



Emtron Cal Slot Control



Cal Slot Control is a very powerful tuning tool which allows for multiple configurations to be applied to each cal slot. To enable the “Cal Slot Control” function the menu item must be checked to “ON” in the functions setup as pictured below:

Config View->Functions Setup->Engine Functions->Cal Slot Control

The screenshot shows the EmTune software interface. The 'Function Setup' window is open, displaying a table of engine functions. The 'Cal Slot Control' function is highlighted in blue, and a red arrow points to it. The table lists various functions and their status (ON/OFF).

Channel Name	Output Channel Assign	Type	Mode	Invert	Pulup	Frequency
ORFC	ON					
Closed Loop Lambda Control	OFF					
Internal LSU Sensor 1 Control	ON					
Internal LSU Sensor 2 Control	ON					
Cam Switch	OFF					
Idle Speed Control	OFF					
Idle Ignition Control	ON					
Cam Control	OFF					
Knock Control	ON					
Boost Control	Single Solenoid					
DBW	OFF					
TGV Control	OFF					
RPM Limit 1	Fuel Cut Only					
RPM Limit 2	OFF					
RPM Limit 3	OFF					
MAP Limit 1	Fuel Cut Only					
MAP Limit 2	OFF					
Speed Limit 1	OFF					
Speed Limit 2	OFF					
Cal Slot Control	ON					

The right-hand sidebar displays various engine parameters such as Engine Speed (RPM), Manifold Pressure (kPa), Engine Temperature (°C), and Fuel Tables.

Now the “Cal Slots” have a control to switch between, the “Cal Config” table can now be configured. The Table pictured below has a list of all Tables which can be controlled by the function. Each “Cal Slot” can be configured to enable a selected table. In this particular example, “Cal Slot 1” is configured so that all tables that are controlled will use “Table 1”. “Cal Slot 2” is configured to have the “Main Fuel Table and “Main Ignition Table” to use “Table 2”. All other tables are configured to use “Table 1”.

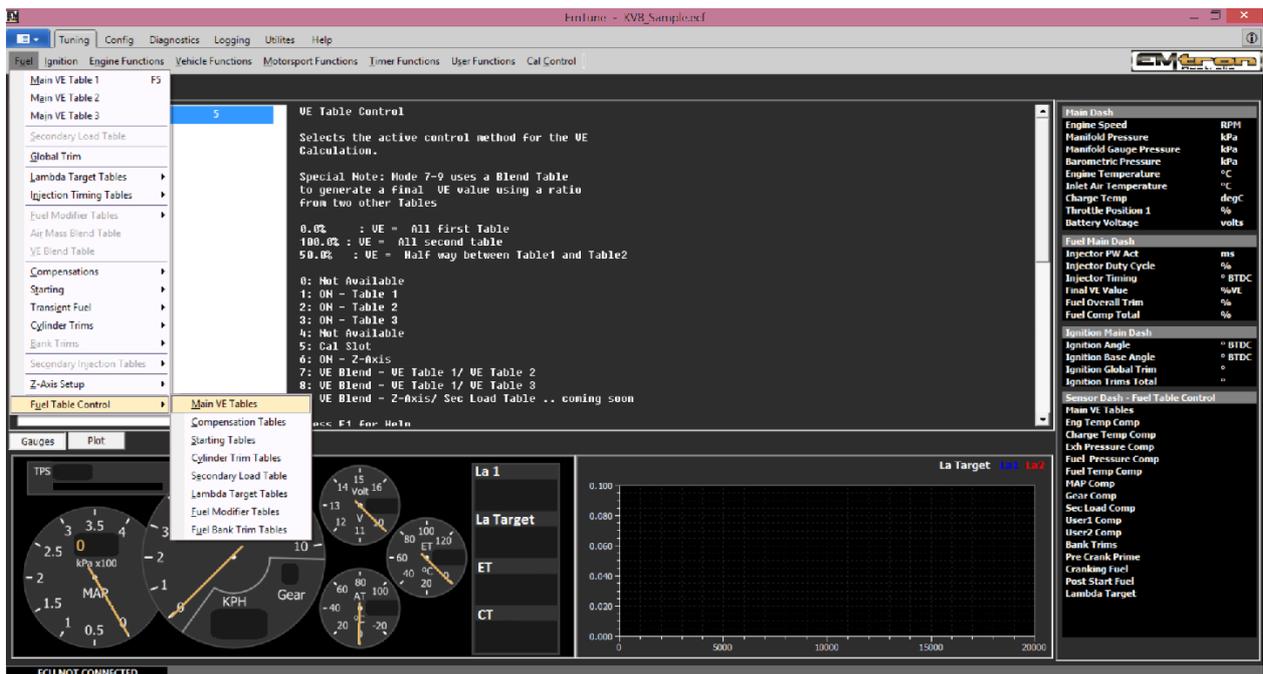
The screenshot shows a dialog box titled "Cal Config" with a close button (X) in the top right corner. The dialog contains a table with the following structure:

Function	Cal Slot 1	Cal Slot 2	Cal Slot 3	Cal Slot 4
Main Fuel Table	Table 1	Table 2	Table 3	Table 2
Main Ignition Table	Table 1	Table 2	Table 3	Table 2
DBW Target Table	Table 1	Table 1	Table 1	Table 1
Launch Tables	Table 1	Table 1	Table 1	Table 1
Traction Tables	Table 1	Table 1	Table 1	Table 1
Boost Target Tables	Table 1	Table 1	Table 1	Table 1
Engine Speed Limit	Table 1	Table 1	Table 1	Table 1
Fuel Type	Fuel Type 1	Fuel Type 1	Fuel Type 1	Fuel Type 1
RESERVED				
RESERVED				
RESERVED				
Boost Limit Table	Table 1	Table 1	Table 1	Table 1
Ground Speed Limit Table	Table 1	Table 1	Table 1	Table 1
AntiLag Table	Table 1	Table 1	Table 1	Table 1
Lambda Table	Table 1	Table 1	Table 1	Table 1
Cam Angle Inlet Target	Table 1	Table 1	Table 1	Table 1
Cam Angle Exhaust Target	Table 1	Table 1	Table 1	Table 1
Dwell Table	Table 1	Table 1	Table 1	Table 1

At the bottom right of the dialog, there are two buttons: "Ok" and "Cancel".

Ok, so now the “Cal Slot Control” is configured the one last step is ensure that the tables you wish to be controlled by this function are set to allow the function access to the respective tables.

Pictured below is the Fuel Table Control Menu where the main VE Table can be accessed:



Tuning View->Fuel->Fuel Table Control->Main VE Tables

Select the menu item number corresponding to “Cal Slot”. In this case it is menu item number 5.

The screenshot shows the 'Main VE Tables' configuration window in the ECU Tuner software. The 'VE Table Control' dropdown is set to '5'. A red arrow points to the '5: Cal Slot' option in the list. The interface includes a menu bar, a main text area with instructions, a list of control options, a 'Gauges' section with various engine gauges, and a 'Plot' section with a graph.

VE Table Control

Selects the active control method for the VE Calculation.

Special Note: Mode 7-9 uses a Blend Table to generate a Final VE value using a ratio from two other Tables

0.0% : VE = All First Table
100.0% : VE = All second Table
50.0% : VE = Half way between Table1 and Table2

0: Not Available
1: ON - Table 1
2: ON - Table 2
3: ON - Table 3
4: Not Available
5: Cal Slot
6: ON - 2-Axis
7: VE Blend - VE Table 1 / VE Table 2
8: VE Blend - VE Table 1 / VE Table 3
9: VE Blend - 2-Axis/ Sec Load Table .. coming soon

Press F1 For Help

Gauges | **Plot**

La 1
La Target
ET
CT

La Target | **La 1** | **La 2**

ECU NOT CONNECTED

Pinout Dash

- Engine Speed RPM
- Manifold Pressure kPa
- Manifold Gauge Pressure kPa
- Barometric Pressure kPa
- Engine Temperature °C
- Inlet Air Temperature °C
- Charge Temp degC
- Throttle Position 1 %
- Battery Voltage volts

Fuel Main Dash

- Injector PW Act ms
- Injector Duty Cycle %
- Injector Timing ° BTDC
- Final VE Value %VE
- Fuel Overall Trim %
- Fuel Comp Total %

Ignition Main Dash

- Ignition Angle ° BTDC
- Ignition Base Angle ° BTDC
- Ignition Global Trim °
- Ignition Trims Total °

Sensor Dash - Fuel Table Control

- Main VE Tables
- Eng Temp Comp
- Charge Temp Comp
- Lch Pressure Comp
- Fuel Pressure Comp
- Fuel Temp Comp
- MAP Comp
- Crab Comp
- Sec Load Comp
- User1 Comp
- User2 Comp
- Bank Trims
- Pre Crank Prime
- Cranking Fuel
- Post Start Fuel
- Lambda Target

The Fuel Tables are now controlled by the “Cal Slot Control” function. This setting gives the flexibility to allow the function control or not over the table. This process is to be repeated for any Table you wish to link to the “Cal Control Function”.

