

Thank you for purchasing The STM PRO ECU.  
Ecu is uploaded with the latest Speeduino firmware and the basic settings have been done and tested.  
**Speeduino.ini is on the main directory of the USB stick included in the package,**

You will need this for your Tunerstudio project.

When you open Tunerstudio under “Engine” settings select board definition “STMPPro” (should already be selected by default).

Wiring will be different depending on which board definition you select. This is explained further down.

## **IMPORTANT INFORMATION**

\*\*\*Please allow at least 20 seconds after a change in Tuner Studio for the ECU to update before unplugging or powering off. Windows operating system mostly, has delayed writes to the USB and this can corrupt the ECU.\*\*\*

You’ll also find the wiring diagrams and jumper settings paper work included in your package.

\*\*\*Please make sure you use a FUSE inline with the main power input, no more than 10A fuse\*\*\*

Remember IGNITION output are for Smart coils or Ignitor IGBTs. Do not connect normal 2 pin 12V coils to the ECU.

GM LSx Coils work great and the 5v trigger out of the ECU connects directly to their trigger input.

You should have received ECU, 26/34 pin male connectors, and 60 crimp pins to make your wiring harness.

If you purchased a Bluetooth adapter, it will be configured and the sticker on the side has the Bluetooth name and 4 digit password.

VR conditioner is installed and configured for the VR

If you want to use HALL Sensors, remove the VR conditioner and

change the jumpers to HALL and use the switches to turn on the pull ups

If you have one VR sensor and one HALL sensor just change the corresponding jumper and enable the pull up on the HALL sensor.

Please be careful if removing the hose from the internal map sensor, it will pull off the board and be damaged, a gentle twist while pulling usually removes the hose.

## **Extra Inputs and Outputs.**

I have installed a Baro sensor and it is configured in hardware and firmware. The Baro input pin is A13.

Analog inputs A6, A7, A8, A9 are linear inputs (0-5v) and can be used in their current state for fuel/oil pressure sensors (5 volt) etc. There is a solder jumper that can be set with a 2.4k resistor for a temperature input under the processor board. You'll find a picture sheet of their location in your paper work.

Tunerstudio numbers will be:

- ECU analog input 6 = Tunerstudio A12
- ECU analog input 7 = Tunerstudio A7
- ECU analog input 8 = Tunerstudio A6
- ECU analog input 9 = Tunerstudio A4

Pins marked on wiring diagram as Boost output and VVT output are default settings and can be changed in Tunerstudio to programable outputs, by making sure the function is turned off. Using the Arduino pin identification on the pinout sheet, set them up as a programable output.

Pin 10 on the 34 pin connector is a 12v (battery voltage) Positive Programable output, Usually used for Vtech solenoids as they require positive trigger, but can be used as long as the device negative terminal goes to ground.

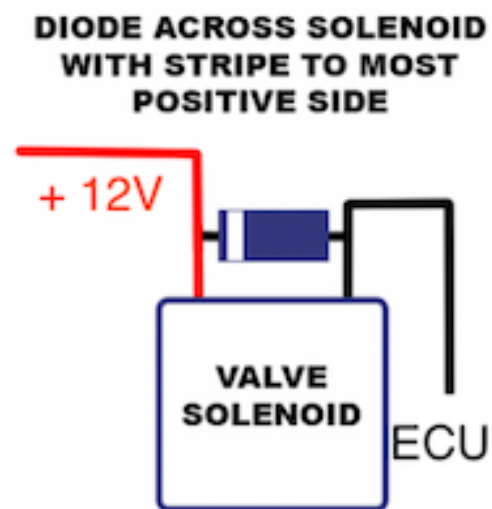
- ECU Going high out = Tunerstudio 37 this is the only output that is positive 12v.

All other outputs are ground switching.

- ECU Spare LC Output = Tunerstudio 3
- ECU Digital in 2 = Tunerstudio 40
- ECU Digital in 1 = Hardcoded to VSS input, 5V pull-up for hall trigger.

Idle1,2,Boost,VVT outputs are for Solenoids. These work best with a Diode across the ECU output and 12v positive wire.

1n4004 - 1n4007 will work. This gives the solenoid faster response times.



USB power switch, Default is on, Taking the jumper off will stop the ECU powering up when a USB cable is plugged in that's connected to a computer, only the switched 12v supply will power the ECU, but you will still be able to communicate with the ECU in this mode.

Any Help email me at : [nick@everythingfuelinjection.com](mailto:nick@everythingfuelinjection.com)

Speeduino Forum as : NickZ

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