gaugeART CAN Video Adapter
(HT-061000)
QUICK START GUIDE

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www.haltech.com

Version 1

Next by clicking the Range tab, set the gauge colour to white. One or two "warning points" can be selected. This will cause the gauge to turn a certain colour at a certain data point. For example, this gauge will turn yellow at 104 degrees C and red at 133 degrees C.

If you'd like save your progress at this point by clicking "save design". This saves the background image and the gauges in to one .gad file.
The background image does not need to be loaded separately each time.
The background image can be changed at any time by clicking "change background".

The remaining gauges can be created in a similar way. To see completed design open the default .gad file by clicking "load design" and loading the "1006-Haltech-batter.gad" file.

Finally, to export the files to the SD card – insert the micro SD card in the supplied adaptor and insert the card into an SD port of your PC or CARD reader. If prompted to format the card, close the prompt and do not format the card.

Click the "export design" button and save the file to the SD card. If you wish to update the firmware (referred to as the pointers file) click the "update pointers" button and save the file to the SD card. Make sure that the card finishes writing before pulling it out of the SD port.

Insert the card into gaugeART (label side down) and power – up gaugeART.
The new design will begin to display after boot-up. Note that if gaugeART is already powered before the card is reinserted, it must be power cycled to load the new design.

Next, click "ADD A GAUGE" to add a new gauge.
Create a horizontal bar gauge and set the data type to "coolant".
Set the size and position of the gauge as shown.
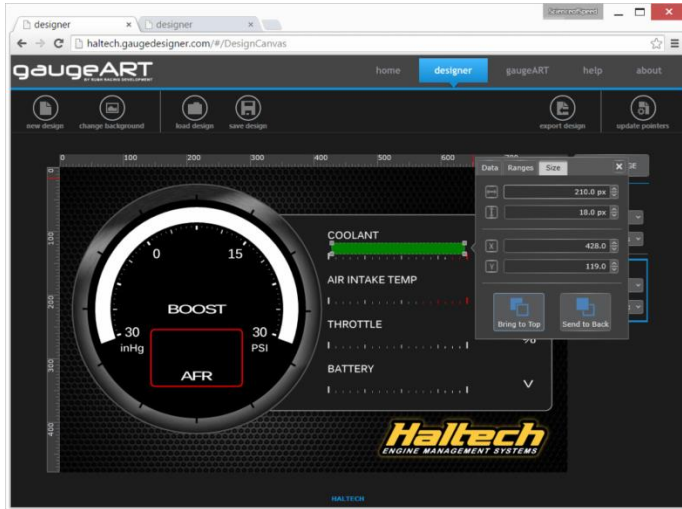
Leave the temperature units to C and set the display range from 38 – 120 degrees.

Check Average Rolling Data. This is selected for slower response rate gauges to damp the display rate slightly. This is useful for certain data channels where data streaming from the ECU may shift between two points at some point rapidly (for example 100 and 101 degrees which may cause the gauge to "flicker" between two display points.

Quick Start Guide

Congratulations on purchasing a Haltech GaugeART CAN Video Gauge Adapter.
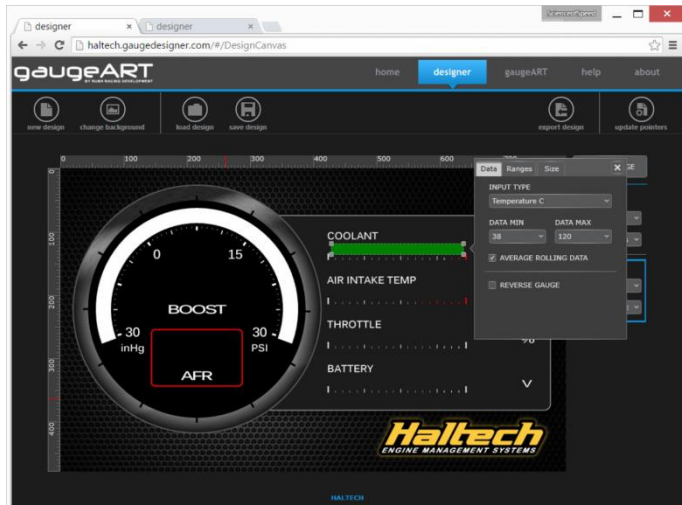This *Plug and Play* product allows the user the ability to increase the functionality of their Haltech ECU by using the Haltech CAN system which is fitted to all Elite and Platinum Series ECU's.

The Haltech GaugeART CAN Video Gauge Adapter allows the user to view a range of gauges and engine data by converting the Haltech CAN network data into a RGB video signal that can be viewed on an in-vehicle monitor.

This quick start guide will walk you through installation of the Haltech GaugeART CAN Video Gauge Adapter into a vehicle.
This guide is accompanied a set of online gauge setup instructions that can be found at www.haltech.gaugedesigner.com

Included in Haltech GaugeART Video Gauge Adapter

- Haltech GaugeART CAN Video Gauge Adapter Single Channel wiring harness
- CAN Connection Cable (900mm)
- 1 x MicroSD card
- 1 x MicroSD to SD card adapter
- Quick Start Guide

Optional accessories (purchased separately)
(Required for Elite Series Installations)

- Haltech CAN Hub Mini – HT-059991 or Haltech CAN Hub 6 Port – HT-059990
- Haltech Elite DTM4 CAN Cable HT-13000X

Connection: Elite Series

Connecting the Haltech gaugeART CAN Video Gauge Adapter to an
Elite Series ECU is simple. Be advised that a Haltech CAN Hub will be required
for all installations and can be purchased using the following part numbers:

- HT-059991 – CAN Hub MINI
- HT-059990 – CAN Hub 6 Port

Connect the Haltech gaugeART CAN Video Gauge Adapter to a CAN Hub
via the supplied cable. It is a requirement that the the gaugeART
video gauge adaptor be connected to the last spare input of the CAN Hub
after all other connected devices.

*Figure 1 – Haltech gaugeART CAN Video Gauge Adapter connected
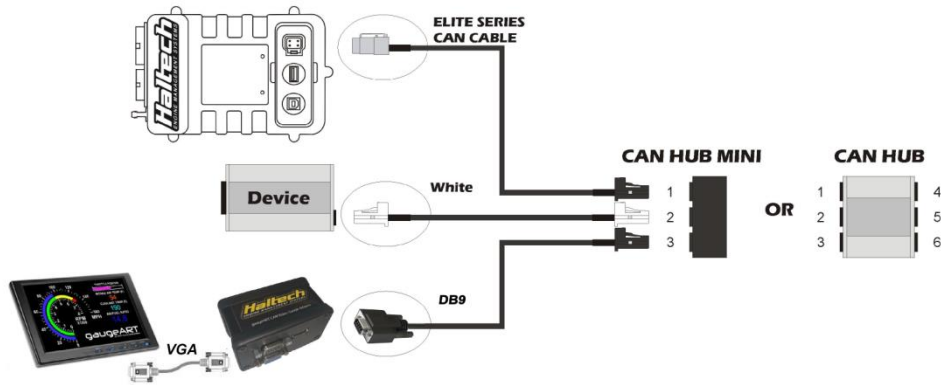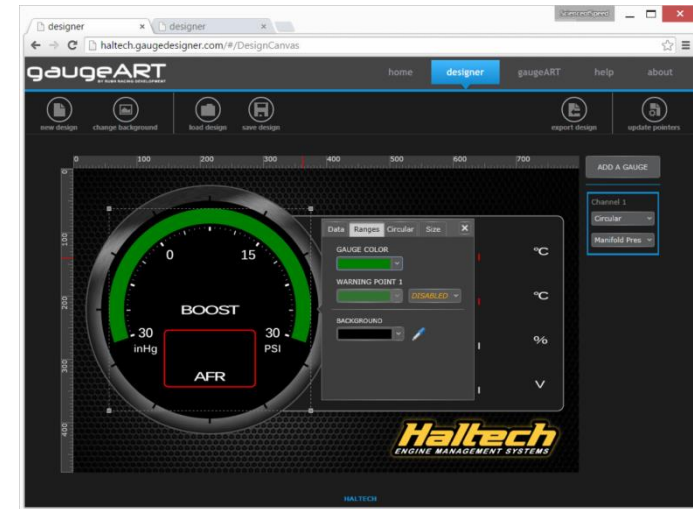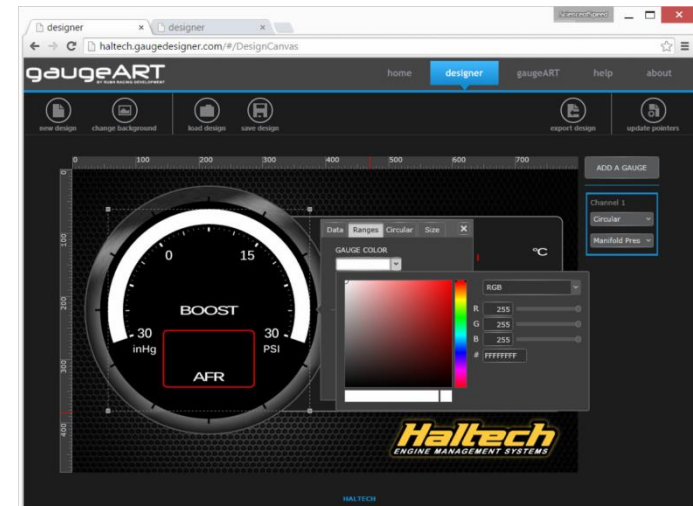to a Haltech Elite Series ECU*

Lastly, let's set the colours of the gauges by clicking the "Ranges" tab.
First the background colour should match the background of the gauge (click the eye
dropper to select a particular colour on the canvas).

Change the gauge colour by clicking the gauge colour box and selecting the desired
colour (white is selected in this example).

Centre the gauge. Gauges can be moved by dragging the gauge with your mouse, clicking the horizontal (x) and vertical (y) position adjustment buttons while holding down the control button, or by entering the numbers directly (56 x 63 pixels).

Note that the gauge can also be moved with the arrow buttons on your keyboard in 10 pixel increments by clicking the arrow, shift and control button at the same time.
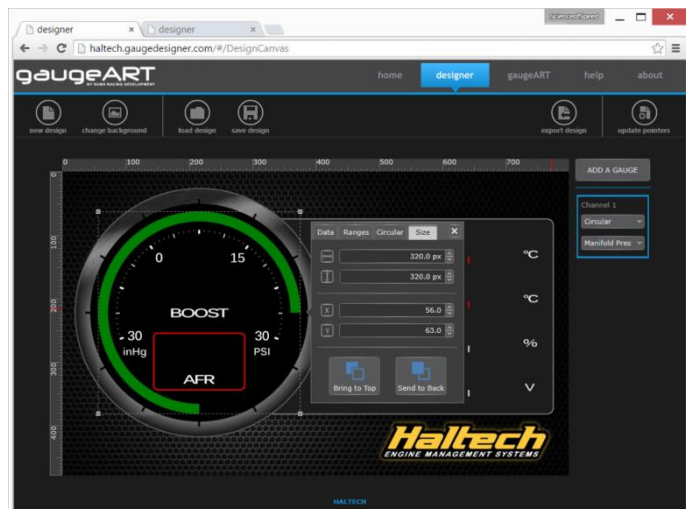
Next, let's increase the width, starting position and length of the gauge.
Increase the width to 15 pixels by clicking the "circular" tab and entering "15" to bar width.
Change the starting position and length of the gauge in degrees as shown.
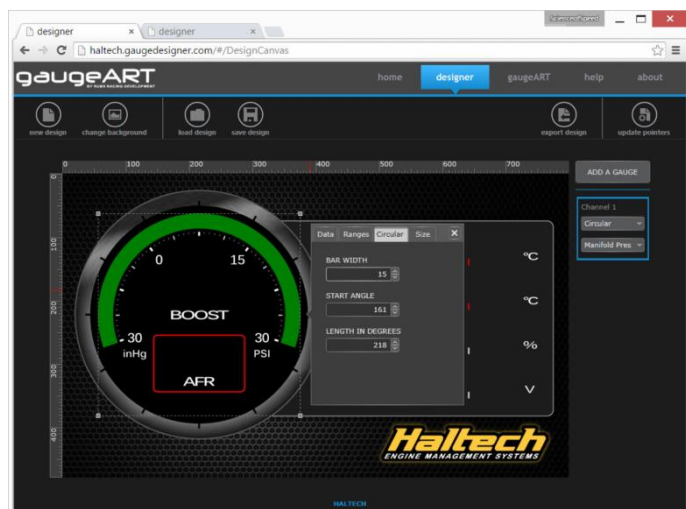
Enable Haltech CAN Supported Dash (Elite Software Programmer Users Only)

For the Haltech gaugeART CAN Video Gauge Adapter to display the correct information the Haltech CAN Supported Dash must be enabled in the ESP software.
To access this setting go into the main setup page (F4), click on the devices tab and enable the Haltech CAN supported dash in the Displays section.
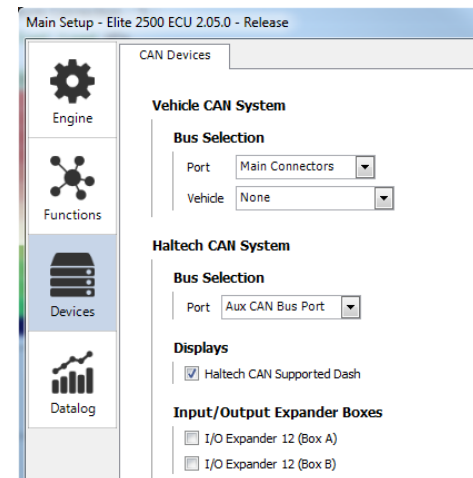

Figure 2 – Enabling the Haltech CAN Supported Dash within ESP

Connection – Platinum Series

Connecting the Haltech gaugeART CAN Video Gauge Adapter to a Platinum Series ECU is simple.

Method 1: Direct Connection to Haltech Platinum Series ECU
Connect the Haltech GaugeART CAN Video Gauge Adapter directly to a compatible Haltech ECU via the CAN direct connection cable included with the kit

Figure 3 – Haltech GaugeART CAN Video Gauge Adapter connected directly to a Haltech Platinum Series ECU

Method 2: Connection via Haltech CAN Hub (HT059990)
Connect the Haltech gaugeART CAN Video Gauge Adapter to a CAN Hub via the supplied cable. It is a requirement that the the gaugeART video gauge adaptor be connected to the last spare input of the CAN Hub after all other connected devices.
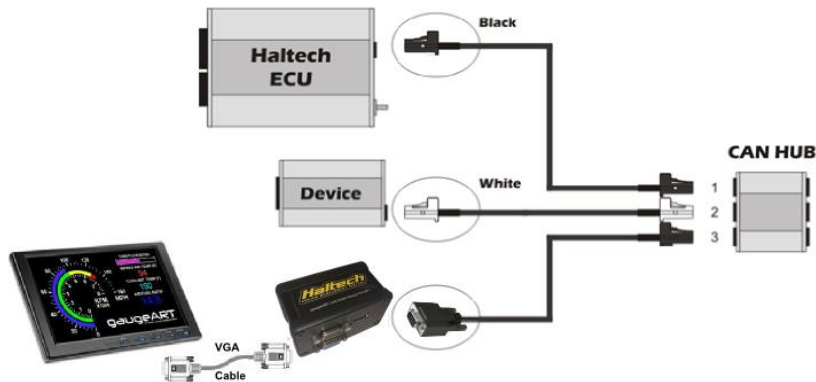
Figure 4 – Haltech CAN Wideband Controller connected via the Haltech Can Hub

Click the new gauge that was created and click the settings button.
Let's set the gauge to be in "PSIg" on the data tab.
Set the data range to match the range of the background image which is -15PSIg to 30PSIg.
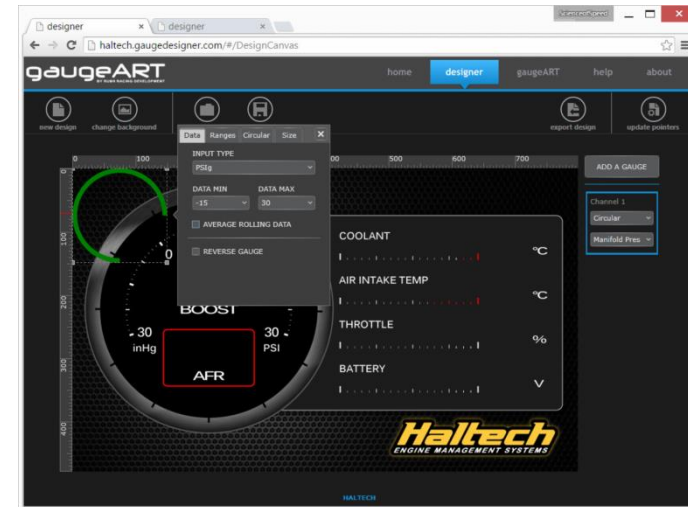
Gauges can be manually positioned by clicking and dragging or by setting size and position on the canvas. In addition, circular gauges width, start position and length (both in degrees) can be set. Let's adjust this gauges size by clicking the "size" tab. Set the gauge to 320 x 320 (pixels).
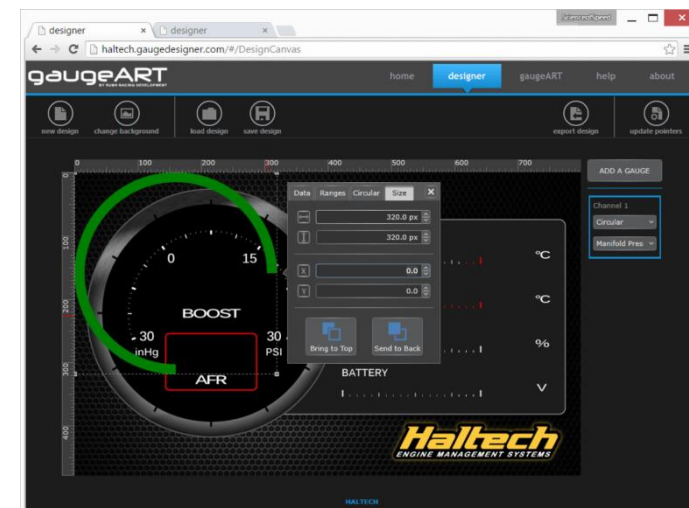
To add a gauge, click "ADD Gauge". The result is shown below.
Four types of gauges can be created – digital, horizontal, vertical bar and
Circular (as shown). This is set on the right hand side of the screen under "channel 1".
Leave the gauge type to circular, click data type and change it to "Manifold Pressure".

The following channels are included.

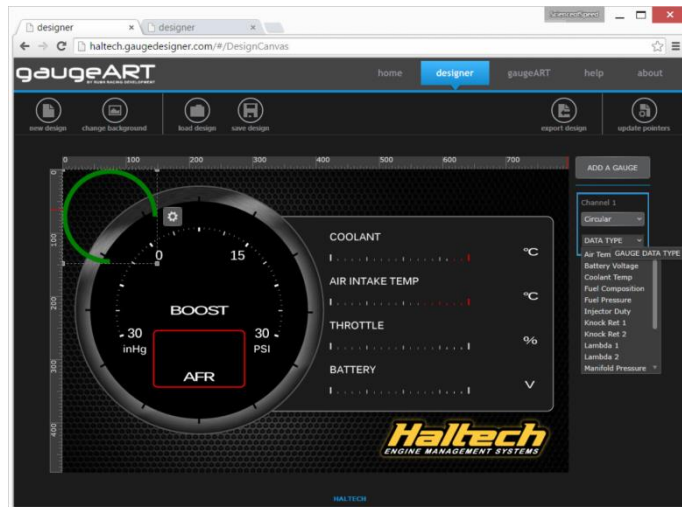- Air Temperature
- Battery Volts
- Coolant Temperature
- Fuel Composition
- Fuel Pressure
- Injector Duty
- Knock retard 1 & 2
- Lambda 1 & 2
- Manifold Pressure
- Oil Pressure
- Oil Temperature
- RPM
- Throttle Position
- Wheel Speed

Additional Channels may be added with further development.

Enable Haltech CAN Version 2 Protocol (ECU Manager Users Only)

For the Haltech GaugeART CAN Video Gauge Adapter to display the correct information the Haltech CAN V2 Protocol must be enabled in the ECU manager software. To access this setting go into the main setup page (F4), click on the devices tab and choose Haltech CAN (version 2) in the CAN mode selection.
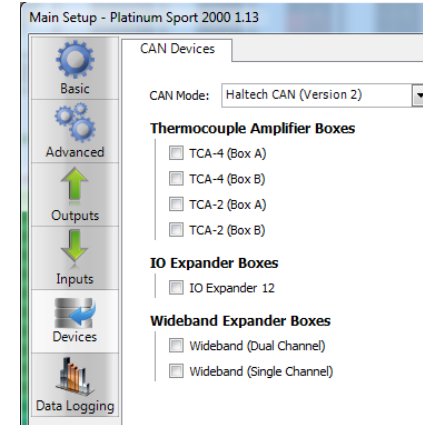

Figure 5 – Haltech ECU Manager CAN version 2 enable

Connection Types

There are three standard video connection types: VGA, HDMI and Composite.
VGA is the standard used by gaugeART, and will give the best quality.
Most stand alone displays have a VGA input.
Displays with a VGA input and 800x480 resolution will offer the best quality images. However other resolution displays can be used as long as the display is compatible with a 800x480 resolution input.
Displays with HDMI inputs are preferred as the gaugeART display quality will be much higher. An inexpensive adaptor is required to convert the VGA signal from the gaugeART unit to HDMI or Composite. The USB port on the gaugeART unit is used **only** to power these adaptors. A sample HDMI connection layout is shown below.

gaugeDesigner Tutorial

gaugeDesigner is the application for creating and modifying designs for Haltech gaugeART units.

Address: http://haltech.gaugedesigner.com

Note: Google Chrome users that visit the gaugeDesigner website will find that the browser prompts you to download the Silverlight plug-in even if you already have it installed.
A work around has been provided by Google and is outlined below:

- Copy and paste this link into the address bar of your browser chrome://flags/#enable-npapi
- Click enable under "Enable NPAPI Mac, Windows"
- Close the browser
- Re open the browser, you can now use the gaugeDesigner website.
- A restart of your PC may be required for the changes to take effect if you are prompted again to download the Silverlight plug-in.

Other browsers including Internet Explorer and Firefox are not affected.

Designs consist of two components:
- the "static" background image – the ticks, bezels, logo etc
- The "dynamic" gauges – driven by the ECU telemetry.

The background image is created and modified in a graphics program (Photoshop, Illustrator, etc)
The background should be saved as a .jpg from the graphics program.
The gauges are added and modified in gaugeDesigner.

When a design is created from scratch, the background image is loaded first.
Click "new design". gaugeDesigner prompts you to open the background.jpg image (this has been provided along with these instructions).
Open "1006-Haltech-Battery.jpg"). The result is shown below.