



**You have one of the best engine computers there is: The Honda ECU!
Now you can add special features and custom tune your stock ECU
much faster and for considerably less than other standalone systems.**

Stage 2

This stage is completely programmable for fuel, ignition, injector and sizing by any Hondadata dealer or Stage 4 owner. At any later time it can be very simply upgraded to any other Hondadata stage. Well priced for engine swaps as virtually any stock OBD I Honda tune can be loaded into any ECU.

Stage 3

Consists of all the capabilities of Stage 2, a **Factory** VTEC controller and rev limits that can be quickly adjusted from within the car. With the dash mounted button, you can quickly and easily set your own VTEC revs, shift light revs and rev limiter in a matter of seconds.

VTEC control: VTEC Hondas have two ignition and two fuel maps, optimised for each cam. Switching the VTEC cam without switching the fuel and ignition maps will result in errors of up to 10 % in fuelling and 6° in ignition. Some VTEC controllers have a coarse fuel correction but none have ignition advance correction. Now you have factory VTEC control for maximum power and reliability.

Three Step Rev Limiter: Includes a three stage rev limiter for drag launch and full throttle shift: This is a clutch activated REV limit where the engine can be rev limited when the clutch is depressed. Brilliant for turbo or supercharged vehicles, this feature keeps your car on boost while changing gear and is great for improving those 1/4 mile times. Consistent drag launches. Set your car to launch consistently at the same RPM every time: Your unfair advantage for bracket racing. Adjust your launch RPM from within the car in seconds to cater for different road conditions. Change gear at full throttle without having to lift off. Keep your turbo on boost while shifting. **A whole new way to unleash the performance of your Honda.**

Stage 4

Consists of Stage 3 plus **ROM Editor** and **Hondalogger** software. ROM Editor allows you to alter the fuel and ignition tables in your computer as well as recalibrate your computer for larger fuel injectors and higher fuel pressure. Changes are saved to a file on your computer and then written to an EPROM via a standard EPROM programmer. You have the control to make a computer chip specifically customised to your car and modifications. ROM Editor can fine tune over 16 MAP positions and 20 RPM positions fuel and ignition values to 1/4 degree ignition timing accuracy and 0.5% fuel change. That is 320 points of resolution for non VTEC and 640 for VTEC Hondas. ROM Editor 2.5 has real time map tracing and real time lambda tracing when used with a wide band lambda meter for very fast and accurate tuning. A number of stock and pretuned starting maps are built into ROM Editor for very rapid setup and tuning.



Shift LED Mounted in dash

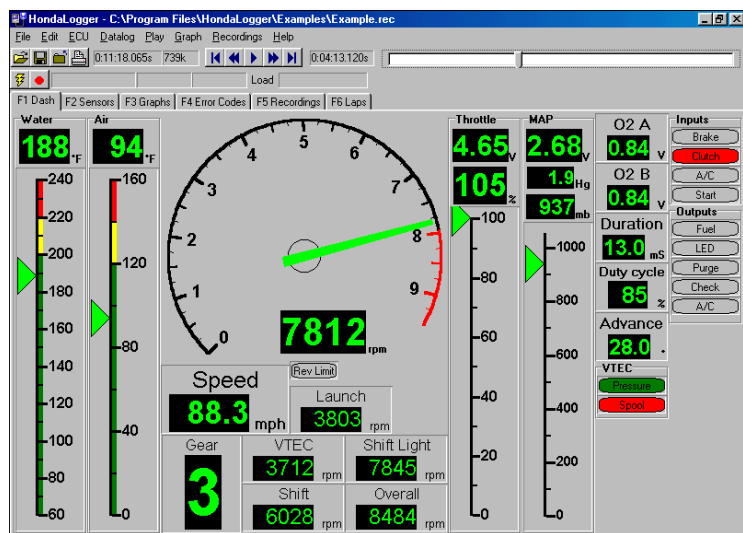


Rev set button mounted in dash

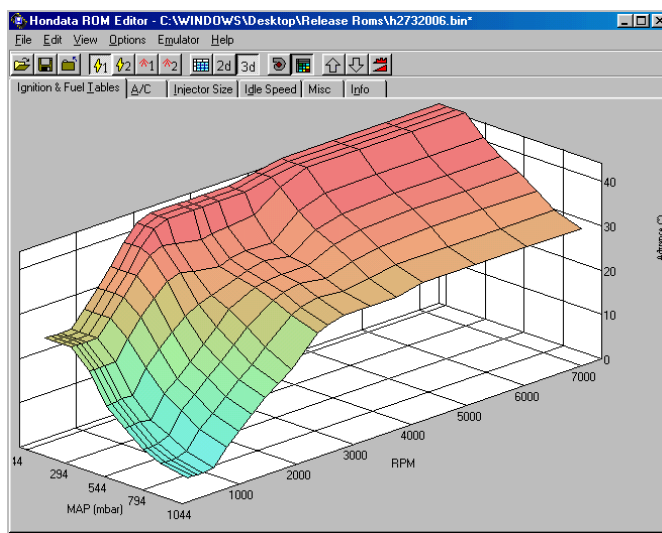


Clutch switch

Hondallogger graphs and records in real time all your engine sensors. An immensely powerful and useful diagnostic tool, Hondallogger can record up to 600 sensor readings per second for 4 hours; 50 times faster than any scan tool. How fast was I going? What revs and throttle was I using? What gear was I in? How hot was the engine? Are my injectors reaching maximum duty cycle? Answers to these and many more questions are now within your reach. Hondallogger teaches you an immense amount about your car and driving.



Digital Dash



Low speed cam timing map

Boost

The Honda MAP sensor can see 11lb of boost, but from the factory, the Honda ECU generates an error if the manifold air pressure goes above 1lb. Not only has Hondal removed that error, but we have reprogrammed the engine computer to inject the correct amount of fuel, compensate for intake air temperature and retarding the ignition under boost, with up to 11lb boost using the stock map sensor. By replacing the stock map sensor with a 3 bar map sensor, 30lb of boost is possible. Fuel and ignition tables have been expanded to include the whole operating range of an engine with forced induction, not just a simple relationship between boost and fuel pressure. To protect your engine against overboost, the boost cut limit shuts your engine down above a predetermined level. Why spend hundreds of dollars on a replacement computer, rewiring, rising rate fuel regulators, check valves and extra injectors, when a Hondal modified Honda engine computer will run better? Not to mention more reliably. No spark retard devices, no additional fuel or VTEC controllers, no MAP pressure check valves, no extra injectors. A properly engineered solution for your car using the best computer available.

Stage	Price	Description
2	\$295	Completely custom programmable by any Hondal dealer for fuel, ignition and injectors.
3	\$475	Factory VTEC controller, Three step rev limiter for drag launch, full throttle shift + all stage 2 features
4	\$845	Real time datalogging and ROM Editor for custom fueling and ignition maps + all stage 3 features
2b	\$545	Completely custom programmable by any Hondal dealer for fuel, ignition and injectors up to 11 or 29 lb boost
3b	\$725	VTEC control, Two stage rev limiter for drag launch and full throttle shift, mapped for boost + all stage 2b features
4b	\$1095	Real time datalogging and ROM Editor for custom fueling and ignition maps mapped for boost + all stage 3 features

** Tuning credits worth \$50 for stage 3 and \$100 for stage 4 are available. Contact your closest dealer.

Extras

OBD I ecu	\$200	Used Honda OBD I ECU, socketed and tested (subject to availability)
Datalogging	\$250	Upgrade for stage 2 or 3. Includes cable and software (\$200 if ordered at the time of purchase instead of upgrade)
Fitting	\$50	Charge to install the Hondal upgrade into your ecu
Programmer	\$270	EPROM Programmer, emulator and 12V car adapter for chip writing and fast tuning
Cable	\$250	Adapts an OBD I computer to work an OBD II car
Injectors	\$383	Four high impedance RC 440cc injectors + adapter cables to fit most Hondas
Upgrade	\$50	To upgrade to a higher stage add \$50 to the difference in price (\$100 for Stage 1 upgrades)

Conversions and upgrades available for most VTEC Honda OBD I ECUs (excluding Accord and Prelude ECUs). For off-road use only. Shipping charges and tax are not included

This brochure and software available from <http://www.hondal.com/downloads.html>

Extensive information and updates at www.hondal.com
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