



**SEMI-TERMINATED HARNESS
FOR iC-7 DISPLAY DASH**

QUICK START GUIDE



HT-060300

HARNESS OVERVIEW

Congratulations on purchasing a Haltech Semi-Terminated Harness for the iC-7 Display Dash.

This harness, in conjunction with the iC-7 Display Dash is an ideal solution for anyone looking to simplify and modernise their dashboard setup.

With this harness, the iC-7 can be used on cars without a Haltech (or any aftermarket) ECU.

This harness will also work with carbureted or mechanically injected applications making the iC-7 a truly universal "stand-alone" display dash.

This quick start guide will walk you through the installation of the Haltech iC-7 Colour Display Dash into your vehicle using the Semi-Terminated Harness.

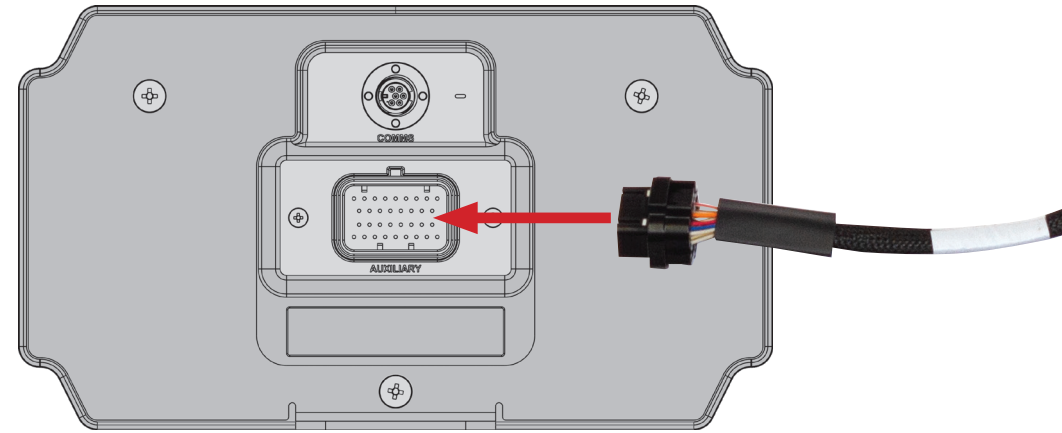
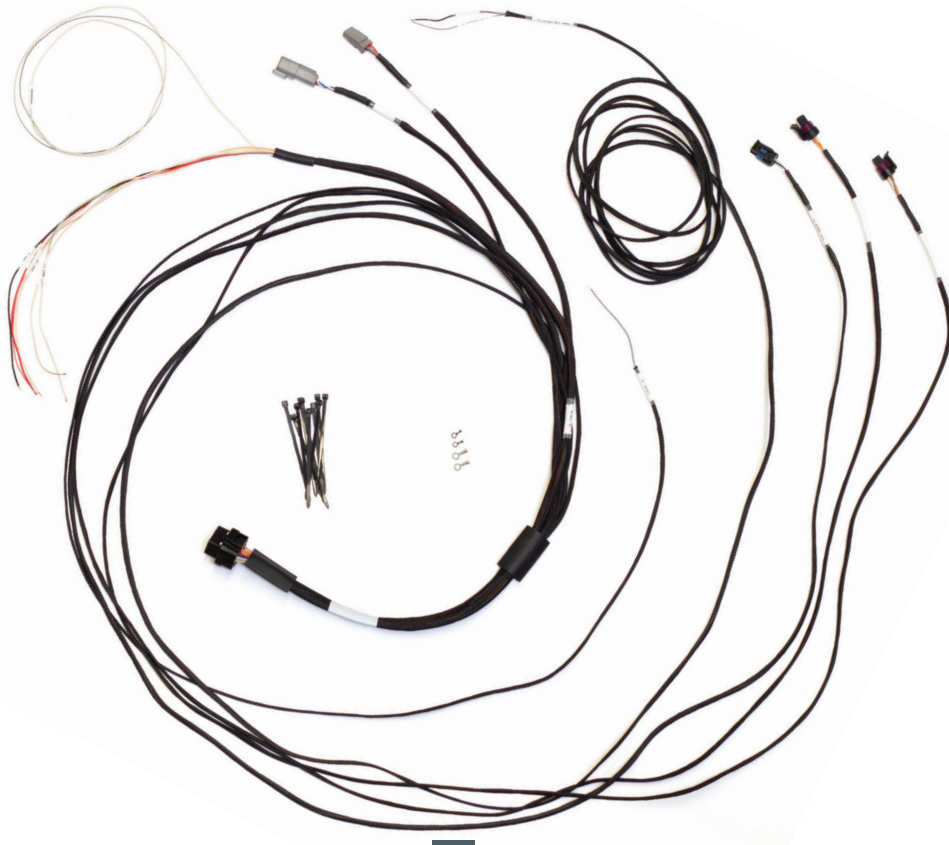
This harness supports both the CAN and the OBDII versions of the iC-7 Display Dash.

What's in the box?

- Haltech Semi-Terminated Harness for the iC-7 Colour Display Dash
- 10 x 100mm cable ties
- 2 x 3mm ID ring terminals
- 2 x 4mm ID ring terminals

Optional Accessories (Sold Separately)

- Haltech iC-7 Sensor Pack (HT-010001)
 - 1 x Coolant Temp Sensor 1/8 NPT
 - 2 x Pressure Sensors 0-150psi
 - 1 x 1/8 NPTF to 3/8 NPTF Adaptor
- Haltech GPS Speed Input Module (HT-011310)



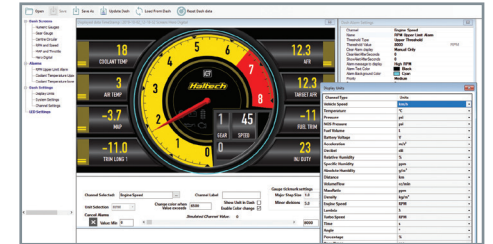
This harness comes complete with labeled terminated sensor connectors as well as flying lead connections for integrating additional inputs such as high beam, park lights, turn signals or fuel level sender.

This harness connects directly to Haltech's iC-7 Display Dash with a 34 Pin Superseal Connector. Make sure your iC-7 Display Dash has the latest firmware and software.

The latest ICC software can be downloaded from www.haltech.com/downloads

Features:

- Integrated Coolant Temperature connection.
- Integrated Fuel and Oil Pressure connection.
- Integrated Turn Signal indicator(s) connection.
- Integrated Handbrake, Park Light, High Beam, and Fuel Level connection.
- Plug'n'Play compatible with a Haltech GPS Speed Input Module.



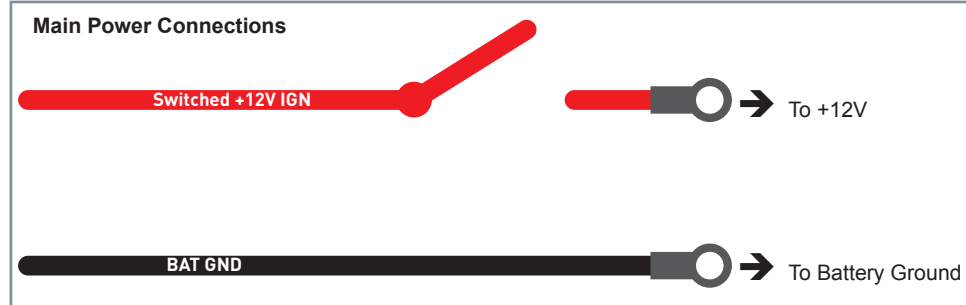
MAIN POWER AND IN-CABIN CONNECTIONS

Make sure all your input connections have been completed and all unused in-cabin wiring has been insulated before connecting the main power.

The main power connections in the harness are colour coded and labelled as: "Switched +12V IGN" and "BAT GND".

Switched +12V IGN (R)

This wire is colour coded RED and supplies +12V DC to the display and sensor circuits within the harness. Connect this cable directly to a switched +12V source.



WARNING!

This harness DOES NOT ground your engine.

Make sure your engine block is grounded to the battery of the vehicle via a correctly sized grounding strap.

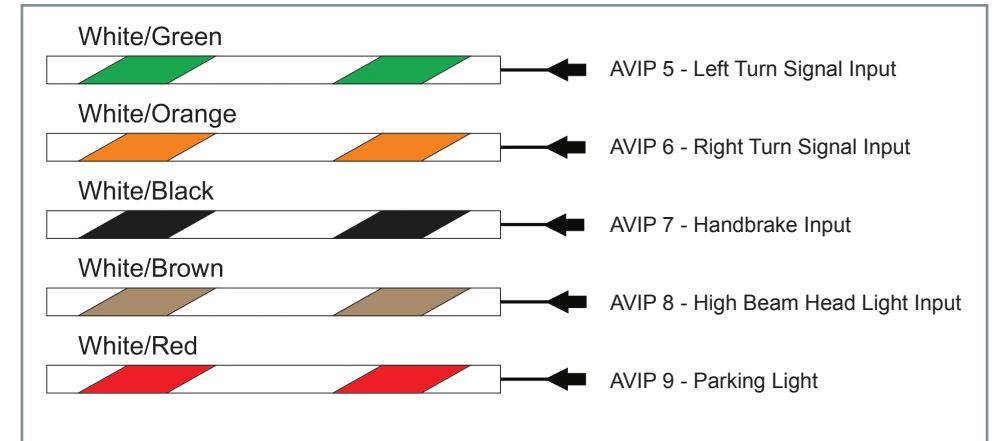
BAT GND (B)

This wire is colour coded BLACK and supplies battery ground for the harness. Connect this cable directly to the Battery (-) Supply terminal.

Lights and Indicators

The cabin-side part of this harness consists of multiple inputs. Correct connection of these wires is essential for effective operation of the iC-7 and all the attached sensors.

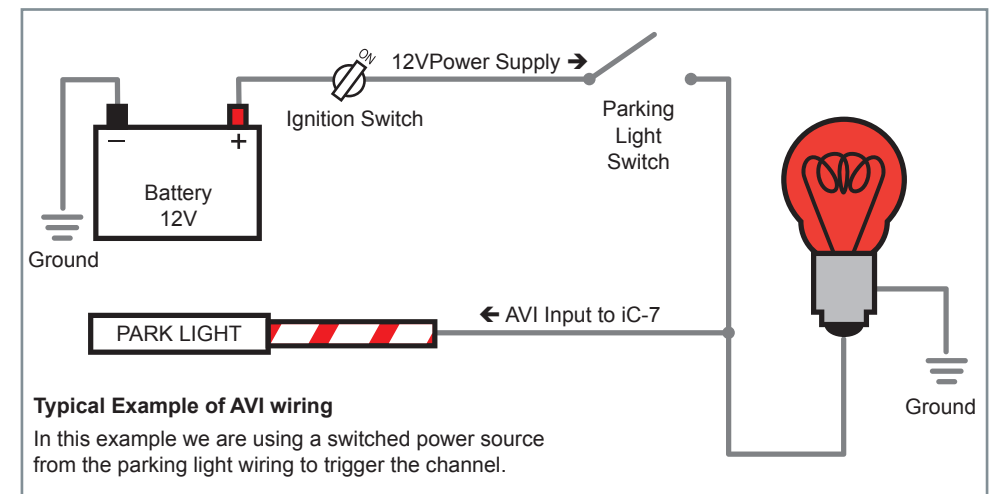
Any unused connections should be insulated.



The iC-7 is pre-programmed to accept voltage inputs for various lights and indicators.

The iC-7 can also trigger the Night Mode based on the Parking Light channel.

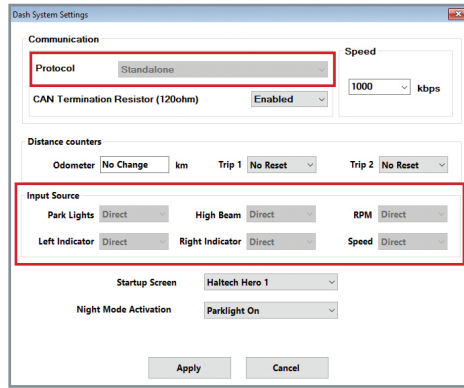
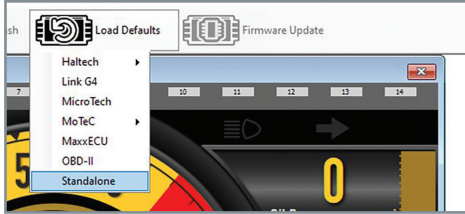
All lights and indicators are triggered by a switched 12V signal. Handbrake is triggered by a ground-switched signal. The location of these signals will vary from vehicle to vehicle.



Loading iC-7's Standalone Default

From the main screen click on the "Load Defaults" menu and select "Standalone".

All the iC-7 inputs are now automatically set to "Direct" input mode.



Speedometer Input

The speed sensor provides a signal which, when received by the iC-7 can be used to display vehicle speed and/or set up speed-based alarms.

This harness will connect directly to a Haltech GPS Speed Input Module (HT-011310) without any additional calibration or configuration required.

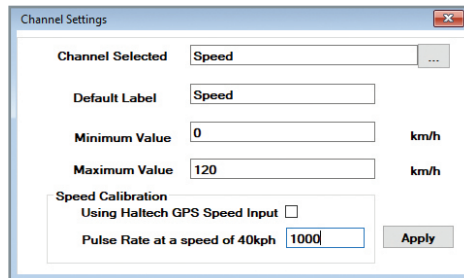
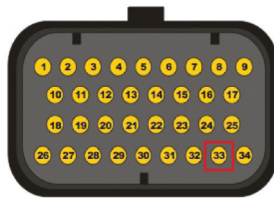
You can also connect your iC-7 to an existing OEM vehicle speed sensor.

In the Channel Settings window untick the "Using Haltech GPS Speed Input" box.

If you already know your sensor's Pulse Rate (PPM), enter it and click Apply.

If you don't know your sensor's PPM calculate it using the following steps:

1. Ensure your speed sensor and iC-7 dash have a common power and ground supply.
2. Connect the sensor signal wire to "SPEED IN" (Pin 33).
3. Display the Speed Pulse Rate channel on an available gauge.
4. Drive the vehicle at 40KPH (25MPH) and note the Speed Pulse Rate value.



You will need an external device (such as a GPS Speed smartphone app) to reference vehicle speed.

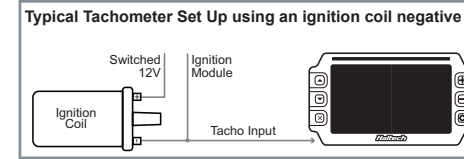
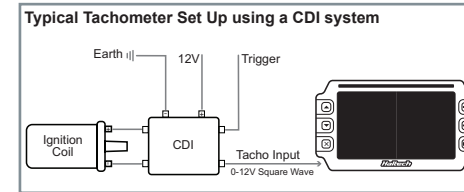
5. Enter the Speed Pulse Rate value in the relevant box and click "Apply" and you're all set!

Tachometer Input

The "TACHO IN" is used to supply the display with engine RPM signal. This signal can be provided by multiple ignition types.

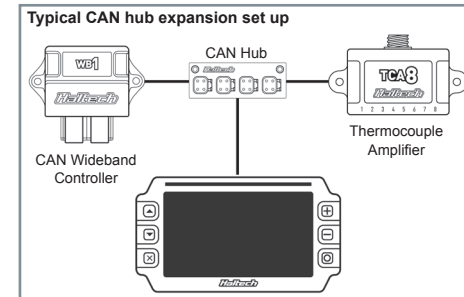
The "TACHO IN" input is an unterminated flying lead type which allows for an easy integration into many different types of OEM and custom-made wiring harnesses.

Connect this input to your current tachometer input wire. This wire can originate from a factory ECU, an ignition coil or your engine wiring harness.

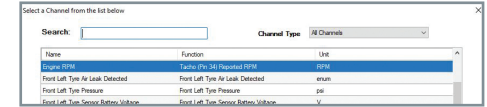


CAN BUS expansion

The CAN BUS connection is used to connect Haltech CAN Wideband Controller, Thermocouple Amplifiers or Tyre Monitoring System. Your iC-7 has been preconfigured to accept the Haltech CAN devices making installation truly Plug'n'Play.



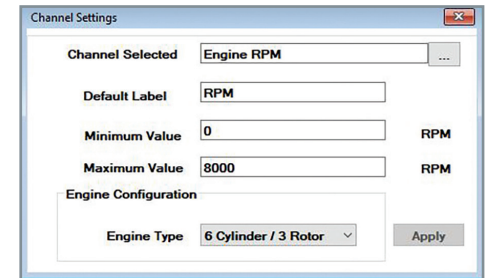
To configure the RPM (TACHO IN) channel in the ICC software, select the tachometer on the main dash layout page.



In the "Channel Settings" dialog box set your minimum and maximum RPM values (eg. 0-8000).

Choose your engine configuration from the "Engine Type" drop down menu and hit "Apply".

NOTE: some factory ECUs such as the GM LS output a four cylinder ignition signal (two pulses per revolution).



AVI CONNECTIONS

Analogue Voltage Inputs (AVIP)

The Analogue Voltage Inputs on Haltech's iC-7 can accept variable voltage levels from 0V to 5V.

The pre-calibrated inputs include air and coolant temperature, oil and fuel pressure and fuel levels (volume) inputs.

If your sensor is not listed in the "Sensors Connected" drop down menu of the "Channel Settings", you can use the "Custom" option and enter the calibration values manually.

Oil Pressure (AVIP 1)

The connector labeled "OIL PRESS" attaches directly to the Haltech oil pressure sensor.

This connection is pre-terminated with a 3 pin Delphi connector.



Oil and Fuel Pressure Configuration

The AVIP1 and AVIP2 channels are already pre-configured for Haltech's 0-150 PSI pressure sensors. They are labeled "Oil Pressure" and "Fuel Pressure" respectively.

Follow the steps below if you need to change the sensor type or the display target of this channel: Choose "Dash Settings" / "Channels" from the navigation menu.

Choose "AVIP1 Sensor Value". You can change its default label "Oil Pressure" if required.

Select "Input Calibration".

From this dialog menu, you can choose a different sensor type. You can also input a voltage range and values for that sensor.

Most pressure transducers have a range of 0-5V, but this may vary and it is important to obtain the correct manufacturer's sensor data prior to calibration.

These sensors are available as a complete kit: Haltech iC-7 Sensor Pack (HT-010001)

Fuel Pressure (AVIP 2)

The connector labeled "FUEL PRESS" attaches directly to a Haltech fuel pressure sensor.

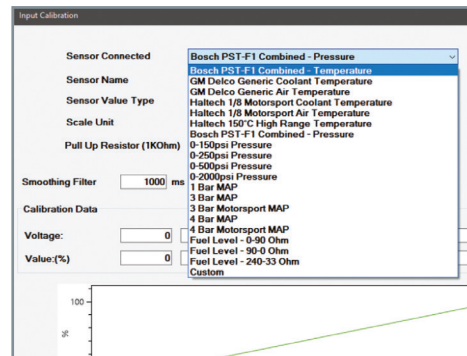
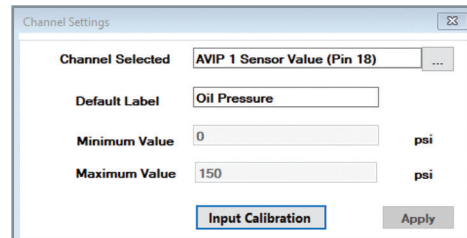
This connection is pre-terminated with a 3 pin Delphi connector.



Coolant Temperature (AVIP 3)

The connector labeled "CTS" attaches directly to a Haltech engine coolant temperature sensor. This connection is pre-terminated with a DTM-2 connector.

A Haltech iC-7 Sensor Pack also includes a 1/8 NPTF to 3/8 NPTF adaptor for vehicles that require a 3/8NPTF sensor.



Fuel Level (AVIP 4)

The flying lead connection labelled "FUEL LVL AVIP 4" is used to connect your existing fuel level sender to the iC-7 Display Dash.

The harness also features a DTM-2 in-line connection for servicing.



Once connected you can you calibrate your fuel level sender using Haltech's ICC software.

To calibrate your fuel level sender go to "Dash Settings" / "Channel Settings" on the navigation menu.

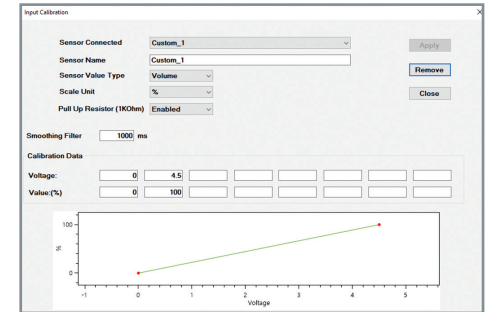
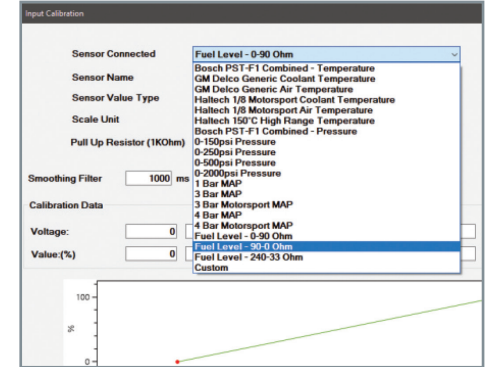
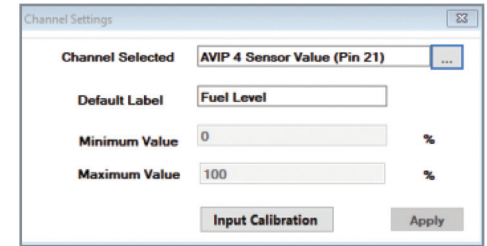
Choose "AVIP 4 Sensor Value". Select "Input Calibration".

The sensor dialog box will show a list of pre-configured sensors including optional Ohm ranges for common sending units. If you have one of the pre-configured sensors, select it and click "Apply".

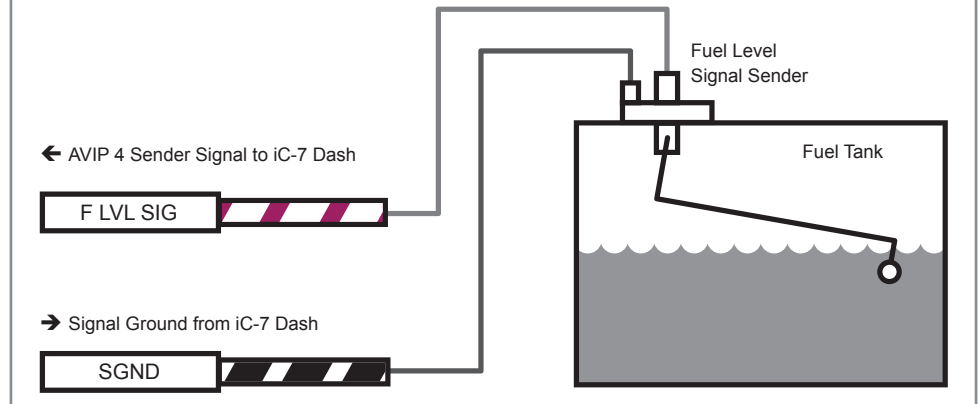
If your sensor type or Ohm range is not listed, you will need to input the "Custom" sensor type.

With the fuel sender connected to your iC-7, connect a Volt meter across your fuel sender gauge posts, and measure the minimum and maximum float height voltages.

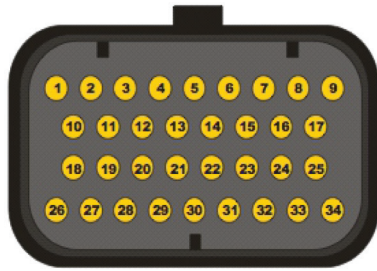
Input those voltages to their corresponding value (0-100). For maximum accuracy measure all eight data points. Otherwise leave them blank and allow the software to interpolate the values.



Typical Fuel Level Sender Wiring



HARNESS PINOUT DIAGRAM



A1	CAN H	Terminated CAN Connection
A2	CAN L	Terminated CAN Connection
A3	+12V Supply	Switched +12V Supply
A4	Ground Battery	Ground Terminal
A5	+5V Sensor Supply	+5V Supply to Sensors
A6		
A7		
A8		
A9		
A10		
A11		
A12		
A13		
A14		
A15		
A16		
A17	Parking Light	Flying Lead
A18	Oil Pressure	Terminated Delphi Connection
A19	Fuel Pressure	Terminated Delphi Connection
A20	Coolant Temp	Terminated DTM-2 Connection
A21	Fuel Level	Terminated DTM-2 Connection + Flying Lead
A22	Left Turn Signal	Flying Lead
A23	Right Turn Signal	Flying Lead
A24	Handbrake	Flying Lead
A25	High Beam	Flying Lead
A26		
A27		
A28		
A29		
A30	Sensor Ground	Ground Supply to Sensors
A31		
A32		
A33	Speed Input (VSS)	Connects to Haltech GPS Module HT-011310
A34	RPM (Tacho In)	Connects to Coil (-), or Engine Speed Input Source



WARRANTY CERTIFICATE

At Haltech we make every effort to design and manufacture fault-free products that perform up to or above the market expectations. All our products are covered by a Limited 12 Month Warranty.

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.

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. Proof of purchase in the form of a copy of the original purchase invoice, receipt or bill of sale which indicates that the product is within the warranty period, must be presented to obtain warranty service.

Replacement or repair of a defective product 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, receipt or bill of sale 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.

Returns of Products Supplied in Sealed Packaging

The sale of any sensor or accessory 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.

A sensor or accessory product may be returned after 30 days of purchase (with its sealed packaging in tact) for credit only (no refunds given) and will be subject to a 10% restocking fee.

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 Off-Road Usage Policy

In many states 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 and may never be used on a public road or highway.

Using Haltech products for street/road use on public roads or highways is prohibited by law unless a specific regulatory exemption exists (more information can be found on the SEMA Action Network website www.semasan.com/emissions for state by state details in the USA).

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 purchasing, using or installing any Haltech product.



Haltech Australia

17 Durian Place,
Wetherill Park NSW 2164
Australia
Phone: +61 2 9729 0999
Email: aus@haltech.com

Haltech USA East

750 Miles Point Way,
Lexington, KY 40510 USA
Phone: +1 888 298 8116
Email: usa@haltech.com

Haltech UK

Unit 1, Miras Business Estate,
Keys Park Road, Hednesford,
WS12 2FS
Phone: +44 121 285 6650
Email: uk@haltech.com

Haltech New Zealand

Grey Lynn Auckland, NZ 1021
Phone: 09 887 0616
Email: nz@haltech.com

Haltech USA West

26429 Rancho Parkway S, Unit 125
Lake Forest, CA 92630 USA
Phone: +1 949 490 5660
Email: usa@haltech.com

Haltech Europe

Ottogasse 2A,
2333 Leopoldsdorf, Austria
Phone: +43 720 883968
Email: europe@haltech.com



facebook.com/HaltechEngineManagement



youtube.com/haltechecu



instagram.com/haltechecu