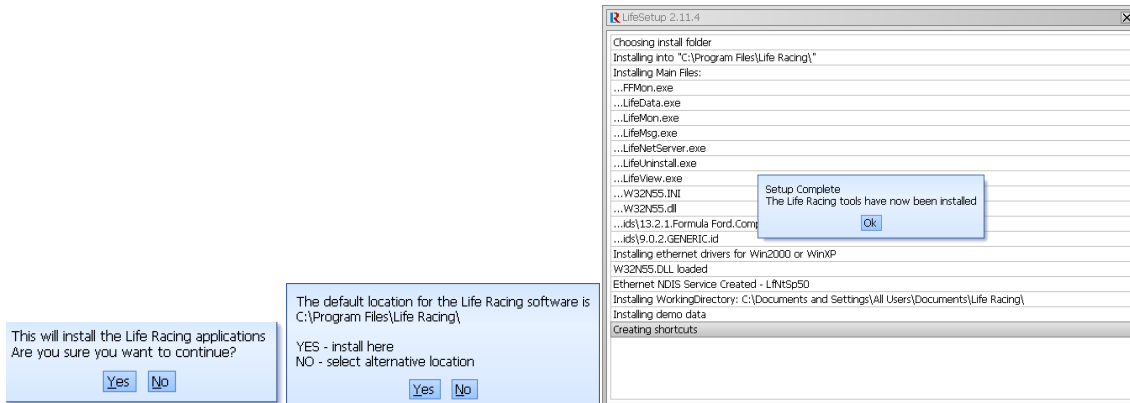




## LifeSetup - Software Setup



Running LifeSetup will install the 6 main Life Racing applications and all the drivers required by them. The applications are as follows:

- LifeCal – Calibration software
- LifeCfg – Logging Setup Software
- LifeData – Logging Download Software
- LifeMon – Monitoring Software
- LifeMsg – Message Logging Software
- LifeView – Logging Analysis Software

## The User Interface

All the Life Racing application share a common graphical user interface (GUI). It broadly follows the Microsoft Windows GUI guidelines, but with some key differences:

### The Main MenuBar

The MenuBar operates in a very similar way to a Windows Menu. The main difference is that no <Alt> key is required to activate each popup. General information about the current calibration is displayed to the right of the last button on the MenuBar. The fact that no <ALT> key is required makes one handed operation easier which is important when the other hand is holding the laptop hosting the application. In general thought has been given to using the applications without a mouse for the same reason.

### File / Directory Selection

The standard windows file selection dialog box has not been used (this may be available in future as a preference). File selection is via a simple menu which displays the contents of a single directory along with menu entries to navigate the directory structure, other drives and the windows desktop. This menu is intended to be quick to operate without a mouse.

### Working Directory

The LifeX suite of programs are designed to automatically manage calibrations, logged data and logging setups within a directory tree specific to the current activity. Facilities are provided to sort files based on vehicle and/or date. Once the working directory has been selected (from any of the applications), all applications will perform load and save operations to appropriate directories automatically.

## LifeCal KeyStokes

The Main MenuBar – **File Cal Pastecal Device Gauge View**

This application is used to configure a device. It does this by altering the devices calibration. This calibration can be edited live while connected to a device or edited offline then programmed into a device.

### The Calibration Tree

Once a calibration has been loaded or a connection to an ECU has been established the calibration tree will appear. Branches can be opened and closed by hitting the <Return> key or by double clicking with the left mouse button. Individual maps are selected in the same way. The keys affecting the menu are:

<Up>	Up one line
<Down>	Down one line
<Page Up>	Up one page
<Page Down>	Down one page
<Home>	top of menu
<End>	bottom of menu
<Plus>	Expand all branches in menu
<Minus>	Collapse all branches in menu
<Return>	Open/Close branch or select calibration for editing
<Shift> + <F5-F8>	Define shortcut
<F2-F8>	Shortcut – go to map and edit

### The Map Editor

Calibrations can be viewed graphically, textually, or both together. This is selected via the options menu. The last setting used for each map is remembered. The mouse can be used to select cells in all of the editors. Pressing <ESC> or selecting the ESC button in the editors' menu bar closes the editor and returns to the calibration tree.

<Left>	Left one cell
<Right>	Right one cell
<Up>	Up one cell in 3D and 4D maps
<Down>	Down one cell in 3D and 4D maps
<Page Up>	Up one layer in 4D maps only
<Page Down>	Down one layer in 4D maps only
>	Rotate anti-clockwise in 3D and 4D maps only
<	Rotate clockwise in 3D and 4D maps only
<Return>	Bring up cell value editor dialog
A	Toggle area select mode
<Plus>	Increase cell value
<Minus>	Decrease cell value
<Shift>	Hold shift and use arrow keys for alternate area select
U	Undo previous edit
<Ctrl> + Z	Undo previous edit
<Ctrl> + C	Copy selected cells
<Ctrl> + V	Paste selected cells

### Miscellaneous Keystrokes

<F1>	Toggle HELP display
Z	Edit previous map (Similar to MS Internet Explorer back)
X	Edit next map (Similar to MS Internet Explorer forward)
<Space>	Freeze/Unfreeze dash and gauge displays



## LifeCfg

The Main MenuBar – **File Config Device View**

This application is used to configure the logging configuration of a device. The current configuration can be extracted from a device altered and put back or edited offline. There are two types of logging items; event items and sampled items. Event items occur only occasionally and only use logging memory when they occur, a common example of one of these is gear position. Sampled items use logging memory at a constant rate, if too many sampled items are logged at high rates the logging memory will wrap after only a short period.

### The Logging Item Tree

Once a logging setup has been loaded or acquired from an ECU the logging item tree will appear. Branches can be opened and closed by hitting the <Return> key or by double clicking with the left mouse button. Individual items can be selected in the same way, in which case a sample rate dialog will appear (event logged items can only be turned on and off). Hitting the <Tab> key toggles between 3 different views of the logging items; a tree view, a list of all items and a list of only those items that are logged.

<Tab>	Toggle between menu/list mode
<Up>	Up one line
<Down>	Down one line
<Page Up>	Up one page
<Page Down>	Down one page
<Home>	top of menu
<End>	bottom of menu
<Plus>	Expand all branches in menu
<Minus>	Collapse all branches in menu
<Left>	Decrease logging sample rate or turn off event item
<Right>	Increase logging sample rate or turn on event item
<Return>	Open Dialog to enter sample rate



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## LifeData

The Main MenuBar – **File Options Device**

This application is used to download the logged data and logbooks from a device. It has no special keys to remember. All activities are controlled from the menubar.



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## LifeMon

The Main MenuBar – **File Device Options Gauge Math**

This application is used to show the value of monitoring items associated with a device. User configurable dashboards of these items can be setup. To add an item to the dashboard simply double click an item on the menu or hit <Return>. Once it has been added to the dashboard it can be further configured by right clicking on it and selecting the desired attributes from the popup menu. All other activities are controlled from the menubar.



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## LifeMsg

The Main MenuBar – **File Options Device**

Life Racing devices send text messages when started and after certain events. These messages can be useful in determining the state of the device. For example the F88 ECU will not run an engine if the crank and cam inputs are not setup. If a Life Racing device does not appear to working properly these text messages will indicate the cause more often than not. It should be noted that LifeCal also collects these messages. It is not a good idea to have both LifeCal and LifeMsg connected to the same device as either application could loose messages. This application has no special keys to remember. All activities are controlled from the menubar.



## LifeView KeyStokes

The MenuBar – **File Session Graph Zoom Channel Worksheet Lap Trackmap Report Options Math**

### The Graphical Display

The graphical display in its simplest form is a single graph. A graph is an area of the display with a single y-axis and an area to the right to show traces of channels. Other graphs can be added via the graph menu but all graphs share the same period of time.

<Left>	Move accelerating cursor to left
<Right>	Move accelerating cursor to right
[	Move cursor left to previous different value
]	Move cursor right to next different value
<	Move cursor to previous alarm position
>	Move cursor to next alarm position
F6	Move cursor to minimum value
F7	Move cursor to maximum value
<Ctrl> + <Left>	Move cursor to left by 10% of screen
<Ctrl> + <Right>	Move cursor to right by 10% of screen
<Shift> + <Left>	Accelerating scroll to left
<Shift> + <Right>	Accelerating scroll to right
<Plus>	Zoom in
<Minus>	Zoom out
<Tab>	Toggle graph focus

### The Key

The key is displayed to the right of the graphical display. It has 2 modes of operation selectable in the options menu. The normal mode shows all the channels in a data file. It gives the value of each channel at the current cursor position. Channels that are shown in one of the graphs also have a colour tab to show their respective trace colours. The alternative mode only shows those channels displayed in the graphical display area.

<Up>	Up one channel
<Down>	Down one channel
<Page Up>	Up page of channels
<Page Down>	Down page of channels
<Return>	Add/Remove channel on focus graph
<Right Shift>	Toggle between data files when more than one loaded
<Delete>	Remove math channel

### Miscellaneous Keystrokes

F1	Toggle HELP display
<Space>	Drop Marker
<Backspace>	Remove marker