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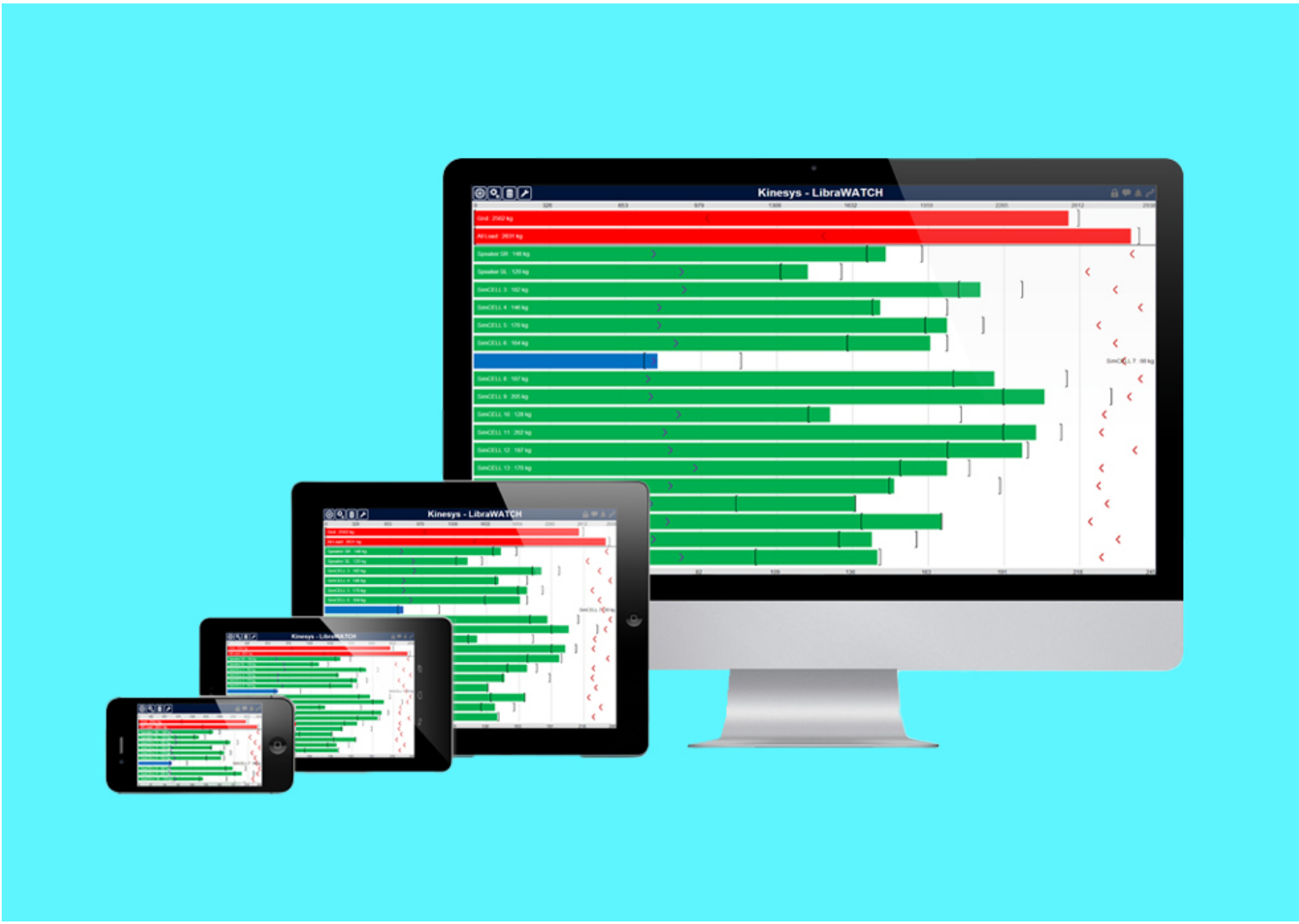
Kinesys Libra Watch

Operating Manual
[ORIGINAL]

An load monitoring software application



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Contact details

support@taittowers.com
www.taittowers.com/products
Tel: +44(0) 20 8481 9850

UK address

TAIT
Unit 2 Kempton Gate Business Centre
Oldfield Road
Hampton
Middlesex
TW12 2AF

US address

TAIT
401 W Lincoln Ave
Lititz
PA 17543

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1. Introduction

LibraWATCH is a portable user-friendly load monitoring software application that forms part of the Kinesys Libra range of products (Libra Cell, Libra Pro, Libra WiFi).

It can be used on any computer, tablet or smartphone and is compatible with Windows, MAC, Android and iOS.

Load cell data can be viewed in tabular, graph or plan view through the user-friendly interface, which can be deployed on many different products while maintaining a consistent, universal look.

Overload and underload alarms and warnings can be communicated through multiple devices simultaneously, giving users a complete overview of the load status. These parameters can be edited remotely by users using a secure PIN.

In order to transmit load data wirelessly, the system uses Libra WiFi. This wireless node comes with a built-in firewall to allow only Kinesys data into the Libra system. This ensures a fast, secure and safe network.

2. IP Address window

This window appear upon opening the application. In the left field, enter the IP address of the Libra Pro or DigiHoist and then click "Connect to IP".

If a password has been previously set up, enter the password depending on your user access level to begin the session. For more information on setting up passwords see section 4.1.5.

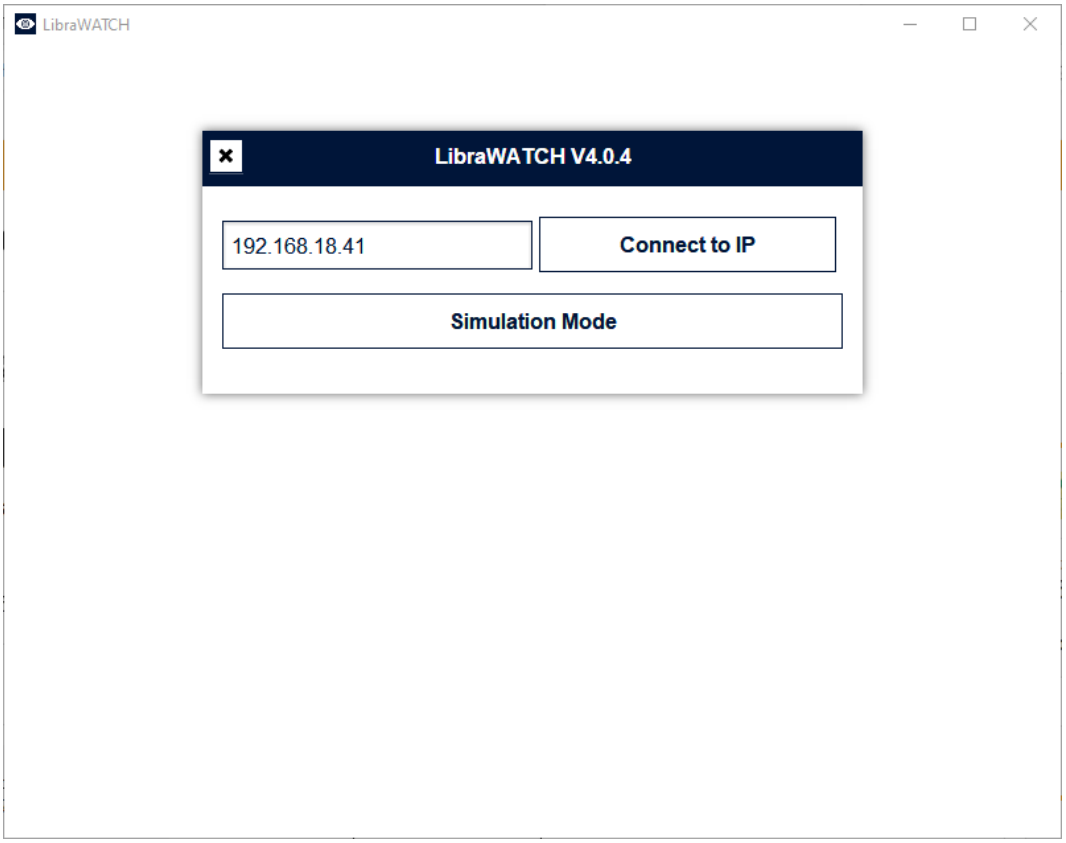


Figure 1. IP Address window

Note: To return to this window after beginning the session, click the gear icon and then select "About".

Figure 2. Returning to the IP Address window

2.1 Simulation Mode

Simulation Mode can be accessed by clicking "Simulation Mode" on the IP Address window. This mode allows users to view the features within LibraWATCH without connecting to any real-world devices.

The simulation includes a range of dummy load cells and a stage plan. The dummy load cells are programmed to periodically give different load readings, allowing the visual indicators within the application to be observed easily on the different viewing modes.

3. View windows

Different views can be accessed by clicking the Kinesys logo icon on the upper toolbar.

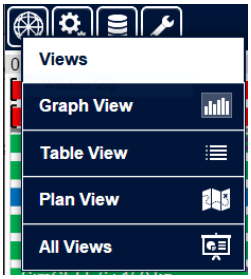


Figure 3. View selection

3.1 Graph View

Graph View displays each load cell in the system as a bar - the size of the bar proportionally changes size in relation to the load reading. The name of each load cell appears within the bar on the left side of the screen. When the bar becomes too small, the name moves to the right side of the screen.

The "All Load" bar refers to the combined load readings of every load cell and is always visible at the top of Graph View above the solid grey line.

The "Grid" bar in the example below refers to a group of load cells in Simulation Mode. All groups created by the user will appear in this section above the solid gray line as new bars in addition to the "All Load" bar.

Scales are provided for the individual bars and combined l bars in the gray shaded sections at the bottom and top of the screen respectively.

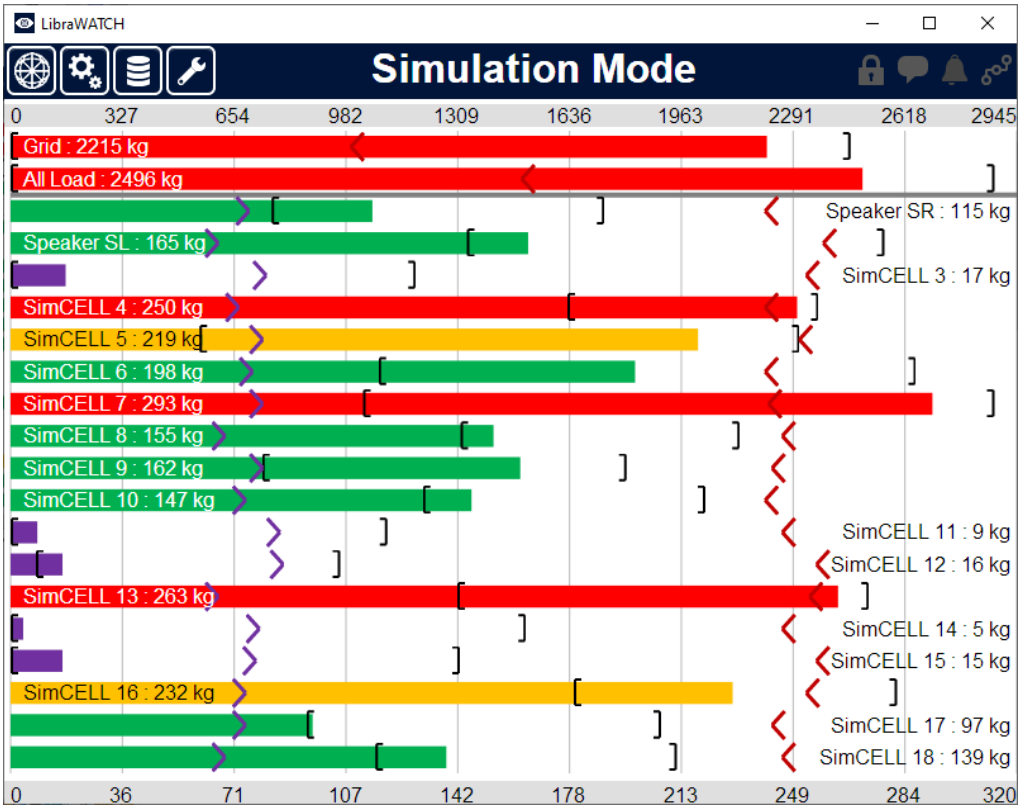


Figure 4. Graph View

3.1.1 Bar colors

Bars within Graph View are displayed in one of five colors. The colors within the factory default trigger system have the following meanings:

Green	OK
Red	Overload reached
Orange	Overload warning
Purple	Underload reached
Blue	Underload warning

The color system will be change if alternative trigger warnings have been programmed - see Section 4.1.4 for details.

3.1.2 Graph View symbols

- The black square brackets indicate the highest and lowest load readings detected in the session.
- The colored arrow symbols indicate the overload and underload values for each load cell (red = overload, purple = underload).
- Coloured circles (if selected to appear) indicate the overload and underload warning values.

3.1.3 Graph View settings

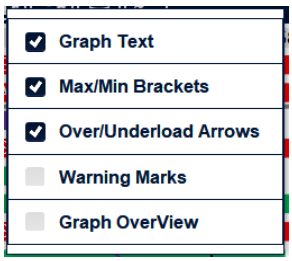


Figure 5. Graph View settings

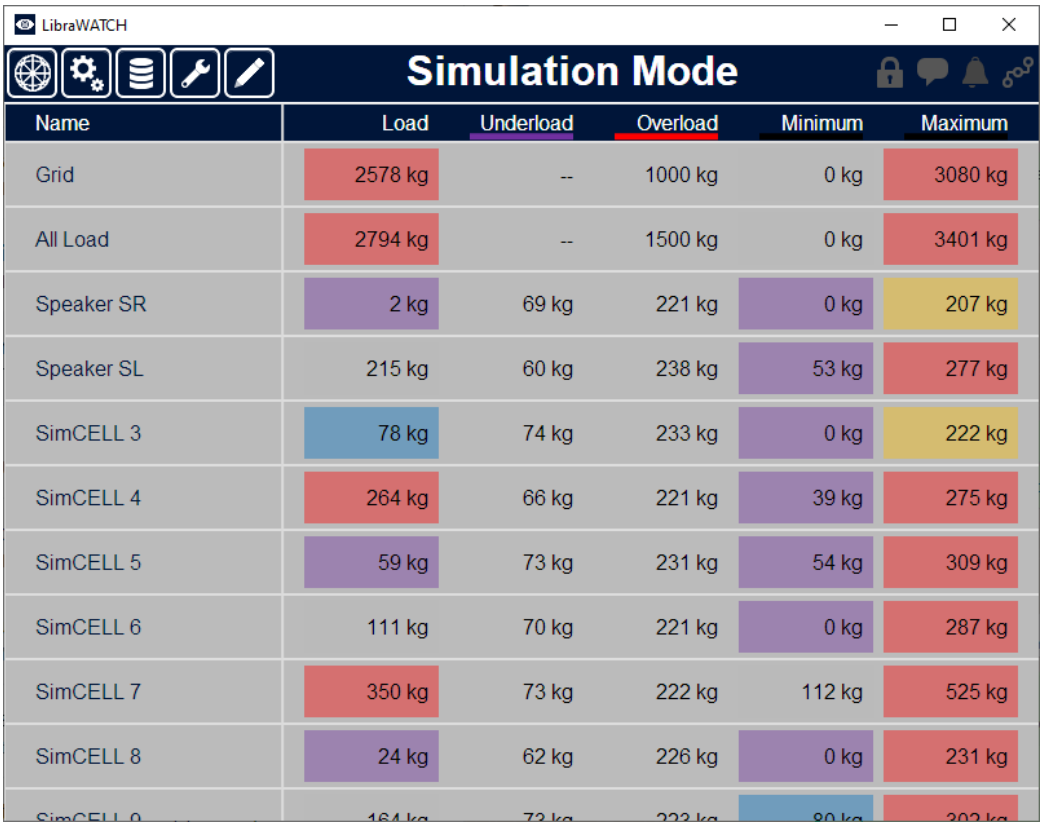
Click the spanner icon to bring up various options for Graph View, where the following visual features can be turned on or off.

- Graph text
- Max/Min Brackets
- Over/Underload Arrow
- Warning Marks
- Graph OverView - selecting this option rotates the graphs 90 degrees. In this view, text, max/min brackets, over/underload arrows and warning marks are not visible.

3.2 Table View

Table View displays the same data as in Graph View but in a tabular form.

Numerical data is displayed in the five columns next to each load cell. "Load" indicates the current load reading. "Minimum" and "Maximum" indicate the minimum and maximum loads detected over the entire session.



Name	Load	Underload	Overload	Minimum	Maximum
Grid	2578 kg	--	1000 kg	0 kg	3080 kg
All Load	2794 kg	--	1500 kg	0 kg	3401 kg
Speaker SR	2 kg	69 kg	221 kg	0 kg	207 kg
Speaker SL	215 kg	60 kg	238 kg	53 kg	277 kg
SimCELL 3	78 kg	74 kg	233 kg	0 kg	222 kg
SimCELL 4	264 kg	66 kg	221 kg	39 kg	275 kg
SimCELL 5	59 kg	73 kg	231 kg	54 kg	309 kg
SimCELL 6	111 kg	70 kg	221 kg	0 kg	287 kg
SimCELL 7	350 kg	73 kg	222 kg	112 kg	525 kg
SimCELL 8	24 kg	62 kg	226 kg	0 kg	231 kg

Figure 6. Table view

Similar to Graph View, "All Load" and groups are always displayed at the top of the window.

The background colors of the "Load", "Minimum" and "Maximum" columns have the same meanings as those listed in section 3.1.1

3.2.1 Additional options within Table View

Unlike Graph View, options are available for each load cell within Table View by right clicking. These options are Edit, Make Group, Delete, Bypass and Enable.

Be aware that deleting the load cell removes it completely. The only way to bring it back is to begin the detection again.

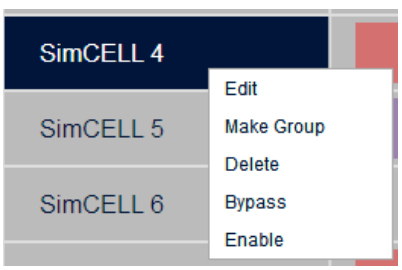


Figure 7. Load cell options in Table View

3.2.2 Editing load cells

Clicking either Edit after right-clicking or the pencil icon in the toolbar brings up a window that allows users to change the overload, underload and warning values. Delete, Make Group, Enable and Bypass also appear at bottom of this window.

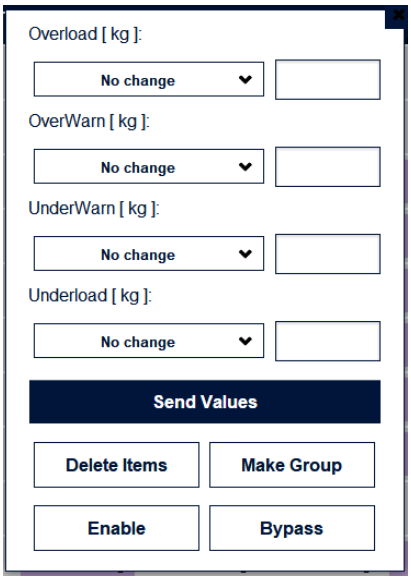


Figure 8. Load cell edit window in Table View

Various logical options can be chosen by clicking the drop-down arrow and then typing the numerical value in the field to the right. Once all changes have been made, click "Send Values" to implement the new values.

3.2.3 Making groups in Table View

To make a new group left click on the desired load cells in the "Name" column so they are highlighted dark blue. Then right click any one of them and select "Make Group".

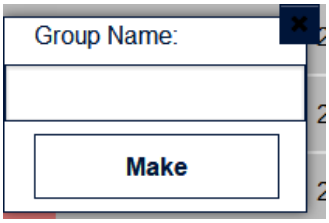


Figure 9. Make Groups window

A small window appears - enter the name of the group and click "Make". Once made, the new group appears at the top of Table View and Graph View.

3.2.4 Table View selection tools

Clicking the spanner icon when in Table View brings up selection options Select All, Clear All and Invert Selection.

3.3 Plan View

Plan View allows users to import an image of a stage, grid or any other form of rigging, and position the load cells accoringly to give a more visually accurate representation of the load cell setup. Each load cell box displays the load reading in real time and changes color in accordance with he same rules listed in section 3.1.1.

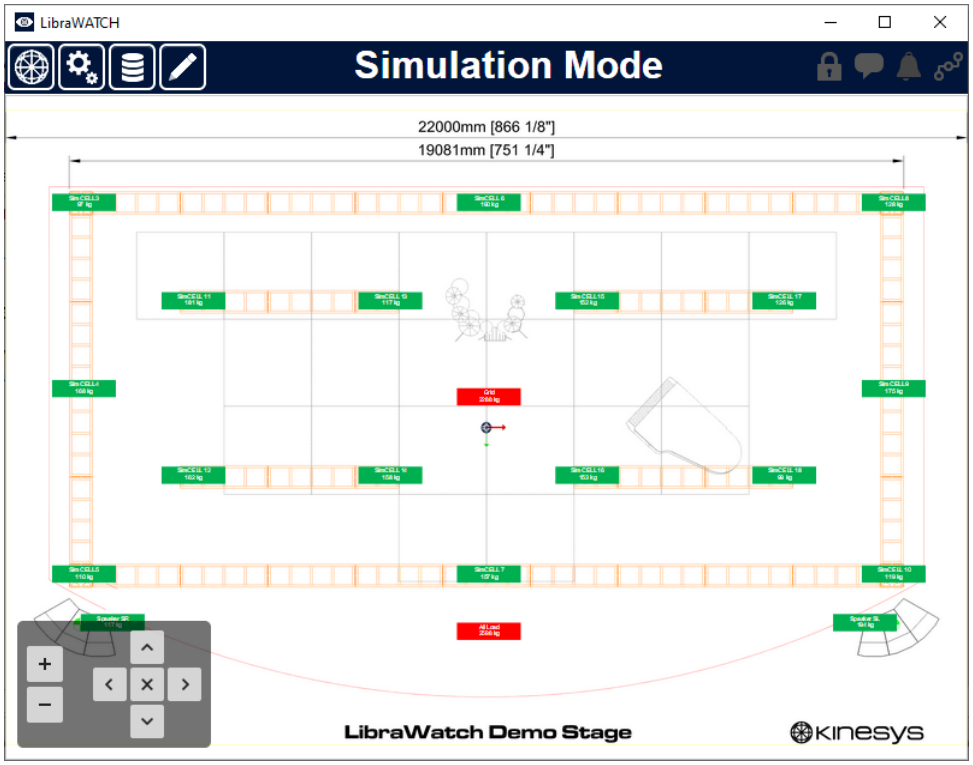


Figure 10. Plan View

3.3.1 Editing the plan in Plan View

When in Plan View, the tools icon on the toolbar is replaced with a penci/edit icon. Clicking this allows users to set up or edit a plan.

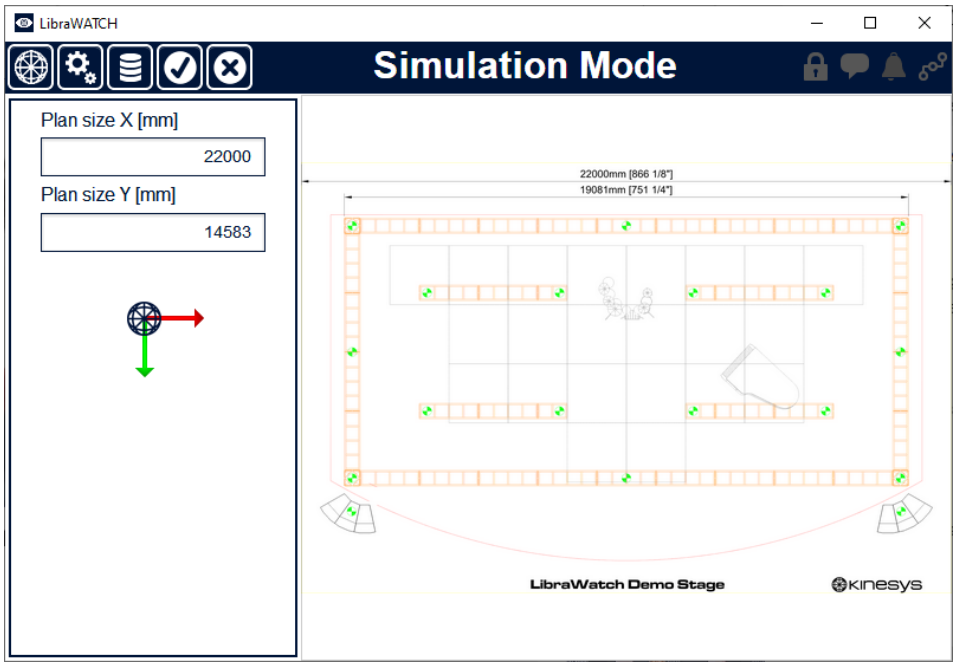


Figure 11. Editing in Plan View

The size of the plan can be edited easily using the Plan size X and Plan size Y fields on the left side of the screen.

The rest of the plan works on a drag-and-drop basis. Each load cell can be dragged around the plan itself or can be removed completely by dragging and dropping to the panel on the left.

The origin can also be dragged and positioned anywhere on the plan as needed. Depending on the rigging application, different users may want the origin placed at the bottom left, top left, centre or somewhere completely different.

Note: Dragging the origin icon to the left panel will also remove all load cells from the plan. When the origin icon is dragged back into the plan, all the load cell boxes will appear in the left panel and must be subsequently repositioned.

The direction of the red and green arrows on the origin icon indicate the positive directions from 0,0. This is true regardless of where the origin is positioned

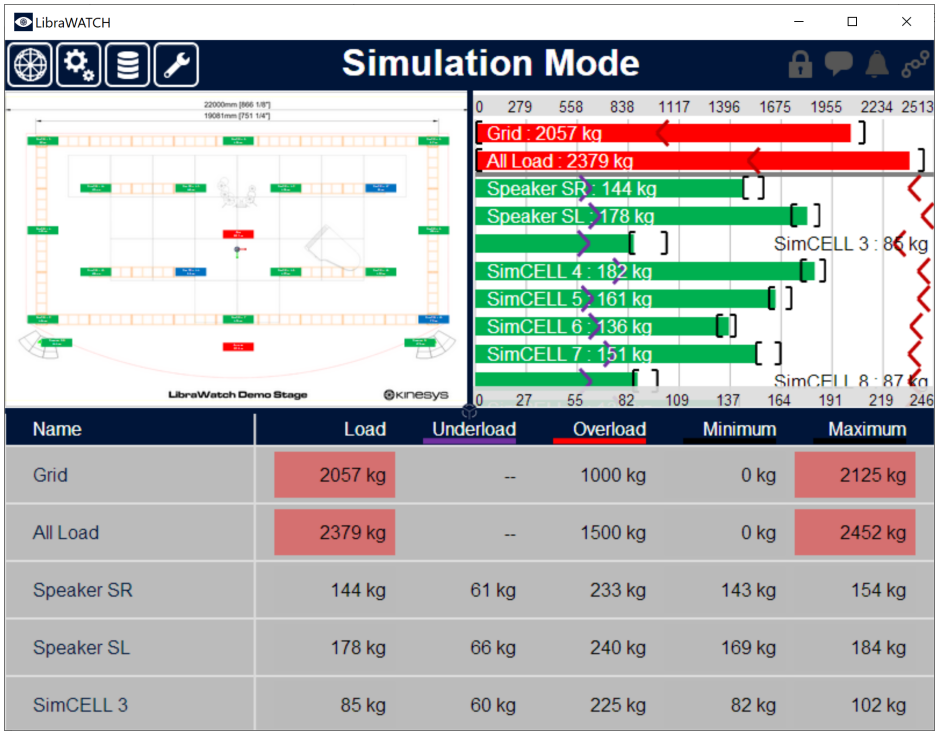
3.3.2 Importing background images into Plan View

To import a background image, navigate to the folder location and then drag and drop the file into the window.

Note: The image size is limited to 110 KB. Also, be aware of the phsyical size of the image - if too small the load cell boxes and origin icon may appear too large.

3.4 All View

All View allows Graph View, Table View and Plan View to appear simultaneously on screen. The sizes of each window can be changed by clicking and dragging the circular arrow icon in the middle of the three windows.



Name	Load	Underload	Overload	Minimum	Maximum
Grid	2057 kg	--	1000 kg	0 kg	2125 kg
All Load	2379 kg	--	1500 kg	0 kg	2452 kg
Speaker SR	144 kg	61 kg	233 kg	143 kg	154 kg
Speaker SL	178 kg	66 kg	240 kg	169 kg	184 kg
SimCELL 3	85 kg	60 kg	225 kg	82 kg	102 kg

Figure 12. All View

4. Settings

Settings can be accessed by clicking the gear icon on the toolbar and then clicking "Settings".

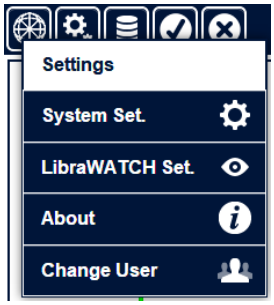


Figure 13. Settings selection

4.1 System Settings

Clicking the first icon brings up the System Settings window.

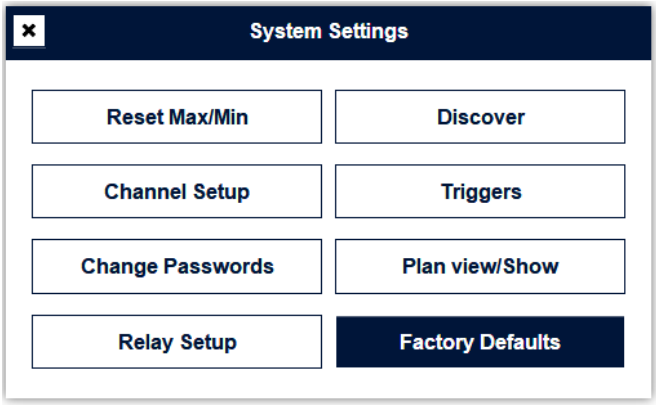


Figure 14. System Settings window

4.1.1 Reset Max/Min

Clicking this resets the maximum and minimum load readings displayed for all load cells as seen in Table View and represented by the square brackets in Graph View.

4.1.2 Discover

Clicking this button discovers all the Libra Cell load cells in the system. After discovery is complete, the details of the load cells, such as name, can be edited later.

When running LibraWATCH for the first time this action must always be done as the first step in order to begin load monitoring.

4.1.3 Channel Setup

This window allows users to program key parameters for each load cell in the system including name, position, tare, reeving, as well as all overload and underload values. Any previously setup groups can also be programmed in a similar way by clicking "Group".

To toggle between different channels or groups, use the left and right arrow icons at the top right of the window. The numerical order of the cells displayed in this window is determined by the order in which they were discovered.

The position of each load cell can be changed by editing the Pos X and Pos Y values. These are measured from the origin in the Plan View window. The values will also change automatically whenever the load cell positions are dragged and dropped within Plan View.

There is no Save button - the data will automatically be implemented by either moving to the next cell/group or exiting the Channel Setup window.

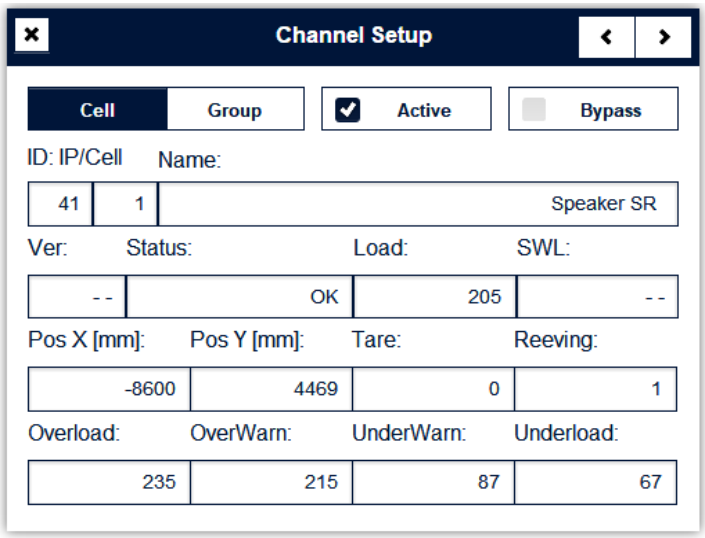


Figure 15. Channel setup window

4.1.4 Trigger Settings

The factory default trigger system consists of five trigger points - Overload, Overload Warning, Load OK, Underload Warning and Underload. These states are indicated in Graph View and Table View by the color system outlined in section 3.1.1.

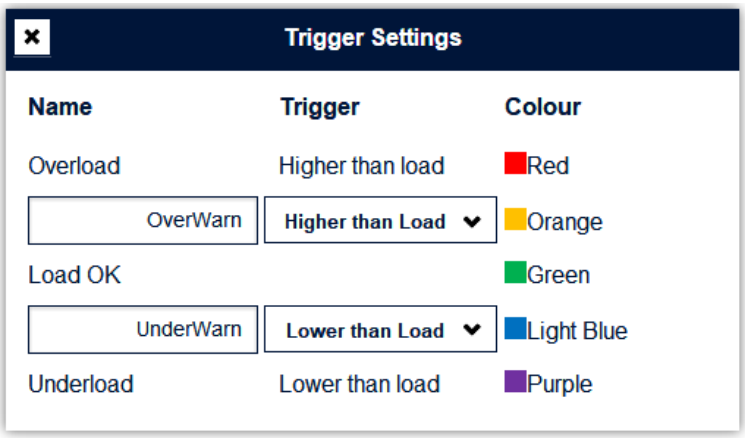


Figure 16. Trigger Settings - default

Users can program two alternative trigger systems if required.

- An additional trigger may be placed between "Load OK" and "Overload". To do this select "Higher than Load" from both drop-downs. When this is done, the triggers will be rearranged automatically on the screen - the new triggers are assigned the colors **orange** and **yellow**.
- An additional trigger may be placed between "Load OK" and "Underload". To do this select "Lower than Load" from both drop-downs. When this is done, the triggers will be rearranged automatically on the screen - the new triggers are assigned the colors **light blue** and **dark blue**.

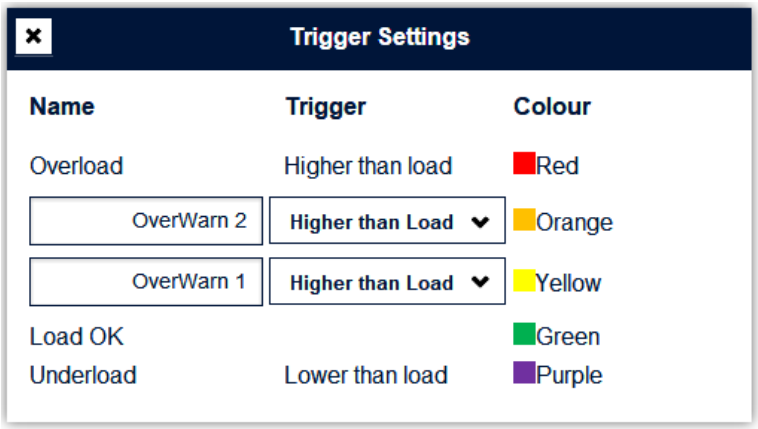


Figure 17. Trigger Settings - additional overwarning

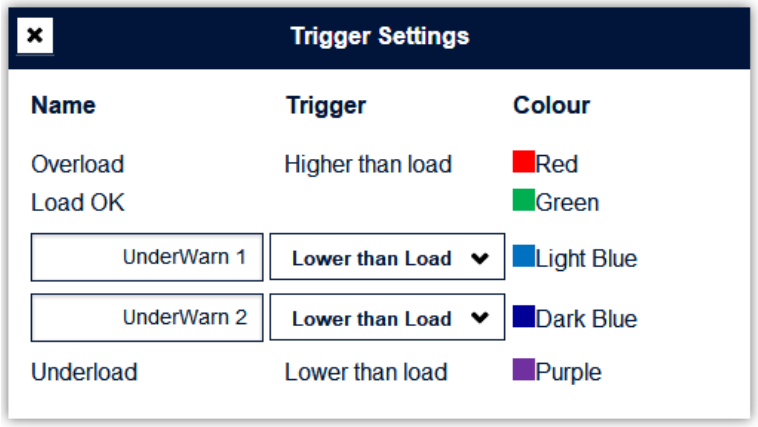


Figure 18. Trigger Settings - additional underwarning

Note: Overload (red), Load OK (green) and Underload (Purple) are always fixed and cannot be changed.

Editable triggers can also be renamed by typing into the fields on the left side of the screen. This is highly recommended to avoid confusion. Once renamed, the new trigger names will appear in the Channel Setup window. The Channel Setup window in Figure 19Figure 18.

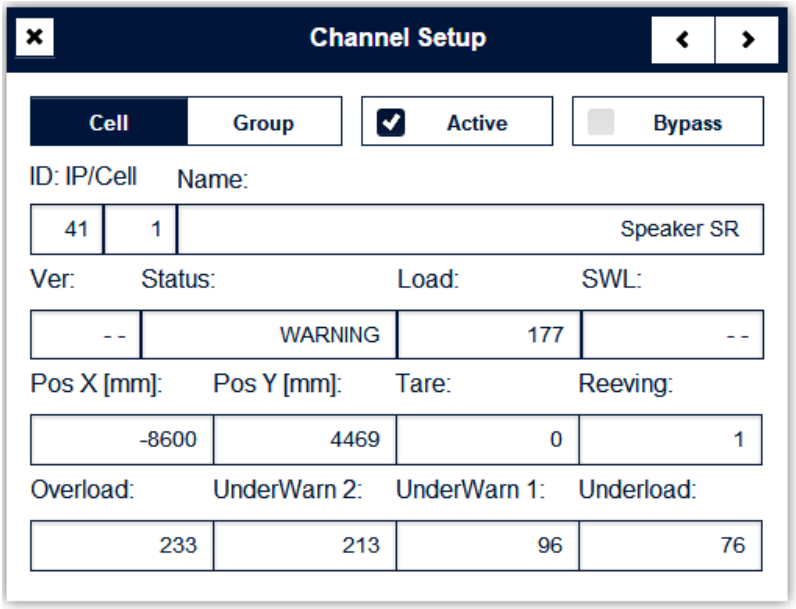


Figure 19. Channel Setup window - new trigger names

4.1.5 Change Passwords

This window allows PIN passwords to be set up for two different user types: viewers and editors. Editorscan access every feature within LibraWATCH including the ability to edit key data such as load cell settings, groups and plan views, whereas viewers only have the ability to view data.

Enter the password for each user in the "View Pass." and "Editor Pass." fields and then confirm the password for each user in the two "Confirm" fields. When the fields match, the background will turn green as shown below.

As stated at the bottom of the window, enter 0000 to cancel a password.

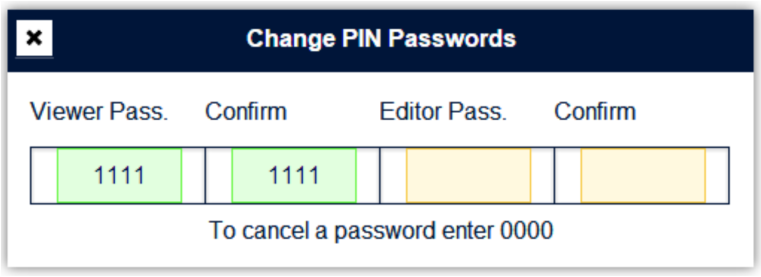


Figure 20. Change PIN Passwords window

4.1.6 Plan View

This window allows users to change the settings of the overall show and parameters within the Plan View.

The Plan size X/Plan size Y values refer to the size of the plan in Plan View.

The Plan offset X/Plan offset Y values refer to the location of the origin in Plan View.

Changing the values in the Plan size and Plan offset fields changes the values seen in the Plan View window, and vice versa.

Other features in this window include the ability to rename the show, change the system load units and the load cell brightness.

The cell brightness can be changed either by sliding the bar or entering a number between 0 and 100 in the field to the left of the bar.

Turning the cell brightness to zero turns off the all the displays globally (they will turn on again shortly after touching any buttons).

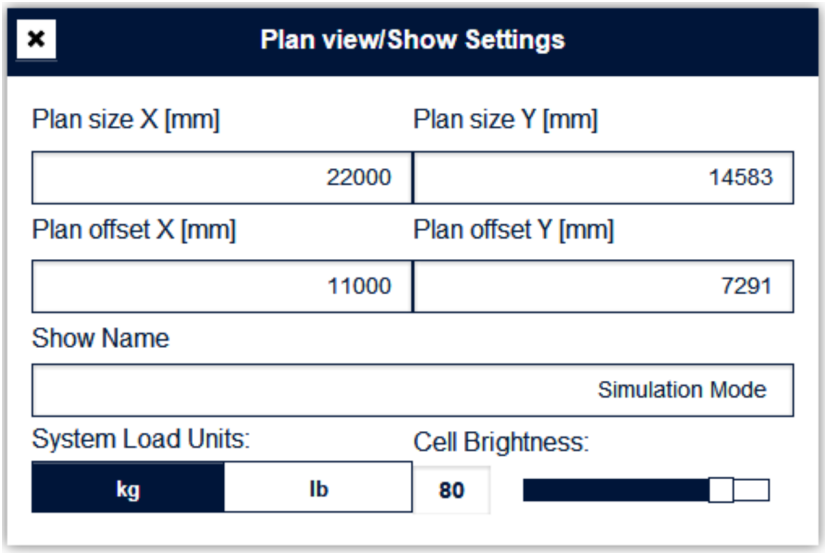


Figure 21. Plan View/Show Settings window

4.1.7 Relay Setup

Relays 1 to 4 refer to the relay outputs of the Libra Pro, which can be used to connect to external devices such as alarms and beacons.

- Relays 1 & 2 are voltage-free relay outputs
- Relays 3 & 4 are PowerCON True1 voltage relay outputs

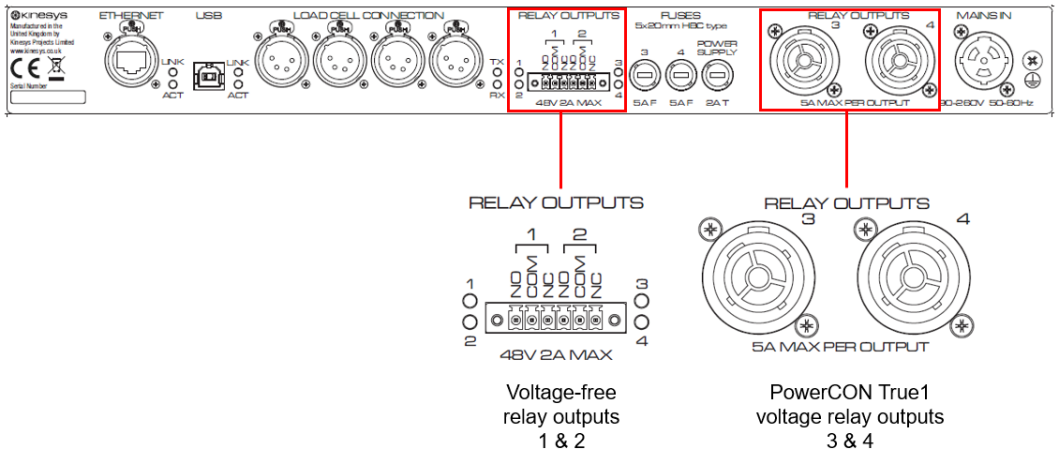


Figure 22. LIbro Pro relays

Clicking the field to the right of each Relay brings up various logical options that can be triggered on that Relay.

Figure 23. Relay Settings window

By using the Kinesys cable "9280125 - Libra Pro Estop Adapter" relay outputs 1 and 2 can be used as part of an E-Stop system.

4.1.8 Factory Defaults

Click this to restore the LibraWATCH factory default settings.

5. LibraWATCH Settings

LibraWATCH settings can be accessed by clicking the gear icon on the toolbar and then selecting "LibraWATCH Set.".

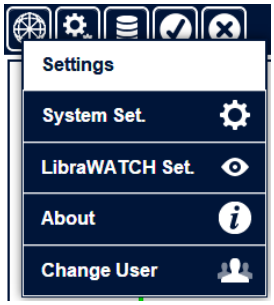


Figure 24. LibraWATCH settings selection

On this window there are options to choose between imperial and metric units, language options from the drop-down menu and notification settings.

The three notification check boxes are used for selecting how LibraWATCH will notify the user if using a mobile device when an alert is detected.

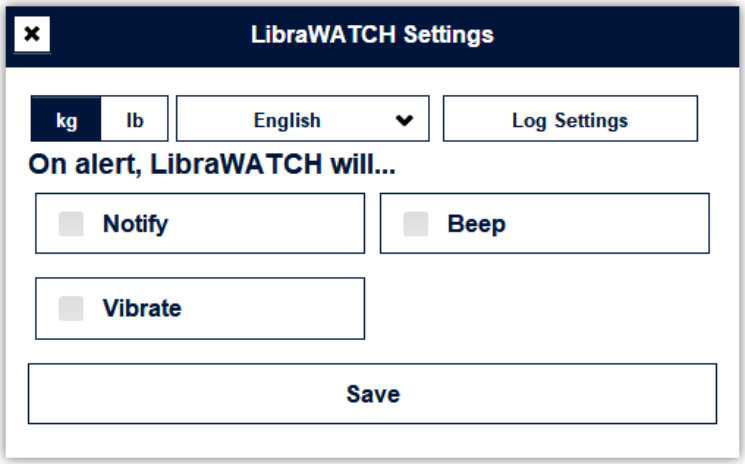


Figure 25. LibraWATCH Settings window

5.1 Log Settings

Data acquired by LibraWATCH is logged and stored periodically within the memory of the connected Libra Pro or DigiHoist. On this window, the logging period and maximum log file size can be changed using the drop-down menus and all logs can be deleted by clicking "Delete All Logs".

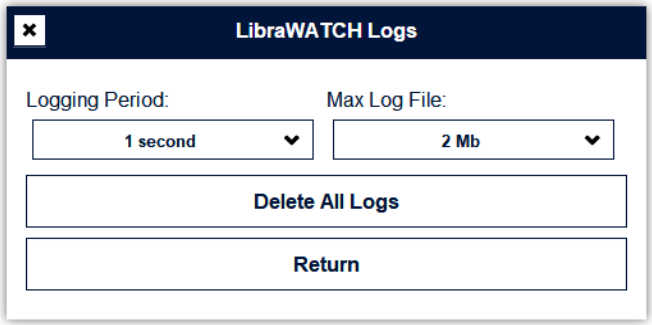


Figure 26. LibraWATCH Logs window

6. Data

Various data options can be accessed by clicking the disc icon in the toolbar.

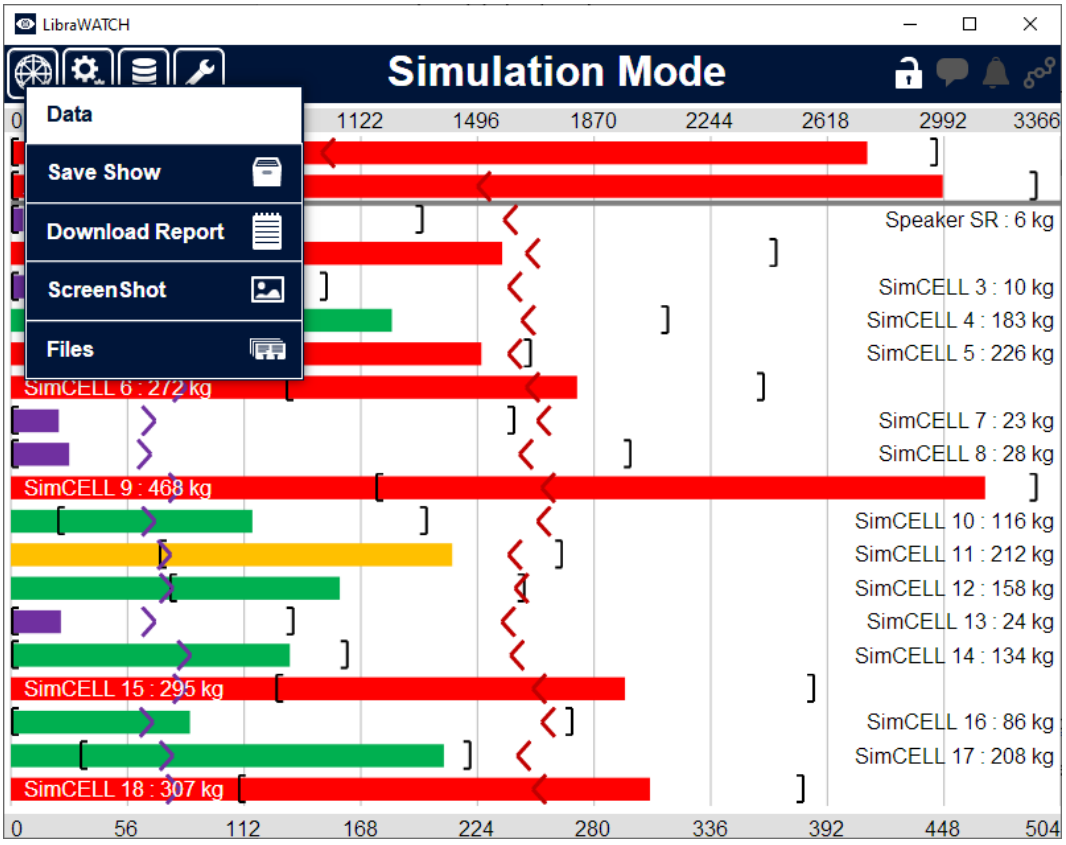


Figure 27. Data options

- Save Show - brings up options to save the current session.
- Download Report - downloads a snapshot report of each load cell - this is different to a log file.
- ScreenShot - takes a screenshot when on the View screens.
- Files - brings up the log screen.

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