



***PLATINUM***  
***PRO PLUG-IN***  
***SUBARU MY 01-05***  
***(HT055174)***  
**QUICK START GUIDE**



### LIMITED WARRANTY

Lockin Pty Ltd trading as Haltech warrants the Haltech™ Programmable Fuel Injection System to be free from defects in material or workmanship for a period of **12 months** from the date of purchase.

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. Lockin Pty Ltd trading as Haltech suggests that the purchaser retain the dealer's dated bill of sale as evidence of the date of retail purchase.

If the Haltech™ Programmable Fuel Injection System 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 Lockin Pty Ltd trading as 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 Lockin Pty Ltd trading as Haltech, be liable for special or consequential damages.

### DISCLAIMER

Haltech will not be held responsible for any damage caused by the incorrect installation or tuning of this product. It is the installers responsibility to ensure the wiring connections and pinouts match that of the vehicle the unit is being installed into.

Haltech has taken all care to make sure the connections match the specified vehicles listed, but variations in wiring and connections on vehicles can occur and therefore this should be checked BEFORE the unit is installed.

Haltech highly recommends installation and tuning of this product is to be carried out by a professional, with an understanding on installing and tuning engine management systems.

Misuse of this product can destroy your engine.

### WARNING

This ECU is designed and sold for Racing use only. Using this product for street / road use may be prohibited by law. Please check with your local vehicle authority before using this product.

### GENERAL INSTALLATION WARNING

Avoid open sparks, flames or operation of electrical devices near flammable substances. Always disconnect the battery cables when doing electrical work on your vehicle.

Do not charge the battery with a 24 Volt truck charger or reverse the polarity of the battery or any charging unit. Do not charge the battery with the engine running as this could expose the ECU to an unregulated power supply that could destroy the ECU and other electrical equipment.

All fuel system components and wiring should be mounted away from heat sources, shielded if necessary and well ventilated. Disconnect the Haltech ECU from the electrical system whenever doing any arc welding on the vehicle by unplugging the wiring harness connector from the ECU.

After completing the installation, make sure that there are no fuel leaks, and no wiring left un-insulated in case a spark or short-circuit occurs and causes a fire. Also make sure that you follow all proper workshop safety procedures. If you're working underneath a jacked-up car, always use safety stands!

# ***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](http://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

### ***Optional Accessories ( Sold Separately )***

- Rear Auxiliary Harness ( HT040003 )
- 3 Bar Map Sensor ( HT010104 )
- Air Temperature Sensor ( HT010200 )

### ***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.

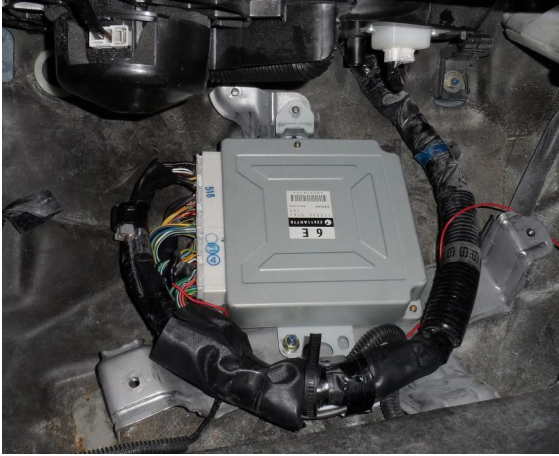


***Figure 1 – ECU Location, Passenger side footwell***



***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



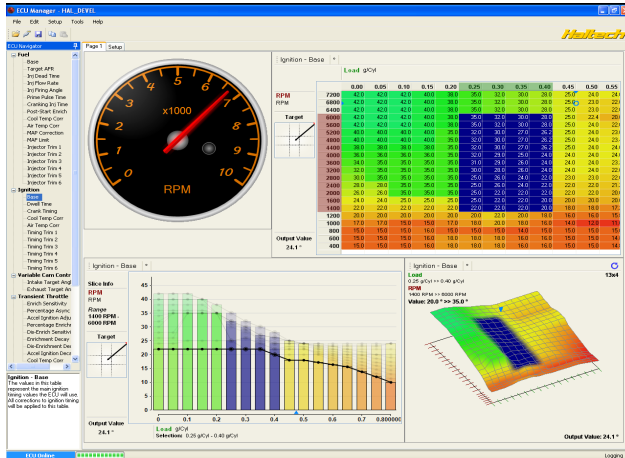
***Figure 5 – ECU Protection panel re-installed***

5. Re- install the carpet



***Figure 6 – Carpet re-installed***

- 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**

- 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](http://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](http://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***

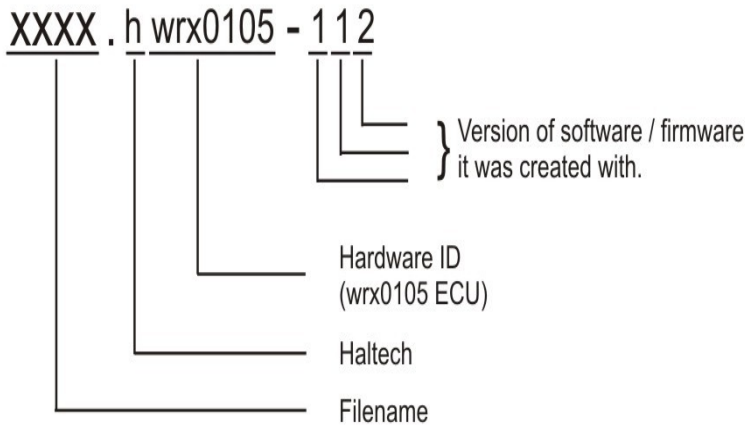
Detailed manuals can be found in the software by pressing your F1 key or by selecting the Help tab located at the top left of the screen

## ***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. ( HT040003 )*



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 ( HT040003 )

### ***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 ( HT040003 )

**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 ( HT040003 )

**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 ( HT040003 )

### ***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.

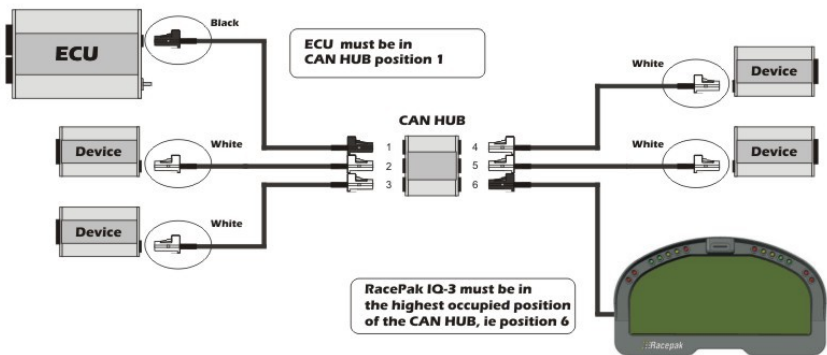
Simply connect the device directly to the 8 pin CAN connector on the rear of the ECU or connect using an optional Haltech CAN Hub (order as part # HT05990) if multiple expansion devices are required).

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

For current available expansion devices please go to our website at [www.haltech.com](http://www.haltech.com)

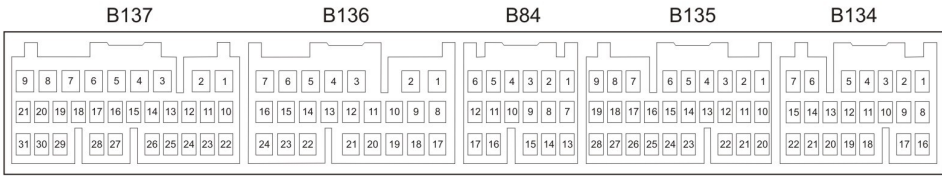


**Figure 9 – Haltech ECU connected to a Racepak Dash**



**Figure 10 – Haltech ECU connected to 5 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 or 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 or Signal
14	AVCS Shield
15	AVCS Camshaft Position Sensor or (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 or 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 or (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	A/C Switch (USDM)
3	Rear Defogger Switch
4	-
5	Test Mode Connector (ADM) / Ignition Switch (USDM)
6	A/C 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



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**Version 2**