



DISPLAY DASH
QUICK START GUIDE

iC-7 DISPLAY DASH OVERVIEW

The Haltech iC-7 display dash now integrates seamlessly with the Nexus Software Programmer (NSP), unlocking powerful features such as Virtual Dash, custom screen displays, I/O sharing, and datalogging. It offers a bright, clear 7-inch full-color TFT display and 14 programmable 7-color shift light LEDs, which can also be triggered by alarms.

Designed for performance and customization, the iC-7 connects directly via CAN to Haltech Nexus or Elite ECUs. It includes user-configurable channels, units, and alarms, and features automatic

brightness adjustment via an ambient light sensor. Configuration is easily managed through the Haltech NSP software via USB connection.

The iC-7 Display Dash is available in three kits:

Part No. **HT-067010** is pre-configured for connection to all Haltech ECUs via a supplied DTM-4 to DTM-4 CAN extension cable.

Part No. **HT-067012** is pre-configured for connection to an OBD-II port via a supplied DTM-4 to OBD-II CAN cable. And,

Part No. **HT-067014** is the Standalone 'Classic' kit, which includes a semi-terminated standalone harness and some sensors, ideal for a standalone installation in old-school hot rods, mechanically injected muscle cars, carbureted classics, and everything in between.

What's in the box?

- Haltech iC-7 Display Dash
- 34 Pin main connector harness
- DTM-4 to DTM- 4 CAN cable (with HT-067010)
- DTM-4 to OBD-II CAN cable (with HT-067012)
- USB to M5 right angle cable
- USB cable
- Mounting screws
- Spare pins to suit AUX connector
- Quick start guide



SPECIFICATION	DETAILS
Display Size	7-inch full color TFT display, 800 x 480 resolution Fully customizable screens
Shift Lights	14 RGB
Dimensions	217mm x 122mm x39mm
Connectors	1 x M5 USB connector (COMMS) 1 x 34-pin Superseal (AUXILIARY)
Inputs and Outputs	9 x Analog Voltage Inputs (AVIs) 3 x Digital Pulsed Inputs (DPIs) 4 x Digital Pulsed Outputs (DPOs) 5V output and signal ground for sensors Tachometer input pin (for wired tachometer signal) 6 x Control Buttons Ambient light sensor (onboard)
Communications	CAN (Haltech, OBD-II, or supported third party ECU) USB A (laptop) to USB-B (dash)
Operating Voltage	6.0V to 20.0V
Ambient Temperature	-10°C (14°F) to +60°C (140°F)
Onboard Datalogging	512MB
Odometer	6 digits
IP Rating	IP64 (Dust-tight and protected against water splashes)

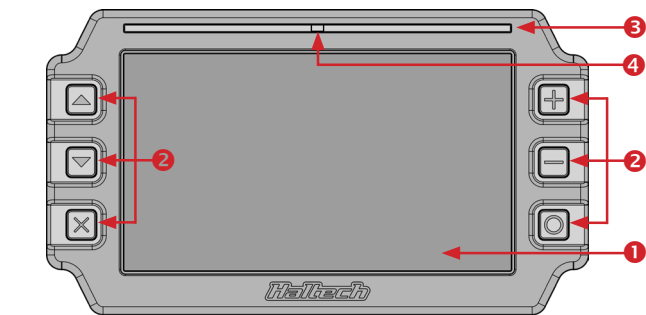
FRONT VIEW

- 1 Display Screen
- 2 Control Buttons
- 3 Shift / Alarm Light Panel
- 4 Ambient Light Sensor

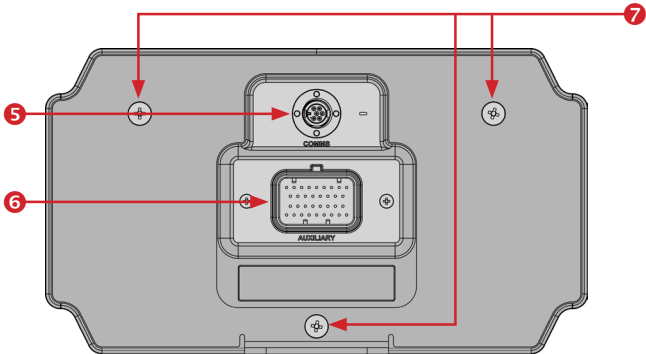
REAR VIEW

- 5 Comms Connector
- 6 Auxiliary Connector
- 7 Mounting Screw Holes

iC-7 DISPLAY DASH OVERVIEW



Front View



Rear View

iC-7 CAN CONNECTION

Haltech CAN connection and initial power up

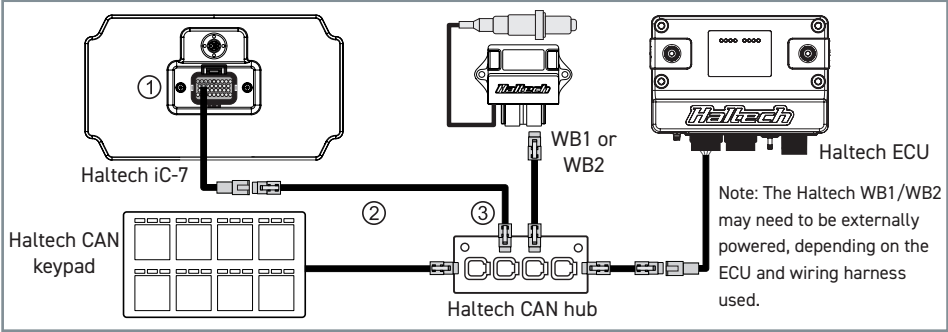
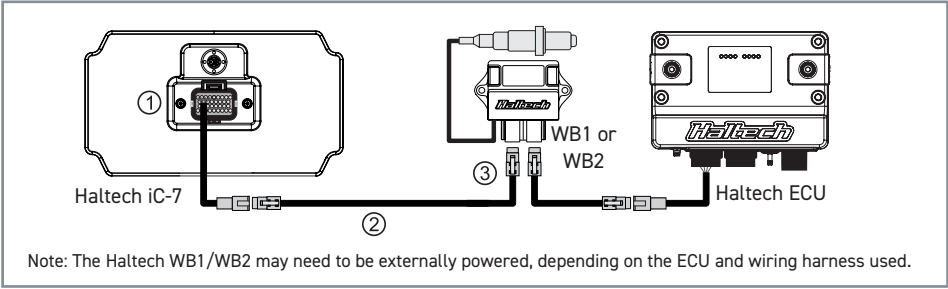
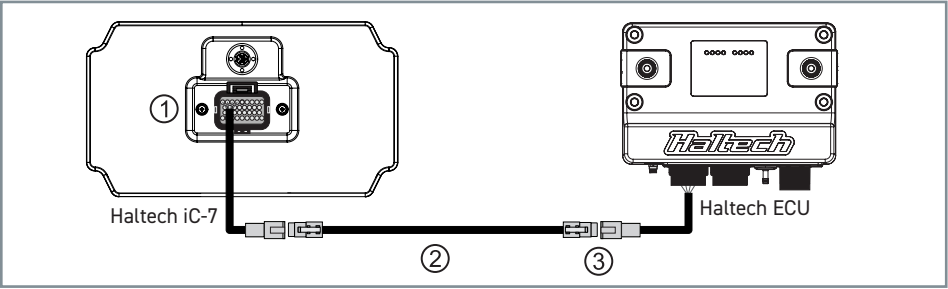
The iC-7 Display Dash requires a CAN connection to a Haltech ECU, a CAN OBD-II port, or a supported third-party ECU to power up.

To connect to a Haltech Elite or Nexus ECU:

- 1. Connect the supplied main connector harness, featuring a 34-pin Superseal connector, to the corresponding 34-pin connector located at the back of the dash.
- 2. Attach the DTM-4 to DTM-4 CAN extension cable to the main connector harness's DTM-4 connector.
- 3. Proceed to run the other end of the DTM-4 cable and connect it to your Haltech ECU, an unused port on your Haltech WB1/WB2, or an unused port on your Haltech CAN hub.

The Haltech CAN connection not only provides ignition power but also ensures proper grounding. As a result, the dash will activate immediately once the Haltech ECU receives power (i.e., turning the ignition key to the "on" position).

This streamlines the integration, allowing for quick and efficient operation of the iC-7 Display Dash.



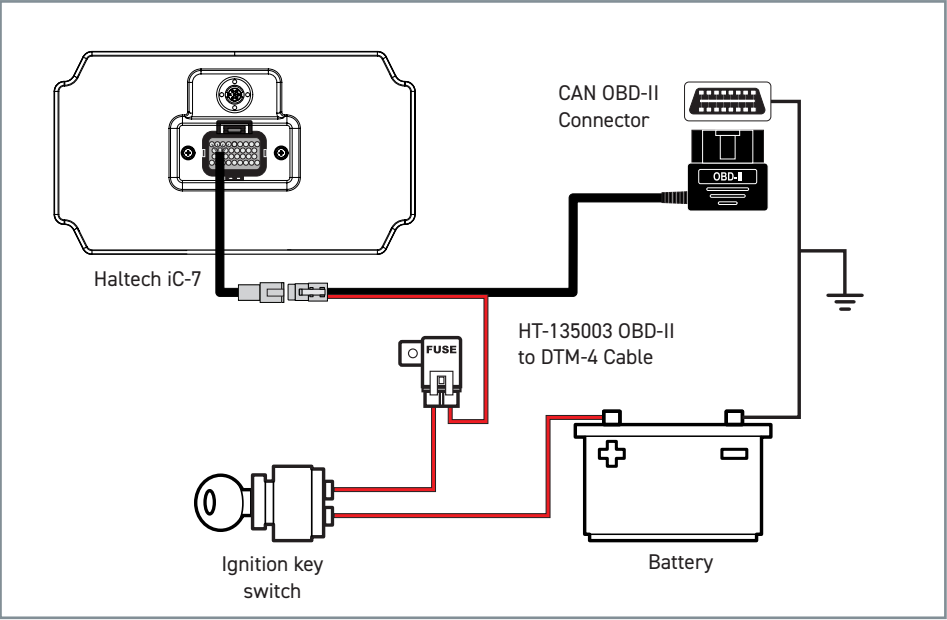
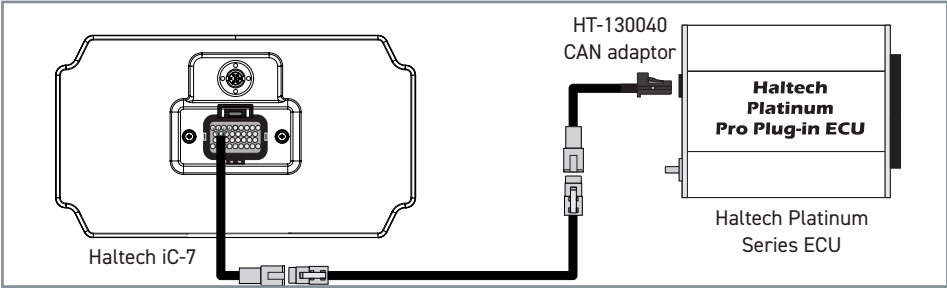
NOTE: If your Haltech Nexus or Elite ECU has two or more CAN channels, you must ensure that the iC-7 Display Dash is connected to a CAN channel configured to use the Haltech CAN protocol. If this protocol is not enabled, the dash will power up but will not display any ECU data.

To connect to a Haltech Platinum Series ECU:

If you are using a Haltech Platinum Series ECU, an additional CAN cable adapter is required to convert the DTM-4 plug to an 8-pin Tyco connector. This cable is included with the ECU upon purchase and can also be bought separately if you need a new one (HT-130040).

CAN OBD-II connection

To connect the iC-7 to a vehicle that uses CAN OBD-II, use the HT-135003 OBD-II to DTM-4 CAN Cable (included with the HT-067012 kit) to read and display data from the vehicle's OBD-II system. Apart from being a communications cable, this cable also provides +12V to the display dash. The red power wire should be connected to a switched +12V 'Key On' power source in the vehicle, since the vehicle's OBD-II connector supplies constant 12V even when the key is off. For more information on where to connect this wire, please refer to your vehicle's wiring diagram.

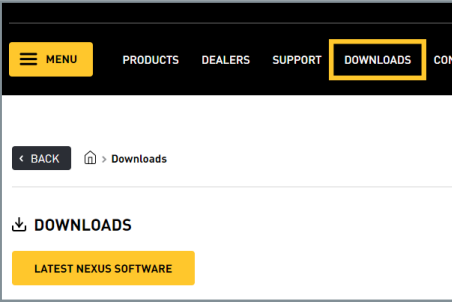


NEXUS SOFTWARE PROGRAMMER

Installing the NSP software

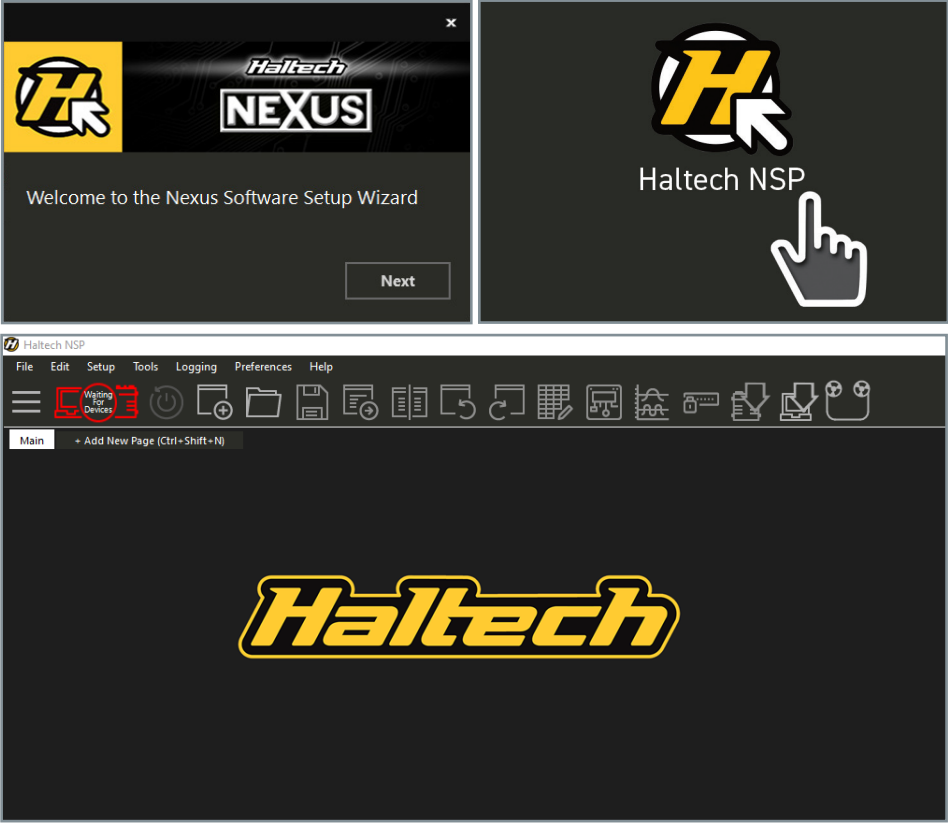
Haltech NSP (Nexus Software Programmer) is the current software used for setting up and configuring the iC-7 Display Dash. Follow these steps to install the Haltech NSP software:

1. Download the NSP installer - Go to the Haltech website (www.haltech.com), navigate to the 'Downloads' section, and click on the download link.



2. Run the installer file - Once the download is complete, locate the downloaded file (usually in the 'Downloads' folder of your computer) and double-click on the file to run the Nexus Software Setup Wizard.

3. Launch Haltech NSP - Once the installation is complete, you can launch the Haltech NSP software from the Windows 'Start' menu or using the desktop shortcut that was created.

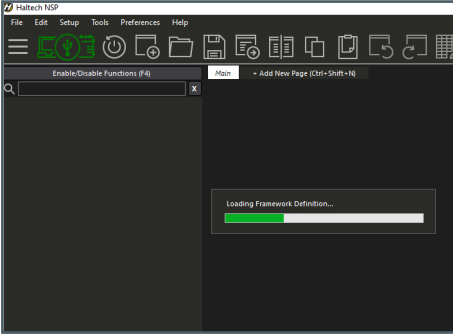


NOTE: If you have a Haltech iC-7 Display Dash with older firmware that only communicates with the Haltech ICC software, it is recommended to upgrade the dash firmware to use the Haltech NSP software and take advantage of the additional available display dash features. To upgrade the dash, follow the steps by scanning the QR code on the right.



Going online with the display dash

With the NSP software open and the dash powered up, connect the supplied Haltech USB cable from your laptop to the USB to M5 connection ("Comms" connector) at the back of the iC-7 Display Dash.



The USB connection enables the NSP software to automatically recognize the iC-7 Display Dash and establish a connection. The software allows you to further configure the display beyond the default settings. This includes customizing screens, configuring warnings and alarms, or assigning inputs and outputs to sensors or devices that you plan to wire directly to the dash.

The NSP software displays dash data in real-time and applies changes to the dash screen as soon as you make adjustments in the software. This makes the dash setup easier, more intuitive, and a more refined experience.

Screen Navigation

Three keys perform the screen navigation.

- Press key to go back to the previous screen in the sequence.
- Press key to go to the next screen in the sequence.
- Press to go to the home (default) screen.

When the dash is powered up it will display a Haltech Logo Screen. After an initial configuration time the dash will display the set home screen.

You can choose from a number of display layouts available in the Haltech NSP software. Display channels are user-customisable.

Brightness Control

The dash has an ambient light sensor placed in the light bar to detect ambient light conditions.

In addition, the dash has a manual brightness control which alters the range of the ambient light sensor.

There are five brightness settings. On minimum brightness setting, the display is at its minimum brightness when the environment is dark, and the brightness of the display increases as the environment becomes brighter.

On the maximum brightness setting, the display is always at full brightness regardless of the ambient light level.

iC-7 DISPLAY DASH BUTTONS

The default setting is brightness level 3.

Press the key to increase the brightness level by 1.

Press the key to decrease the brightness level by 1.

Shift / Alarm Lights

The default function of the shift / alarm light panel is as a shift light bar, however alarms can be programmed for any channel in the iC-7.

There are 14 lights in the sequence. Each LED has a threshold to trigger, and a color which it lights up when the RPM exceeds the threshold.

The colors available are red, green, blue and their combinations (yellow, cyan, magenta and white).

Alarms are configured using the Haltech NSP software. When an alarm event occurs, a message will appear on the screen.

The lights on the light bar can be set to flash in a preset color.

When an alarm is triggered there are two options of turning it off:

1. Press the key to acknowledge the alarm.
2. Pre-set your alarm to turn off automatically when the alarm condition is no longer active after a preset amount of time.

iC-7 MOUNTING OPTIONS

Moulded Panel Mount →
HT-060090

Bolts directly to the back of your iC-7 using three mounting screws provided. 10" x 20", can be trimmed to fit a variety of cluster surrounds.

Universal Mounting Bracket with Integrated Visor ↓
HT-060071

Bolts directly to the back of your iC-7 using three mounting screws provided. Includes a sun visor which reduces glare and protects the screen.

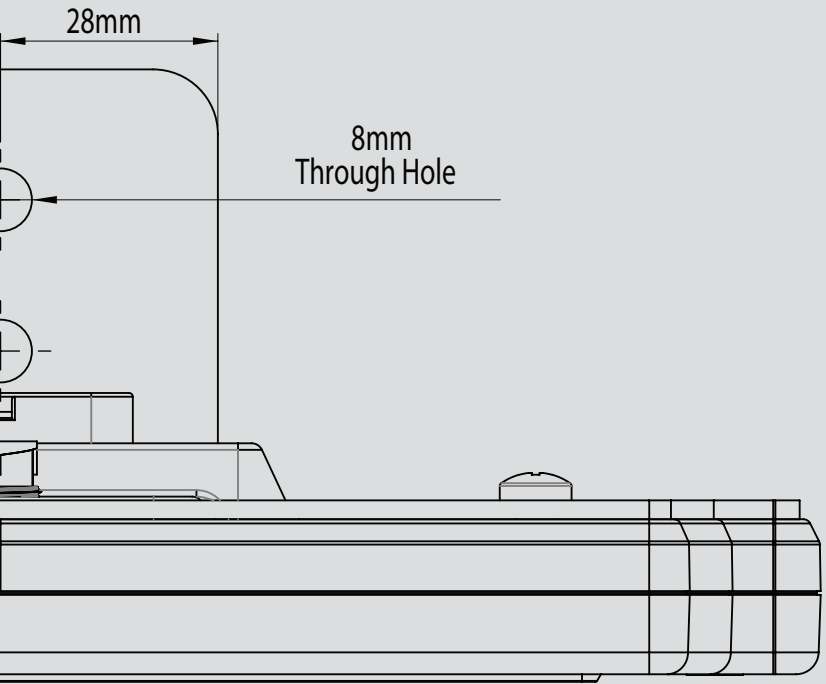
Universal Mounting Bracket →
HT-060070

Bolts directly to the back of your iC-7 using three mounting screws provided.



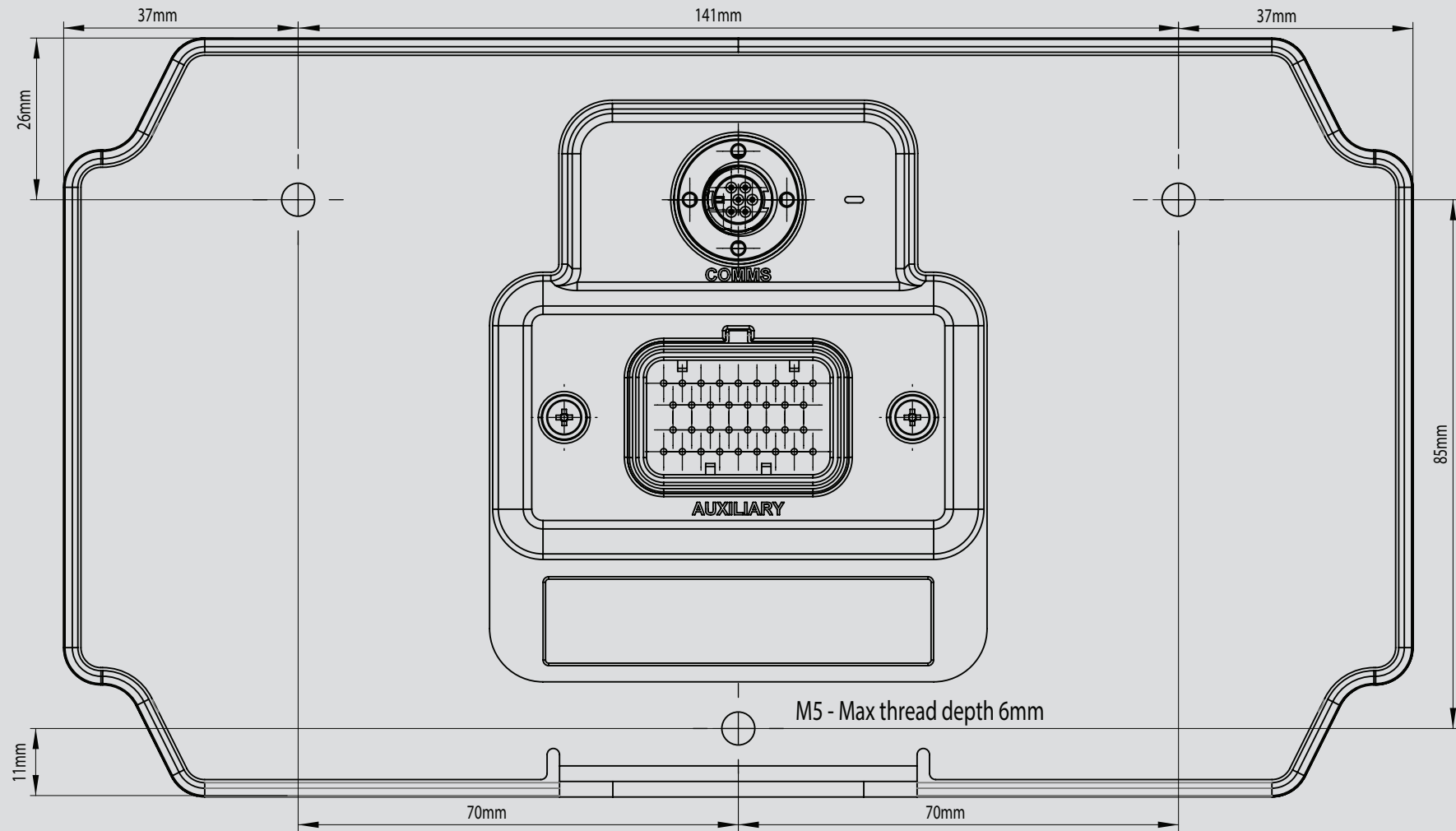
Tube Mount ↓

Connects the Universal Mounting Bracket to a roll cage or steering column. HT-060072 suits tube OD 1.25in

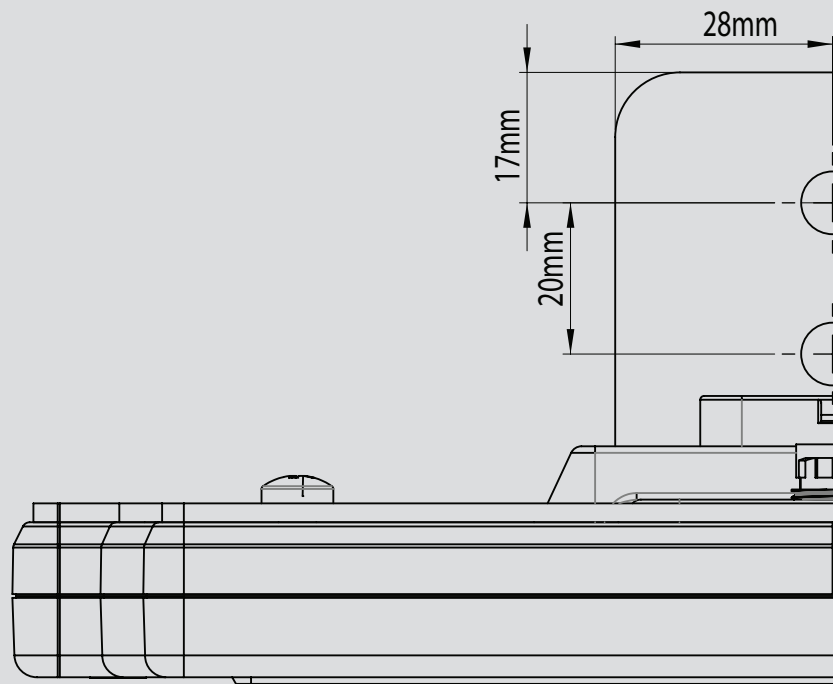


MOUNTING TEMPLATE

MOUNTING TEMPLATE



MOUNTING TEMPLATE



iC-7 Main connector (AMP 34-pin Keyway 2)
Wire side view

PIN	FUNCTION	PIN	FUNCTION
1	CAN High	18	AVI 1 (Oil Pressure)
2	CAN Low	19	AVI 2 (Fuel Pressure)
3	+12V switched input	20	AVI 3 (Coolant Temp)
4	Battery ground	21	AVI 4 (Fuel level)
5	+5V output	22	AVI 5 (Left Indicator)
6	Unused	23	AVI 6 (Right Indicator)
7	Unused	24	AVI 7 (Handbrake)
8	Unused	25	AVI 8 (High Beam)
9	Unused	26	DPO 1
10	Unused	27	DPO 2
11	Unused	28	DPO 3
12	Unused	29	DPO 4
13	Unused	30	Signal ground
14	Unused	31	DPI 3
15	Unused	32	DPI 2
16	Unused	33	DPI 1 (Vehicle Speed)
17	AVI 9 (Park Lights)	34	Tacho input

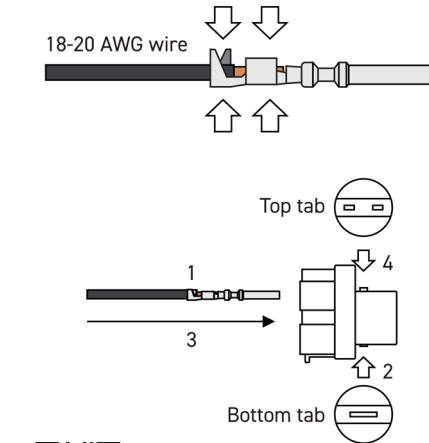
Note: The pinouts above show suggested functions (in parentheses), but they can be changed in NSP.

iC-7 PINOUT INFORMATION

How to place pins into the connector:

1. Crimp the pin onto the wire.
2. Push the bottom tab to unlock.
3. Insert the pin into harness side of connector.
4. Push the top tabs to lock.

NOTE: Use crimper set HT-070300. Please remember soldering the wire into the pin is not recommended.



VIDEO: How to crimp like a pro

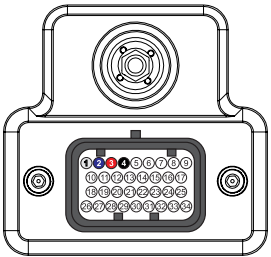
iC-7 DISPLAY DASH WIRING

iC-7 Main Power and Ground

For proper dash display operation or connectivity to the NSP software, ensure that the iC-7 Display Dash is powered on through pin 3 (switched +12V power) and pin 4 (ground).

In most applications, these power and ground pins are connected to and powered by the Haltech ECU CAN system using the DTM-4 to DTM-4 cable included with the dash.

For CAN OBD-II applications, the power and ground connections are linked to the factory OBD-II connector but utilizing a Haltech CAN OBD-II cable to supply switched +12V to the dash.



Pin 1: CAN high
Pin 2: CAN low
Pin 3: Switched +12V
Pin 4: Battery ground

Analog Voltage Inputs (AVI)

Number of channels: 9

Analog Voltage Inputs (AVIs) are inputs that accept variable voltage signals ranging from 0-5V, typical of pressure, temperature, and position sensors. These inputs can also accommodate switch signals that alternate between two distinct voltage levels.

AVIs feature a software-selectable 1K-ohm pull-up resistor to 5V, which is typically enabled for temperature-related sensors and switched to ground inputs. They are usually disabled for sensors with an external +5V supply, such as pressure sensors or throttle position sensors.

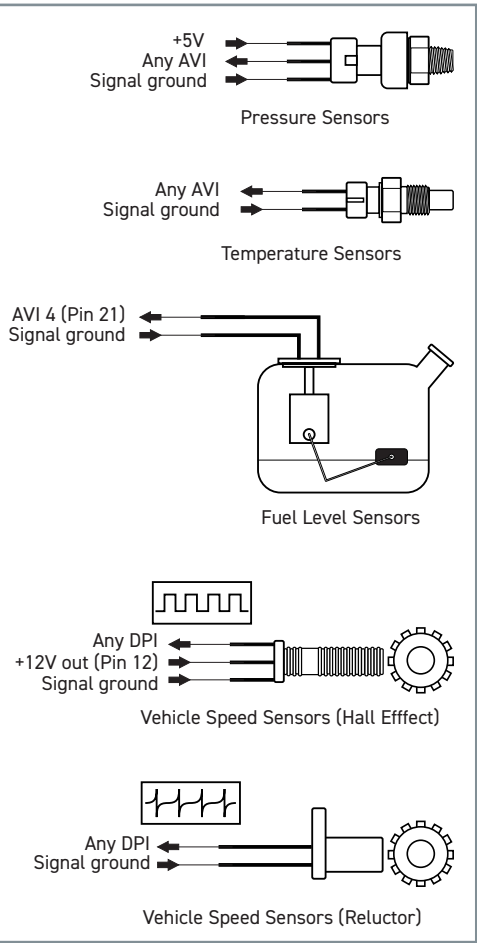
NOTE: Version 2 iC-7 hardware and later feature a 240-ohm pull-up resistor on AVI 4, making this input ideal for use with most fuel level sensors. Version 2 hardware can be identified by the last digit of the unit's serial number, which will be 3 or higher.

Digital Pulsed Inputs (DPI)

Number of channels: 3

Digital Pulsed Inputs (DPIs) are capable of measuring the duty cycle or frequency of a signal, making them suitable for most Hall Effect or Reluctor speed sensors.

When not used for speed sensors, these inputs can also function as switched inputs that alternate between two voltage levels, e.g. +12V or 0V (ground).

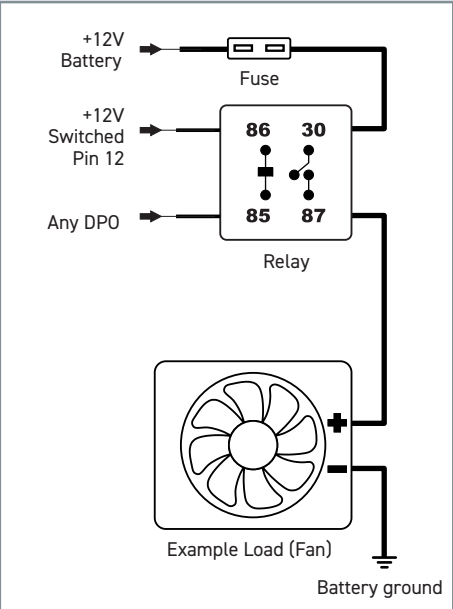


Digital Pulsed Outputs (DPO)

Number of channels: 4

Digital Pulsed Outputs (DPOs) are capable of controlling relays or low-current solenoids (up to a maximum of 3A) using varying duty cycles, frequencies, or simple on/off states.

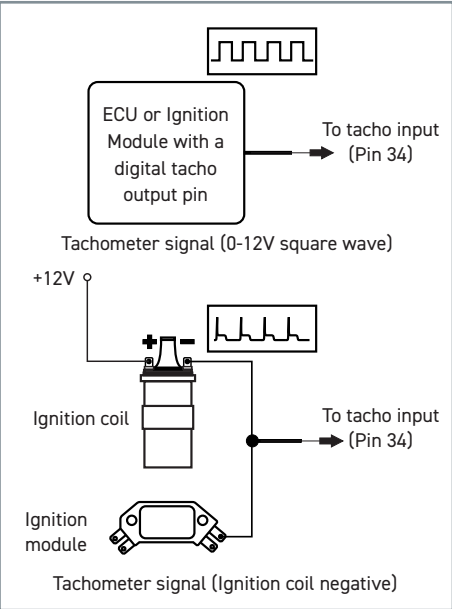
When the output is activated by the dash, the DPO pin switches to ground. Therefore, any connected device should be wired to respond to a ground signal when triggered.



Tacho Input

The Haltech iC-7 Display Dash includes a dedicated tacho input (Pin 34), which can be utilized when a "wired" connection for a tachometer signal is needed. That is, the tacho signal is not transmitted to the dash digitally via the CAN signal.

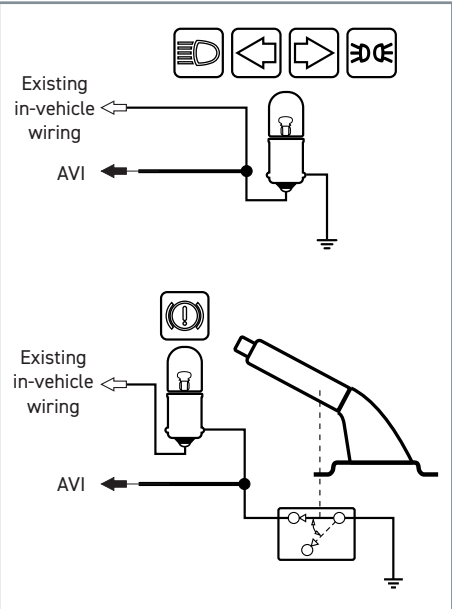
This wired tachometer connection supports both digital square wave signals, and an ignition coil negative type of signal - which is typically for applications using an external ignition module or distributor ignition with contact points.



Indicator and Warning Lights

For street applications, wiring signals for turn indicators and warning lights is essential. To wire these, connect an AVI as shown below to the existing vehicle wiring for these signals.

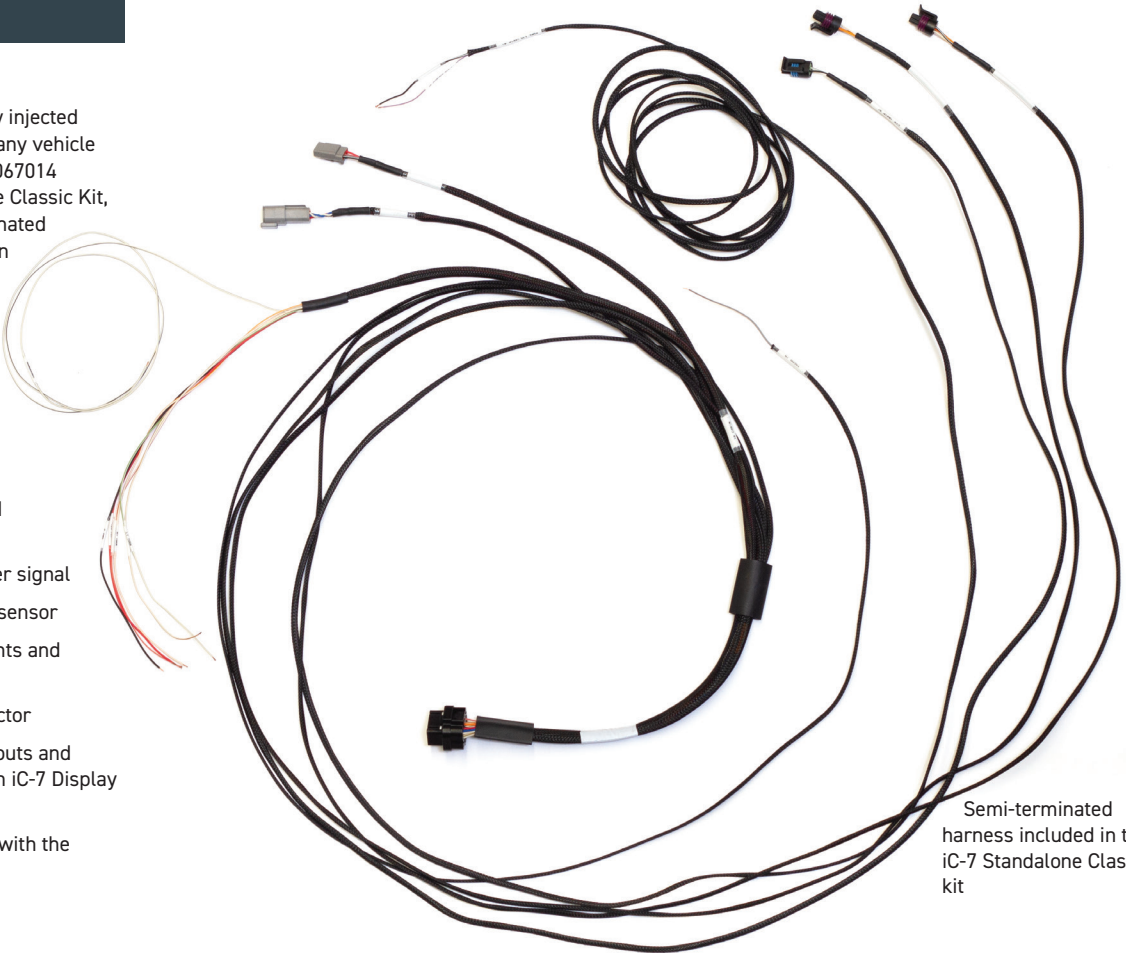
Additionally, configure the voltage thresholds for when the signals switch on or off to ensure the indicator or warning light displays correctly. For example, an indicator signal typically sends 12V to activate, whereas a handbrake switch usually goes to ground.



iC-7 STANDALONE KIT

For old-school hot rods, mechanically injected muscle cars, carbureted classics, or any vehicle without an ECU, you can use the HT-067014 Haltech iC-7 Display Dash Standalone Classic Kit, which includes a labeled, semi-terminated harness designed for easy installation and features the following:

- Coolant temperature connection with sensor included
- Oil pressure connection with sensor included
- Fuel pressure connection with sensor included
- GPS speed module / vehicle speed sensor connection
- Wire-in connection for a tachometer signal
- Wire-in connection for a fuel level sensor
- Wire-in connection for warning lights and indicators
- Haltech CAN Bus expansion connector
- Spare pins for wiring additional inputs and outputs available on the Haltech iC-7 Display Dash
- Harness Quick Start Guide to help with the installation



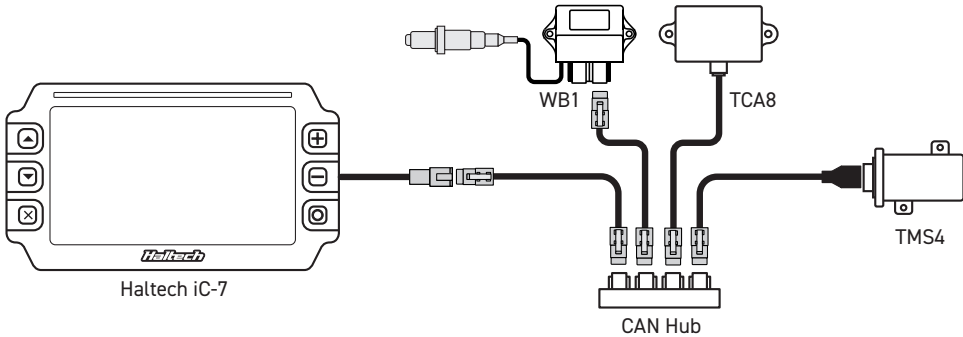
Semi-terminated harness included in the iC-7 Standalone Classic kit



Coolant temperature, oil pressure, and fuel pressure sensors included in the iC-7 Standalone Classic kit

Haltech CAN expansion

The iC-7 Dash Display also supports expanded functionality through the Haltech CAN bus DTM-4 connector fitted to the harness. This allows you to easily add multiple devices, such as Wideband Lambda controllers (WB1/WB2), Thermocouple amplifiers (TCA8), or tire monitoring systems (TMS4), and display all available data on your dash.



Note: Customizable screens are available in firmware version 2.30 or later.



Third Party CAN

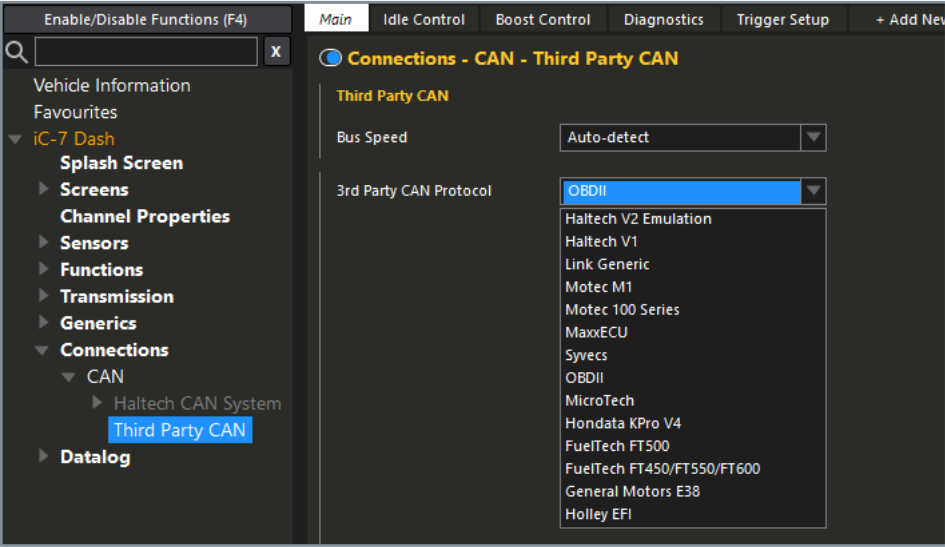
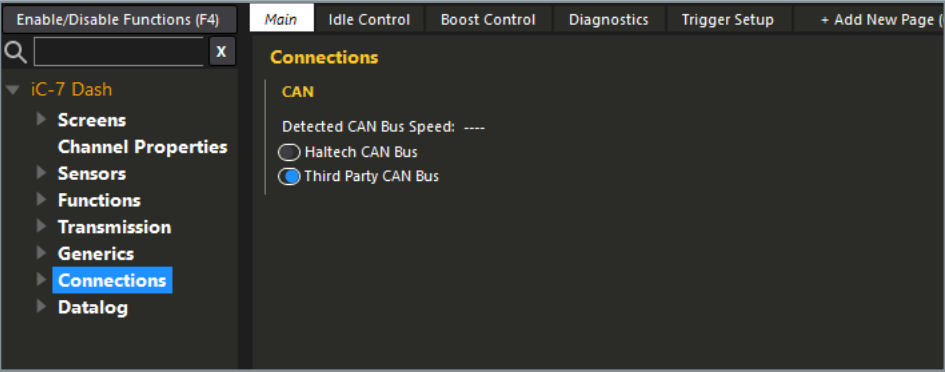
The Haltech iC-7 Display Dash is configured by default to communicate with a Haltech ECU.

If you need to set it up to communicate with a third party CAN device (e.g. a different ECU or CAN OBD-II), simply connect the iC-7 Display Dash to NSP, then click on Connections in the navigation tree.

From there, toggle the setting from Haltech to Third Party CAN Bus, then select the specific CAN protocol from the list that the iC-7 will use for communication.

A number of CAN adaptor looms are also available for purchase on the Haltech website to suit non-Haltech applications where the iC-7 Display Dash is being used:

- **HT-135003** - DTM-4 to OBDII CAN cable (included in the Haltech iC-7 OBD-II kit)
- **HT-130046** - DTM-4 to flying lead (universal)
- **HT-130047** - DTM-4 to 6-pin circular connector (suits Link wire-in ECUs)
- **HT-130048** - DTM-4 to JST 5-pin (suits Link Plug-in ECUs)
- **HT-130049** - DTM-4 to Minifit Jr (suits Microtech ECUs)
- **HT-130052** - DTM-4 to DTM-2 (suits Fueltech ECUs)
- **HT-130053** - DTM-4 to Molex Mizu-P25 (suits Holley ECUs)



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 intact) 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.semanet.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.



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