

RaceMe Ultra Programming Manual

Thank you for the purchase of your RaceMe Ultra.

This manual will instruct you how to install and use your RaceMe Ultra tuner.

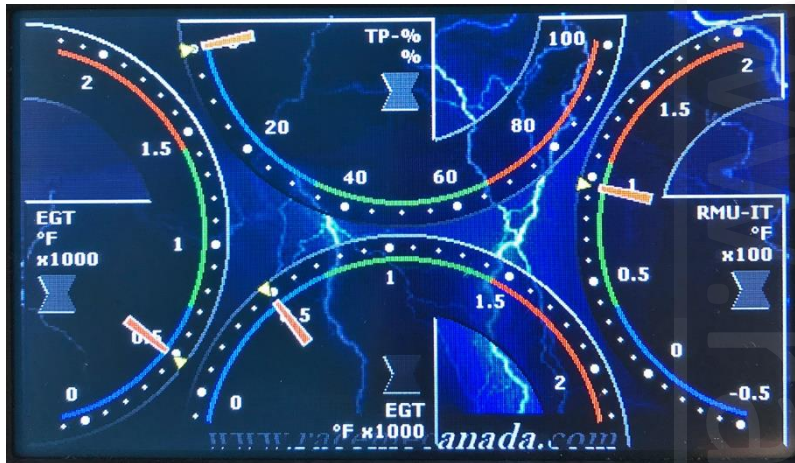
Although it is unnecessary, it is recommended the programming be installed before any hard parts are removed from the truck. This will ensure you aren't left with a no start condition in the unlikely event there is a problem with the tuner.

Raceme Tuners recommends the use of a battery charger on 10 amp charge be connected to the truck before any program sessions are started. Low voltage tuning can be the cause of many problems.

It is **STRONGLY** recommended that the tuner be updated to the latest software and firmware to take advantage of all the available features and to minimize issues. All updates and tutorials as well as a link to our videos can be found at www.racemecanada.com. To check the current software on the tuner, simply navigate to the Main Menu. The software version will be displayed at the bottom left location of the display. This version number can be compared to the latest version listed under the software release notes section on the website.



Once the tuner is up to date, turn the key to the run position without starting the truck. If you have a push button, push the button twice without touching the brake. If connected properly, the tuner will power itself on. Once you agree to the disclaimer, the tuner will default to dashboard A (gauge display).



To access the menu, touch anywhere on the screen. This will display the quick menu. This menu will time out and return to the dashboard if no other selection is made.



The options on the quick menu are as follows:

Main Menu – programming menu, settings, information.

Dashboard – will return you to the gauges.

PID Config – To customize gauges within the dashboards.

Dash Log – A data recorder for the gauges displayed on the dashboard. (Can be emailed to RaceMe tech for diagnostics).

HS Log – A data recorder for all parameters of the truck. (Can be emailed to RaceMe techs for diagnostics).

Previous – Cycles through dashboards in reverse. D,C,B,A

Next – Cycles through dashboards. A,B,C,D

Max Reset – resets the Max values on digital type gauges.

Switch – Allows HP level selection from 0-5 while the engine is running.

RT – Real Time Tuning. Allows advanced tune modification while the engine is running.

POD – Power on Demand. Not available on MY2013 to present.

Programming.

To program the ECM, select the Main Menu. From the Main Menu, select ECM Tuning.



From the next screen, select The ECM option.



The next screen will present you with 3 options:

Basic tuning: This will bypass all advanced settings and direct you to the program screen. With basic tuning, some features will be disabled such as RT, Dash Log, and HS Log, Transmission Tuning, and Top Speed Limiter. When tuned with basic tuning, power level changes are made from the “Switch” function in the quick menu.

Advanced Tuning: Provides the full functionality of the tuner and includes all features such as RT (Real Time), Dash Log, HS Log, Transmission Tuning, Duration, Rail Pressure, Timing, Torque management (not avail 2013+), VGT, and Speed Limiter.



The “Get Stock file for Truck” option is only used when custom tuning is desired. This function only creates a stock file image to the SD that can be emailed to a custom tuner.

Delete Only- Only Stock Power: Will bypass the advanced setting but allow the use of transmission tuning as well as the ability to change the speed limiter.

Deletes- With Increased Power: Allows all advanced functions.



Advanced Tuning Options Breakdown:

Duration: The amount of fuel the injectors are spraying at the main injection event. The tuner allows this adjustment in HP levels. The Ultra's HP levels are 30HP, 60HP, 120HP, 150HP, and 200HP. These are gains above Stock.

Rail Pressure: The Pressure the injectors receive from the high pressure fuel pump. The adjustments are Stock (26107psi), 1850bar (26831psi), 1900bar (27557psi), and 2000bar (29007psi). These are the MAX values the rail pressure can reach.

Timing: The moment, in relation to piston TDC, in which the injector sprays fuel. The adjustments are Stock (17deg), 23deg, 29deg, 35deg. These are the MAX values the timing can reach.

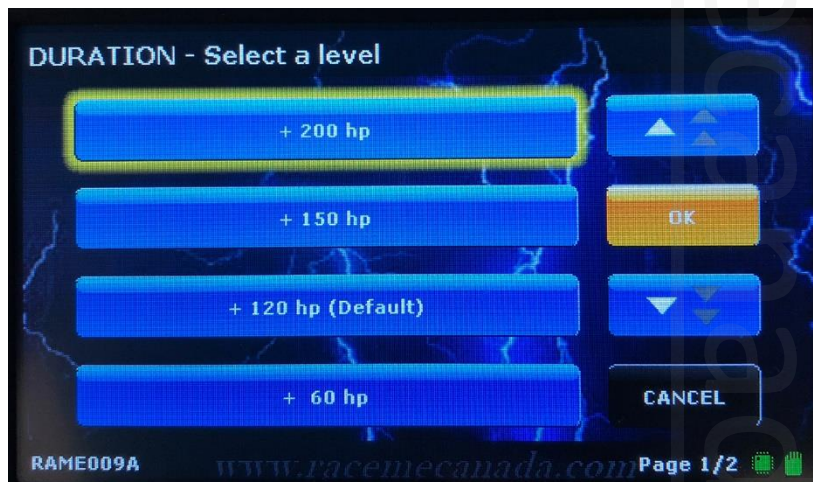
VGT (Variable Geometry Turbo): The VGT refers to the programming of the Variable nozzle ring in the exhaust housing of the turbo that changed the relationship between the blades on the ring and the turbine blades. This allows for control over turbo speed, thus managing drive pressure and boost. The settings are as follows, Stock, Economy Spool, Mild Spool, and Quick Spool. These settings won't necessarily change the amount of boost you desire, but more so change the way the turbo responds to input.

Torque: The amount of Defueling allowed by the engine's computer in relation to RPM and load and throttle position with the intent to preserve the transmission. The Settings here are Stock, Low-Mild, Mild, Medium, and Wild. This setting is not available in 2013+ trucks.

Transmission: Tuning for the transmission. These are full transmission tunes. The upgrades are as follows: Raised line pressure, Increased shift firmness, Changed WOT shift points, High gear shift delay (prevent shift out and lugging at low speeds). The settings are: No Tuning – does NOT tune transmission, Stock Transmission – trans tune for an unmodified transmission (185psi max), Aftermarket Transmission- trans tune for a modified transmission (225psi max). If you do not see the transmission option, it is not currently available for your transmission.



To make a selection change, touch the green bar for the parameters you wish to change. In this case, it is the duration. The selection page will open.



To make the change, simply touch the blue bar you wish to change to. The screen will then revert back to green bars and display your new choice.

The "default" settings seen attached to some of the parameters are the default settings the truck will be programmed with in the advanced menu if you do not change any parameters.



These same steps can be made for all advanced tuning parameters. Once all desired settings are selected, choose Next to proceed.

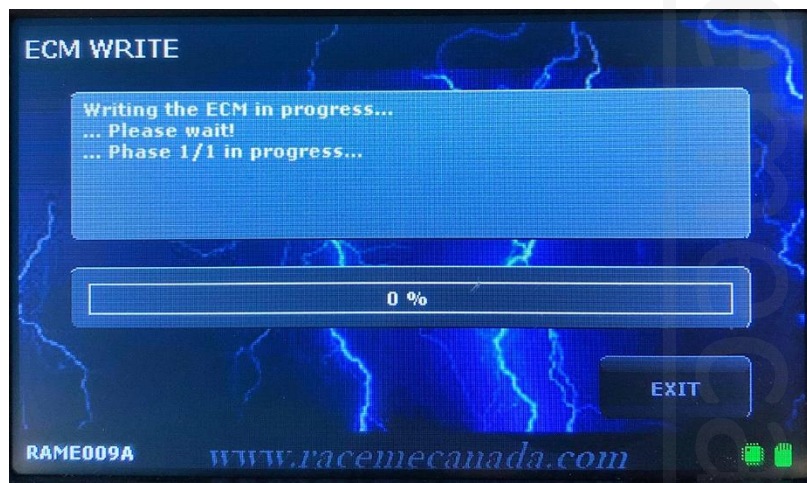
The last selection to be made is the speed limiter. This simply is the top speed (MPH) setting for the truck. The default value is Stock (102.5 MPH).



To change this value, touch the green speed limiter bar and then type in the desired value (25MPH – 250MPH) and push enter.



Lastly, push the program button to program the vehicle. The estimated time for most trucks is around six minutes to complete the programming.



If you happen to receive an error code at the start of programming, please record the error number for further diagnosis. Some common errors are :

14000 – The RSA unlock cable is not plugged in correctly. Please refer to Hardware connection manual for proper connection procedures.

12163 – The engine is running. The tuner can not write the truck's computer while it is in use. Shut engine off and follow the prompts.

15012 – Communication error between the communication module and the controller. Recheck this connection.

12202 – Update to the latest firmware and retry.

14243 – ECM did not accept data. Turn key off, disconnect both battery negatives for 30 minutes to reset ECM. After 30 minutes, retry.

Once the progress bar reaches 100%, the tuner will ask you to turn the ignition off, then on, then off again. This will finalize the program session. The last screen will verify the tuning was installed correctly into the trucks ECM. You can now start the truck.

