

## CAN02 Set-up Software

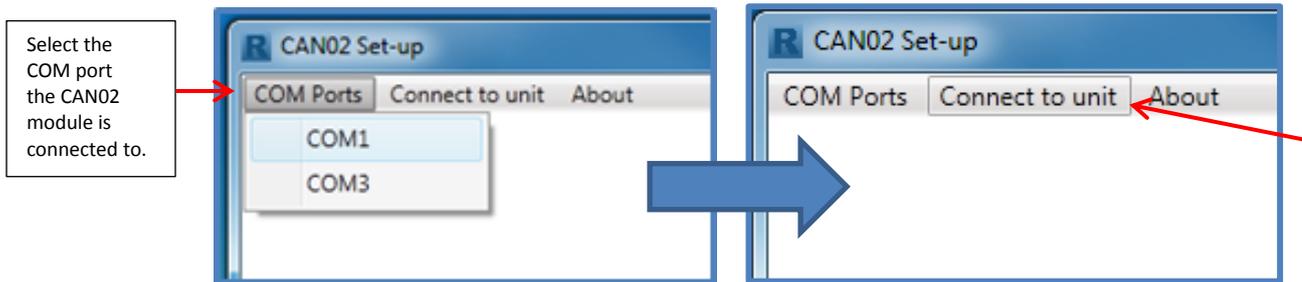
CAN02 is a Racelogic module which allows the user to connect to a 3<sup>rd</sup> party CAN Bus and transmit up to 16 channels of data to a VBOX. This standalone software application allows the CAN02 to be configured for 3<sup>rd</sup> party CAN data loggers and other Racelogic products such as Video VBOX.

To connect the CAN02 module to the setup software, it needs to be supplied with power from a VBOX unit, and be connected to a PC via the RS232 port, using an RLCAB001.

When the software is first opened, the COM port the device is connected to needs to be selected.

Device manager can be checked on the PC to confirm this.

When the correct COM port has been selected, click 'Connect to unit'.



Once connection is established, the window shown below will appear. This is where the settings inside the CAN02 module can be configured.

## Software Overview

**COM Ports** | **Connect to unit** | **Import** | **Export** | **About**

**Incoming CAN**

Baud rate: 500.00 kbps

Channels: Altitude, Longitude, Latitude, Time, Sats

**Outgoing CAN**

Mode: Timed | Time: 500 ms |  Pack |  Extended Id

Channels:

Tx ID (hex): 500	Altitude	Longitude
Tx ID (hex): 501	Latitude	Time
Tx ID (hex): 502	Sats	

COM3

**Export** | **About**

Write Configuration to Module  
Export Configuration  
Export CAN Database

**Import** | **Export** | **About**

Import Configuration  
Import CAN Database

Add or clear a CAN channel from the imported database.

Set the transmission period between CAN frames.

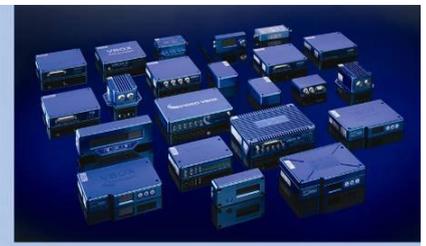
Set the CAN bus baud rate.

CAN channels selected to log.

Change the trigger method of outgoing messages.

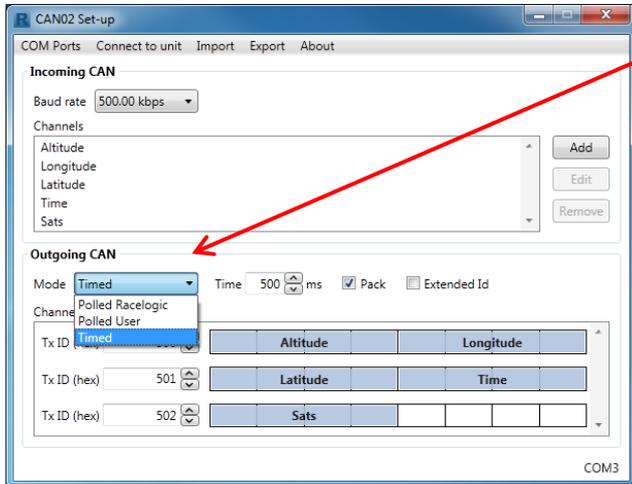
Configure the IDs that the CAN messages use.

This shows the configuration the CAN frame will be sent in. The options to 'Pack' this or extend the ID's can be seen above.

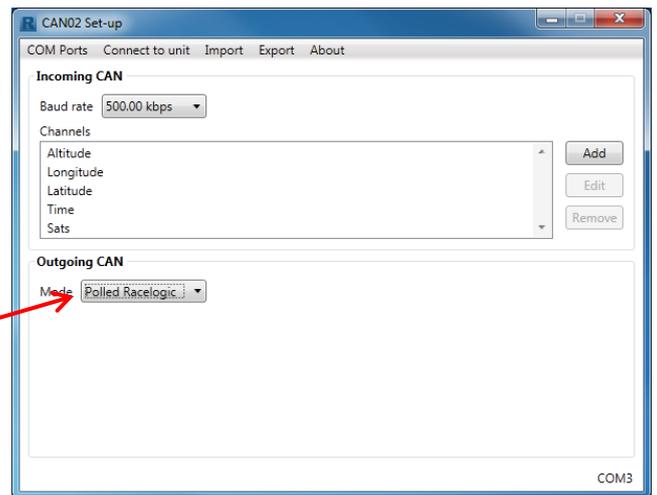


## Outgoing CAN modes

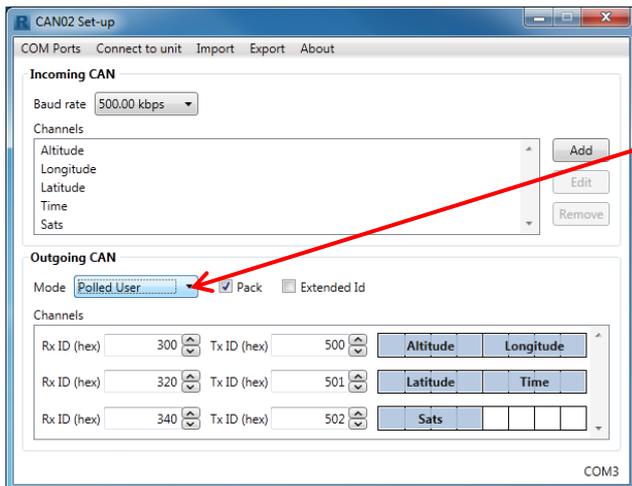
The CAN02 module can now be configured to output CAN in three different ways.



**Timed** – This mode will cause the CAN02 module to send out CAN frames at timed intervals. This is for use with third party data loggers. The transmission rate can be altered in the 'Time(ms)' box.



**Polled Racelogic** – This mode is for use with VBOX Products – if this is selected the only user configurable settings available will be adding CAN database files and selecting channels.



**Polled User**- This mode will send out CAN frames when a request message is sent to the module. This configuration can be used with third party data loggers.

## Importing a CAN Database

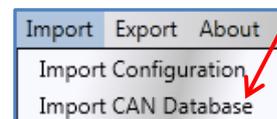
If a CAN file for a specific vehicle is required, please check the [Vehicle CAN Database](#) on our website.

CAN database files with the extensions DBC, REF or VCI can be imported into the software.

To do this, select **Import/Import CAN Database**.

In the window that appears, select the desired CAN file to load.

Press 'Open' to load the CAN file.



**-Make sure the correct file type of DBC, REF or VCI is selected to allow the PC to see the file.**

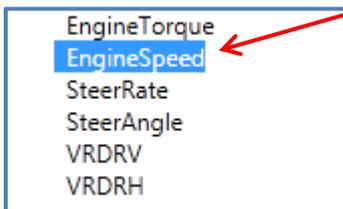
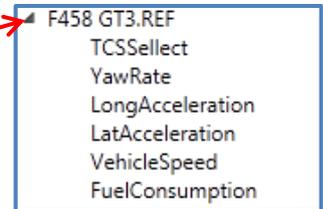


## Defining a CAN channel

Once the database file is loaded into the software, the required channels must be selected. To do this, use the 'Add' button located at the top of the CAN02 software.

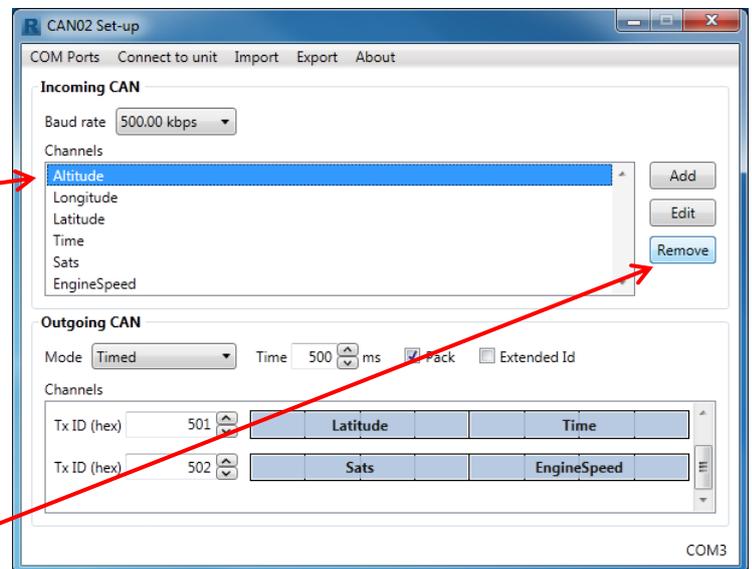


The CAN database can now be expanded to reveal all of the CAN channels available.



Only one CAN channel can be loaded at a time. Click on the desired channel so it is highlighted and then press 'OK' to load it.

The selected channel will now appear under the 'Incoming CAN' section of the software.



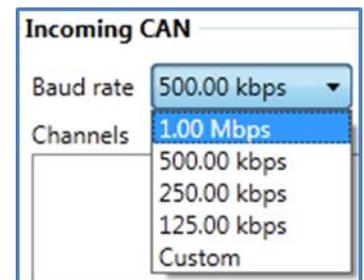
To delete a CAN channel, highlight it and press the 'remove' button.

## Setting the CAN Baud Rate

This allows the baud rate at which CAN frames are being received on to be changed. It is important to check that this matches the baud rate of the CAN bus on the connected vehicle.

Most road cars work on a baud rate of 500MB/s. Most industrial vehicles work on a baud rate of 250MB/s.

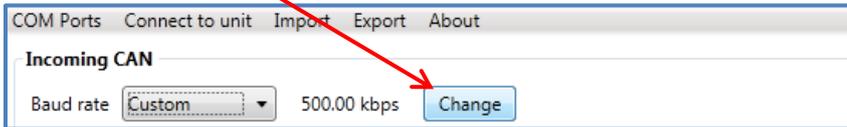
The Baud Rate can be changed to a standard selection by using the drop down list.





## Setting a Custom CAN Baud Rate

If a specific baud rate is needed, select 'custom' from the drop down list. When the 'change' button is clicked, the software will display a window showing a list of settings.



Bit rate	Sample point	SJW	BTR0	BTR1
500.000	52.94	0	0	118
500.000	52.94	1	64	118
500.000	52.94	2	128	118
500.000	52.94	3	192	118
500.000	58.82	0	0	103

Advanced setting for changing CAN sample rate.

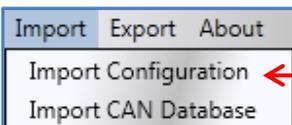
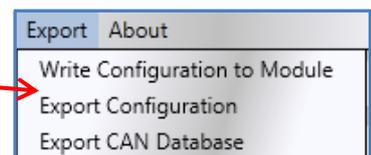
'Tolerance' allows the user to define how close to the desired baud rate can be accepted for situations where a non-standard - (ie; not 250Kbit/s, 500Kbit/s or 1Mbit/s) baud rate is used. In most cases however, a tolerance of 0% should be used.

To change the CAN Bus baud rate, enter a value in the 'Required Frequency (Kbit/sec)' field and press enter.

The list will be re-calculated to show all possible settings for the CAN Bus interface for the new baud rate. The settings within the list relate to a number of advanced features such as bus timing registers and sample point for the CAN Bus receiver. However, for most applications, it is recommended to choose a sample point of around 45 to 65%. Double click on the desired baud rate to select it.

## Exporting and Importing a CAN02 module setup file

To export and save a CAN02 setup, use the 'export' tab. This will allow a setup .RMSF (Racelogic Module Setup File) to be saved.



This setup file can be reloaded at any time by using the 'import' tab and navigating to the desired .RMSF file.

If any further help is needed using Racelogic equipment please contact [support@racelogic.co.uk](mailto:support@racelogic.co.uk) for further assistance.