

NHRA Pro Stock Motorcycle ECU Specifications

Inputs

1. Ref (Crank): Allow hall-effect, magnetic and optical type sensors with various types of trigger wheels.
2. Sync (Cam): Allow hall-effect, magnetic and optical type sensors with various types of trigger wheels.
3. Water Temp: Allow sensor types of reading based on resistance that measure in ohms. For example Delco Temperature sensor of 3300 ohms = 20C
4. Air Temp: Allow sensor types of reading based on resistance that measure in ohms. For example Bosch Temperature sensor of 2500 ohms = 20C
5. Throttle Position Sensor (TPS): All sensor types of potentiometers, rotary, and string pots that measure in a linear voltage curve of 0-5 volts. For example 0.5 volts = 0% TPS and 4.5 volts = 100% TPS
6. Barometer Pressure: Allow reading of ambient pressure only. Manifold/Air box pressure reading is prohibited.
7. Clutch switch: In applications without a MSD ignition, clutch switch can be input to the ECU for dual RPM limits. In applications with a MSD ignition, clutch switch can be either input to the ECU or the MSD ignition to perform dual RPM limits.
8. Gear detection: Allow voltage level to be set per gear.
9. O2 Sensors: Allowed for data acquisition only. Must not be able to perform any type of closed loop control.

Outputs

1. Injectors: Allow any type of injector that is capable of pulse width modulated control by the ECU. Only one injector allowed per each cylinder.
2. Ignition: Allow Stand Alone ignition boxes to be used in slave mode as an amplifier and the ECU to use "Points" output to trigger the coil. Allow coil-on-plug ignition. ECU can internally trigger each individual coil. Only one ignition output can be used per cylinder.
*Buells & V-Twins odd fire two cylinders = maximum two ignition outputs
*Suzuki even fire four cylinders = maximum four ignition outputs
3. RPM signal: In applications without a stand-alone ignition system, rpm signal may be input into the data recorder only. In applications with a stand-alone ignition the rpm signal may be output from either the ignition or ECU but not both.
4. Shift light signal: Shift light may receive a signal from the ECU.

Notes: All other inputs/outputs to the ECU maybe used for logging purposes only. Data recorder cannot activate any function on the vehicle. Transmission or display of any vehicle performance data gathered or processed by the data recorder, to the driver or any remote location, during the run, is prohibited. The only NHRA approved ECU's with the supplied software versions are listed below. Must run latest accepted firmware. All ECU's, other than those specified, must be submitted to the NHRA for approval. Note the submitted software will only be considered without the ability to perform closed loop O2 control, traction control, wheel speed, pulse, and time measurement. All of these features must be removed from the software prior to submission. Any input signal not listed on this specification must be approved by the NHRA prior to submission.

**Currently accepted manufacturers, models and software versions:
Yellow Highlights Most Recent Changes:**

Manufacture/Model	Firmware Version
MaxxECU	1.136.14696
Motec M130	1.05.089 Jan. 2017
Motec M400/M600	2.40F
Motec M4	6.20 NHRA
Magneti Marelli SRAE	(Vision) PS60
Magneti Marelli SRAE	(SYSMA) 4.78
S&S Variable Pro Tune II	Pro Stock
Muzzy EFI	7.0.5
Holley EFI #554-129	4.1 Build 301
FuelTech FT450, FT550, FT600	5.02