BossECU C1XSE V1

Before connecting the ECU to the car

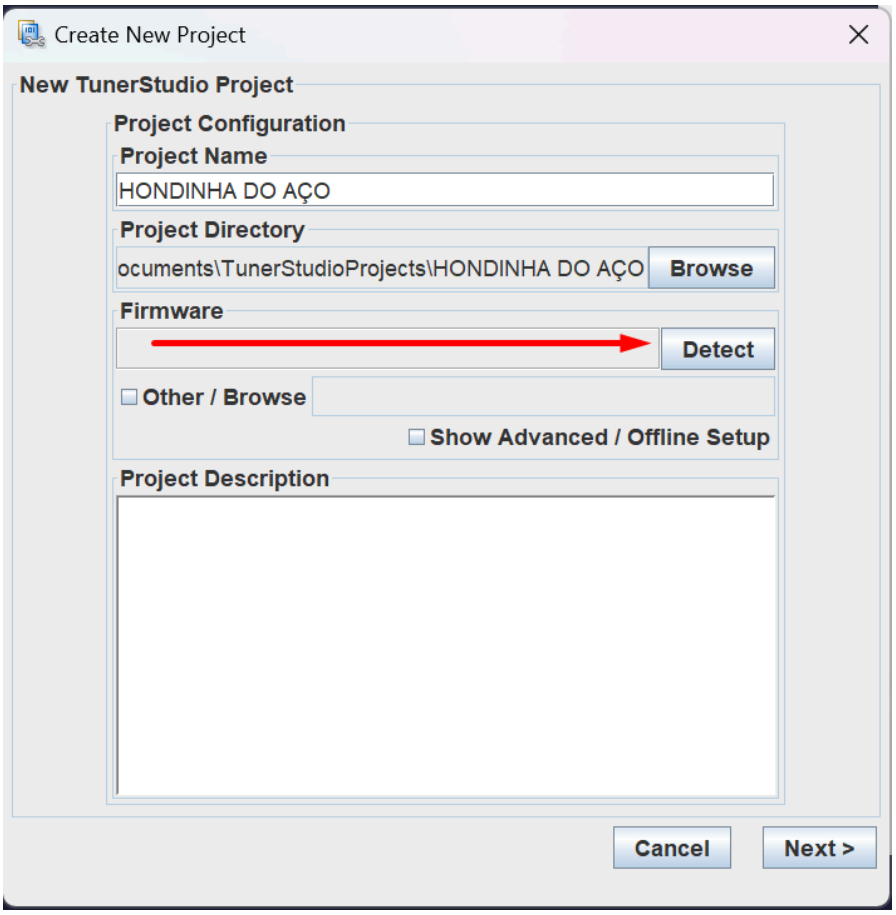
1) Download and install:

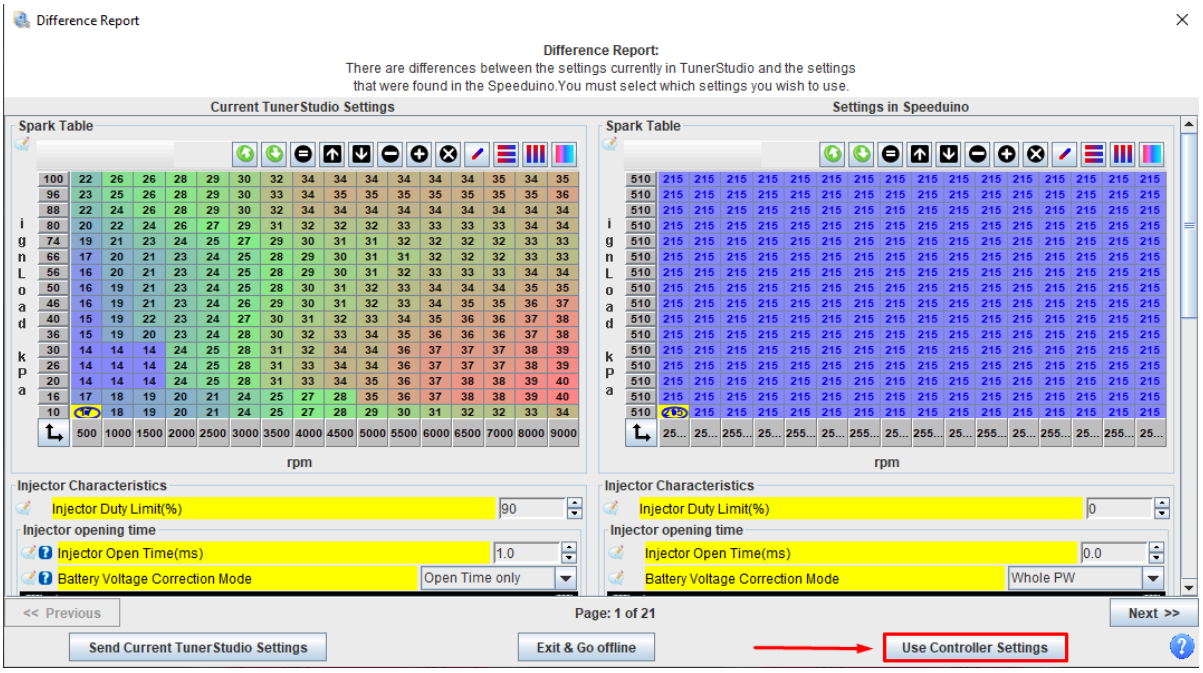
- **TunerStudio software: LINK**
- **USB driver: LINK**

Connectivity:

- **Bluetooth**: Connect via USB to power the ECU and pair the Bluetooth
- **USB**: Unplug the Bluetooth module and connect via the USB

2) Create a project and detect firmware

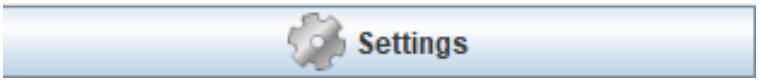


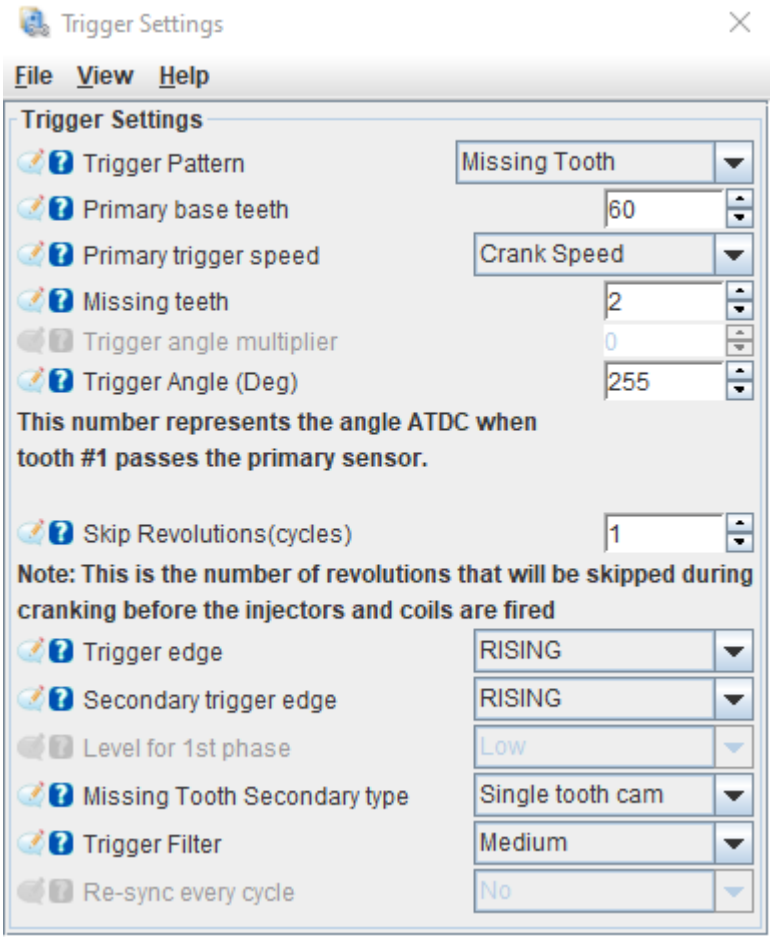


“Use controller settings” to load ECU settings

3) Trigger wheel

Configure the trigger wheel:

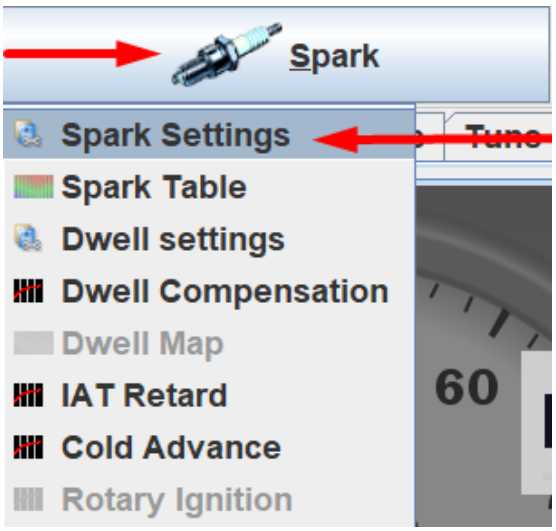


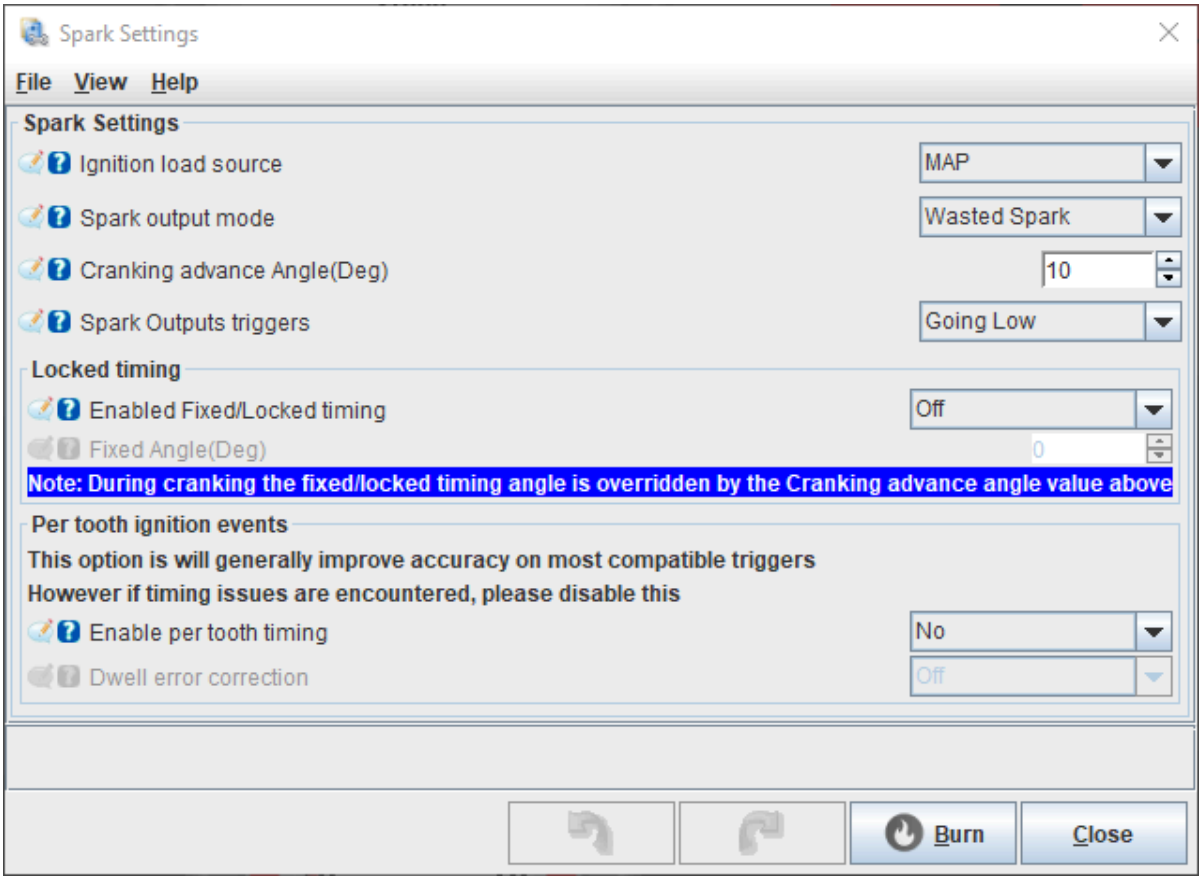


4) Ignition

On the board Jumper JP1, select the voltage sent to the coils:

- Distributor coil: 12V
- VAG / K20 coils: 5V





Spark output mode:

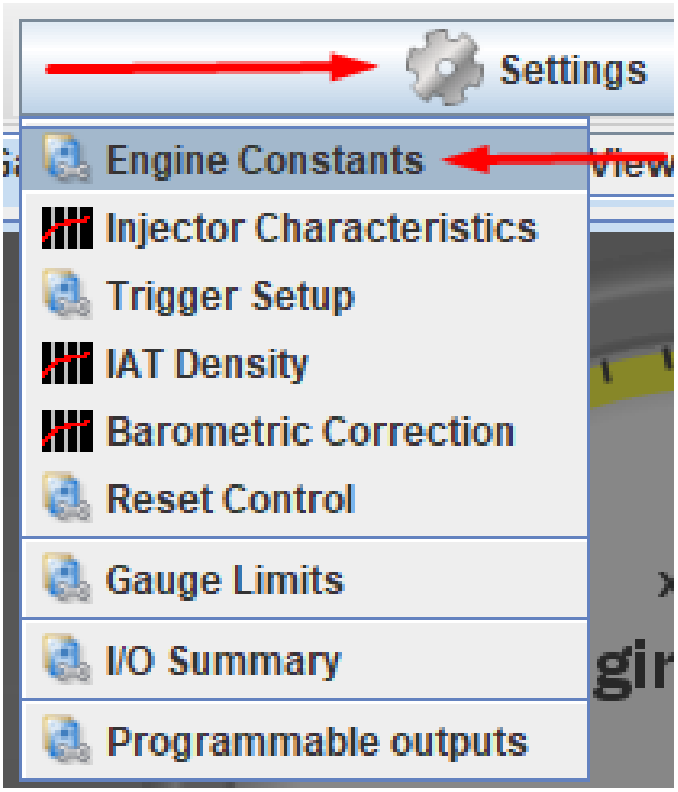
- Single channel: Distributor
- Wasted spark: Only uses 2 signals and sparks the plugs in pairs

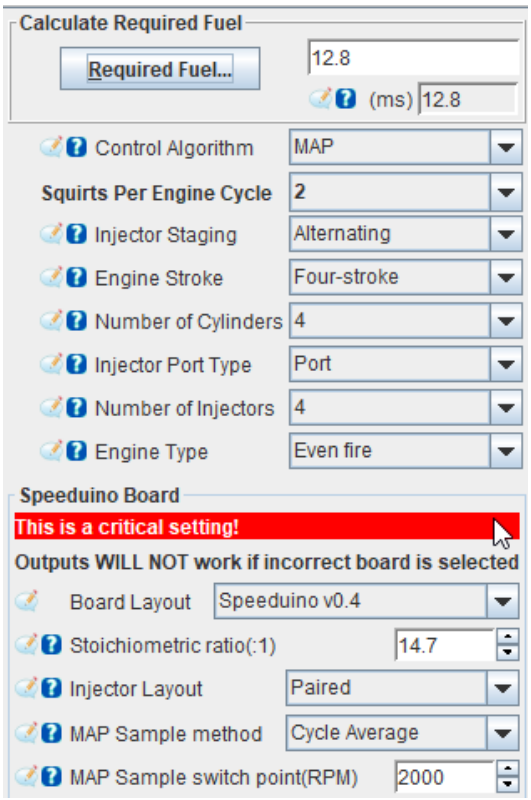
Spark output triggers:

- Honda distributor: Going High
- Smart coils: Going Low (most of them)

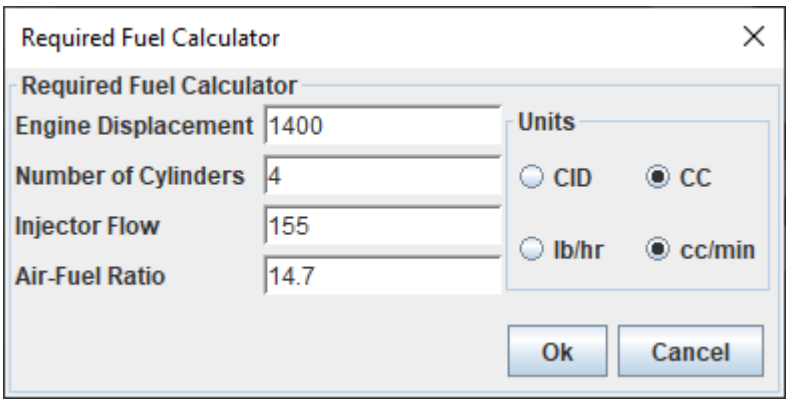
5) Injection:

WARNING: Use only high impedance injectors (> 8 ohm) or low impedance with resistor box.



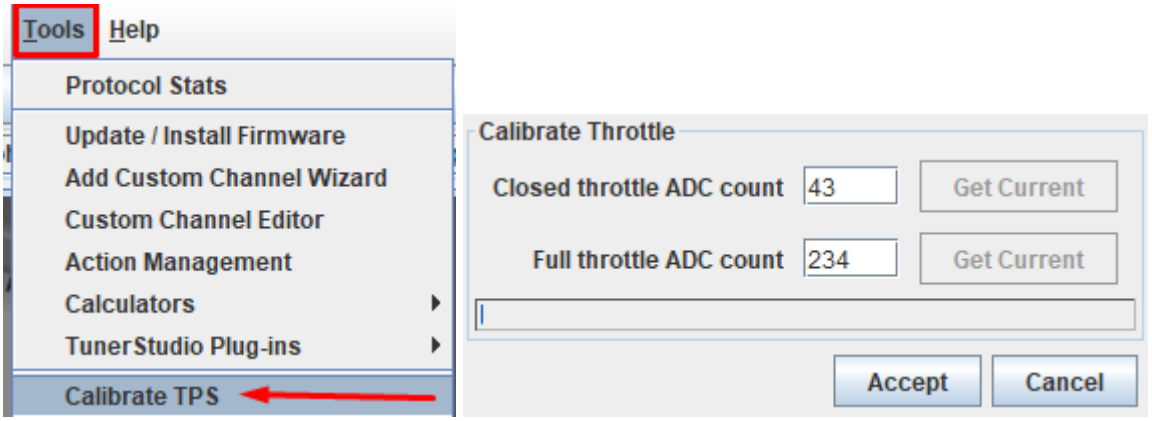


Change the engine displacement and injector flow rate



Connect the ECU to the car

6) Calibrate TPS

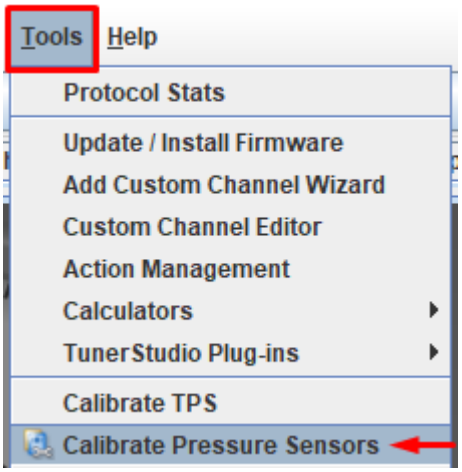


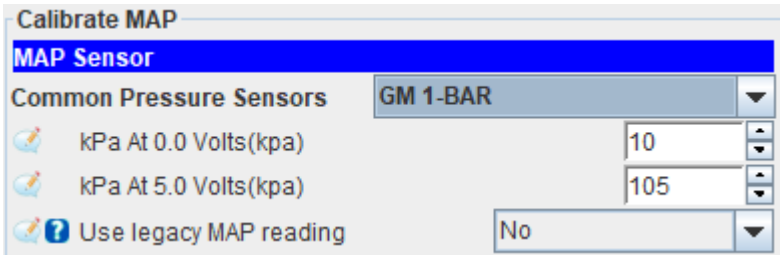
Click on the closed throttle “Get current” button.
Then press full throttle and click on the full throttle “Get current” button.
Now, click “Accept” to save.

7) Calibrate MAP

STOCK = Sensor in the engine bay
MPX = Map sensor on the board

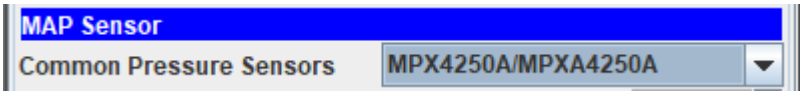
Stock map sensor configurations:





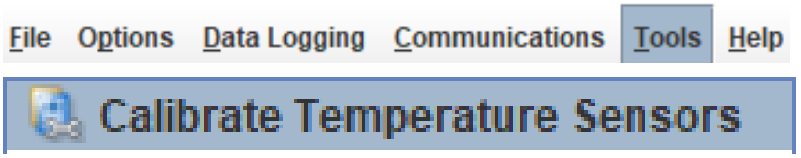
If it uses a map sensor on the board:

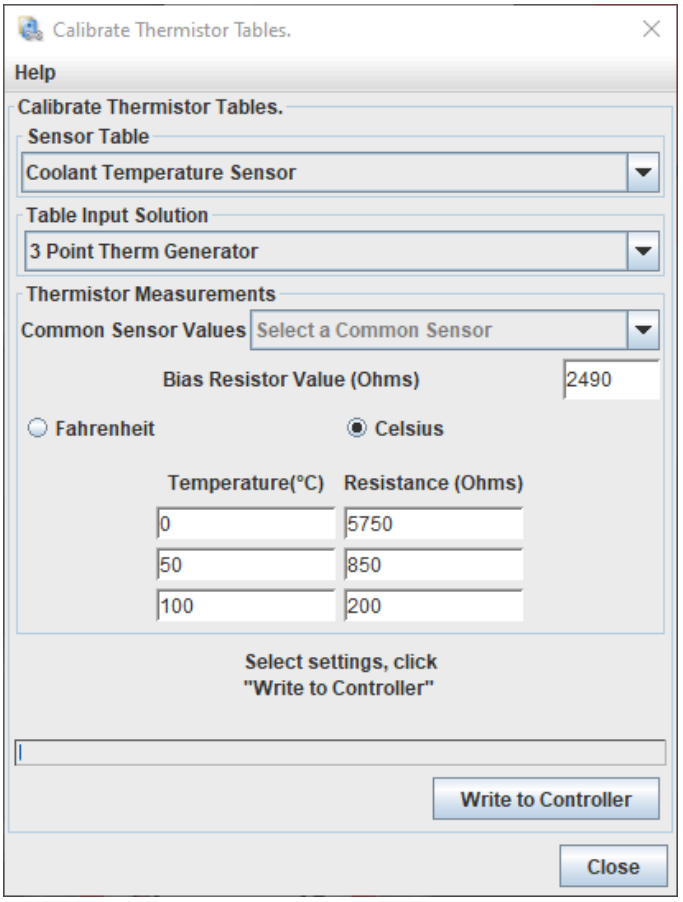
MPX42050AP

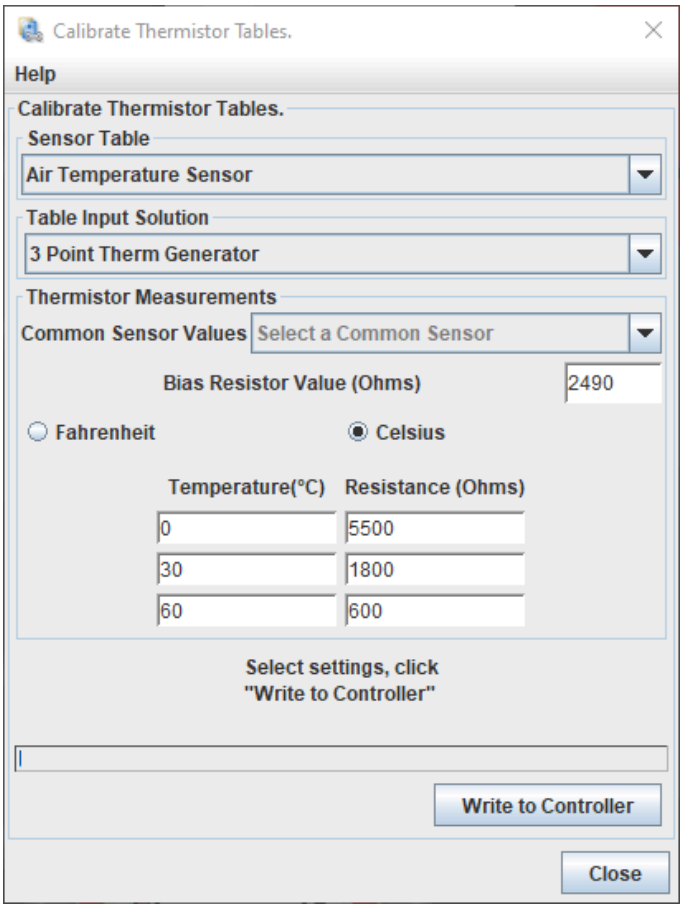


MPX5700AP

8) Calibrate temperature sensors

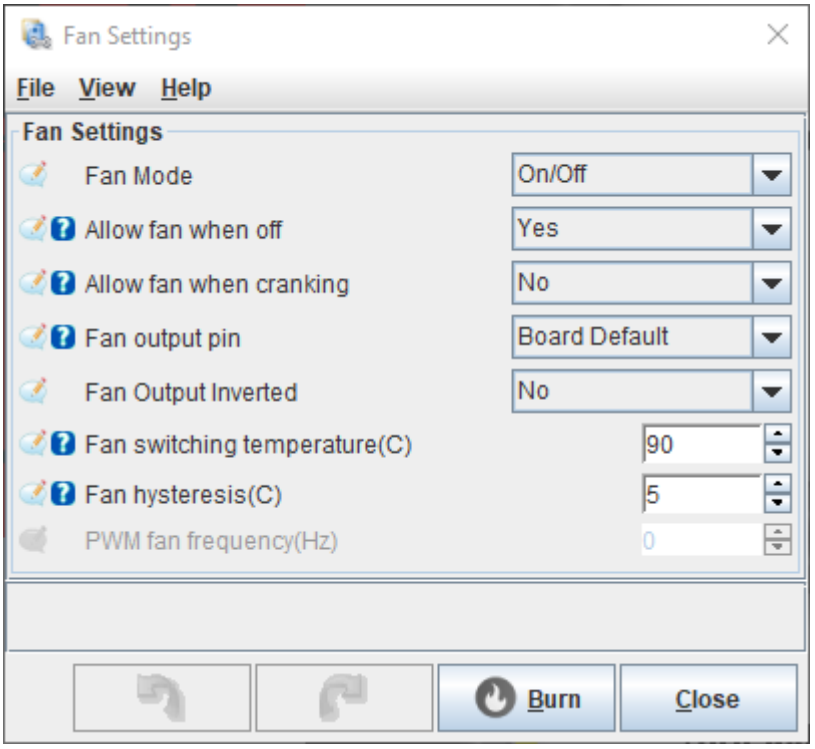



Calibrate Thermistor Tables.
Help
Calibrate Thermistor Tables.
Sensor Table
Coolant Temperature Sensor
Table Input Solution
3 Point Therm Generator
Thermistor Measurements
Common Sensor Values
Select a Common Sensor
Bias Resistor Value (Ohms)
2490
Fahrenheit
Celsius
Temperature(°C)
Resistance (Ohms)
0
5750
50
850
100
200
Select settings, click
"Write to Controller"
Write to Controller
Close


Calibrate Thermistor Tables.
Help
Calibrate Thermistor Tables.
Sensor Table
Air Temperature Sensor
Table Input Solution
3 Point Therm Generator
Thermistor Measurements
Common Sensor Values
Select a Common Sensor
Bias Resistor Value (Ohms)
2490
Fahrenheit
Celsius
Temperature(°C)
Resistance (Ohms)
0
5500
30
1800
60
600
Select settings, click
"Write to Controller"
Write to Controller
Close

9) Electric Fan

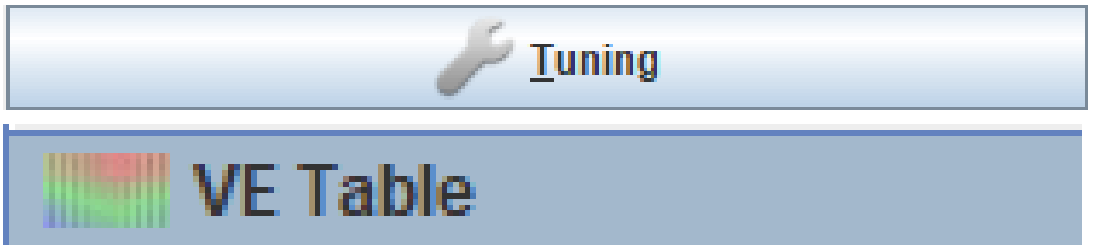
Connect the auxiliary output **FAN** on the PCB to the negative terminal of the FAN relay coil.

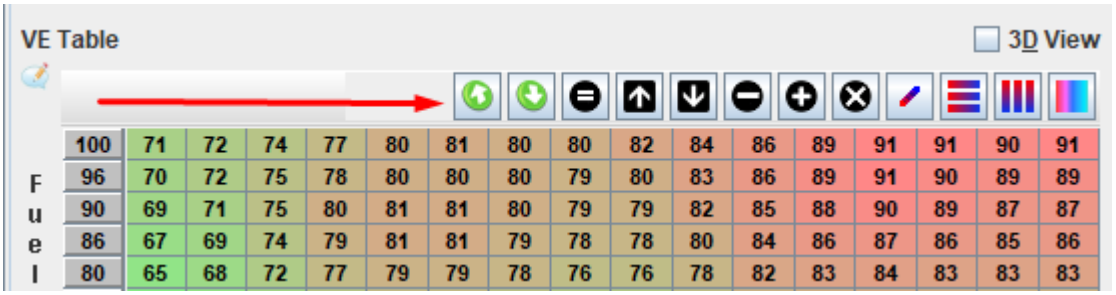


10) Base timing

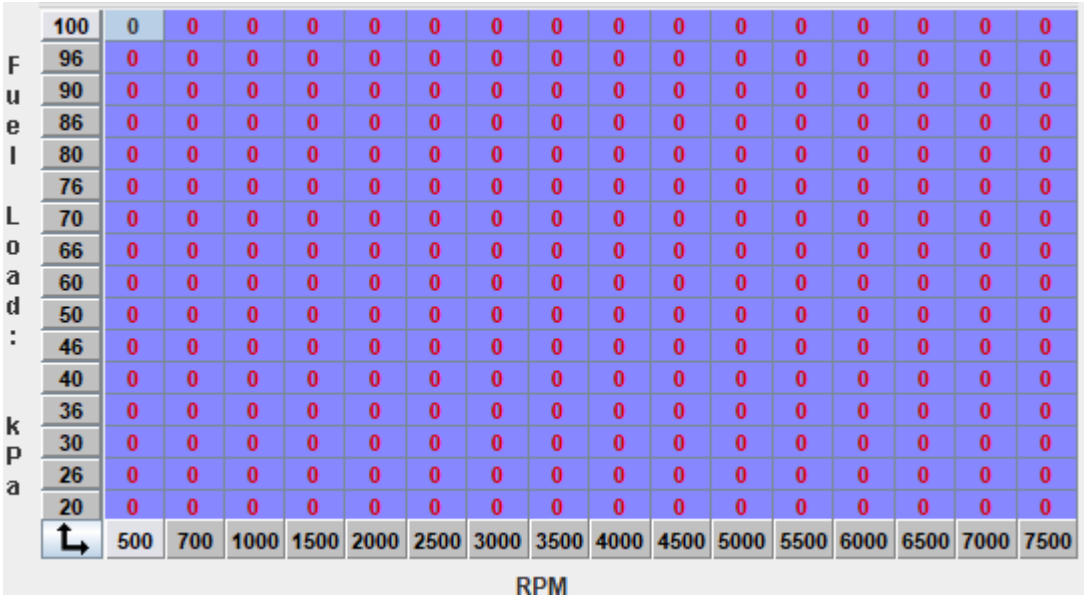
To sync the ignition timing with the engine, it's necessary to adjust with the help of a [Timing Light gun].

Export the VE Table (for later importing)

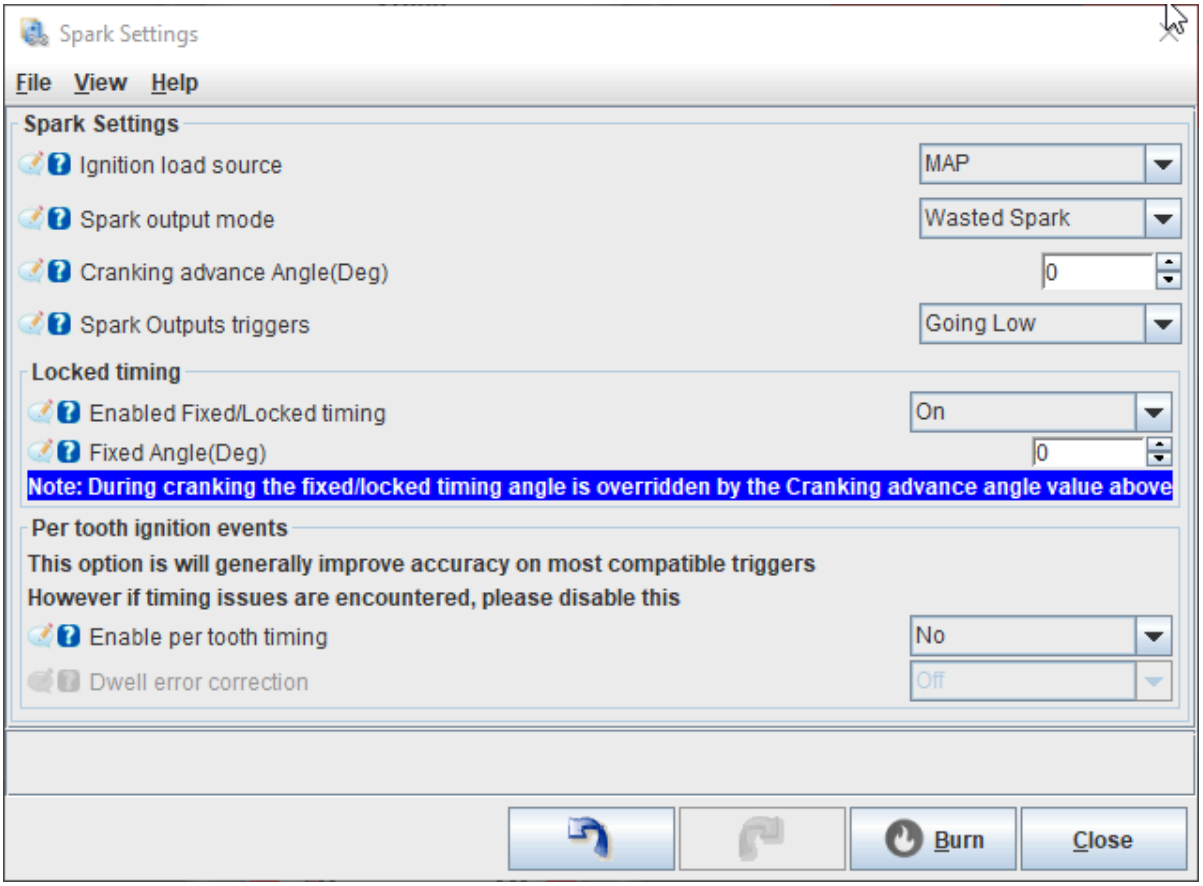




Zero all the table or disconnect the injectors, so while cranking doesn't inject fuel

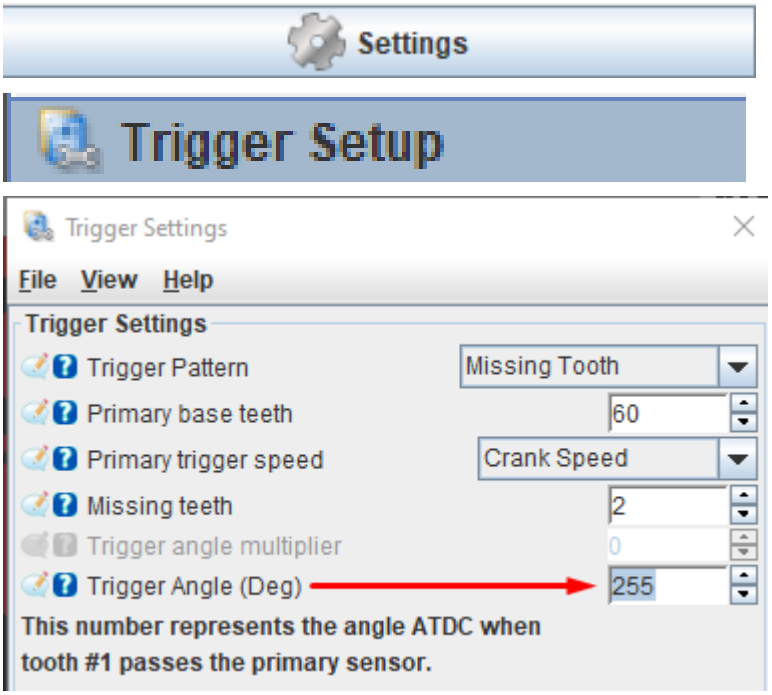


Lock the timing



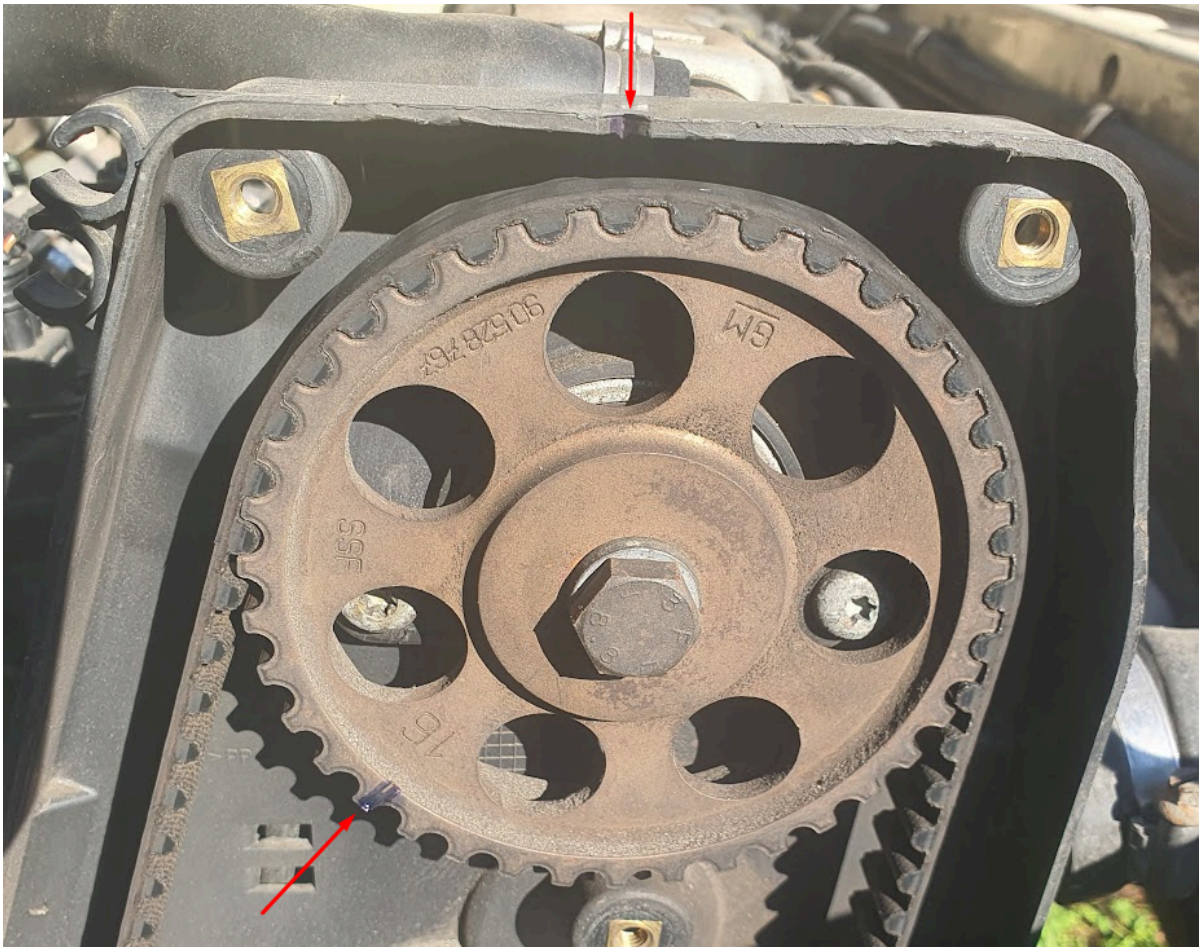
In the crank pulley, mark 0 degrees with a white highlighter.

Put the timing light clamp on the spark plug wire number 1
(**with the direction of the arrow pointing to the spark plug**)

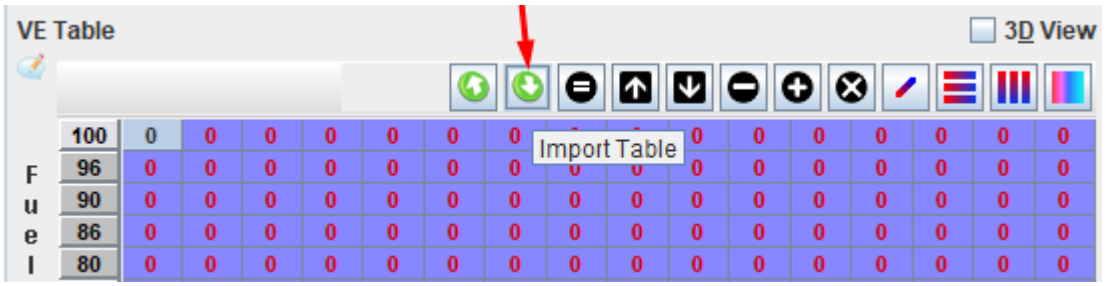


Crank the engine and see if you can see the 0-degree mark…
If you can't, adjust 30º in 30º in **trigger angle** settings until you see it.

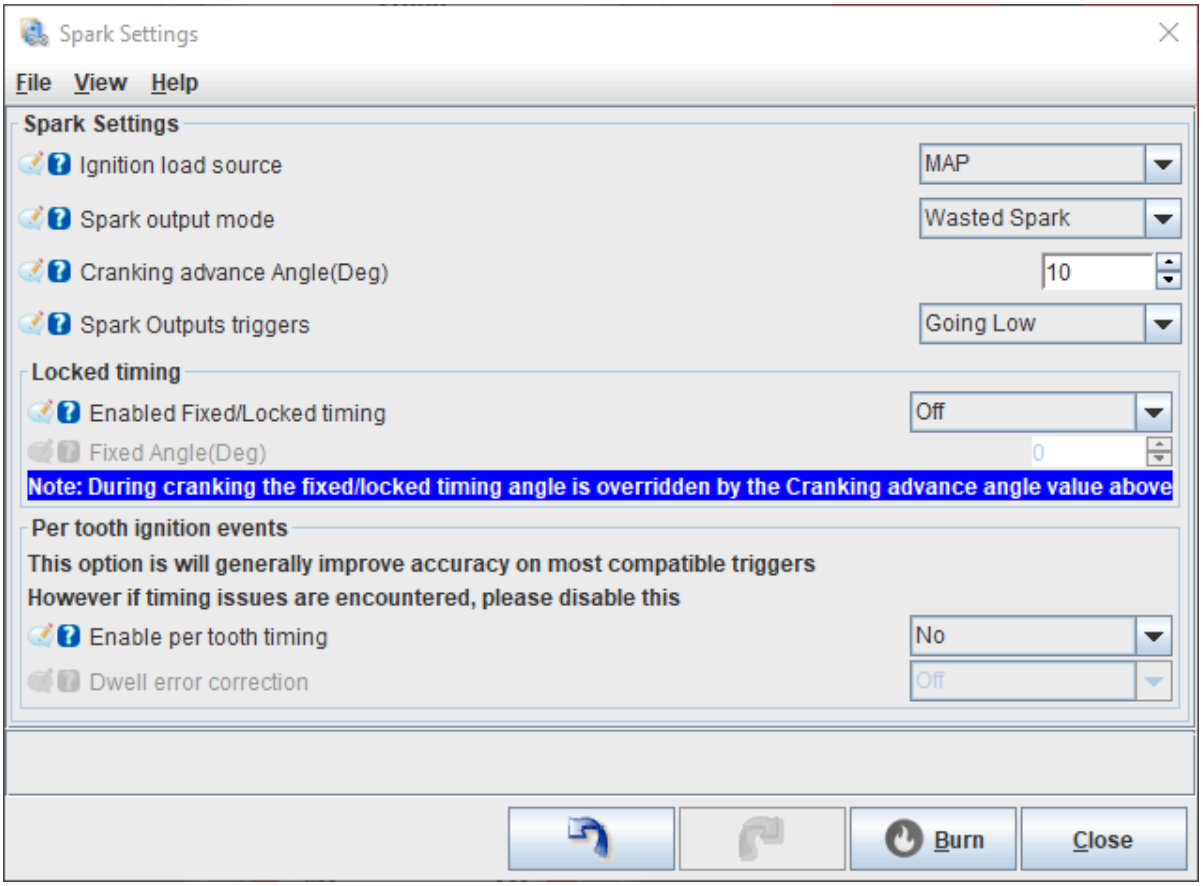
Then make fine adjustments until the crank mark lines up with the distribution cover mark.



After the base timing is synchronized, import the VE table or connect the injectors.

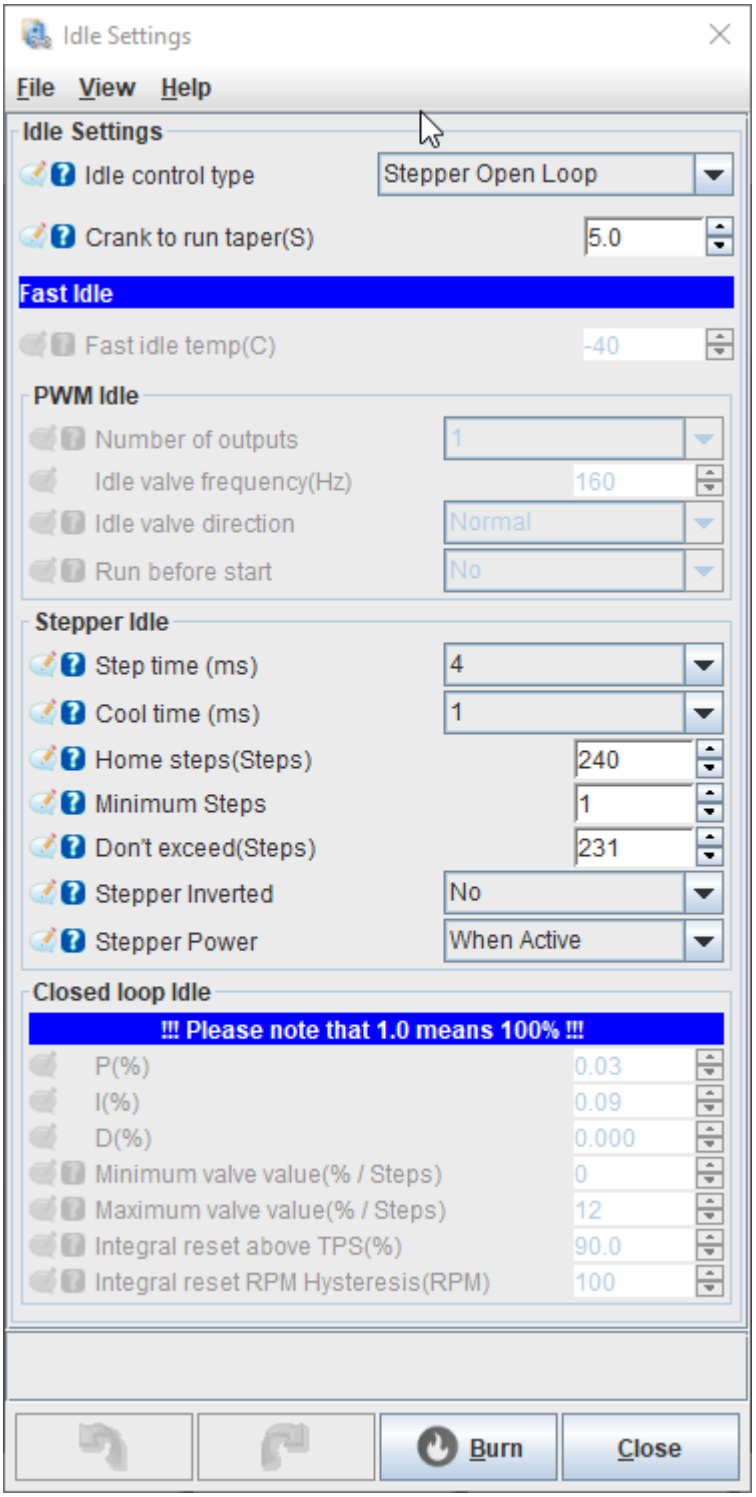


Now, unlock the timing and insert 5 to 10 degrees for cranking

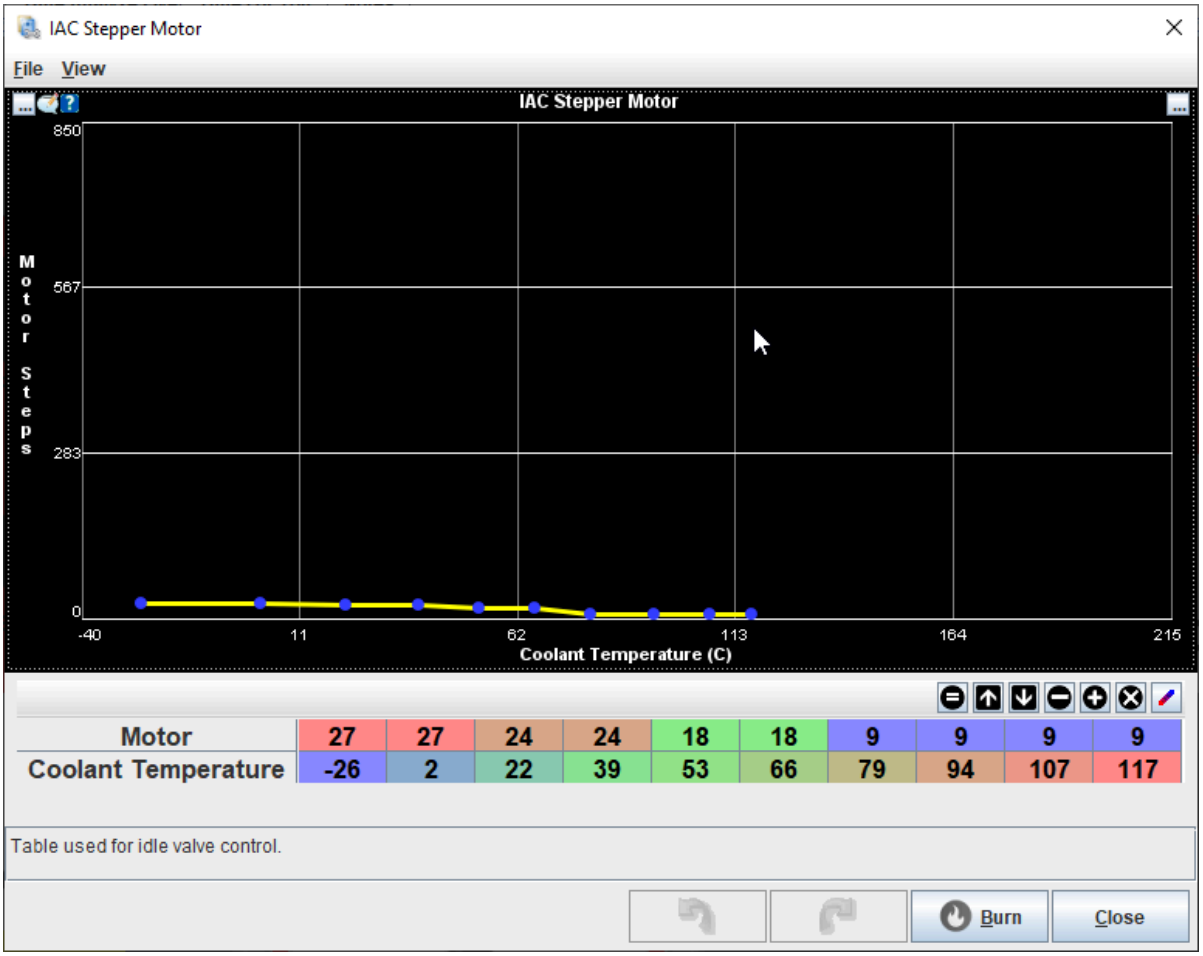


Now, start your car 🥳🥳🥳

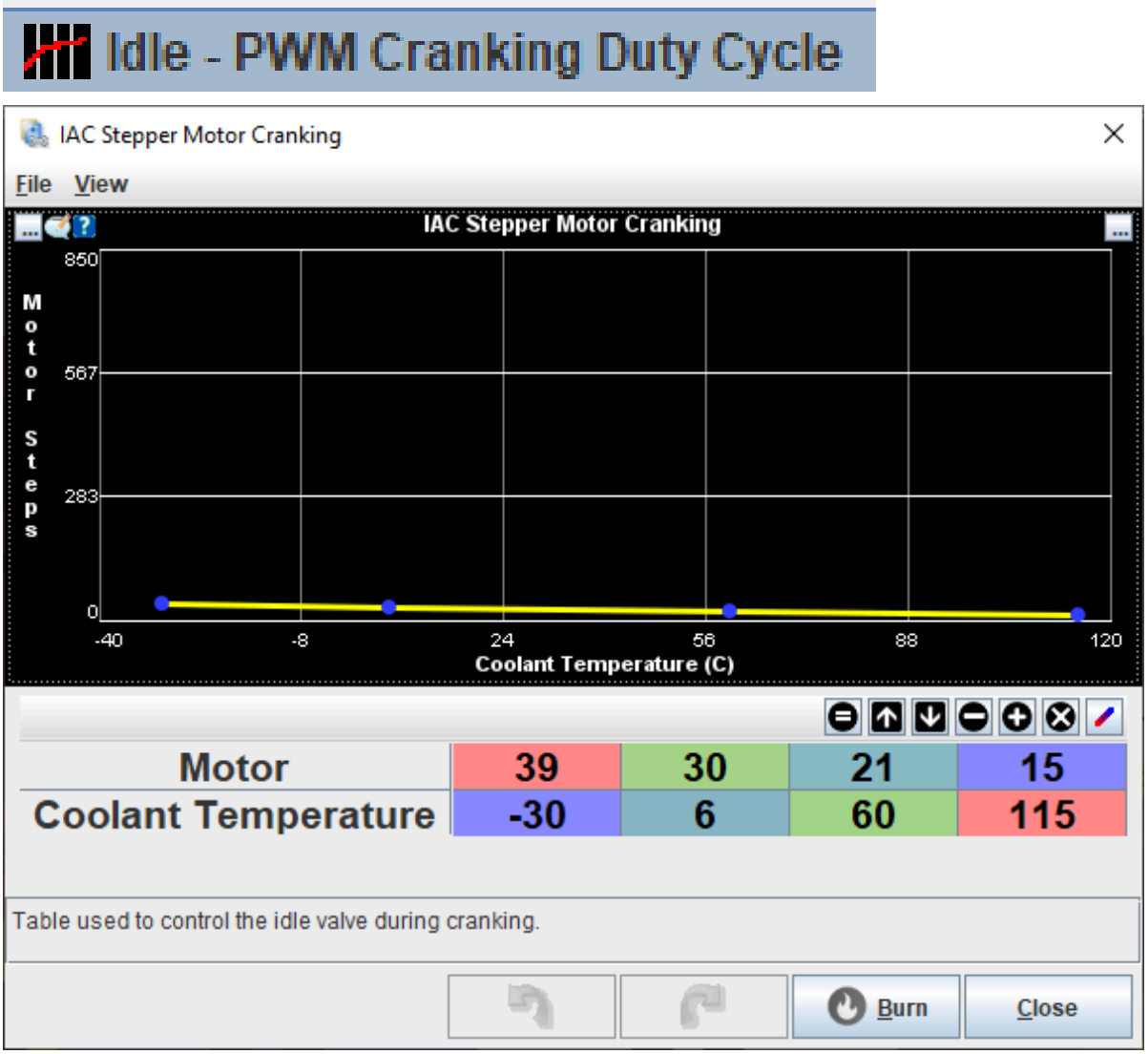
11) Idle control



Adjust the duty cycle when the engine is running



Adjust the duty cycle while cranking

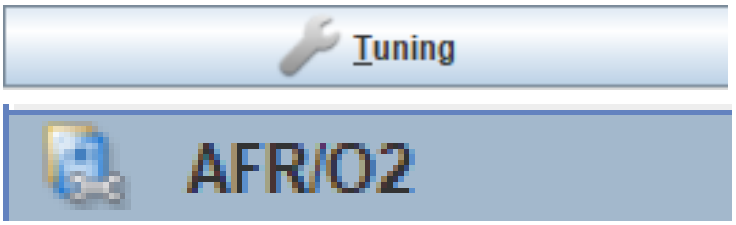


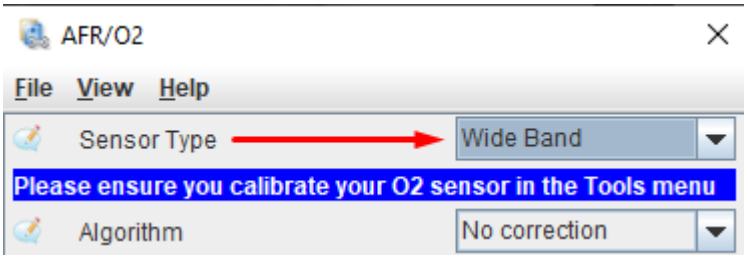
Extra features

12) Wideband

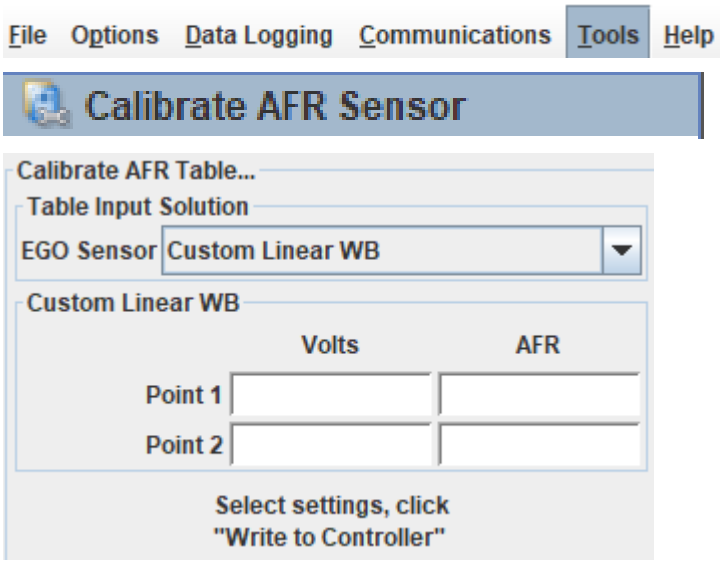
Connect the 0-5V analog wire from the wideband controller to the auxiliary input **WIDEBAND** on the PCB.

Activate the wideband:





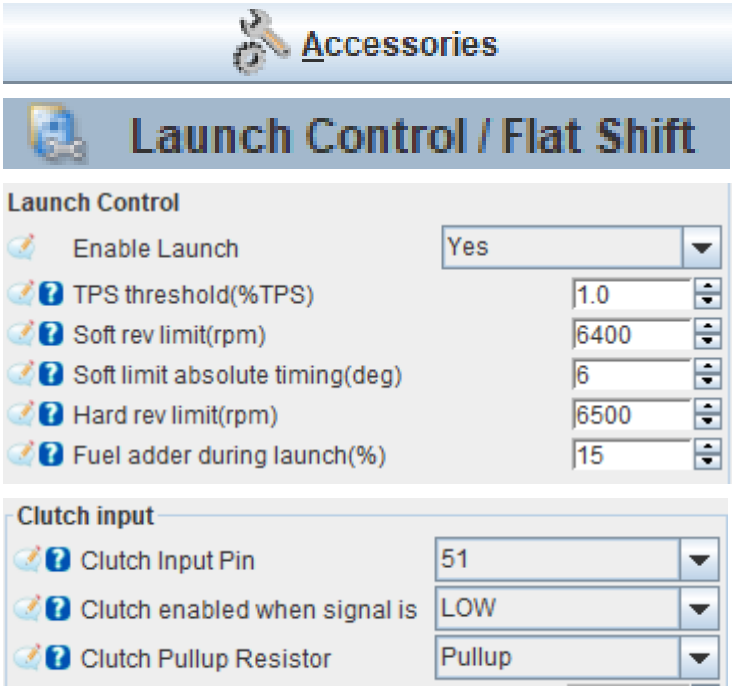
Calibrate the sensor settings:



Choose your wideband from the list.
If it's not there, choose "Custom Linear WB" and set the wideband controller values.

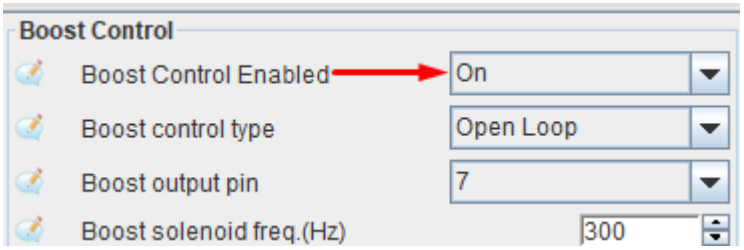
13) Launch control

Wire a switch that sends ground to the auxiliary pin **CLUTCH** on the PCB.

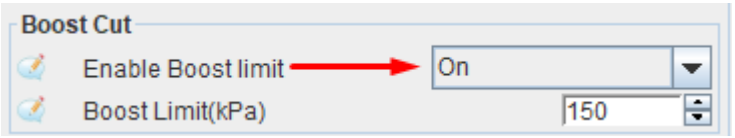


14) Boost control

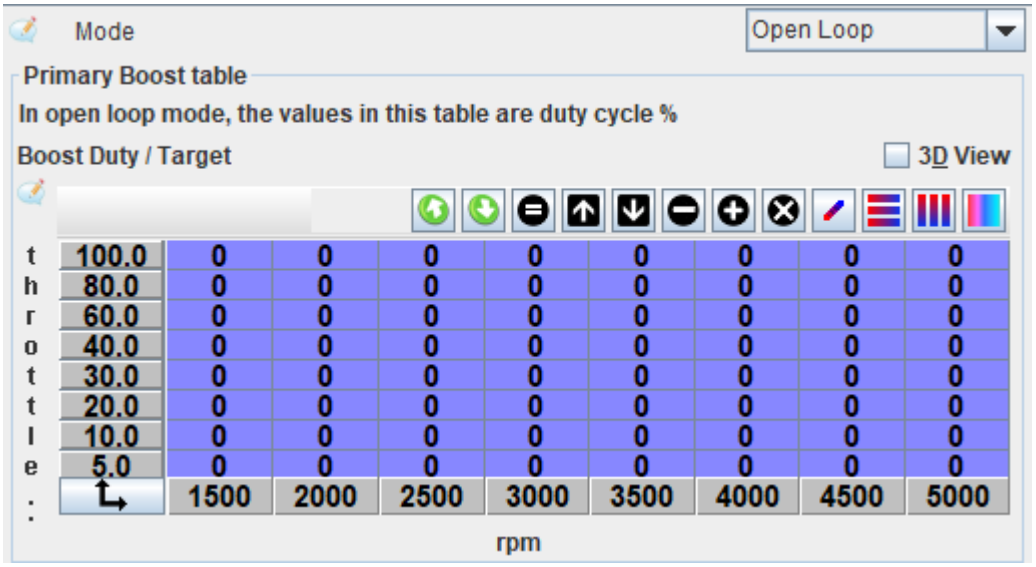
Connect the auxiliary output **BOOST** on the PCB to the negative wire of the boost controller valve.



PROTECTION: Enable boost cut to when the value is reached

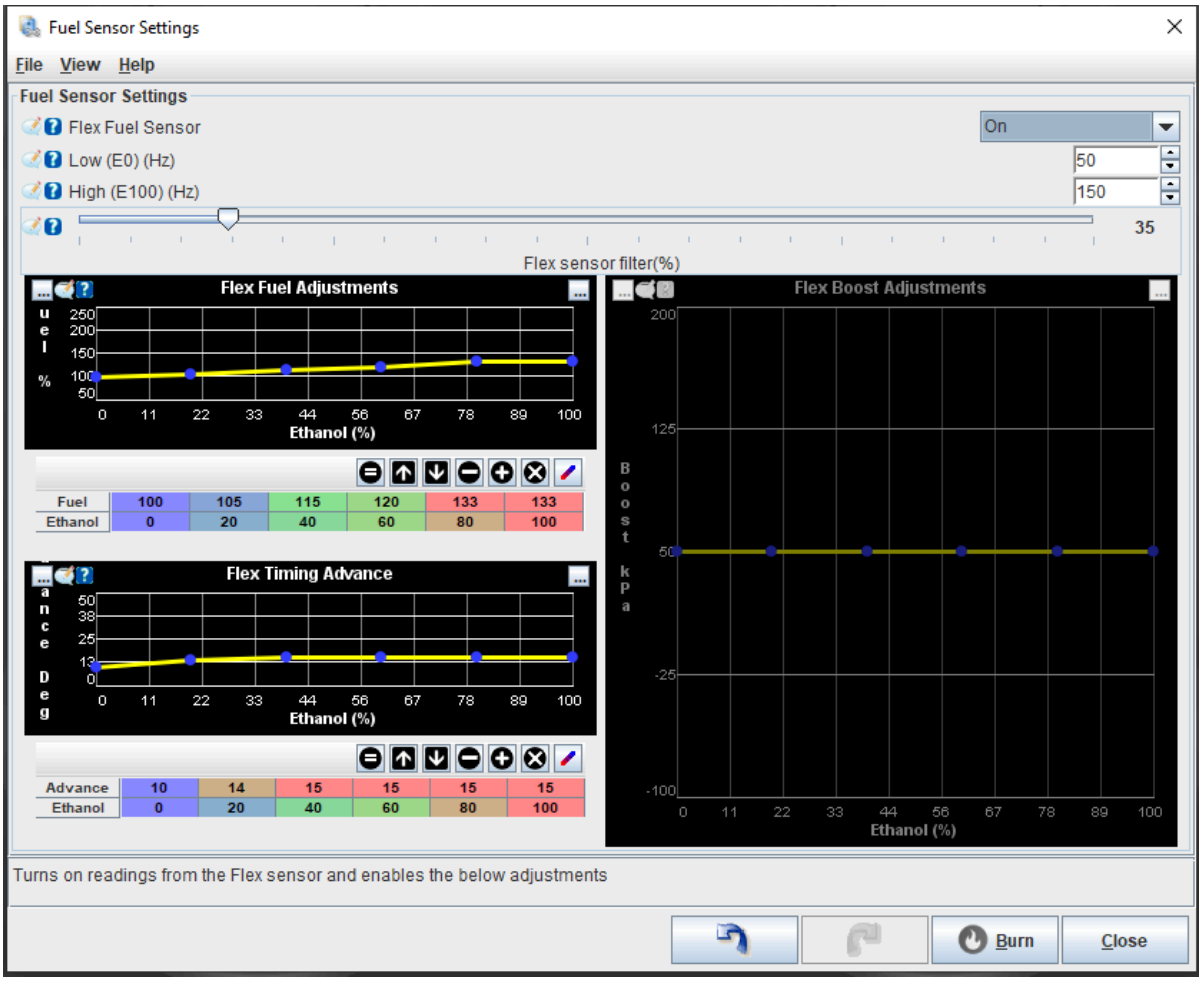


Configure the table:



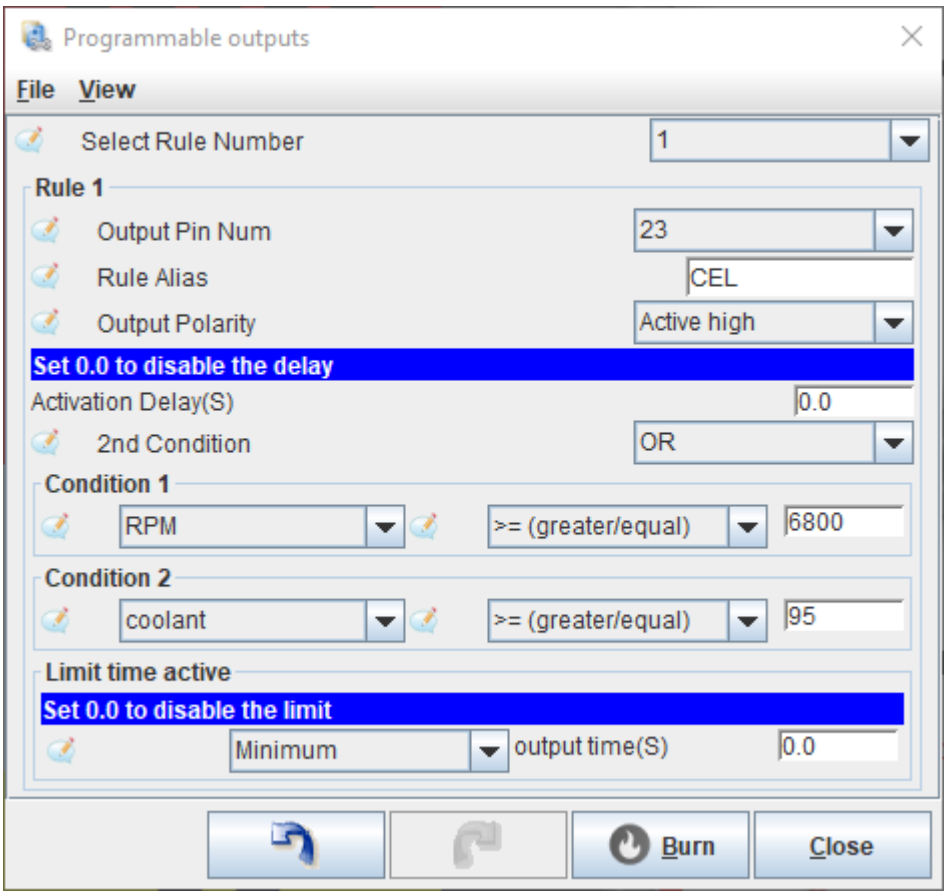
15) FLEX

Connect the flex fuel sensor signal to the auxiliary input on the PCB.



16) CEL / Shift light / Temp Light

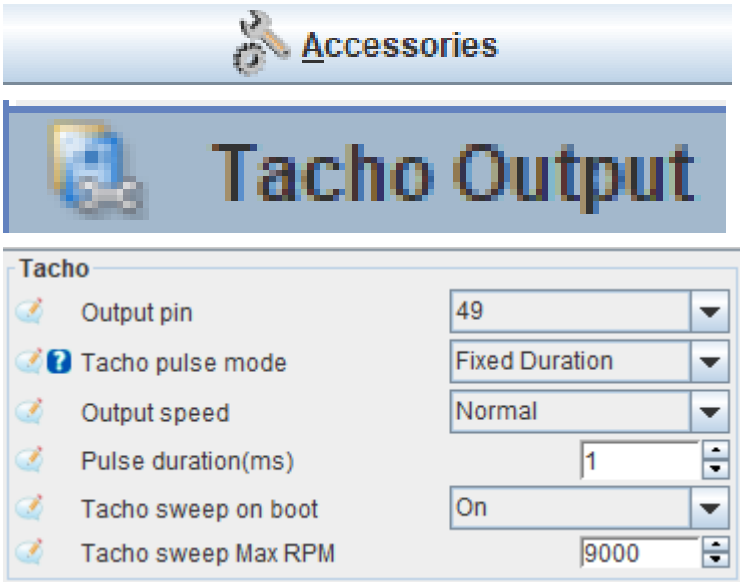
You can use the engine light as a shift light or as you like through a programmable output.



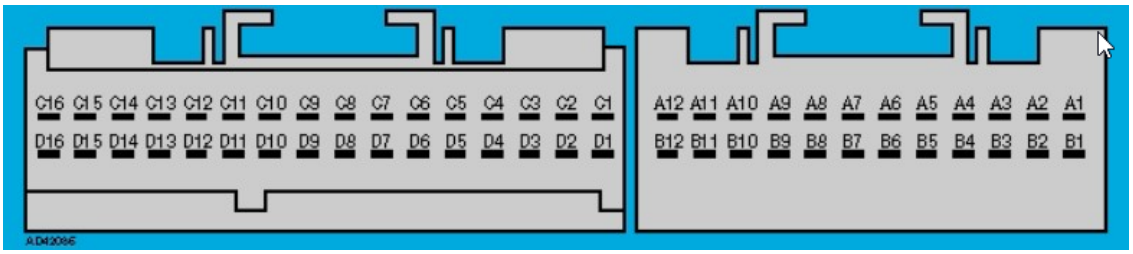
Wire the output on the PCB to the negative wire of the CEL light in the dashboard.

17) Tachometer

Connect the auxiliary output **TACH** on the PCB to the dashboard RPM input.



18) ECU Pinout



INPUTS	**ECU terminal**	**Tunerstudio pin**
VR1+	A2	x
Manifold pressure	A7	A3
Throttle position	A8	A2
VR1-	B3	x
Coolant temperature	B12	A1
Intake temperature	D3	A0

OUTPUTS	**ECU terminal**	**Tunerstudio pin**
Fuel pump / Injectors relay	B6	D45
CEL light	C1	D23
Ignition 2	C3	D38
Injectors 1+2	C10	D8
Injectors 3+4	C11	D9
Ignition 1	D10	D40