

## Using Video in VBOX Brake Stop Testing

VBOX systems are used in brake testing applications around the world to provide accurate measurements of vehicle braking capability. Video integration enables engineers to have a graphical representation of the test over live footage, which adds a further dimension to brake testing.

To do a brake stop test you need to use a VBOX that has a high accuracy event trigger. The options are:

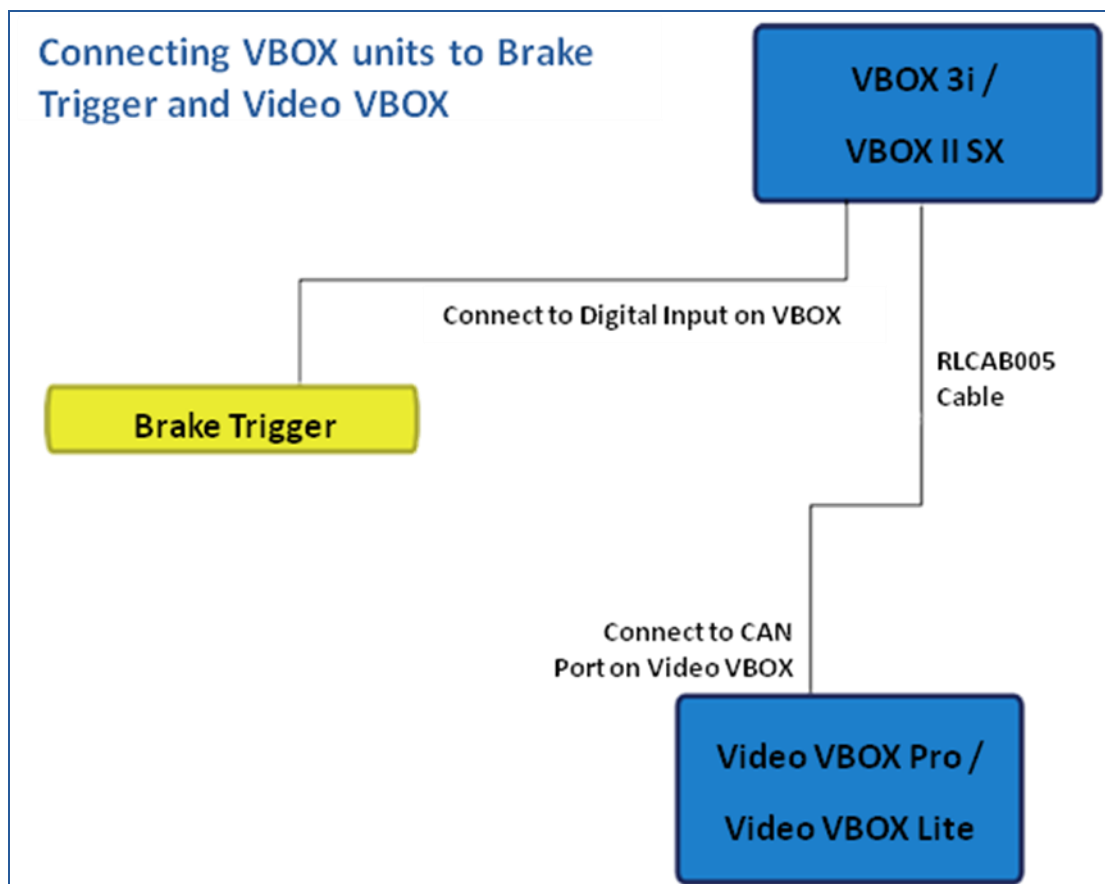
- VBOX 3i (or VBOX III)
- VBOX II SX
- VBOX Speed Sensor

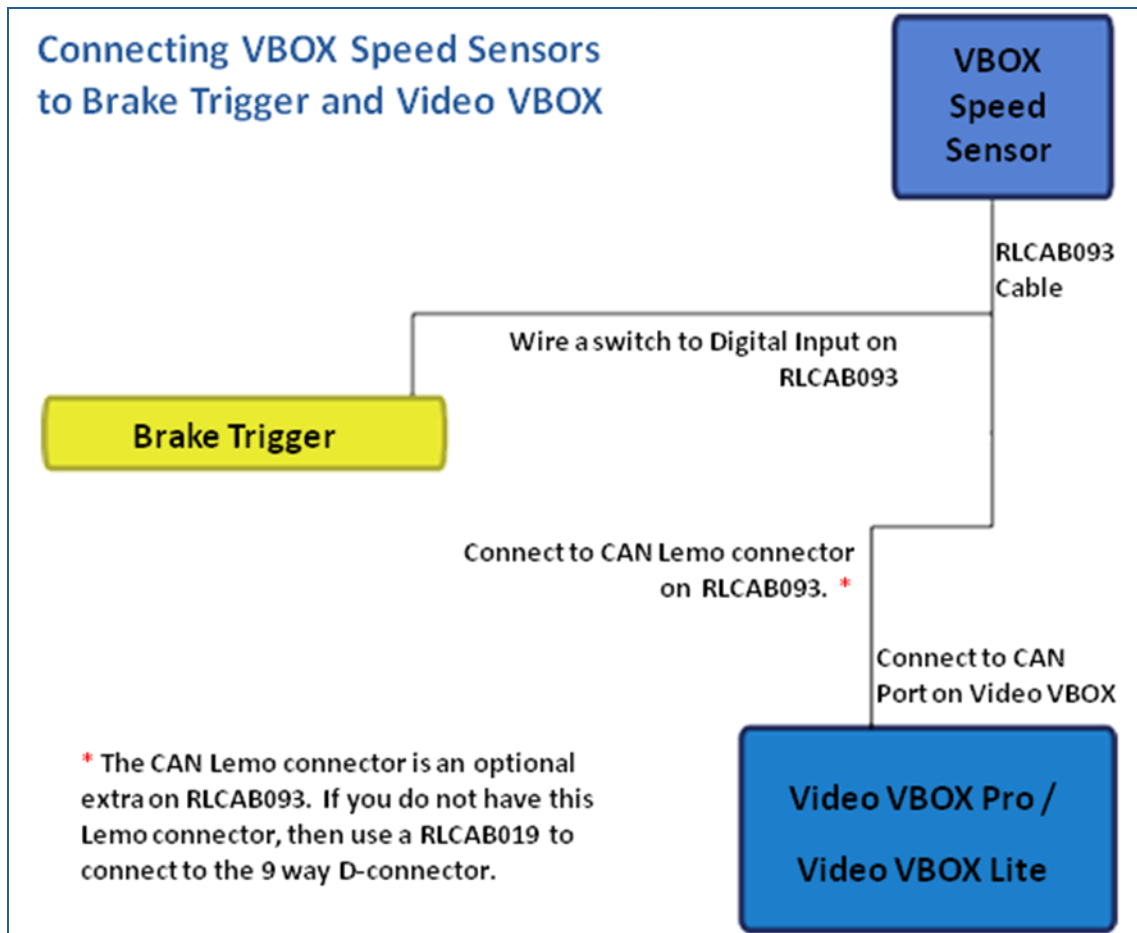
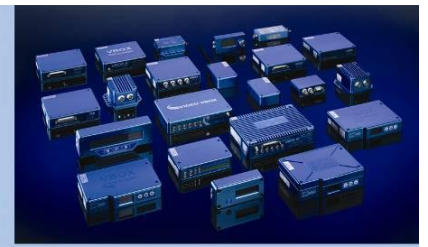
Click the screenshot to the right (or type in the url) for an example video of a brake test using Video VBOX.



## Connections

A brake trigger is connected to the VBOX to record the moment the brakes are activated. The high accuracy brake stop distance and time is transmitted to the Video VBOX via CAN to produce a graphic overlay of the data over the synchronised video. Diagrams illustrating the connections are below.



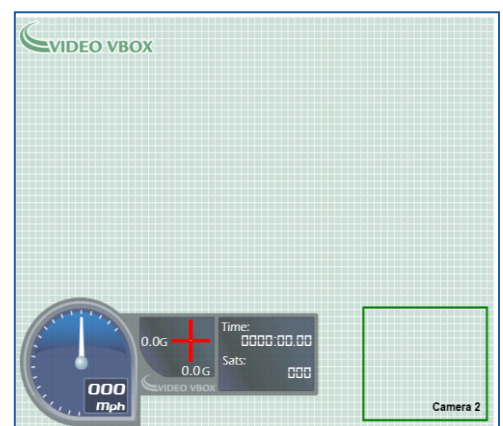


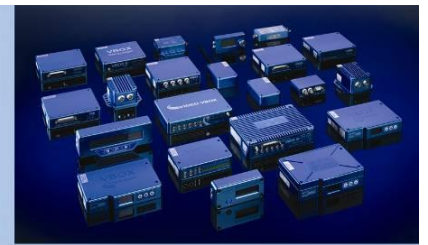
## Creating a Video VBOX Scene for the brake test

We have created a scene suitable for using as part of a brake test. It is available to download on the free scenes section of the Video VBOX website under the 'Generic' section: [www.videovbox.co.uk/index.php/free-scene-files](http://www.videovbox.co.uk/index.php/free-scene-files)

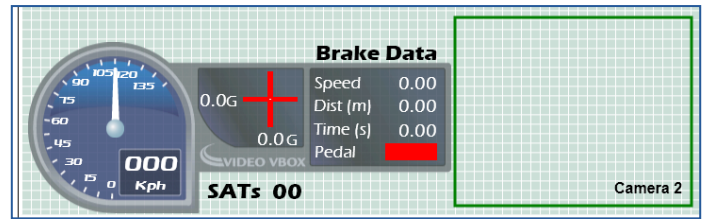
If you wish to make your own, instructions are below.

1. Find a generic test scene that fits your purpose. As mentioned above, example scenes are available from the Video VBOX website: <http://www.videovbox.co.uk/index.php/free-scene-files>



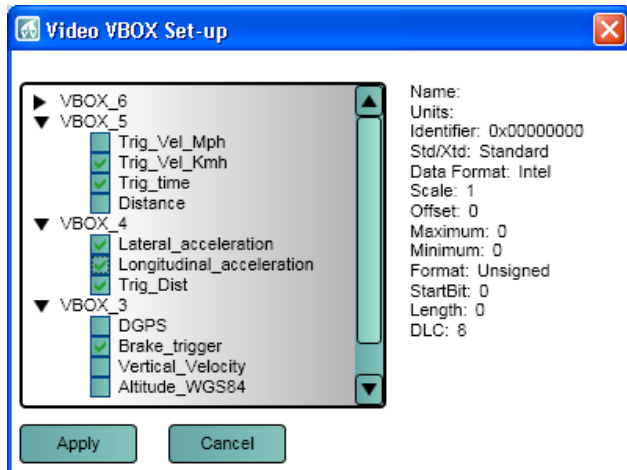
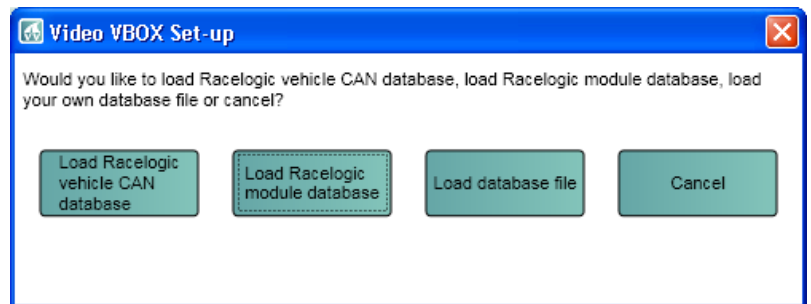


2. Add text elements and bar graphs to suit your requirements. In the scene below text elements showing speed figures have been added over the blank gauge. Text elements to display inputs from the VBOX have also been added.



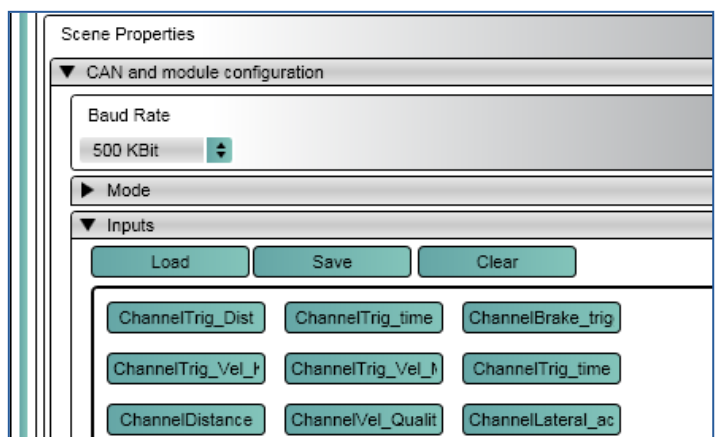
3. Configure the CAN & Module settings in the scene. If you do not already have the VBOX CAN file, you can download this from our website: [http://www.racelogic.co.uk/?show=VBOX-Downloads-CAN\\_Database](http://www.racelogic.co.uk/?show=VBOX-Downloads-CAN_Database)

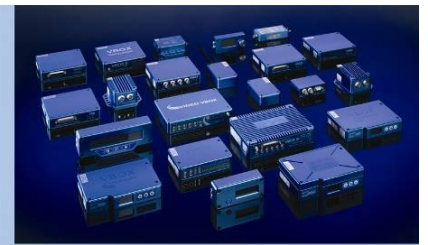
a) Expand the 'CAN & Module Configurations' tab, then the 'Inputs' tab and select the LOAD button. In the window that appears you should choose 'Load Racelogic Module Database' as shown.



b) When you have selected the VBOX CAN file, you can choose which channels you wish to log. Simply tick the desired channels and click 'apply'.

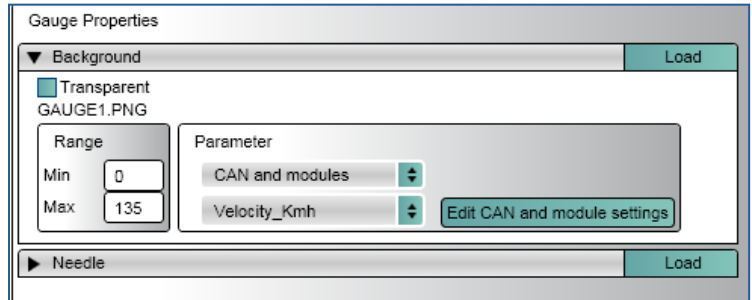
c) Now the selected CAN channels should display under the 'Can and Module Configurations' section of scene properties.



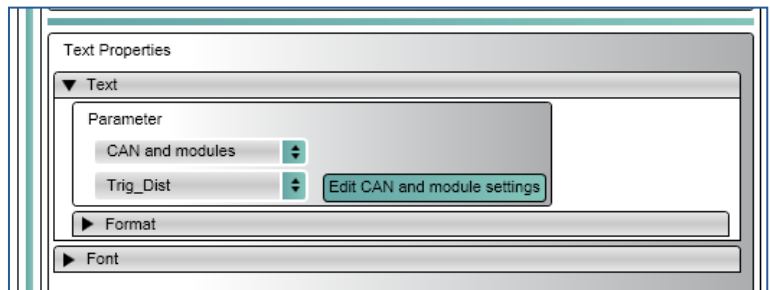


4. Assign the correct parameters to the desired elements. If you have text elements, gauges or bar graphs in your scene, you must set up the element parameters to display the VBOX CAN channels that you have loaded. Below are examples of the settings for different elements.

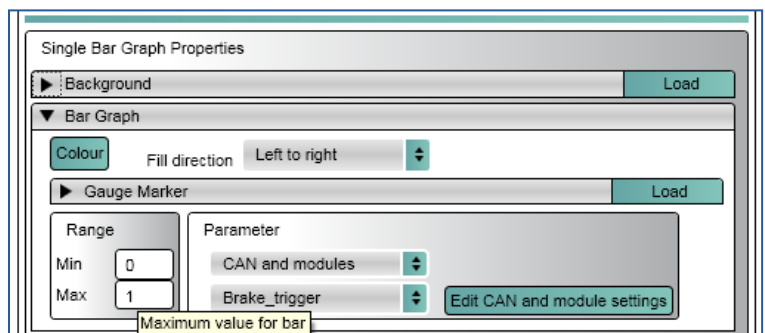
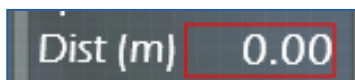
a) This gauge is set to read the speed trace via CAN from the VBOX rather than GPS speed as measured by the Video VBOX as this will be measured at a faster rate and will be more accurate.



b) This bar graph is set to show 0 or 1: empty or full. It will show the status of the brake trigger (on or off). This makes it easy to see if the brake is actually applied or not.



c) This text element is configured to show the distance travelled since the brake trigger was pushed. This stops either when a zero speed value is achieved, or, when the brake trigger is released.



Your scene should now be fully configured. An example scene as shown in this document is available here: [www.videovbox.co.uk/index.php/free-scene-files](http://www.videovbox.co.uk/index.php/free-scene-files) (look under the generic section).

**When you have uploaded the scene to the Video VBOX and connected it to your Speed Sensor or VBOX, you are ready to do a Brake Stop Test with integrated video. Have a look at an example video [here](#).**