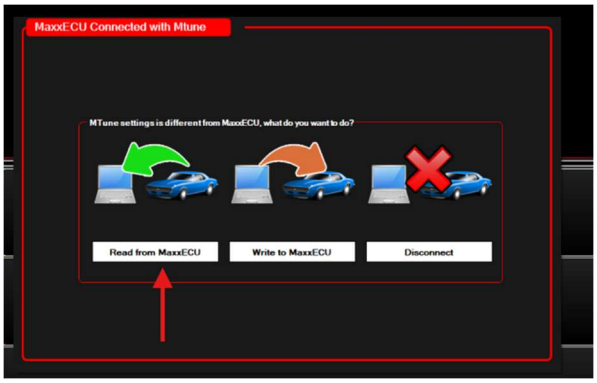
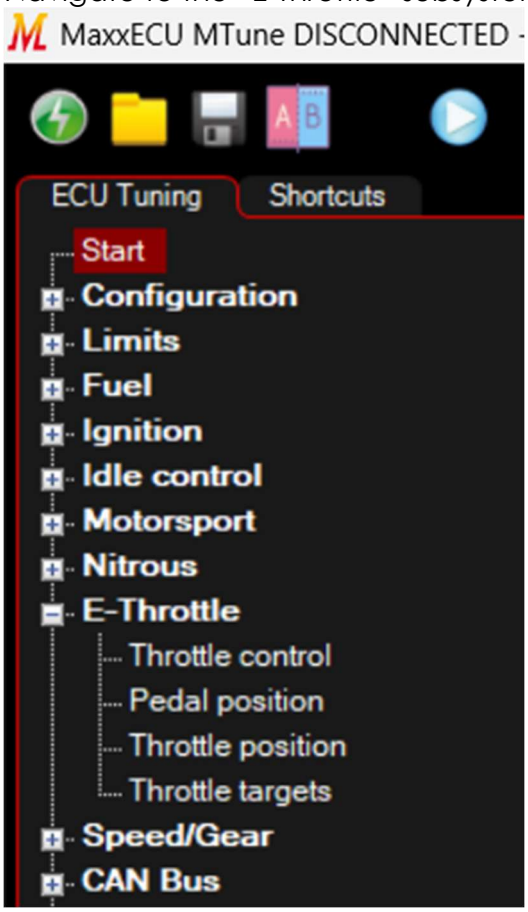
KTM 890 ENGINE PACKAGE INSTRUCTIONS

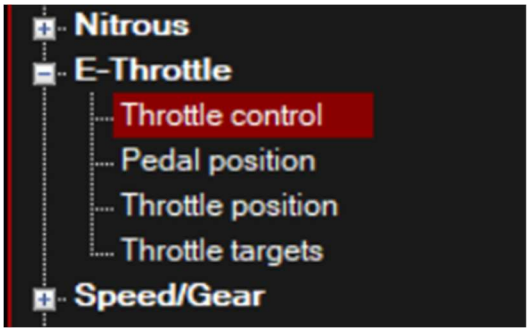
1. Remove seat from motorcycle along with the battery hold down tray.
2. Using a cutoff wheel remove the bolt boss in the middle of the package tray area where the ecu will sit.
3. Attach the engine harness too the ECU rotating the bail-clip to secure it in place.
4. Place the ecu in the package tray with the engine harness leading towards the left side of the bike when looking from behind.
5. Route the main engine portion of the harness down under the FBW throttle body motor, then up, over and across the fuel rail on the leading edge.
6. Begin connecting all connectors too their labeled positions. Take care to route wires away from possible pinch points and high heat areas like exhaust pipes.
7. Install the supplied Wide Band Oxygen sensor into the exhaust, if only running a single sensor, it is preferred to install the primary Lambda into the left exhaust runner. If two sensors will be used, the second sensor will connect to the CAN WBO2 module which then plugs into CAN WB plug on harness. Please contact JB-Tech Racing to enable the secondary Wide Band at no cost.
8. The secondary portion of the harness contains all the handlebar control inputs and accessory inputs. Route this up the main backbone of the bike and make necessary connections to at least the ignition switch and the grip position sensor.
9. Typically customers mount the starter solenoid on the rear engine mount in the center of the bike. Once this is secured the Starter Solenoid wires can be connected.
10. Terminals have been included in the kit in the event starter power wires or battery power wires need to be modified for proper length.
11. Attach the engine harness leg labeled "GROUND" to one of the starter mounting bolts. You will also need to run a sufficient ground, typically 8awg from the starter mount too the battery ground lug.
12. Install the charging system sub harness by connecting the 3 pin connector too the stator plug and the 5 wire connector too the regulator.
13. Connect the red wire of the charging sub harness too battery positive and the black wire to battery negative along with the main batter cables.
14. We are now ready to connect too the ECU for calibration of the throttle system, gear position sensor and if used, the no-lift shift system.
15. Visit www.maxxecu.com/downloads and download the latest Mtune software.
16. Once downloaded, please install the software, following all the prompted instructions.
17. Connect the ECU to the Laptop with a USB Cable (Sport uses Type B to Type A cable)
18. Open MTune software which should now be on the desktop.
19. Turn on ignition to bike- should hear fuel pump prime.
20. You will most likely have a dialog pop up like below, please click READ FROM ECU!

a. 

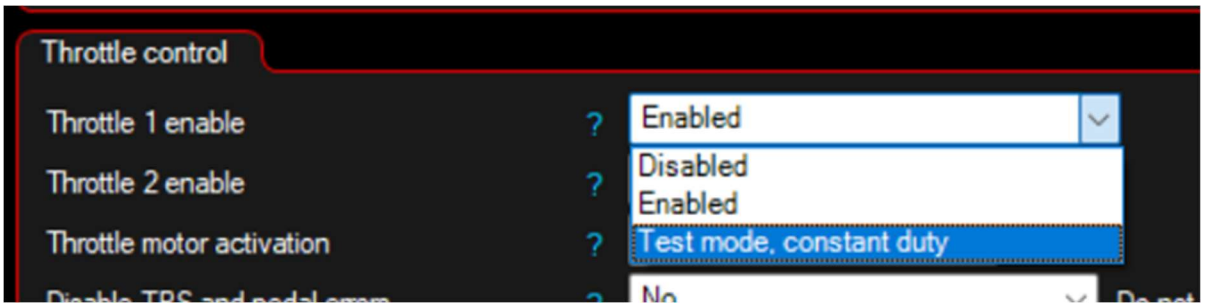
21. Once it has read the current tune into the computer, we are now ready to calibrate the throttle systems.
    a. Navigate to the "E-Throttle" subsystem



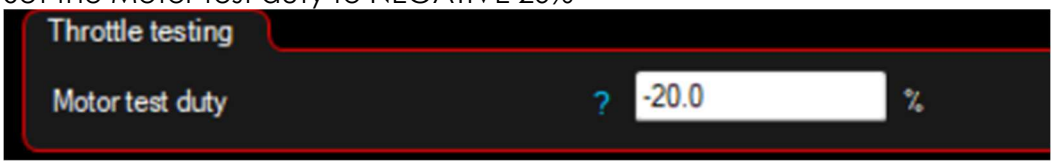
    b. Click on "Throttle Control"



c. Select Throttle 1 Ebale control and switch too "Test Mode" You will likely hear the throttle make some noise. This is ok.

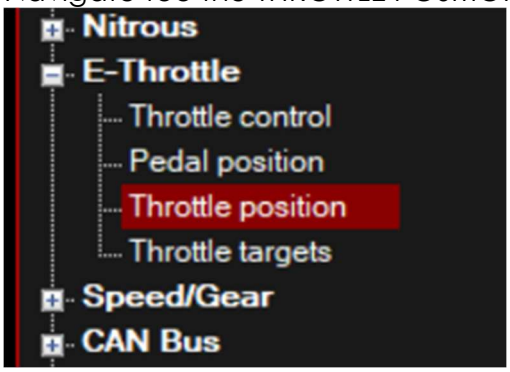


d. Set the Motor test duty to NEGATIVE 20%

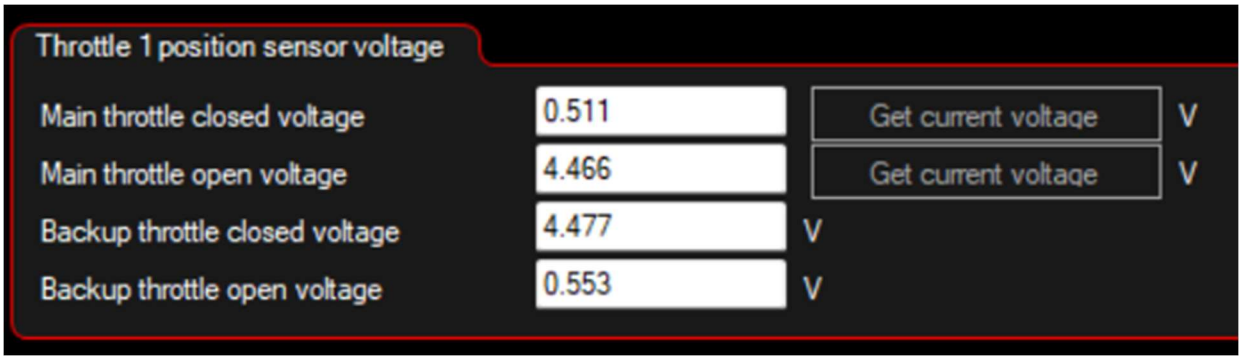


This will fully close the throttle for the zero calibration step.

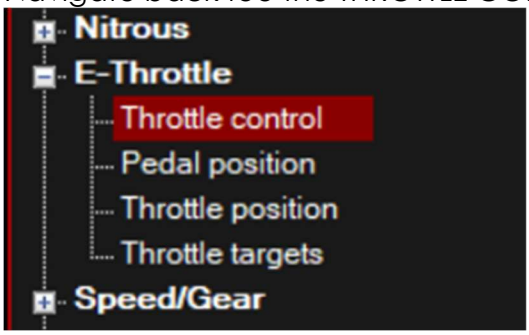
e. Navigate too the THROTTLE POSITION tab



f. Click on the "GET CURRENT VOLTAGE" button for the MAIN THROTTLE CLOSED VOLTAGE position.



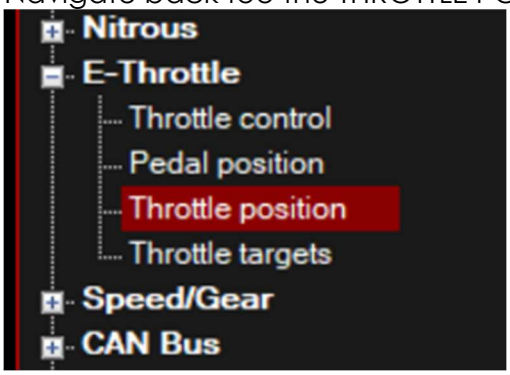
g. Navigate back too the THROTTLE CONTROL subsystem tab.



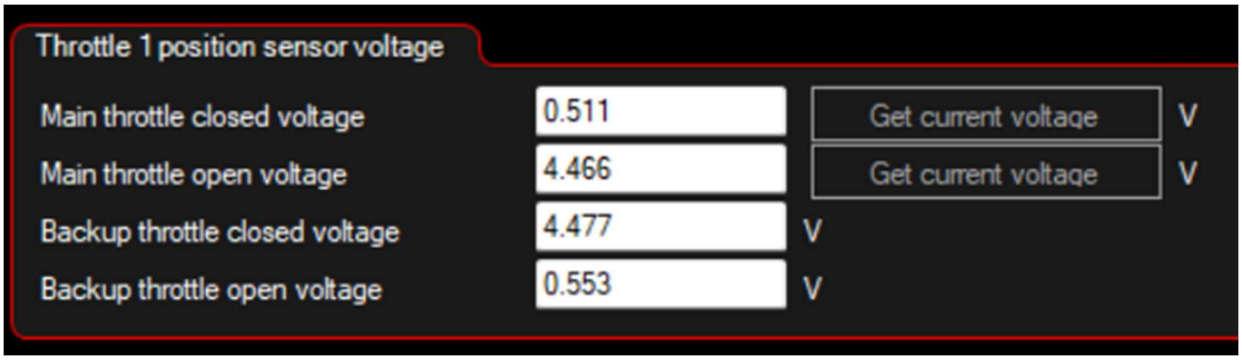
h. Set the MOTOR TEST DUTY to POSITIVE 50%

This will now fully open the throttle blades for our 100% calibration.

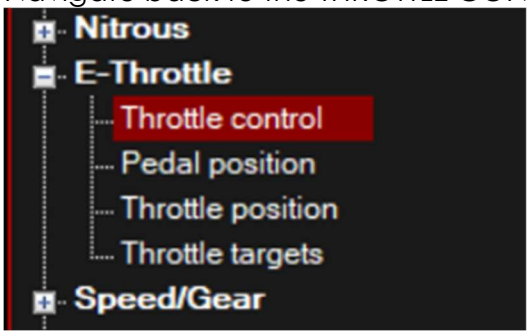
i. Navigate back too the THROTTLE POSIITON tab



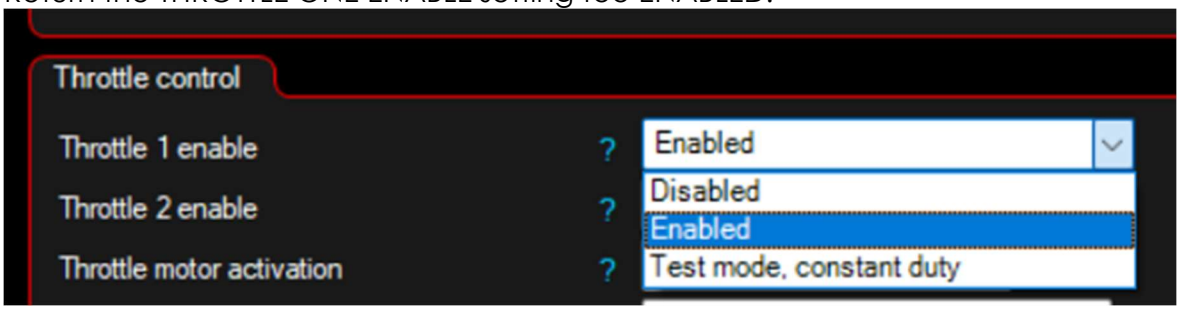
j. Click on the "GET CURRENT VOLTAGE" button for the MAIN THROTTLE OPEN VOLTAGE position.



k. Navigate back to the THROTTLE CONTROL tab.

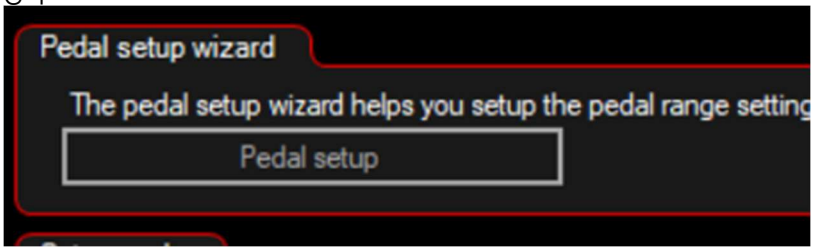


l. Return the THROTTLE ONE ENABLE setting too ENABLED.

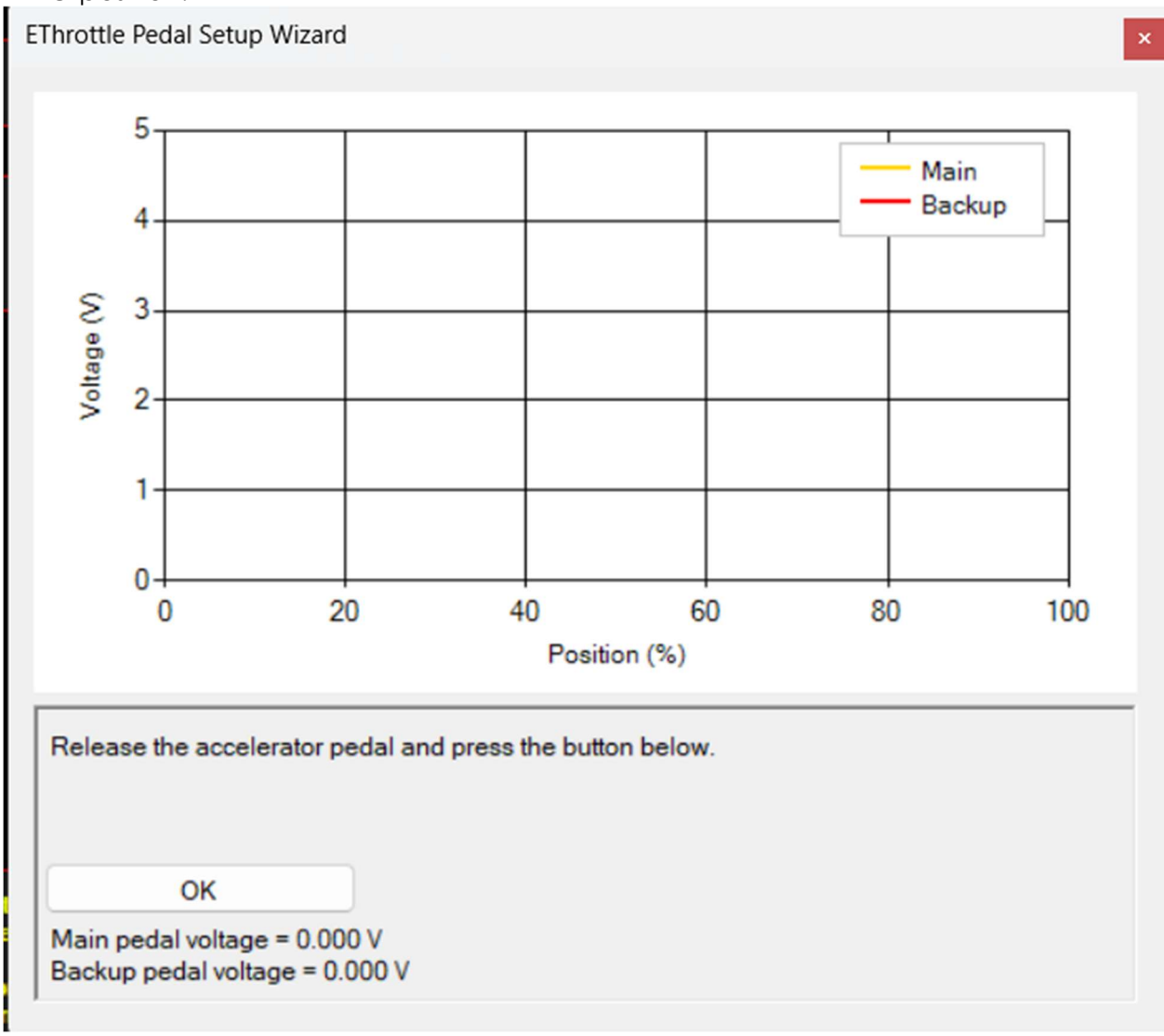


m. Navigate to the PEDAL POSITION tab

n. Click on the PEDAL SETUP button, this is how we will calibrate the throttle grip sensor.



o. With your hand off the grip, click the OK button ONCE…this has set the ZERO position.

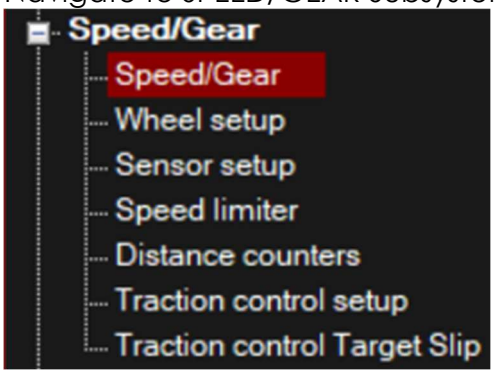


p. Twist the grip smoothly to Wide Open Throttle and click OK WHILE HOLDING THE THROTTLE OPEN.

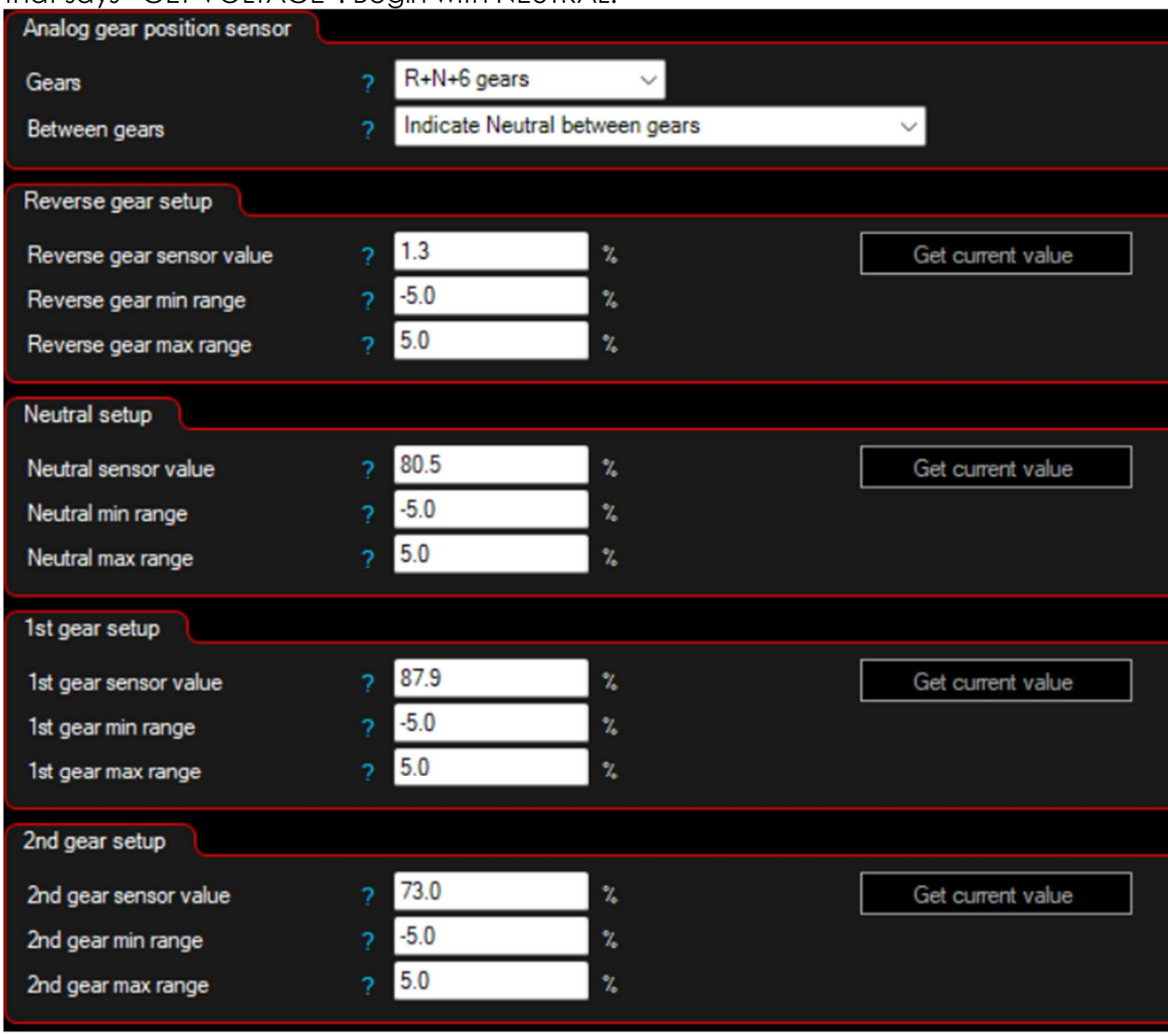
q. Click the SAVE SETTINGS AND CLOSE button. Your throttle is now fully calibrated and the engine is ready to be started!

22. If you will be monitoring Gear Position, we will calibrate it now.

a. Navigate to SPEED/GEAR Subsystem and select SPEED/GEAR tab.



b. Once in this tab, you will see a list of gears with a button next to each one that says "GET VOLTAGE". Begin with NEUTRAL.



c. Once in NEUTRAL, click the GET CURRENT VOLTAGE button next too NEUTRAL SETUP.

d. Click the shifter into 1st gear then click GET CURRENT VOLTAGE for 1st gear setup. Repeat this process for all gears, doing one at a time. Once this is

completed, the gear position has been calibrated. Gear position can now be logged, and used for things like boost by gear, altering the throttle feel based on gear, timing and fueling corrections based upon gear, etc.

23. To calibrate the SHIFT SENSOR it is recommended you contact JB-Tech Racing for a remote login to assist. The shift force system can be touchy and may take a few adjustments to get right. Once it is fully setup, the rider can shift up or down without using the clutch. For upshifts the system will automatically cut the ignition to allow for a positive upshift without ever letting off the throttle. For downshifts, the system can automatically blip the throttle to allow a down shift without the rider needing to manipulate the throttle.