



PLATINUM
PRO PLUG-IN
SUBARU MY 01-05
(HT-055174)
QUICK START GUIDE



WARNING - HALTECH OFF-ROAD USAGE POLICY

It is unlawful to tamper with your vehicle's emissions equipment.

Haltech products are designed and sold for sanctioned off-road/competition non-emissions controlled vehicles only. Using Haltech products for street/road use on public roads is prohibited by law. It is the responsibility of the installer and/or user of this product to ensure compliance with all applicable local and federal laws and regulations. Please check with your local vehicle authority before using any Haltech product

INSTALLATION OF HALTECH PRODUCTS

No responsibility whatsoever is accepted by Haltech for the fitment of Haltech Products. The onus is clearly on the installer to ensure that both their knowledge and the parts selected are correct for that particular application. Any damage to parts or consequential damage or costs resulting from the incorrect installation of Haltech products are totally the responsibility of the installer.

Always disconnect the battery when doing electrical work on your vehicle. Avoid sparks, open flames or use of electrical devices near flammable substances. Do not run the engine with a battery charger connected as this could damage the ECU and other electrical equipment. Do not overcharge the battery or reverse the polarity of the battery or any charging unit. Disconnect the Haltech ECU from the electrical system whenever doing any welding on the vehicle by unplugging the wiring harness connector from the ECU. After completing the ECU installation, make sure there is no wiring left un-insulated. Uninsulated wiring can cause sparks, short circuits and in some cases fire. Before attempting to run the engine ensure there are no leaks in the fuel system. All fuel system components and wiring should be mounted away from heat sources, shielded if necessary and well ventilated. Always ensure that you follow workshop safety procedures. If you're working underneath a jacked-up car, always use safety stands!

HALTECH LIMITED WARRANTY

Unless specified otherwise, Haltech warrants its products to be free from defects in material or workmanship for a period of 12 months from the date of purchase, valid in the original country of purchase only. Proof of purchase, in the form of a bill of sale or receipted invoice, which indicates that the product is within the warranty period, must be presented to obtain warranty service. Haltech suggests that the purchaser retain the dealer's dated bill of sale/receipt as evidence of the date of retail purchase. If the Haltech product is found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of purchase. This shall constitute the sole liability of Haltech. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations, either expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Haltech be liable for special or consequential damages.

PRODUCT RETURNS

Please include a copy of the original purchase invoice along with the unused, undamaged product and its original packaging. Any product returned with missing accessory items or packaging will incur extra charges to return the item to a re-saleable condition. All product returns must be sent via a freight method with adequate tracking, insurance and proof of delivery services. Haltech will not be held responsible for product returns lost during transit. The sale of any sensor or accessory that is supplied in sealed packaging is strictly non-refundable if the sealed packaging has been opened or tampered with. This will be clearly noted on the product packaging. If you do not accept these terms please return the sensor in its original unopened packaging within 30 days for a full refund.

Returning a sensor or accessory product within 30 days of purchase: Product may be returned for credit or full refund. (Any sealed packaging must not have been opened or tampered with)

Returning a sensor or accessory product after 30 days of purchase: Product may be returned for credit only (no refunds given) and is subject to a 10% Restocking fee. (Any sealed packaging must not have been opened or tampered with)

PLATINUM Pro Plug-in Subaru MY01-05

Quick Start Guide

Congratulations on purchasing a Haltech Engine Management System.

This *fully programmable Plug and Play* product opens the door to virtually limitless performance modification and tuning of your vehicle. Programmable systems allow you to extract all the performance from your engine by delivering precisely the required amount of fuel and ignition timing that your engine requires for maximum output under all operating conditions.

This quick start guide will walk you through installation of the Platinum Pro ECU into a vehicle. This guide is accompanied by the full service manual located on the software CD provided with the ECU that you or your tuner will need to refer to before completing your installation and configuration. The Manual is included in the software which can be downloaded from the Haltech website www.haltech.com

Supported Vehicles

The Platinum Pro Plug-in Subaru MY01-05 ECU supports the following vehicles:

- Subaru WRX MY01-05 JDM,USDM,ADM
- Subaru WRX STI MY01-05 JDM,ADM

Supported Engine Code

- EJ20

Platinum Pro Plugin Subaru MY01-05 Kit Includes

- Haltech Platinum Pro Plug-in ECU
- Rear Auxiliary Connector and pins
- USB Cable
- Software CD
- Quick Start Guide
- Haltech Elite CAN Adaptor Cable DTM4 Receptacle to 8 pin Black Tyco 75mm (HT-130040)

Optional Accessories (Sold Separately)

- Rear Auxiliary Harness (HT-040003)
- 3 Bar Map Sensor (HT-010104)
- Air Temperature Sensor (HT-010200)

Loaded Basemap

Your Platinum Pro Plug-in ECU has been programmed with a basemap to suit a Subaru WRX running a EJ20 engine using the standard MAF sensor.

ECU Installation

To install your new Platinum Pro Plug-in to your Subaru WRX, please follow the procedures below.

Please Note the following Installation photos based on:

Subaru WRX MY03 Australian delivered model

You will require the following tools

- Socket set with 10mm socket
- Cable Ties / 3M Velcro tape or similar

1. Locate your factory ECU. The ECU is located on the passenger side footwell under the carpet and steel protection panel. To access the ECU fold back the carpet on the passenger side footwell and remove the 4 x 10mm bolts holding the ECU protection panel in place Lift off the plate to gain access to the ECU.



Figure 1 – ECU Location, Passenger side footwell



Figure 2 – ECU Protection panel under the carpet

2. With the ignition turned off, remove the 2 nuts securing the ECU to the vehicle. Disconnect the 5 main harness connectors from the front of the ECU. Remove ECU from vehicle.

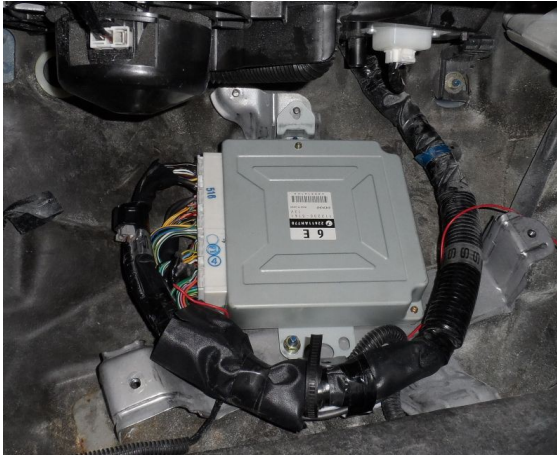


Figure 3 – Factory ECU mounted in vehicle

3. Fit the Haltech Pro Plug-in ECU to the vehicle making sure that you connect the USB Cable and auxiliary plug (if required), the USB cable can be routed up into the glove compartment for access and storage. Secure the Haltech ECU to the mounting bracket using double sided tape and cable ties.



Figure 4 – Haltech ECU Mounted to Factory ECU Mount

4. Re-fit the ECU Protection Plate



Figure 5 – ECU Protection panel re-installed

5. Re- install the carpet



Figure 6 – Carpet re-installed

6. With the Haltech ECU installed do not attempt to start the vehicle. You will need to configure the ECU. The Haltech ECU is pre-configured for use with a EJ20 standard engine. If this is your setup then you will not have to modify the basemap. If your engine is not standard please adjust the configuration settings affected according to your setup. With suitable settings and basemap loaded, your engine can now be started.

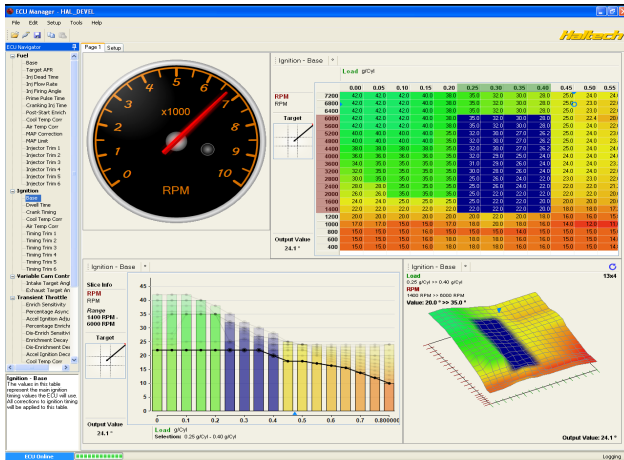


Figure 7 – Haltech ECU Manager Software tuning page

7. With the engine started and running its now time to tune. This is best achieved by your nearest engine tuner. See the listing of Haltech dealers on our website to find the closest one to you. www.haltech.com

ECU Manager Software

ECU Manager software is used for setup, calibration and diagnostics and can be found on the CD supplied with this unit or downloaded from the Haltech website www.haltech.com

Minimum System Requirements

Operating System:	Windows 2000 SP4 / XP / Vista / Windows 7
Processor Speed:	1GHz
RAM:	256 Mb
Video Card:	128MB graphics card with 3D acceleration
USB:	1.1
Hard Drive Space:	250Mb
Minimum Screen Resolution:	1024 x 768 pixels

Installing ECU Manager

Installing ECU Manager onto your PC is performed similar to any other Windows software package. Installation is outlined below to ensure correct installation:

- 1.** Insert the CD-ROM into your PC's CD-ROM drive. The CD should automatically launch into the Haltech Browser. If the CD does not run automatically double click on the "My Computer" icon on the desktop, double click on the Haltech icon (CD- ROM drive) to start the browser software.
- 2.** The Browser will display the disclaimer and you will need to agree to the terms stated before allowing to progress. Read the Disclaimer and click on AGREE if you agree.
- 3.** Now you will be able to access all the information contained on the CD
- 4.** To download the Platinum Software, click on the Platinum Series ECU Manager Link. You will be prompted to install the software. Click "Install" to install ECU Manager and the Data Log viewer.
- 5.** Follow the software prompts and install the software.

With your programming cable (USB) attached to your ECU and the other end connected to your laptop, power up the ECU by turning your key to IGN. Start the programming software on your PC and go online with the ECU.

ECU Manager / ECU Manuals

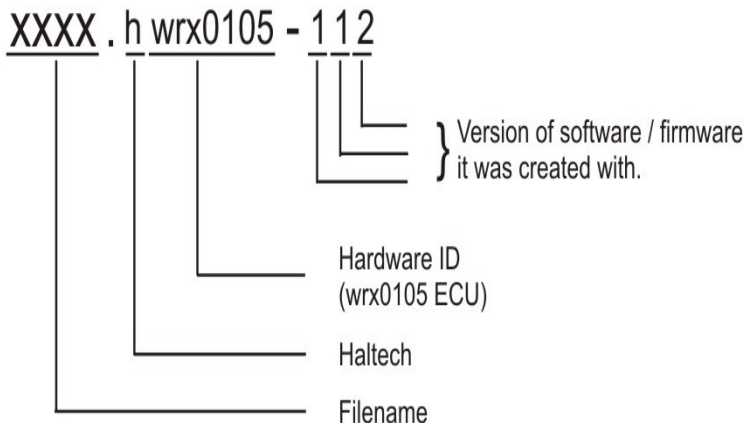
Detailed manuals can be found in the software by pressing your F1 key or by selecting the Help tab located at the top left of the screen

ECU Manager File Extensions

When ECU manager saves the map from the Haltech ECU, it saves the map with a Haltech specific file extension.

The File extension can be broken down as follows:

Example File : xxxx.hwrx0105 - 112



Later map versions cannot be loaded into ECU's with earlier firmware versions.

ECU Manager will upgrade earlier map versions when loading into ECU's with later firmware versions.

ECU Manager upgrades maps between versions where equivalent settings are available. However, new settings not in the original map, will be substituted with values from the new version's default map.

WHENEVER ECU MANAGER CONVERTS YOUR ECU MAP, YOU SHOULD ALWAYS CHECK YOUR MAP SETTINGS TO ENSURE THAT ALL THE APPROPRIATE SETTINGS HAVE BEEN CONVERTED CORRECTLY.

Rear Auxiliary Connector

The Platinum Pro Plugin Series allows further expansion of your ECU by the Rear Auxiliary Connector.

The Rear Auxiliary connector allows you access to:

- 1 Additional Digital Pulsed Input (DPI)
- 2 Additional Digital Pulsed Outputs (DPO)
- 2 Additional Digital Switched Outputs (DSO)
- 4 Additional Analogue Voltage Inputs (AVI)
- 2 Additional +13.8V Sensor Power Outputs (**Limited to 500mA Per output pin**)
- 2 Additional +5V Sensor Power Output (**Limited to 50mA Per output pin**)
- Additional Sensor Power and Signal Grounds

These extra Inputs / Outputs can be used to:

- Fit additional sensors. (eg MAP, Temperature and Flex Fuel)
- Control additional devices via relays
- Control additional solenoids directly (eg Aftermarket Boost Control solenoid)

The Rear Auxiliary harness is available as an optional extra. (HT-040003)



Pin #	Wire Colour	Connection
1	O	+5V (50mA Max)
2	Y	AVI1 (MAP)
3	O/B	AVI2
4	B/W	SIGNAL GROUND
5	V/B	DPO1
6	V/BR	DPO2
7	GY<SHD>	DPI1
8	R	+13.8V (500mA Max)
9	O	+5V (50mA Max)
10	GY	AVI 3
11	GY/B	AVI 4
12	B/W	SIGNAL GROUND
13	V/R	DSO1
14	V/O	DSO2
15	-	-
16	R	+13.8V (500mA Max)

<SHD> Denotes shielded cable

Figure 8 - Rear Auxiliary Harness Connector and Pinout

Digital Pulsed Input (DPI)

Digital Pulsed Inputs are capable of accepting pulsed input information such as for a road speed sensor. These inputs measure the time periods between the pulses and can process this information to provide quantities such as road speed.

One additional input can be connected using the Optional Rear Auxiliary Harness (HT-040003)

Digital Pulsed Outputs (DPO)

Digital Pulsed Outputs are capable of producing pulsed waveforms with varying duty and frequency. DPO's can be used to control various devices such as thermo-fans, shift lights, bypass air control valves, boost control solenoids etc.

When a Digital Pulsed output is activated by the ECU the output will switch to ground. Solenoid valves and shift lights etc can be run directly from the output, however high current devices such as thermo-fans and additional fuel pumps must be activated through a relay. This way the DPO is only switching a relay and not a high current draw device.

Two additional outputs can be connected using the Optional Rear Auxiliary Harness (HT-040003)

Digital Pulsed Outputs are limited to 800mA Max current draw.

Digital Switched Outputs (DSO)

Digital Switched Outputs are capable of switching to ground

DSO's can be used to control relays in an on / off state only.

Two additional outputs can be connected using the Optional Rear Auxiliary Harness (HT-040003)

Digital Switched Outputs are limited to 800mA Max current draw.

Analogue Voltage Inputs (AVI)

Analogue Voltage Inputs accept variable voltage inputs from 0V to 5V. These inputs can also accept switch inputs that change between two different voltage levels.

The On Voltage and Off Voltage define what the thresholds are between the On and Off states. The Voltage can be viewed as a channel in the software to determine the thresholds for a switched input.

Two additional sensors or switched inputs can be connected using the Optional Rear Auxiliary Harness (HT-040003)

Wire connections

When using crimp connectors ensure that the correct crimping tool is used – if in doubt do a pull test on a crimp connector, the wire should break before the wire pulls out of the crimp. Terminal soldering can weaken a connection and should only be used as a last resort. If solder joints are used, ensure joints are well isolated from movement as solder joints are prone to fracture.

When splicing 2 wires it is preferable to use a crimp splice – again if using a solder joint, ensure joint is limited in its range of possible movement as solder joints are prone to fracture. Always use heat-shrink sleeving to insulate wires.

The Haltech CAN Network

The Haltech CAN network allows for simple and effective expansion in ECU capability and functionality without having to go to the trouble of wiring in a whole new computer.

Expansion is made possible by the addition of multiple expansion devices that communicate to the main ECU via a Control Area Network (CAN).

Installation time and costs are kept to a minimum as all expansion devices are powered up from the main ECU via the pre-terminated connection cable that comes with each expansion device.

Simply connect the device directly to the 8 pin CAN connector on the rear of the ECU or connect using an optional Haltech CAN Hub (order as part # HT-159000) if multiple expansion devices are required.

Each expansion device is pre-programmed with a unique ID code which allows it to be recognised on the network and work correctly every time.

For current available expansion devices please go to our website at www.haltech.com

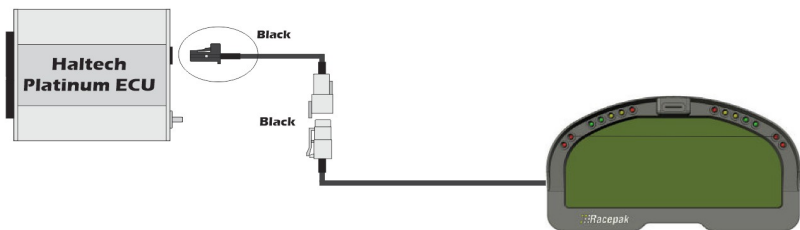


Figure 9 – Haltech ECU connected to a Racepak Dash

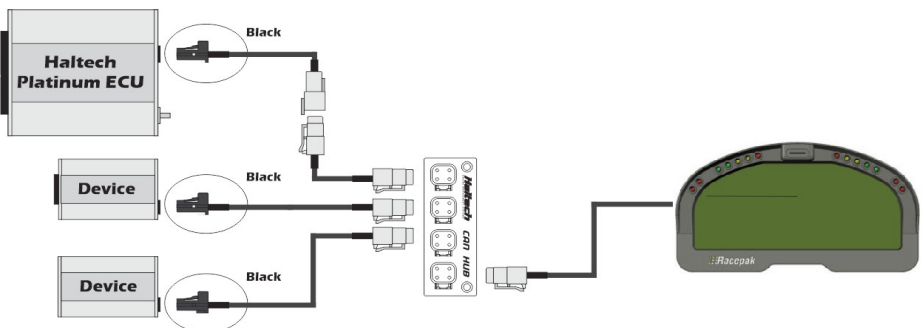
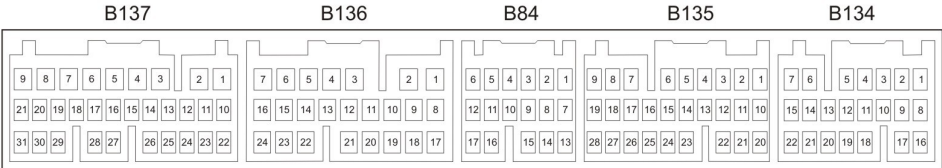


Figure 10 – Haltech ECU connected to 3 Auxiliary CAN based devices

ECU Pinout



Looking into ECU Connector

Pin #	Connector B137
1	INJ1 (No.1 Injector)
2	Control Unit Power Supply
3	Control Unit Power Supply
4	-
5	-
6	-
7	-
8	-
9	-
10	Backup Power Supply
11	Generator Signal (ADM) Drain Valve (USDM)
12	Generator Signal
13	-
14	Air Temperature Sensor (Spec C Only)
15	Malfunction Indicator Lamp
16	Purge Control Solenoid Valve
17	Radiator Fan Control Relay 1
18	-
19	-
20	-
21	-
22	Fuel Tank Pressure Control Valve (USDM)
23	-
24	Wastegate Control Solenoid Valve
25	-
26	-
27	A/C Relay Control
28	Radiator Fan Control Relay 2
29	-
30	-
31	-

Pin #	Connector B136
1	-
2	Blow By/Leak Diagnosis Signal (USDM)
3	-
4	INJ4 (No.4 Injector)
5	INJ3 (No.3 Injector)
6	INJ2 (No.2 Injector)
7	-
8	Ground (Injectors)
9	Engine Speed Output
10	Idle Air Control Valve
11	-
12	-
13	Oxygen Sensor Heater (Rear)
14	Torque Control Cut Signal (USDM)
15	Fuel Pump Control Unit Signal 2 (USDM)
16	Fuel Pump Control Unit Signal 2
17	Ground (Power Supply)
18	Ground (Ignition System)
19	-
20	-
21	IGN #4 (No. 4 Ignition Coil Pulse)
22	IGN #3 (No. 3 Ignition Coil Pulse)
23	IGN #2 (No. 2 Ignition Coil Pulse)
24	IGN #1 (No. 1 Ignition Coil Pulse)

Pin #	Connector B84
1	-
2	AVCS Camshaft Position Sensor (RH) (+)
3	AVCS Camshaft Position Sensor (RH) (-)
4	Tumble Generator Valve RH (Open)
5	Tumble Generator Valve RH (Close)
6	Oil flow control solenoid valve (RH) Signal (+)
7	Ground (Mass Air Flow Sensor)
8	Mass Air Flow Sensor/ Shield
9	AVCS Camshaft Position Sensor (LH) (+)
10	Tumble Generator Valve LH (Close)
11	Tumble Generator Valve LH (Open)
12	Oil flow control solenoid valve (RH) Signal (-)
13	Mass Air Flow Sensor/ Signal
14	AVCS Shield
15	AVCS Camshaft Position Sensor (LH) (-)
16	Oil flow control solenoid valve (LH) Signal (-)
17	Oil flow control solenoid valve (LH) Signal (+)

Pin #	Connector B135
1	Camshaft Position Sensor (+)
2	Crankshaft Position Sensor (+)
3	-
4	Knock Sensor Signal
5	-
6	Fuel Temperature Sensor Signal (USDM)
7	Throttle Position Sensor Signal
8	Manifold Absolute Pressure Sensor Signal
9	Throttle Position Sensor Power Supply
10	Camshaft Position Sensor (-)
11	Crankshaft Position Sensor (-)
12	Wiper Switch
13	Tumble Generator Valve Position Sensor (LH)
14	-
15	Fuel Tank Pressure Sensor Signal (USDM)
16	Exhaust Temperature Sensor Signal
17	Oxygen Sensor Signal (Rear)
18	Engine Coolant Temperature Sensor
19	Ground (Sensor)
20	-
21	Crankshaft Position Sensor (Shield)
22	Ground (Knock Sensor)
23	Tumble Generator Valve Position Sensor (RH)
24	Powersteering Oil Pressure Switch
25	Fuel Level Sensor
26	Oxygen Sensor Shield (Rear)
27	Air Temperature Sensor
28	-

Pin #	Connector B134
1	Vehicle Speed Signal
2	AC Switch (USDM)
3	Rear Defogger Switch
4	-
5	Test Mode Connector (ADM) / Ignition Switch (USDM)
6	AC SWITCH
7	Ground (Control system)
8	Neutral Position Switch
9	Blower Fan Switch
10	-
11	-
12	-
13	Fuel Pump Control Unit Signal 1
14	Ignition Switch (ADM) / Test Mode Connector (USDM)
15	Ground (Control system)
16	Starter Switch
17	Small Light Switch
18	Torque Control 2 Signal (USDM)
19	Torque Control 1 Signal (USDM)
20	-
21	-
22	Ground (Power Supply)

Figure 11 – Platinum Pro Plug-in Subaru WRX ECU Pinout

Haltech™

ENGINE MANAGEMENT SYSTEMS



Need more help?



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