



Thank you for purchasing a Megasquirt (MS) ECU from [www.ExtraEFI.co.uk](http://www.ExtraEFI.co.uk)  
Before doing anything please read this and the README files on the CD! It could save you time and hassle.  
Whilst every effort has been made to setup the ECU for your engine's configuration, I can NOT be held responsible for any damage that may be caused directly or indirectly by the supplied MegaSquirt ECU. After all, this is designed to be a Do-It-Yourself project.

The base VE table and Spark map I install into the ECU is **NOT** meant as the finished map, it may not even get your engine started, it is there as a guide to help you to understand roughly what settings are needed. It is your responsibility to ensure all wiring, settings and all of the interfacing between your setup and the MegaSquirt ECU is correct and tested before powering up the ECU. If you are in any doubt what so ever, please contact me and I will help you.

**Before making any adjustments ON-LINE please SAVE the configuration that's on your ECU when you power it up. To do this run MegaTune and select File – SAVE AS call it something like “original”, then any adjustments made can be put back to how it was if needed.**

Please note that when using MegaTune off-line it will be full of random values unless you load in a file.

I have supplied various diagrams on the ExtraEFI.co.uk site and on the CD, a set of comprehensive manuals, etc, for the installation to be as easy as I can possibly make it for you. It is strongly recommended that you read the manuals tuning and software sections before starting your project.

**The fuel VE table and spark tables are all an estimate for your setup and are in no way meant to be the finished map. The tables will need to be tuned.**

When transferring setups (msq files) from others or from the Internet or simply changing settings in Megatune please ensure that the Outputs are setup for your ECU before downloading it to your MS ECU.

To check this open MegaTune (MT) open the msq file and when asked whether to burn click “N”.

Go to *Basic Setup – Tacho Input/Ignition Settings*

Ensure **Spark Output = Going High (Inverted)** (*if you are directly driving coils from your MS ECU*)

Ensure **Spark Mode** has your setup Selected, e.g. Toothed Wheel or EDIS, etc. (If in any doubt e-mail me)

Ensure **Number of coils** is setup for your configuration, e.g. COP or wasted, etc.

Ensure **Spark A Output pin** is set to **D14**

**Upgrade notes:**

When / if burning a code (firmware) due to using a new release please remove the coils that are directly driven from the ECU! Also ensure that the **Basic Setup – Tacho Input/Ignition Settings** are set as above before re-connecting the coils. Failure to do so could damage the Spark drivers inside the ECU.

**Wiring notes:**

Please ensure that any directly driven spark coils from the ECU have no power to them when the MS ECU is off. The best method to supply the +12V to the ignition coil is to come from the fuel pump, as this is only switched on by the MS ECU when the engine is turning and only when the MS is powered on.

There are several earth wires in the loom that have to be connected to a good clean earth. The engine block is the best place if possible.

The screened trigger wire is earthed to the ECU in the loom, simply cut back the screening and don't connect it (insulate it), just use the 2 cores that are inside for your sensor. **For more info on the above please see the other PDF files I've compiled, or for the latest version see my help/support pages on my website!**

**Before attempting to start your engine please measure the resistance of your injectors (ensure they are totally disconnected from the wiring loom before doing the measurement)**

If you are running **high-impedance injectors** (greater than 10 Ohms), then the settings in the **Engine Constant Page** should be :

**PWM Current Limit (%)** 100%.

**PWM Time Threshold** 25.5 msec

If you have **low-impedance injectors** (less than 4 Ohms), then the settings in the **Engine Constant Page** will need tuning, see the **Setting the PWM Criteria** section in the **Tuning Manual**. This is a starting point:

**PWM Current Limit (%)** 30%

**PWM Time Threshold** 1.0 msec

<p><b>NOW READ the <b>Settings+Checks</b>, then <b>SpeedDen or Alpha_N</b> and lastly the <b>Starting+Tuning</b> PDF files on the CD (Also available on my website!)</b></p>
--

**www.ExtraEFI.co.uk**