



*REVEAL TRUE
PERFORMANCE.*



uma **M9**

USER MANUAL



UMA M9 ECU IS DESIGNED FOR ENGINE TUNING
AND MONITORING PURPOSES ONLY.

UMA M9 ECU Apps Logo



UMA M9 ECU App Download



UMA Tune Introduction

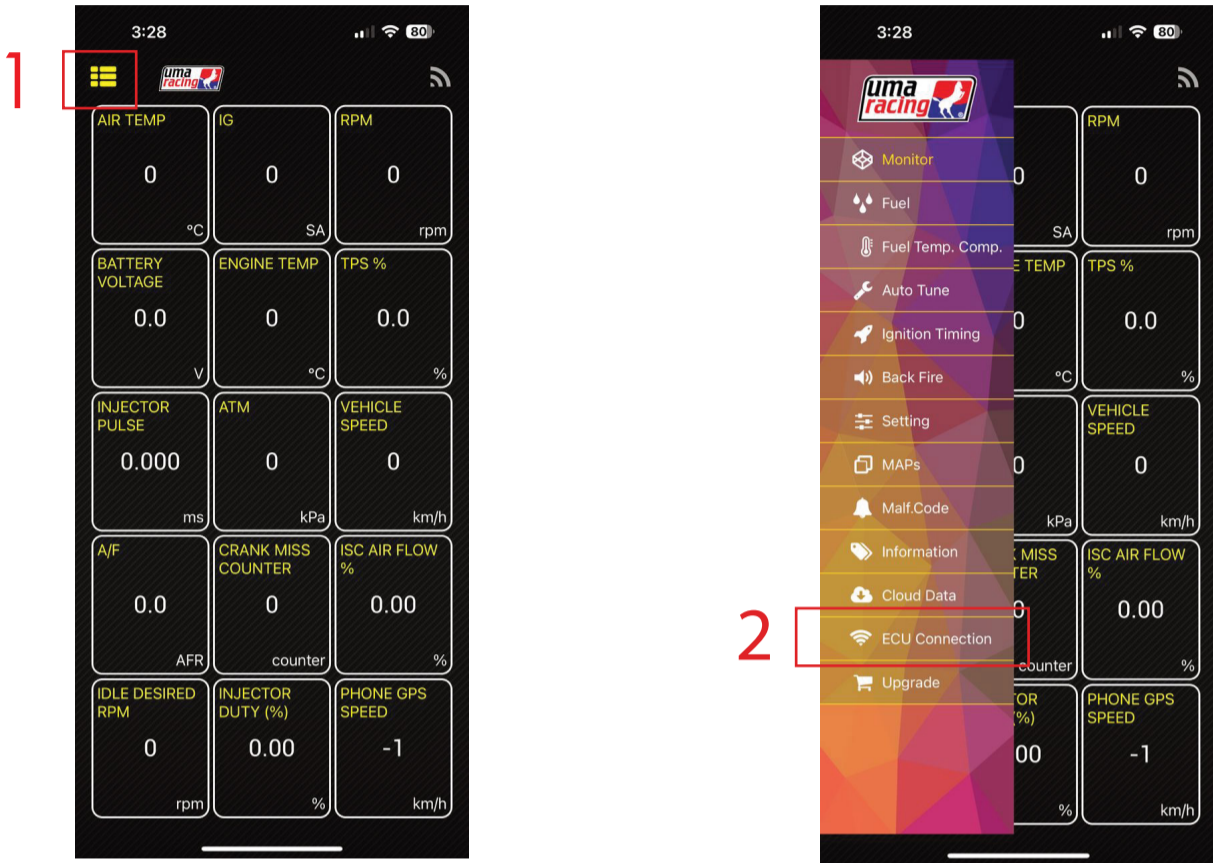
Uma Racing M9 ECU can be tuned or adjusted via PC and smartphone or tablet (Android and iOS platform) using UMA M9 with bLink Bluetooth module. It supports modified engine with high air flow, exhaust pipe, cam and bore up of up to 25%.

UMA Tune functions as per below:

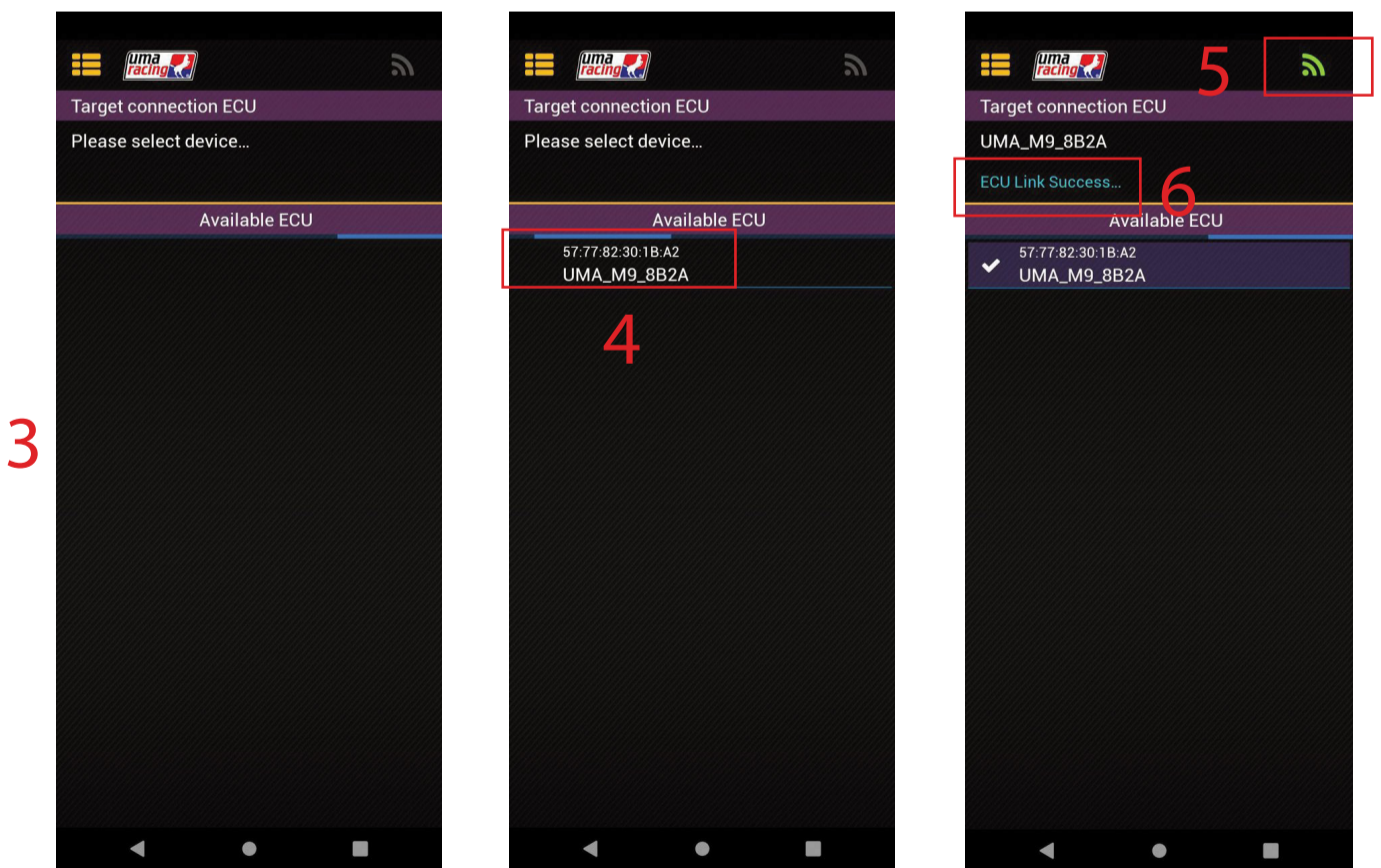
- 1) Monitor : Parameters for monitoring engine status and tuning
- 2) Fuel Adj : 3D Fuel Settings
 - i. Fuel Acc : Acceleration Enrich Fuel Settings
- 3) Ignition Timing : Timing of the Spark Settings
- 4) Idling RPM : Target Idling RPM Settings
 - i. RPM Limit : RPM Limit Settings
 - ii. VVA Control : VVA on RPM Settings
 - iii. Speed Gain : Dashboard Display of Speed Gain
 - iv. Coolant Fan : Coolant Fan Turn on Temperature Setting
- 5) TPS Reset : Reset TPS 100% Value
- 6) Malf. Code : Malfunction Code
- 7) MAPs : Save and Load Calibration Maps
- 8) Cloud Data : Update/Flash The Base Map for M5 ECU
- 9) Information : Check Vehicle, ECU, App, Module, Device Information/Version

1) To Connect To ECU by using phone (BLUETOOTH enabled)

Slide right or click 3 line icon at the top left #1 for the main menu & click #2 ECU Connection

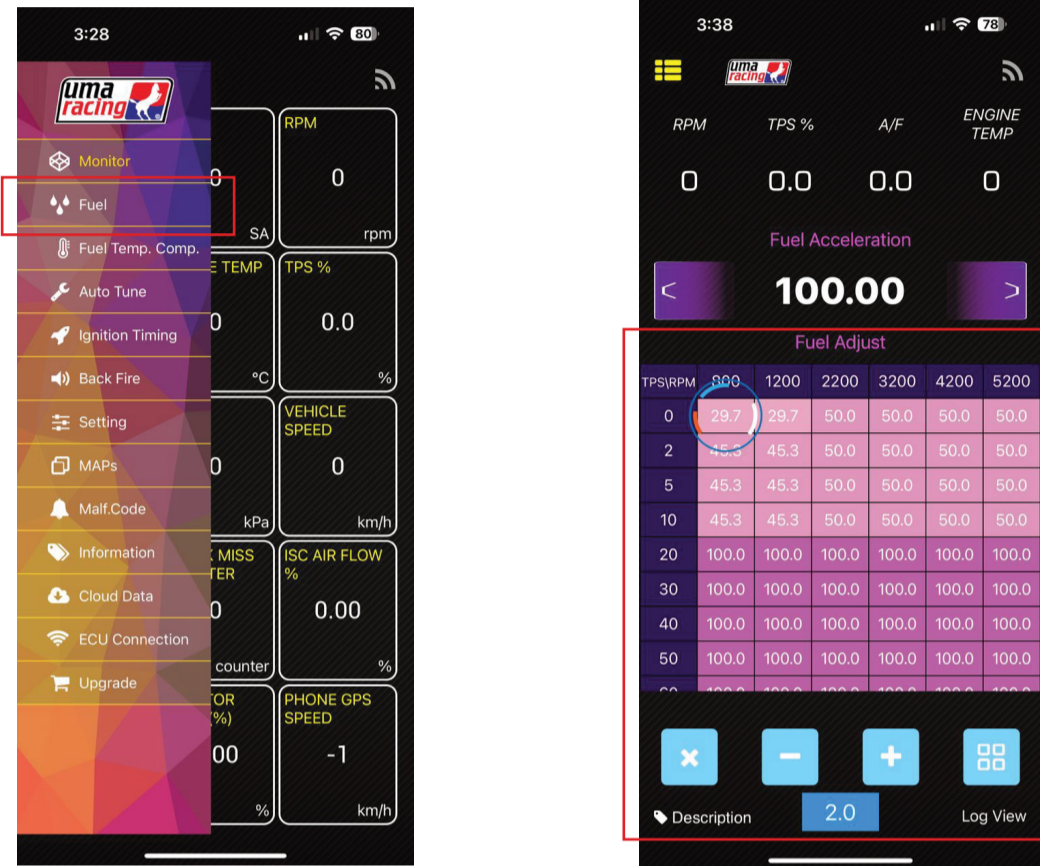


When screen appear #3, turn full throttle up to 10 sec, click #4 when ECU name appear. #5 and #6 UMA M9 apps successfully linked with M9 ECU.



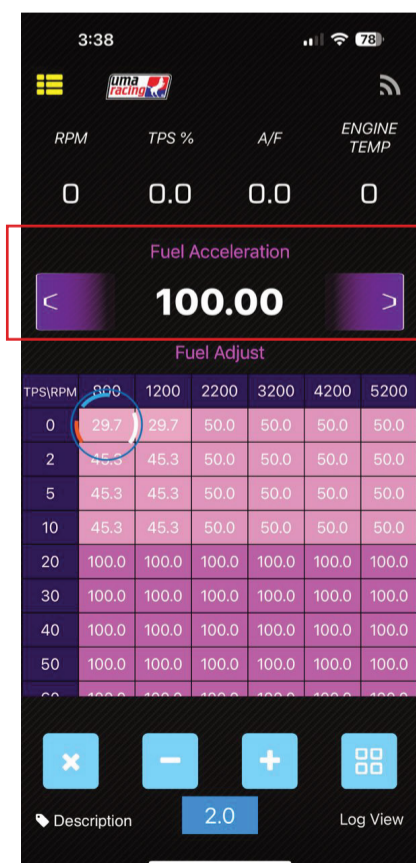
2) Fuel Adj. (199% ~ 0%)

3D Fuel Adjustment: All cylinders fuel factor by TPS% & RPM. 100 is the base value, 110 is 10% fuel increasing, 90 is 10% fuel decreasing.



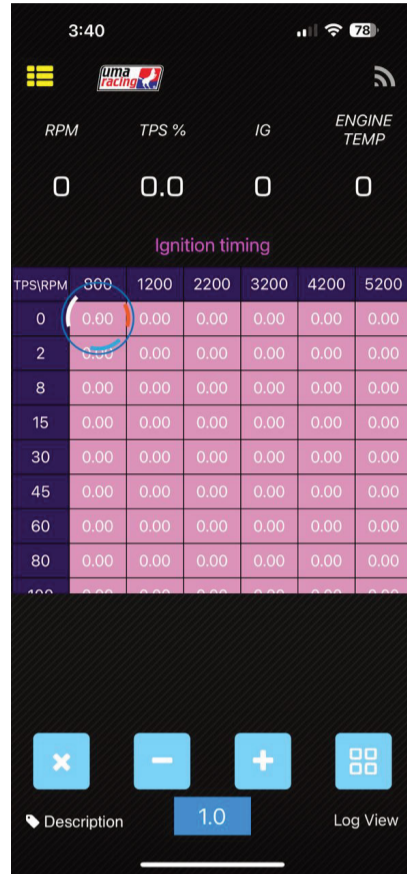
i. Fuel Acc (199% ~ 0%)

Acceleration Fuel Setting. Increase or decrease the acceleration fuel % to improve the throttle response.



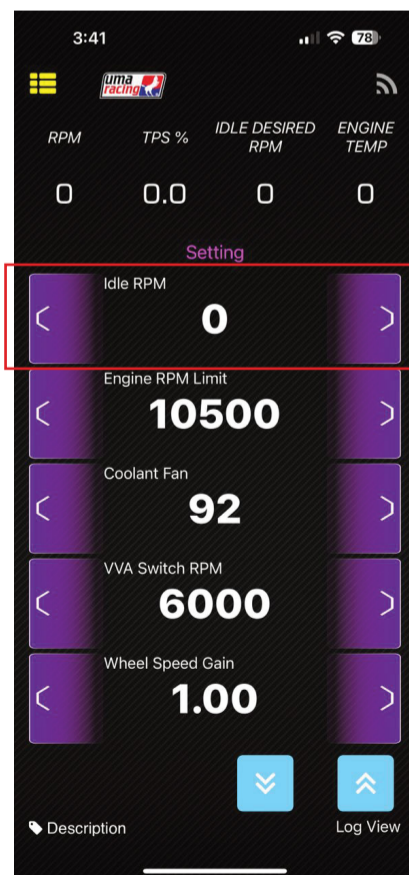
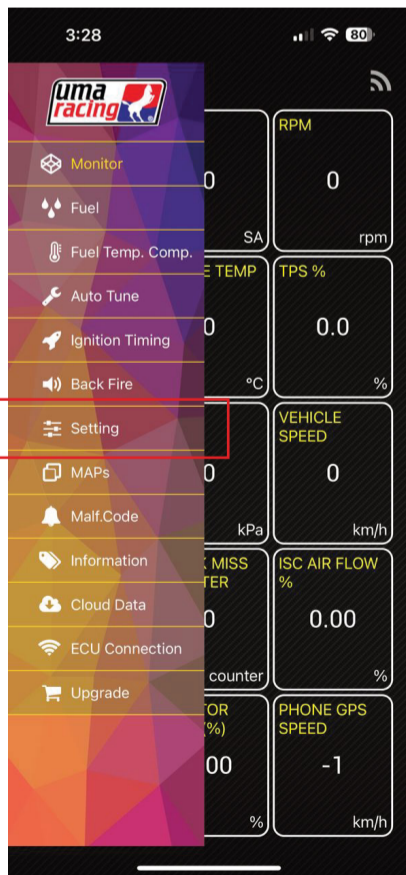
3) Ignition Timing

3D ignition timing Adjustment: + means increase the timing, - means decrease the timing



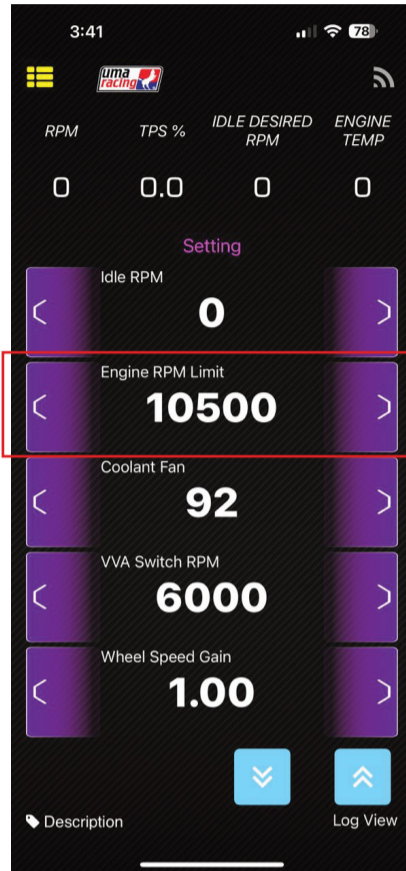
4) Idling RPM (+960 ~ -960)

Adjust target idling RPM for special applications. Such as for high cam...etc.



i. RPM Limit (3000 ~ 16000 RPM)

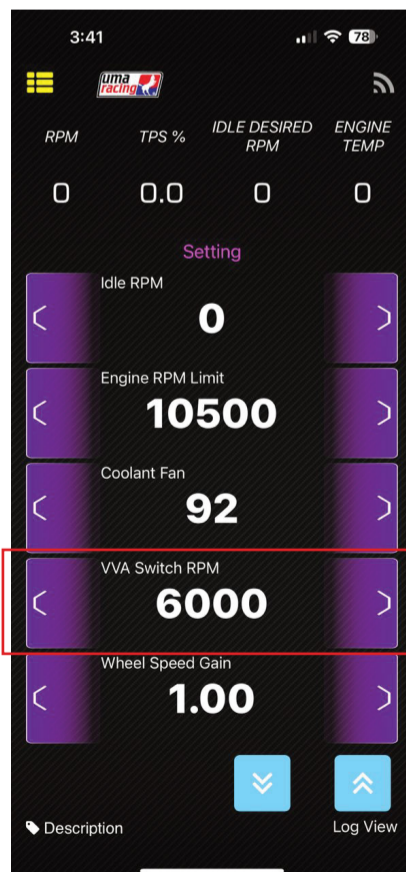
Set engine RPM Limiter. If RPM is higher than the limiter, fuel will be temporarily cut off.



ii. VVA Control (0 ~ 12750 RPM)

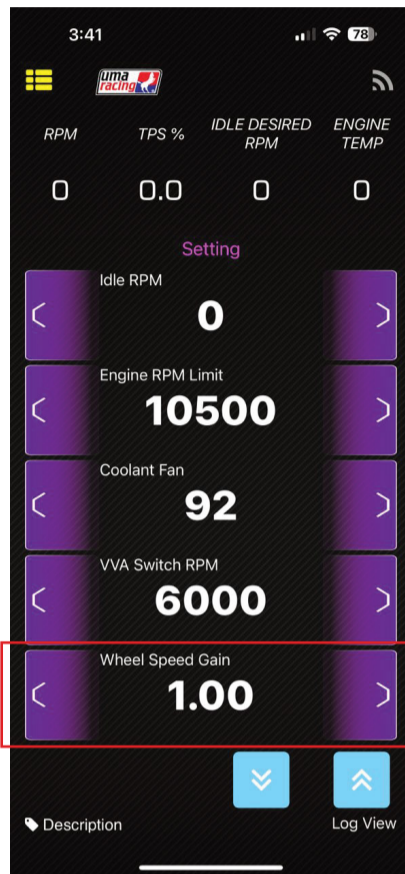
RPM threshold for VVA control. When RPM is higher than the threshold the VVA will turn on and switch cam profile.

*VVA : Variable Valve Actuation



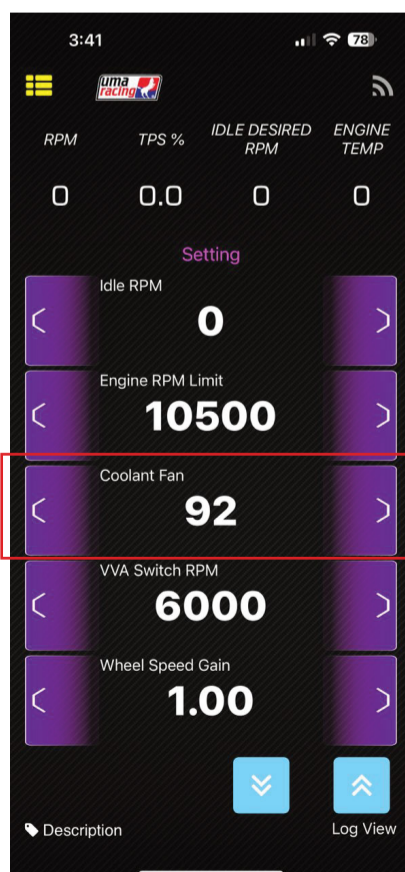
iii. Speed Gain

Vehicle Speed Gain (0~4.0), 1 is the default setting, 1.1 is 10% vehicle speed increase, 0.9 is 10% vehicle speed decrease. After changing the sprocket or tire specs use this parameter to correct the speed.



iv. Coolant fan

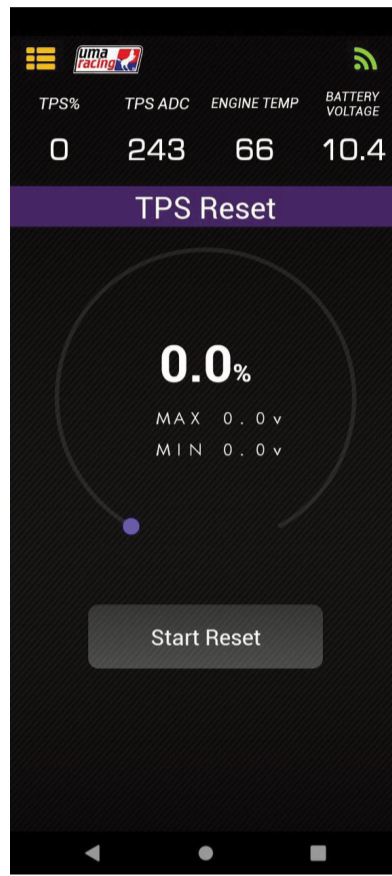
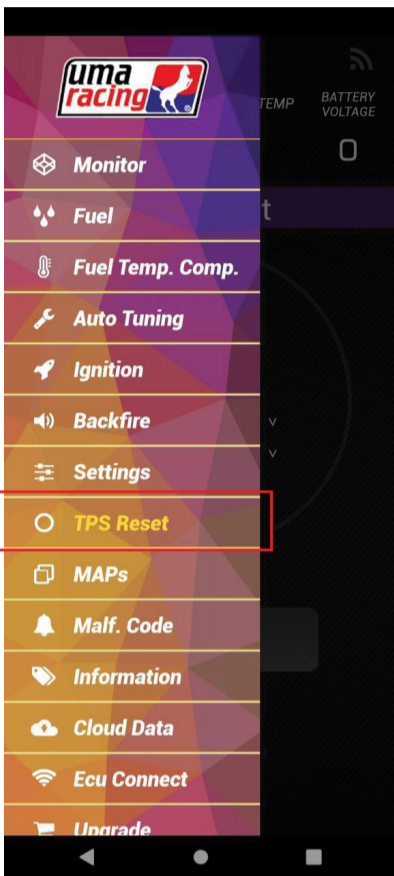
Based on different modifications done on the engine, user can set different temperature whereby the fan will auto switch off once the temperature is below 5°C from set temperature.



5) TPS Reset

When throttle is wide open, if TPS% < 97% or the throttle is not wide open, but TPS% is already 100%.

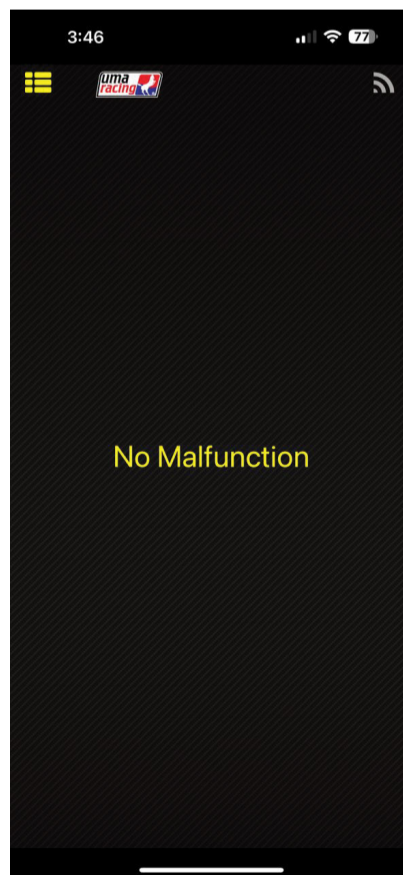
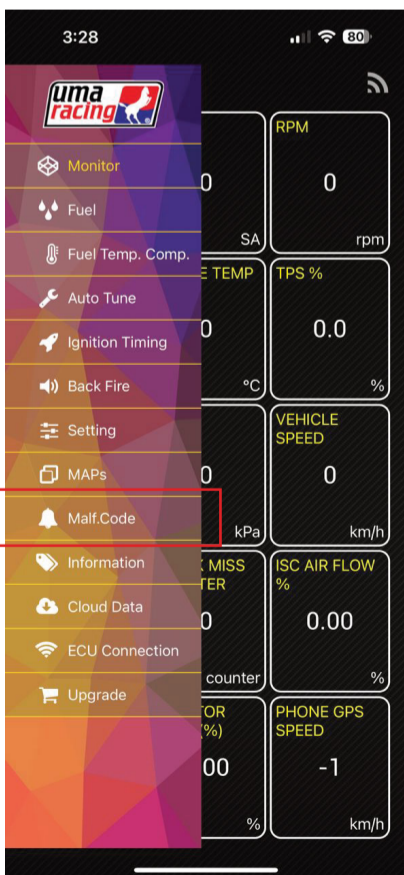
Click "Start Reset" button to reset TPS 100% value.



6) Malf.Code

1. Click Malf.Code.

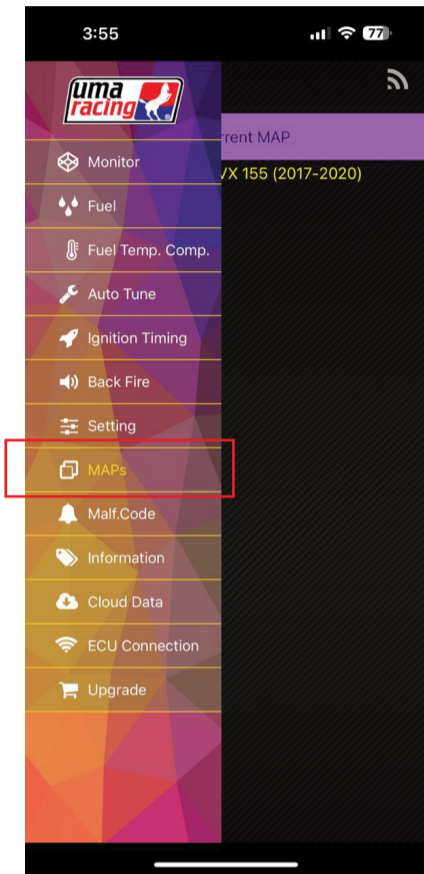
ii. UMA Tune can show the malfunction code if any EFI malfunctions happens. Some malfunction code is detected while engine is running.



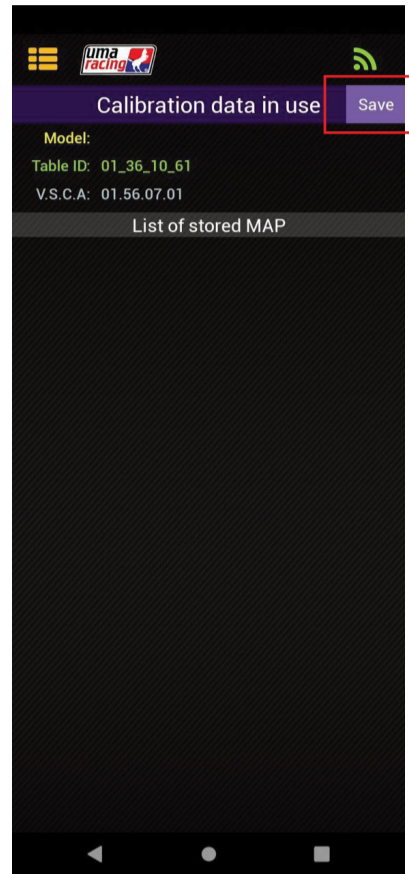
7) MAPs

Save Map (Save the current Map in your smart phone)

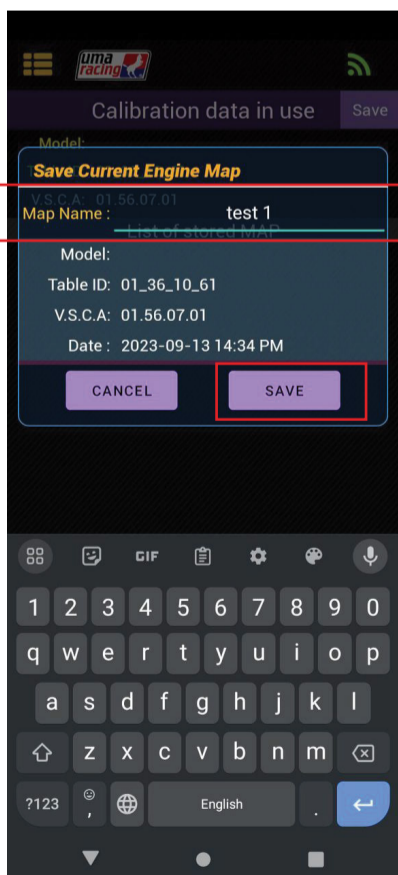
i. Click MAPs button.



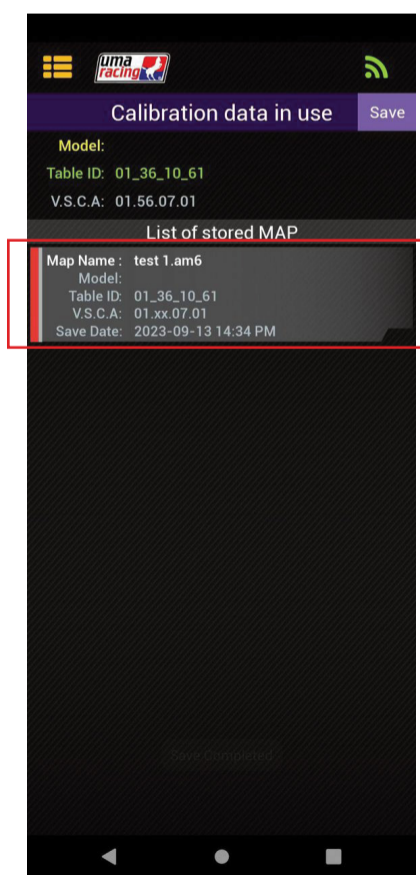
ii. Click Save



iii. Fill in Map Name & Notes. Then Click Save.

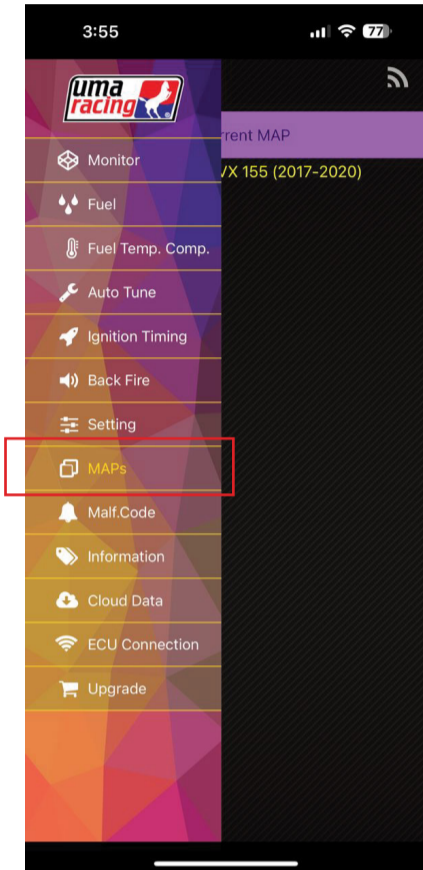


iv. Map is already saved.

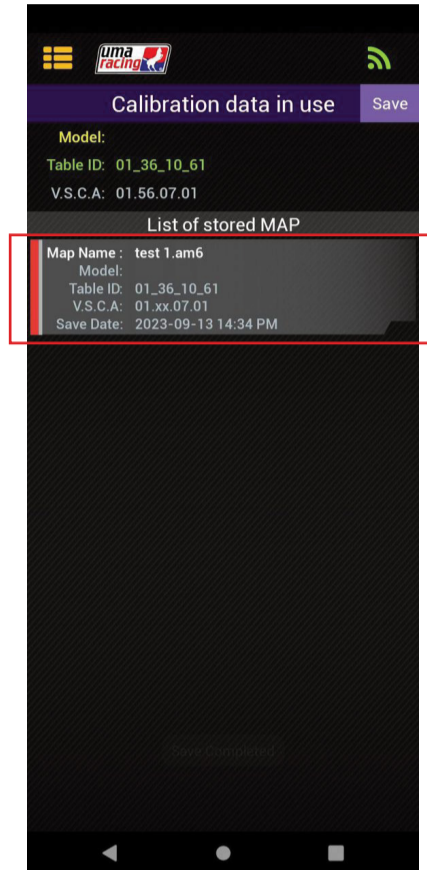


Load Map (Load the Map from your smart phone)

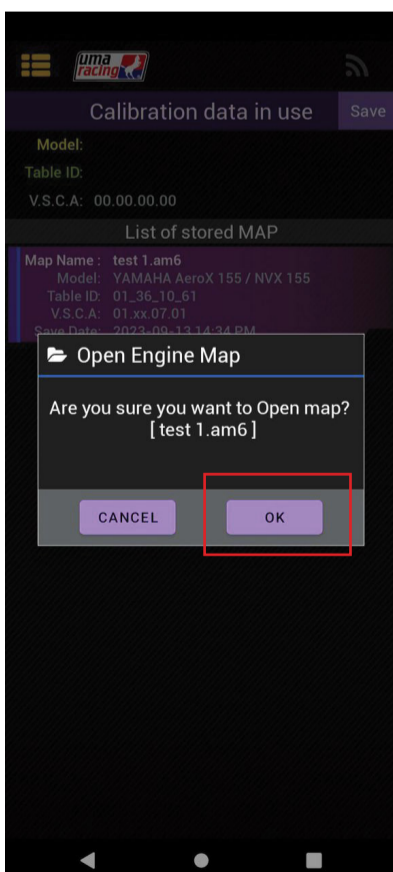
i. Click MAPs button.



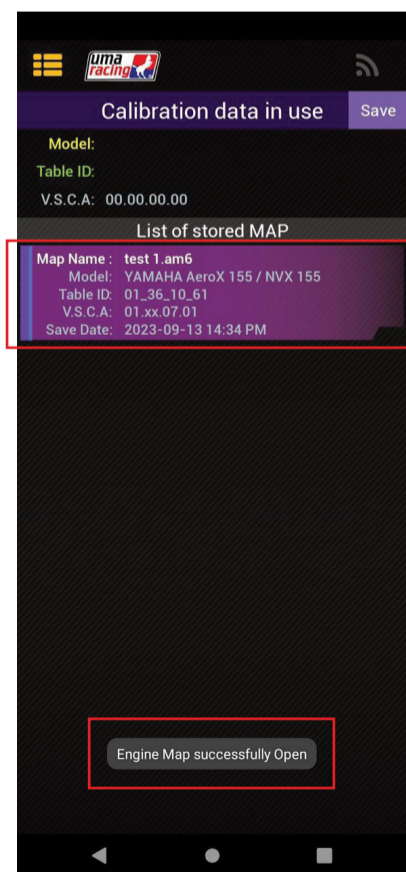
ii. Select the MAP.



iii. Click ok to load

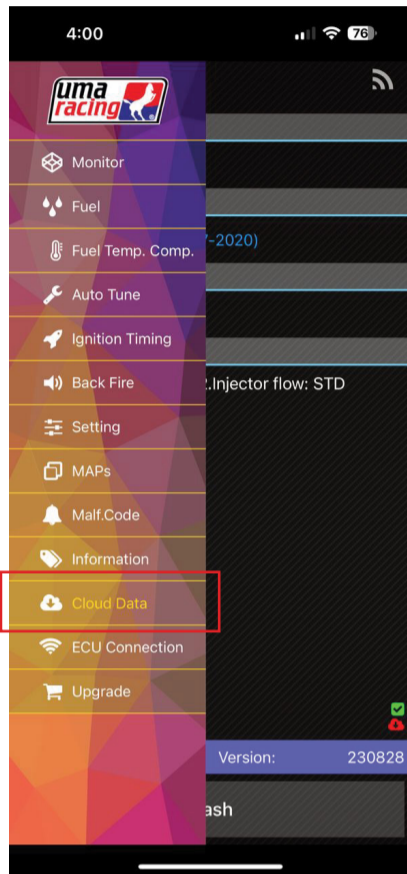


iv. Map is already loaded.

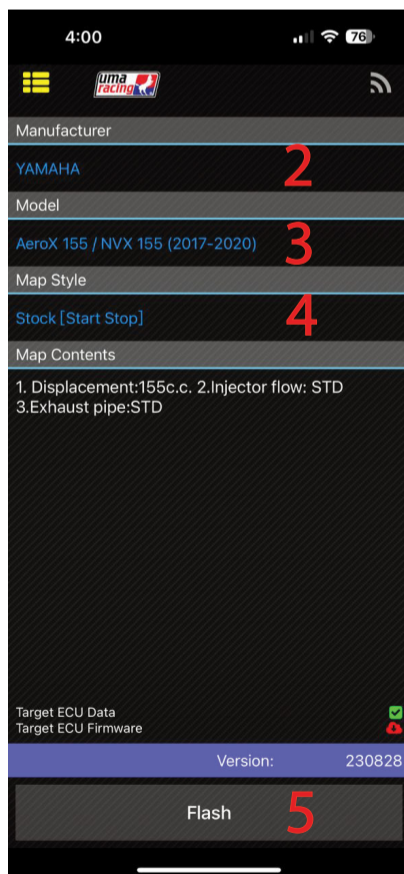


8) Cloud Data

(Download & flash the Map from cloud)



1 → Click Cloud Data

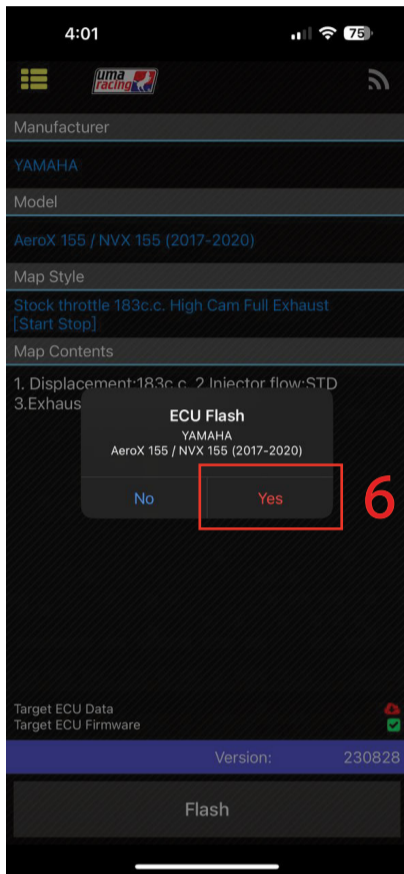


2 → Select Manufacturer.

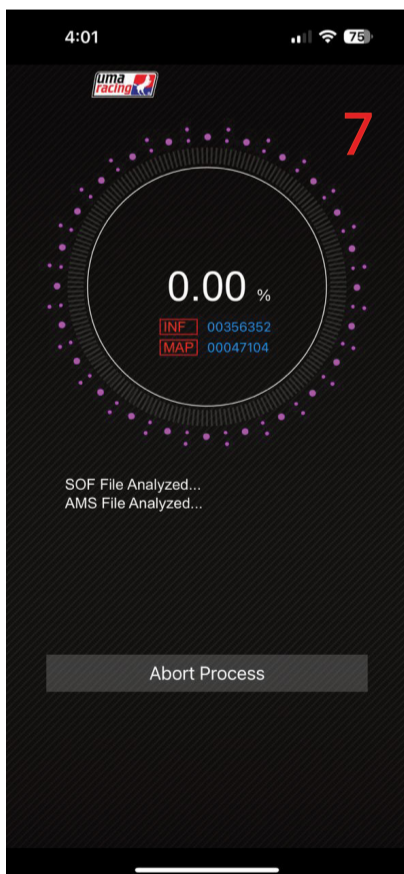
3 → Select Model.

4 → Select Map Style.

5 → Press Flash.



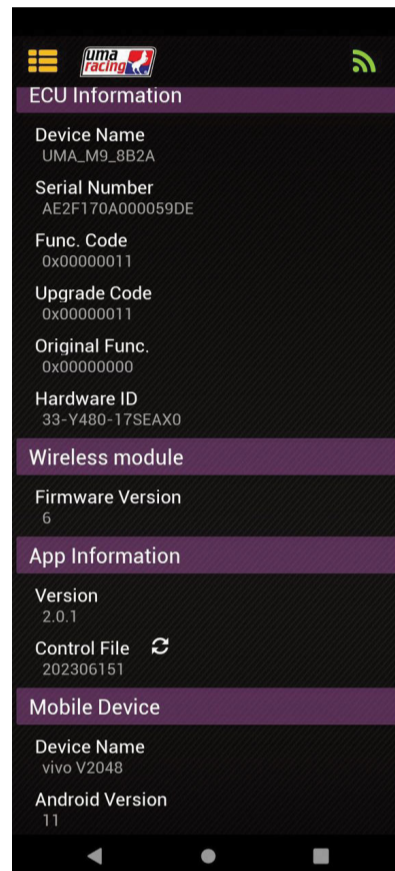
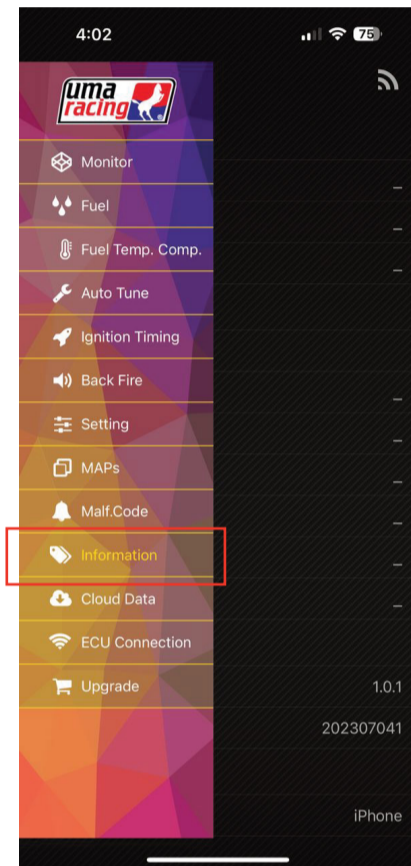
6 → Press Yes to start flash.



7 → After flash complete (100%), UMA M9 will auto re-link to M9 ECU. Please turn-off the ignition for 10 seconds, to complete the flash.

9) Information

To know any information/version regarding your vehicle, ECU, etc...



Recommended Tuning Process for UMA M9

Please select UMA Racing different Map on cloud data first & then start engine to warm up until $>80^{\circ}\text{C}$

“Fuel Adj” for full range adjustment on road load:
Please adjust & check the WB AFR data on all range of engine operating RPM. The full range AFR should be 12.6 ~ 13.2

“Ignition Timing” adjustment:
Adjust “Ignition Timing” for best performance in wide open throttle & then, please check if there is knocking in full range. Decrease the “Ignition Timing” if knocking is found.

Other adjustment:
You can check the setting of “Fuel Acc”, “RPM of idle”, “RPM Limiter”, “Coolant Fan”, “VVA Control”...etc.

Save Your MAPS! :
The input & output data between the ECU memory & UMA M9 is uploaded & downloaded in real time but the data should be saved first before power off to prevent data lost.

Tips:

1. Before tuning, please check whether the ECU type is compatible with the vehicle.
2. For the best tuning result, please use AF2 wideband AFR module (WB AFR) for setting.
3. If your bike has been upgraded or bored up, choose the nearest map to suit your vehicle specs.
4. Calibrate TPS before tuning and check AFR reading.
5. You can adjust Ignition Timing for the best performance on dynamometer.



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