# Datalogger Help

The following document provides user instructions for the Datalogger tool and consists of the following sections:

1. Using the Datalogger

2. Signal selection

3. Signal Configuration

4. Trigger configuration

5. Global configuration

6. The live display

7. Playback viewer

1. Using the Datalogger

This application enables the user to view and analyse selected signals or data, and if required, capture them for further investigation or storage. The following options are available:

1. Select the required signal by pressing sub-tab

2. Set the configuration for the highlighted signal * by pressing sub-tab

3. Select and configure the trigger for the highlighted signal * by pressing subtab

4. Set global configuration for the Datalogger by pressing sub-tab

5. View selected signals in the live display by pressing [sub-tab]

6. View (playback) any captured signals by pressing [sub-tab]

7. ***** Highlighted signals - Before trigger configuration or setup is possible, the required signal must first be highlighted. This is done from the live display screen by simply clicking on the screen area, or touching it with the screen pen.

 2. Signal Selection

The left half of the screen presents the user with sets of signals for specific areas of the vehicle. The right half shows a description of the currently selected signal.

- It is possible to select signals from any area of the vehicle (Other Signals). Each area can be expanded by clicking , or collapsed by clicking .

- The signal may then be selected from the list, and confirmed by clicking .

  Note: Clicking this icon a second time will de–select the signal.

- Clicking will de-select all signals.

- It is also possible to select an analogue signal source (voltage or current).

Other:

- Clicking will return to default.

- Clicking gives options to print the page or exit.

 3. Signal Configuration

From this screen it is possible to determine the way a signal is displayed.

Specifically, to choose the Display Type for the signal by selecting one of the following icons:

- Bar graph
- Histogram
- Waveform
- State Display

For the currently highlighted signal

- Define the display units for the selected signal.
- Define the display range limits for the selected signal.
- Specify how the analogue measurements are configured (voltage or current).

Other:

- Clicking will return to default.

- Clicking gives options to print the page or exit.

4. Trigger Configuration

This screen is only present when at least one signal has been selected.

Before Trigger configuration or setup is possible, the required signal must first be highlighted. This is done from the live display screen by simply clicking on the signal area, or touching it with the screen pen.

The following options are available:

Selecting Trigger Function

- Highlight 'Trigger', followed by 'On'. This will enable the trigger function, and also Trigger type and Trigger limit selection in the lower half of the screen.

- Highlight 'Trigger Data Logger recording', followed by 'On'. This enables automatic recording as soon as a trigger event occurs.

- Highlight ' Beep when limit is passed', followed by 'On'. This enables an audible warning when a trigger event occurs.

Selecting Trigger Types and Levels

- Triggering will occur on a rising edge at a limit (level) set by the user, by using the up/down icons or by touching the Trigger limit box with the screen pen and inputting a more specific value.

- Triggering will occur on a falling edge at a limit (level) set by the user, by using the up/down icons or by touching the Trigger limit box with the screen pen and inputting a more specific value.

- Triggering will occur within limits (levels) set by the user, by using the up/down icons or by touching the Trigger limits boxes with the screen pen and inputting more specific values.

- . Triggering will occur outside limits (levels) set by the user, by using the up/down icons or by touching the Trigger limits boxes with the screen pen and inputting more specific values.

Other:

- Clicking will return trigger settings to default values.

- Clicking gives options to print the page or exit.

 5. Global Configuration

This option enables the user to select the most appropriate Data logger settings from the following options:

- **Enable Output State Control (OSC)**. This option allows the signal (PID) to be forced to a specific state or level. To enable this option, the user must first highlight 'Enable Output State Control' followed by 'On'. It will then be possible to activate any signal (PID) which has OSC.

- **Road Test.** This is a safety option which will blank the screen when the vehicle is in motion. Signal capture will continue as normal, and the screen will return once the vehicle is stationary and in neutral with the park brake on. To enable this option, the user must first highlight 'Road Test' followed by 'On'.

- **Record time.** This option allows the user to set the length of time a signal is captured, either user defined through selection of the time boxes, or pre-defined by selection of Fast (30 seconds), Medium (10 minutes) or Slow (12 hours) capture rate. In turn, this time period is split between pre (before) and post (after) signal capture. These values are 50/50 by default, but may be changed separately through the percentage boxes, or together by means of the slide bar.

Other:

- Pressing ⟳ will return settings to default values.

- Pressing ☰ gives options to print the page or exit.

6. Live Display

This screen only appears when at least one signal has been selected . It is divided into two areas, (1) the main signal display area, and below that (2) the Data Logger screen selection icons, along with the title of the highlighted signal. Note: signals are individually highlighted by clicking on the screen area, or touching with the pen.

The signals may be displayed as digital values (PID's), histograms, bar graphs or XY plots. These options are selectable from the signal configuration screen , or by using the plot type toggle on the right hand side.

The following options are available to the user:

- Selecting ▶ will open the data logger.

- Selecting ■ will close the data logger.

- By selecting , the signal capture will run for the selected time, and the user will then be directed to the replay screen.

- Reposition a signal in the Live Display by highlighting it, clicking , and then moving it to its new position.

- Zoom in and out using the zoom in ![zoom in icon] and zoom out ![zoom out icon] buttons.

- Clear the signals currently displayed by pressing ![clear icon]

- Alter the number of selected signals displayed, by using the live data icons on the right of the screen (containing red + and -).

- If Output State Control (OSC) mode is selected through the Data logger configuration screen ![config icon] the highlighted signal may be forced to a specific output level.

- Clicking ![list icon] gives options to print the page or exit.

7. Playback Viewer

The Playback Viewer enables viewing of previously captured signals in the same way as live data. The last signal captured is displayed by default.

Use the scroll-bar at the bottom of the screen to navigate through the captured event.

The buttons perform the following functions:

▶▶ Start play forward

▶ Forward one record

◀ Back one record

◀◀   Start play backward

In the Playback Viewer you can also:

- Reposition a signal in the Live Display by highlighting it, clicking , and then moving it to its new position.

- Skip forward to the next capture event by pressing ▶▶|

- Skip backward to the previous capture event by pressing |◀◀

- Clear the signals currently displayed by pressing

End of help