Thank you for buying an AMP EFI MicroSquirt transmission control TCU package! This quick start guide will cover the most common questions about your TCU. The full manuals are online at www.diyautotune.com/support/transcontrol – they include a full wiring diagram, notes on tuning software, and more. This quickstart is not intended to replace the full manual, only to offer a quick startup guide.

Wiring: You will need to connect power and ground to the 6 pin connector.

If you are running an ECU in the MegaSquirt-II or MegaSquirt-III lineup, you just need to connect the two CANBus wires between your ECU and TCU. This lets the transmission controller share data and a tuning connection with your ECU and eliminates the need for extra sensors.

If you are running this kit with a non-MegaSquirt EFI system or a carburetor, you will need a throttle position sensor signal and an RPM signal. For an injected engine, you can share the throttle position sensor signal with your ECU. For a carbureted engine, you will need to source a TPS kit for your particular carburetor. Alternatively, you may use a MAP sensor signal for load instead of TPS.

You have the following options for a tach signal.

- A low voltage (0-12 volt square wave) signal from your ignition module or engine management. The tach output from a typical MSD box will work, for example.
- The input speed shaft sensor (4L80E only).
- If you must get RPM from the ignition coil, use our AXM-110 high voltage isolator module to protect the tach input.

You will also need to be able to connect the TCU to a laptop. We include a cable with a 9 pin serial connector, also called RS232. If your computer does not have a suitable serial port, you can use our USB-2920 adapter to plug into a USB port. You will connect using TunerStudio, which is a free download. You will need to set a few essentials before the TCU will be able to command shifting:

- Whether you are using a 4L60E or 4L80E
- Your tire size
- Your final drive ratio
- Whether your controller will get its data from a connection to the ECU via CANbus or from separate sensors
- The number of cylinders (set to 62 if you are using the 4L80E input speed shaft sensor)

At this point, the transmission should be able to shift.

The default tune is rather cautious. The transmission will run full line pressure, and upshifts fairly quickly to make sure it does not over-rev the engine. You can fine tune the shift curves for better performance, set the line pressure to lower pressure if you want to soften the shifts, and adjust torque converter lock up for best efficiency.

You can reach our technical support team by email at support@ampefi.com if you have any questions.