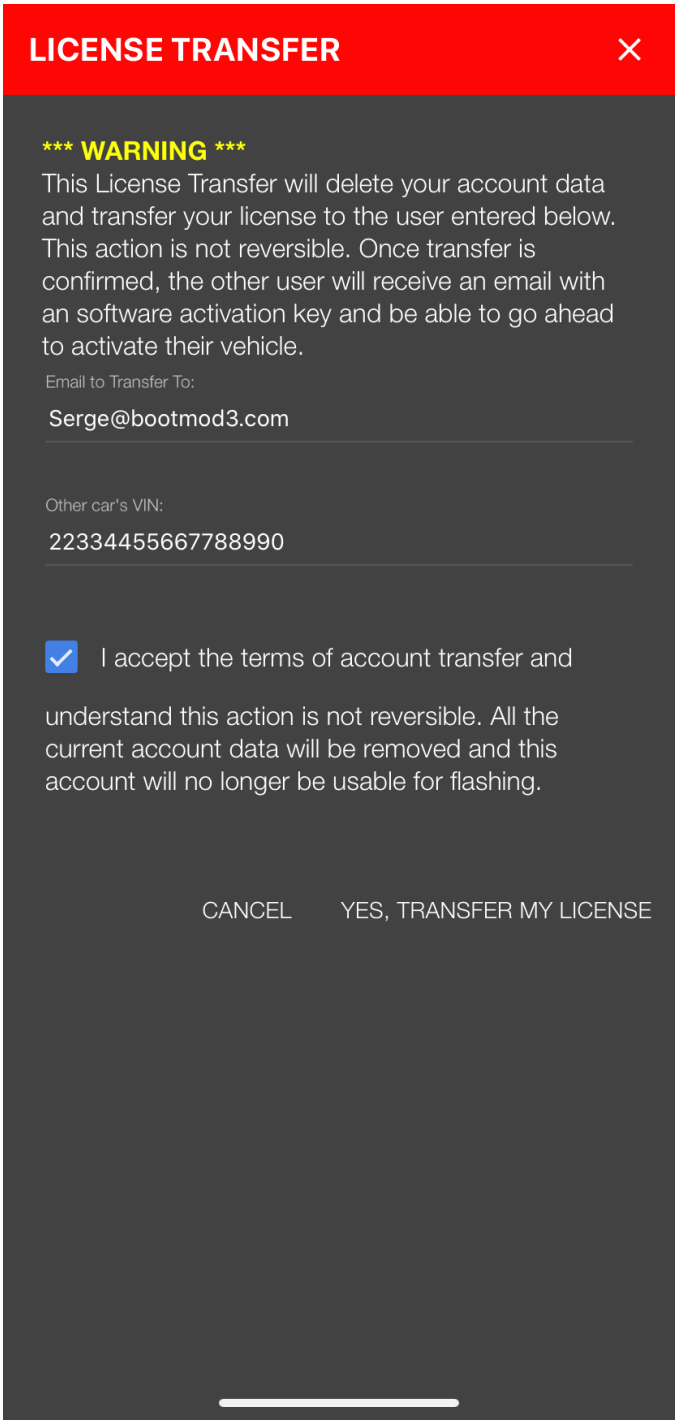
Software ***must be uninstalled*** from the original vehicle by following the steps below to be eligible for the license transfer.

****** If uninstall is not completed by the original buyer, the license cannot be transferred.***

Steps to follow for a successful license transfer:

1. Go to www.bootmod3.net
2. Go to **'My Maps'**, select the stock tune, click flash and choose the **FLASH AND RELOCK DME** option.

Once the 2 steps have been completed, the user can go to the **'Vehicle'** screen and click on the **'Transfer My License'** button. (page 15)



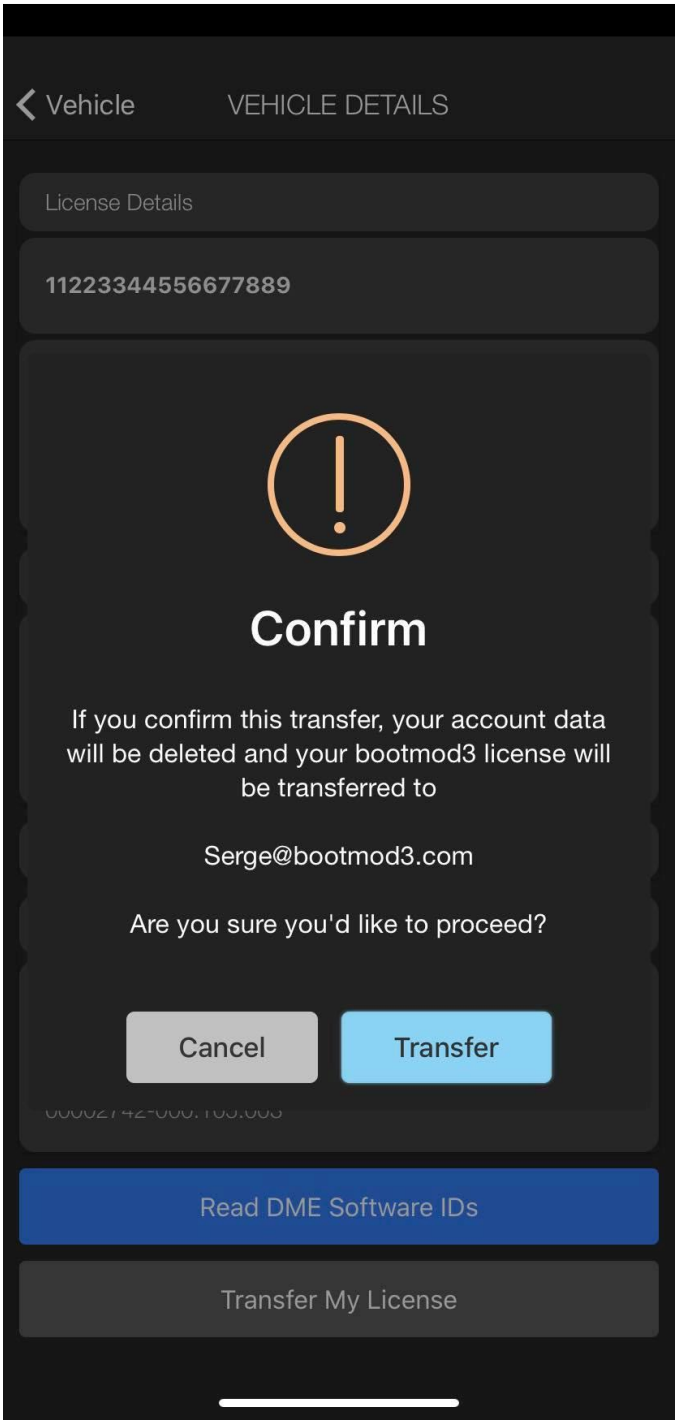

Once the license transfer is initiated, the original license owner will have to fill out the requested information in the fields provided.

- Email address of the transferee
- Full VIN of the transferee

Original license owner will have to check the box ☑ to accept the terms of the account transfer in order to proceed.

To proceed, click on **'Yes, Transfer My License'**.

**'Cancel'** button cancels the license transfer.



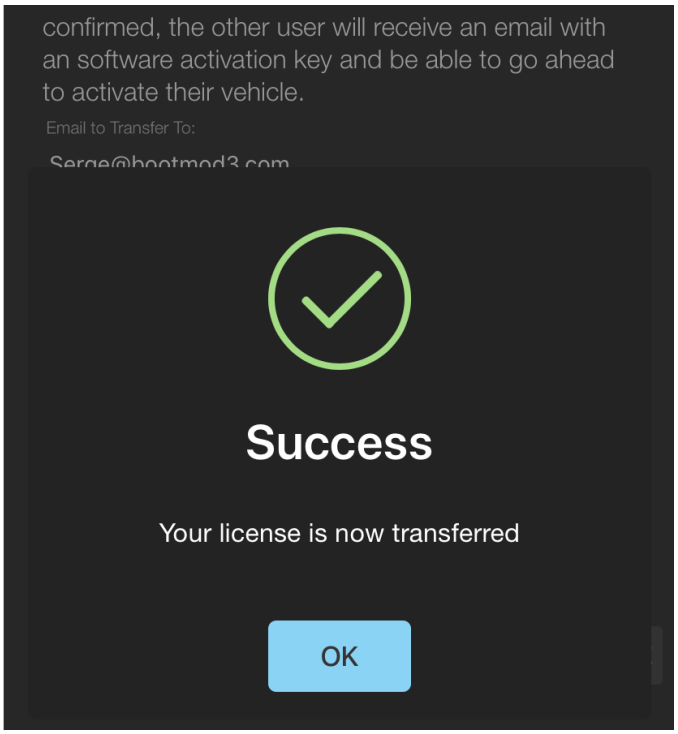

After clicking on **'Yes, Transfer My License'** from the previous page, the confirmation screen will pop up as shown on the screenshot to the left.

It is particularly important for the users to read over the content before proceeding.

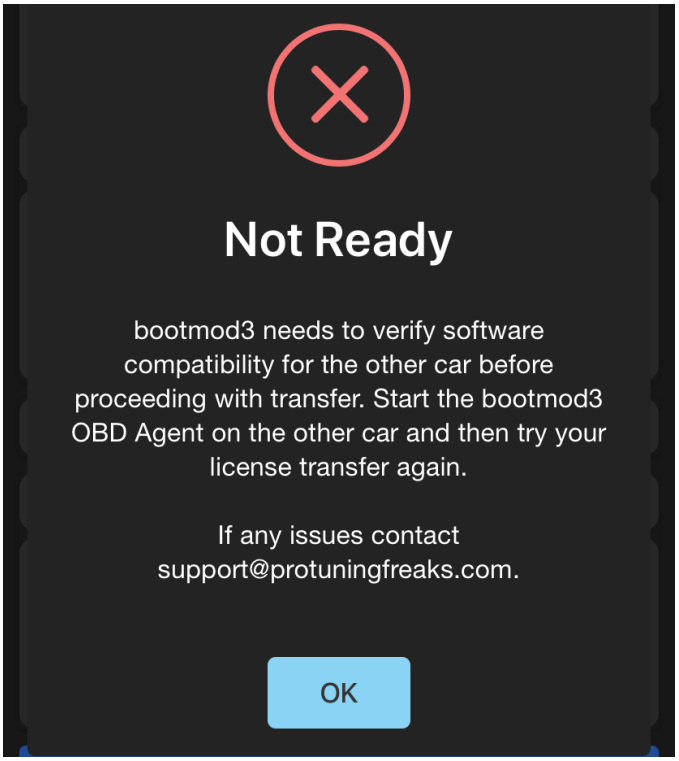
A license transfer will delete your account data and transfer your license to the new user. All the current account data will be removed, and this account will no longer be usable for flashing purposes. This action is not reversable. Once the transfer is confirmed, the new user will receive an email with the software activation key which will allow them to activate their license.

By clicking on the **'Transfer'** button, the original license owner will then complete the license transfer.

**'Cancel'** button cancels the license transfer and takes the user back to the previous screen.

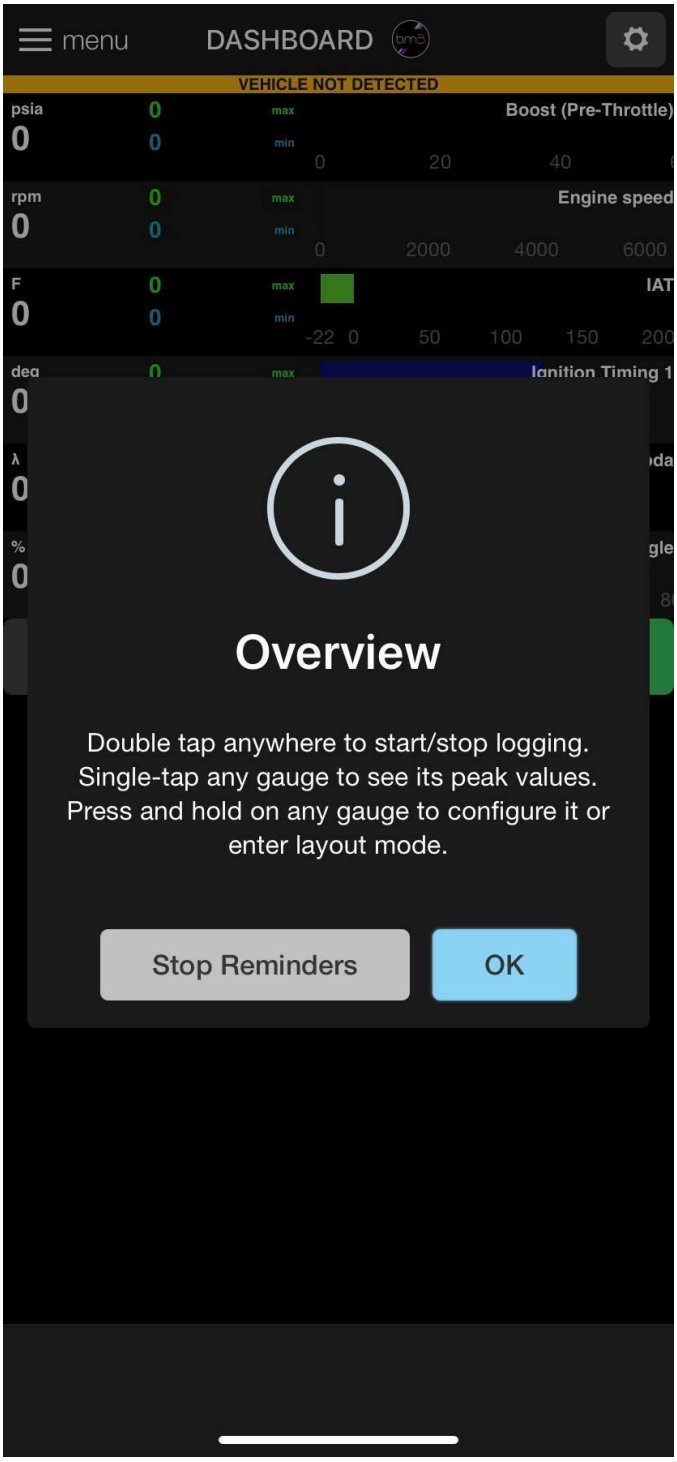



After a successful license transfer, the **'Success'** message as shown on the top image will appear, confirming the license has been transferred.




In case the **'Not Ready'** message as shown on the bottom image, the new user will need to verify their software compatibility before proceeding with the transfer. They will need to connect the car to the laptop and start the OBD Agent. Our servers will detect the vehicle's software, in which case the license transfer can be attempted again.

# 5 Dashboard




As shown on the screenshot, the first pop-up message when entering the dashboard sub-menu will inform the user how to start data logging. To start the log, simply double tap on any gauge. To stop the log the user will perform the same action and double tap on any gauge. To view all the logs that have been recorded, user will have to go into **'Datalogs'** submenu.

By clicking on **'Stop Reminders'**, the pop-up message will not appear again.

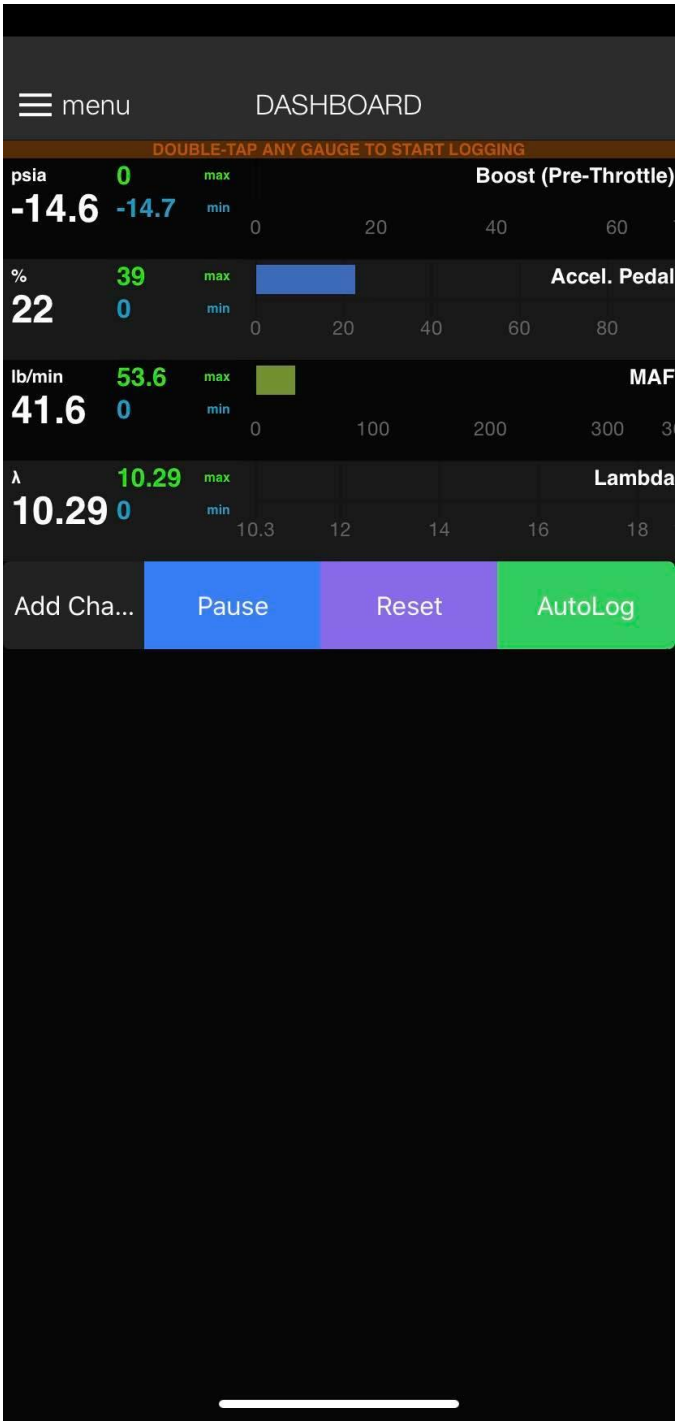
By clicking on the  in the top right corner, user will be taken to the Datalog settings page.

Bootmod3 currently offers 3 different dashboard layouts which users can choose from. The most suitable option can be selected in the **'Datalogs'** menu.

1. Bar Graphs
2. Dials
3. Live Charts

Each Dashboard Layout will be explained separately in detail.

# 5.1 Bar Graph




**'Bar Graph'**, as shown on the image to the left is one of the available options for the dashboard layout. The dashboard displays the live gauges once user is connected to the car.

**Values shown here are just for illustration purposes and not actual values from any car.**

The name of the channel is written in white letters on the right-hand side, and the value with units is shown on the left-hand side. Beside the current value of the channel, minimum and maximum values are shown. The green number represents the **maximum** value, and the blue number represents the **minimum** value.

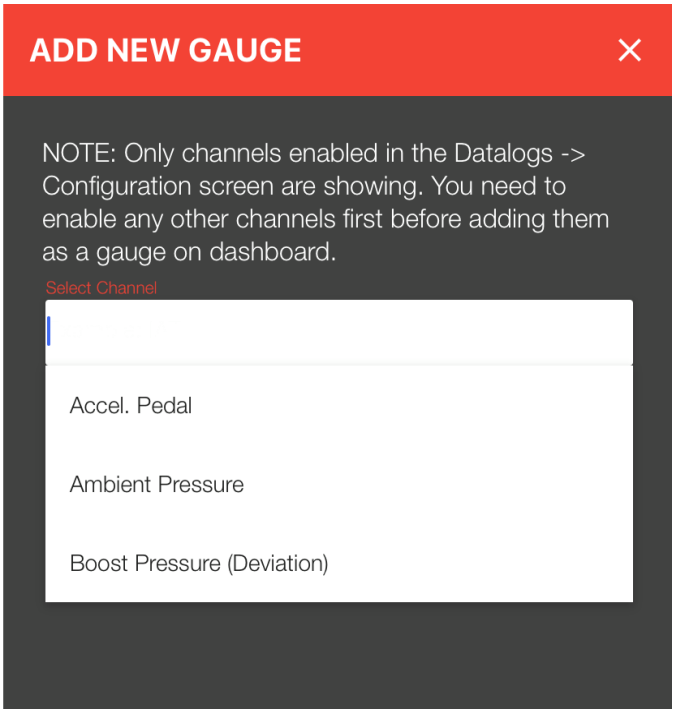
To start/stop the log, double tap/click on any gauge.

By clicking on the **'Pause'** button, the user will pause the live dashboard.

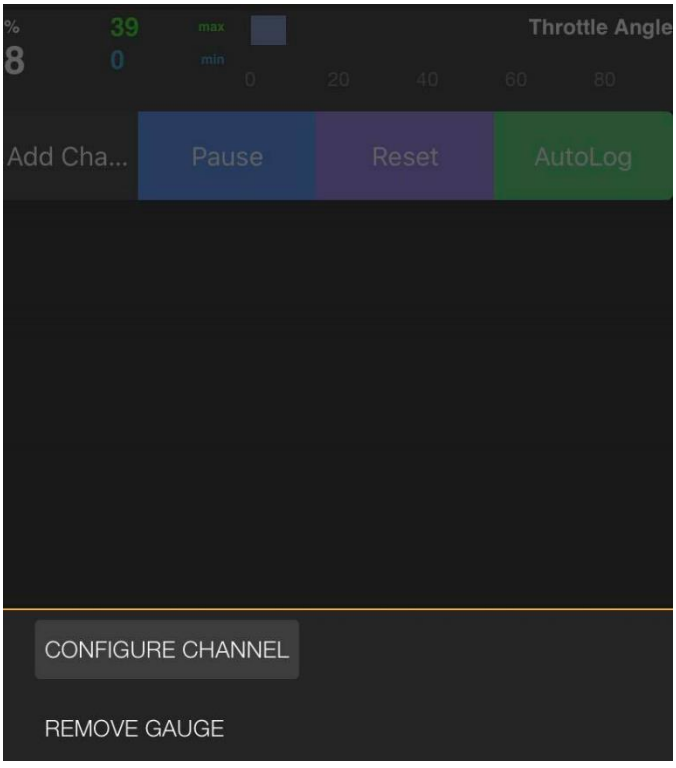
**'Reset'** button will reset all the values briefly to 0.

Clicking on the **'AutoLog'** enables the logs to be captured automatically. The user will not have to double tap to start/stop the log. **'AutoLog'** thresholds are further explained in the **'Datalogs'** menu.

**'Add Channel'** is explained on the next page.



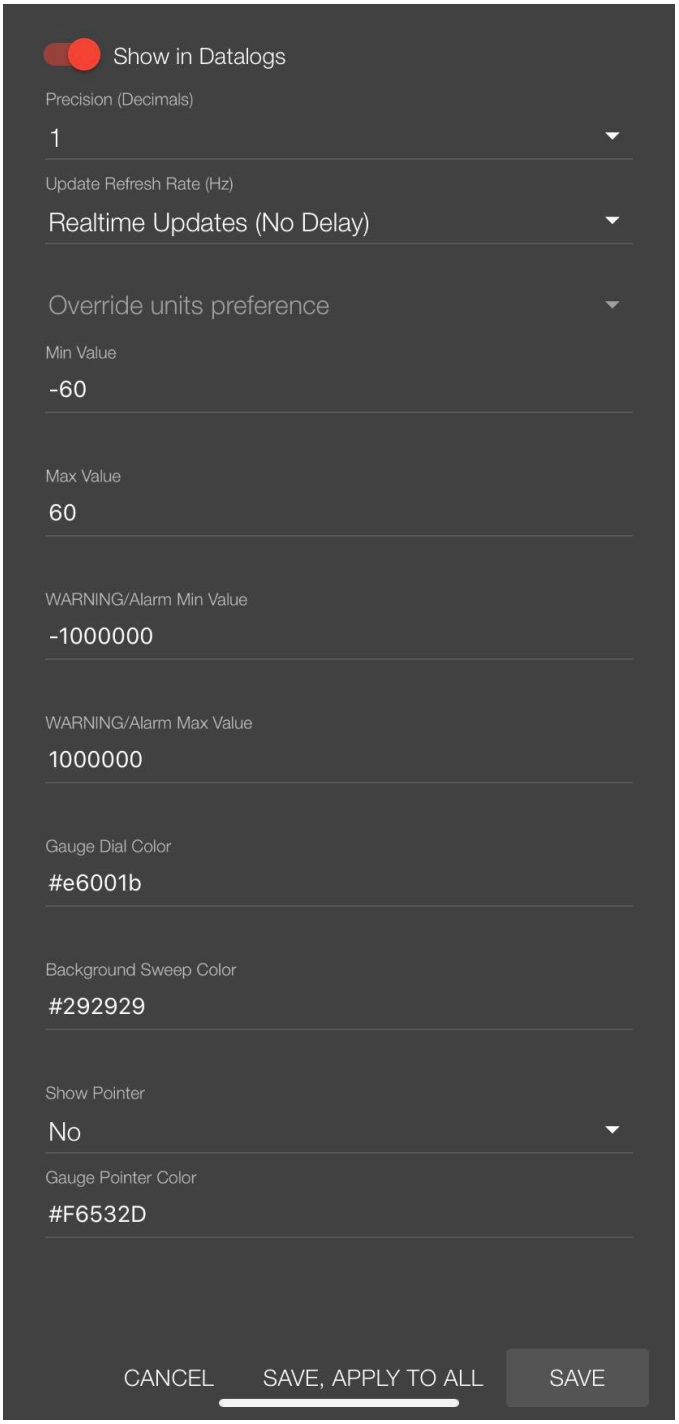

By clicking on the **'Add Channel'** button from the previous screen, a new screen will pop up, as shown on the top image. A list of channels will be available for the user to add to their dashboard. Please note, only the channels that are enabled in the **'Datalogs'** configuration screen are showing. The user will need to enable any other channels first before adding them as a gauge on dashboard.




By clicking/tapping any gauge once and holding, options to remove the gauge and to configure the channel will appear, as shown on the bottom image.

Clicking/tapping on the **'Remove Gauge'** will remove the gauge from the dashboard.

**'Configure Channel'** allows the user to configure the channel. Channel configuration is explained on the next page in greater detail.

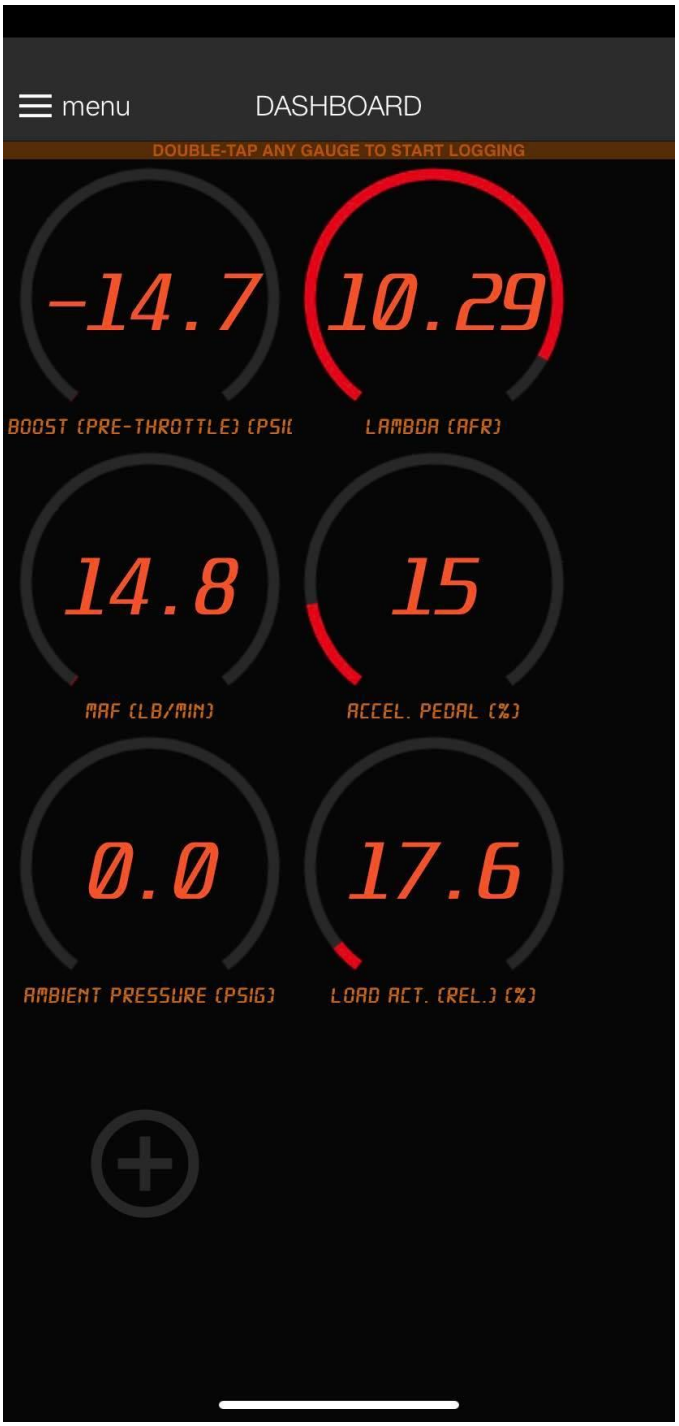



The following changes can be made in the **'Configure Channel'** option.

1. Precision (Decimals) - If defaults are not satisfactory for any reason, user will be able to adjust the decimal point.
2. Realtime Update (No Delays) - Default is real time (fastest updating no delay) but the user can now also slow down update to each gauge as needed 1, 5, 10 Hz (1,5 or 10 updates per second)
3. Override Units Preference - User can set each gauge to imperial or metric units and in case of pressure channels to absolute or relative, overriding the global defaults.
4. Configuration of minimum and maximum value for each gauge.
5. Ability to set alarms - Minimum and maximum threshold values. If breached, a given channel with place a red border around that channel for a period of 5 seconds.
6. Change gauge dial color to any color user wishes.
7. Change Background Sweep Color.
8. Show a pointer on the gauge or turn it off.
9. Change color for pointer.

Once the changes have been made, clicking **'Save'** will only apply the changes to the selected gauge. Selecting **'Save, Apply to All'** will apply changes to all the gauges.

# 5.2 Dial Gauges




The dial gauge is the original dashboard layout bootmod3 released that displays the gauges as shown in the image to the left. The functionality of the dashboard is the same, however, the option to **'Pause'**, **'Reset'** and **'AutoLog'** is not available in this layout mode.

To start the log, simply double tap/click on any gauge. To stop the log the user will perform the same action and double tap/click on any gauge. To view all the logs that have been recorded, go into **'Datalogs'** submenu.

To add a new gauge, click on the big '+' button on the right side of the screen. This action will result in a new screen popping up, as already mentioned on page 22.

Feel free to customize your dashboard!

**Please note, values shown here are just for illustration/demo purposes and not actual channel values from any given car.**


The user can press and hold any one of the gauges, and the 4 options shown on the screenshot on the left will appear.

1) Configure Channel
2) Change Layout
3) Show Peak Values
4) Remove Gauge

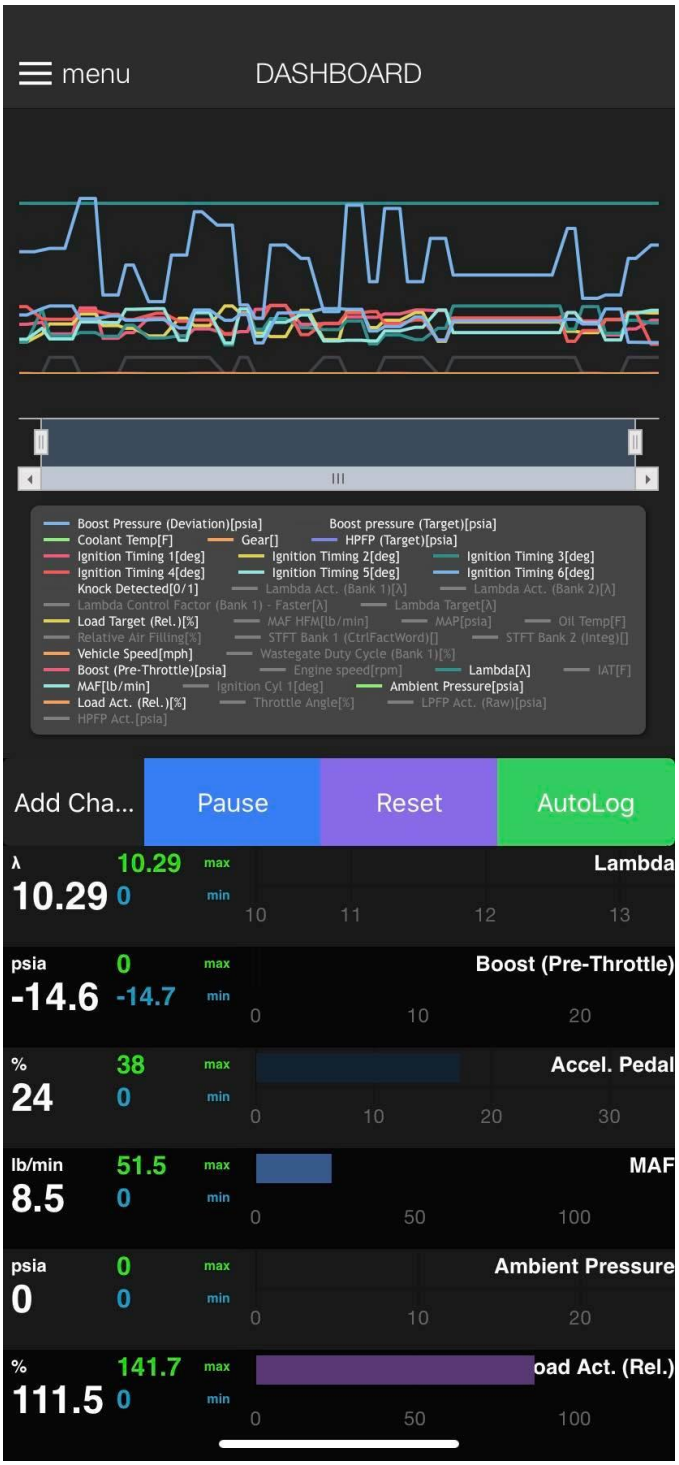
1.Configure Channel – see page 23.

2. Change Layout – By clicking on the '**Change Layout**' option, this will enable the user to customize the gauges in whichever order they would like it. To do so, simply press and hold the desired gauge and move it to the wanted position. To exit layout mode, simply double tap any gauge.

3. Show Peak Values - By clicking on the **'Show Peak Values'**, the user will be able to see the minimum and maximum value given for a specific gauge. User will be able to reset the values to default settings at any point.

4. Remove Gauge - Clicking on **'Remove Gauge'** simply removes the gauge from the screen.

# 5.3 Live Charts




**'Live Charts'** dashboard layout is a mix of the **'Bar Graph'** layout with the addition of the live chart updating in real time.

To start the log, simply double tap/click on any gauge. To stop the log the user will perform the same action and double tap/click on any gauge. To view all the logs that have been recorded, go into **'Datalogs'** submenu.

Live chart shows 20 seconds of data at a time, and it can replace logging.

The user can select which parameter they want to view on the live chart by clicking/tapping the desired channel from the list below the live chart.

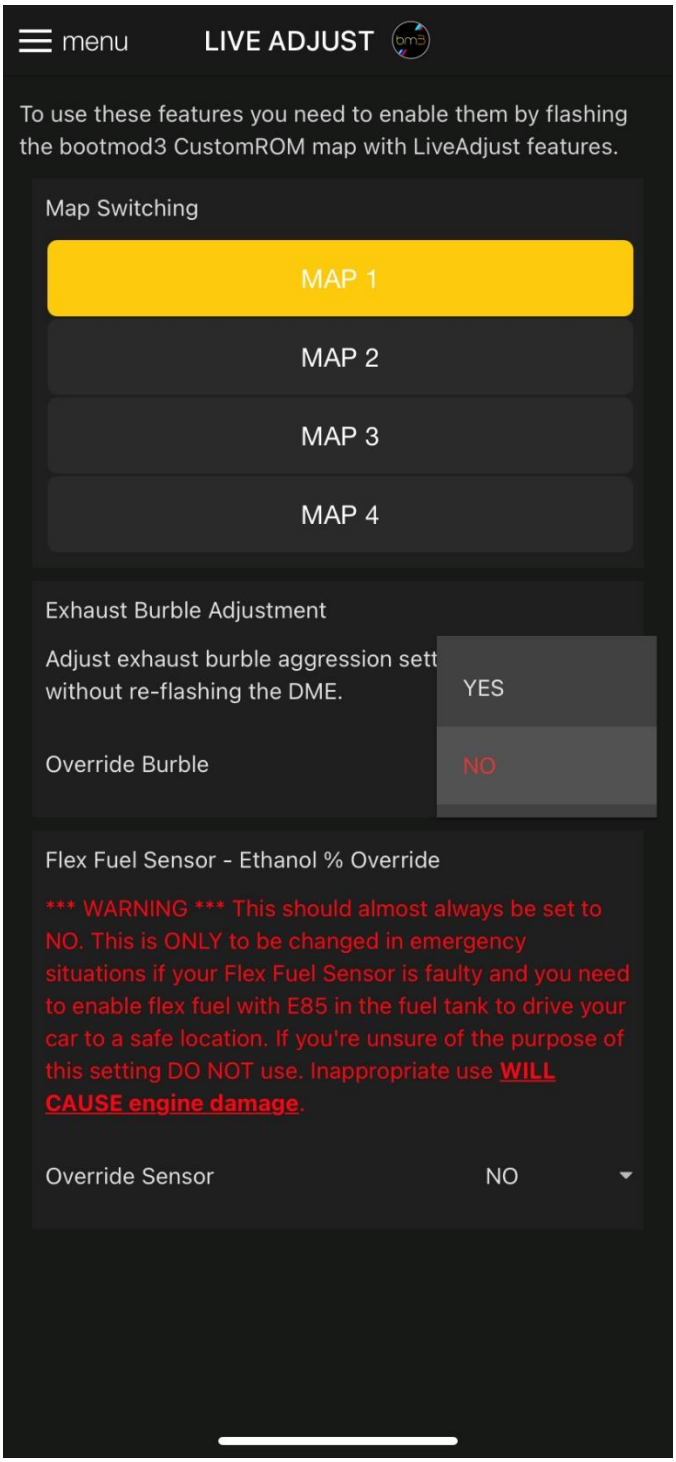
By clicking on the **'Pause'** button, the user will pause the live dashboard and the live chart, allowing the user to view the chart.

**'Reset'** button will reset all the values on the **'Bar Graphs'** and the **'Live Chart'**.

Clicking on the **'AutoLog'** enables the logs to be captured automatically. The user will not have to double tap to start/stop the log. **'AutoLog'** thresholds is further explained in the **'Datalogs'** menu.

**'Add Channel'** – Please see page 22.

# 6 Live Adjust (Custom Rom)




When flashed on CustomROM, various live adjustable options are now available to help users adjust tuning parameters without re-flashing. Map configuration screen so far has served the purpose of end user configuration for any given map. Live Adjust screen takes Map configuration a step further and applies changes to a running vehicle, without re-flashing.

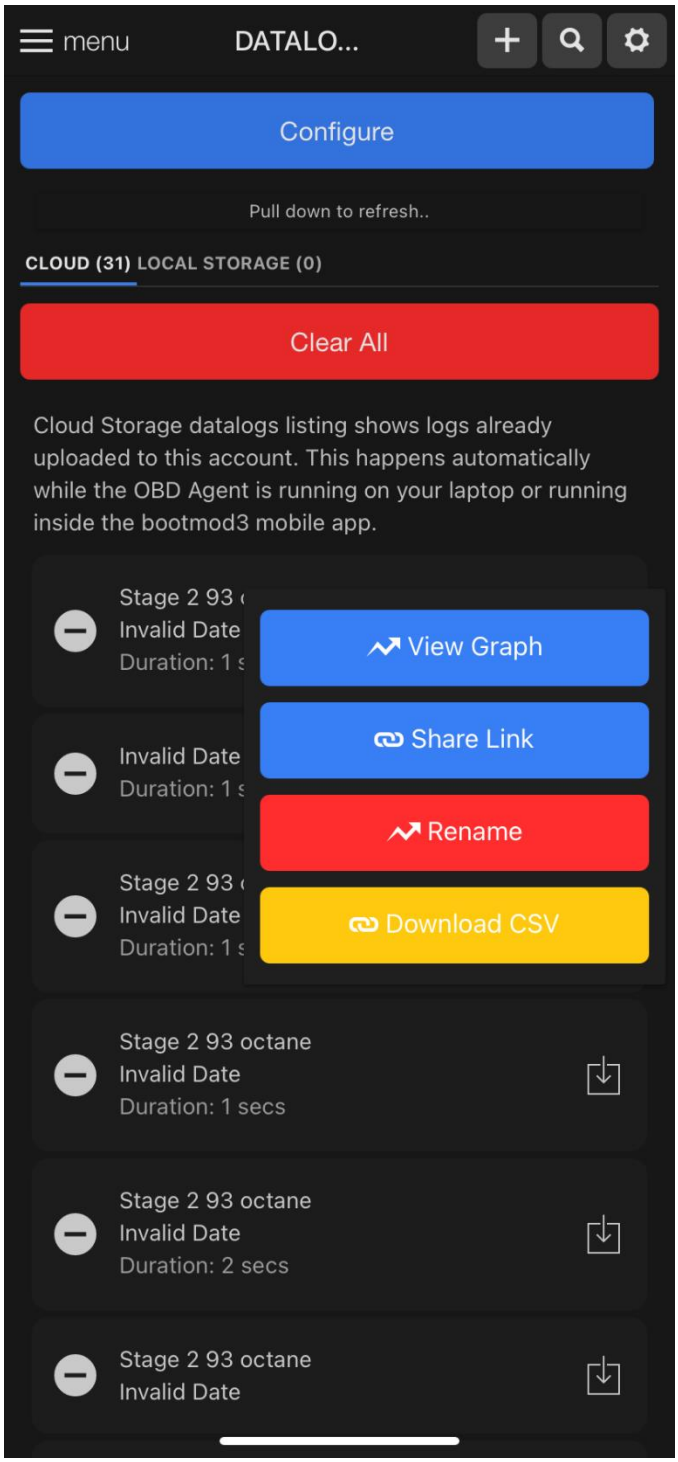
**Exhaust Burble Adjustment**

Users will be able to Override Burbles on any of the four maps, without re-flashing. This is done by clicking on the dropdown arrow and selecting ‘Yes’.

**Flex-Fuel Sensor – Ethanol % Override**

This feature is useful in cases where ethanol may have become faulty. Without this convenient live adjustable, the driver would be stuck with a car not starting on a high concentration of ethanol in the tank, and a DME that doesn’t see ethanol content due to a faulty/disconnected Flex-Fuel Sensor. This should almost always be set to NO, and only to be changed in case of emergency situations.

# 7 Datalogs




This is the first screen in the Datalogs sub-menu. Previously recorded logs from the dashboard menu will be available to view in the datalogs menu.

All the data logs recorded will be labelled with the date, time, and duration.

Clicking on the + will allow the user to upload any .csv file and manually upload them to bootmod3, allowing them to view the datalog with bm3 charting tool.

Clicking on the search icon, the user will be able to search for specific graphs from the entire list.

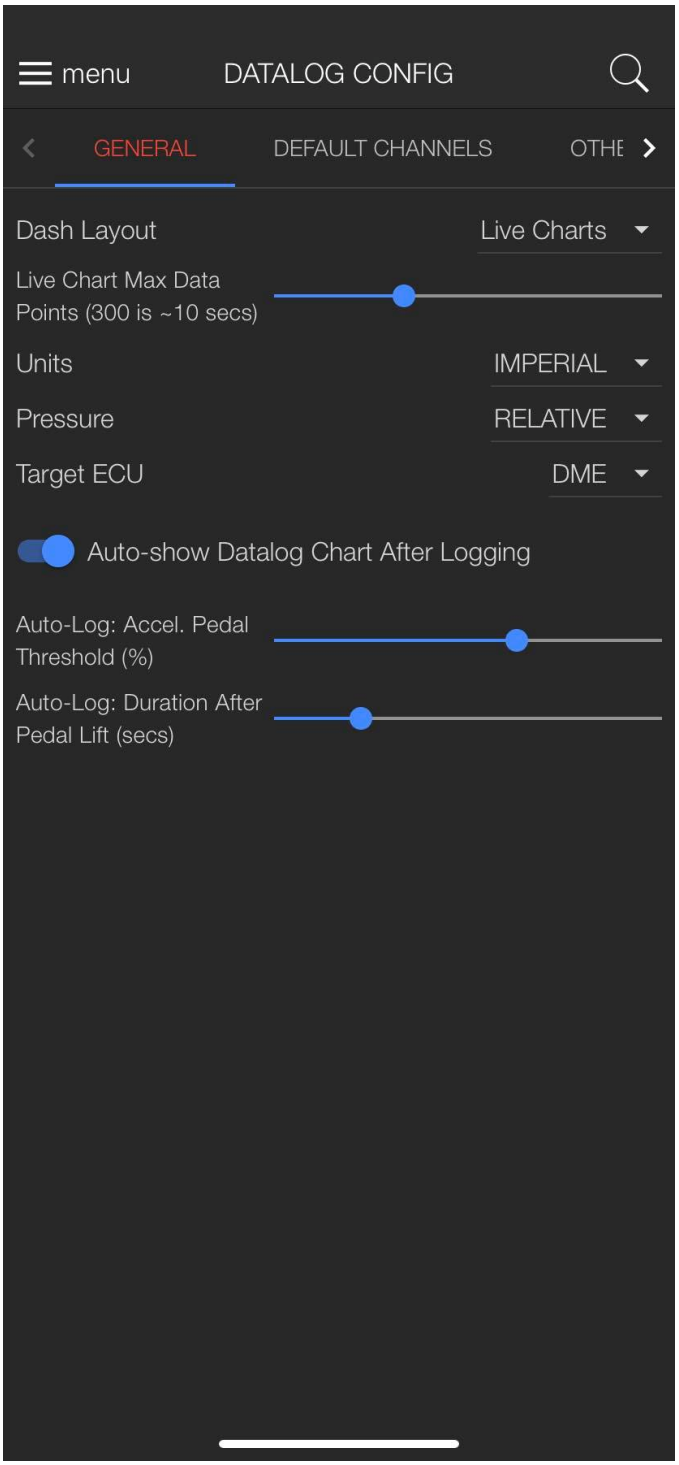
By clicking on the small down arrow on the right of the data log, 4 options as shown on the image will pop up. The user will be able to view the graph, share the link for the given log, rename the log and download the .csv file.

The '**Clear All**' button will clear all the logs that have been recorded.

By pressing on the minus icon, on the left side of the graph, user will be able to remove the datalog.

**'Configure'** button and the settings button in the top right corner have the same functionality and will be explain in depth on the next page.

# 7.1 Datalog Settings




Once inside the datalog settings, the screen on the left is what will appear. This would be the general configuration screen, as highlighted in red in the top left part of the image.

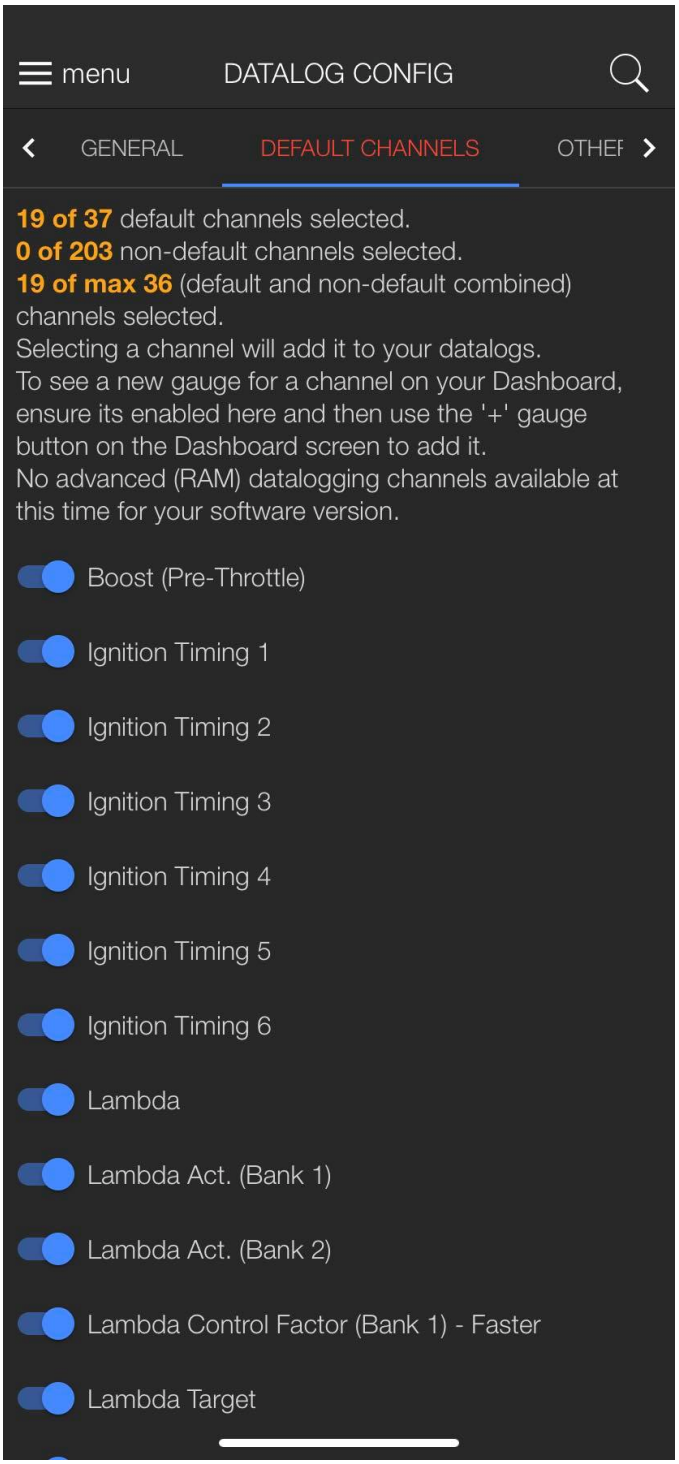
**'Dash Layout'** gives the user the option to choose what they want their dashboard layout to look like. Clicking on the dropdown arrow will give the user the options of choosing either Bar Graphs, Live Charts or Gauge Dials.

**'Live Chart Max Data'** slider sets the number of points available in the live chart before the chart starts to scroll.

**'Units'** can be changed to either Imperial or Metric, and **'Pressure'** can be set to either Absolute or Relative. The target ECU will always be the DME.

Toggling the Auto-show Datalog Chart enables/disables the log showing automatically after it has been recorded.

**'Auto-Logger'** captures the logs automatically in the car.
Acceleration Pedal Threshold % - this slider allows the user to set the percentage of the acceleration pedal at which the auto logging will begin.
Duration After Pedal Lift - this slider allows the user to configure the number of seconds after the pedal lift, under the % threshold the auto-log will end.




**'Default Channels'** screen, as shown on the image shows the entire list of all the default channels available.

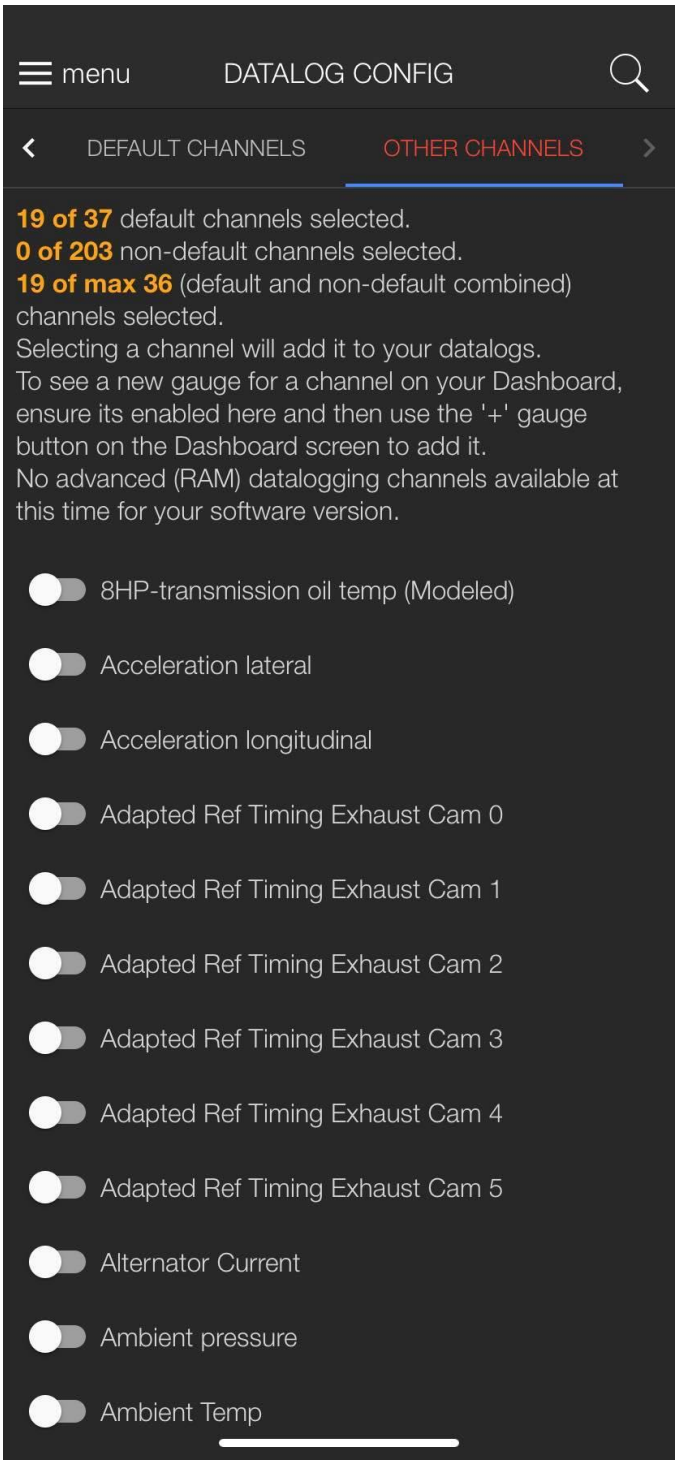
As demonstrated in the screenshot provided, there are 37 default channels, 19 of them which have been selected.

The maximum number of default and non-default channels combined, allowed for logging purposes is 36. Once the max. number has been reached, a pop-up message will appear notifying the user it is at the max. limit.

To search for a specific channel, use the  button instead of scrolling down the list.

Selecting a channel by toggling it on, will add it to the datalogs.

To see a new gauge for a channel on the dashboard, ensure the channel is enabled here, and then use the **'+'** gauge button, or **'Add Channel'** (depending on the layout) on the dashboard screen to add it.




**'Other Channels'** screen, as shown on the image shows the entire list of all the default channels available.

The maximum number of default and non-default channels combined, allowed for logging purposes is 36. Once the max. number has been reached, a pop-up message will appear notifying the user it is at the max. limit.

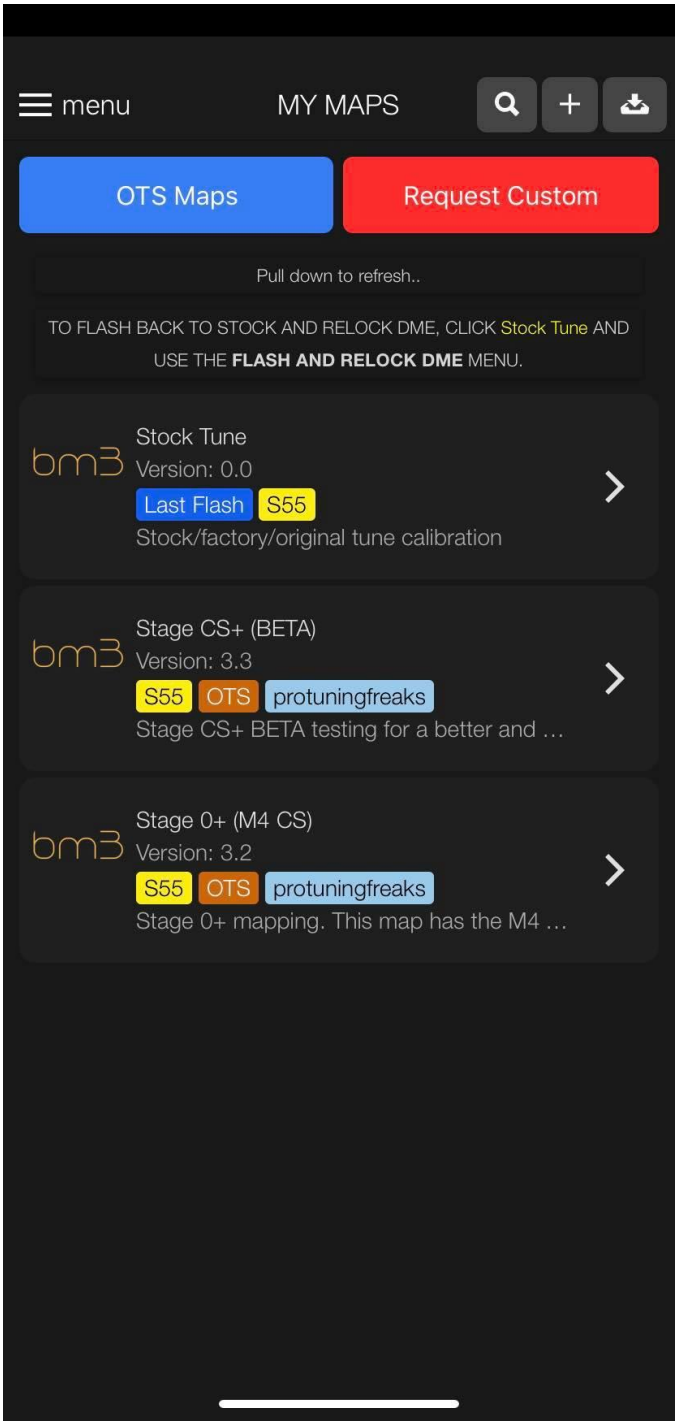
To search for a specific channel, use the  button instead of scrolling down the list.

Selecting a channel by toggling it on will add it to the datalogs.

To see a new gauge for a channel on the dashboard, ensure the channel is enabled here, and then use the **'+'** gauge button, or **'Add Channel'** (depending on the layout) on the dashboard screen to add it.

**PLEASE NOTE: This tab shows non-default channels, some of which may not be compatible with the connected vehicle. Adding a non-default channel may cause the Dashboard and logging to stop working (e.g., all zeros). If this happens, go to the 'About' screen and click on 'Reset Settings' button.**

# 8 My Maps




This is the first screen that will appear when inside '**My Maps**' menu. All acquired maps from the OTS Menu will be stored in **'My Maps'**, including the stock tune which will always be at the top of the list. Each flash will begin when the user enters this menu.

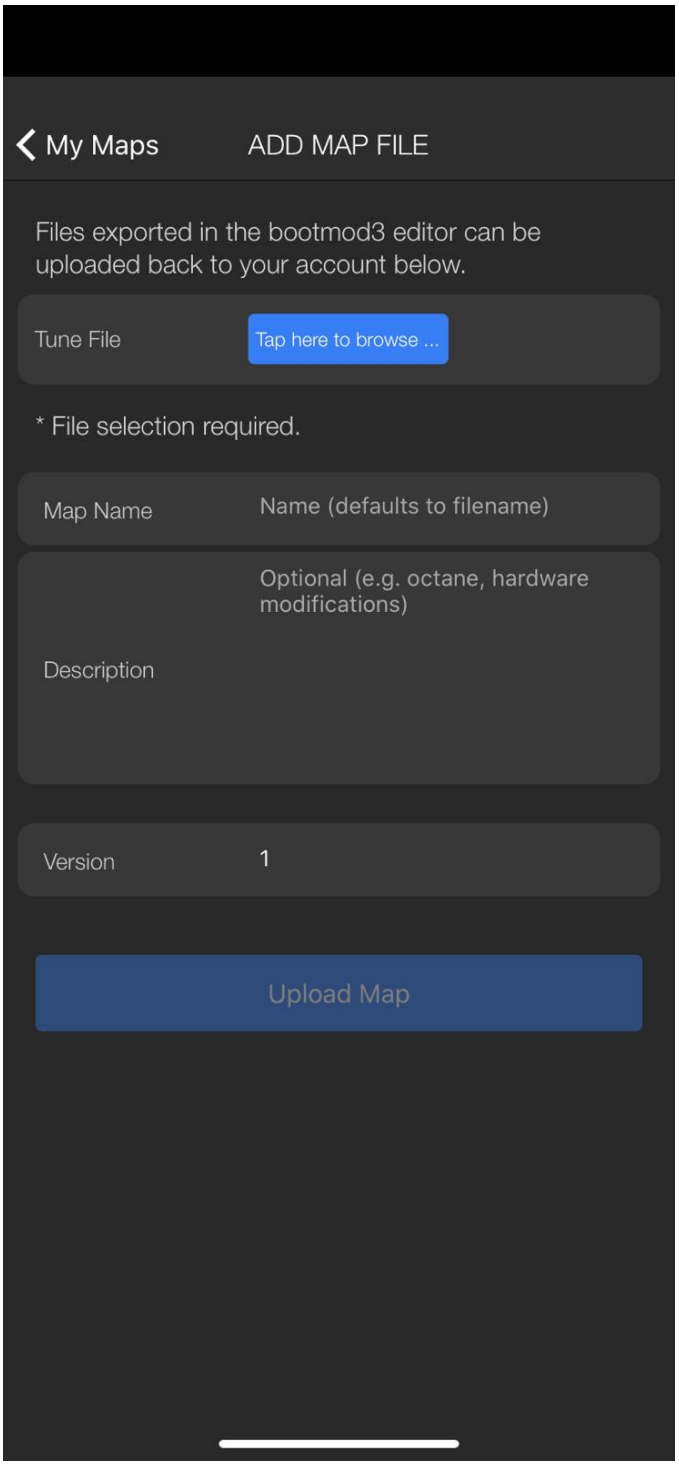
Clicking on the '**OTS Maps**' will show the entire collection of all maps available for the specific engine, which will be explained in the next chapter in full detail.

Clicking on the  button, the user will be able to search a specific map, without having to scroll down in case there is quite a few maps.

Each map will state the name of the map, with the version of the map below, and labels such as the engine type and the tuners name.

As shown on the stock tune, **'Last Flash'** label will appear on the map that was flashed last.

# 8.1 Add Map File




By clicking on the + button from the previous page, the user will be taken to this screen, as shown on the image.

Files exported in the bootmod3 map editor can be uploaded back to the account using this feature.

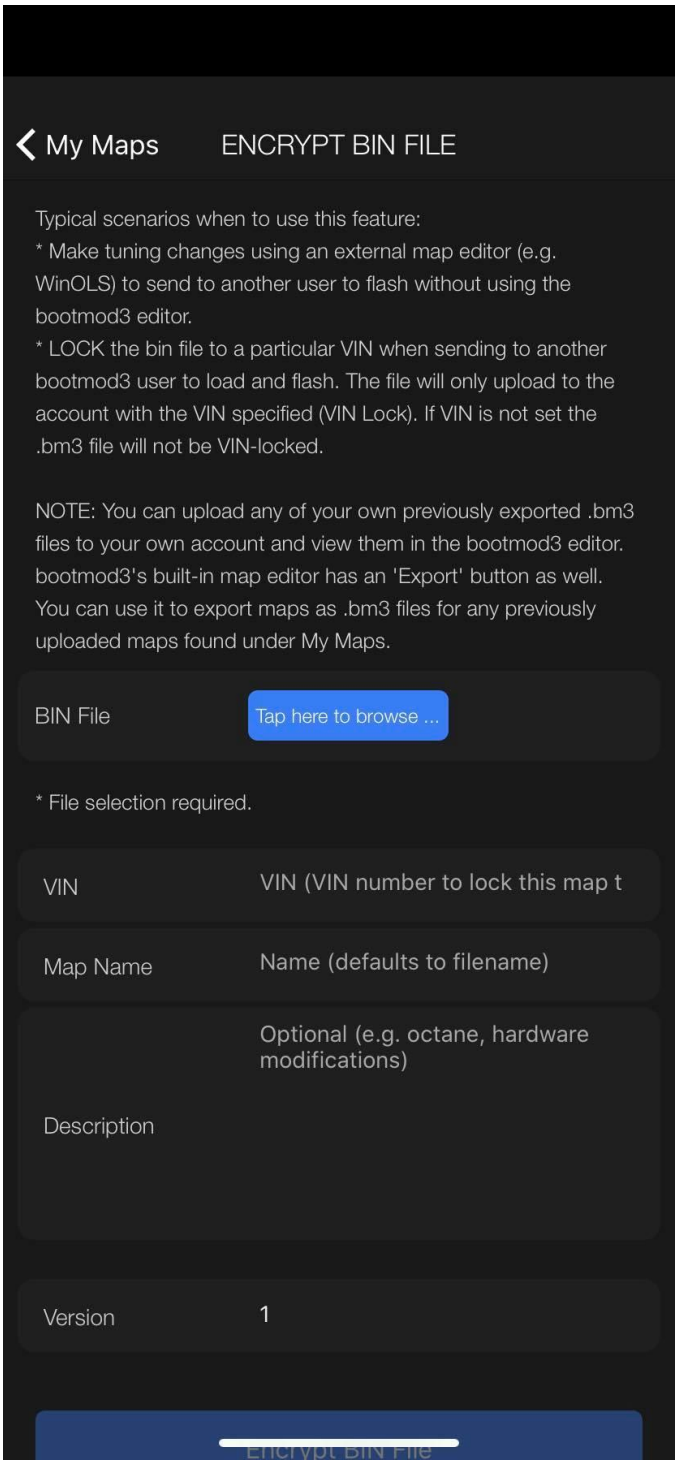
Clicking on the **'Tap here to browse'** will open a screen allowing the user to search for the specific file on their computer.

File selection is required; entering the map name, the description of the map, and the version is recommended.

Once the appropriate file has been selected, and all the fields have been filled out, the **'Upload Map'** button will become available for clicking.

The uploaded file can be then found in **'My Maps'** screen.

# 8.2 Encrypt .bin File




By clicking on the  from page 33, only an *authorized tuner* will be taken to the page, as shows on the screen here.

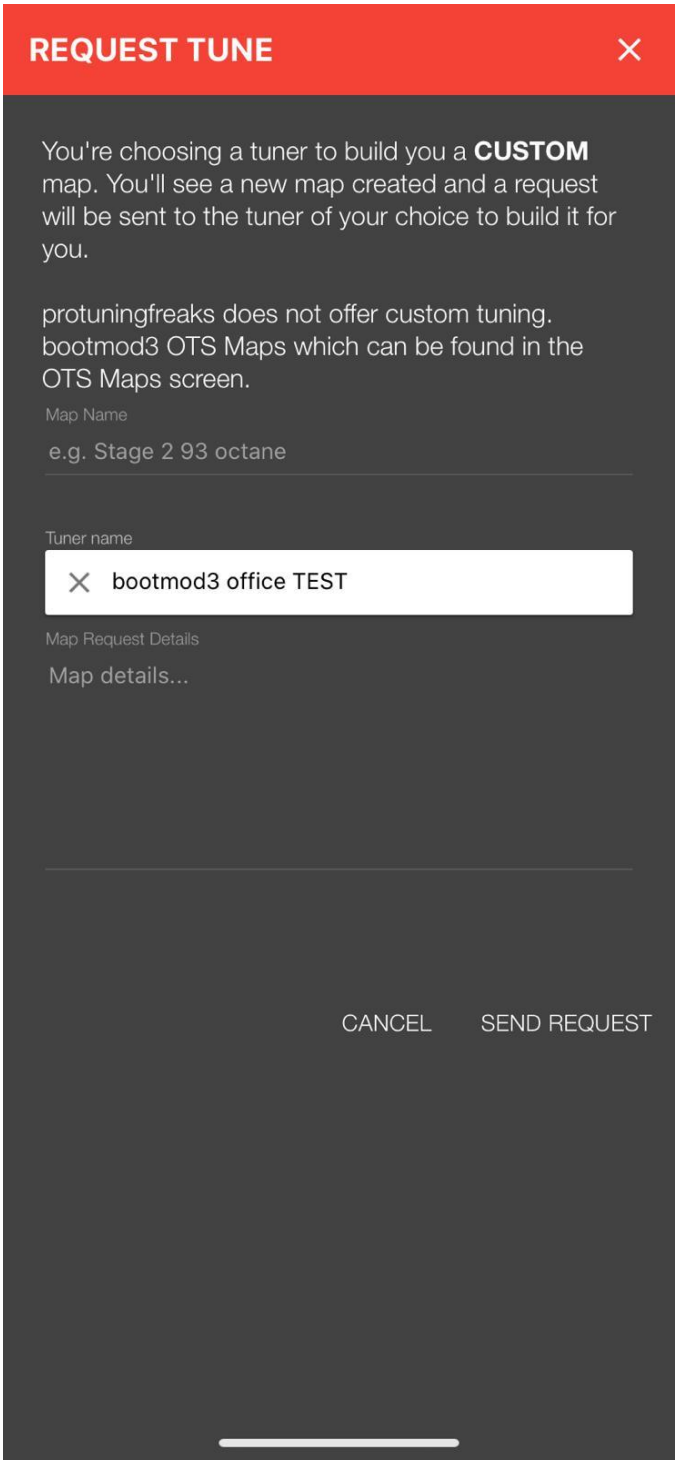
Some tuners use editors outside of bootmod3 to make custom maps, like WinOLS for example. This feature allows any tuner that is also a bootmod3 authorized tuner to export their tunes originally from .bin format to any bootmod3 customer in .bm3 format instantly.

Clicking on **'Tap here to browse…'** button will allow the tuner to import the desired map.

Once all the information has been filled out, such as the VIN, Map Name, Description, and the Version, at the bottom of the page is the **'ENCRYPT BIN FILE'** button.

An Authorized Tuner can send that file to the customer over email, put it on dropbox or any other method. Once the customer receives the map, they can then upload it into their account (page 34), and then flash as usual.

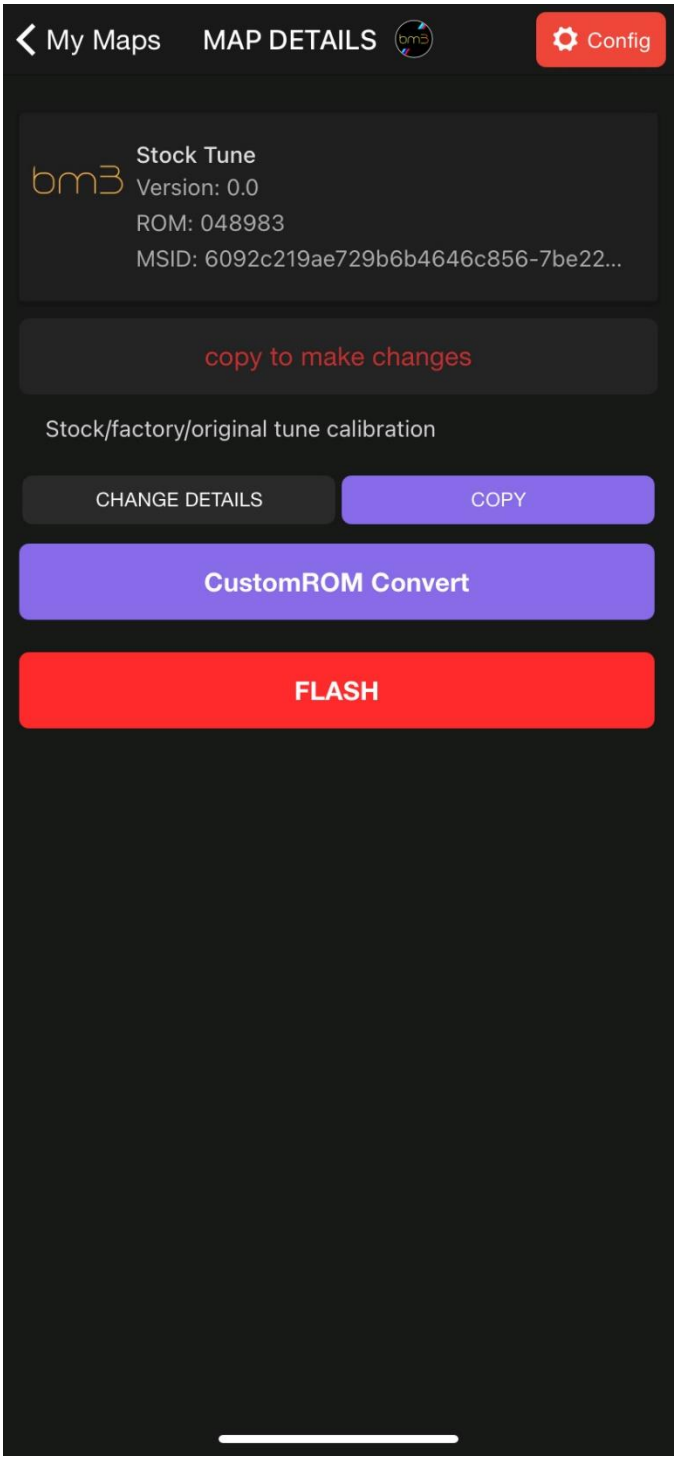
# 8.3 Requesting Custom Tune




Since ProTuning Freaks does not offer custom tuning, the user has an option of requesting a custom tune by clicking on the red button **"Request Custom"** in the top right corner of the **"My Maps"** screen, see page 33. A list of all authorized tuners will appear as shown in the screenshot on the left, allowing the user to select a tuner of their own choice.

Once a Tuner has been selected, the user will have to write a map description of the desired custom map in '**map details'**, as well as the map name above the tuners name. This gives the tuner details of the map. Once all the information has been filled out, by clicking **'Send Request'**, the tuner will receive a custom map request on their end. (See section 11).

# 8.4 Stock Tune




Stock Factory Tune is automatically created for the vehicle upon activating the license. Factory tune is based on the software details on the vehicle's DME. Flashing to stock tune is always an option. This is typically done when a license transfer needs to be completed. Other times include; if the vehicle needs to be taken to the dealership or simply if there is no more desire to drive with the OTS map.

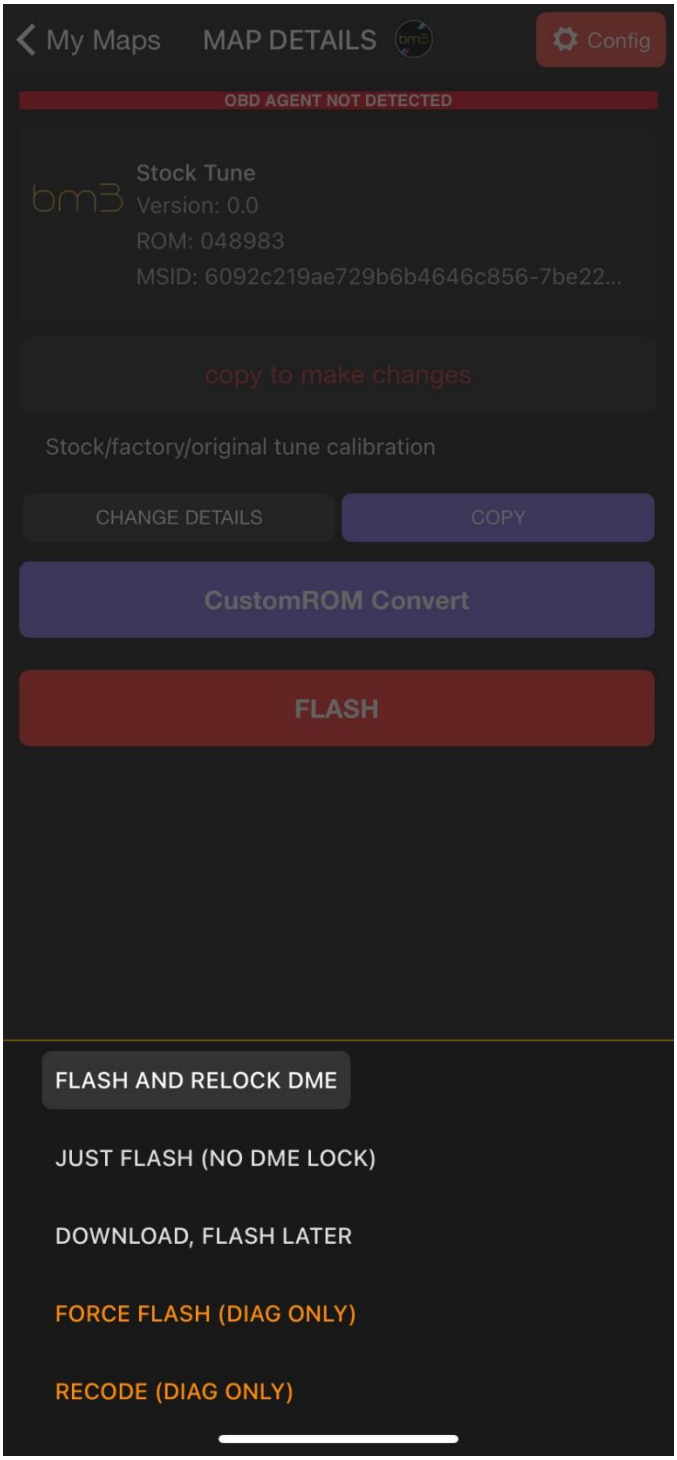
Changing the details of the stock tune, such as the name of the map, description and the version is available by click on **'Change Details'**.

**'Config'** button will be explained in detail in a separate section.

'**CustomROM Convert'** will create a copy of the custom map under My Maps and enable bootmod3 CustomROM features with default settings on it. For instance, it will turn on the Antilag feature. (**only available for S55 engines)**

Clicking on the **'Copy'** button allows the user to make a copy of the map. Once a copy is made, it is placed in **'My Maps'**. Copying a map will enable the Map Editor, allowing user to build their own custom map.

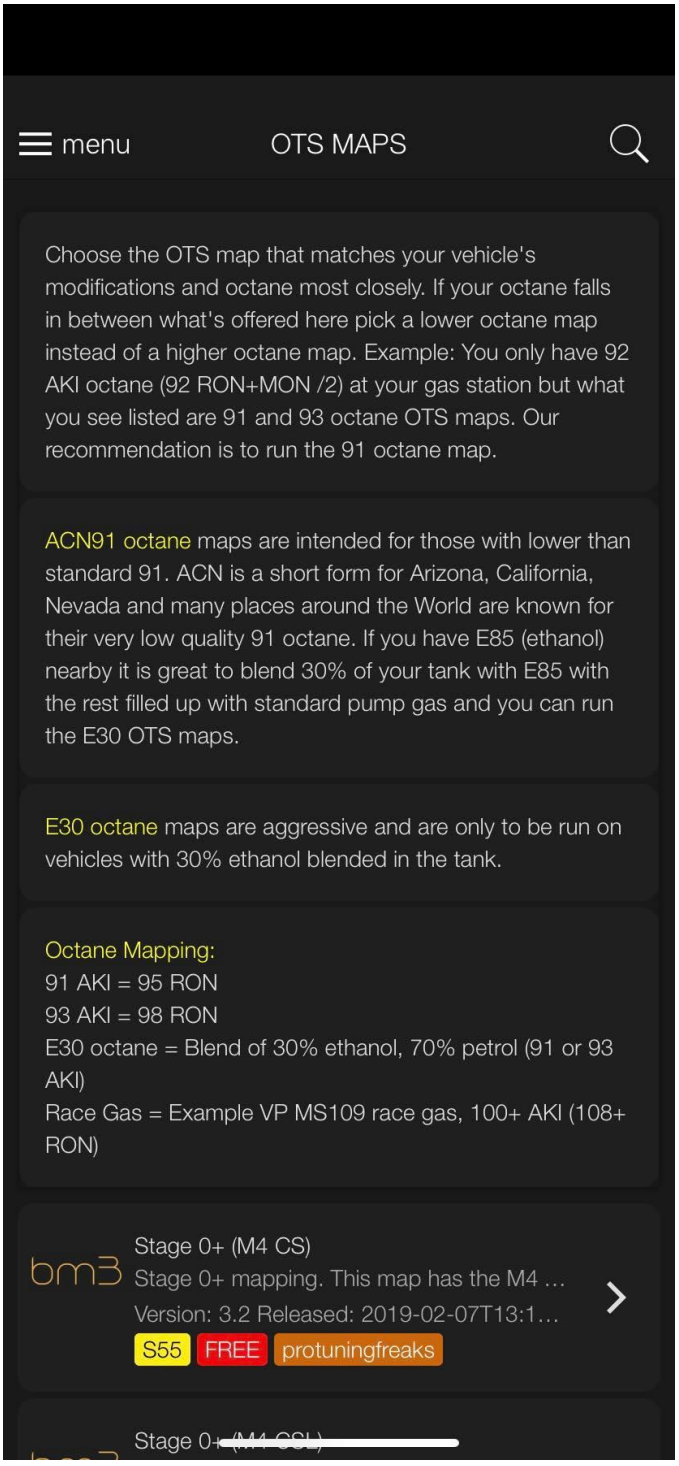
Clicking on the **'FLASH'** button will prompt the user to 5 possible flashing options, explained on the next page.




**Five choices of flashing back to stock:**

1) ***Flash and Relock DME***: This option is used to flash back to stock tune and to lock the DME. This is mainly used when transferring a license to a new owner, or if taking the vehicle back to dealer. Please note that DME must be locked for a successful license transfer.
2) ***Just Flash (No DME Lock):*** This flash option is used to only flash back to the stock tune, but not to lock the DME.
3) ***Download, Flash Later:*** To download the stock tune now, and to flash it later in offline mode.
4) ***Flash Full (Diag. Only):*** This option is used for all 4mb of data to be programmed. It is not a necessary function, unless doing a recovery.
5) ***Recode (Diag Only):*** This option is used by boomod3 tech support only, when the flash is successful, but the coding is not properly applied.

# 9 OTS Maps




OTS Maps menu is where the user will be able to find all the maps available for the vehicle connected.

ACN91 octane maps are intended for those with lower than standard 91. ACN is short for Arizona, California, Nevada, and other places in the World known for their low quality 91 octane.

E30 octane maps are aggressive and are only to run on vehicles with 30% ethanol blended in the tank.

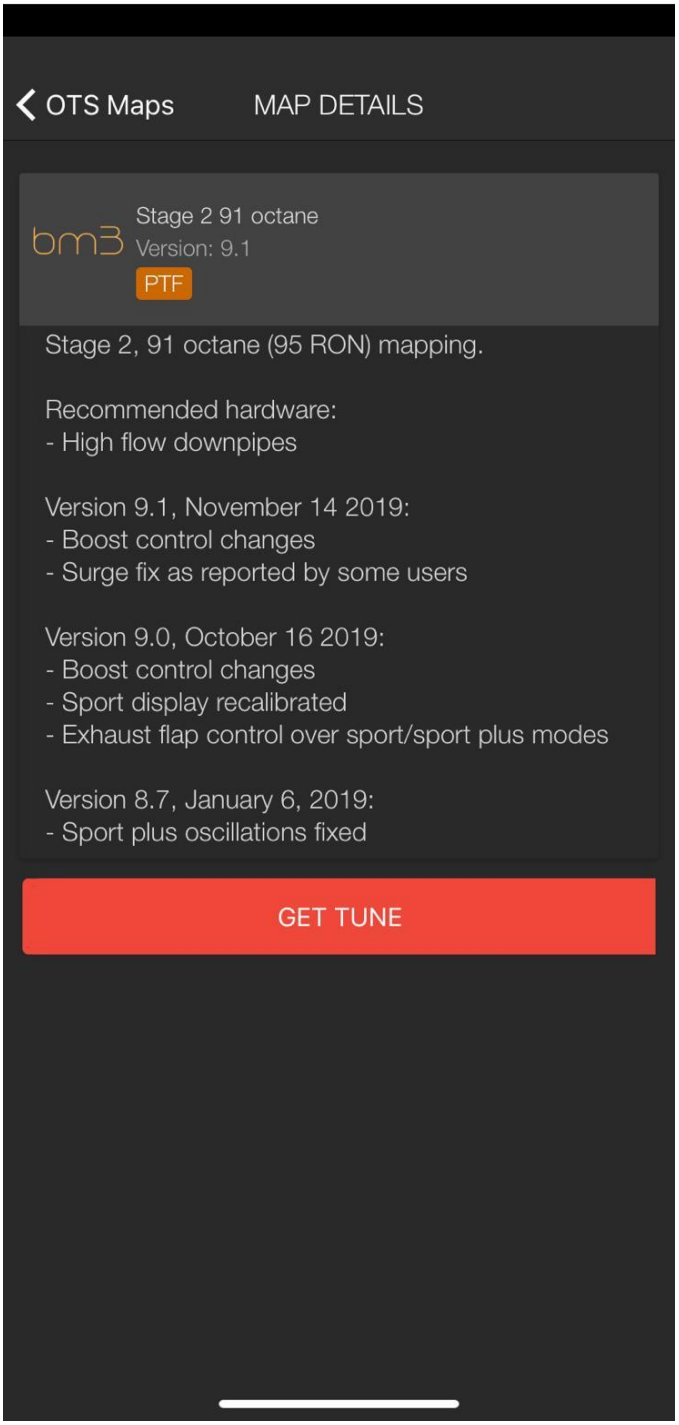
Octane Mapping:
91AKI = 95 RON
93AKI = 98 RON
Race Gas = 100+ AKI (108+ RON)
E30 = Blend of 30% Ethanol

User can use the  button to search for a specific map.

Each bootmod3 license includes one free OTS map of the user's choice. This can be either Stage 1 maps or Stage 2 maps, depending on the vehicle's hardware set up. When selecting the OTS maps, please note the version of the map, as well as required hardware upgrades.

Clicking on any map will prompt the user to the **'Map Details'** screen, explained on the next page.

# 9.1 OTS Map Details




Once a desired map has been selected, the user will be directed to the 'Map Details' page, as shown on the screen on the left.

Map details include the following details:

1) Map Name – Stage 2 91 Octane

2) Map Version – 9.1

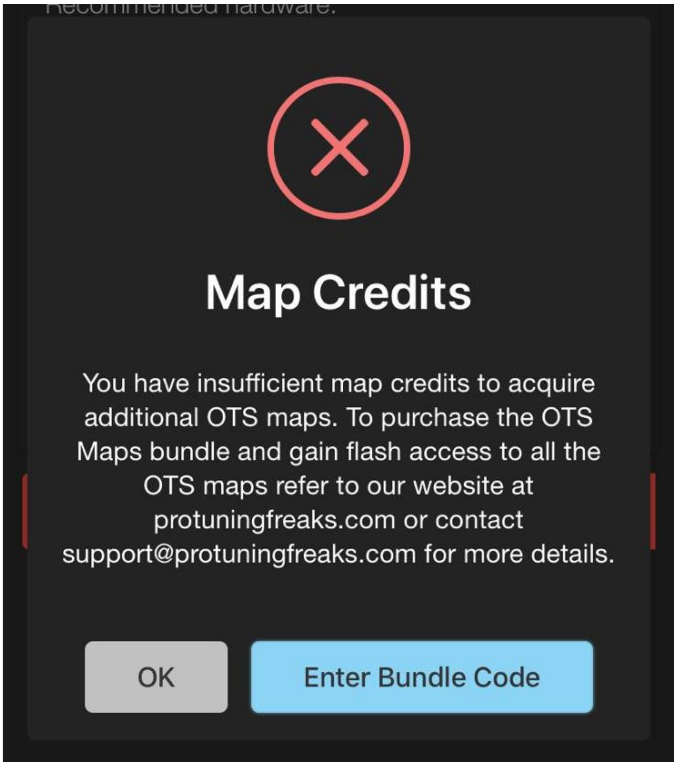
3) **PTF** will always be the tuner when acquiring maps from the OTS Menu.

4) Recommended Hardware – Each engine type will have different hardware requirements. Be sure to have the proper parts installed to avoid any issues.

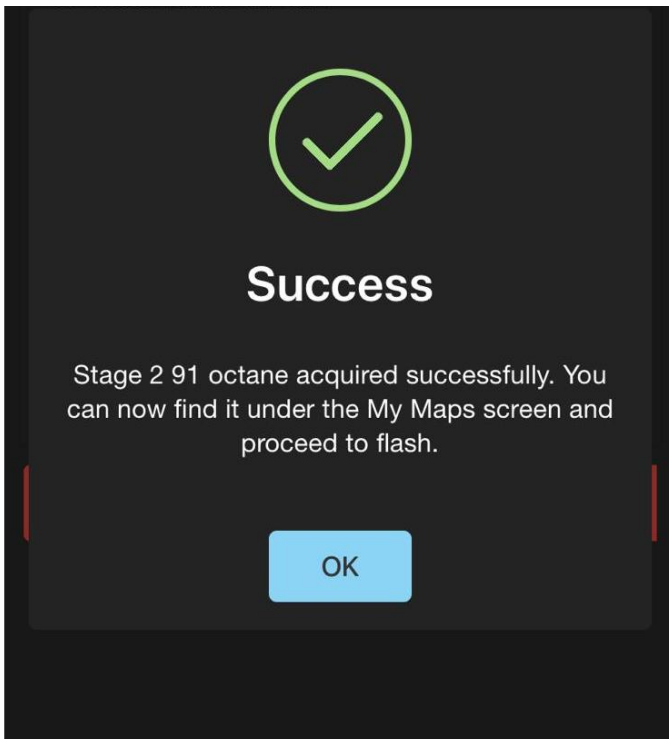
5) Current Version – Current version of the map shows what changes were made from the previous map version. Current map version will display the date the version was released by our calibrators.

6) Previous Versions – Previous map version will show the version number, the date released, and the changes provided for those versions.

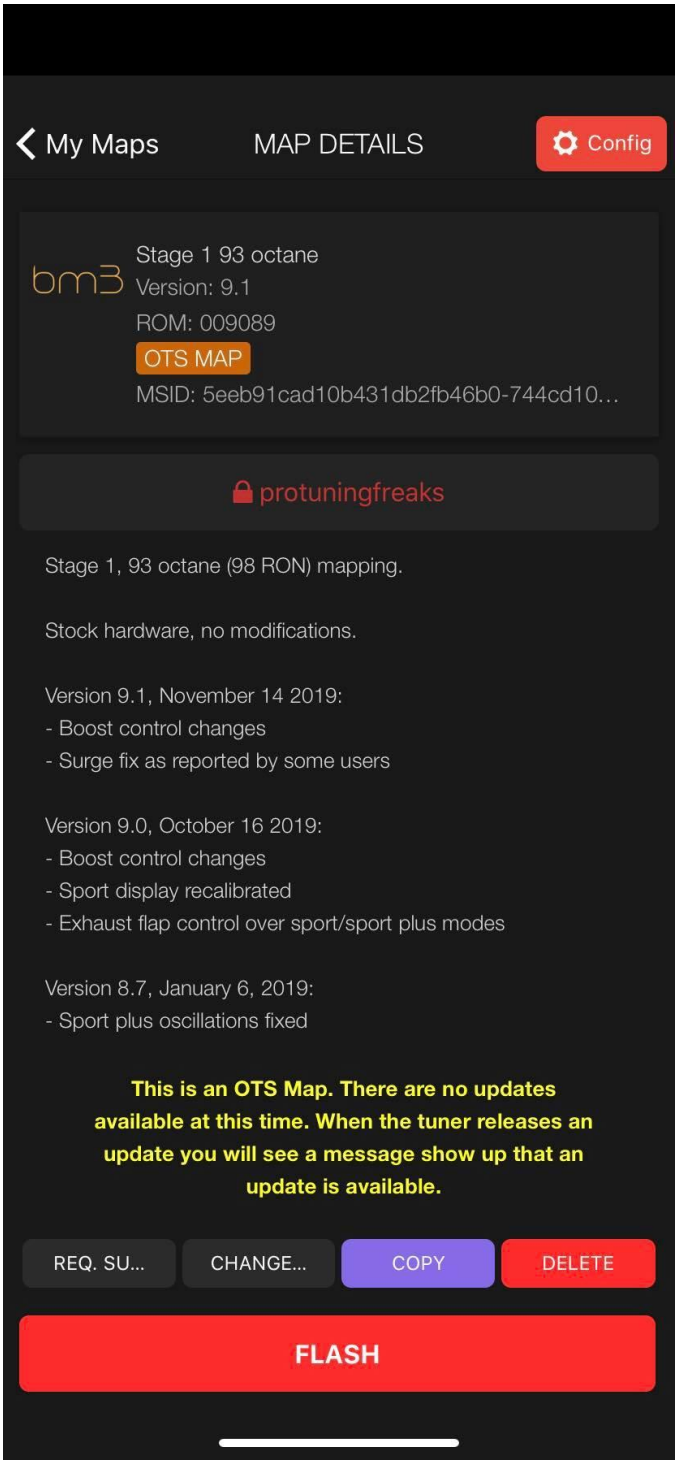
Once ready to acquire the map, click on **'GET TUNE'.**




Once the user clicks on **'Get Tune'** From the previous screen, one of the 2 messages will appear. If this is the second OTS map that is being acquired, the insufficient map credits message will appear, as shown on the top image. As mentioned earlier, a software license purchase includes one free OTS map. To have access to more maps, the OTS Map Bundle will need to be purchased.
Be sure to enter the full VIN at checkout. This will ensure the credits are automatically applied to the account. For further assistance, please contact support@protuningfreks.com




Once the map has been successfully acquired, the pop-up message, as shown on the bottom image will appear. The freshly acquired map can now be found in **'My Maps'**.




To find the map that has been selected from the OTS maps, the user will have to go back to the '**My Maps**' screen. Simply select desired map to be flashed, and the screen on the left will appear.

At any point, the user will be able to delete this map if no longer needed. This is done by clicking on the **'Delete'** button.

The '**REQ. SUPPORT**' button is used in case there is something wrong with the map, and the user would like to report it to us.

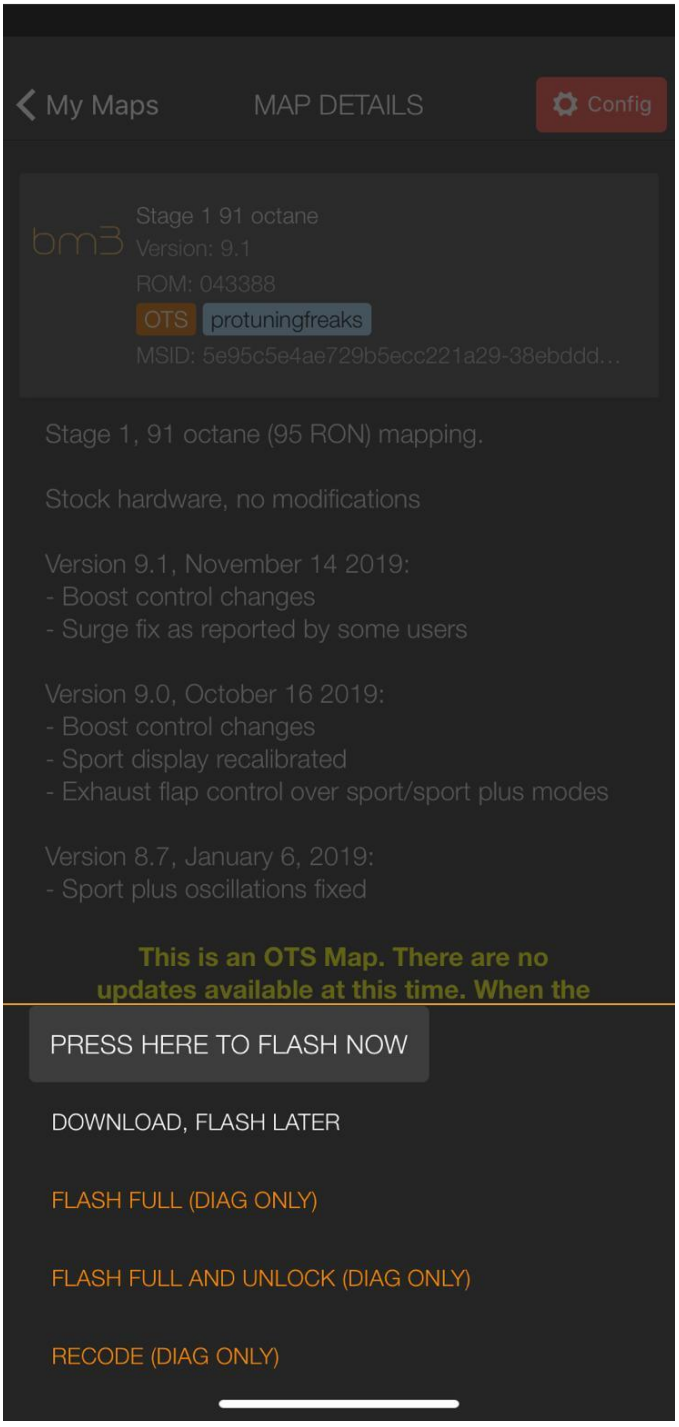
The user will be able to re-acquire the OTS map at any time and get an extra copy. For instance, the account can have two of the same OTS maps. One can be custom configured using the map configuration screen (e.g. aggressive burble settings for fun) and the other map can be configured in a different way (e.g. mild burble for daily driving).

Clicking on the **'Copy'** button allows the user to make a copy of the map. Once a copy is made, it is placed in **'My Maps'**.

The user will be able to change the map details such as the map name, map description and map version, by clicking on **'Change Details'** button.

Clicking on the **'FLASH'** will prompt the user to 5 possible flashing options explained on the next page.

# 9.2 OTS Map Flashing




Once the user has decided which specific map to flash, clicking on the red '**FLASH**' button will prompt four different options of flashing.

**Press Here to Flash Now**: This option is used most frequently by users. Simply click and wait for the flash to be completed.

**Download, Flash Later**: This option for flashing is used to download the map now, and to flash it later in "**Offline Mode**".

**Full Flash (Diag Only)**: This option is used when instructed to do so by a bootmod3 team member.

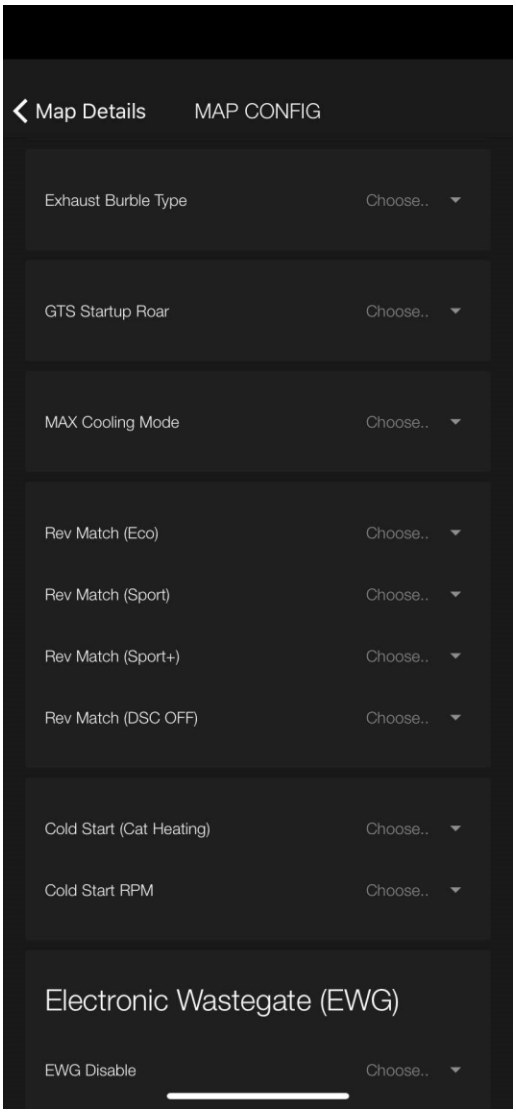
**Full Flash and Unlock (Diag. Only)**: This option is used to program the 4mb data and calibration part to your vehicle. This also includes the boot loader as well. Unnecessary function, unless doing a recovery.

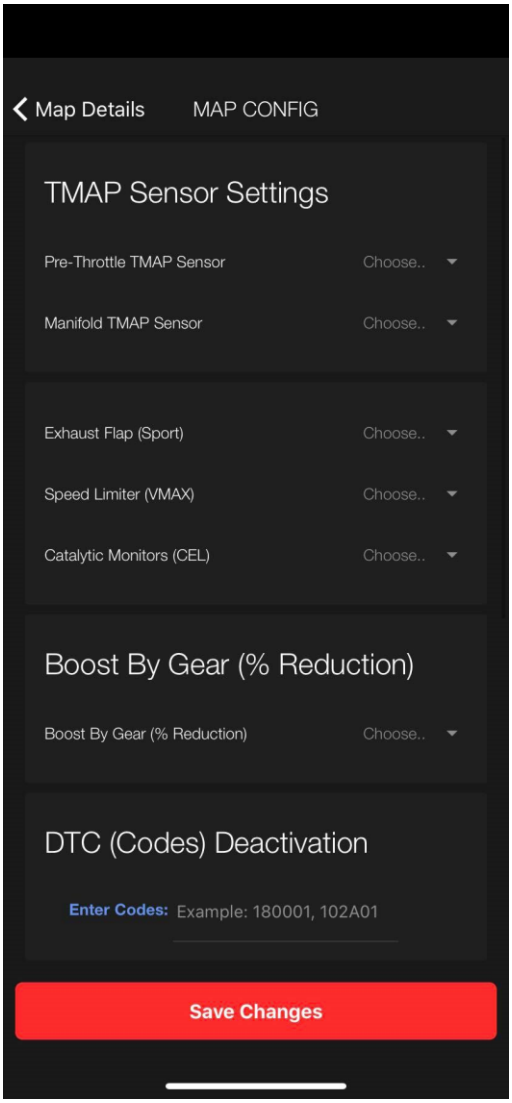
**Recode (Diag Only):** This option is used when the flash is successful, but the coding is not properly applied.

Flash Times: **30 seconds** for a normal flash, and **3.5 minutes** for a full flash on single DME vehicles.

**Please note all 'flashing' downloads the full map data to the laptop or Wi-Fi device first and that internet is NOT being used during programming of the DME**.

# 9.3 Map Configuration




Map Configuration screen offers the following features on OTS Maps:

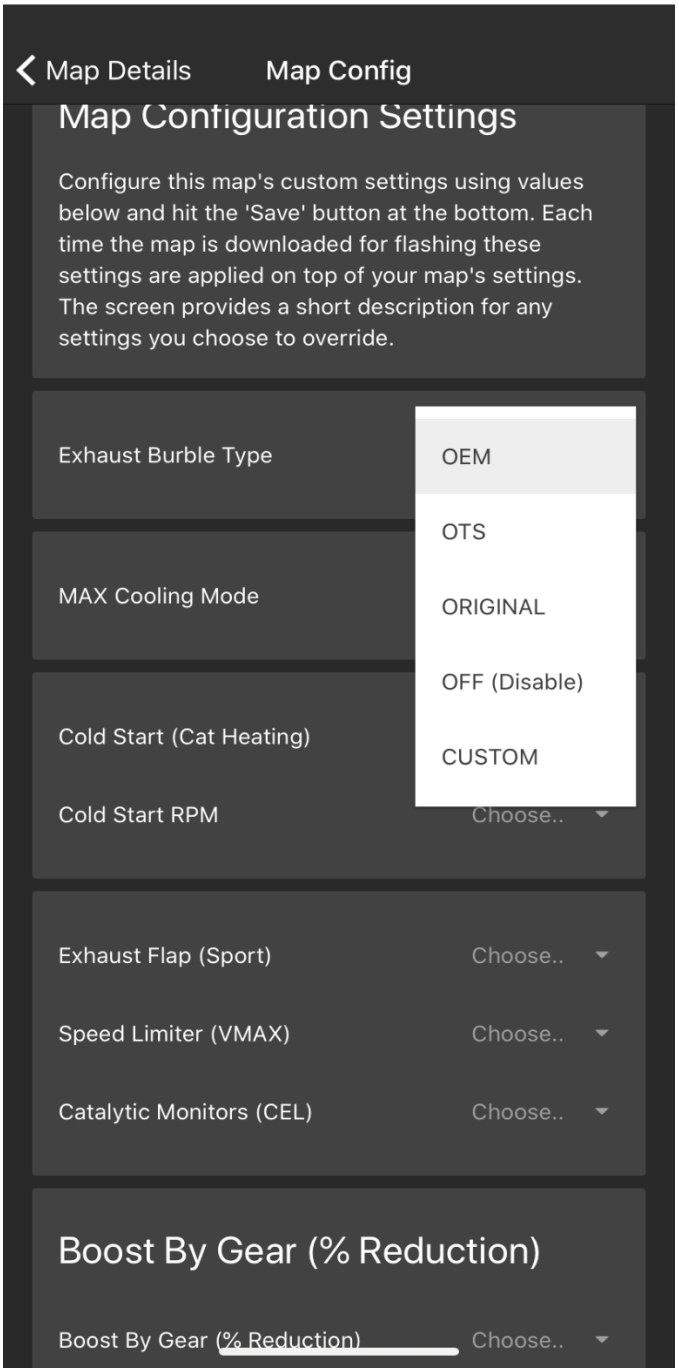
- Exhaust Burble
- Cold Start Idle RPM
- GTS Start-up Roar
- MAX Cooling Mode
- Electronic Wastegate (EWG)
- Rev Match/Rev Match (DSC off)
- TMAP Sensors switch for N20 TMAP Sensor where applicable
- DI Fuel Injectors
- Exhaust Flaps
- Ignition Coils
- High Pressure Fuel Pumps
- Speed Limiter defeat (VMAX off)
- Cat Monitors CEL off for off-road/race car configuration
- Boost by Gear (% Reduction)
- DTC (Codes) Deactivation
- Exhaust OPF

**Please note some of the features are not applicable for all supported vehicles.**

| FUNCTION | A90 | B48 | B58 | N13 | N20 | N55 | N63TU | N63T2 | N63T3 | S55 | S58 | S63TU | S63T4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exhaust Burble | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| GTS Start Up Roar | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | | |
| Max Cooling Mode | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cold Start (Cat Heating) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cold Start RPM | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Exhaust Flap | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Speed Limiter | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Exhaust OPF | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | ✓ |
| Catalytic Monitors (CEL) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ignition Coils | | | | | | ✓ | | | | | ✓ | | |
| HPFP | ✓ | | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | |
| Pre Throttle TMAP Sensor | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Manifold TMAP Sensor | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Rev Match (Eco/Sport?Sport+) | | | | | | ✓ * | | | | ✓ | | | |
| Rev Match (DSC OFF) | | | | | | ✓ * | | | | ✓ | | | |
| Boost by Gear Reduction | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Electronic Wastegate (EWG) | ✓ | ✓ | ✓ | | | | | | | ✓ | | | |
| DTC Deactivation | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| DI Fuel Injectors | | | | | | ✓ ** | | | | | | | |

*N55-M2 **N55-EWG & N55-M2

# 9.3.1 Exhaust Burble




Exhaust Burble is one of **bootmod3's** most desired features. It enables the user to customize the exhaust burble to personal liking. There are five choices to select from.

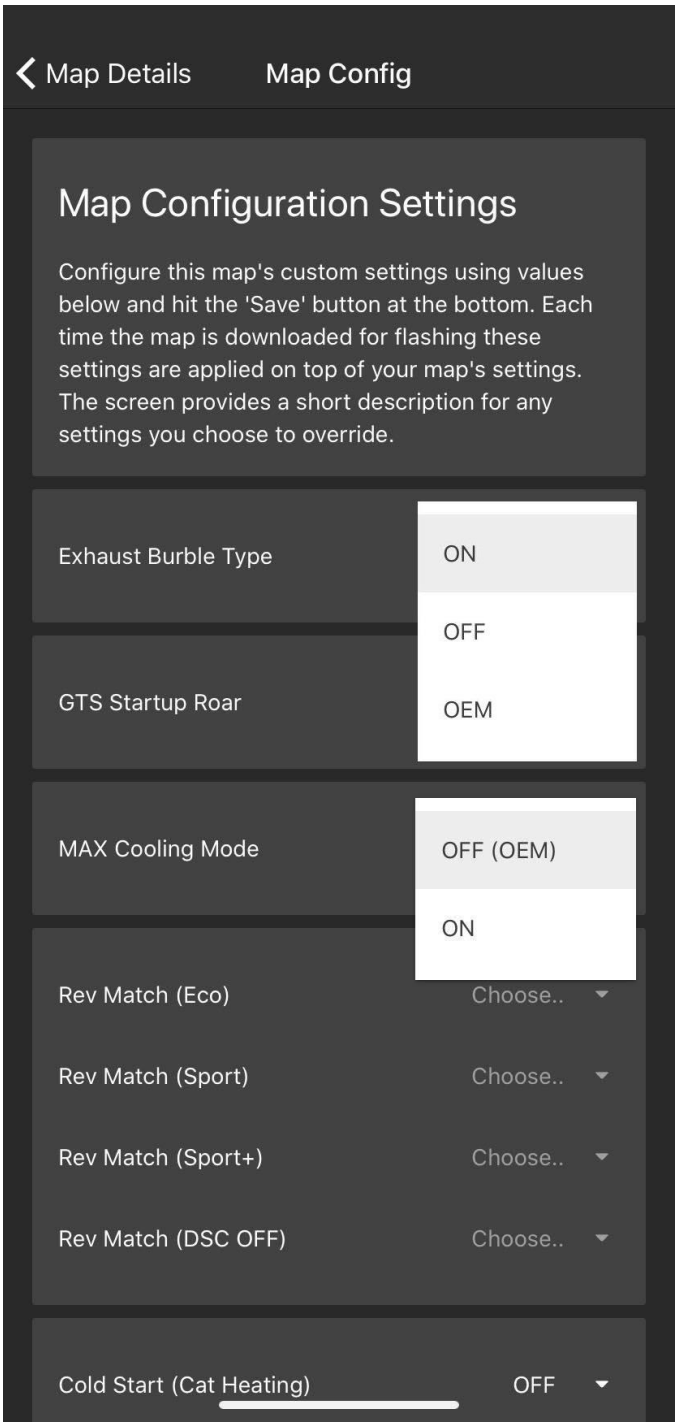
1) OEM – will set the map to the vehicle's OEM burble settings.
2) OTS – will set this map up with the latest released OTS Exhaust Burble setting.
3) Original – uses this map's original values. If it's a custom map, it will use the settings from inside the map which the custom tuner configured. If it's an OTS map, it will use the maps original OTS values. If the map is Stock tune, it will use the stock tune values, equivalent to using OEM setting.
4) OFF (Disable)
5) Custom – allows the user to customize this map's exhaust burble settings.

**Default Settings:**

| | |
|---|---|
| **Duration** | **1 seconds** |
| **Duration (sport)** | **1.5 seconds** |
| **Aggression** | **5** |
| **Min. RPM** | **1200** |
| **Max. RPM** | **5600** |
| **Min. Speed** | **0km/h** |
| **Max. Speed** | **100km/h** |

**Please note Exhaust Burble custom option is not available for S63TU and N63TU engines.**

# 9.3.2 GTS Roar, Max Cooling Mode




**GTS Start-up Roar**

GTS Startup Roar increases the RPMs to about 2000 for .5 seconds at start up. It can be set to ON, OFF or OEM.

1. On – Choosing this option enables the GTS Startup Roar, or race start. On engine startup the RPM will briefly go higher than factory settings to produce a more aggressive sounding engine start. On vehicles with electronic exhaust valves, the valves will also open for a brief moment to assist the overall sound effect.
2. OFF – Disable
3. OEM – This option will use the vehicle's factory startup RPM setting.

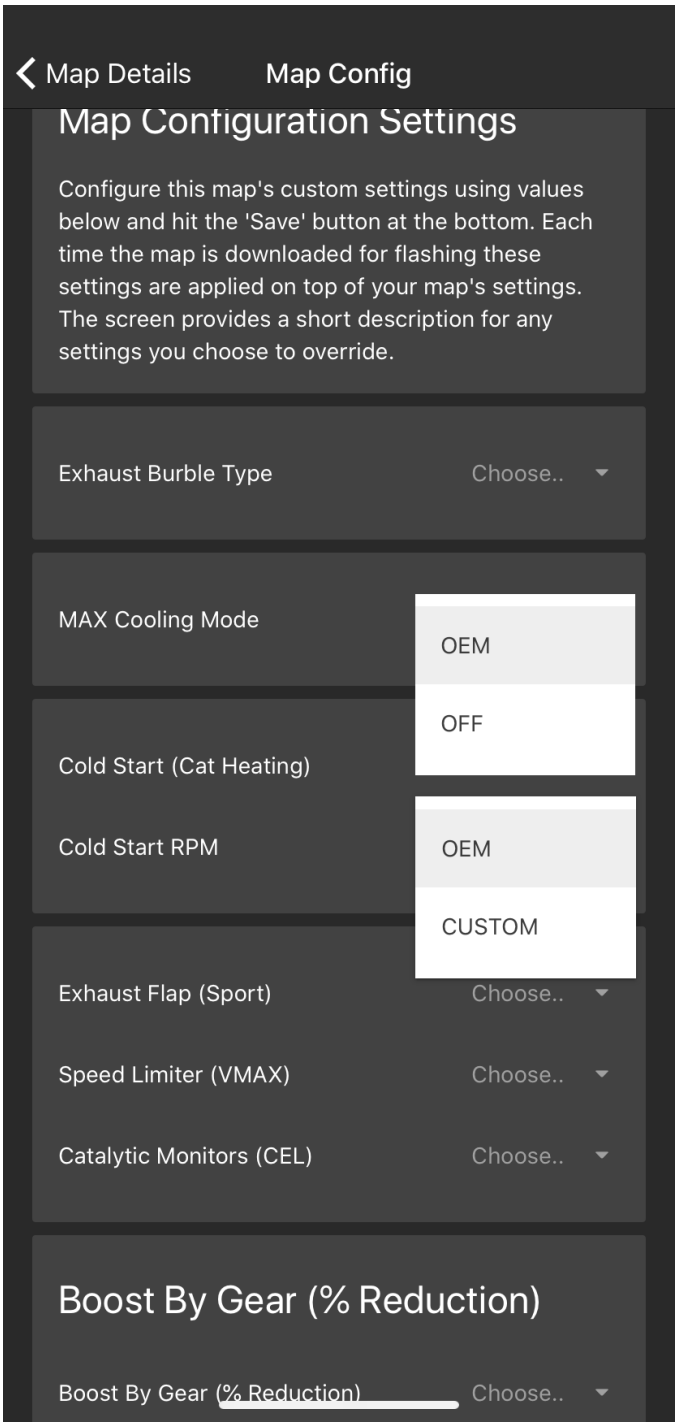
(**Available for all N55, S55, B58, B48 and A90 engines)**

**Max Cooling Mode**

1. ON - Turning on this feature will reduce the targeted coolant temperature by 10 degrees Celsius, thereby causing the water pump thermostat to open earlier, as well as the fan to come on. This feature does not add additional load to the cooling system in the car when coolant temperatures are below target.
2. OFF (OEM) – uses the vehicle's factory cooling settings.

**(Available for all supported engines)**

# 9.3.3 Cold Start, Cold Start RPM




**Cold Start**

Cold Start (Cat Heating) can either be left to OEM settings or be turned OFF. The intended purpose of a cold start is to heat up the catalytic convertors.

1. OEM – This option will use the stock tune settings for cat heating. This brings back the factory long running high RPM cold start to heat up the catalytic converters.
2. OFF – This option will turn off the cat heating process and upon engine start, the engine will immediately run at the standard lower RPM (e.g. 600rpm)
   **(Available for all supported engines)**

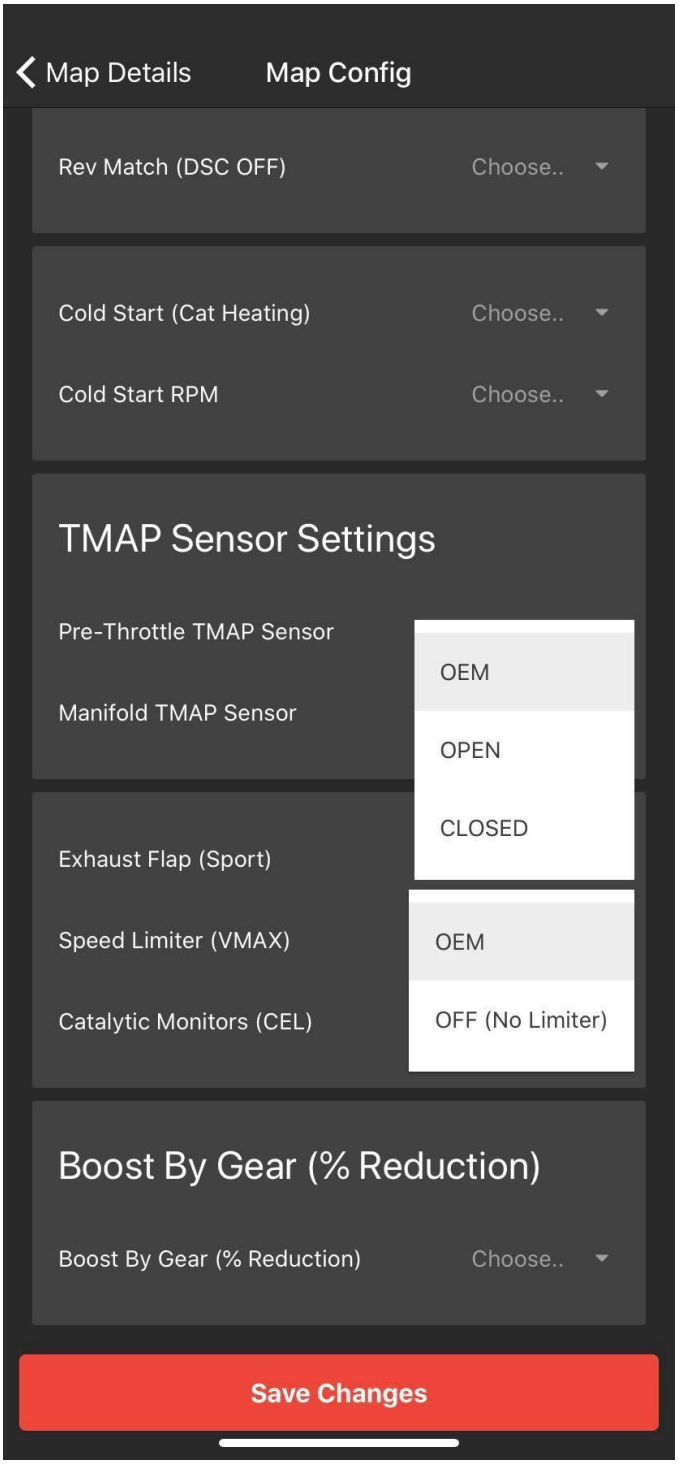
**Cold Start RPM**

Cold Start RPM can either be left to OEM or Custom. Custom RPMs will range from 660-1200 RPMs.

1. OEM – Choosing this option will use the stock tune settings for the cold start RPM.
   **(Recommended setting)**
2. Custom – This option allows the user to set a higher cold start RPM than OEM. This is commonly never used, only in the case of a manual transmission vehicle and if running a lightweight flywheel. Raising idle RPM may remove some associate transmission chatter.

**(NOT AVAILABLE FOR B48, B58 AND A90)**

# 9.3.4 Exhaust Flap, Speed Limiter




**Exhaust Flap**

Exhaust Flaps can be opened, closed or left at factory setting in sport and sport+ mode. These are permanent, unlike in the diagnostics screen, where it is on demand. Purpose of the exhaust flaps is to reduce the exhaust noise.

1. OEM – This option sets up the DME to run exhaust flap controllers with OEM settings, varying 'open/close' operation based on RPM and gear.
2. OPEN – Choosing this option sets up the DME to fully open exhaust valves when in Sport and Sport+ mode, not to vary open/closing by RPM and gear.
3. CLOSED – Sets up the DME to fully close the Exhaust valves in Sport and Sport+ mode.

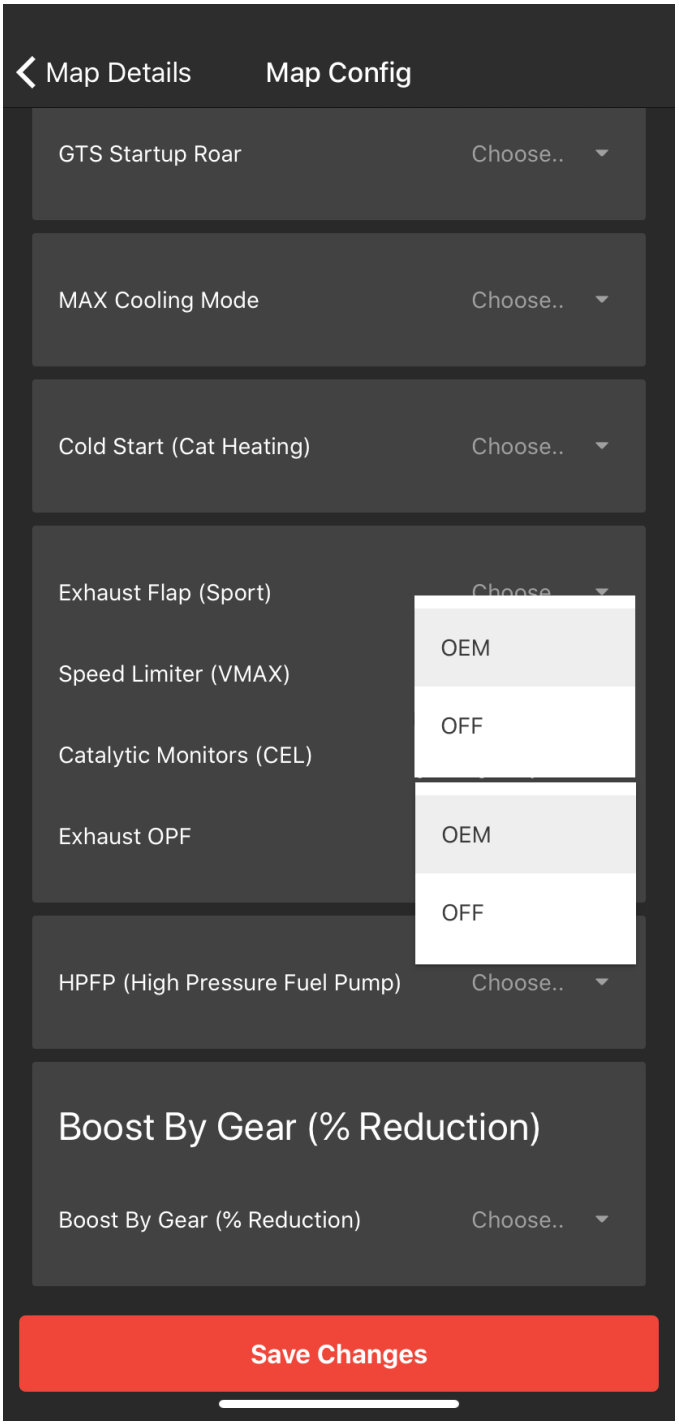
**(Available for all supported engines)**

**Speed Limiter**

1. OEM – Choosing the OEM option sets this map up with the factory vehicle top speed limiter.
2. OFF (No Limiter) – Choosing this option removes the vehicle top speed limiter.

**(Available for all supported engines)**

# 9.3.5 CEL, Exhaust OPF




**Catalytic Monitors (CEL)**

In case a CEL comes up, in most cases due to cat inefficiency, it can be turned off in the map configuration screen. Stage 2 maps are set for CEL to be turned off automatically.

1. OEM – Choosing OEM enables the catalytic efficiency monitor as per factory settings.
2. OFF – Choosing OFF disables the catalytic efficiency to remove the CEL (check engine light) associated with (catless) high flow down pipes for off road use.
   **(Available for all supported engines)**

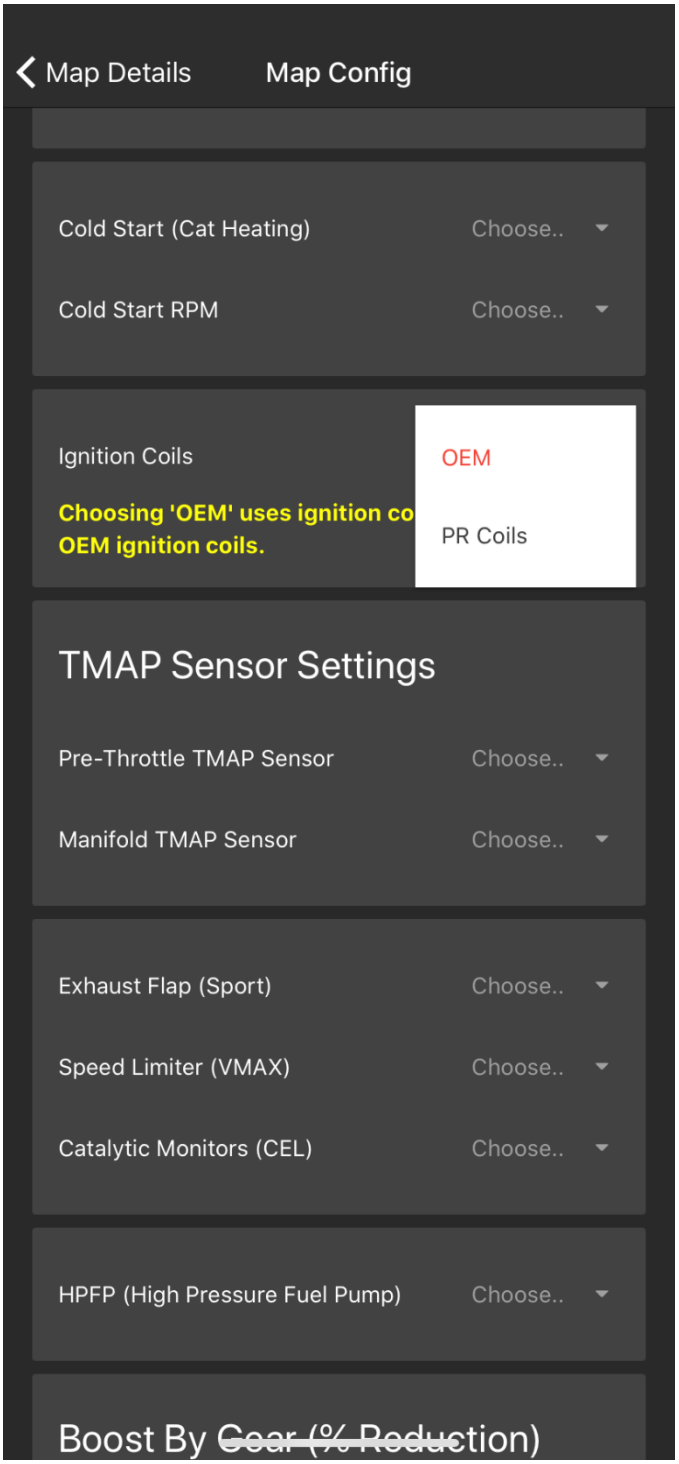
**Exhaust OPF**

Cars of Europe in late 2018 are required to have the OPF/PPF due to emissions regulations. OPF (Otto Partikelfilter) / PPF (Petrol Particulate Filter). Function can be turned off when removing the particulate filter from the car.

1. OEM – Choosing this option restores OPF operation to factory settings.
2. OFF – Choosing OFF disables the OPF operation and monitoring preventing drivetrain malfunction associate with high flow down pipes that don't have OPF in them.

**(Support Available only for A90, B48, B58, S55 and S58 engines)**

# 9.3.6 Ignition Coils/ DI Fuel Injectors




**Ignition Coils**

Upgraded ignition coils support from Precision Racewerks (PR). Take the ignition to the next level, far better than OEM.

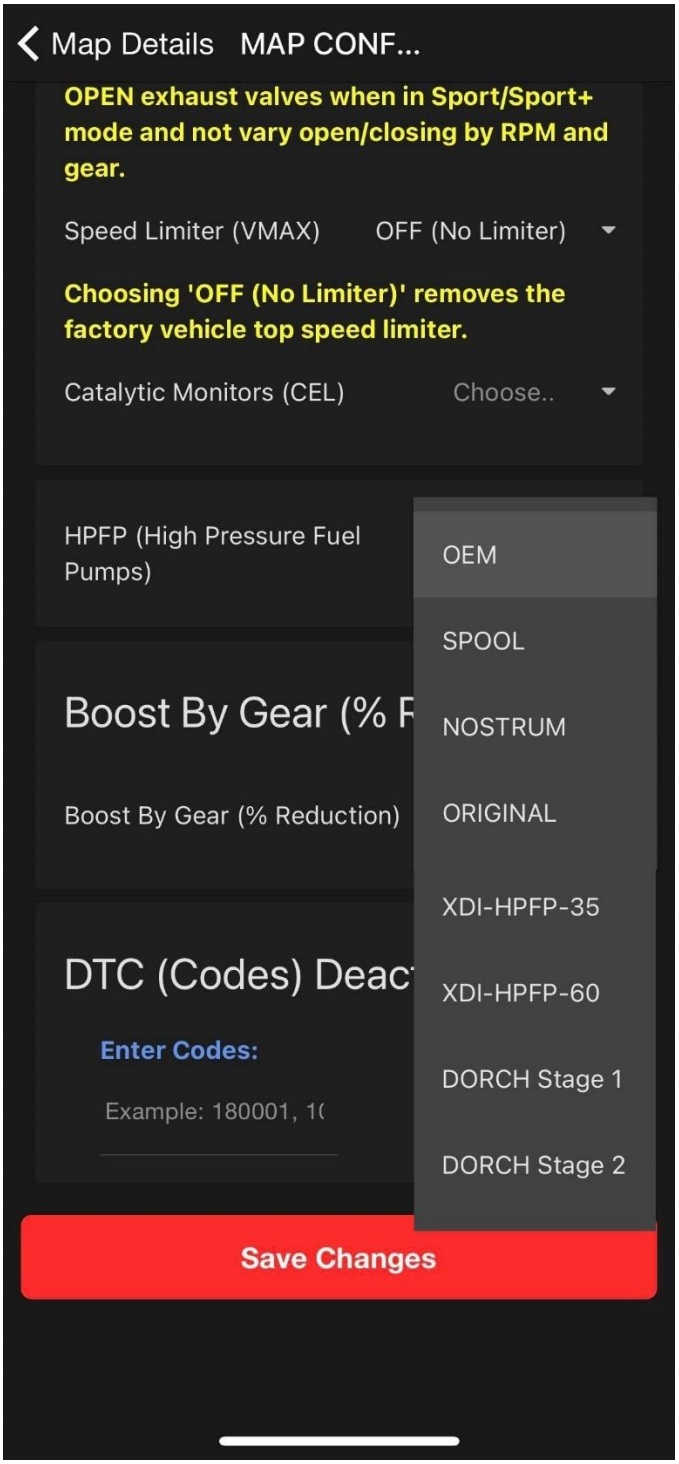
1. OEM – Choosing OEM uses ignition coil settings for OEM ignition coils.
2. PR Coils – Choosing this option uses ignition coil setting for the aftermarket Racewerks PR ignition coils. If the car does not have the aftermarket Racewrks PR coils installed, the vehicle will not start or may start rough. DO NOT choose this option unless the OEM ignition coils have been replaced with PR.
   **(Available only for N55 engines)**

**DI Fuel Injectors**

We have released a new feature for N55 and N55-M2 vehicles **only.** This allows the users to select from the following drop-down options.

1. OEM – Choosing OEM uses the factory Direct Injection fuel injector calibration value.
2. NOSTRUM Stage 1 – Choosing Nostrum uses the calibration settings provided by Nostrum for their Stage 1 injector upgrade. If your car isn't running the Nostrum Stage 1 DI fuel injectors, do not use these settings.
3. ORIGINAL – Choosing original uses the DI fuel injectors settings from this map. This can be used on a custom map as well.

# 9.3.7 High Pressure Fuel Pump




**H.P.F.P.**

High Pressure Fuel pump is an upgraded fuel pump from XDI. Both XDI-HPFP-35 and 60 outflow the OEM HPFP pump on the N55.

Installing one of these pumps without making the changes will force the car into limp mode, as well as throw various codes for fuel pressure.

1. OEM – Choosing OEM uses factory high pressure fuel pump settings.
2. SPOOL - Choosing Spool uses HPFP settings for this aftermarket HPFP.

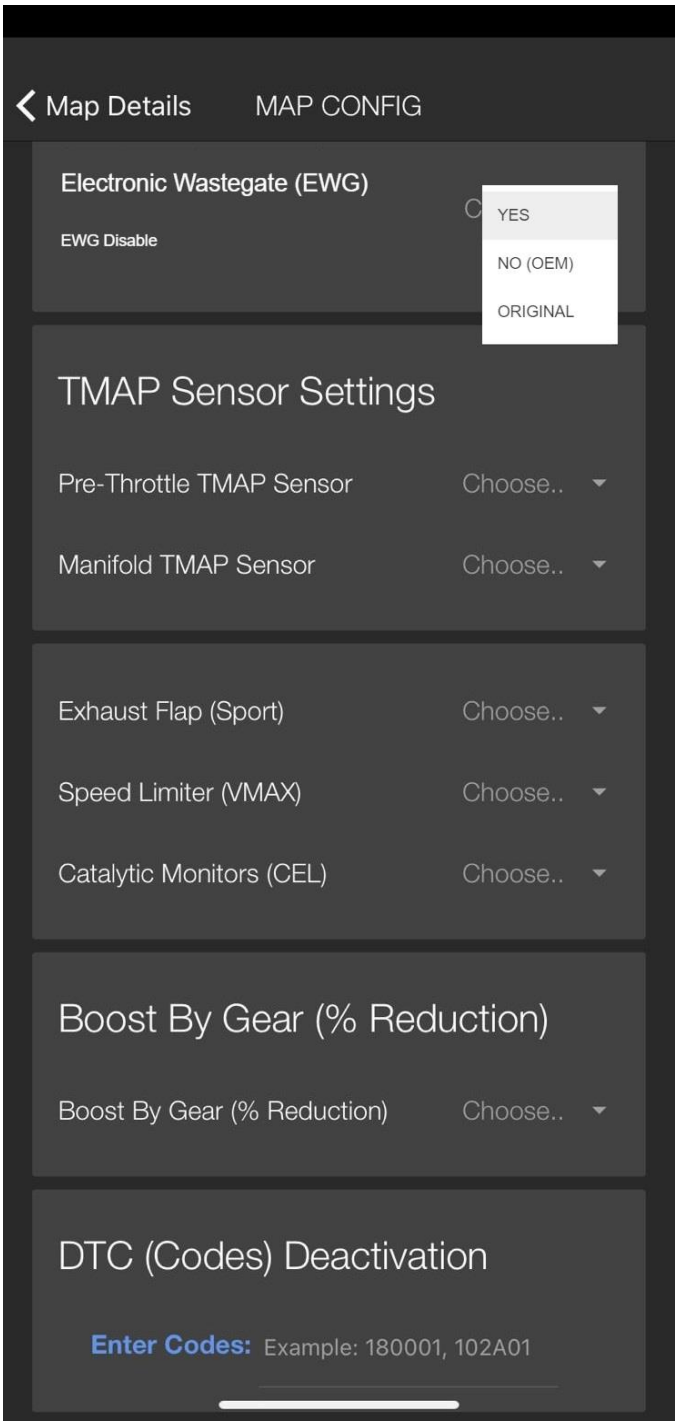
   **(Available for N55, B58, S63TU & N63TU)**
3. NOSTRUM – If your car is not running on the Nostrum HPFP, do not use these settings and set it back to OEM.
4. DORCH – Choosing DORCH uses high-pressure fuel pump settings for this aftermarket HPFP.

   **(Available for B58 & N55 engines)**
5. DORCH Stage 1&2 – Choosing DORCH Stage 1/2 settings uses high-pressure fuel pump settings for this aftermarket HPFP.

   **(Available for B58 engines)**
6. XDI-HPFP-35/60 – Choosing this option uses high-pressure fuel pump settings for this aftermarket HPFP.

   **(Available only for N55 engines)**
7. Original – Choosing ORIGINAL uses the HPFP settings from this map. This can be used on custom maps where a custom tuner is applying their HPFP settings for this map. If this isn't a custom map, then it is equivalent to OEM

# 9.3.8 Electronic Wastegate




Electronic Wastegate (EWG) is one of our new features. Customers going with aftermarket big turbo kits there the factory EWG controller is being removed in favor of the conventional wastegate (e.g. Tial, Tubrosmart, etc.) for boost control. EWG OEM set up is great but this option makes it much easier for custom tuners to dial in the big turbo set up and focus on what matters the most, making gains.

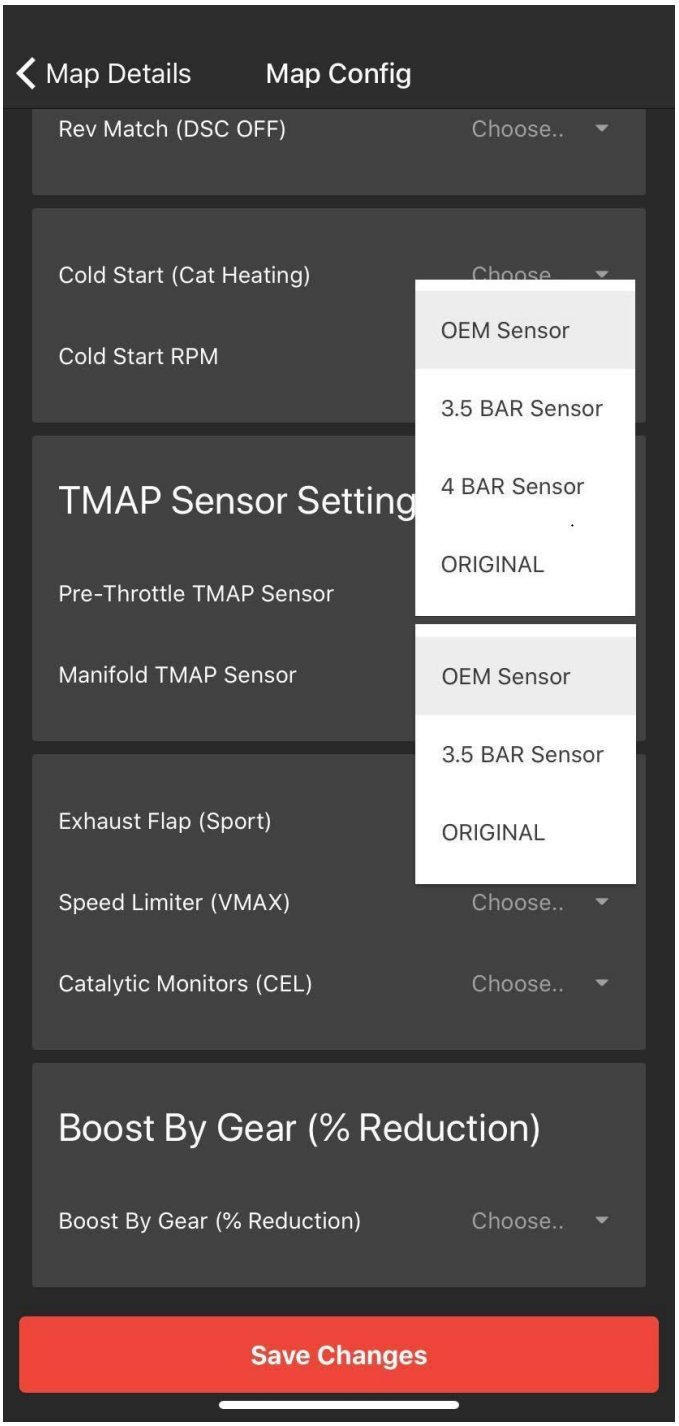
1. YES – Choosing 'YES' disables the Electronic Wastegate controller functionality. This should only be used in after-market turbo kit applications where the EWG is being removed from the car and replaced for the more conventional after-market wastegate setup. Contact an authorized bootmod3 tuner for required custom tuning details.

WARNING: If EWG has not been removed on this vehicle, do not use this setting

2. NO – Choosing NO leaves the EWG Enabled.
3. ORIGINAL – Choosing original, uses the EWG original set up from this map. This can be used on custom maps where a custom tuner is applying their EWG set up to this map. If this is not a custom map, then this is equivalent to setting it to OEM.

**Available only for S55 Vehicles**

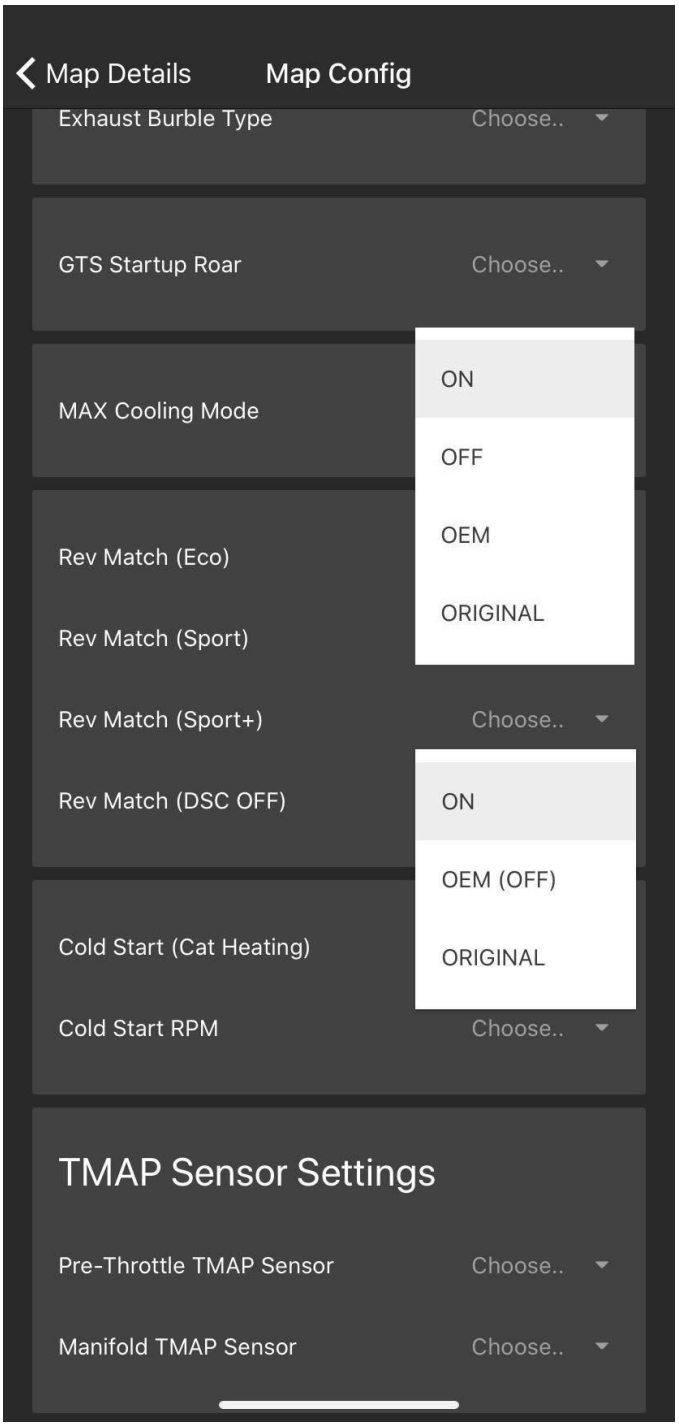
# 9.3.9 Pre-Throttle & Manifold TMAP Sensor




Users may wish to change the Pre-throttle and Manifold TMAP sensors on certain vehicles where the boost will exceed factory TMAP sensors, typically with custom tunes. Only change these settings if certain of the changes. If the changes don't match the sensor after flashing the map the vehicle will stumble, get a drivetrain malfunction and won't idle.

1. OEM – Choosing OEM uses the vehicles stock settings for Pre-Throttle/Manifold TMAP Sensor. Unless the sensor has been changed, this setting should not be changed.
2. 3.5 BAR Sensor – If the car isn't running the 3.5bar Pre-Throttle/Manifold TMAP sensor, the vehicle will not start or may start rough. Do not choose this option unless the OEM Pre-Throttle/Manifold TMAP Sensor has been changed.
3. 4 BAR Sensor - – If the car isn't running the 4bar Pre-Throttle TMAP sensor, the vehicle will not start or may start rough. Do not choose this option unless the OEM Pre-Throttle TMAP Sensor has been changed.
4. ORIGINAL – Choosing this option uses the original TMAP settings from this map. This can be used on a custom map where a custom tuner is applying their TMAP settings for this map. It this isn't a custom map then this is equivalent to OEM **(Available only for N55, S55, S63TU and N63TU engines)**

# 9.3.10 Rev Match / Rev Match DSC OFF




**Rev Match Eco/Sport/Sport+**

This feature is used to match the revolutions when downshifting.

1. ON – Choosing ON will enable rev matching in Eco/Sport/Sport+ mode.
2. OFF – Choosing OFF will disable rev matching in Eco/Sport/Sport+ mode.
3. OEM – Choosing OEM will revert rev matching in Eco/Sport/Sport+ mode to stock tune settings.
4. ORIGINAL – Choosing Original will use this map's preset setting in Eco/Sport/Sport+ mode. If this map is custom tune, it will use the settings the tuner configured.

**(Only available on S55 MT engines, as well as the N55-M2)**

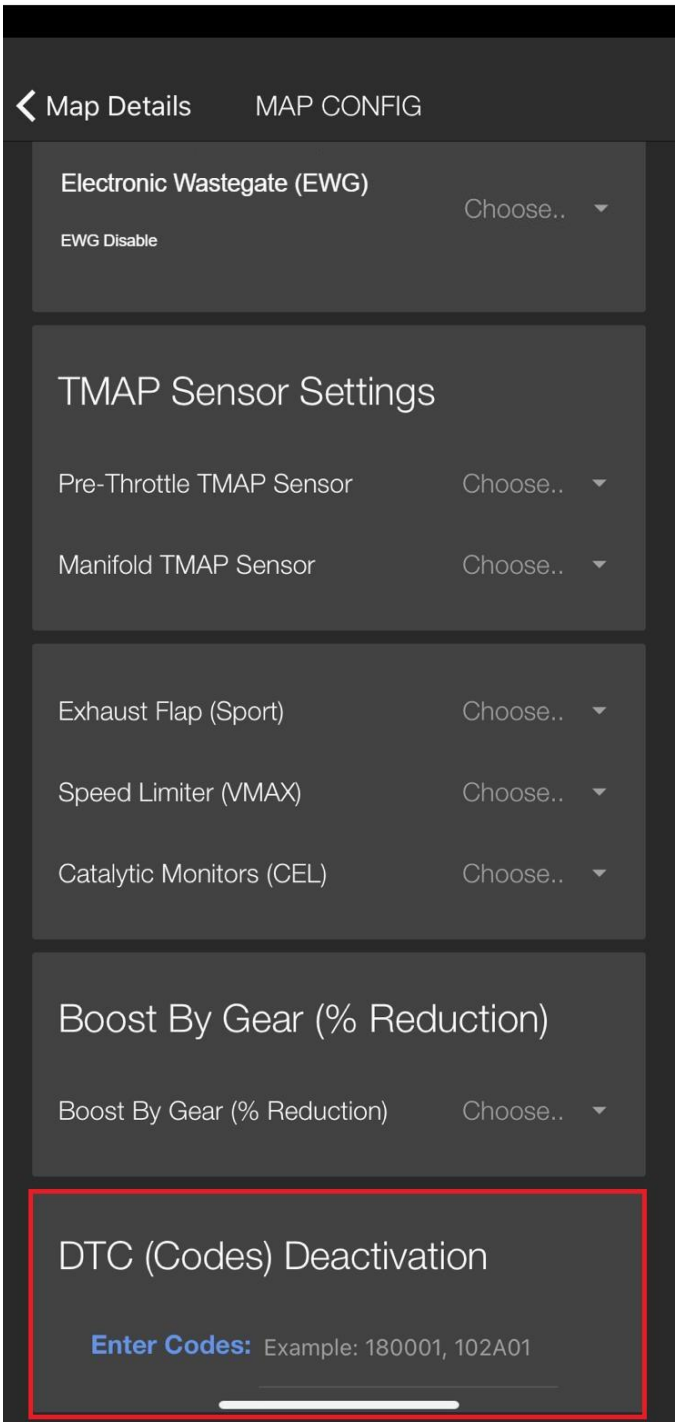
**Rev Match (DSC OFF)**

S55 6MT (Manual) transmission cars now have the ability to turn Rev Match ON when DSC is turned OFF. By default, factory tuning turns off the rev matching feature when DSC is OFF. It is now configurable for all maps including Stock, OTS and Custom maps.

1. ON – Choosing this option will enable rev matching in DSC OFF mode.
2. OEM (OFF) – Choosing this option will revert rev matching in DSC OFF mode to stock tune settings.
3. ORIGINAL – Choosing Original will use this map's preset setting in DSC OFF mode. If this map is custom tune, it will use the settings the tuner configured.

**(Only available on S55 MT engines, as well as the N55-M2)**

# 9.3.11 DTC Deactivation



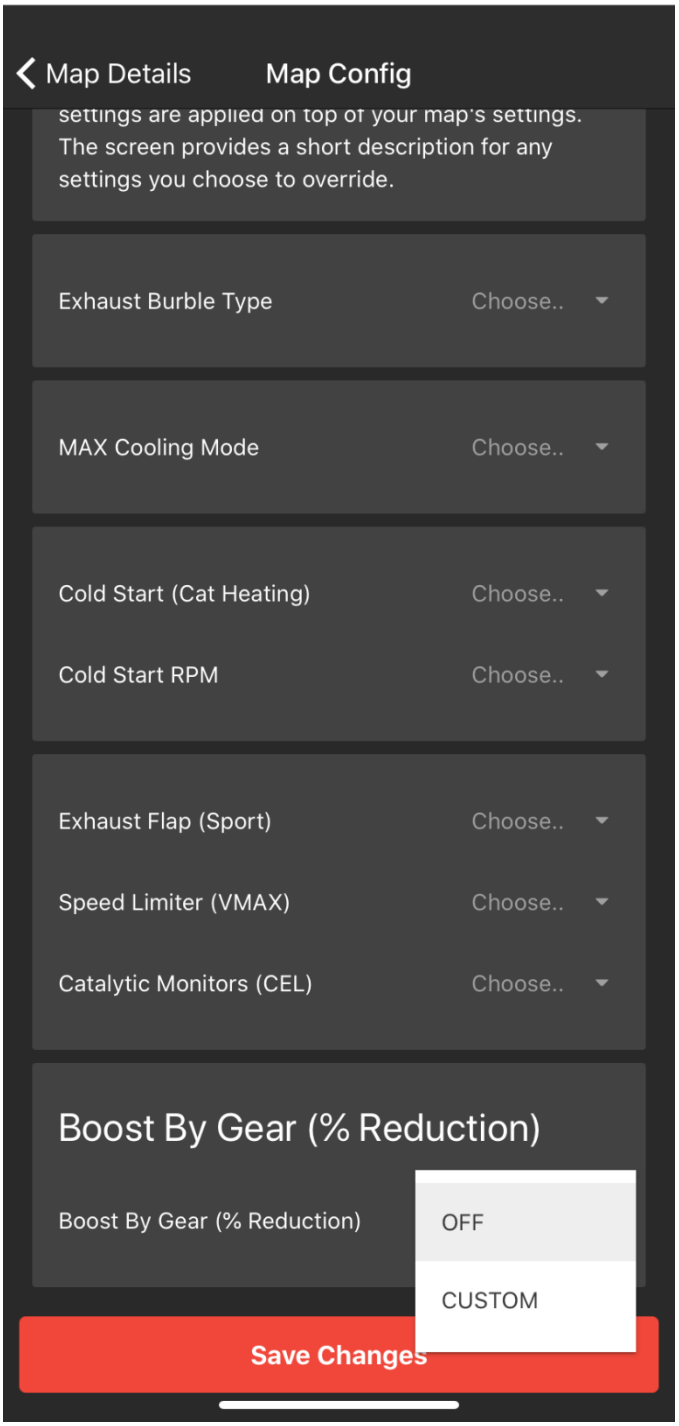

We have added a new feature to enable users to selectively remove DTCs (Diagnostic Trouble Codes) on maps. In the cases of extensive hardware modifications, relating to the engine or its accessories, there are times when its nice to turn off certain codes from coming up.

This DOES NOT in any way help resolve any mechanical issues the user may be having. In some other cases, turning off a code will also not resolve an issue where the additional custom tuning is necessary to fully address the problem.

In situations where the source/cause of a given code is understood and the user is comfortable turning it off to ‘clean things up’, this is a neat feature to get that accomplished.

**Available today for all S55 cars, N55-M2 and N55-EWG.**

# 9.3.12 Boost by Gear Reduction (%)



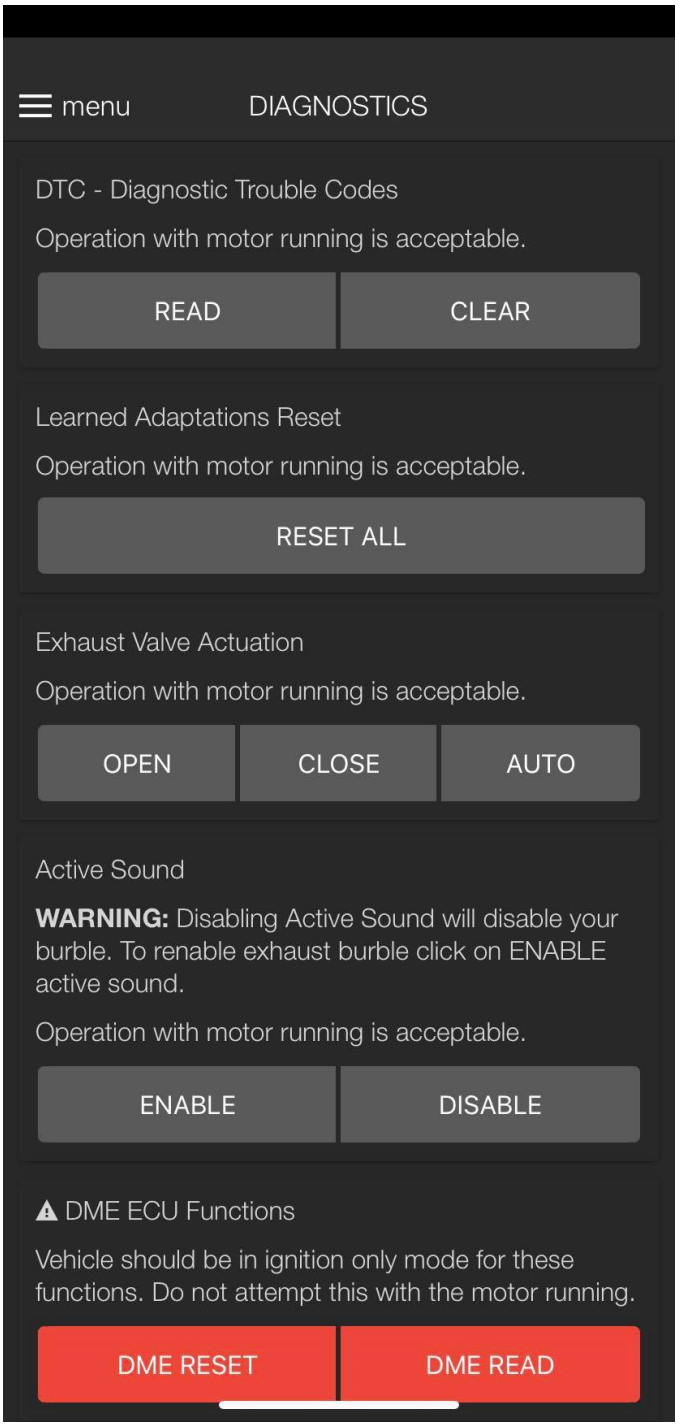

Many people on the racetracks can attest to having traction issues, especially in lower gears. These issues are about cutting better 60' at the ¼ mile or in a 2nd gear roll, given how torque ramps in quickly on these cars. This is a great feature we have added where user can reduce the boost by gear to their personal liking. Quality tires and proper suspension set up go a long way.

1. OFF – Choosing this option will not apply any boost reduction to this map's request torque output settings.
2. CUSTOM – Choosing this option allows the user to configure this map's requested torque output based on gear. This is typically used to adjust for loss of traction issues in lower gear preventing quick off the line launches.

Typical starting values if traction is limited:
20-30% - 1st Gear
10-20% in 2nd Gear

Please note that after every change in the map configuration screen, saving changes (button on the bottom), as well as re-flashing the map will be required for the changes to be applied to the map.

# 10 Diagnostics




The Diagnostics screen is mainly used to read codes from the DME.
Pressing the '**READ**' button will read all the DTC from the DME. Users may be asked by the **bootmod3** team to do the readout, to help identify any potential issues.

The '**Clear**' button clears all the codes.

The Learned Adaptation Reset ('**Reset All'** button) is used to reset all previous adaptations. This is used when flashing from stock to a tune, or if a new version of the tune is available.

Exhaust Valve Actuation can either be set to '**Open**', '**Close**' or '**Auto**'. This is an on-demand option, not permanent. To permanently set valves position, use the map configuration screen.

Active sound can always be either enabled or disabled. Note that disabling the '**Active Sound**' may disable current burble setting.

DME RESET will power reset the entire DME. Only to be used when/if troubleshooting with technical support staff.

By clicking the '**DME READ**', the platform will then perform a DME readout and save any previously flashed maps. This function is to be used only when instructed by bootmod3 tech. support team.

Please note that the vehicle should be in ignition mode only when preforming these two actions – DME RESET and DME READ.

# 10 Map Editor


bootmod3 Map Editor has been entirely overhauled during the past few months along with many changes both server side and inside the OBD Agent to support the advanced editing features now available.
We have extensively used it on, and off dyno and a number of really great tuners have provided input throughout our recent tuner beta to make things as efficient as possible for them and their customers when tuning remote and in-person on-dyno vehicles.

# 11.1 Map Editor Overview

- **4800+** tuning tables available on S55 CustomROM (1000s for other vehicle models) for tuning between CORE and RELATED tables on each ROM version
- Thousands of tables available for any existing non-CustomROM maps
- Table categorization done by splitting tables into two main categories: CORE and RELATED
    - **CORE** tables represent tables most frequently used throughout tuning lifecycle
    - **RELATED** tables represent functionally related tables as per research on DME logic and A2L functions
- Tables Tree showing all Core tables with Related tables underneath for ease of research/browsing
- Integrated Table Descriptions for all Core tables
    - Descriptions are interactive. When other tables are referenced in the description text they can be clicked on and tables opened for review/edit/compare/import from version history
- Related Tables tab on any open Core table shows all functionally related tables
    - Related tables tab is interactive. Any related tables shown can be clicked through and opened for review/edit/compare/import from version history
- Integrated Version History at Map and Table levels - Compare or restore with any prior saved map version by importing a complete map or checking version history at the individual table level
- Integrated Datalogs for Tune Requests and Self-Tuning
- Integrated Live Dash for monitoring and logging
    - Dash remains hidden on the right of the screen until opened for use
    - Datalogs accessible through Datalogs Tab after logging with the integrated dash without leaving the editor
    - Without leaving editor and while dash is running, easily toggle between Metric, Imperial units and relative/absolute pressure unit representation
    - In cases vehicle connection changes from one vehicle to another, the available channels listing updates with new channels appropriate for the connected vehicle
    - Logs captured are automatically uploaded to the end-users account and made available on the Tune Request's Datalogs tab for review
- Integrated Map Configuration screen for Tune Requests - tuners can update Map Configuration on any custom tune request on behalf of end users

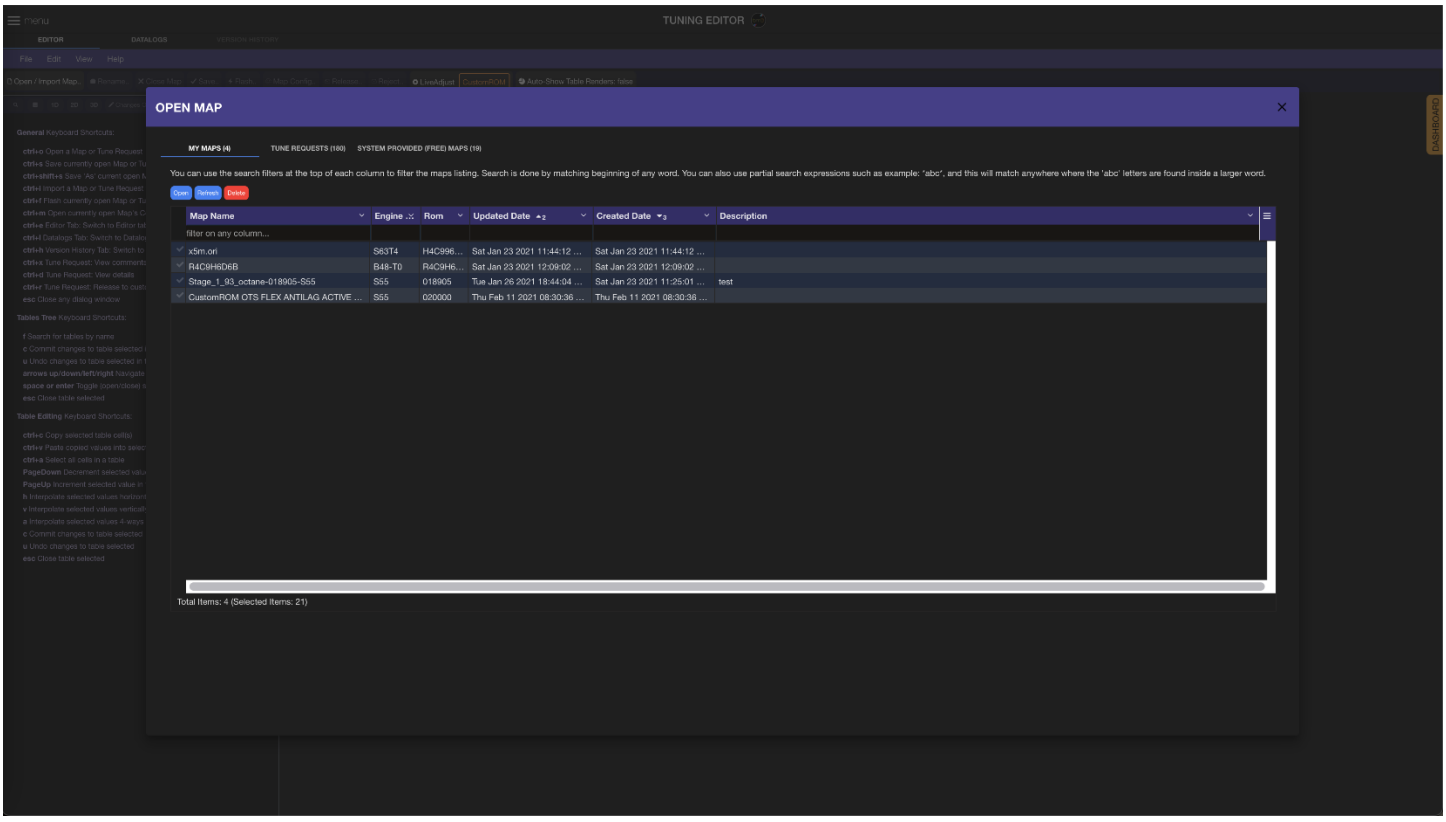
- Open/Import screen across My Maps, Tune Requests and Free Reference Maps.
    - Maps shown with advanced filtering per column for all table listings making it easy to find what user is looking to import/compare against
    - Filter search and Multi-select-to-delete any existing unwanted maps under My Maps
    - All Tune Requests are shown in the Tune Request tab regardless of their current status allowing for filtering on any in progress and previously closed Tune Requests
    - Free Reference Maps Tab - shows various maps made available for import into the existing maps for learning/comparison
    - New Ability to import across different engine types along with previous cross ROM import support
    - View Tune Request comments before opening the map for the tune request and respond when no map changes are required
    - Filter-select tables at Import by Name, Table/Map ID and Size
- Search Table Tree by Table/Map ID
- Flash open Tune Requests to connected vehicles directly from the Authorized Tuner account
- Run LiveDash and datalog any connected vehicle by Authorized Tuners
- Save Tune Requests under My Maps in the Tuner account when looking to save a reference map for later use
- 30+ keyboard shortcuts to speed up everything from map opening, table commit/undo changes, math functions, viewing tune request comments, switching between Editor, Datalogs, Version History tabs, and many others...
- New Table Editing Math Functions:
    - Horizontal, vertical, and 4-way interpolation smoothing functions added based on WinOLS interpolation behavior
    - Increment/Decrement by smallest factorable unit
    - Increment/Decrement/Multiply/Divide by value entered in cell
- Increment/Decrement by % value
- View % differences before committing changes
- Hover over Undo button to view current/previous data in a table before commit
- Various ‘under the hood’ performance enhancements to editor functionality
- Warning on close browser or back button when inside editor
- Maps, tune requests, datalogs listings all show current user’s time zone date format (e.g., Tuner will see end user’s logs in their current local time zone, while end user sees the listing in their local time zone).

# 11.2 Map Editor Walk-Through

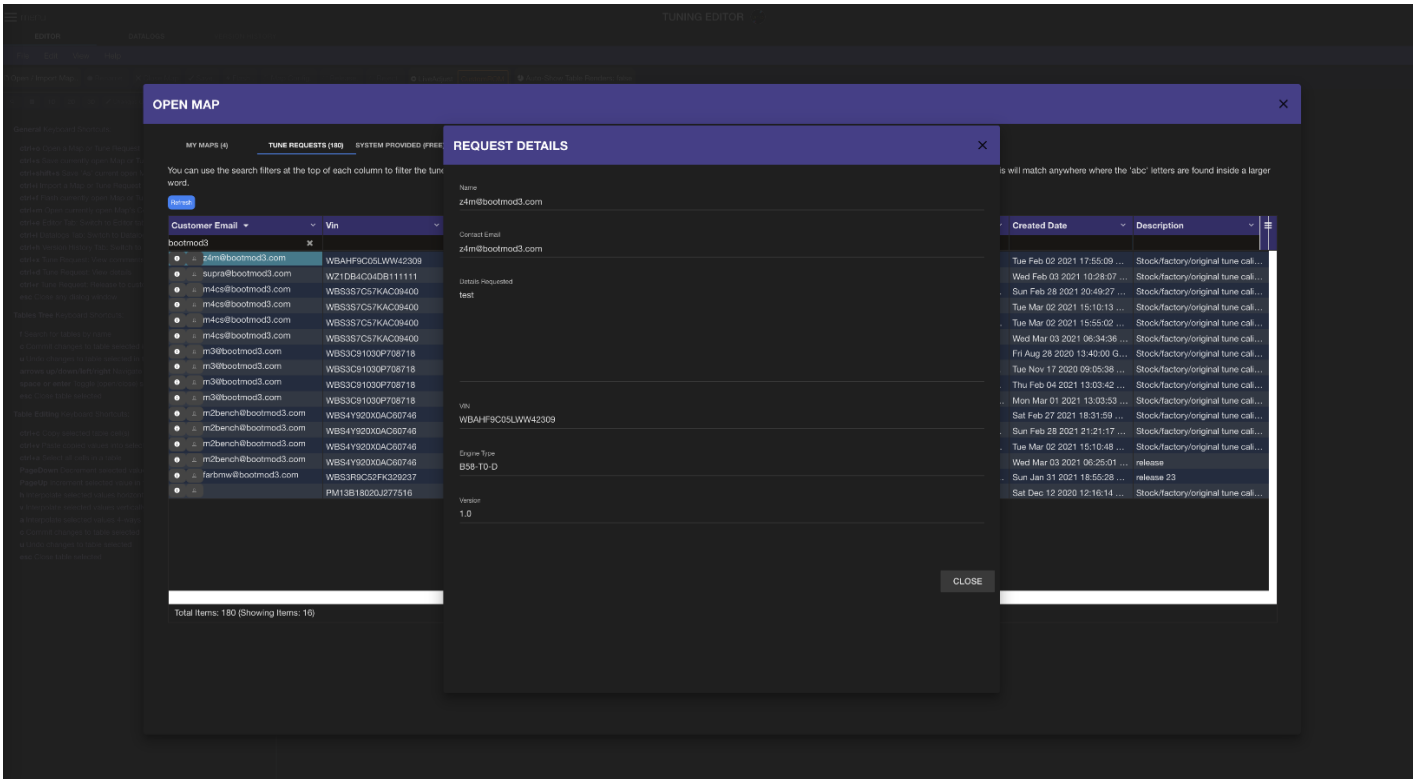
Map Editor with sample map open and some tables open for editing, dashboard open on the right side running against the connected vehicle, searchable table tree on the left, button bar across the top for quick access to open, flash, other actions.

Clicking on Open/Import Map button a new dialog box shows up showing 3 tabs:

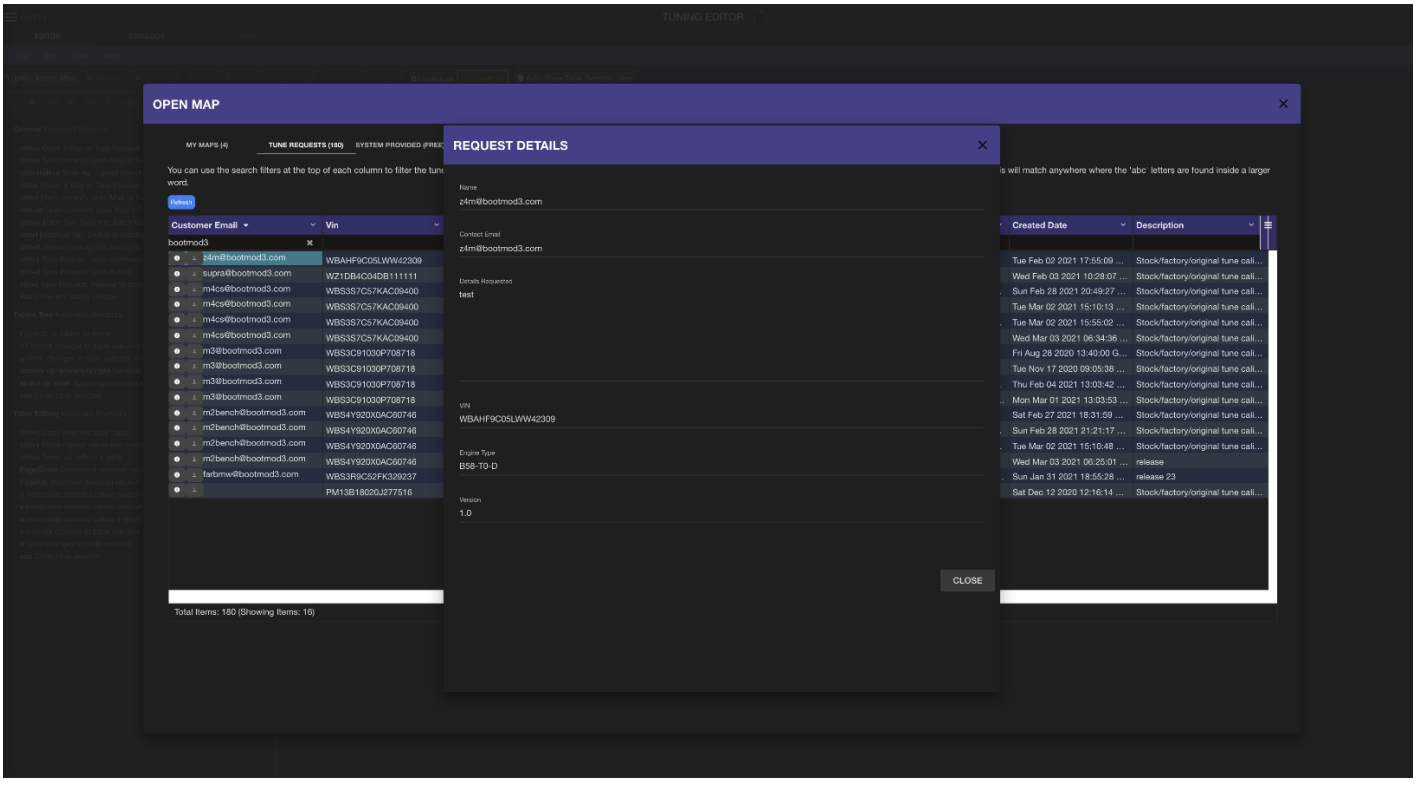
- My Maps - all private maps in your own account, typically base maps used for custom tuning.
    - Authorized users can upload raw BIN files to their account under My Maps and open them in editor.
- Tune Requests - all pending and completed tune requests from remote customers available to open, review, filter.
- System Provided (FREE) Maps - reference maps listing with several maps provided by the bootmod3 team for compare/learning.



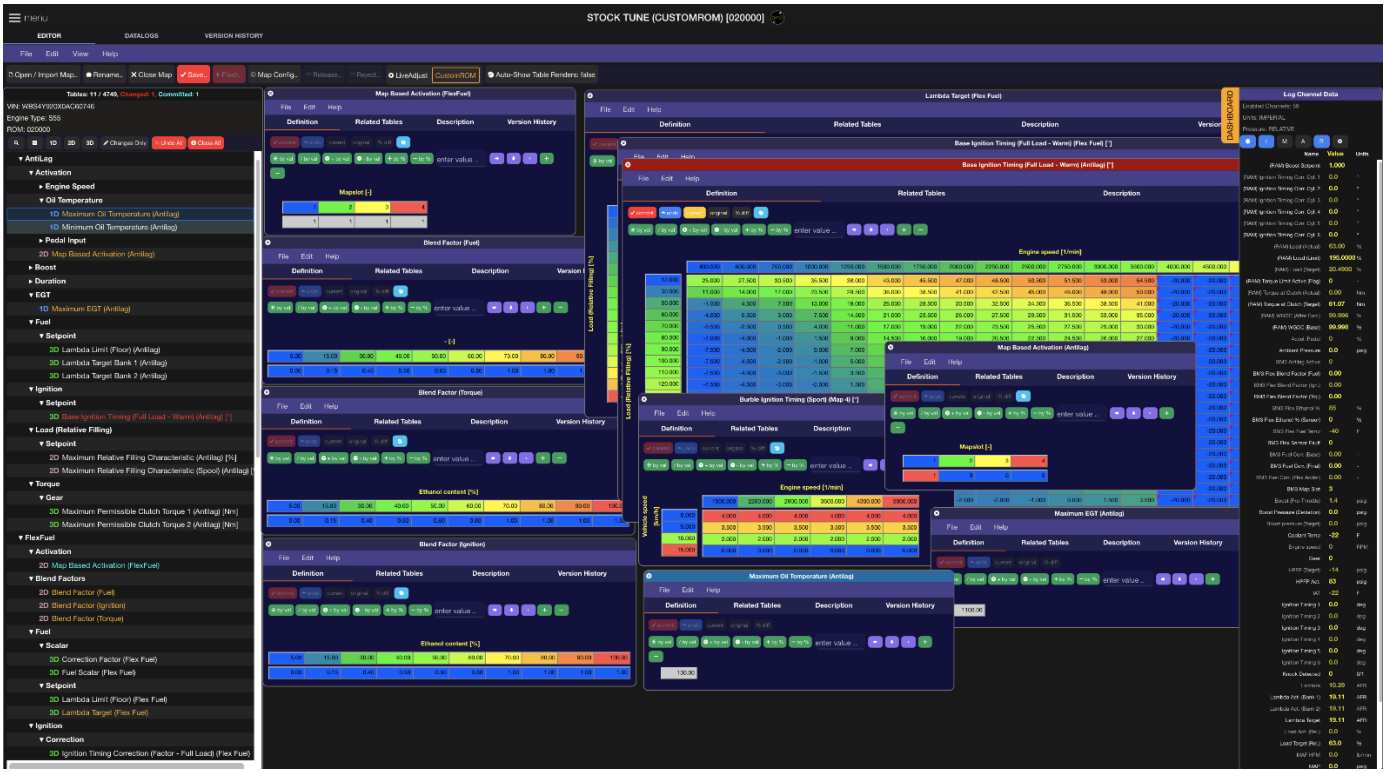
Tune Requests Tab - test account data, demonstrating filter by customer email at top which shows 16 of the available 180 tune requests. Filtering and sorting each column is possible along with viewing request details and responding to customer comments.



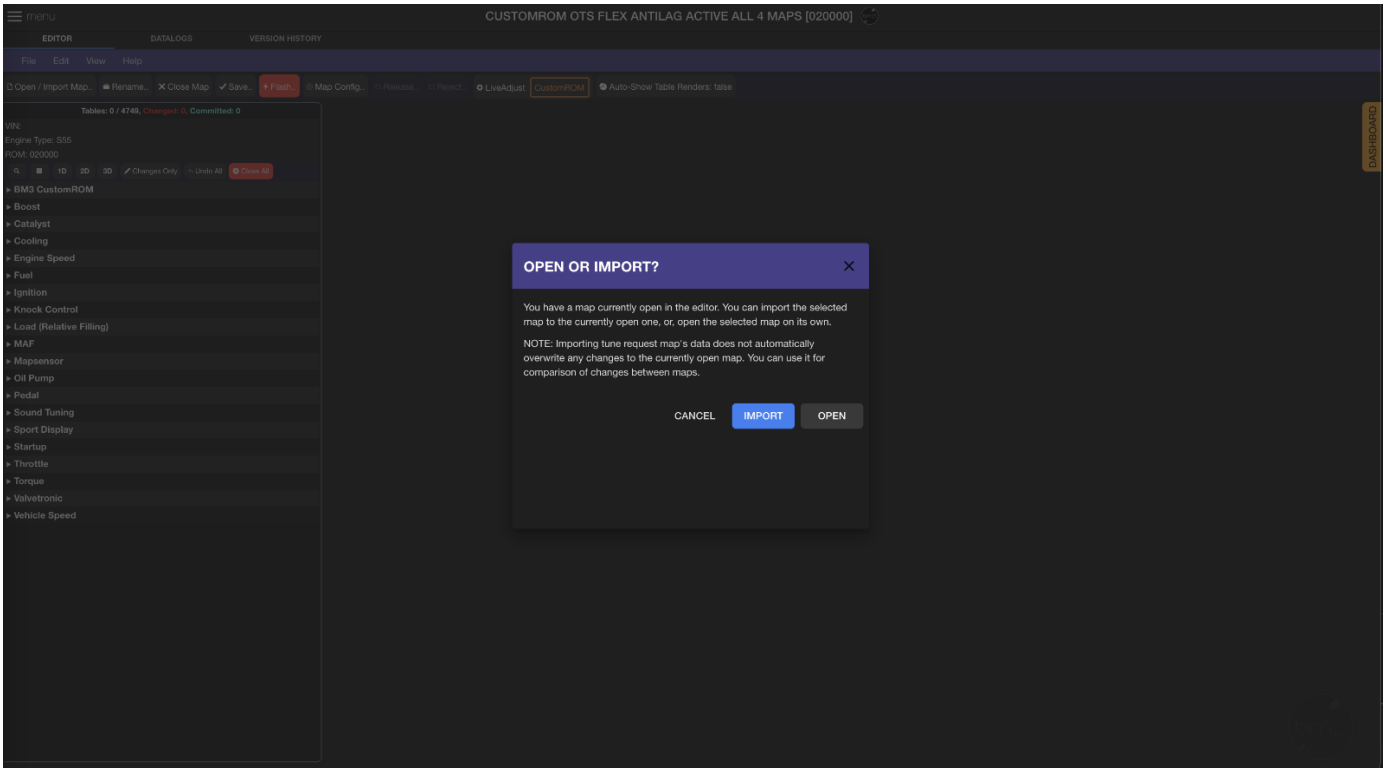

Tune Request Details screen:



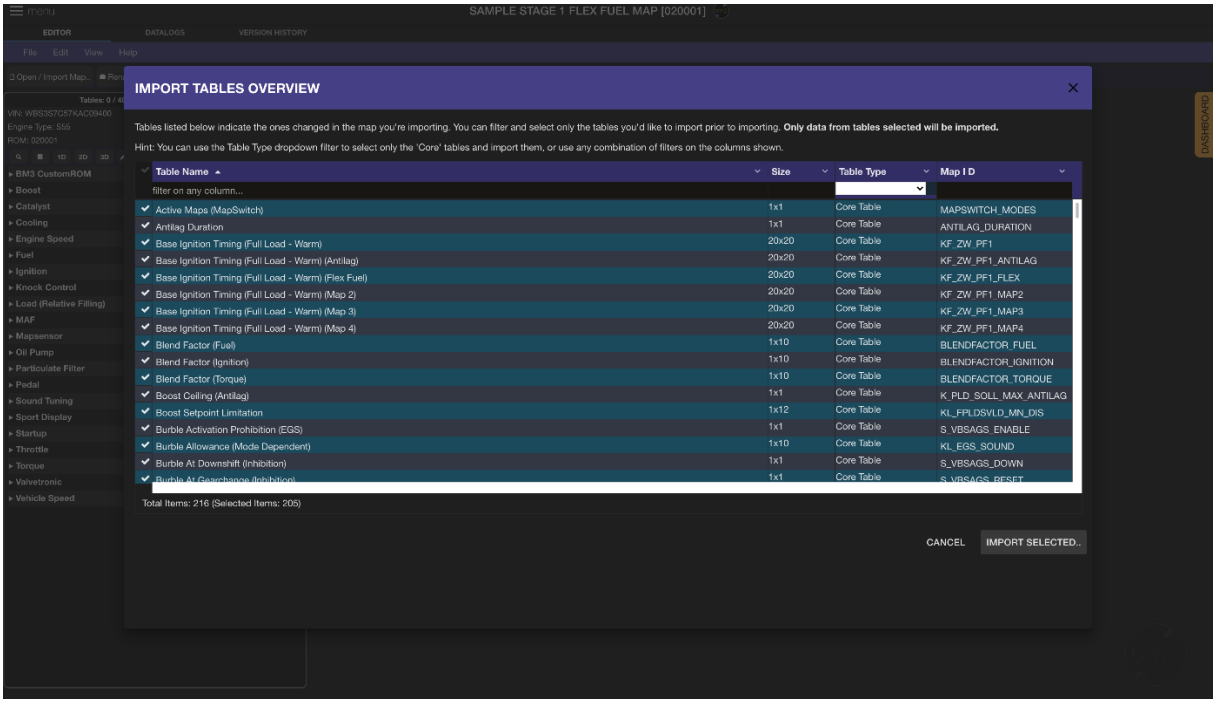
Double-clicking on any map under My Maps or Tune Requests opens the map and shows the editor as below.



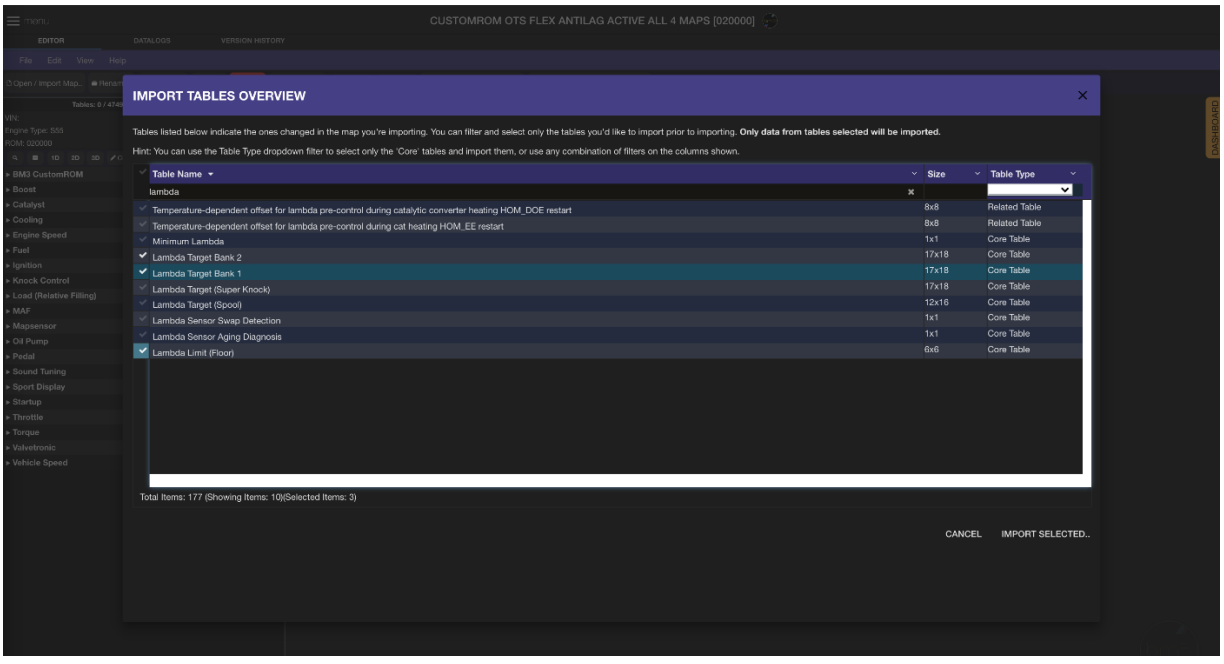

In case a map or tune request is already open, double-clicking to open another map from My Maps or Tune Request will allow the user to Import data from that map or tune request allowing for cross-porting of changes between various base maps under My Maps as well as custom Tune Request maps.



Choosing ‘Import’ on the selected map shows differences between the map currently open and the one selected and allows the user to select tables they would like to import instead of importing all changes. By default, all Core tables are preselected but the user can deselect all by clicking on the checkbox in the top left corner of the listing and filter by entering the table name or size or table type first and then check off the tables targeted for import.




User can see that they can search/filter the import tables listing by a number of parameters including Name, Size, Table Type and Map ID. Here we have deselected all and filtered for “Lambda” in the Table Name filter and then selected Lambda Target Bank 1, Lambda Target Bank 2, and Lambda Limit (Floor) tables for import:

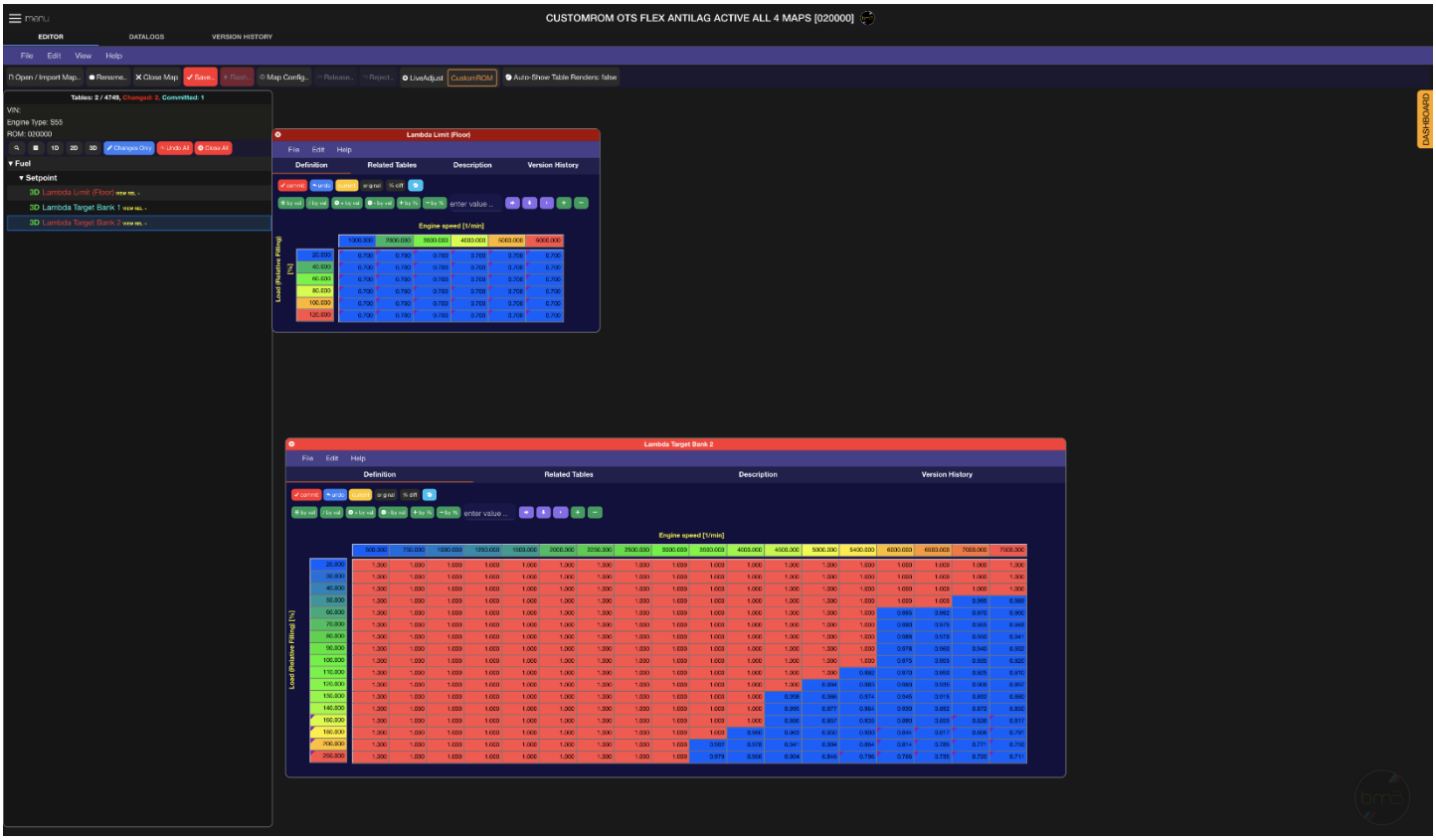


After import, the Table Tree shows dirty tables only (can be toggled off with the ‘Changes Only’ button above the Table Tree). Once tables are clicked on user can see the data in the table with indicators on all the cells changed after import. The user can also see the title bar for each changed table is changed from blue to red indicating changes pending commit and save.

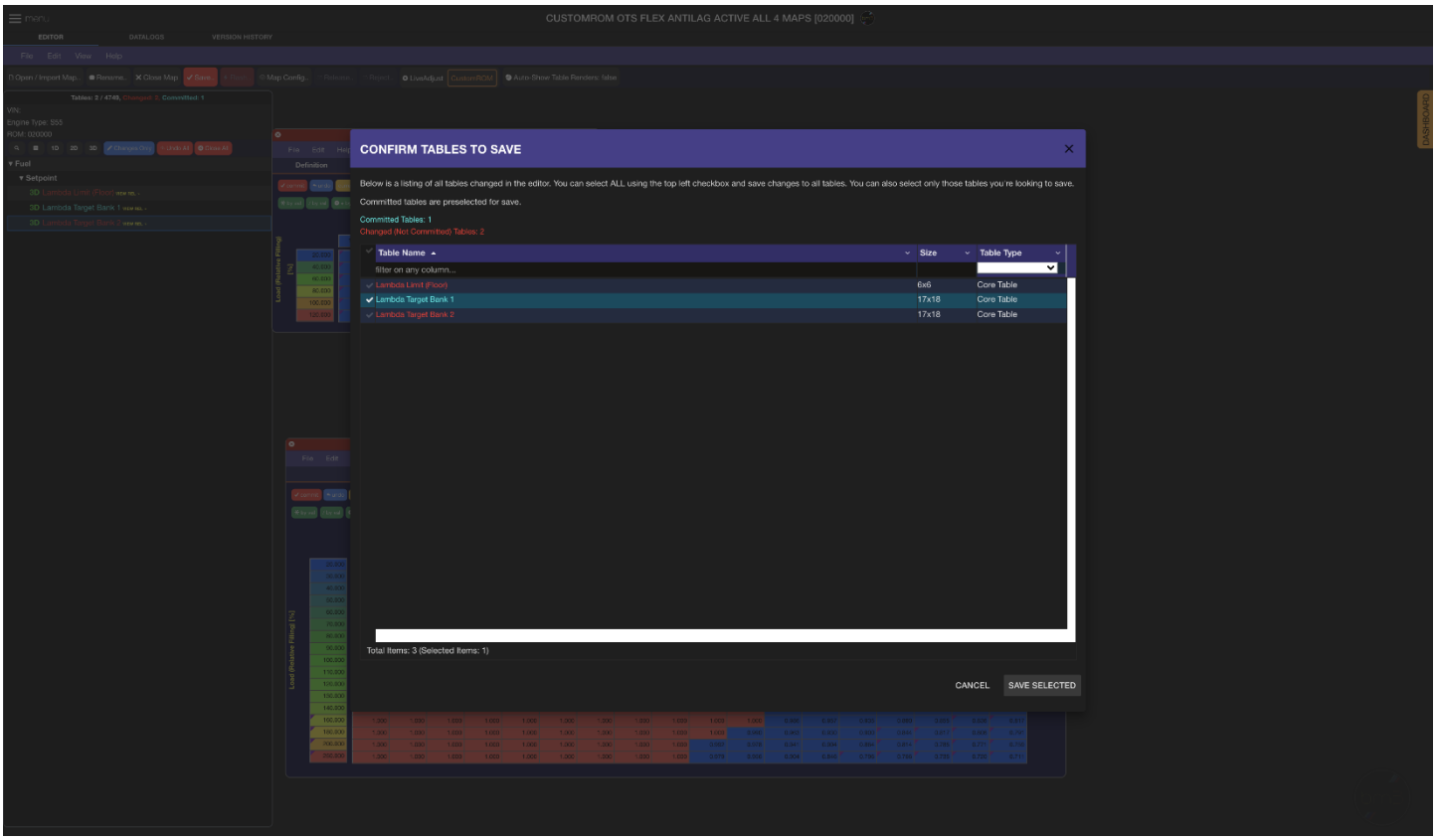
Hovering over the ‘undo’ button on each table will show original values that were in the table before editing/importing. This is only available before the ‘Commit’ button is clicked on.

Clicking on the ‘commit’ button prepares that table for ‘save’ and removes original tables from it. Not all tables changed need to be committed before Saving. Saving, much like importing, is selective.

For example, we have clicked on ‘Commit’ on one of the 3 tables above, Lambda Target (Bank 1), and table name changes color in the tree from red to light blue, and auto-closes the table, ending up with this in the editor:

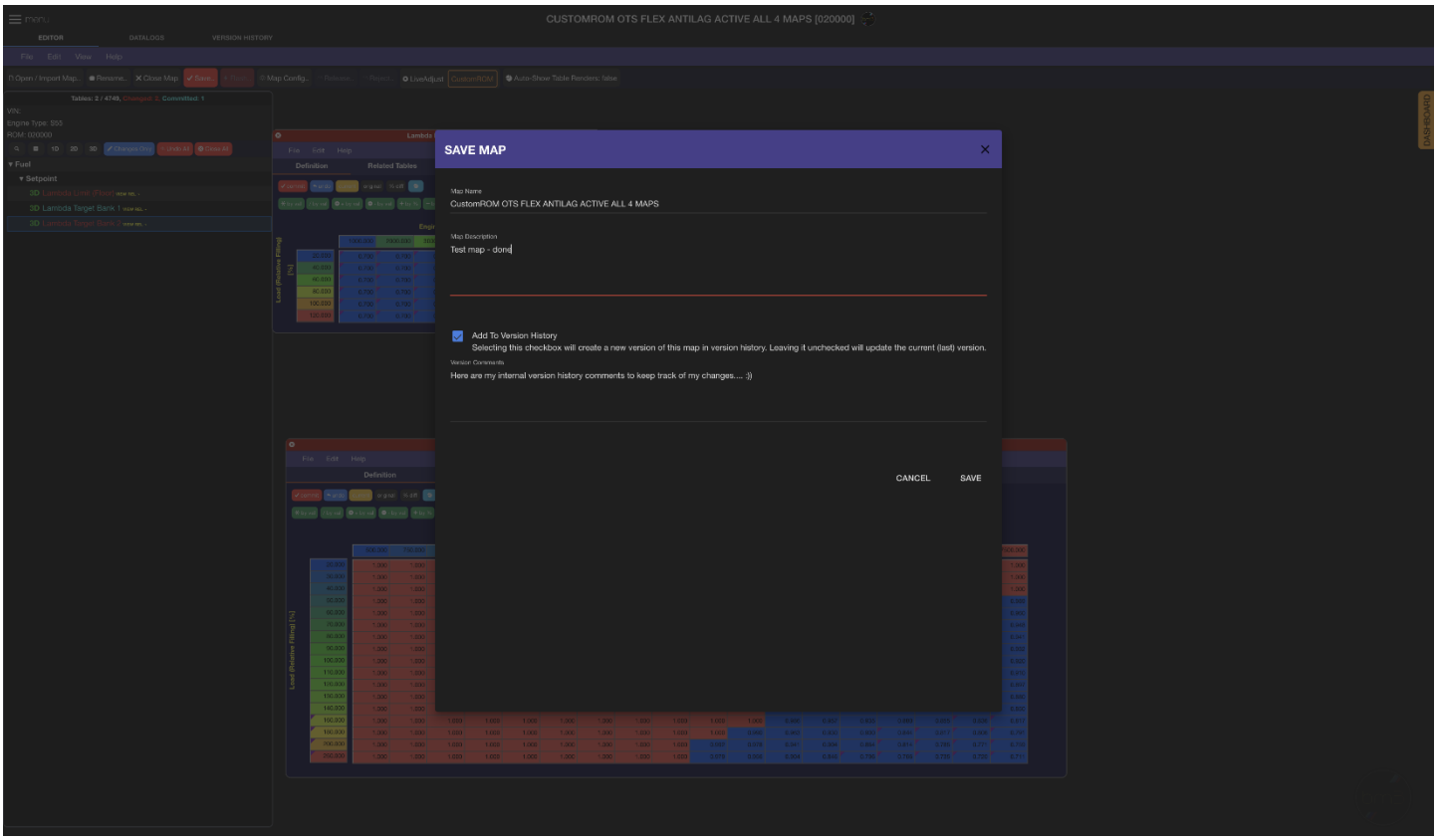


Let us assume only we are done with editing; we did not commit the other 2 tables, but we would like to Save and finish editing the map. Clicking on Save with 1 table committed and 2 tables still with changes pending (dirty) shows this:

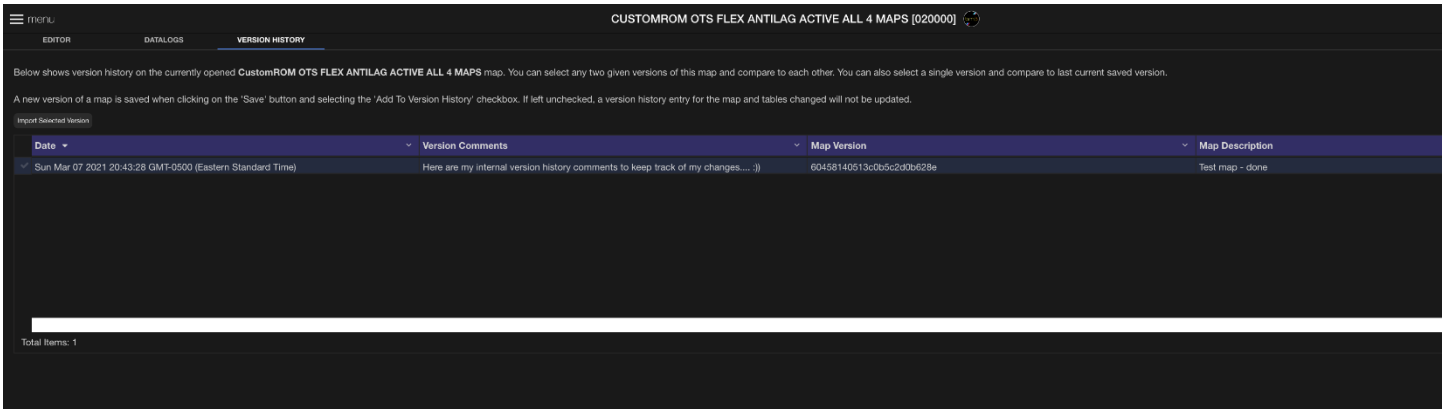



The user can see Lambda Target Bank 1 shows preselected for Save. If that is all we wanted to change, we can click the ‘Save Selected’ button at the bottom and only the Lambda Target Bank 1 table will be saved. The other two tables will remain with changes only in the editor and can be subsequently saved, or they can be ignored, and map closed.

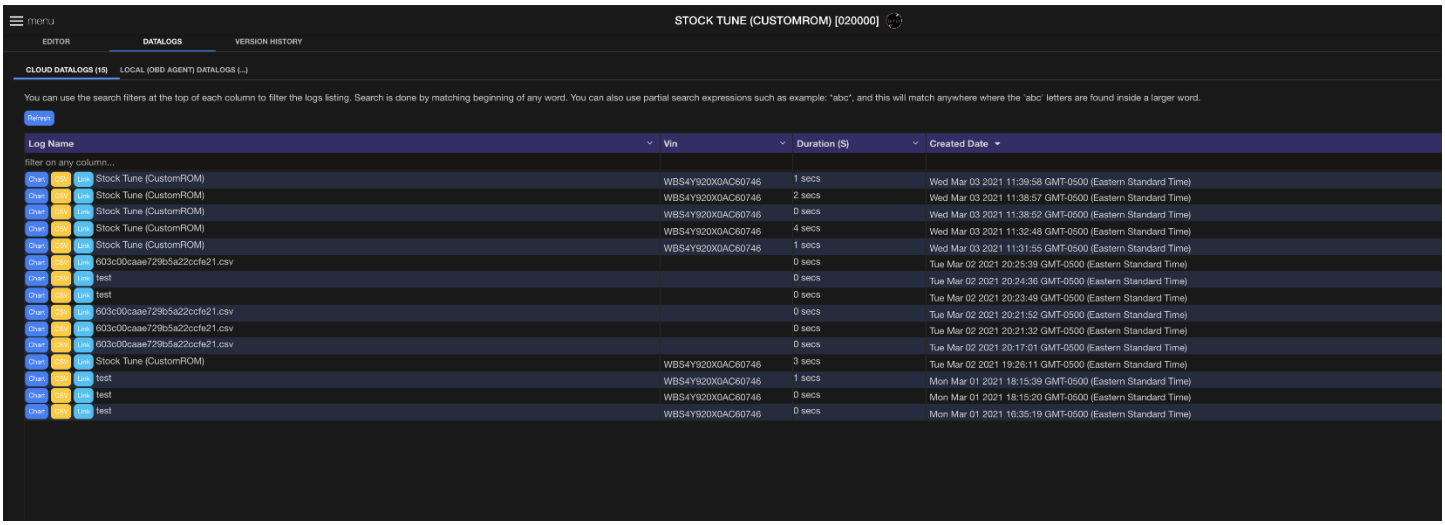
Upon clicking ‘Save Selected’ the following screen is presented:



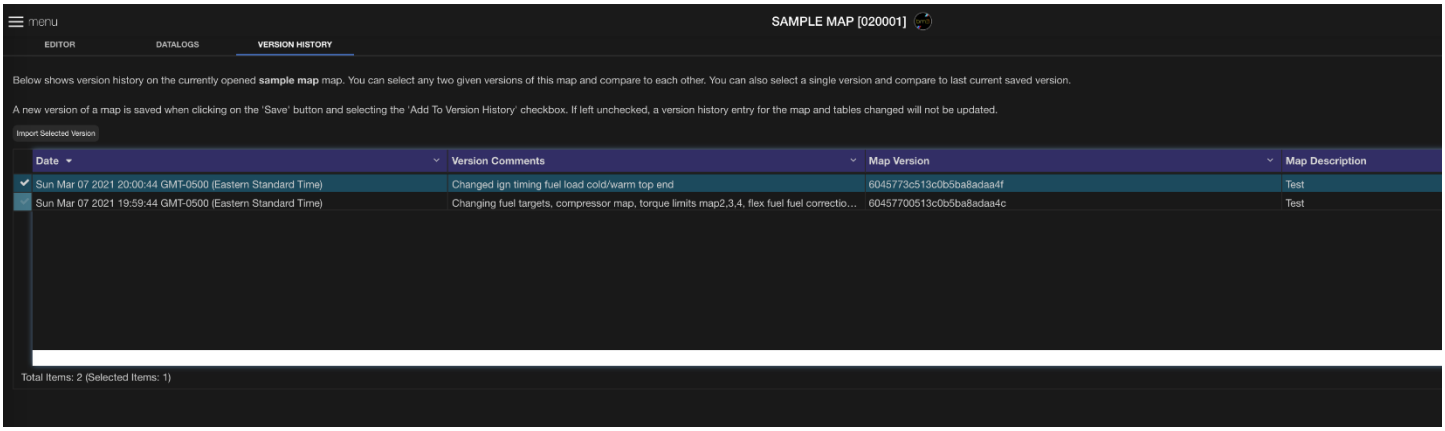

Upon a successful Save, going to the Version History, the user will be able to see the map has been versioned and its changes can be imported back to the map at any time if required:



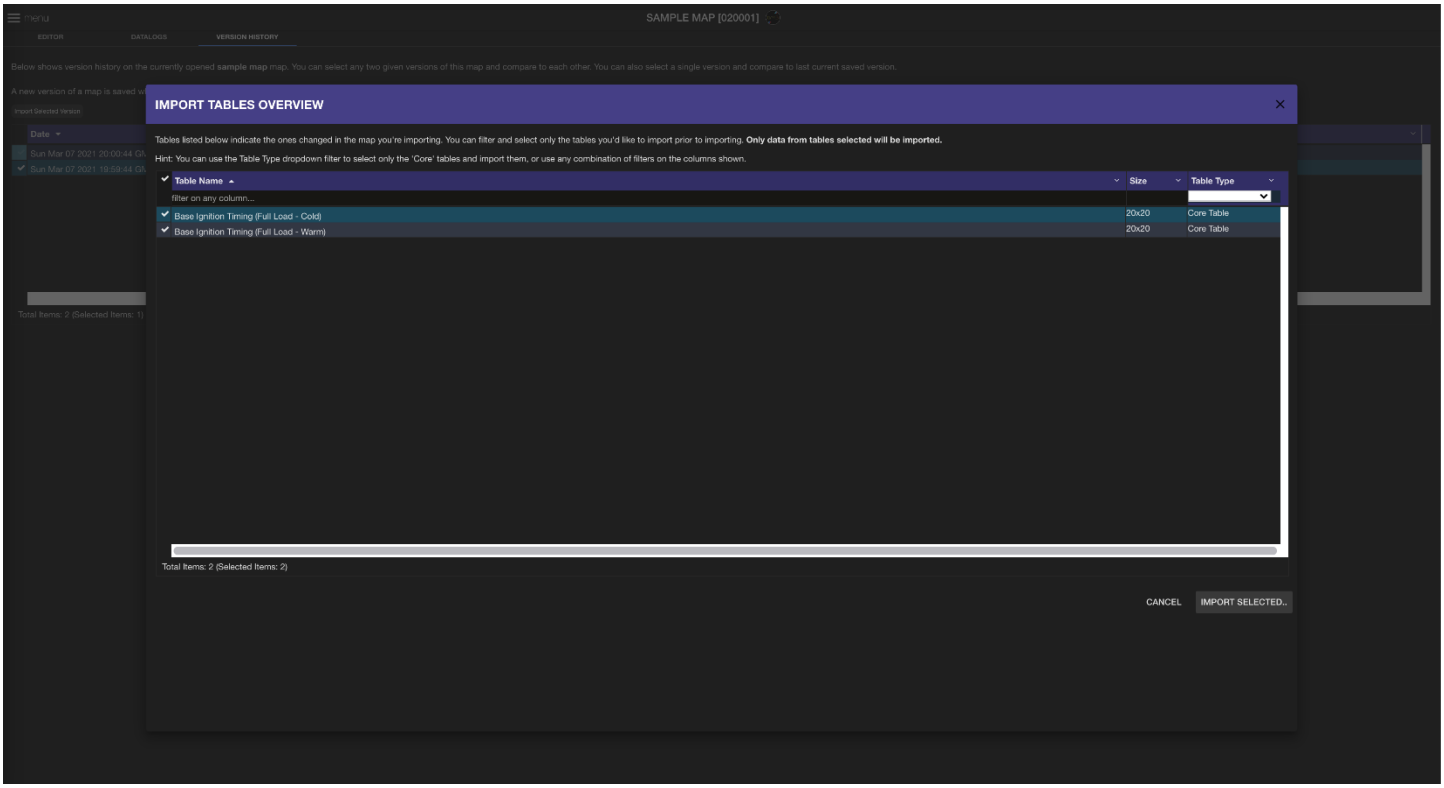
Showing Datalogs Tab View - chart logs, download CSV files for external tool graphing, copy link to send to anyone externally, showing dates in current user's time zone:



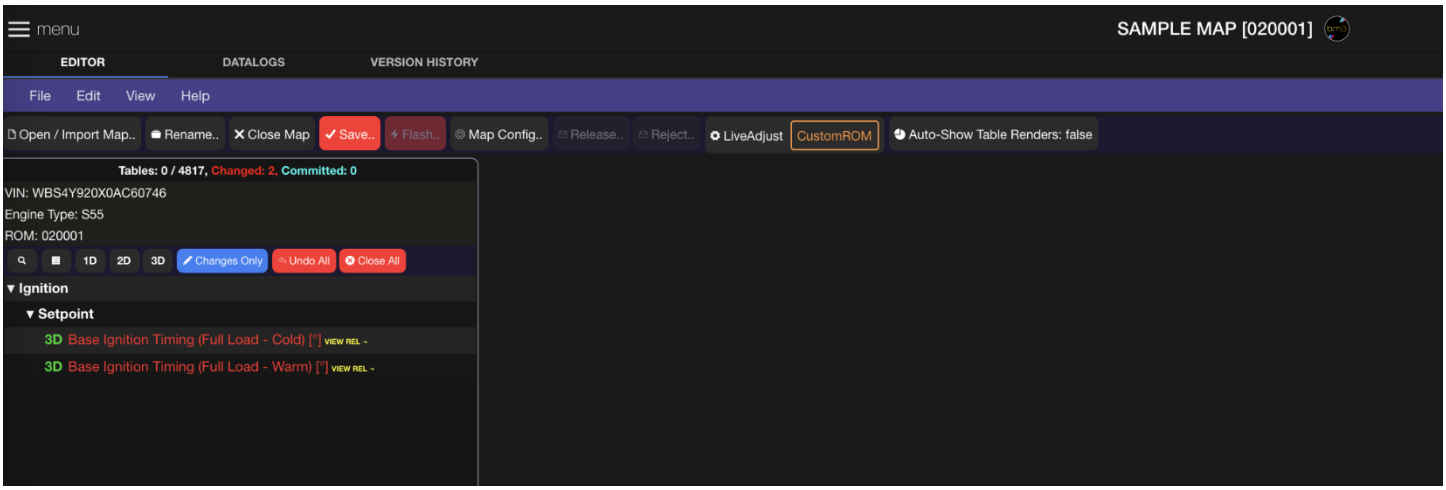

Version History at Map Level - allows importing any version into the currently open map.



When choosing to import a specific version from Version History the import tables overview screen allows selection of tables to import along with filtering by table name and category.

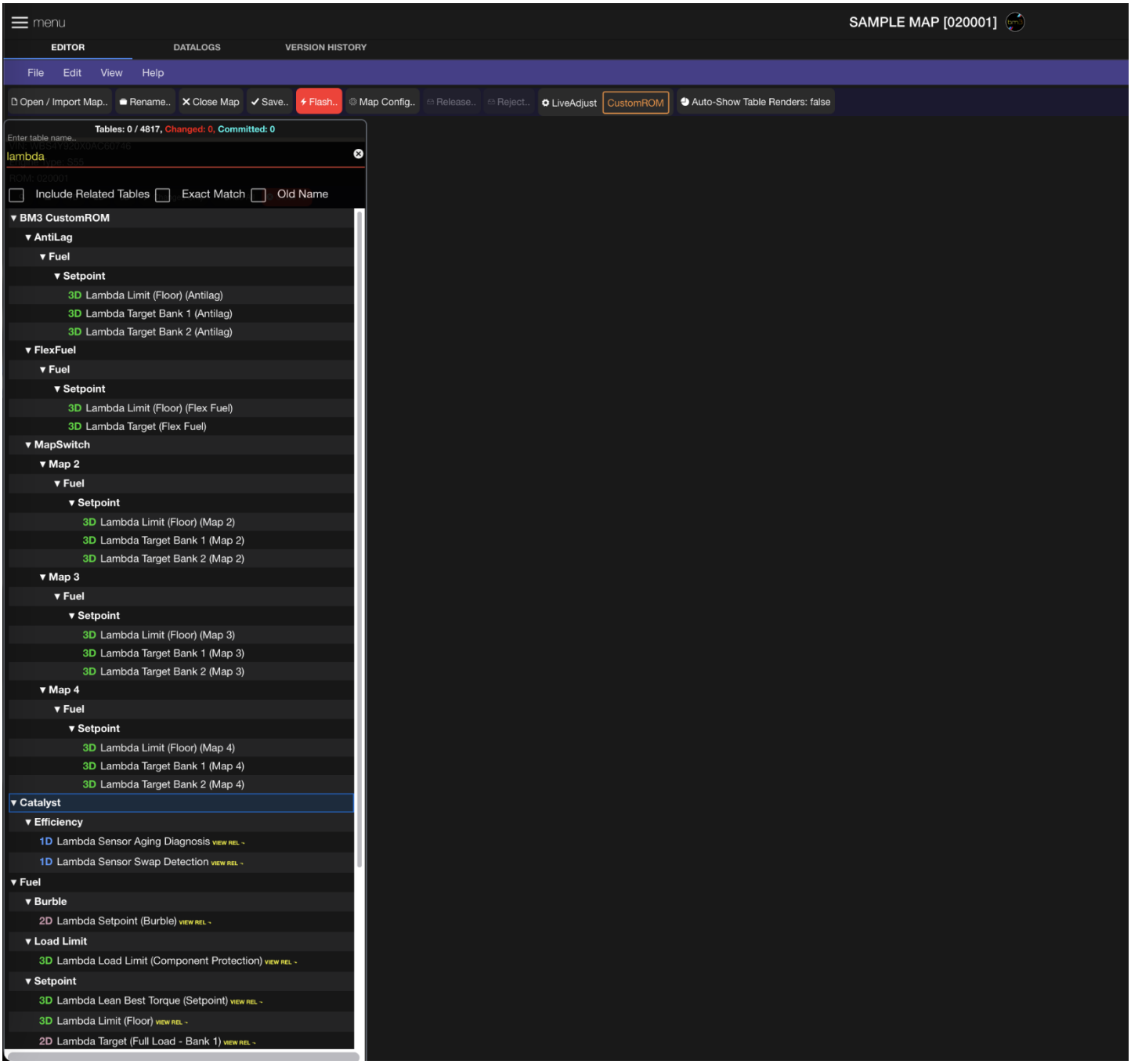



After import, the Table Tree changes to ‘changes only’ mode and shows only the ‘dirty’ tables (those not committed yet). This can be toggled off using the buttons above the Table Tree. Undo All is available to undo all table changes that have not yet been committed in the map.



Various keyboard shortcuts are available while in the Table Tree. Pressing the 'f' key for instance while in the tree will display the search dialog at the top and tree will filter as you type the name of the table.

Filtering the Table Tree can be done using the options illustrated with checkboxes to alter default filter behaviour. To exit Filter mode, hit the Esc key or the 'x' button in the filter input on the right side.



Above the Table Tree, the user will see filters for 1D, 2D, 3D tables. Use these to filter the tree and only focus on tables of a give structure type (1D for a toggle or switch, 2D for a curve, 3D for a 3-dimensional map). In the screenshot below both 2D and 3D are selected which filters the tree to show only 2D and 3D tables.

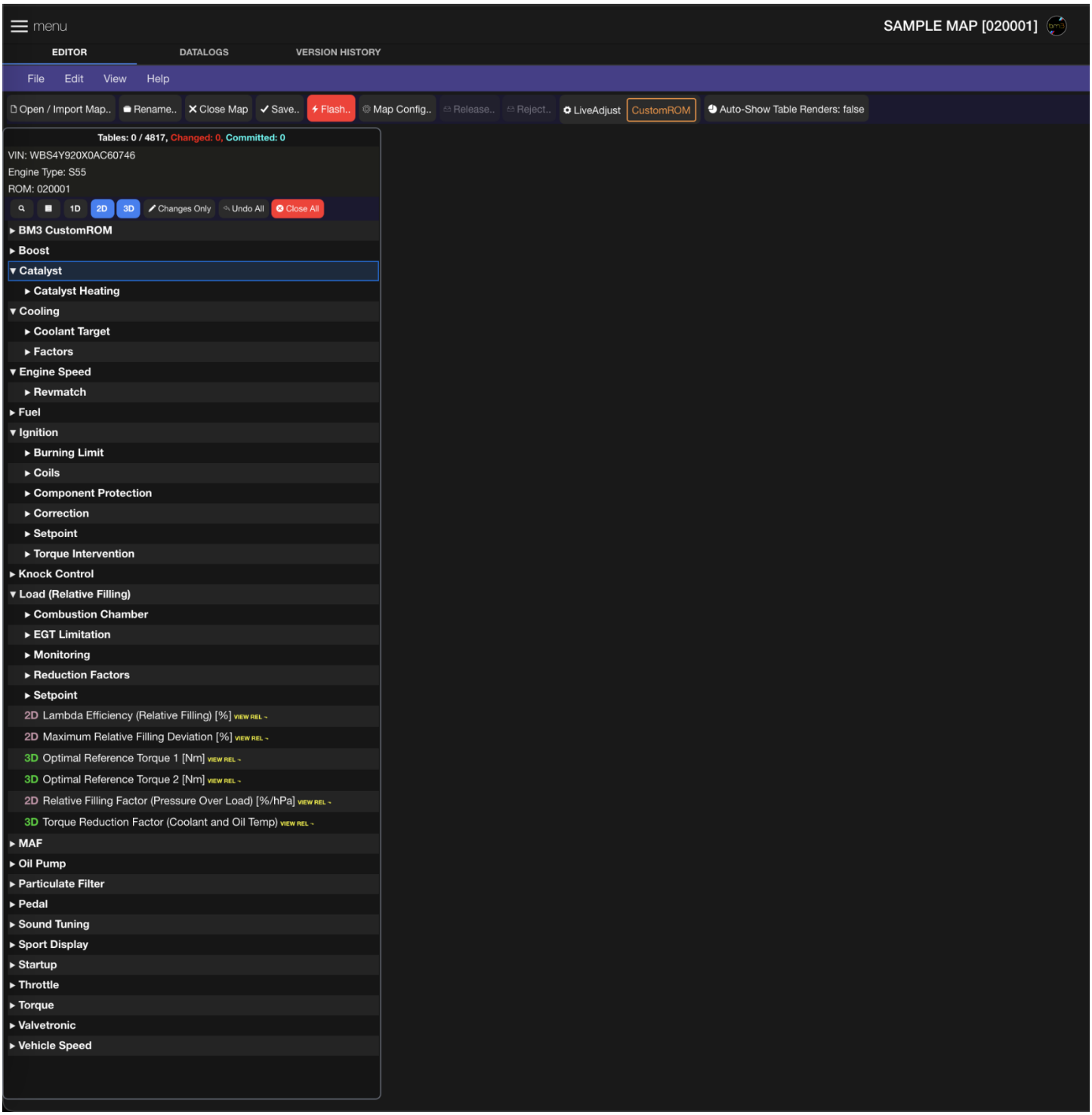
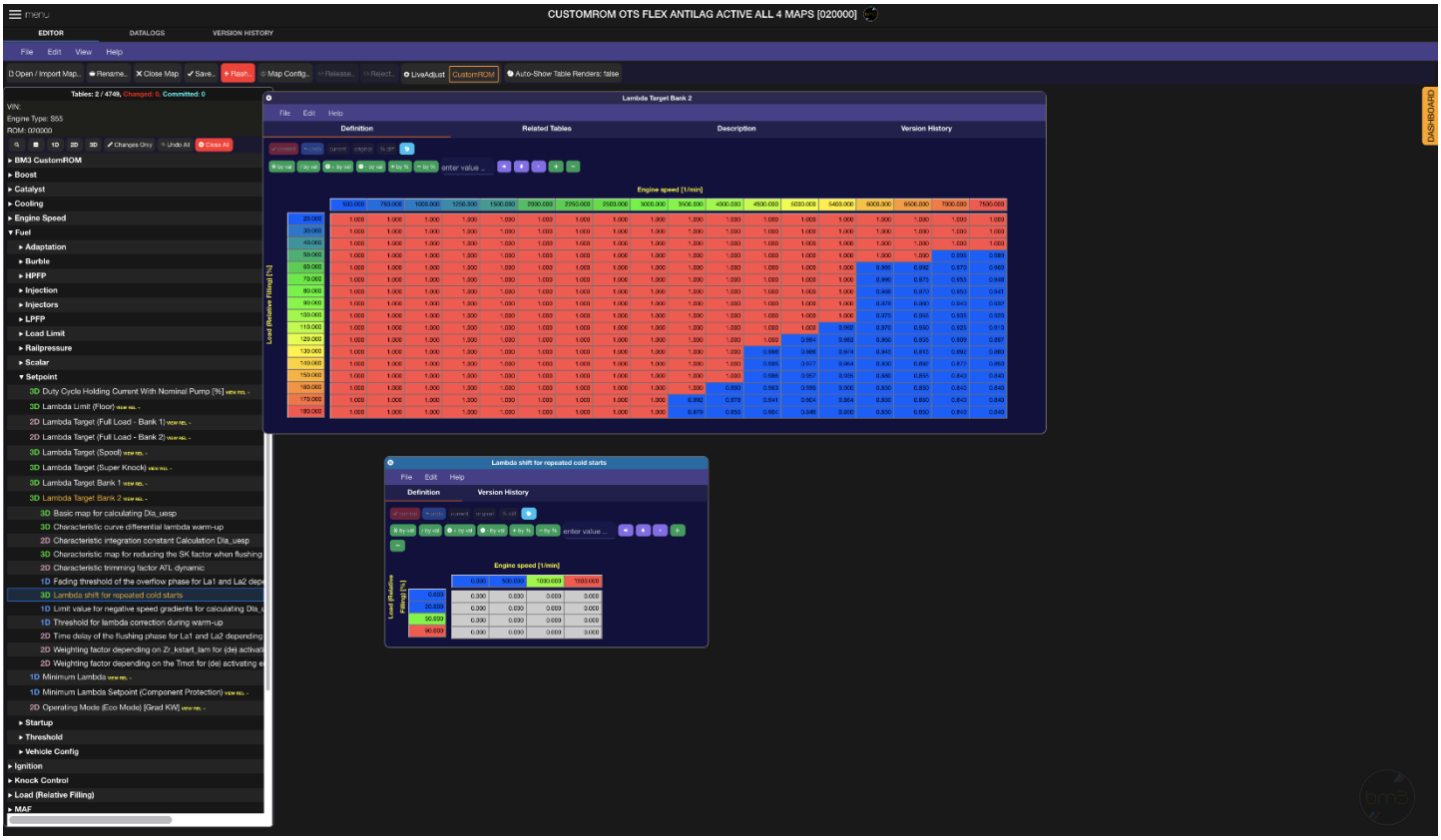
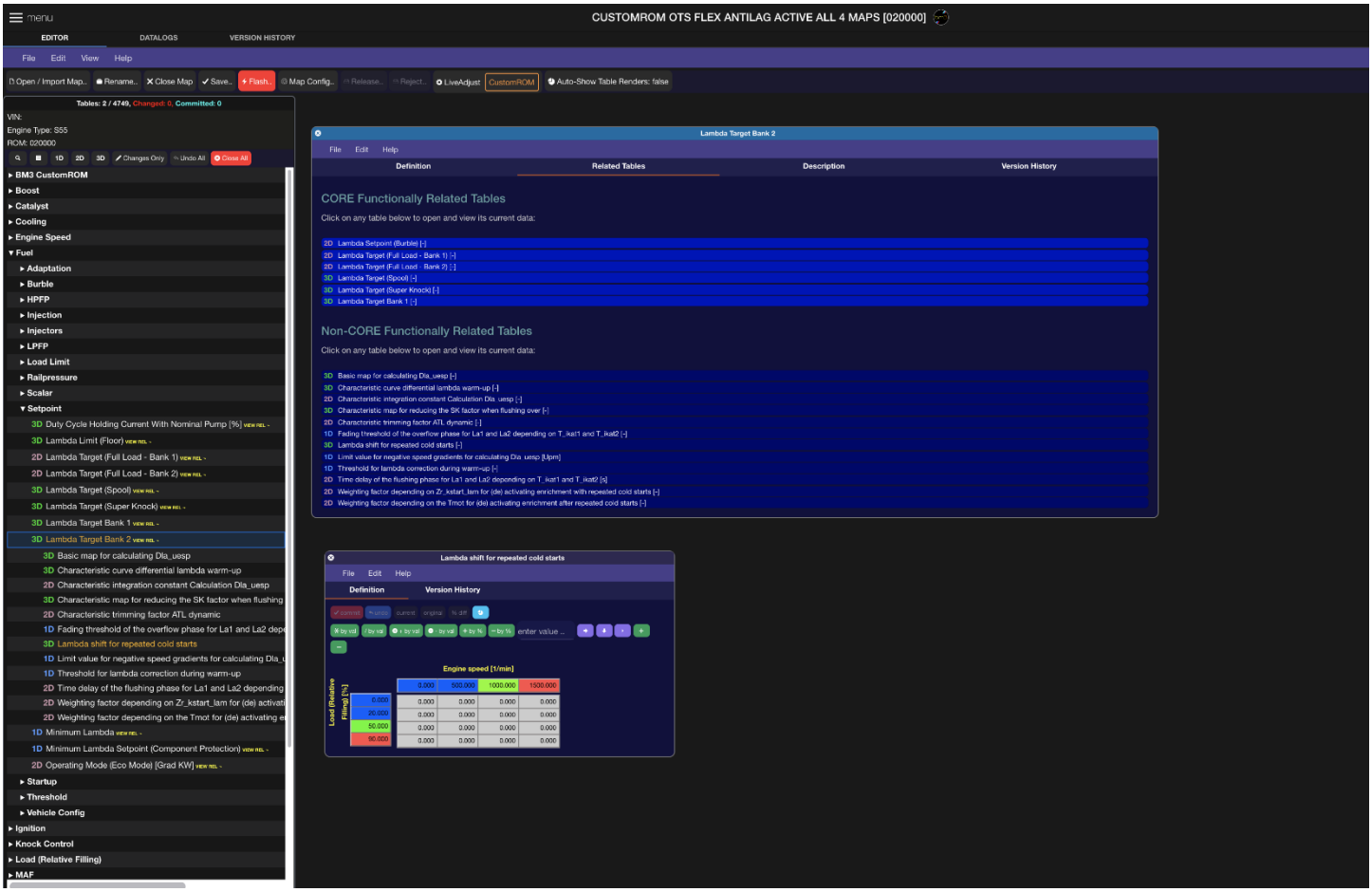


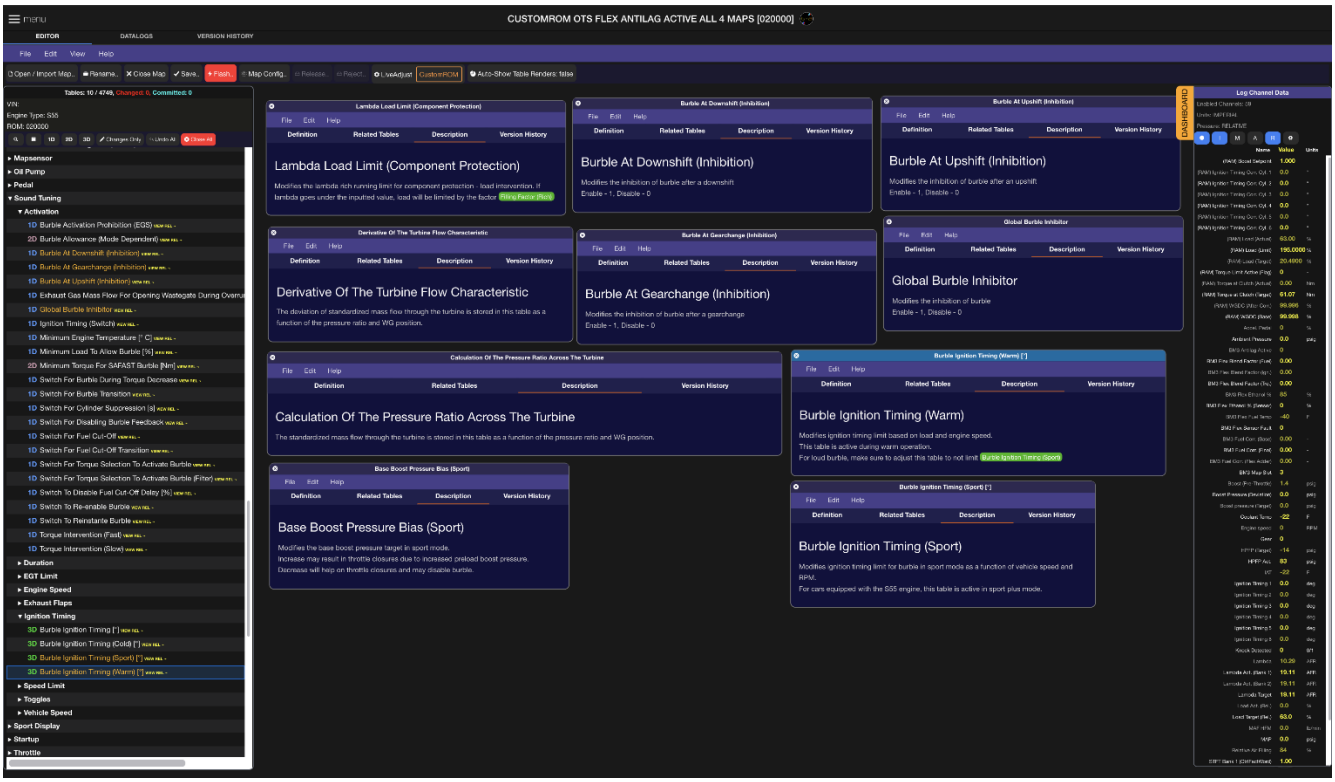
Table Tree shows all Core tables in their respective folders. Related tables show up by clicking on the ‘View Rel’ yellow link, on the right side of the Core table name:



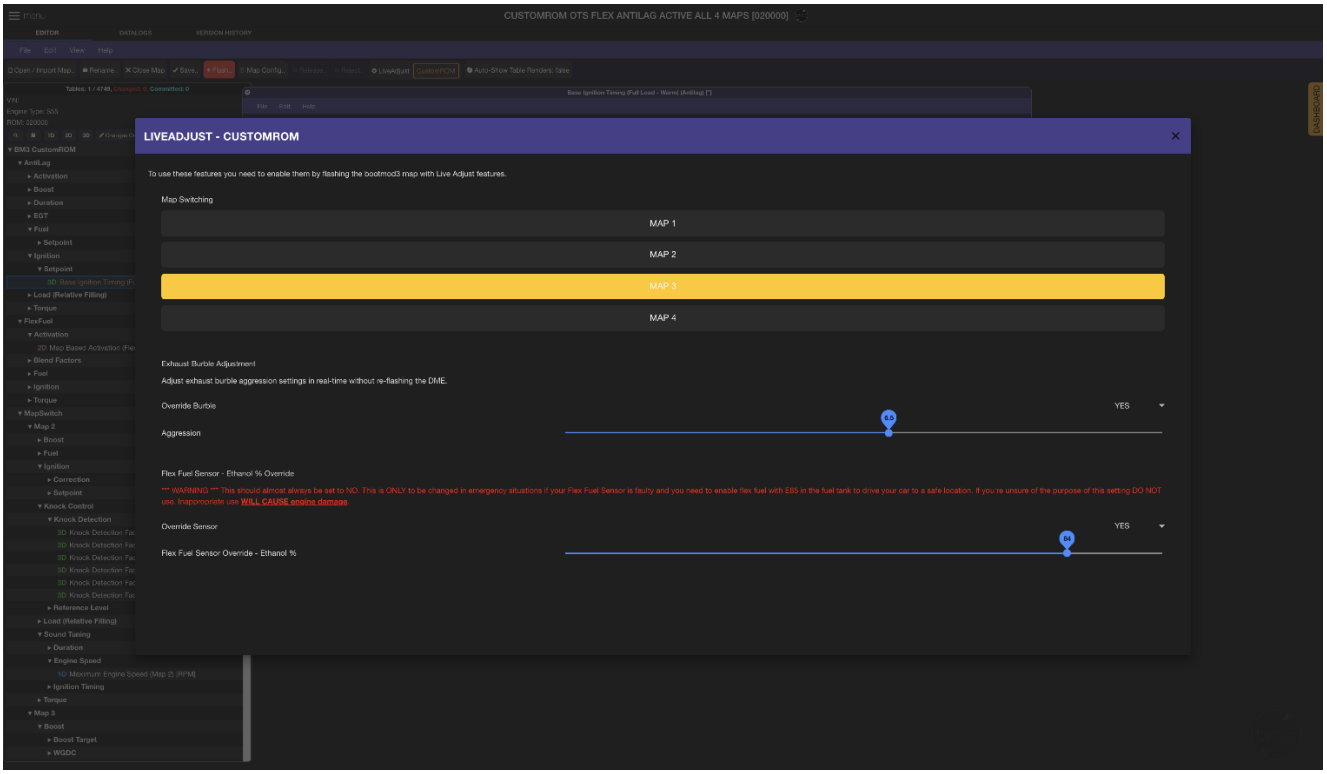
In this case the Lambda Target Bank 2 table is the Core table we opened. When clicking on the ‘View Rel’ there, we can see a set of Related tables show under it, and in this case, we clicked on the Lambda Shift For Repeated Cold Starts ‘related’ table. Both Core and Related table changes are managed in version history. When clicking on the Related Tables tab on the Lambda Target Bank 2 table we can see an interactive view of its Related Tables here as well. Clicking on any table here will open it and make it available for editing:



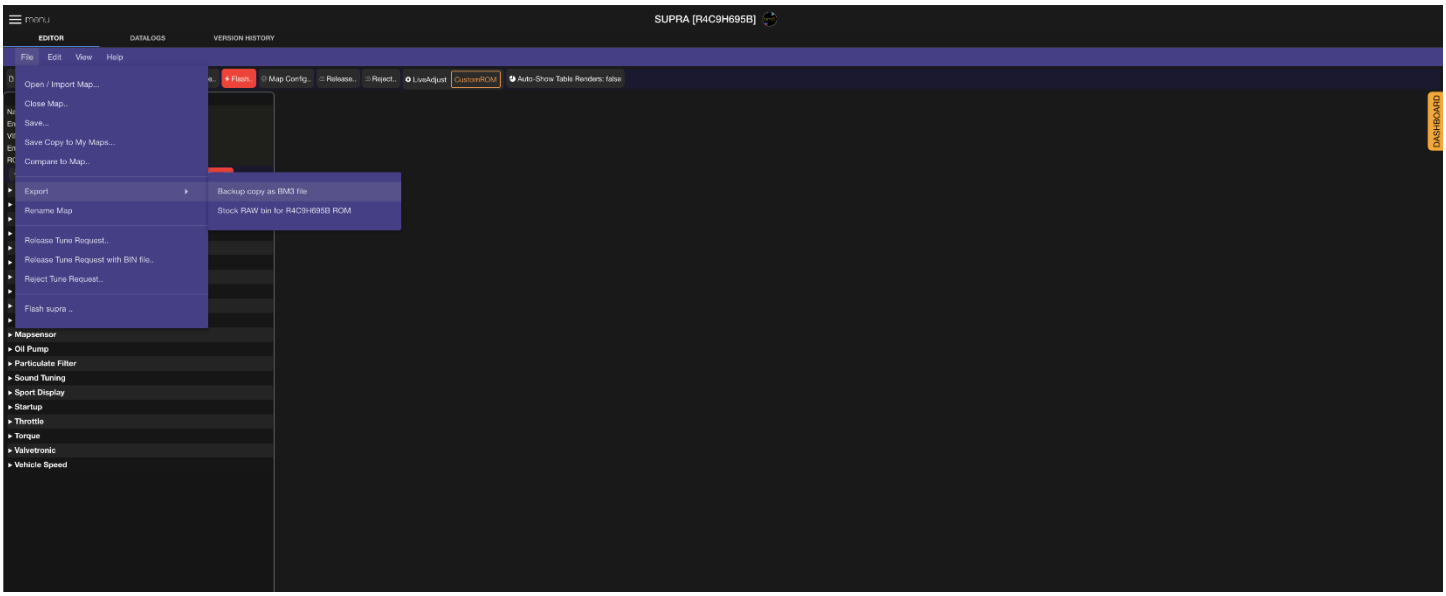
Clicking on the ‘Description’ tab in any Core table will show a brief description on its function. Any tables requiring description to be expanded can be requested through the Help menu in the map editor.



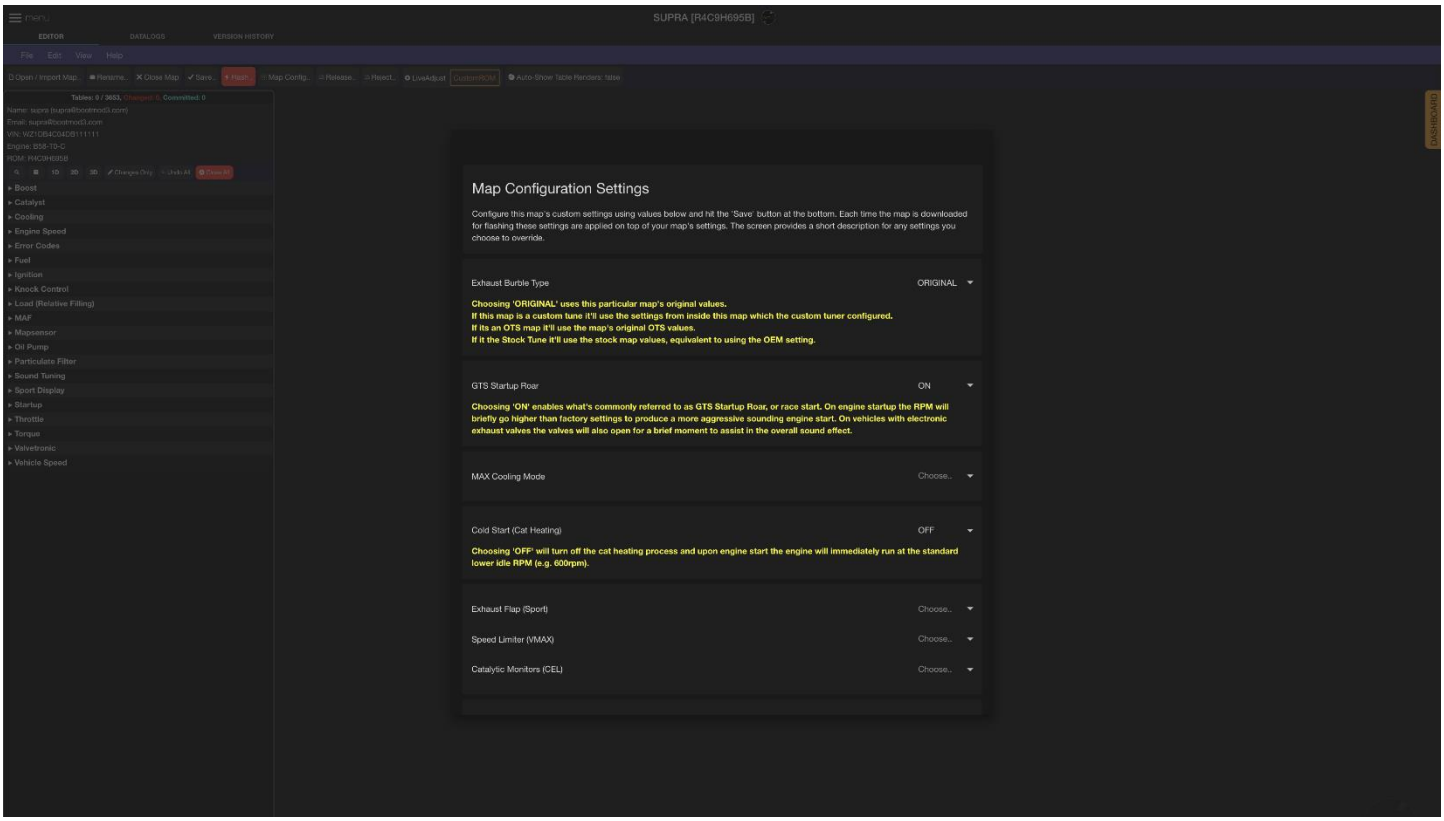

For ‘CustomROM’ enabled cars, with vehicle connected, you can use the LiveAdjust button to bring up the screen inside the editor to test live adjustments and any overrides in the screen:



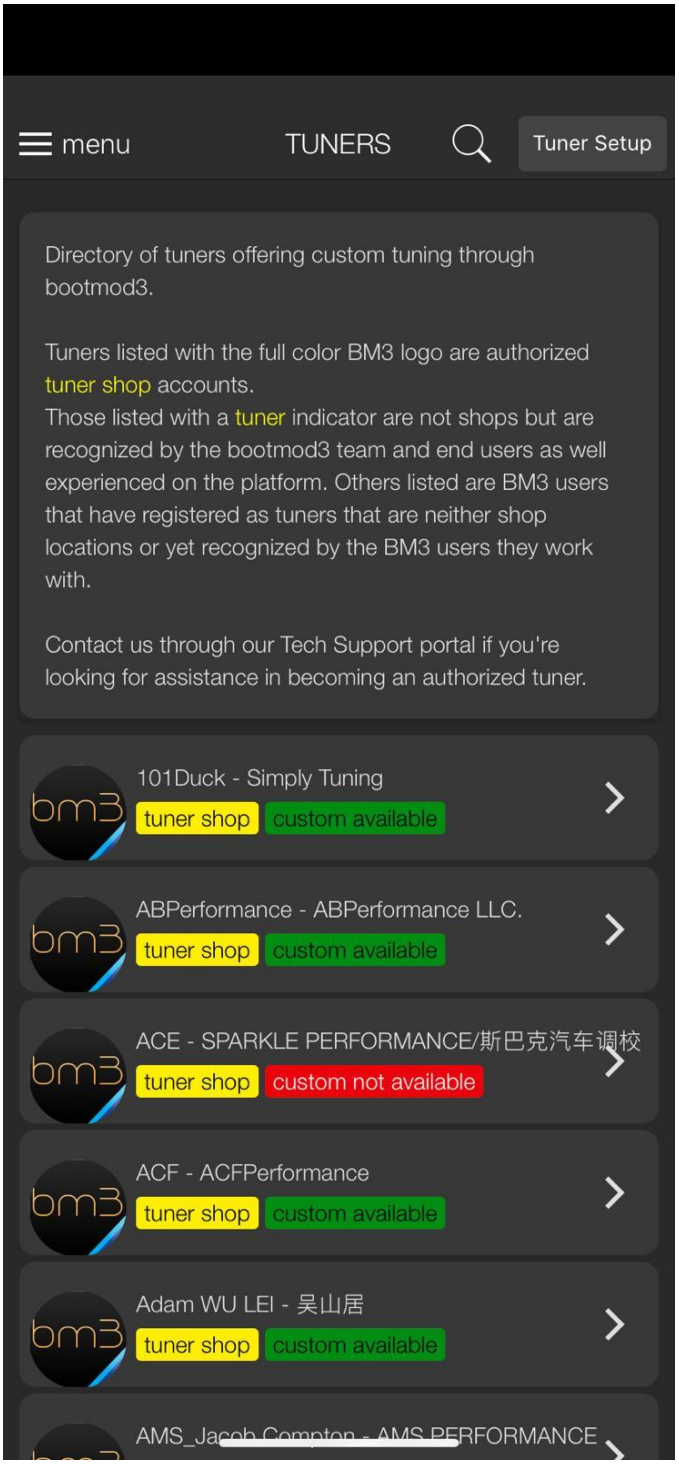
All maps can be exported in encrypted .bm3 format for backup offline. Editor also provides a way to export stock raw virtual read BIN files if required:




Map Configuration is accessible from the Map Editor for any maps and tune requests and can be set up by tuners on behalf of their customers for seamless end to end setup of the map before hand over to the customer for flashing when working remotely:



# 12 Tuners




In the '**Tuners Menu**', a complete list of all available tuners will be shown.

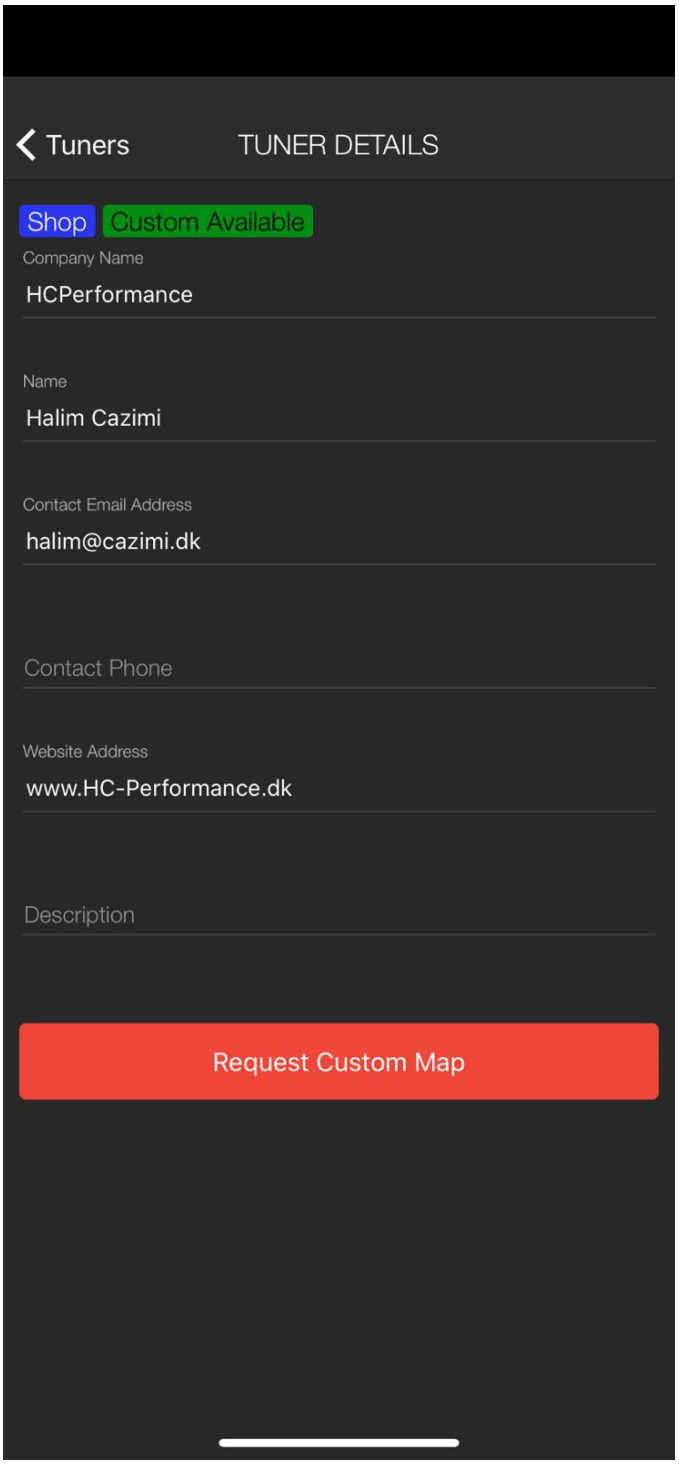
Tuners with a bootmod3 (BM3) logo beside their name are authorized tuner shops.

Tuners that provide custom tunes will have a green label beside their name (as shown in the image) and tuners that do not provide custom tunes, will have a red label beside their name.

Tuner shops will have a yellow label underneath their name, indicating that this tuner has its own shop.

By pressing on the small arrow, on the right of the tuner's name, a new screen will appear where all the details of the tuner will be provided (see page 63).

Clicking on the  will allow the user to search for a specific tuner and not scrolling through the entire list.




By clicking on the specific tuner, the **'Tuner Details'** page will appear as shown on the screen to the left, showing all the details about the particular tuner.

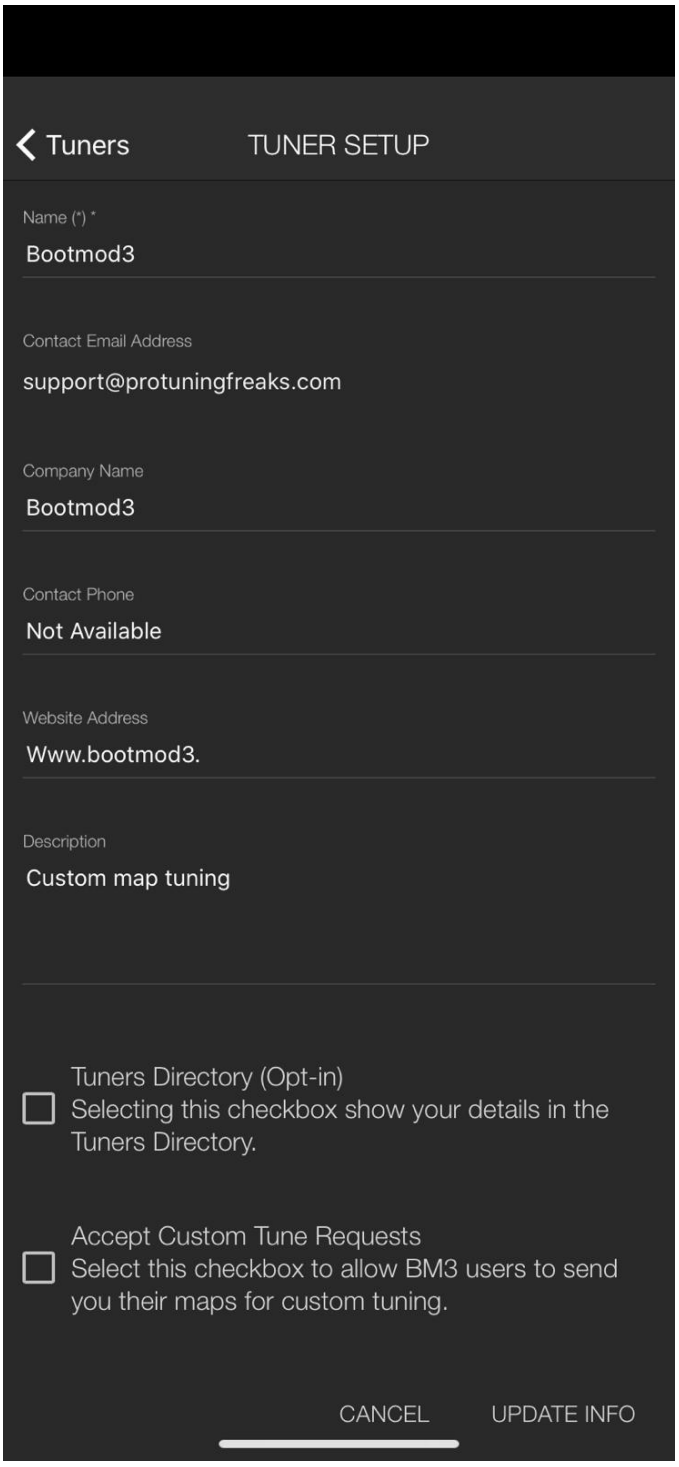
As demonstrated on this screen; the **'shop'** and **'custom available'** labels will indicate that this tuner has a shop, and that he does provide custom tuning.

Details of the tuner will include the following:

- Company Name
- Tuner's Name
- Contact Email address
- Contact Telephone
- Website
- Description

The user will also be able to request a custom map via tuner details page by clicking on the **'Request Custom Map'** button.

# 12.1 Tuner Setup




To be able to use the map editor in '**Stock Tune**', a tuner account will need to be set up. Clicking on '**Tuner Setup**' from page 64 will prompt the user to the screen shown on the left.
Completing all the necessary information and clicking on the '**UPDATE INFO**' button, will grant the user the ability to go into the map editor.

Checking off the '**Accept Custom Tune Request**', the tuner will be able to accept custom tune requests from other users.

Checking off '**Tuners Directory**' box will show the details of the tuner in the Tuners Directory.

**Tuners that wish to be recognized as bootmod3's authorized tuners will need to submit custom made maps to our support team for review.**

# 13 CustomROM Engine


CustomROM is a set of changes to the DME software which augment and enhance its functionality with features not provided from the factory.

Features in our CustomROM release have been added in a way to preserve all existing DME calibration safeties in place and integrating new and existing CANBus (PT-CAN) messages from other vehicle modules (e.g., steering wheel) and auxiliary CANBus devices.

CustomROM in its current form applies to the S55 engine vehicles with support for other engine types to follow. Outside of the CustomROM specific features, the Map Editor, Datalogging updates and many others mentioned below apply to all vehicles supported by bootmod3 today.

**Bootmod3 CustomROM Feature Overview:**

- CustomROM Map Switching
- CustomROM Flex Fuel
- CustomROM Rolling Anti-Lag

# 13 CustomROM - Map Switching


In its OEM form, the factory DME supports changes to Torque Request and Burble via the Driver Mode Selection switches (e.g. Efficient, Sport, SportPlus).

While great and sufficient for most users, CustomROM takes this further and provides the ability to store 4 individual map slots internally inside a single flash-able map. Load/Torque/Boost, Ignition Timing and Fueling can all be mapped differently in each map slot in the tune.

bootmod3 Custom Tuners have the ability to build custom calibrations for their customers to recalibrate, convert and bundle any previous custom maps done for end users as required and a configurable number of map slots can be made active in the DME, meaning, if only 2 map slots are being customized then the tuners would enable only 2 switchable maps instead of 4.

Users can switch among the enabled Map Slots on the fly without re-flashing the DME by using the steering wheel buttons for Cruise Control on the left side of the steering wheel.

After successfully flashing MultiMap Stage 1 or 2, to switch maps using the steering wheel, press and HOLD the RESUME button for 3 seconds to engage map switching mode. To switch maps, press the Cruise Control UP/DOWN button to the 1st up or down position to move between map slots.

Map switching demonstrational video can be found by clicking on the link below.
https://youtu.be/iGu85QHKG48

# 13 CustomROM – Flex Fuel


## FLEX FUEL HARDWARE SETUP REQUIREMENTS

To allow for Flex Fuel tuning, an Ethanol (alcohol) fuel sensor and an Ethanol Content Analyzer (ECA) CANBus device need to be connected to the vehicle's PT-CAN.

Overview of the how the sensor data travels look as follows:
**Continental Flex Fuel Sensor → CANBus Enabled ECA Board → CANBus (PT-CAN) → DME running bootmod3 CustomROM**

Flex Fuel is a term used to describe tuning for changes in fuel composition when the content of alcohol in the fuel can vary from one fill-up to another from 0 to 100%. Typically, it is Ethanol that is found at pumps under the name E-85 at fuel stations (85% ethanol, 15% petrol) along with 91, 93 AKI (95, 98 RON).

Due to Ethanol's higher-octane characteristics over petrol, it sees great attention from racers and enthusiasts alike. bootmod3 has been providing E30 blend (30% ethanol, 70% petrol) maps since its initial November 2016 release and with the CustomROM FlexFuel support, we are now releasing the new Stage 1 and 2 CustomROM based maps with integrated Flex Fuel support!

Flex-Fuel demo video can be viewed by clicking on the link below:
https://youtu.be/UnR4O0_yyPY

# 13 CustomROM – Rolling Anti-Lag

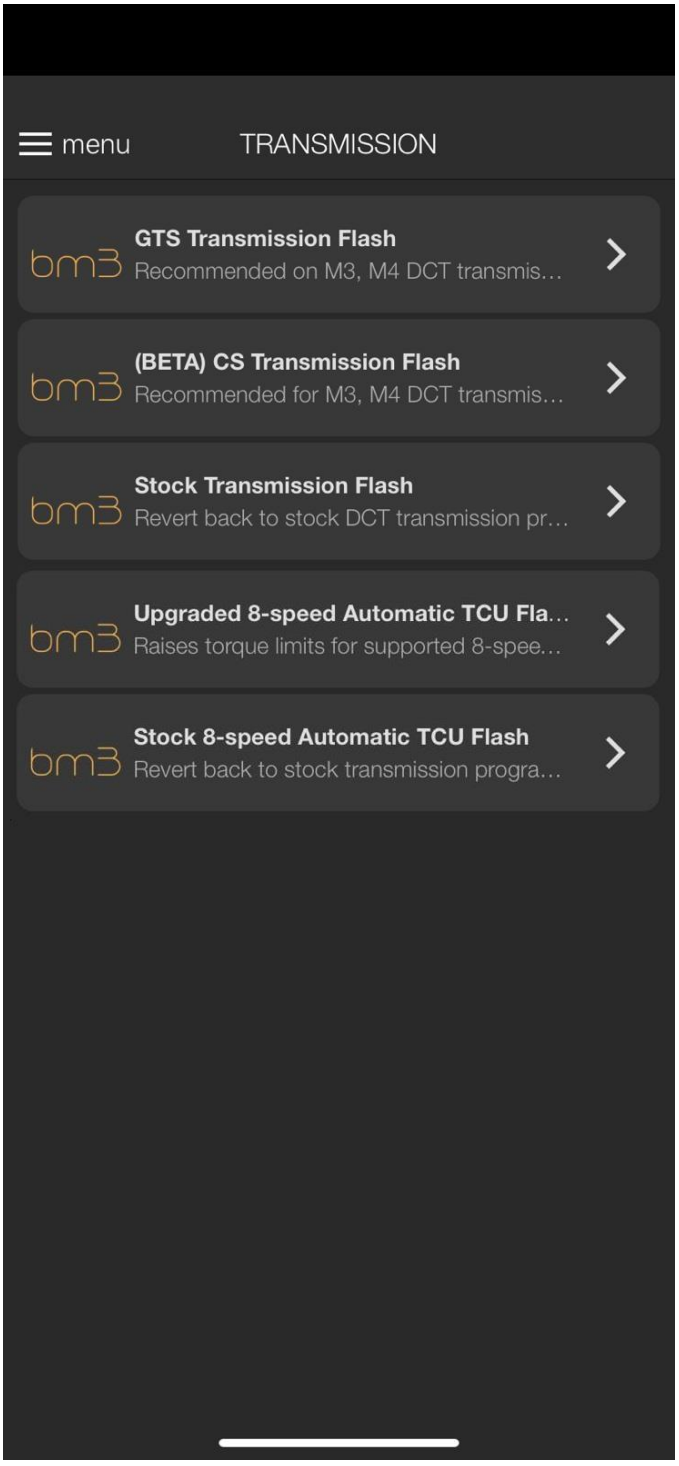

When racing or trying to achieve best acceleration times, the spool of a turbo impacts initial acceleration of the vehicle. The larger the turbo the more LAG (delay) before the turbo spools up and boost hits.

bootmod3 CustomROM's AntiLag feature allows custom tuners and users to simply press and hold the UP button on the Cruise Control buttons of the steering wheel and then press the Accelerator pedal for 1-2 seconds to allow the turbo to come to a predefined and Anti-Lag mode specific boost target, let go of the UP button and while still holding the Accelerator pedal pressed have the car accelerate with boost on-tap.

AntiLag tuning on the bootmod3 CustomROM is highly customizable and can be calibrated to any given setup by bootmod3 custom tuners. boost/load/torque, ignition, and fuel target tables along with many configurable safeties and activation thresholds are available via the bm3 Tuning Editor.

AntiLag demo video can be viewed by clicking on the link below.
https://youtu.be/-23MTGbwdmE

# 14 Transmission



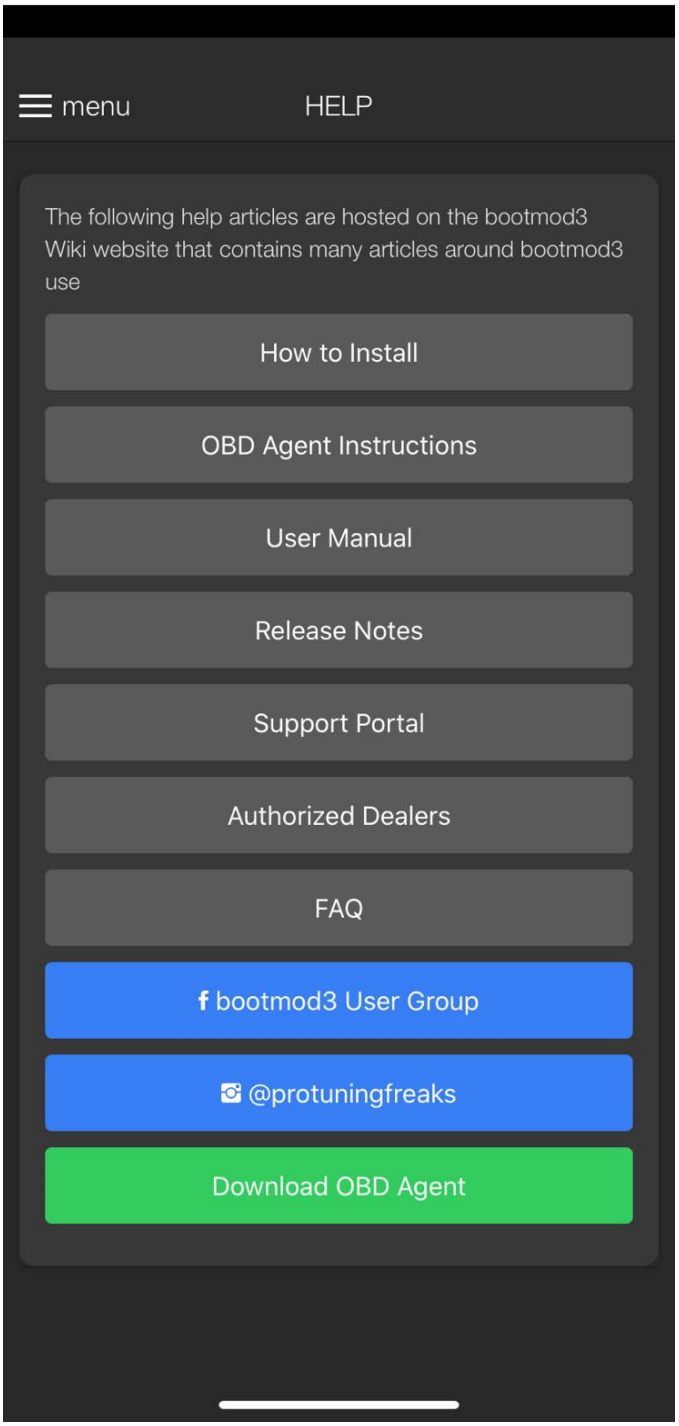

**Bootmod3** also offers support for GTS and CS transmission flash for certain vehicles: **M4, M3 and M2 DCT equipped vehicles.**
The purpose of the transmission flash is to enable more precise and faster shifts. It maximizes the clamping force applied by the clutches, which is highly recommended on tuned M2, M3 and M4 vehicles.
CS DCT transmission flash option added for late production S55 DCT cars where the GTS TCU flash was causing certain compatibility issues with the dash cluster (e.g., gear display).

Stock Transmission Flash is also there to revert to stock transmission with stock programming.

This applies to the **ZF 8HP45** transmission cars only. The purpose of this addition to bootmod3 is to lift the torque limits on the 3rd and the 6th gear that mostly impact N55 equipped cars. As the same transmission is in the N20/N26 automatics, those are also supported. Without this flash the 3rd and 6th gear load/torque targets (boost) end up far lower than the tune targets (at around 11-12psi) and a DME flash cannot lift them on its own.

***ZF 8HP45 Transmission flash available only for N55/N20/N26 8 speed AT vehicles***

# 15 Help

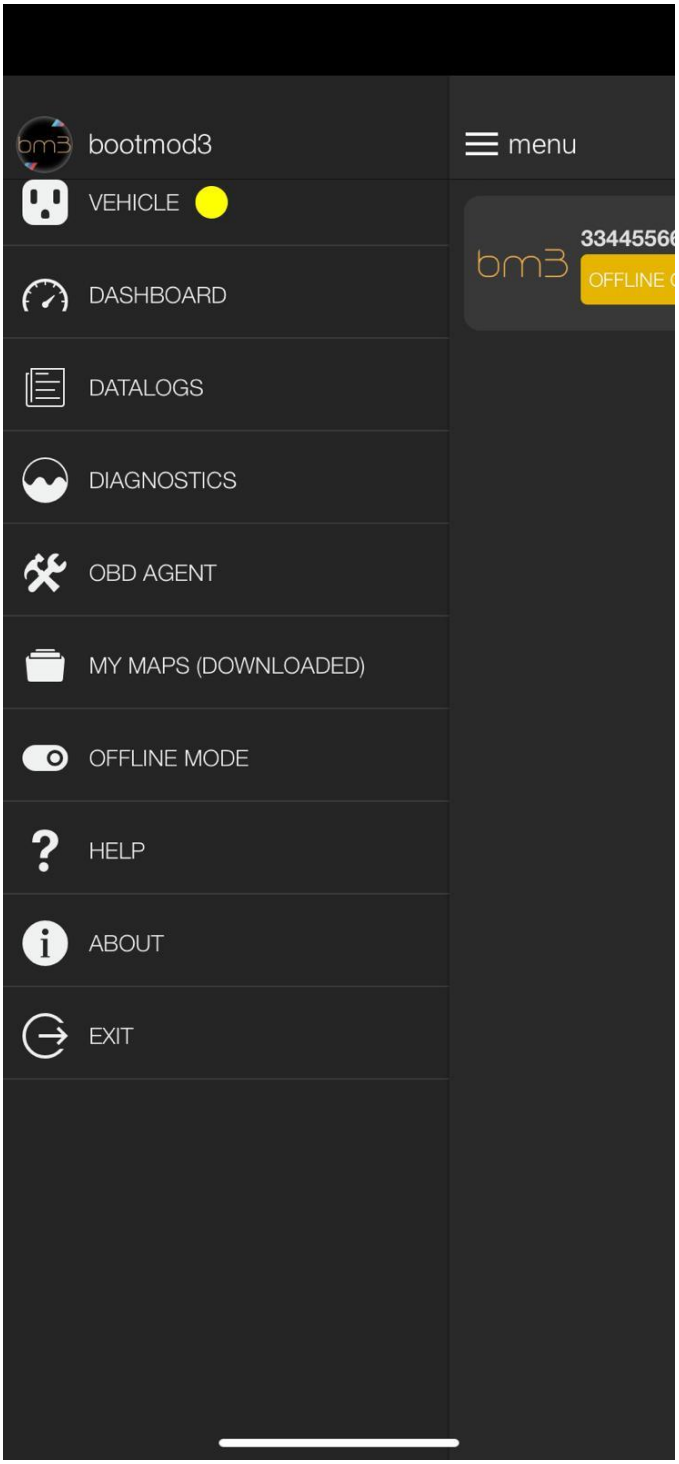



A new Help button on the log in screen and inside the app in the main menu has been added, allowing the user to be able to find all the help articles that are hosted on **bootmod3** Wiki website.

Users can also directly visit our Facebook user group and our Instagram page as well.

Option to download the OBD Agent is also added to this screen.

# 16 Offline Mode



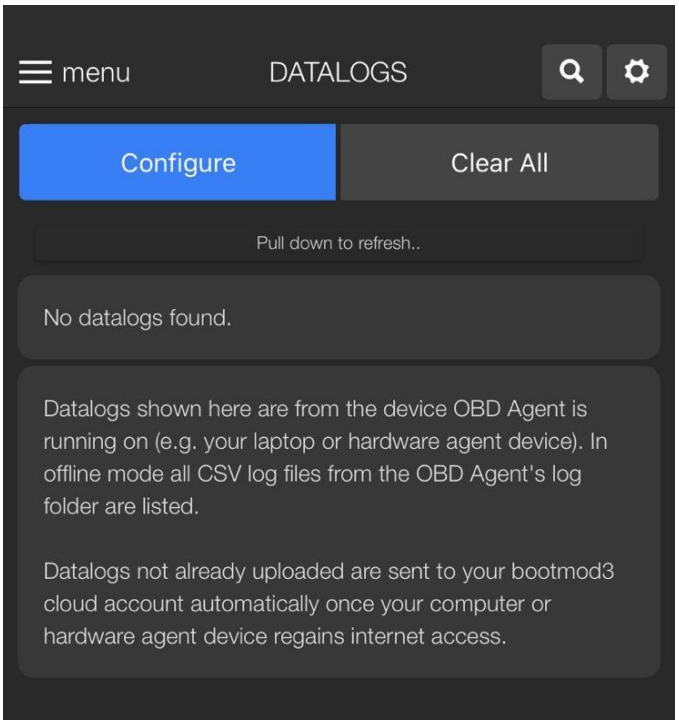

As mentioned earlier, to enable '**Offline Mode**', the user must log in once first on the app or using the browser with an internet connection.

'**Offline Mode**' was created so the users can use bootmod3 without the use of internet.

Previously downloaded OTS maps will be available to flash in '**Offline Mode**'.

Data logging in '**Offline Mode**' while driving is highly recommended.

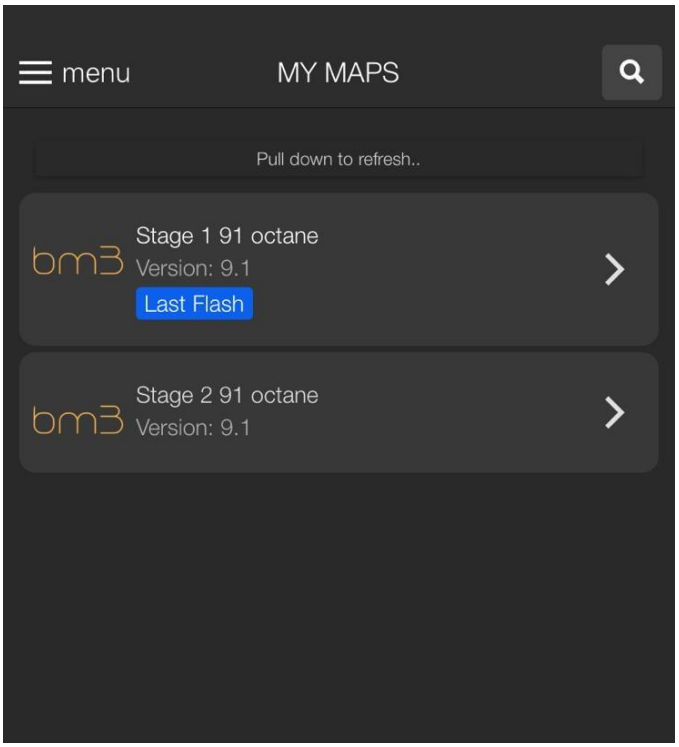
As shown on the screenshot attached, when in **'Offline Mode'**, OTS Maps, Transmission and Tuners sections are not available.




When data logging in '**Offline Mode**' and there is an internet connection, the logs will get uploaded right away as usual.

**'Configure'** button will have the same function as when in online mode.

Datalogs not already uploaded, are sent to the bootmod3 cloud account once the computer or the hardware agent device regains internet access.

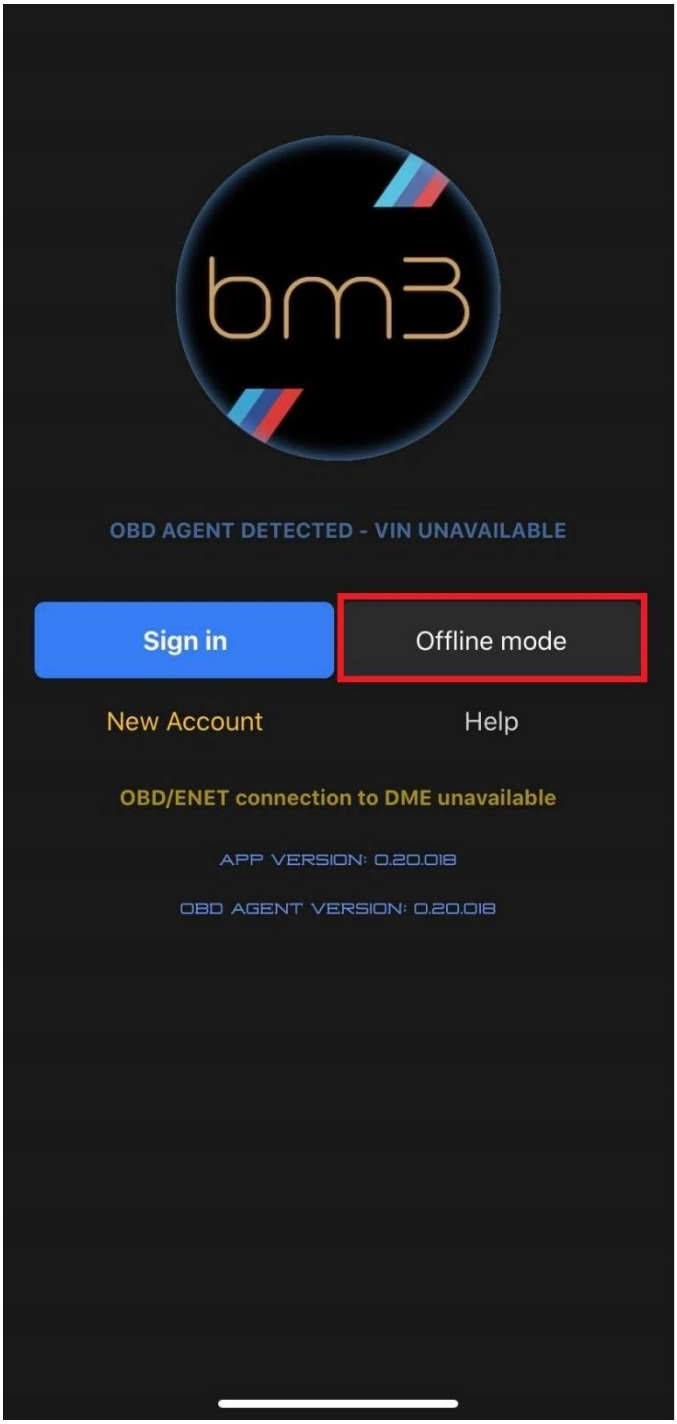



Once inside '**My Maps (Downloaded)**' sub-menu in '**Offline Mode**', the only maps that will be available for flashing will be the previously downloaded maps.

Clicking on any one of the maps will prompt the user to a screen that will allow flashing ONLY.

Map configuration screen, request support and delete options will not be available.

# 16.1 Offline Mode (Android Set-Up)

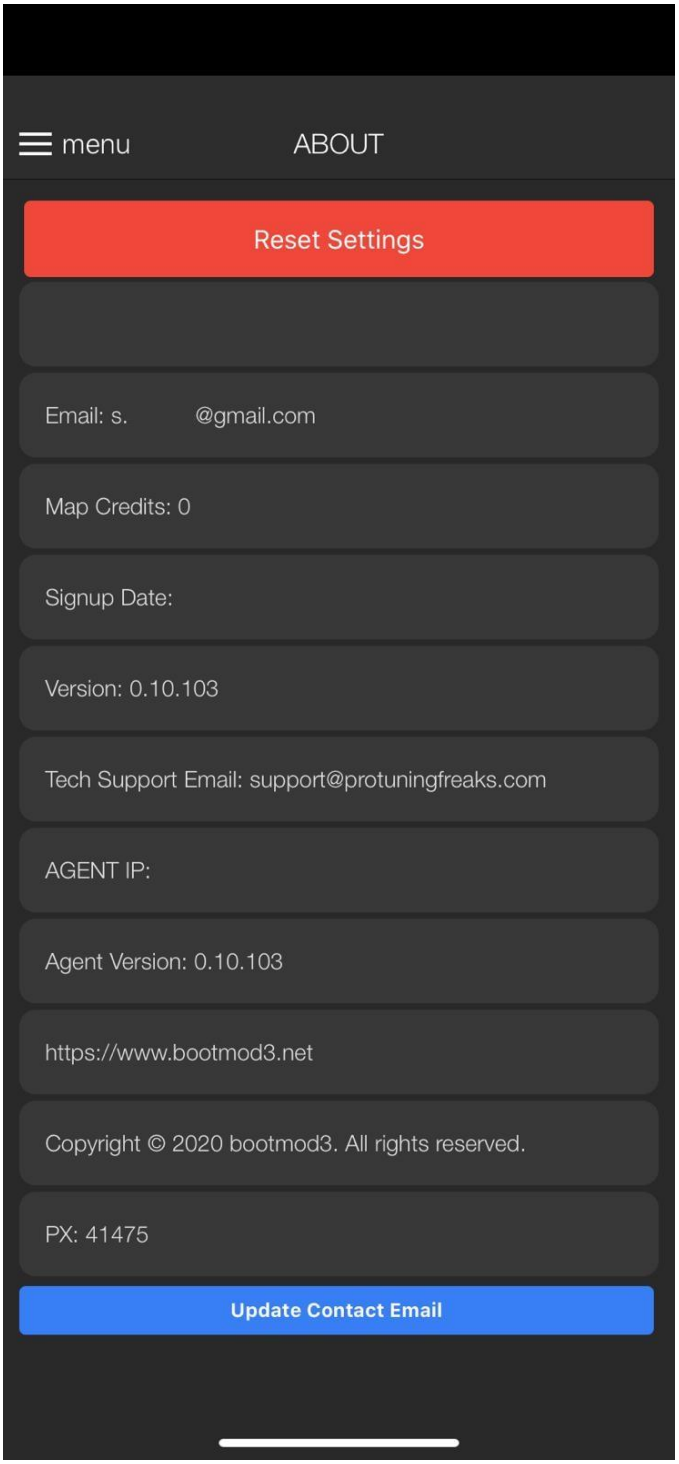



Some Android devices (usually older ones) do not support both Mobile Data (Internet) and ENET/Wi-Fi connectivity at the same time. To use the bootmod3 app in this case you can use the **'Offline Mode'** feature.

To set up the **'Offline Mode'** for android mobile devices, please follow the steps below:

- Launch the app and log into the account.
- Go to the main menu and click on the **'Exit'** menu item, choose **'Keep Settings'** in the popup menu and it will send the user back to the login screen.
- While on Login screen, connect the ENET cable to the phone. First time, the user will have to ensure the Ethernet IP settings are entered correctly. (NOTE: Ethernet IP settings only show up when the cable is connected to the phone.). This is a one-time set up of Ethernet settings.
- Back in the app, the user will see **'Offline Mode'** button change from gray to yellow. Click on the yellow **'Offline Mode'** button and use the app in offline mode.

# 17 About




The '**About**' screen shows username, email address and all the account information.

Clicking on '**Reset Settings**' will reset pre-saved (cached) settings in the app/browser and server to the defaults for dash and logging. This is done in case data logging does not work.

If you have any difficulties with either the activation, flashing, or have any other inquiries regarding your account, please do not hesitate to reach us at support@protuningfreaks.com .

The last part of the menu, which is the **'EXIT'** button, allows the user to log out of the account.

We hope this manual is helpful in your setup and we are here to support every step of your ride. Get ready to UNLEASH THE BEAST! 😊

Please refer to our general FAQ page for any further related boomod3 information.

# 18 Appendix

Throughout the entire user manual, we have added a few links for easy access to our useful material we have posted on the web. Below is a list of all links our team has created over a period, with intention of assisting our users with any inquiries or technical issues.

1) Frequently Asked Questions
2) How to Install Bootmod3 On Your Vehicle
3) How to Activate Bootmod3 License
4) How to Flash Your BMW With Bootmod3
5) How to Datalog With Bootmod3
6) OBD Agent Instructions – Laptop
7) OBD Agent Hardware Device – Firmware Update
8) Bootmod3 Android app – Ethernet and BM3_NET Wi-Fi Settings
9) Offline Mode - Android
10) Bootmod3 iOS app – Ethernet and BM3_NET Wi-Fi Settings
11) OBD Wi-Fi Hardware Agent Connectivity Issues – iPhone Hotspot Troubleshooting
12) Bootmod3 CustomROM Features
13) Need More Help? How to Open a Support Ticket
14) How to Properly Fill Out a Support Ticket
15) Bootmod3 Release Notes
16) Bootmod3 License Transfer
17) BMW F-series Spark Plugs – Which Brand and Which Gap?
18) How to Prepare Your Vehicle for Dyno Mode?
19) OBD Agent Not Detected / VIN Not Detected
20) Bootmod3 Flash Failure (DME, TCU, Online Recode)