



**'15+ Mopar
#GWDC-1521
Gate-Way
by RACE LLC**

Installation Instructions

The installation of the Gate-way can be done by any experienced Technician.

The Gate-Way and Holley ECU must be programmed by an experienced Holley EFI tuner.

Before you install the Gate-Way, you should know:

- You will lose the function of the factory cruise control and traction control.
- The camshaft must be locked on vehicles using the Holley Dominator ECU

Program the Gate-Way

Download Gate-Way software off of RACE's website: **Raceproductsusa.com**

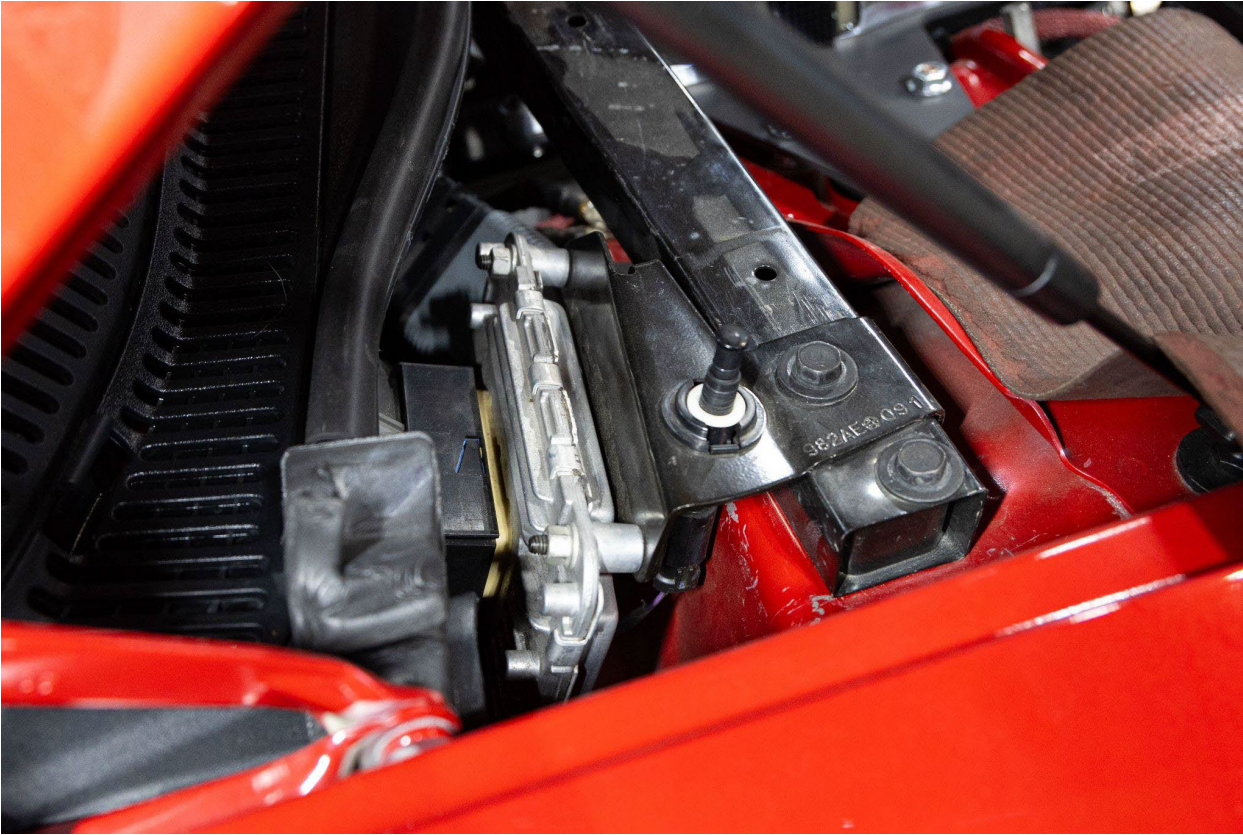
Use the mini-USB to micro-USB harness (included) to connect and program the Gate-Way. The Gate-Way will power up off of your laptop so you can program the Gate-Way before it is installed into your car.

To program, you will need to enter the:

1. VIN
2. Year, make model:
3. Type of transmission: Choose Manual or Automatic

Remove the factory ECU

1. First, disconnect the positive battery cable.



-The Gate-Way will be put in the same spot as the factory ECU.

2. Start by removing the cowl cover on the passenger side, then remove the hood ajar sensor.

3. Unbolt the ECU from the bracket and remove the bracket, then pull up the ECU and unplug it.

-This area will have to stay clear for you to drill the hole for the new Gate-Way harness to run through.

Installing the Gate-Way Harness

1. First, remove the passenger side front wheel. Next remove the clips for the wheel liner and either completely remove it or bend it out of the way. At this point the factory ECU should be out of the car.



-You will then need to cut a hole (in the triangle shaped indent located behind the fender badge) for the Gate-Way harness to pass through to the Gate-Way in the factory ECU location.

We recommend using a right angle drill with a hole saw, but the fender can also be removed for easier access.

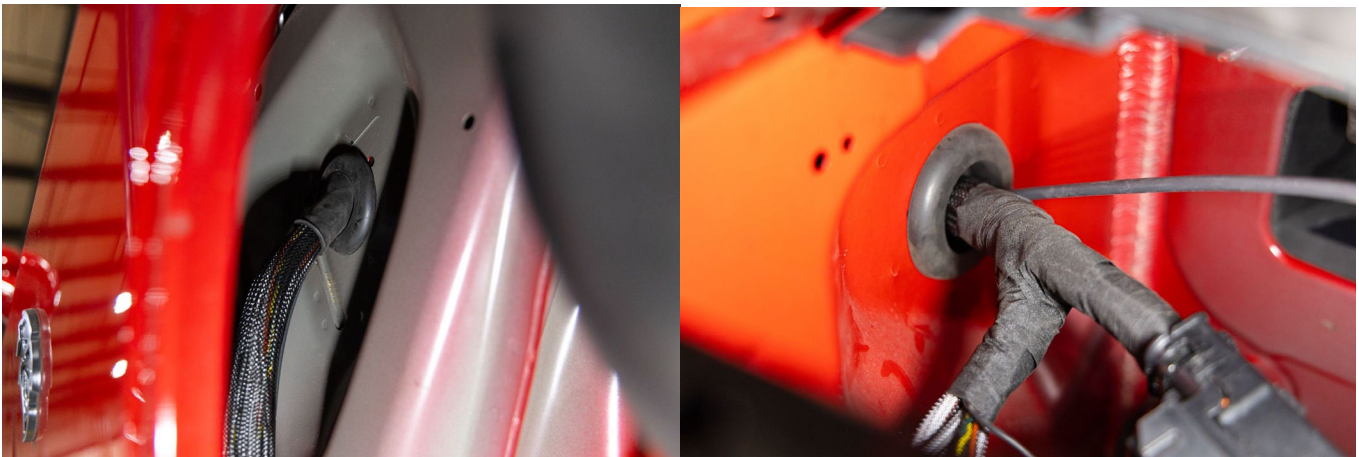
We recommend using a 2 ¼ / 57mm shallow carbide tip hole saw



2. Start by drilling a small pilot hole in the center/top of the indent.



3. Once the hole is drilled, you can then run the Gate-Way harness up into the cowl from the inner fender.

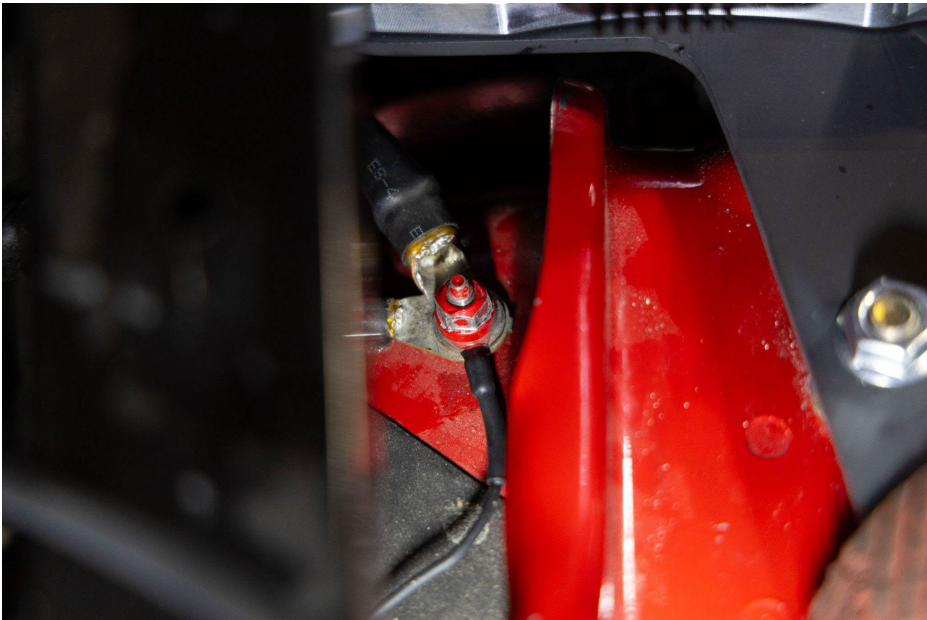


4. Now run the power harness under the car from the Holley ECU to the battery in the rear of the vehicle. There is a grommet in the trunk floor that it can be routed through.



Note If using the Holley power harness (558-308), it will have to be extended about 6ft. We would also recommend adding a fuse to the harness near the battery. Custom power harnesses are available.

5. The Gate-Way harness has an added ground that needs to be attached to the existing ground pole near the cowl on the strut tower



Wideband

You will need to either replace one of the factory O2 sensors with the Holley O2, or weld in a bung for it.

-Users with the Dominator ECU will need Holley 554-100 or 554-101 O2 sensor. You can also add a secondary O2 and that will require the Holley 558-401 Auxiliary Harness and another O2 sensor.

-Terminator X will require the Holley 554-155 sensor and 558-463 adapter harness.

Do not plug in the O2 sensor till it is properly programmed in Holley



Coil Drivers/Smart Coils

-Both Dominator and Terminator X equipped vehicles will need Holley 554-122 8 channel coil drivers.

-Dominator equipped cars looking to use Smart Coils will need Holley 556-163 and 558-312.

How to mount the Gate-Way and ECU

The Holley ECU is going to be mounted inside the wheel well behind the fender.



1. Use the optional bracket as a template to the drill holes to mount it.
2. Bolt the Holley ECU into the optional bracket. Then plug in the Holley ECU with the connectors facing rearward and install the ECU and bracket onto the car. You can use either self tapers or riv-nuts to hold it down.



3. Then plug in the Gate-Way harness and factory connectors into the Gate-Way, then bolt the Gate-Way onto the factory ECU bracket.



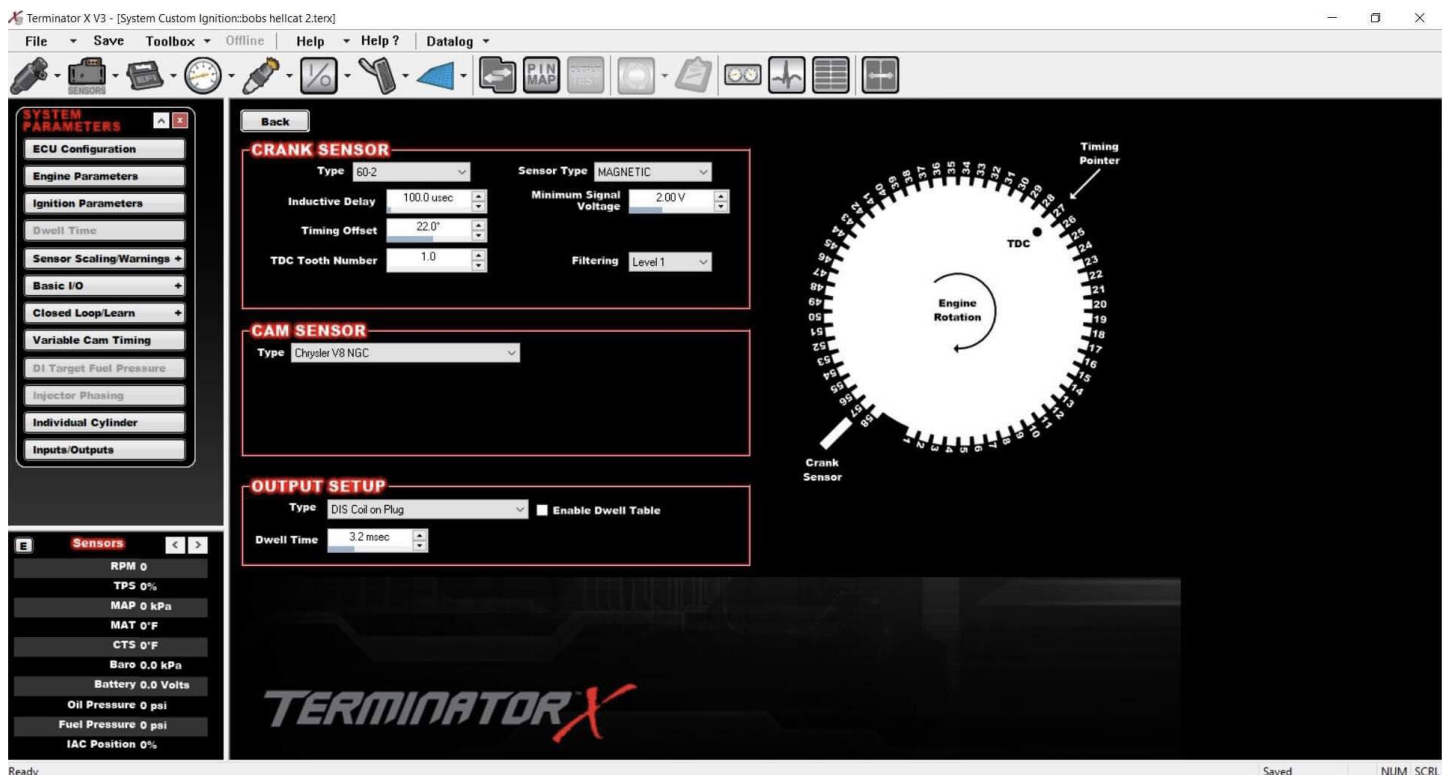
Tuning the factory 8HP90 transmission

If you wish to change the transmission tune in your 8HP90 transmission, you will need an aftermarket tuner to flash the onboard transmission ECU.

Holley EFI setup

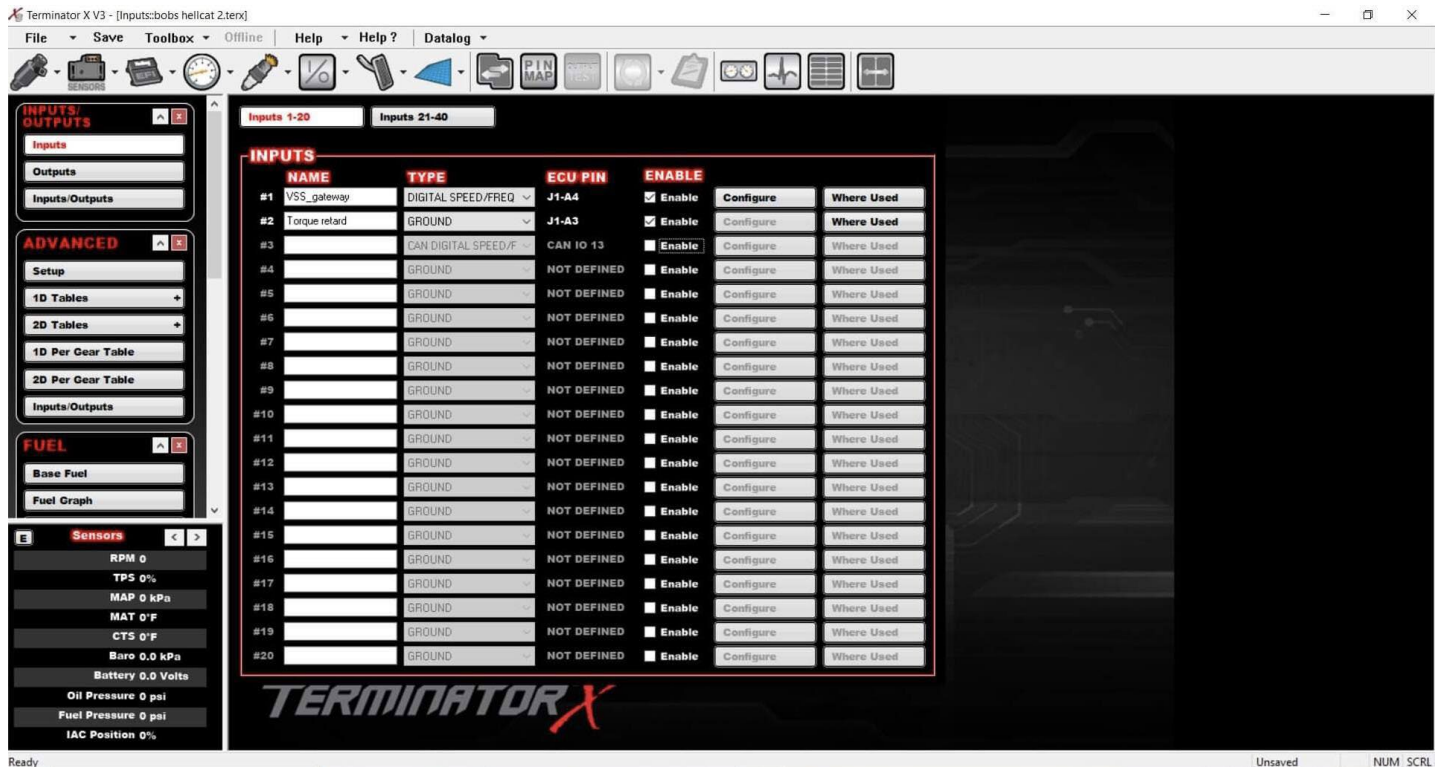
Below are the custom tables that make this work, you must have a good understanding of Holley EFI. If none of this makes sense to you, you need the help from a qualified Holley EFI tuner

In order to use the factory crank sensor it requires you to do a custom cam and crank configuration as shown below.



Next you will have to do a series of custom inputs and outputs to make the OEM features work.

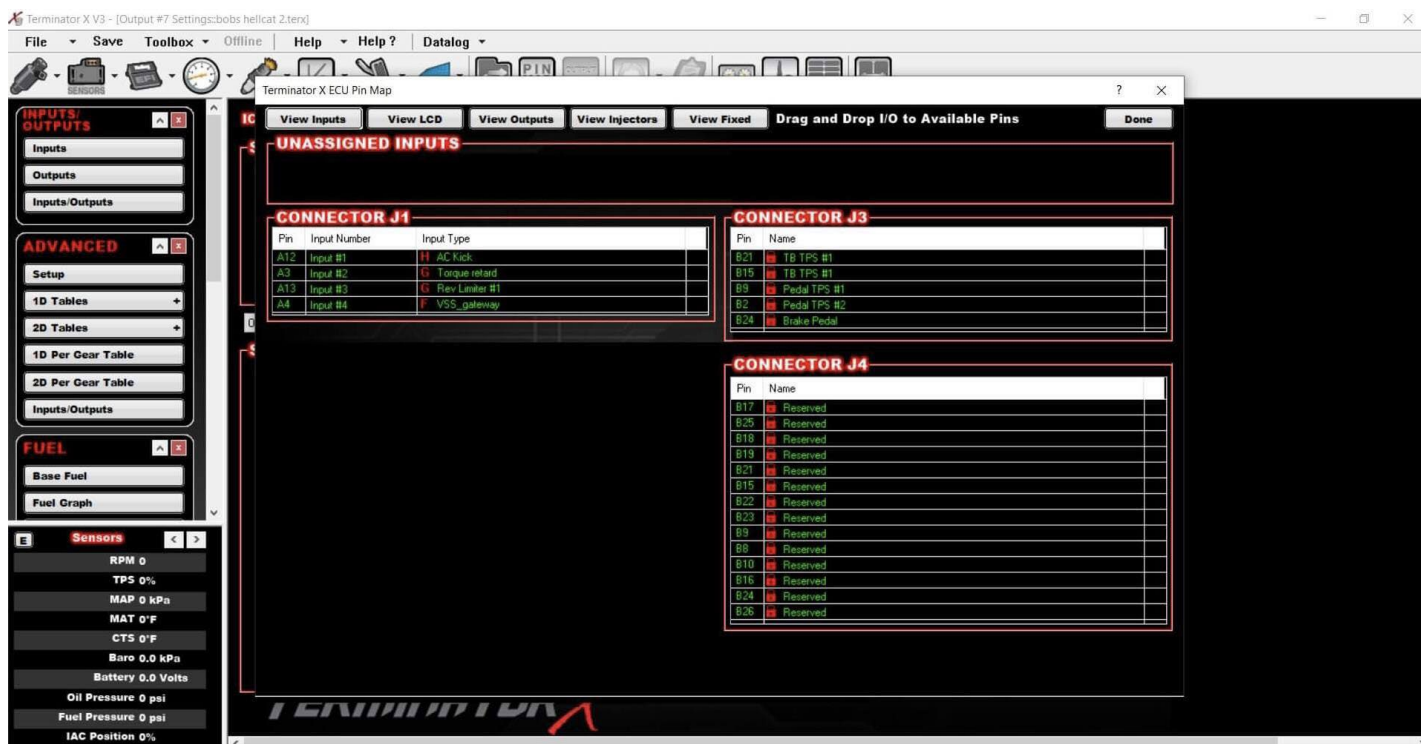
It is important that the I/O's are numbered just like the pictures below.



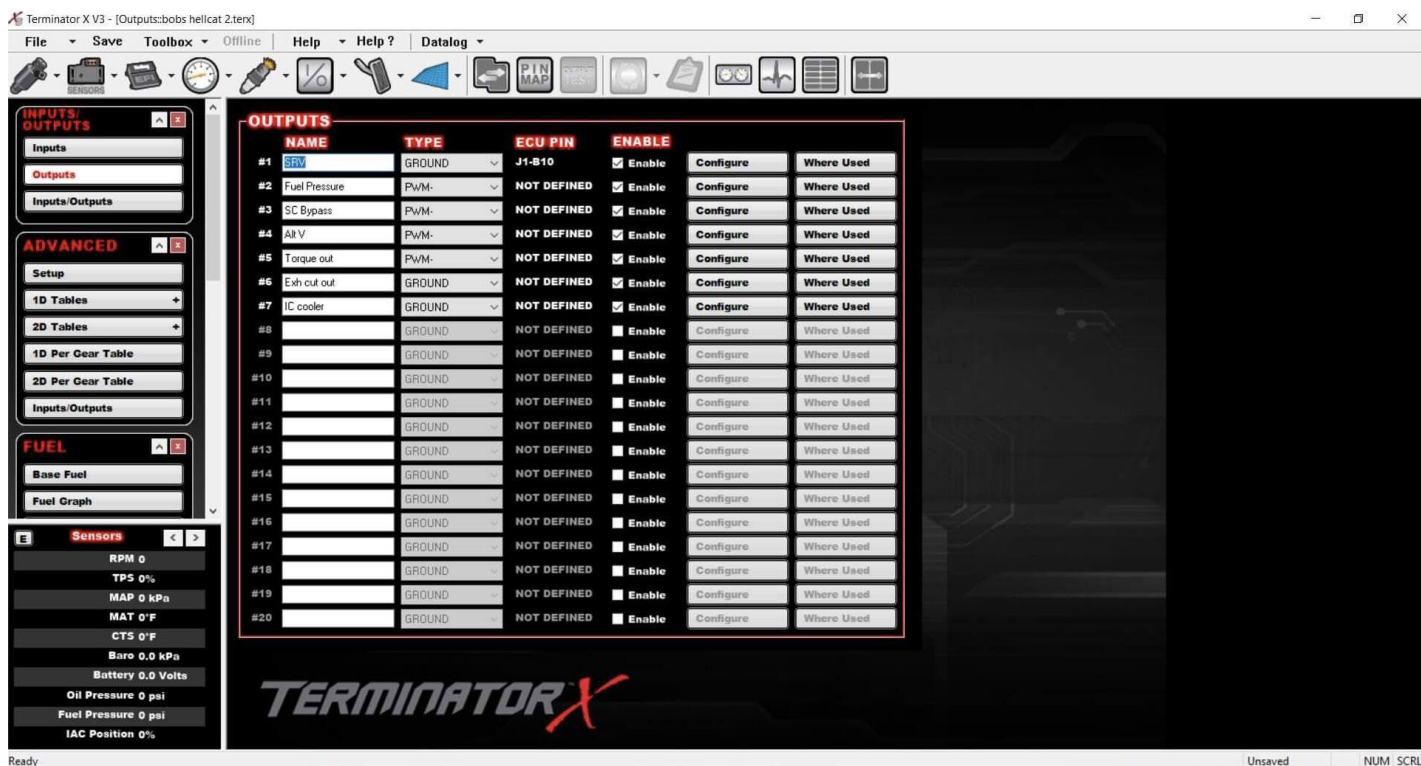
Make sure to add your ground input as shown above. It is shown as “Torque Retard”



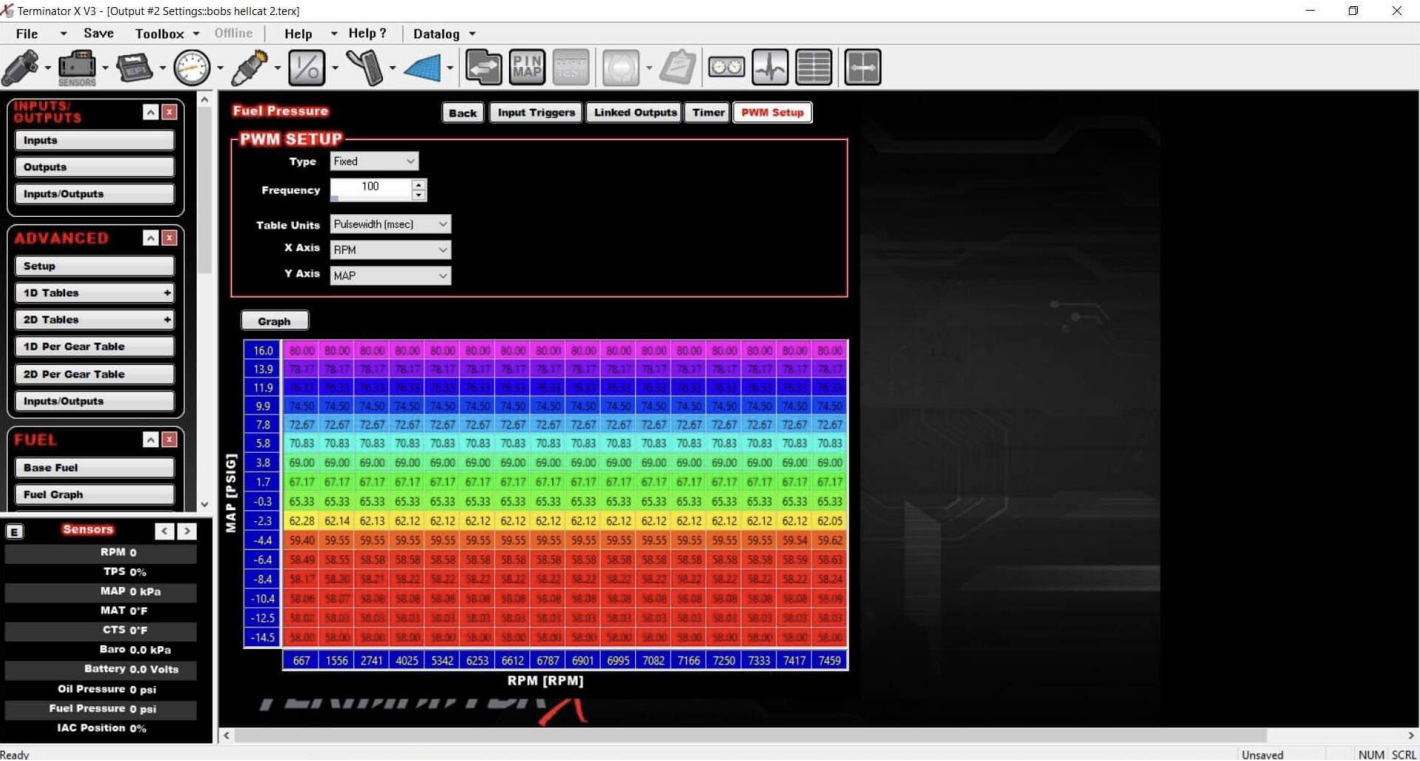
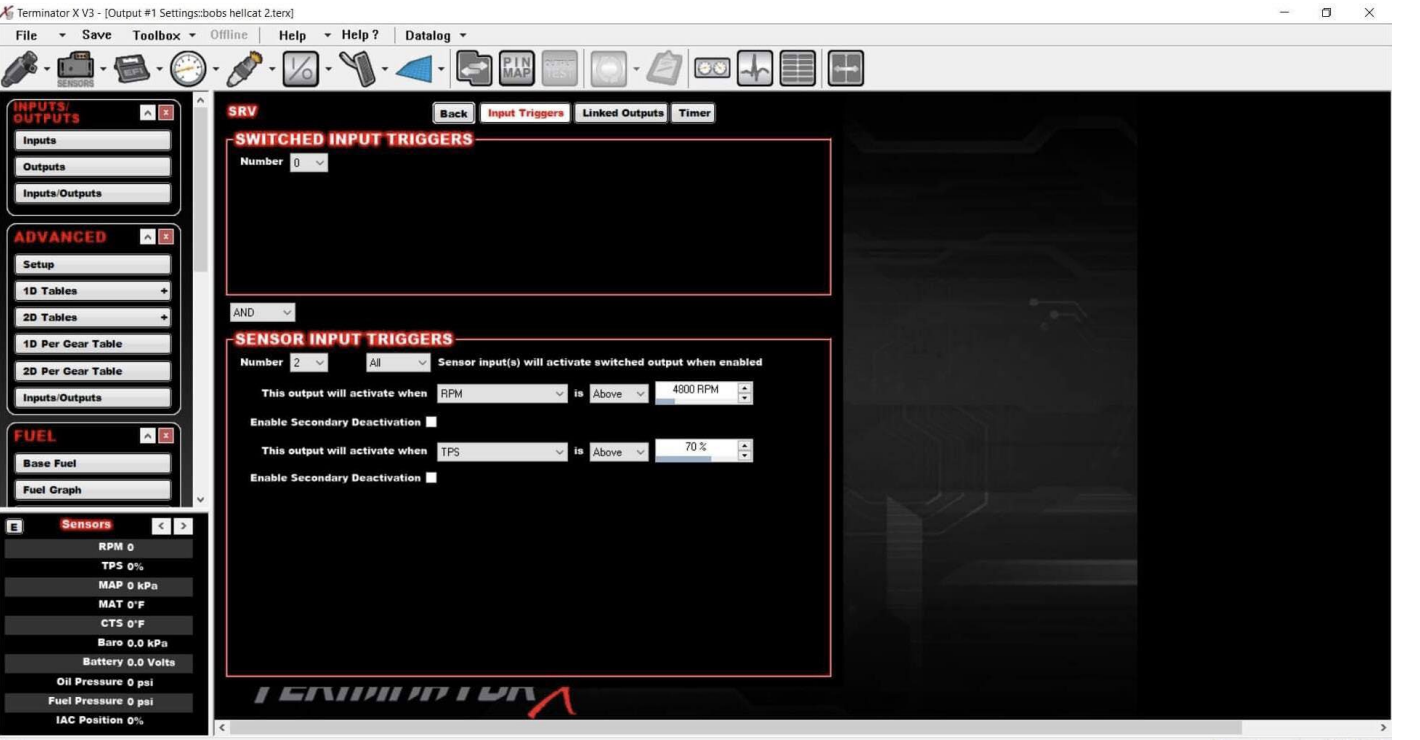
For vehicle speed input use the configuration above.

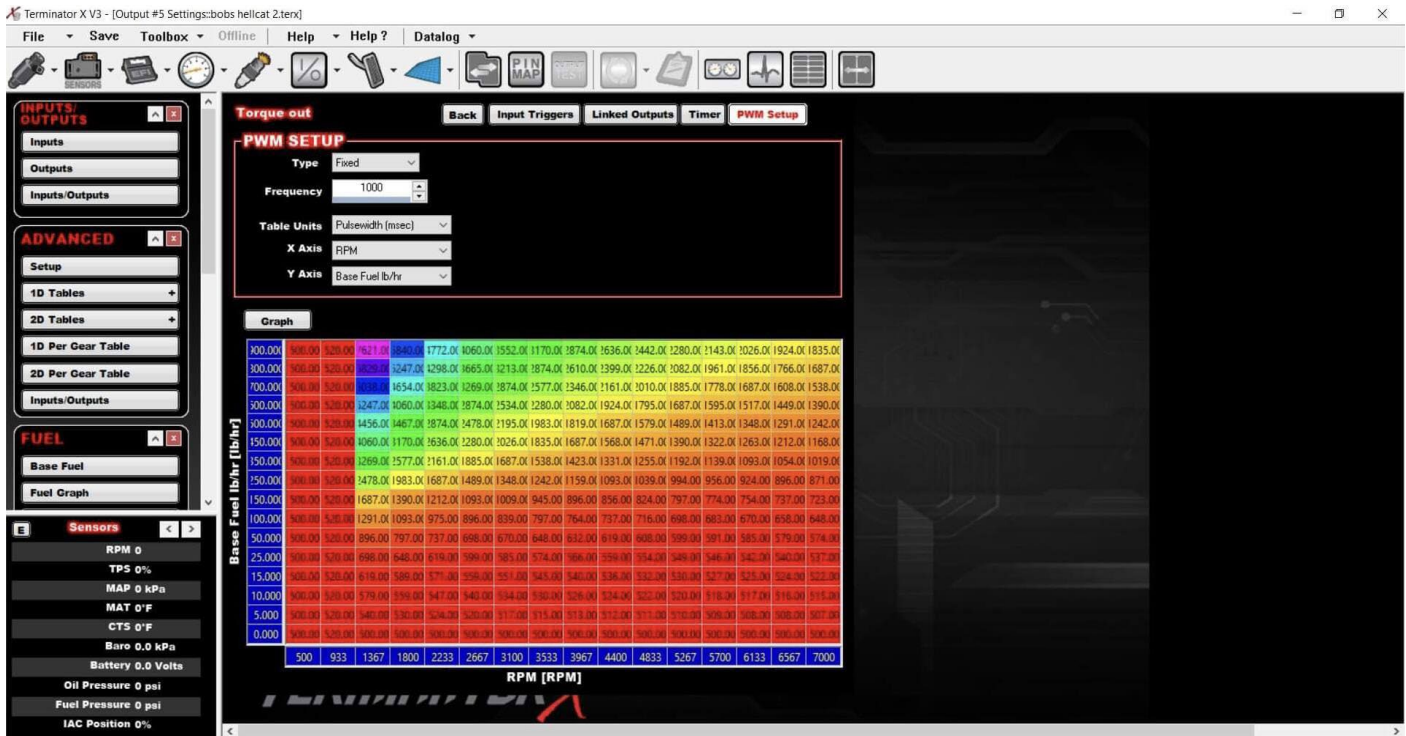


Refer to above picture for the pin map of the inputs.

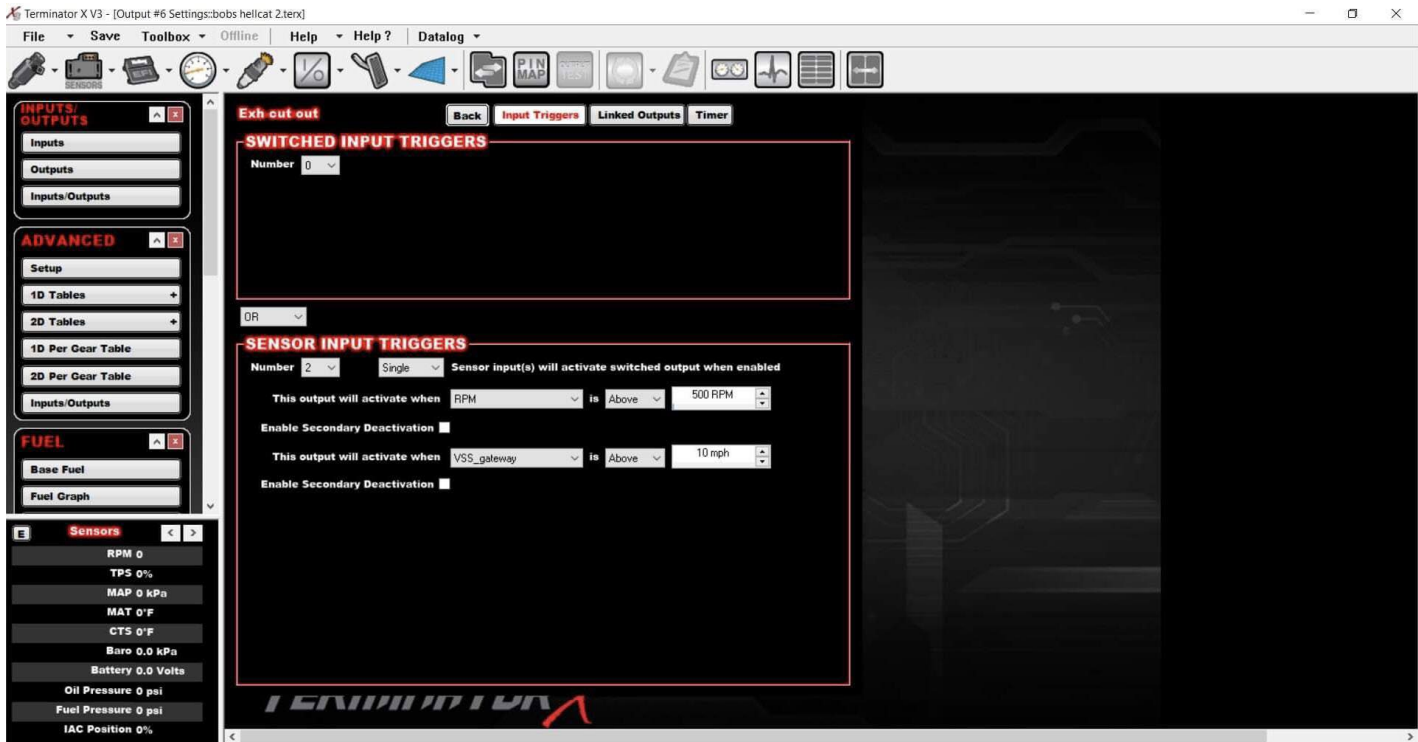


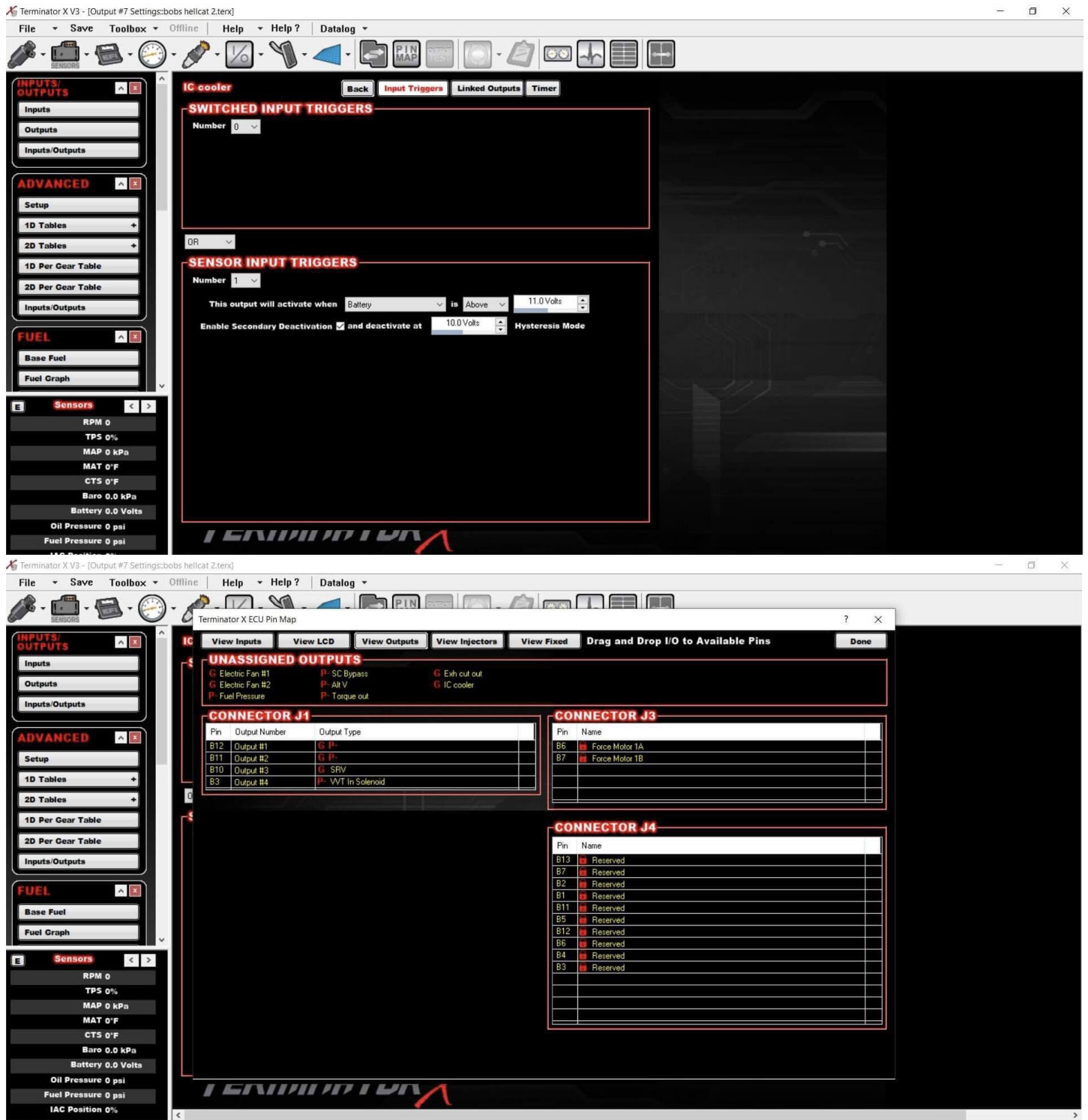
Refer to the following pictures for the custom outputs.





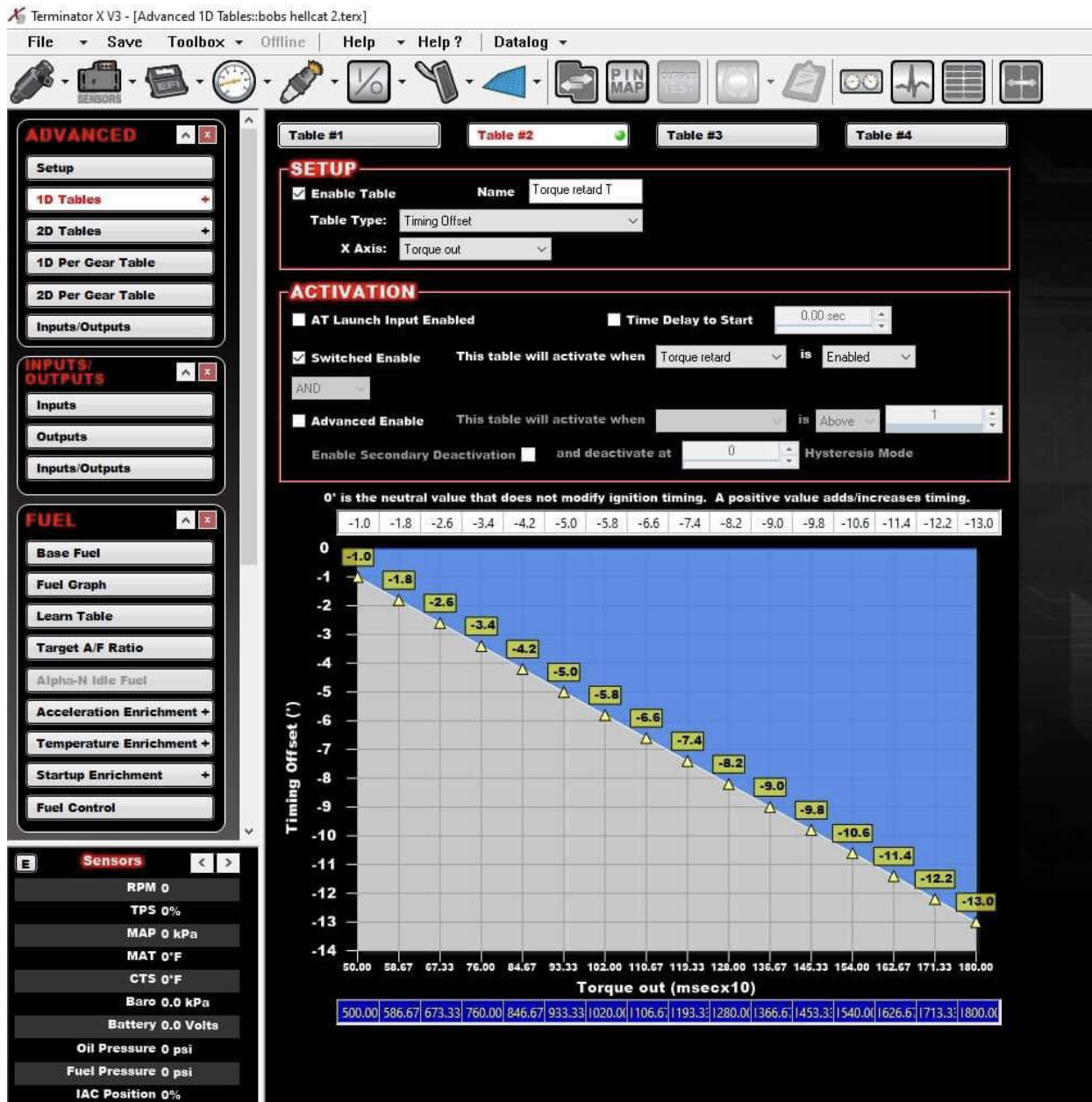
This table is the torque table that the TCM uses for torque calculations. The numbers represent newton meters, (0=-500NM, 500=0NM, 1000=500NM etc)





The Output pin map should look like above.

-Note The unpinned outputs must stay unpinned.



This advanced table needs to be used for torque management for transmission shifts.