



User Guide

Laboratory and Weather Monitoring & Control System
User Interface

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1 Purpose

To provide an easy to use, secure system which enables laboratories, testing facilities or cold chain operators to remotely monitor and record the status of critical areas in real time; for staff to be alerted to changes in the critical environment immediately.

2 Infrastructure and Components

Sensors Sensors can be external or immersion, and measure almost any physical quantities such as temperature, moisture, pressure, gas, light or humidity. Wireless sensors are usually used, although occasionally wired sensors are used.

Repeaters These are used to ensure reliable communication between the wireless sensors and the Wireless Data Centre

Wireless Data Centre The Wireless Data Centre is the interface between the Datalogger and the wireless sensors. It stores wireless sensor data on an internal SD data card (typically 2GB) which, depending on the number of sensors can be up to 2 years of information.

Datalogger The Datalogger retrieves the information from the sensors and compares the data to preset parameters. If the data falls outside these parameters an alert is triggered. In the case of an alert the Datalogger will activate the system to inform *Users* of the alert.

Router Communicates between the Datalogger and the Web Server

Web Server Data is stored on a secure, remote server for at least 7 years. It is backed up onto a separate server every 24 hours.

User Interface The Software can be accessed from any web enabled device. A physical warning device such as a beacon or buzzer can also be connected to the system to provide additional alerts on site when the system falls outside the preset parameters.

3 The User Interface

Users can log in from any web enabled device. There are four levels of access permission, from Guest, where data can be viewed but not changed, through to Administrator which has the capability of changing all variables. All access is password protected, and the *Users*, and their level of access can be easily defined or changed with immediate effect. See section 9 for details.

Data is displayed in real time, and is stored for easy access at a later date. The data can also be downloaded into a .csv format for local storage and manipulation. A detailed data display allows the user to view system status and unit performance at a glance.

From the *Monitoring and Control System User Interface* (hereafter known as The Software) *Users* with appropriate access privileges can configure the target settings, along with positive and negative tolerances.

The Software is designed to make viewing the data intuitive and easy to navigate.

One or more sensors are used to monitor one physical quantity in one place. This is known as a UNIT. If measurements of more than one physical quantity are required the number of UNITS would increase accordingly. For example, if both temperature and humidity were being measured this would be classed as two UNITS.

If the same physical quantity is being measured throughout the system, the number of UNITS would be defined by the location of the sensors. For example, each UNIT would be one or more sensors in a room

A group of UNITS is classified as a ZONE. For example, a ZONE may be a factory's main building which has several rooms each with different monitoring requirements.

The LOCATION describes the geographic area, in which there are usually several ZONES. UNITS, ZONES and LOCATIONS are all accessed from the same menu bar, even if in different countries; making it easy to view an entire operation.

4 Alerts

An alert is a warning triggered when the monitoring system detects that one or more of the preset sensor parameters have been breached.

Alerts can be sent by SMS and email, as well as on site beacons and/or sirens.

Each UNIT will have a customised contact list which can be different for email and SMS messages. The User Interface allows *Users* with appropriate access privileges to programme the interval between alert messages.

In the case of an alert, a process will be followed which is described in section 15.4.

5 Target Audience

Testing laboratories, food manufacturers and cool chain operators worldwide.

6 Security

CWi Technical Ltd recognises the importance of data security and has made every effort to protect clients' confidential data.

- Data is stored on remote servers which are inaccessible to the client directly. It is impossible for the client to add, remove or alter data.
- All access to the system is password protected.
- Passwords are stored in one way encryption on the server.
- All actions are automatically logged by the system, time and date stamped, and attributed to the User who is logged in. It is impossible for the client to change the action log.
- Different levels of access are given to *Users* depending on their responsibilities.

7 History and Approach

CWi Technical Ltd was established in 2001 and has built up an enviable reputation as a supplier of robust and reliable monitoring and control systems. Used throughout the world, their weather stations and laboratory monitoring systems are built to a high specification and customised to each application. Each system is programmed to the client's exact requirements then fully tested prior to installation, ensuring commissioning and installation is completed quickly on site.

CWi Technical Ltd offers a comprehensive service and support package adapted to each client's requirements.

8 System Requirements

8.1 Internet access

Users can access The Software from any web enabled device. The Software is optimised for use with the latest version of Mozilla Firefox, but will work on any web browser.

Please note that downloading data on a mobile device may incur significant data charges.

8.2 Cookies

The Software uses cookies to ensure optimum performance. Please ensure cookies are enabled on the device used to access The Software. A cookie will be placed on the device used each time the *User* logs into the system and provides the following functions:

- Identifies the *User*
- Ensures The Software remains logged in for 24 hours following the last action
- Retains the *User's* preferences, For example, once the location menu has been navigated, its position will be retained for the next time the *User* logs in

The cookie used is a persistent cookie with an expiration time of 24 hours. This means that it will be stored on the device after the web browser window is closed or the device switched off. The system will remain logged in, even if the browser is closed, allowing the *User* to re open the system program without having to re enter their Password each time.

If the User is accessing the system from a shared device, CWi Technical Ltd strongly recommends that they log out each time they finish using the system as any actions on the site will be logged to the User ID stored in the cookie.

For further information about cookies see <http://www.aboutcookies.org/Default.aspx?page=5>

8.3 Data Storage

CWi Technical Ltd will store data for 7 years. In order to safeguard their data for longer than this, clients should regularly download the data and store in their own facility.

8.4 Data Protection

CWi Technical Ltd will not share any personal information, or use it for any purpose other than that for which the system is designed.

The client is responsible for enforcing the correct data security procedures. They may choose to protect their data with an annual SSL certificate.

8.5 Password Security

Each *User* has a unique Username and Password combination. They enable The Software to recognise the *User* and display the appropriate information for that *User* account. It is therefore imperative that Passwords are not shared, or disclosed to anyone.

In the event of a Password having been shared, it should be changed immediately..

8.6 Time

All times are shown in Greenwich Mean Time/Universal Time Constant (GMT/UTC). *The system does not adapt to Daylight Saving Time* to avoid the risk of compromising the data validity.

9 Registration

In order to use the system, all *Users* must be registered. This maintains the integrity of the system, and ensures that each *User* is only permitted access to UNITS within their remit.

The *User* privileges are set at the time of registration, but can be changed at any time.

The four levels are:

- Guest
- User
- System Operator
- Administrator

The levels of access for each *Usertype* are shown below

	View data	Download data	Email data	Summary data	View action log	Reset/Acknowledge alerts	Configure parameters	Sensor management	Access Administration menu
Guest	✓	✓	✓	✓					
User	✓	✓	✓	✓	✓	✓			
System Operator	✓	✓	✓	✓	✓	✓	✓	✓	
Administrator	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 1: User levels of access

The most comprehensive level of access is Administrator. The Administrator is able to register new *Users*, change Passwords and deactivate existing *Users*. Every *User* should be aware of who the Administrators are for their system.

Registration is achieved in one of two ways; by CWi Technical Ltd as part of the installation procedure, or by the client after installation and commissioning.

At the time of installation CWi Technical Ltd will register *Users* identified by the client. The client provides all the registration details on a registration form.

Each *User* will receive a registration email detailing their Username and Password, and a link to activate the account.

10 Front Page

This is displayed before the *User* is logged in. It displays the login window, and from this screen the *User* can find out more about products, see the terms and conditions of sale, and contact information for CWi Technical Ltd.

The information on this screen is standard, but once logged in the menus will only display links relevant to the *User's* account.

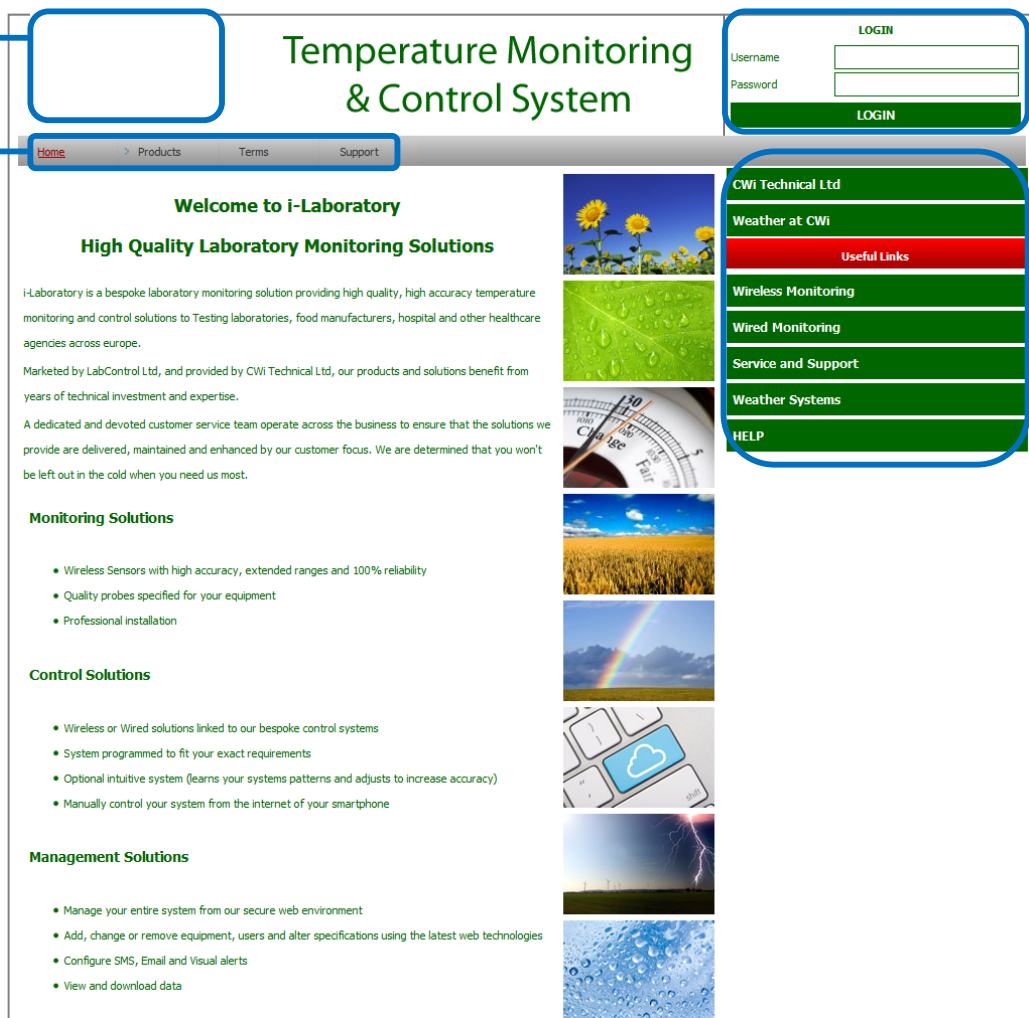
Please note that the header and colour scheme can be tailored to the client's specification. Multiple schemes can be used by arrangement, enabling a client to present their *Users* with a customised front page.

Client's Company logo

Click here at any time to return to the front page

Upper Navigation Bar

See section 13.1



The screenshot shows the front page layout. At the top left is the 'Client's Company logo' area. Below it is the 'Upper Navigation Bar' with links for Home, Products, Terms, and Support. The main heading is 'Temperature Monitoring & Control System'. Below this is a 'Welcome to i-Laboratory' section with a sub-heading 'High Quality Laboratory Monitoring Solutions'. The main content area is divided into three sections: 'Monitoring Solutions', 'Control Solutions', and 'Management Solutions', each with a list of bullet points. On the right side, there is a 'Login' form with fields for Username and Password, and a 'Useful links' menu with options like 'Weather at CWi', 'Wireless Monitoring', 'Wired Monitoring', 'Service and Support', 'Weather Systems', and 'HELP'. A vertical column of images is positioned between the main content and the right sidebar.

Login
See section 11.1

Useful links.

Figure 2: Front page

11 Login/Logout

In order to access the secure data, the *User* must be logged in and have appropriate access privileges. The Software is accessible from any web enabled device, and therefore to protect the client's data, access to The Software is password protected. Each *User* must have a unique Username and Password in order to access their own personal settings. There are 4 levels of access; these are detailed in section 9.

11.1 Login

The Login window is displayed at the top right hand corner of the Front Page, see Figure 2

To login, the *User* will need to enter their unique combination of Username and Password.

The Username is usually the *User's* registered email address. If the *User* was registered at the time the system was commissioned, the Password can be found in a registration email sent to the registered email address.

If the *User* was added at a later date, the Password will have been set by the Administrator.

There is currently no facility for the *User* to change their own Password; it must be done by an Administrator or CWi Technical Ltd

To Login:

Enter Username and Password

Click LOGIN

The Home Screen will open see, section 12.

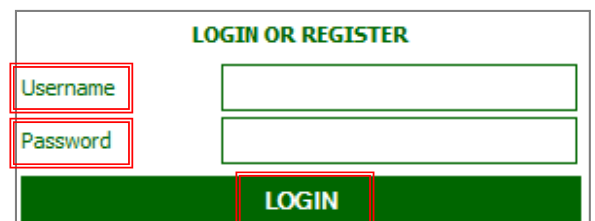


Figure 3: Login

The login boxes will be replaced by the *User's* name, company details and registered email address. If these details are not correct, an Administrator can change them in User Management, see section 16.4.



Figure 4: Logged in User details

11.2 Login error

If an incorrect Username or Password is entered an error message will be displayed:

Try entering the Username/Password combination again. Note that the Username and Password are case sensitive

If the error persists contact the Administrator.

There is no limit to the number of login attempts that can be made. However, each attempt will be logged by the system, so the system Administrators would be aware of a sustained effort to gain unauthorised access.

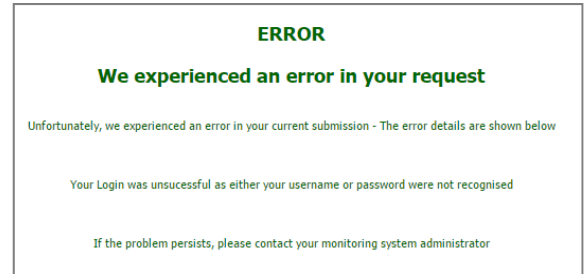


Figure 5: Login error

11.3 Logout

It is imperative that the *User* logs out when using a shared computer to prevent unauthorised access to the system. If the *User* fails to do this, the system will remain logged in, allowing unauthorised persons to gain access to the system and data. Any operations carried out by the unauthorised *User* would be logged to the account in use.

The green LOGOUT button is displayed in the top right hand corner of the screen, beneath the *User's* details This is static and can be accessed at any time.

To logout click the LOGOUT button.

The Front Page will be displayed.



Figure 6: Logout

12 Home (logged in)

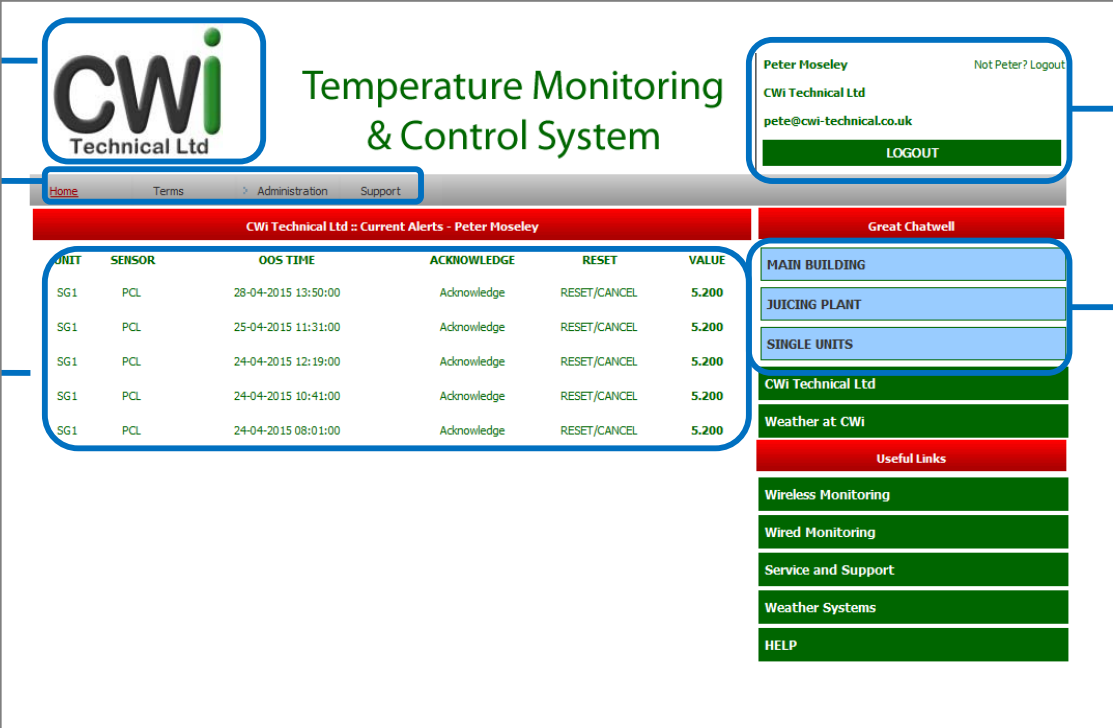
The Home Screen is displayed when the *User* logs into the system. From this page the *User* can access the parts of The Software for which they have access privileges.

To display the home screen at any time;

Click the logo at the top of the screen;

Click Home on the Upper Navigation Bar, see section 13.1.

Alerts are shown on this page, see section 15 for further details.



Client's company logo
Click here at any time to return to the home screen

Upper Navigation Bar (section 13.1)
Content depends on the *User's* access privileges

Alerts (section 15)
Current alerts are displayed here

User details and Logout (section 11)
Ensure the details shown here are correct

Location menu (section 13.2)
Click here at any time to view real time data. The areas visible will depend on the *User's* access privileges

UNIT	SENSOR	OOS TIME	ACKNOWLEDGE	RESET	VALUE
SG1	PCL	28-04-2015 13:50:00	Acknowledge	RESET/CANCEL	5.200
SG1	PCL	25-04-2015 11:31:00	Acknowledge	RESET/CANCEL	5.200
SG1	PCL	24-04-2015 12:19:00	Acknowledge	RESET/CANCEL	5.200
SG1	PCL	24-04-2015 10:41:00	Acknowledge	RESET/CANCEL	5.200
SG1	PCL	24-04-2015 08:01:00	Acknowledge	RESET/CANCEL	5.200

Figure 7: Home Page (logged in)

13 Menu bars

13.1 Upper Navigation Bar



Figure 8: Upper Navigation Bar - Administrator

The Upper Navigation Bar can be found at the top of the screen. It will remain in the same place, although the **content of the bar is dynamic and changes according to the login state and the *User's* privileges**. Whenever a *User* is logged in, the Upper Navigation Bar may be used to access any part of The Software. The headings on this menu bar are as follows:

- Home – see section 12
- Terms – click to see terms and conditions of sale, and provision of goods and services
- Administration – only visible if the *User* is logged in as an Administrator - see section 16
- Support – see section 17.

13.2 Location menu

This is a navigable list of the monitored areas located on the right hand side of the screen when the *User* is logged in. Only areas the User has permissions for will be shown. See 16.4.2 to see how Units are added to a *User's* account. This can only be done by an Administrator.

The geographic position of the monitored site is known as the LOCATION and is shown in red. ZONES are shown in blue. Click on a ZONE to expand into a list of UNITS. UNITS are shown in grey. Click on the ZONE again to hide the list.

A cookie enables the system to remember how this menu is displayed after the *User* logs out, and will return to the same position when the *User* logs in again on the same device.



Figure 9: LOCATION and ZONES

UNITS, ZONES and **LOCATIONS** are all accessed from the same menu bar, even if in different countries; enabling the *User* to view an entire global operation.

Some applications require only a single sensor, for example a fridge. Typically, single sensors like these would all be shown in one UNIT, and are configured individually. See section 16.5.3 for details on how to ensure the data is shown individually.

Click on the UNIT to display and manipulate the data for that UNIT, see section 16.5.

Great Chatwell	
MAIN BUILDING	
Hi Care	
Cold Store	
D/I	
Fog Humidity	
FOG Temp	
JUICING PLANT	
Juicing HI	
Juicing LO	
Juicing Cold	

Figure 10: LOCATION, ZONES and UNITS

14 Data Display

14.1 Data

Click on the UNIT name at any time to view its data. A chart will be displayed showing last 24 hours' data for each sensor within that UNIT.

The date and time is displayed along the x axis. The date is shown in the format dd/mm/yyyy, and the time is in GMT, 24 hour format: hh:mm:ss.

The units measured are shown along the y axis.

Red lines show the levels at which an alert will be triggered.

Below the chart there is a table summarising the data for the time period displayed. The table columns displayed alter according to the sensors, but will usually include:

Max: Maximum measurement

Min: Lowest measurement

Mean: Mean over the time period displayed

Total: The total for the time period displayed

Latest Data: the most recent sensor measurement

To refresh the data click the UNIT name.

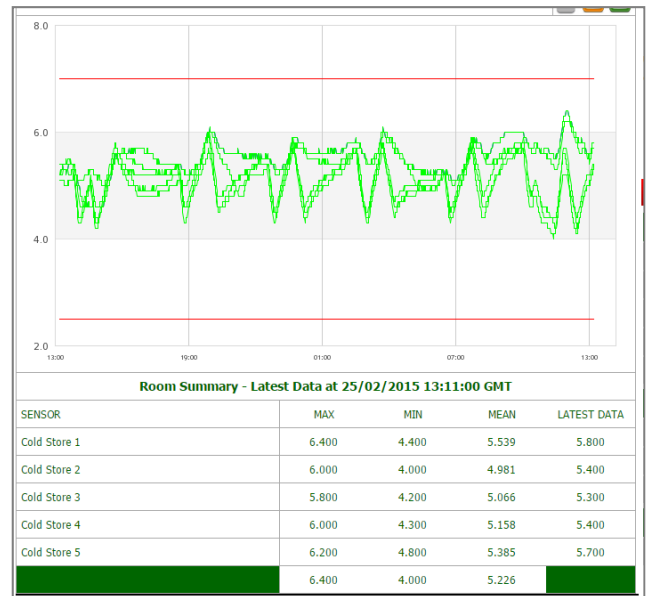


Figure 11: Data

14.2 Data Navigation Bar

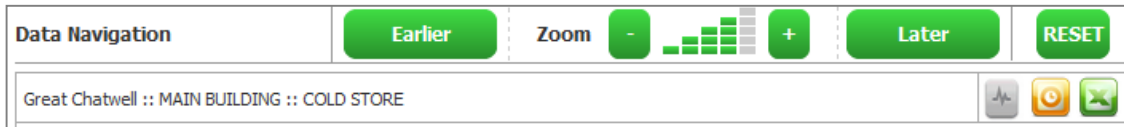


Figure 12: Navigation bar

The Data Navigation Bar is the primary method of viewing and manipulating data for a UNIT. Its functionality will depend on the *User's* access privileges. From the Data Navigation Bar, the *User* can view data from the last 24 hours at the click of a button. The Zoom buttons allow the *User* to view the data for a greater or lesser time period. The custom range function allows the *User* to enter a start and end date for the data required.

There are three buttons below this which allow the *User* to do the following if they have the appropriate access privileges:

- Configure the parameters for each UNIT (System Operator and Administrator only)
- Email the data chart to a colleague (All *Users*)
- Download the data in an .csv file for import into a spreadsheet package (All *Users*)






14.2.1 Zoom



Figure 13: Zoom control

The Zoom buttons will incrementally change the time frame for which the data is displayed.

The – button will zoom out to a maximum of one month prior to the current date and the + button zooms in to a minimum of 4 hours prior to the current time.

-  1 calendar month previous to selected date
-  2 weeks prior to selected date
-  1 week prior to selected date
-  24 hours prior to selected date. This is the default level
-  4 hours prior to selected time

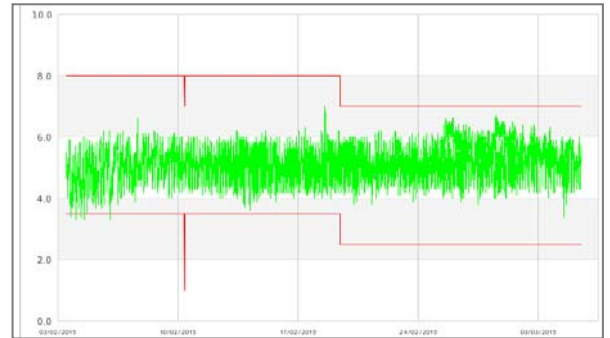


Figure 14: Maximum zoom in: 1 month

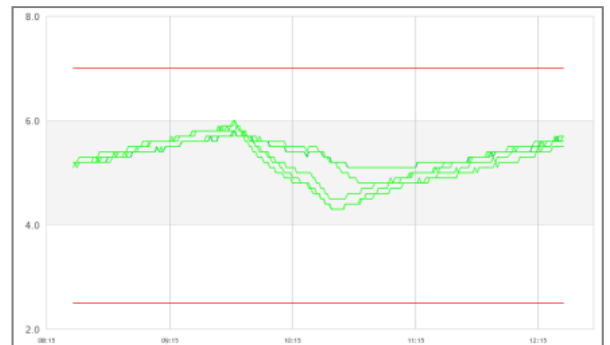


Figure 15: Maximum zoom out: 4 hours

14.2.2 Earlier

The earlier button displays data from the same time span immediately before the one currently shown, if available.

7 years of historical data may be accessed in this way, or all data since the system was commissioned, whichever is the shortest period of time.

14.2.3 Later

The later button displays data from the same time span immediately after the one currently shown if available.



Figure 16: Earlier, Later, Reset buttons

14.2.4 Reset

Reset will revert to the default view of the previous 24 hours

An error message will be displayed if the data is not available

Click the browser's back button in order to return to the previous data or click on a UNIT to return to the default view of 24 hours.



Figure 17: Data error

14.2.5 Custom Range

The date and time range of the data displayed is shown on the right hand side of the screen.

It is shown in the format dd-mm-yyyy hh:mm. The time is displayed in GMT, in the 24 hour clock format. *There is no allowance made for daylight saving time.*

Data Navigation

Displayed data is from
16-03-2015 14:50 to 17-03-2015 14:50 GMT

Use the form below to select specific dates for this page's charting function.

Select Start Date Select End Date

Show Chart Data

Figure 18: Time and date of displayed data

To change the dates for the displayed data:

Click the Select Start Date box.

A calendar will open.

Use the left and right arrows to choose the month.

Click the date from which the data should be displayed

Click the Select End Date button

Use the calendar to choose the last date for which data is to be displayed.

Click the green Show Chart Data button see Figure 18.

The data displayed is from midnight of the start date to midnight of the end date.#

Alternatively, manually enter the dates into the Select Start Date and Select End Date box in the format yyyy-mm-dd.

Click Show Chart Data, see Figure 18.

The Zoom buttons will no longer be visible as this function is not available for custom data view.

Use the Earlier and Later as described in sections 14.2.2 and 14.2.3 to display data for the same time period immediately before and after the selected dates.

Data Navigation

Displayed data is from
23-03-2015 09:22 to 24-03-2015 09:22 GMT

Use the form below to select specific dates for this page's charting function.

Select Start Date Select End Date

March 2015

Mo	Tu	We	Th	Fr	Sa	Su
23	24	25	26	27	28	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Figure 19: Custom date range

14.2.6 Quick configuration

(Administrator and System Operator only)

When this button is clicked a new window will open.

Boxes will be displayed showing the current values for:

- Target temperature
- Positive tolerance
- Negative tolerance
- Delay count (multiples of Time Interval, see 16.5.2)

Change the value, and click UPDATE. The value will be saved and logged.

Click CLOSE to return to the Data Navigation screen.

Please note that not all sensors have this facility, and if no values are available, none will be shown.

Users with System Operator or Administrator privileges can access further configuration options; click the Configuration icon at the bottom of the Data Navigation Window, see section 15.6.4.



Figure 20: Quick configuration button

	Value	Execute Command
Target Temperature	5	UPDATE
Positive Tolerance	2	UPDATE
Negative Tolerance	2.5	UPDATE
Delay Count	30	UPDATE

For further configuration settings, please use the system configuration menu

Figure 21: Configuration options

14.2.7 Email the chart to a colleague

When this button is clicked a new window will open showing a dialogue box and a preview of the chart to be sent.

Enter the recipient's email address and click SEND.

In the case of a successful transmission the SEND button will now read SENT.

Repeat the process to send the data to further contacts.

The recipient of the email can either view the email in their usual email program, or can choose to follow a link to view the data in their default web browser.



Figure 22: Email chart to a colleague button

Recipient:

SEND

Sending this data does not guarantee that the recipient will review the data

Figure 23: Email chart to a colleague

14.2.8 Download the data for this chart

Click this button to download a .csv file of the data to save in Excel or other spreadsheet application.



Figure 24: Download chart data button

A new window will open asking what the browser should do with the file.
CWi Technical Ltd recommends that you save the file locally before opening.

Click the Save File button.

Click OK.

Choose a location and relevant name for the file

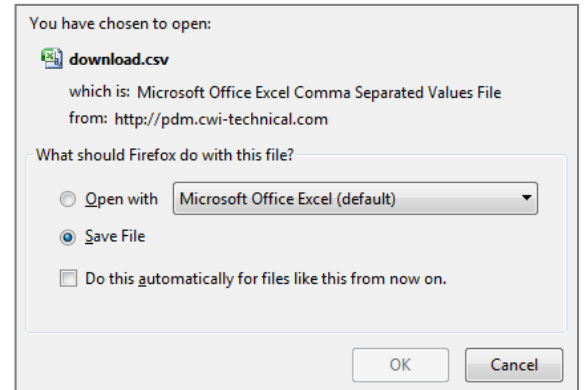


Figure 25: Download the data dialogue box

15 Alerts

The system will issue an alert if any of the sensors go outside their specification providing that *there is at least one email recipient set* see section 16.5. The alerts are displayed in three ways:

- On the Home Page, see section 12.
- Email to selected *Users*, see section 15.2.
- SMS message to selected *Users*, see section 15.3

Alerts will continue to be issued at predetermined intervals until the sensor(s) return to their normal state.

All alerts are logged within the system and cannot be deleted.

15.1 Alert display on the Home Page

Alerts will be displayed on the Home Page providing that at least one email alert recipient has been set up. (see section 16.5.4).

If there are no alerts the following screen will be shown on the Home Page:

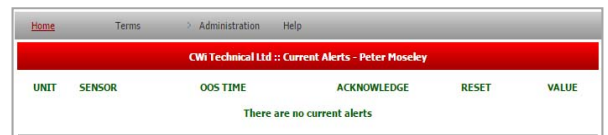


Figure 26: No alerts

As soon as a UNIT is out of specification as defined by the system settings, an alert notification will be presented on the logged in Home Page, Figure 7.

To acknowledge the alert: Click ACKNOWLEDGE

To reset the alarm click RESET/CANCEL

Add relevant audit notes if access privileges allow

Any *User* can be given access to read or add audit notes. See sections 16.4.1 and 16.4.2 for details.



Figure 27: Alerts

For a detailed display of the data, click on the relevant sensor name.



The screenshot shows a table titled 'Hi Care - 10-03-2015 Last data at 09:58 GMT'. The table has columns: Max, Min, Mean, Total, 09:58, and Units. The first row is highlighted with a red box and contains the following data: Hi Care 1A, 16.70, 6.80, 11.74, (empty), 12.10, C, and a red dot.

	Max	Min	Mean	Total	09:58	Units	
Hi Care 1A	16.70	6.80	11.74		12.10	C	●
Hi Care 1B	17.00	5.20	11.17		12.20	C	●
Hi Care 1C	17.40	5.10	11.29		12.10	C	●
Hi Care 1D	17.80	4.90	11.65		13.20	C	●
Hi Care 1E	17.10	5.10	11.21		12.20	C	●

Figure 28: Alert details

The Data Display page will be displayed, see section 14.



Figure 29: Graphical view of data

15.2 Email Alert

Alert Email					
Peter Moseley					
The following alerts require your attention:					
SENSOR	UNIT	DETAIL	OOS TIME	CONDITION	LINK
1565	GBY PL SINGLES	Single Units	26-02-2015 11:52:30	INITIAL	VIEW
If you feel you have received this email in error - please contact your local administrator or raise a support ticket.					
CWi Technical Ltd					

Figure 30: Email alert

Selected *Users* will receive alert information by email, see section 16.5.4. The email will contain the following information:

- **SENSOR** – the unique sensor code
- **UNIT** – Name of the UNIT
- **DETAIL** – name of the sensor
- **OOS** – Out of Specification; Time and date shown as dd-mm-yyyy hh:mm:ss
- **CONDITION** – The state of the alert, it will either be INITIAL for the first alert, and subsequent emails regarding the same alert will say REMINDER
- **LINK** – Click here to be taken to The Software. If already logged in, the *User's* computer will show the alert. If not logged in, an error message will be displayed. Log in to view the data.

If the *User* has access to multiple UNITS and multiple UNITS are alerting, they will be grouped into a single email.

15.3 SMS Alert

Selected *Users* will receive alert information by SMS, see section 16.5.7. The SMS will contain the following information

- **SENSOR** – The unique sensor code
- **DETAIL** – name of the sensor, and measurements.
- Time and date of the alert

If multiple UNITS are alerting, an individual SMS will be sent for each one.

15.4 Alert response process

When an alert has been triggered, a clearly defined process should be followed as follows:

- A number of people may receive the alert by email or SMS. **One person** should acknowledge the alert. This indicates to other *Users* that the issue is in hand.
- Following acknowledgement, and while the sensors are still out of specification, the alert email and SMS messages will continue to be sent at the predetermined interval.
- The person who acknowledged the alert should investigate the cause, and if possible rectify it
- If it is not possible to immediately identify the problem or rectify the alarm, the tolerances should be changed to prevent the alarm continuing.
- Reset the alarm
- Enter an audit entry (if access privileges allow. See 16.4.1 and 16.4.2 to set access privileges) describing the reason for the alert, actions taken and follow up required
- **If tolerances were changed ensure that the sensor is returned to the correct configuration once the fault has been rectified.**

15.5 Alert Response Flow Chart

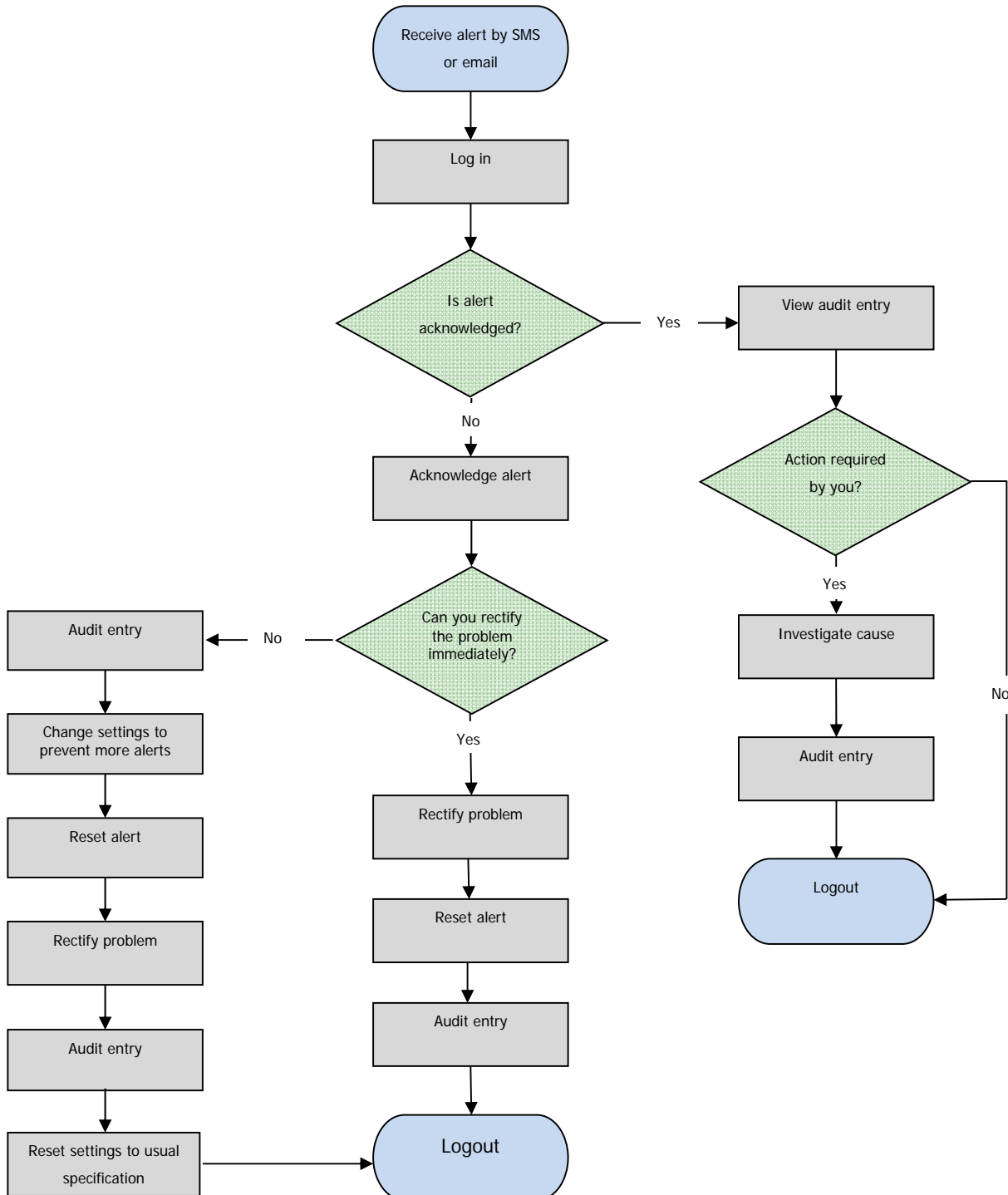


Figure 31: Alert response process flowchart

15.6 Lower Menu Bar

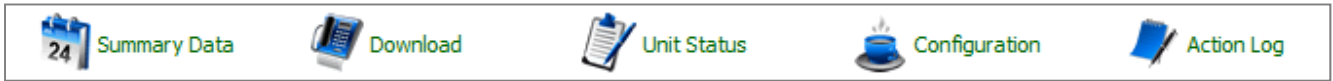


Figure 32: Lower menu bar

This menu bar is displayed at the bottom of the page and depending on access privileges will show the following options:

- **Summary Data** – view real time and historical data
- **Download** – download to data to their local drive
- **Unit Status** – view or add audit entries
- **Configuration** – configure sensor parameters, and view current and previous alert details
- **Action Log** – view list of actions for the selected UNIT

15.6.1 Summary Data

This shows the critical information for each sensor on any day since the system was commissioned. It can be accessed by all levels of *User*.



Figure 33: Summary Data button

Click on Summary Data to view real time data.

To view data from a specific date range:

- Click in the Select Start Date box
- Choose a date from the calendar.
- Repeat with the Select End Date box.
- Click Show Chart Data.

Figure 34: Select custom date

A colour coded circle on the far right side of the table indicates whether an alert was triggered during that selected time period.

- Green – The sensor stayed within limits
- Yellow – Warning: the sensor went outside the limits, but stayed within the time limit set so an alarm was not triggered
- Red – An alert was triggered

Click on the circle to view the alert history for that sensor

Insl - 22-04-2015 Last data at 12:15 GMT						
test	Max	Min	Mean	Total	12:15	Units
Ventilation	35.10	5.30	19.08		30.90	C ●
Canteen Staff Fridge	6.20	-0.60	3.07		1.10	C ●
QC Office	25.00	17.40	20.76		22.70	C ●
QC Office Sample Fridge	9.70	1.80	6.02		6.50	C ●
Pest Cool	6.40	2.90	5.03		3.80	C ●
Juiking NPD Fridge	15.50	1.70	4.87		4.70	C ●
Ambient Outdoor	53.50	2.10	19.13		42.70	C ●

Figure 35: Summary Data table

Click on DETAIL to find out more, including:

- Alert date and time
- The sensor and unit that is out of specification
- The date and time the alert was acknowledged, and by whom
- The date and time the alert was reset, and by whom

UNIT	SENSOR	OOS TIME	ACKNOWLEDGE	RESET
CST	CST-1	15-01-2015 13:44:00	Chris Urwin	Chris Urwin
CST	CST-1	30-10-2014 17:31:00	Steve Heskey	Steve Heskey
CST	CST-1	18-10-2014 09:55:00	Paul Dauny	Paul Dauny

Figure 36: Detail

To see further detail in graphical and tabular form as shown in Figure 29.

Click on the alert time

Alert Time	03-02-2015 22:25:00
Sensor 2 Unit	CST-1 - 10000000000000000000
Acknowledged	Steve Heskey 30-10-2014 18:48:32
Reset	Steve Heskey 30-10-2014 18:48:38

Figure 37: Alert time

15.6.2 Download

This will download the data for particular sensors between specified dates.

All levels of *User* can do this.

Check the box for each sensor for which information is required.

Use the drop down menus to select the start and end dates.

Click Download



Figure 38: Download button

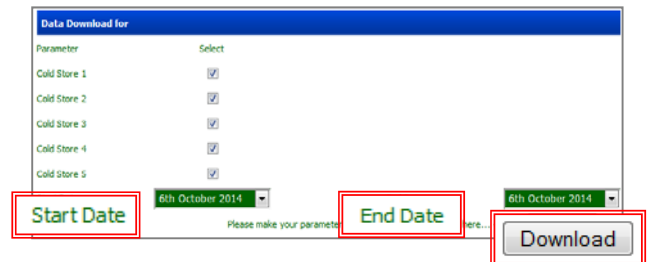


Figure 39: Download

A new window will open asking what the browser should do with the file.

CWi Technical Ltd recommends that you save the file locally before opening.

Click the Save File button.

Click OK.

Choose a location and relevant name for the file

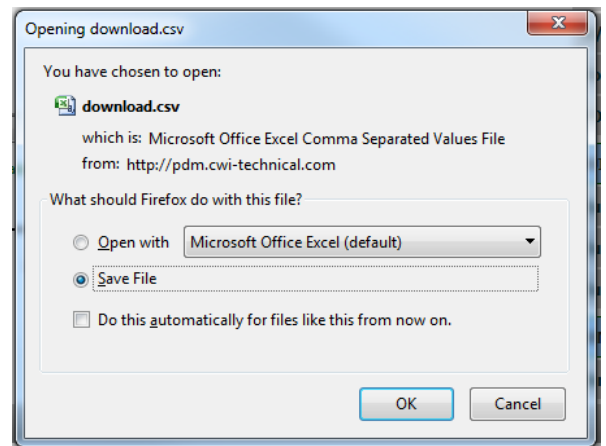


Figure 40: Save file

15.6.3 Unit status

This will show any audit entries for the selected UNIT, and allows the *User* to add an audit entry for that UNIT. See section 16.4.1 and 16.4.2 for details on allowing *Users* access to view or add audit entries.



Figure 41: Unit Status button



Figure 42: Unit status

To add a new audit entry. Type the notes in the box. Use the format buttons to change the appearance of the text.

When the audit entry is complete click ADD.

The audit entry will be visible to all *Users* with appropriate access privileges.

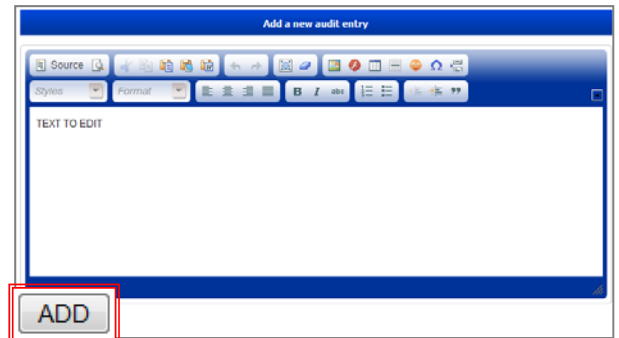


Figure 43: New audit entry

15.6.4 Configuration

This will display the Equipment List window and is accessible only by System Operators and Administrators.

There are 5 columns of information in this window

- **ID** – unique identifier of that sensor
- **DATA CODE** – a unique code which identifies the UNIT that sensor is part of- usually an abbreviation of the measurement value
- **MEASUREMENT** – A description of what is being measured
- The CONFIG button allows the *User* to change the parameters for each sensor
- The ALERT button displays a list of current alerts



Figure 44: Configuration button

Monitoring Systems - Equipment List				
ID	DATA CODE	MEASUREMENT	CONFIG	ALERT
15	CST-1	Cold Store 1	CONFIG	ALERTS
16	CST-2	Cold Store 2	CONFIG	ALERTS
17	CST-3	Cold Store 3	CONFIG	ALERTS
18	CST-4	Cold Store 4	CONFIG	ALERTS
19	CST-5	Cold Store 5	CONFIG	ALERTS

Figure 45: Equipment list

15.6.5 Change the configuration parameters

Where multiple sensors are in the same room, room based values will be controlled under the configuration of the first sensor.

To change the parameters, click CONFIG of the sensor, see Figure 45.

This will display 6 options.

1. **Target temperature:** The ideal temperature for that sensor
2. **Positive tolerance:** The number of units above which an alert will be triggered
3. **Negative tolerance:** The number of units below which an alert would be triggered
4. **Delay count:** time that the sensor should be out of specification before an alert is triggered. Expressed in multiples of the Time Interval, see 16.5.2
5. **RESET ALARM:** Click this button in the case of an alert.
6. **Calibration offset:** The calibration offset will compensate for any consistent drift in accuracy of the sensor.

Change the value in the boxes and click UPDATE.

The button will change to green and will show "SUCCESS".

In the case of an error, the button will change to red and will show the text "ERROR". If the failure is persistent contact CWi Technical Ltd through the support process, see section 17

Click CLOSE to return to the Equipment List.

Where multiple sensors are contained within a laboratory setting, the main settings for that UNIT are held against the first sensor. In this case, click the CONFIG button of the first sensor in the list, Figure 45, follow the procedure outlined above. This will change the other sensors in the list.

Where a UNIT is made up of single sensors, each sensor will have individual settings.

The calibration offset is set individually for each sensor, see section 15.6.6.

ID	VALUE	UPDATE	DESCRIPTION
1	5	UPDATE	Target Temperature
2	2	UPDATE	Positive Tolerance
3	2.5	UPDATE	Negative Tolerance
4	30	UPDATE	Delay Count
5	RESET ALARM		
6	0	UPDATE	Calibration Offset (- to add)

The options above can be changed to alter the performance of the system. To change a system parameter, alter the value, and click UPDATE. This will communicate your changes to the data system. If your request is a success, then the update button will go green and show a "SUCCESS" text, however, if there is an error, you will see a red button and the text "ERROR". In this instance, you should contact your administrator through the support system

Figure 46: Change configuration parameters

15.6.6 Calibration offset

Click on CONFIG of any sensor to change the calibration offset, see Figure 45.

If it is necessary to add a positive figure for the offset, then in this field it must be prefixed with a minus sign. For example, if the sensor is consistently measuring 1°C below the actual temperature, enter -1 in the Calibration Offset box. Conversely, if a negative offset is required then it should be entered as a positive figure.

Change the value in the box, and click "UPDATE". It will change to green and show "SUCCESS".

In the case of an error, it will change to red and will show the text "ERROR". In this case, contact CWi Technical Ltd through the support process, see section 17.



Figure 47: Calibration offset

15.6.7 View Alerts

To view alerts for each UNIT:

Click on ALERTS in the Equipment List window, see Figure 45.

To view a list of all previous alerts:

Click VIEW HISTORY:

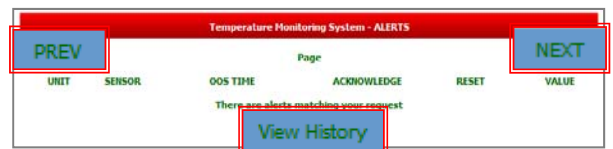


Figure 48: View alert history

Each page will display up to 10 alerts in reverse date order.

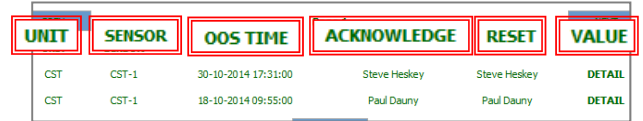
There are 6 columns of information for each alert:

- **UNIT** – a 3 digit abbreviation of the UNIT showing the alert
- **SENSOR** – The unique identifier of the sensor that has triggered the alert
- **OOS TIME** – Out of Specification Time: the exact date and time at which the tolerances were breached. This is in the format dd-mm-yyyy hh:mm:ss. The time is displayed in 24 hour clock.
- **ACKNOWLEDGE** – If acknowledged, the name of the person who acknowledged the alert will be displayed, if the alert is still current this will display a button to allow the *User* to acknowledge the alert
- **RESET** – If it has been reset: the person who reset the alert will be displayed, if the alert is still current, this will display a button to allow the *User* to reset the alert
- **DETAIL** - Click on DETAIL to view the detail of the
 - alert time
 - sensor
 - UNIT
 - time it was acknowledged and by whom
 - the time it was reset and by whom

Use the PREV and NEXT buttons to navigate through the pages.

To view a graphical representation of changes over a 24 hour period:

Click on the alert time



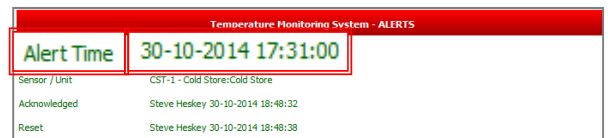
UNIT	SENSOR	OOS TIME	ACKNOWLEDGE	RESET	VALUE
CST	CST-1	30-10-2014 17:31:00	Steve Heskey	Steve Heskey	DETAIL
CST	CST-1	18-10-2014 09:55:00	Paul Dauny	Paul Dauny	DETAIL

Figure 49: Alert information



Temperature Monitoring System - ALERTS					
		Page			
UNIT	SENSOR	OOS TIME	ACKNOWLEDGE	RESET	VALUE
CST	CST-1	15-01-2015 13:46:00	Chris Unwin	Chris Unwin	DETAIL
CST	CST-1	30-10-2014 17:31:00	Steve Heskey	Steve Heskey	DETAIL
CST	CST-1	18-10-2014 09:55:00	Paul Dauny	Paul Dauny	DETAIL

Figure 50: Alert detail



Temperature Monitoring System - ALERTS	
Alert Time	30-10-2014 17:31:00
Sensor / Unit	CST-1 - Cold Store: Cold Store
Acknowledged	Steve Heskey 30-10-2014 18:48:32
Reset	Steve Heskey 30-10-2014 18:48:38

Figure 51: Alert time

15.6.8 Action Log

Shows the list of actions and the Data Navigation information.



Figure 52: Action Log button

The actions will be displayed in reverse date order, with 10 on each page.

Navigate through the list of actions using the page numbers

Click CLOSE to display the Data Navigation pane.



Figure 53: Action log

16 Administration

The Administration dropdown menu is accessed when logged in as an Administrator from the Upper Navigation Bar, see section 13.1.

The menu options are:

- **User Registration** – register new *Users*
- **User Management** – add UNITS to a *User's* account
- **Unit Management** – configure UNITS
- **Sensor Management** – change the settings for sensors
- **Location Management** – add a new location, or change the settings of the existing location
- **System Billing** – Not yet active. Billing information for service and SMS will be held here.

16.1 User Registration

Register a new *User* by filling in their information into the appropriate fields.

First name: The *User's* first name. Displayed whenever the *User* is logged in

Surname: The *User's* surname. Displayed when the *User* is logged in

Company: Company name. Displayed when the *User* is logged in

Email: The *User's* email address. This will usually also be the Username, used for login.

Address 1:
Address 2:
Town:
County:
Postcode:
Country: } The company's registered address details.

Use the drop down menu to select the country

Telephone: The *User's* company contact phone number. To be used in case of an SMS alert. The number should be in the international format. E.g. UK mobile numbers would start 447, rather than 07

Password: This will be automatically generated and an email will be sent to the *User's* registered email address.

Agent Use the drop down menu to choose the correct company. This gives clients the flexibility to have different styles applied to their account.

Usertype Use the Usertype drop down menu to select access permissions for that *User*

- **Guest:** A guest can view the data, but does not have the permissions to change any data
- **User:** A *User* has the same permissions as a Guest, but can also acknowledge alerts and reset alarms, and view the Action Log.
- **System Operator:** The System Operator has the same permissions as those above, and has access to sensor management and configuration menus
- **Administrator:** Administrator is the top level of permission and has access to add, delete or change *User*, UNIT and sensor information.

See Figure 1 for details of *User* access privileges



Figure 54: User registration

Click Submit

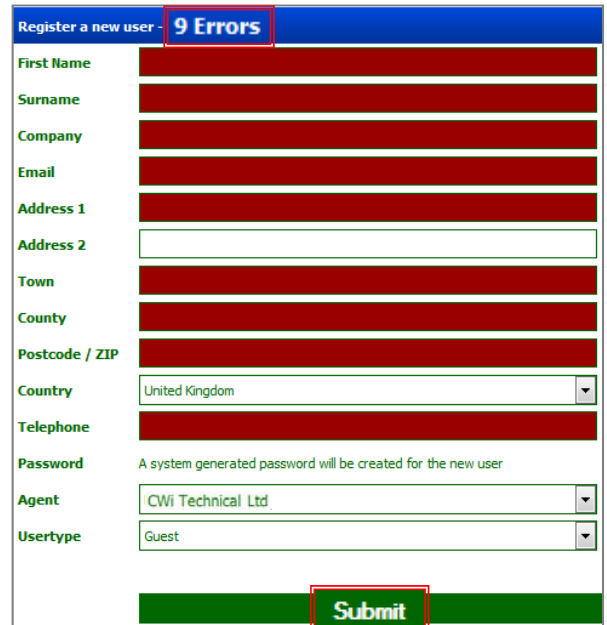
16.2 User registration error

Each field is mandatory, and the form submission will not work if any field is left blank.

Each empty field will be highlighted in red, and the number of empty fields (errors) will be shown at the top.

Enter the correct information into the highlighted field

Click Submit



Register a new user - **9 Errors**

First Name [Red]

Surname [Red]

Company [Red]

Email [Red]

Address 1 [Red]

Address 2 [White]

Town [Red]

County [Red]

Postcode / ZIP [Red]

Country [United Kingdom]

Telephone [Red]

Password [A system generated password will be created for the new user]

Agent [CWi Technical Ltd]

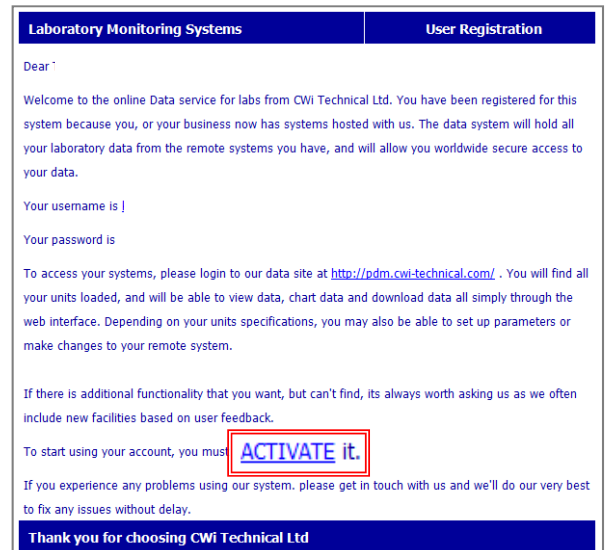
Usertype [Guest]

Submit

Figure 55: User registration error

16.3 Successful registration

When a *User* has been successfully registered they will receive an email containing a system generated password. And a link to ACTIVATE their account.



Laboratory Monitoring Systems | User Registration

Dear [Name],

Welcome to the online Data service for labs from CWi Technical Ltd. You have been registered for this system because you, or your business now has systems hosted with us. The data system will hold all your laboratory data from the remote systems you have, and will allow you worldwide secure access to your data.

Your username is [Name]

Your password is [Password]

To access your systems, please login to our data site at <http://pdm.cwi-technical.com/>. You will find all your units loaded, and will be able to view data, chart data and download data all simply through the web interface. Depending on your units specifications, you may also be able to set up parameters or make changes to your remote system.

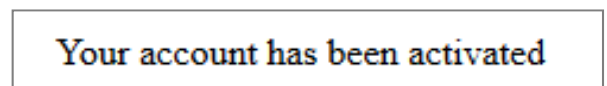
If there is additional functionality that you want, but can't find, its always worth asking us as we often include new facilities based on user feedback.

To start using your account, you must **ACTIVATE it.**

If you experience any problems using our system. please get in touch with us and we'll do our very best to fix any issues without delay.

Thank you for choosing CWi Technical Ltd

Clicking the ACTIVATE link will open a web page confirming that the account has been activated



Your account has been activated

16.4 User Management

Use this facility to edit the details of *Users* registered on the system.

When User Management is selected, the system will display a list of *Users* with a selection of possible actions:

Monitoring Systems - User List									
ID	First	Last	Email	Actions		Active			
1	Peter	Moseley	pete@cw-technical.co.uk	E	U	A	P	L	<input checked="" type="checkbox"/>

Figure 56: User management

ID Unique identifier code for the *User*. This is set by the system and will not change.

First Registered first name

Last Registered surname

Email Registered email address.

Actions: **E:** Edit

U: Unit List

A: Not in use

P: Change Password

L: Not in use

Active Check box to identify whether the *User* is active on the system. If the box is left unchecked the *User will not be able to log in.*

16.4.1 E - Edit

This will display the *User's* details entered at registration, see section 16.1.

To change a field

Place the cursor in a box and type the new details.

Use tab to move away, or click outside the box, to save the information.

In addition to the details outlined in registration, there are radio buttons for Audit.

Click yes if the *User* is to be able to view audit entries, click no if not. If the *User* is to be able to add audit entries, this needs to be set individually for each UNIT. See section 16.4.2.

Click CLOSE to return to the *User* List.

The system will log which registered *User* made the changes, and when.

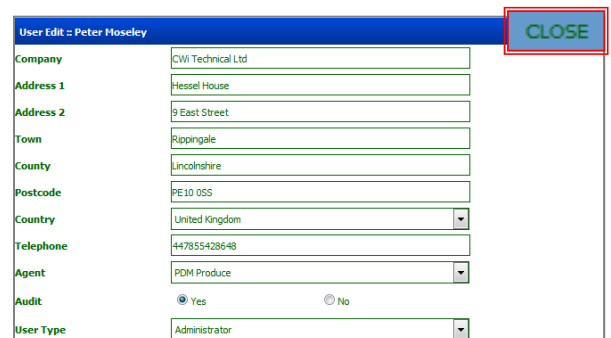


Figure 57: Edit User details

16.4.2 U - Unit List

When a *User* is added, initially they will not have access to any UNITS. This function enables the Administrator to link *Users* to UNITS. Click on the U to display two tables:

One will display the current settings, and allow the Administrator to edit them:

- ID** Unique identifier number for the UNIT. This is set by the system and is not changeable
- IFC** Abbreviation for the UNIT, usually 3 characters. This is not changeable
- Name** UNIT name
- Description** Description of the UNIT for that *User*. This will only be displayed on this *User's* menu.
- Audit** Check this box if the *User* is to have the facility to add audit notes for this UNIT. In order for this to work the Audit "Yes" radio button must be selected in User Management, Edit User. See section 16.4.1
- Public** Audit "Yes" radio button must be selected in User Management, Edit User. See section 16.4.1
- DELETE** If the system has the facility to be accessed by anyone without logging in, click the Public box. Uncouple the *User* from the UNIT. The *User* or the UNIT will not be deleted from the system.

ID	IFC	Name	Description	Audit	Public	DELETE
1	HCS	Ht Care	Ht Care	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
3	CST	Cold Store	Cold Store	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
4	DI1	D/I	Delivery Intake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
6	TFG	FOG Temp	FOG Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
5	HFG	Fog Humidity	FOG Humidity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
7	SHC	Juicing HI	Juicing HiCare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
8	JLC	Juicing LO	Juicing LoCare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
9	JCS	Juicing Cold	Juicing ColdStore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL
2	SG1	Singles	Single Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DEL

Figure 58: Unit List

The second table allows the Administrator to link the *User* to a new UNIT

- UNIT SELECT** Use the drop down menu to select a UNIT
- Name** Choose a short (less than 16 characters) name that will identify the UNIT. This will be used in alerts
- Description** Enter a longer description for the UNIT for that User. This will only be displayed on this *User's* menu.
- Public** If the system has the facility to be accessed by the public without logging in, click the Public box.

UNIT SELECT: High Care Salads-HCS
 Name:
 Description:
 Public:

Figure 59: Link User to a new UNIT

16.4.3 A

Currently has no function

16.4.4 P - Change Password

Click CHANGE to automatically change the *User's* Password.

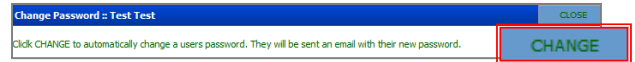


Figure 60: Change Password

An email will be sent to the *User's* registered email address informing them of their new Password.

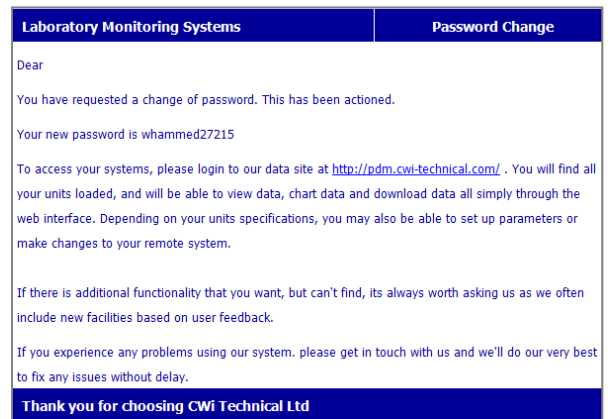


Figure 61: New Password confirmation email

A message will be displayed to confirm Password change was successful

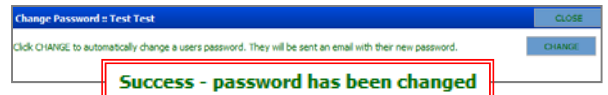


Figure 62: Successful Password change

16.4.5 L

Currently has no function

16.4.6 Active

This box must be checked to ensure the *User* is able to login to the system.

Users cannot be deleted from the system, however if they leave the organisation, or no longer need access to the system their account should be deactivated.

Uncheck the box to deactivate the *User's* account.

They will no longer be able to log in.

If the *User* is required to access the system after a period of no access:

Check the Active box.



Figure 63: Active User

16.5 Unit Management

Unit Management enables Administrators to configure the UNITS.

When Unit Management is selected, a NEW UNIT button and a list of all the UNITS will be displayed, alongside 7 icons and a check box.

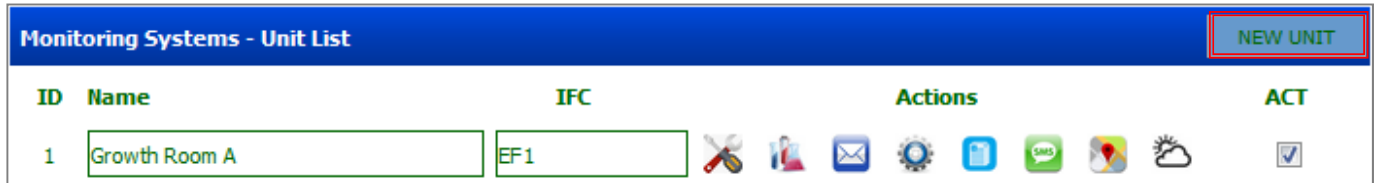










Figure 64: Unit management

ID	Unique identifier code for the UNIT
Name	UNIT name
IFC	Abbreviation for the UNIT. This should not be changed unless under instruction from CWi Technical Ltd.
	Sensor Management
	Lab Unit Specification
	Unit Alert Email List
	Channel Settings
	List of Actions
	Unit Alert SMS list
	Map Unit Specification
	Weather Unit Specification
ACT	Active check box

16.5.1 New Unit

To add a new unit, click this button.



Figure 65: New Unit button

- Enter a name for the Unit
- Enter a **unique** 3 letter identification code
- Click Submit

Figure 66: Enter new Unit name

The fields will return to being blank.

To view the new unit:

- Go to Unit Management in the Administration menu, see section 16.5.

16.5.2 Sensor Configuration



Figure 67: Sensor Configuration button

WARNING: MAKING CHANGES TO THIS SECTION MAY AFFECT THE WORKING OF THE SYSTEM. Proceed with caution: only make changes here under direction from CWi Technical Ltd, or if you are confident of the outcome.

The Sensor Configuration option enables the Administrators or System operators to configure each sensor in a UNIT.

Click on the Sensor Configuration icon next to the appropriate UNIT.

This enables the Administrator or System Operator to edit the sensors for this UNIT. Two tables will be displayed:

One will display the current settings, and allow the Administrator to edit them:

- ID** Automatically generated identifier code for the sensor
- Data Code** Unique code to identify the sensor in the database. DO NOT CHANGE
- Sensor Code** Drop down menu to select the UNIT. This is set in sensors
- Measurement** Description of what is being measured
- Time Interval** Time, in seconds, between measurements
- DEL** Delete the sensor from this UNIT

ID	Data Code	Sensor Code	Measurement	Time Interval	DELETE
1	HCS-1	HC1-Baby Leaf High Care	HI Care 1A	60	DEL
2	HCS-2	HC1-Baby Leaf High Care	HI Care 1B	60	DEL
3	HCS-3	HC1-Baby Leaf High Care	HI Care 1C	60	DEL
4	HCS-4	HC1-Baby Leaf High Care	HI Care 1D	60	DEL
5	HCS-5	HC1-Baby Leaf High Care	HI Care 1E	60	DEL

CLOSE

Data Code	Sensor Code	Measurement	Time Interval
	JH4-Juicing High Care		

Figure 68: Configure sensor information

The other will allow the Administrator or System Operator to add a new sensor to the UNIT

- Data Code** Unique code to identify the sensor
- Sensor Code** Drop down menu to select the UNIT
- Measurement** Description of what is being measured
- Time Interval** Time, in seconds, between measurements

Figure 69: Add new sensor

16.5.3 Lab Unit Specification

If the sensors of that UNIT are to be shown together on the same chart.

Check the box

Leaving the box unchecked will show a separate chart for each sensor within that UNIT

Click CLOSE to return to the Unit List



Figure 70: Lab Unit Specification button



Figure 71: Lab unit specification

16.5.4 Unit Alert Email List.

This function allows an Administrator or System Operator to edit the list of *Users* who will receive email alerts for that UNIT, and configure the timings for the email alerts.

Click on the email alert list icon next to the UNIT for which the *User* is required.

Check the active box for those who should receive alerts for that UNIT

Uncheck the active box for *Users* who should not receive alerts for that UNIT

To enable a different registered *User* to receive email alerts for that UNIT:

Click the Select *User* drop down menu.

A list of *Users* will appear.

Select the appropriate *User*.

Click ADD



Figure 72: Unit alert email list button

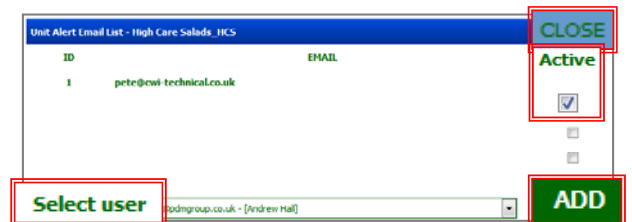


Figure 73: Unit alert email list

If the *User* is not in the drop down list return to User Management, see section 16.4, and ensure:

- (i) the *User* is coupled with the appropriate UNIT
- (ii) The *User* is active.

NB To ensure email alerts are received correctly, *Users* should add the domain cwi-technical.com to the safe senders list in their email program.

To configure the email alert timings:

Primary count– enter the number of minutes required between the alert and the first email being sent

Repeat count – enter the number of minutes between subsequent emails. If set to zero, no alert will be sent. *Use whole numbers only, decimals will not be recognised.*

The Active box must be checked for the *User* to receive email alerts. If email alerts are no longer required for that UNIT uncheck the box

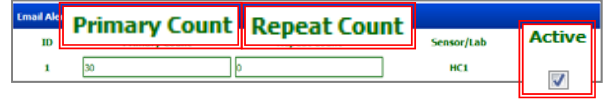


Figure 74: Email alert timings

Click CLOSE to return to the Unit List

16.5.5 Channel Settings

These will change the fundamental program. They are set when the system is commissioned and should only be changed under direct supervision from CWi Technical Ltd.



Figure 75: Channel Settings button

16.5.6 List of Actions

This will display the list of events that have occurred since the system was commissioned. The events will be displayed in reverse date order with 10 to a page.

Each entry has a unique identifying number and will show the date and time it was added in the format: yyyy-mm-dd hh:mm:ss. The time will be in GMT



Figure 76: List of actions button

Navigate using the page numbers.

Click CLOSE to return to Unit List



Figure 77: List of actions

16.5.7 Unit Alert SMS List

Use the drop down menu to select a recipient of SMS alerts for that UNIT

Click ADD

Set the Alert timings in minutes. If set to zero, no alert will be sent.

Primary count – enter the number of minutes required between the alert and the first SMS being sent

Repeat count – enter the number of minutes between subsequent SMS messages

To enable the *User* to receive SMS alerts:

Check the Active box

If SMS messages are no longer required for that *User*:

Uncheck the box



Figure 78: Unit alert SMS list button

Figure 79: Alert SMS list

16.5.8 Map Unit Specification (Logistics Package Only)

This is used to show mobile UNITS on a map.

Check the box if the UNIT is to be visible on a map.

Click CLOSE to return to Unit List



Figure 80: Map Unit Specification button

Figure 81: Map Unit check box

16.5.9 Weather Unit Specification

Check this box if the Unit is a weather station.



Figure 82: Weather Unit Specification box

16.5.10 ACT check box

Check this box if the UNIT is part of a transport system and the location of UNIT is to be displayed on a map

ACT



Figure 83: ACT check box

16.6 Sensor Management

This part of the system enables the *User* to configure the way the data from the sensors is displayed.

Click on Sensor Management to display a list of Units, a table of information and an ADD button. For each Unit there is the following information, and a MORE button:

- **Name** – Unique three letter identifier code
- **Description** – Full name of the Unit
- **Units** – Units of which the sensor is measuring
- **R1** – Target value 1
- **T1** – Tolerance 1
- **R2** – Target value 2
- **T2** – Tolerance 2
- **Max** – Maximum limit before an alert is triggered
- **Min** – Minimum limit before an alert is triggered
- **OR max** – This is not currently used

Monitoring Systems [ITS] - Sensor List											ADD
Name	Description	Units	R1	T1	R2	T2	Max	Min	OR Max	MORE	
JHH	Juicing High Care	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
JHC	Juicing Low Care	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
JCC	Juicing Cold Store	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
HC1	Baby Leaf High Care	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
CS1	Main Cold Store	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
DIT	Delivery Intake	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
WS1	Singles 1	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
WS2	Singles 2	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
HFG	Fog Room Humidity	%	0.00	0.00	0	0	0.00	0.00	0.00	MORE	
TFG	Fog Room	C	0.00	0.00	0	0	0.00	0.00	0.00	MORE	

Figure 84: Sensor management

Click MORE for the UNIT to be changed.

16.6.1 Add a new sensor

Click on the ADD button, Figure 84: Sensor management

Enter the sensor details

The screenshot shows a web form titled "Add a new Sensor". The form contains the following fields and controls:

- Name:** A text input field.
- Description:** A text input field.
- Units:** A text input field, a "Chart" checkbox, another text input field, and a "Web" checkbox.
- Range & Tolerance:** Four text input fields labeled "Target Value [1]", "Tolerance [1]", "Target Value [2]", and "Tolerance [2]".
- Limits:** Four text input fields labeled "Max", "Min", "OR Max", and "OR Min".
- Chart:** Four text input fields labeled "Max", "Min", "Mean", and "Total", each with a checkbox below it.
- Data:** A section containing the four checkboxes from the "Chart" section.
- Sensor Limit:** Two text input fields.
- Fixed Scale:** Two text input fields.
- Type:** A dropdown menu currently showing "BAR".
- Add Sensor:** A green button at the bottom right of the form.

Figure 85: Add a new sensor

Name – 3 letter unique identifier code

Description – Full name of the Unit

Units: Chart, Web– Units that will be displayed on the chart and web page

Range and tolerance

Target value [1], Target value [2] – the upper and lower value of the ideal range for the sensor

Tolerance [1], Tolerance [2] – The tolerance of the target value [1] and [2] in units

Limits: Max, Min - the high and low value at which an alert will be triggered

OR Max, OR Min

Chart: Max, Min, Mean, Total – check the boxes for those that are required to be included in the data display

Sensor Limit – The upper and lower limit in units at which the sensor functions

Fixed scale – The chart would usually customise the scale of the chart according to the data displayed, however, if a fixed scale is required, it should be entered here.

Type – Use the drop down menu to display the type of chart in which the data should be displayed.

16.7 Location management

This allows the *User* to add a new LOCATION, or manage the settings for the ZONES within existing LOCATION.


Monitoring Systems - Locations				NEW LOCATION
ID	LOCATION	OPTIONS	ACTIVE	
1	Great Chatwell		<input checked="" type="checkbox"/>	

Figure 86: Location management

To add a new LOCATION

Click NEW LOCATION, Figure 86

A new window will open

Enter the new LOCATION name

Click Submit

Add a new Location

Location Name

Submit




To add a new ZONE:

Click Options, Figure 86

A new window will open

Enter the new ZONE name in the box and click Add Zone

ZONES [Great Chatwell]

ID	ZONE NAME	DELETE
[+]	JUICING PLANT	
[+]	MAIN BUILDING	
[+]	SINGLE UNITS	

Zone Name **Add Zone**

16.8 System Billing

This is not active yet, but will include service and SMS billing and information.

17 Help and Support

The Help & Support button on the right of the Upper Navigation Bar will display 3 options:

- User Manual
- Support
- FAQ

17.1 User manual

Click on user manual to open a copy of the User Manual in pdf format.

To go back to the software, click the go back button in your browser.

17.2 Support

For a new query click Open New Ticket,

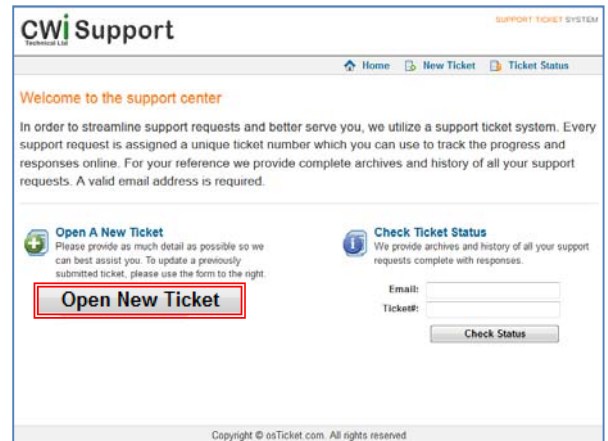


Figure 87: Support Centre home

A new window will open.

Fill in the form with as much detail as possible

Click Submit Ticket

To clear the fields

Click Reset

CWi Technical Ltd will respond to the query as soon as possible.

To check on the status of a ticket

Enter Email Address and ticket number into the appropriate boxes on the Support Centre home page, see Figure 87

Please fill in the form below to open a new ticket.

Full Name: *

Email Address: *

Telephone: Ext

Help Topic: *

Subject: *

Message:

Figure 88: New support ticket

17.3 FAQ

Click on FAQ to open the Frequently Asked Questions document which will provide answers to the following issues:

- How do I log in?
- I am entering the correct Password and Username but it doesn't work
- I can't see any locations, zones or units
- I have forgotten my Password
- How do I delete a user?
- How do I view audit entries?
- I can't add an audit entry
- The time isn't displayed correctly
- I can't access configuration functionality
- I can't log in even though I am entering the correct Username and Password
- Does CWI Technical Ltd keep a copy of the data indefinitely?
- How do I download the data for archiving?

18 Glossary

UNITS	<p>A UNIT is one or more sensors monitoring one physical quantity in one place. If measurements of more than one physical quantity are required the number of UNITS would increase accordingly. For example, if temperature and humidity were being measured this would be classed as two UNITS.</p> <p>If the same physical quantity is being measured, the number of UNITS would be defined by the location of the sensors. For example, each UNIT would be one or more sensors in a room.</p> <p>The number of UNITS in a ZONE is prescribed by the client's requirement. Some UNITS may utilise multiple sensors, such as incubator rooms. Others may be small devices and use a single sensor.</p>
ZONE	<p>A group of UNITS is classified as a ZONE, for example, a ZONE may be a factory's main building which has several rooms each with different monitoring requirements.</p>
LOCATION	<p>The LOCATION describes the geographic area, in which there are usually several ZONES.</p>
Audit entry	<p>Notes made by <i>Users</i> logged permanently on the system, relating to a specific alert. The facility to add and view audit entries is set individually for <i>Users</i> and UNITS.</p>
Action log	<p>A time and date stamped record of all actions attributed to the logged in <i>Users</i>. It is generated automatically by The Software and can be viewed by Users, System Operators and Administrators. It cannot be changed.</p>
Primary count	<p>The number of minutes following a sensor going out of specification before sending an alert</p>
Repeat count	<p>The number of minutes between subsequent alert messages</p>
The Software	<p>The graphical <i>User</i> interface enabling <i>Users</i> to view and configure the CWi Monitoring and Control System</p>
The System	<p>The CWi Monitoring and Control System comprising of sensors, data centre, communication system, web server and <i>User</i> interface.</p>