SBD Motorsport Ltd

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Basic calibration information for Traction control via MBE9A4/9A8

It is assumed that anyone who will undertake this job will have a good understanding of engine management programming and the related principles, this information sheet provides all the data you will require, if you are not able to complete the job from this please contact a professional programmer.

Applicable for software version 9A4bd600 onwards

This information covers systems utilising 1 wheel speed sensor on an un-driven wheel.

Gear position must be fed to the ECU.

We recommend using a minimum of 4 speed pickups, ideally 8.

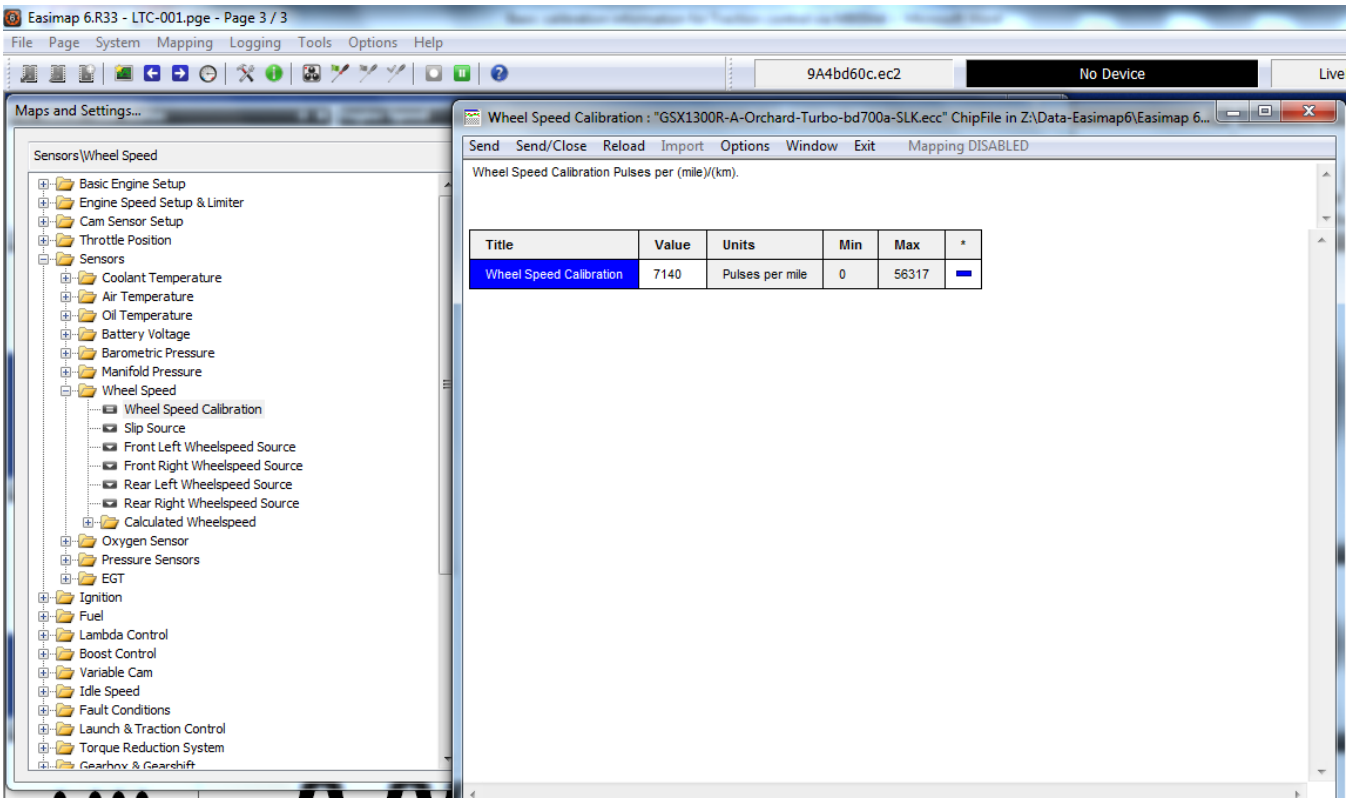
Below is an example of the calculation required, this is not specific to you!

The pulses per mile must be entered into the chipfile, do this using your measured tyre circumference in Metres.

So 1609.344 (1Mile in Metres) / 1.803 (Tyre circumference example) x 8 (8 speed pickups)

= 7140 pulses per mile.

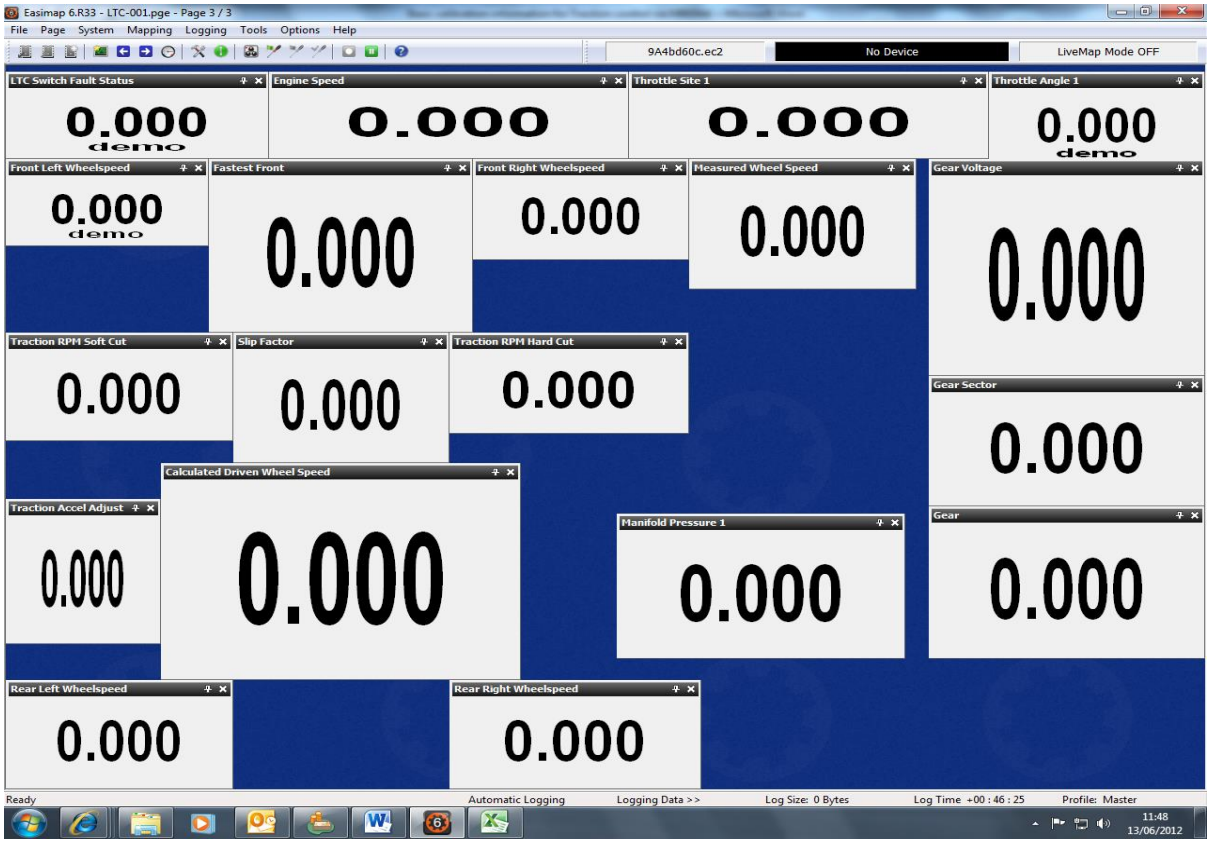
Enter this here;



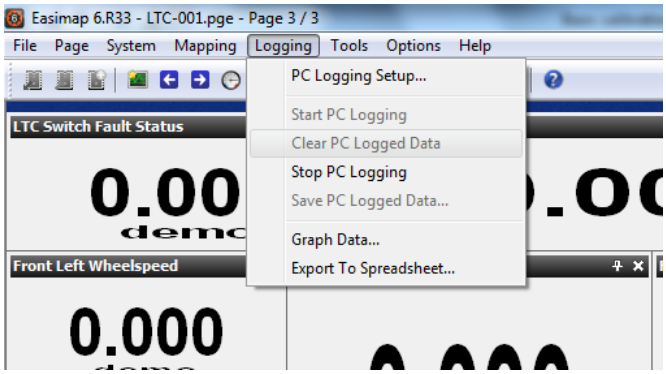
The car must be driven and logged through all gears to gather the required gear V's engine speed V's wheel speed data.

It is critical that you use accurate data, so only use parts of the logged data which are clear, without wheel spin and the clutch fully engaged.

You will require a suitable logging screen for Easimap 6, these can be created by adding panels, however a pre-set page can be emailed, an example is below;

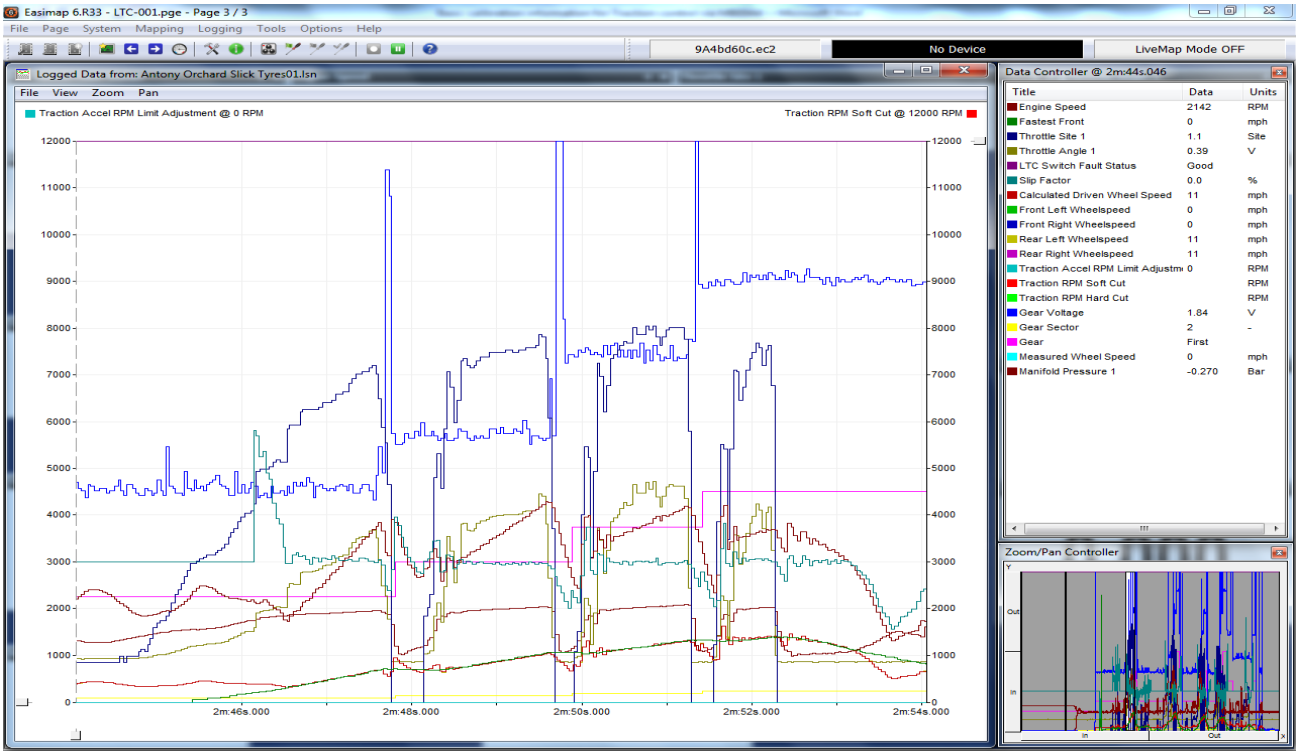


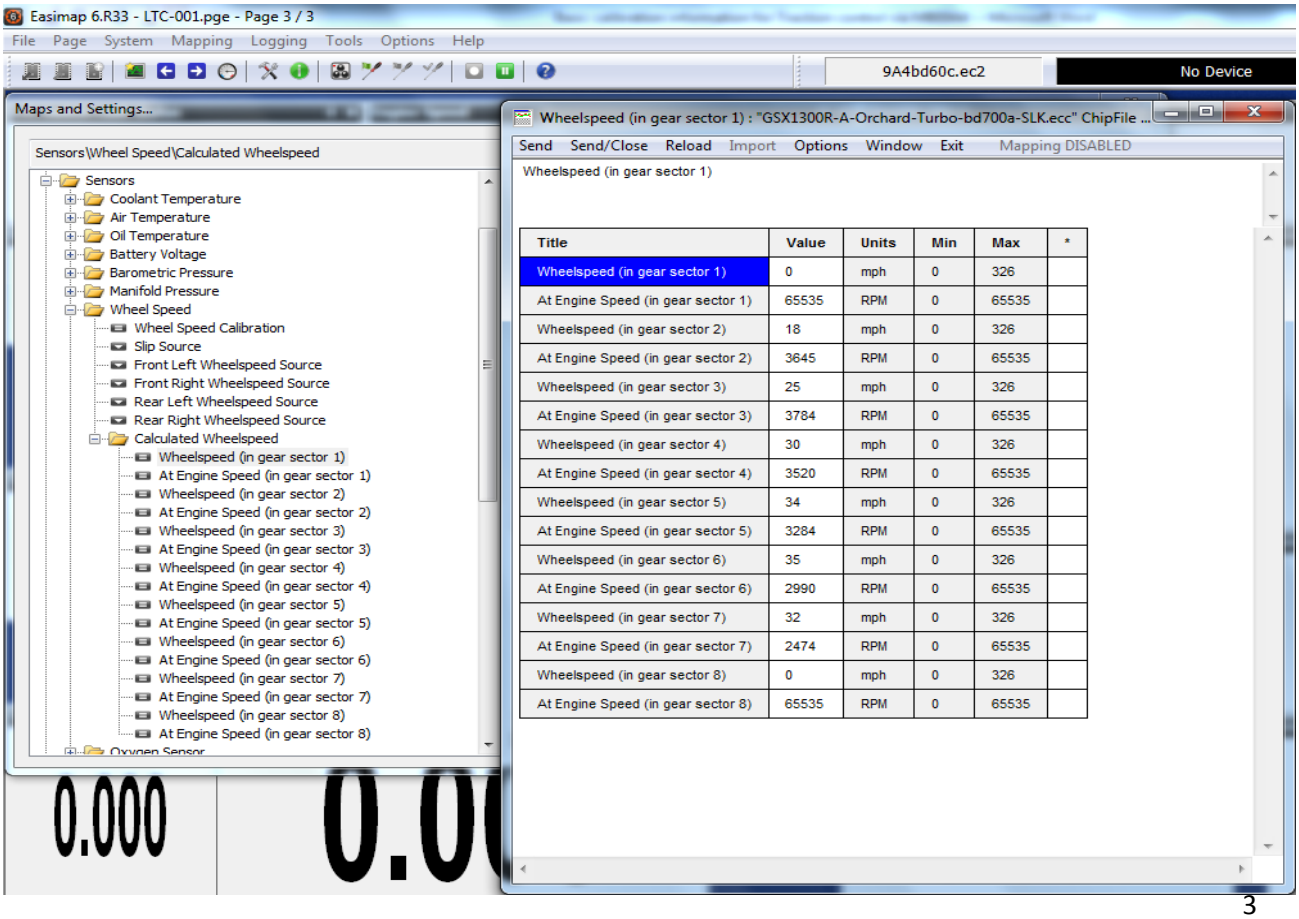
Start the PC logging, leave the laptop connected to the ECU and drive the car through all gears, when finished save the data to review later.



All parameters are shown; you can zoom in using the pan controller in the bottom right hand corner.

Find the front wheel speed and its matched engine RPM for each gear, input the values into the setup table as shown; (note in this example gear sector 1 is Neutral, so no value is inputted)





Title	Value	Units	Min	Max	*
Wheelspeed (in gear sector 1)	0	mph	0	326	
At Engine Speed (in gear sector 1)	65535	RPM	0	65535	
Wheelspeed (in gear sector 2)	18	mph	0	326	
At Engine Speed (in gear sector 2)	3645	RPM	0	65535	
Wheelspeed (in gear sector 3)	25	mph	0	326	
At Engine Speed (in gear sector 3)	3784	RPM	0	65535	
Wheelspeed (in gear sector 4)	30	mph	0	326	
At Engine Speed (in gear sector 4)	3520	RPM	0	65535	
Wheelspeed (in gear sector 5)	34	mph	0	326	
At Engine Speed (in gear sector 5)	3284	RPM	0	65535	
Wheelspeed (in gear sector 6)	35	mph	0	326	
At Engine Speed (in gear sector 6)	2990	RPM	0	65535	
Wheelspeed (in gear sector 7)	32	mph	0	326	
At Engine Speed (in gear sector 7)	2474	RPM	0	65535	
Wheelspeed (in gear sector 8)	0	mph	0	326	
At Engine Speed (in gear sector 8)	65535	RPM	0	65535	

With all the information loaded into the ECU run the car again and log the data, this is to confirm the Front wheel speed and the calculated wheel speed match within an acceptable percentage, the more time you spend with the data the closer you can synchronise the values.

Remember, the slip percentage will not be correct when the clutch is used, as there is no longer direct drive.

If you are setting up the traction control yourself, you will need to load good starting values into the chipfile and enable the traction control.

If you require your software version to be updated along with a general update of the chip file with proven Traction Control values to use as a base we are happy to assist, please contact us for current pricing and turnaround time.

Please be aware that Technical Support involving our Technicians is chargeable

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