

K-Pro Dual ECU

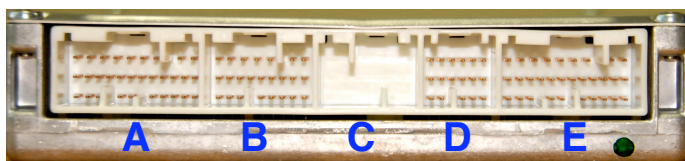


K-Pro Dual for 06-09 Drive by Wire S2000

Thank you for purchasing the Hondata K-Pro Dual for your car. Take a few minutes to go over this brief installation guide to understand how the two engine computers are installed and work together.

Installation

There are 5 plugs on your stock ECU referred to in the Honda manual as connectors A, B, C, D, and E.



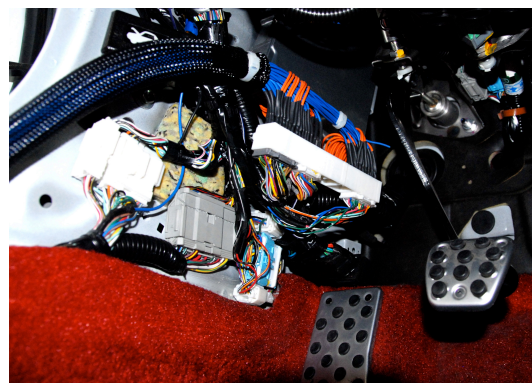
Connector C is empty and connector D (the smallest) houses the wiring for the electronic throttle. Plug D must remain connected to the stock ECU or else your throttle will not work and remain closed.

The longer cable which connects to the K-Pro may have two white connectors. Make sure the plug labeled A is connected to the far left connector A. If it is plugged it into E the K-Pro will not power up.

You will find an open wire in the harness labelled E20. E20 is used by the K-Pro to control an emissions output *EVAP Bypass*, which is not present on the S2000. This wire connects to pin E20 on the K-Pro and can be used as an output for nitrous relay control and methanol injection etc. Control for E20 (and other outputs) can be found in the K-Manager software under Nitrous.

Stock ECU operation

Hondata reflashes the stock ECU to switch off all emissions controls and VTEC operation. If you have a problem with your K-Pro and it needs to be repaired the reflashed stock ECU will still operate your S2000 as long as it has stock injectors. It will not operate the highcam and the rev limit will be lowered but your car will be drivable.



Dual Adapter wiring behind kick-panel



K-Pro mounted behind passenger seat

Engine check light and errors

The engine check light is connected to the stock ECU and cannot be connected to the K-Pro. There may be situations in which you get an engine check light caused by sensors that are connected to your stock ECU, such as VSS, crank, cam and temperature sensors. In the case of an engine check light, connect your laptop to the K-Pro USB port, activate datalogging and see if the K-Pro is also reading an error code. If so, correct and clear the error in the K-Manger software. Pull the fuse to the stock ECU to clear any codes it may have recorded. If K-Manager reports no codes but the engine check light is still on, you will need to either connect a scan tool to the OBD2 data port or short the connectors on the OBDII port as per the Honda manual to read the code the stock engine computer reports.

Emissions testing and the OBD2 port

Any programmable engine computer cannot by definition be CARB approved, so this system is sold for off-road use only. Both the stock and K-Pro computers are Honda computers and can correctly report the status of connected emissions systems if correctly wired. Only the stock S2000 ECU is connected to the OBDI port via two CAN lines. These CAN lines also allow diagnostic tools to communicate to the ABS, EPS and other computer systems. A Scan tool connected to the OBD2 port will report the Catalyst, Oxygen sensor and Evaporative systems as not supported.

Input/output	Stock ECU	K-Pro
Crank and cam sensors	Yes	Yes
Air and Water sensors	Yes	Yes
Vehicle speed sensor	Yes	Yes
OBDII data port	Yes	
Engine Check light	Yes	
Instrumentation	Yes	
Air Conditioning	Yes	
Vehicle stability assist	Yes	
Drive by Wire	Yes	
Idle speed control	Yes	
Fuel injectors		Yes
Ignition coils		Yes
Oxygen sensors		Yes
Emissions equipment		Yes
VTEC		Yes

The K-Pro uses an earlier communications protocol called K-Line which uses a single wire. It would be theoretically possible to connect another OBD2 port to the K-Pro computer to report on the status of the connected emissions systems, but that is not supported by Hondadata's Dual adapter harness or by Hondadata's tech support.

Oxygen sensor fitment

You cannot use the stock O2 sensor. You will need to route the oxygen sensor cabling over the top of the gearbox when you replace the S2000 sensor with:

- 36531-PND-A11 - front sensor from a 2002-2005 Honda Civic Si

Correctly tuned and with a stock cat, you should have tailpipe emissions close to stock.

Vehicle Stability Assist works by closing the throttle to reduce power in the event of wheelspin.

Cruise control has been disabled as it was not possible to have it work safely with the dual ECUs.

Idle speed is controlled by the stock ECU. If the ignition and fuel as tuned by the K-Pro is not correct you may experience rough/low idles and stalls. Larger injectors which do not atomize as well may contribute to a rougher idle. Running closed loop, or open loop at 13:1 air fuel ratio may help idle stability, so make sure you have the correct O2 sensor fitted.