



CheckPoint User Manual & Training Guide

CHECKPOINT®

Wireless Monitoring Solution
Version 9.3.9 Build 24

Login ID

Password

Powered by TempSys © 2011 TempSys Inc.

Document No. D1561 – V9.3.9 B24

September 23, 2013 (Rev. -)

CheckPoint User Manual & Training Guide

TABLE OF CONTENTS

1.0	Introduction & Overview	6
2.0	Launching the Software	7
3.0	Navigating the Main Dashboard (Features & Functions)	8
3.1	Equipment Status – Graphical View.....	10
3.2	Equipment Status – Numeric Table View.....	11
3.3	Addressing Alerts	12
3.4	Taking Corrective Action	16
3.5	Clearing the Yellow Alert (Corrective Action in Progress)	20
3.6	Other Alert Messages	20
3.6.1	No Sensor Contact.....	20
3.6.2	Probe Unplugged	20
3.6.3	Wireless Device Stopped Communication	21
4.0	Status Menu	21
5.0	Graph Menu	25
6.0	Report Menu	26
6.1	Corrective Action Report	28
6.2	User Login & User Change History Reports	28
6.3	Setting Change History Report.....	30
6.4	Average Temperature Report	31
6.5	Alert Frequency Report.....	32
6.6	Alert Response Report	33
6.7	Equipment Group Report.....	34
6.8	Daily Review Report	35
6.8.1	Current Reading Report	36
6.8.2	Approve Current Reading Report.....	36

CheckPoint User Manual & Training Guide

6.8.3	New Alert Report	36
6.8.4	Approve Alert Report.....	36
6.9	Time-of-Day Report.....	37
7.0	View Menu	38
8.0	Schedule Menu	40
8.1	Task Reminders	41
8.2	Alert Suppression	42
9.0	Settings Menu	44
9.1	Equipment Menu	46
9.1.1	Add New Equipment	48
9.1.2	Edit Equipment.....	54
9.1.3	Snapshot All Equipment.....	54
9.1.4	Print All Equipment	54
9.1.5	Edit Email Escalation	54
9.1.6	Find.....	54
9.2	User List Menu	55
9.2.1	Add User.....	57
9.2.2	Delete User	58
9.2.3	Edit User	58
9.2.4	Change Password	58
9.3	Groups\Email Escalation Menu.....	59
9.3.1	Alert Escalation	61
9.3.2	Set Up Alert Watch on a User PC	62
9.4	Diagnosis Configuration	62
9.5	Configuration Menu	64
9.5.1	Configuration Menu - Application	64
9.5.2	Configuration Menu - Server	66
9.5.3	Configuration Menu – User Login Authentication	70

CheckPoint User Manual & Training Guide

9.5.4	Configuration Menu - Sound.....	71
9.6	Calibration Offsets Menu.....	72
9.7	Alert Device Menu	73
10.0	Alerts Menu	74
10.1	Current Outbox	75
10.2	Recipient Setup	75
10.3	Email & Lamp Groups.....	77
10.4	Escalation \ Equipment	78
10.5	Email Setup & Test	80
11.0	Help Menu	81
11.1	Contents Submenu.....	81
11.2	About Submenu	81
12.0	Code of Federal Regulations 21 CFR Part 11 Compliance	83

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

FIGURES

Figure 1 - Main User Dashboard	8
Figure 2 - Equipment Status Graphical Plot	10
Figure 3 - Equipment Status - Numeric Table View	11
Figure 4 - <i>Right Click</i> Mouse to Address Current Alert	13
Figure 5 - Adjust Window Size	15
Figure 6 - Document Corrective Action Window	18
Figure 7 - Take Corrective Action	19
Figure 8 - Repeaters and Access Point Status	22
Figure 9 - CheckPoint Services Pop-Up Window	24
Figure 10 - Generate a Graphical Plot.....	25
Figure 11 - Corrective Action Report Functions.....	28
Figure 12 - User Login & Change History	29
Figure 13 - Equipment Change History	30
Figure 14 - Average Temperature Report	31
Figure 15 - Alert Frequency Report.....	32
Figure 16 - Alert Response Report	33
Figure 17 - Equipment Group Report.....	34
Figure 18 - Current Reading Report	35
Figure 19 – Time-of-Day Report.....	37
Figure 20 - View Menu	38
Figure 21 - Change Database	39
Figure 22 - Schedule Menu	40
Figure 23 - Task Reminders	41
Figure 24 - Suppress Alerts	42
Figure 25 - Suppress Alerts Duration Settings	43
Figure 26 - Settings Menu	44
Figure 27 - Equipment Configuration Menu	46
Figure 28 - Find & Search Box	47
Figure 29 - Edit Equipment Configuration	49
Figure 30 - Temperature Settings Page.....	50
Figure 31 - Emergency Alerts Settings Page	51
Figure 32 - Add / Remove Probe	52
Figure 33 - Dual Probe Long Cable Settings Page	53

CheckPoint User Manual & Training Guide

Figure 34 - Set Up Users.....	56
Figure 35 - Add User Menu	57
Figure 36 - Groups & Email Escalation	60
Figure 37 - Alert Escalation	61
Figure 38 - Set Up AlertWatch on a User's PC	62
Figure 39 - Diagnosis Configuration	63
Figure 40 - Configuration Menu.....	64
Figure 41 - Application Configuration Menu (Application Server Only)	65
Figure 42 - Server Configuration with Access Point(s).....	67
Figure 43 - Edit IP Addresses for 900 MHz Access Point(s).....	68
Figure 44 - Receiver Settings for a USB Receiver	69
Figure 45 - User Login Authentication Options.....	70
Figure 46 - Select Alert Watch Sound	71
Figure 47 - Enable Offsets for Specific Equipment Groups	72
Figure 48 - Alert Device Menu	73
Figure 49 - Email Alert Status.....	75
Figure 50 - Recipient Setup	76
Figure 51 - Set Escalation for a Specific Sensor	78
Figure 52 - Managing Equipment Groups	79
Figure 53 - Help Contents	81
Figure 54 - Online User & Help Manual	82

TABLES

Table 3.6.1-1 – No Sensor Contact Calculations	20
Table 9.1.1.4-1 – Dual Probe Sensor Types	53

CheckPoint User Manual & Training Guide

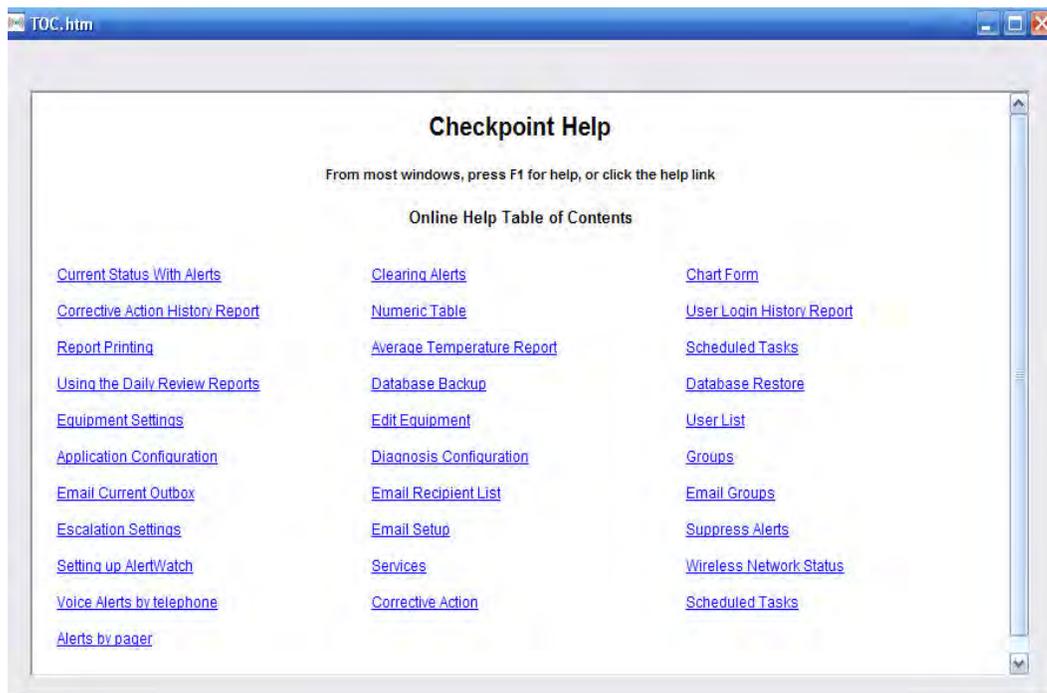
1.0 Introduction & Overview

Wireless, software based alarm/monitoring provides compliance and security in one complete system. This system offers performance and flexibility not available in other wire-based systems. Reporting features are available to meet the regulatory needs of multiple departments.

Checkpoint's wireless monitoring systems has the capacity to manage and monitor virtually all of a facility's equipment on a single monitoring platform while providing the flexibility to easily and cost-effectively add and move sensors, and expand coverage as monitoring requirements evolve.

The next few chapters are designed to step you through the software system that monitors and manages the sensor data.

From most pages, pressing F1 will bring up the help files for the opened page. Help files are also available from the menu bar.



CheckPoint User Manual & Training Guide

2.0 Launching the Software

Once the software is installed, it will be continuously running as a service, collecting data points at specified time intervals. To view the status of the system simply:

1. Access the computer where the software resides (either a specific PC, or obtain access on the network to view the software).

2. Click on the 'CheckPoint' software icon on your



desktop→

3. Enter in your Login ID and password (if you do not remember your login id or password, please contact your administrator at your facility)



CheckPoint User Manual & Training Guide

3.0 Navigating the Main Dashboard (Features & Functions)

Once you are logged into the software, you can now navigate the program to view the status of the equipment being monitored.

Below is the main page:

The screenshot displays the 'All Equipment Status' dashboard. At the top, a status bar reads 'All Equipment Safe. No Alerts.' Below this is a table with columns: Area, Equipment, Last Contact, Current Value (°F), Status, and Notes. The 'Current Value' column is highlighted in green for all entries, indicating they are within the normal range. Annotations with red arrows point to various parts of the interface:

- Tool bar:** Located at the top left of the window.
- Click on any header box to sort:** Points to the 'Equipment' header.
- A complete list of equipment currently being monitored:** Points to the entire table.
- Area helps find the location of the equipment. Description may be edited in Equipment Settings:** Points to the 'Area' column.
- Time since the last transmission was received from a sensor. Sensor transmission interval is set up at the factory based on the type on equipment being monitored, typically every 15 minutes:** Points to the 'Last Contact' column.
- Temperature range as set in Equipment Settings and current status:** Points to the 'Current Value (°F)' column.
- The status of the equipment is highlighted by a green, red or blue indicator:** Points to the 'Status' column.
- Write notes to share with others. Like 'Post-it Notes' notes are not archived and may be deleted:** Points to the 'Notes' column.
- Red Flashing box will appear here for Alerts:** Points to the top right corner of the dashboard area.

Area	Equipment	Last Contact	Current Value (°F)	Status	Notes
2425_BF_001102	20 Fuel 81	7 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001103	20 Fuel 82	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001104	20 Fuel 83	11 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001105	All Powerline	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001114	20 Fuel 812	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001143	20 Fuel 807	4 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001146	20 Fuel 804	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001129	20 Fuel 802	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001144	20 Fuel 805	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001145	20 Fuel 806	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001122	20 Fuel 803	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001124	20 Fuel 809	7 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001125	20 Fuel 811	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001140	20 Fuel 807	6 min ago	10.0	Temp Range: 10.0 to 10.0	
2425_BF_001121	20 Fuel 810	6 min ago	10.0	Temp Range: 10.0 to 10.0	

Figure 1 - Main User Dashboard

CheckPoint User Manual & Training Guide



The number of equipment rows viewable without scrolling will change depending on your screen resolution.



If a sensor loses communication due to a network or any other problem, each sensor will time stamp and store the data. During this time, the Last Contact time will increment and may show hours or days. Upon communication restoration, the Last Contact time will show “seconds” reflecting the time that the data has arrived, and all the stored data will automatically fill in.



A pulsating row means that the equipment is in alert suppression.

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

3.1 Equipment Status – Graphical View

On the main page, highlight any row and right click

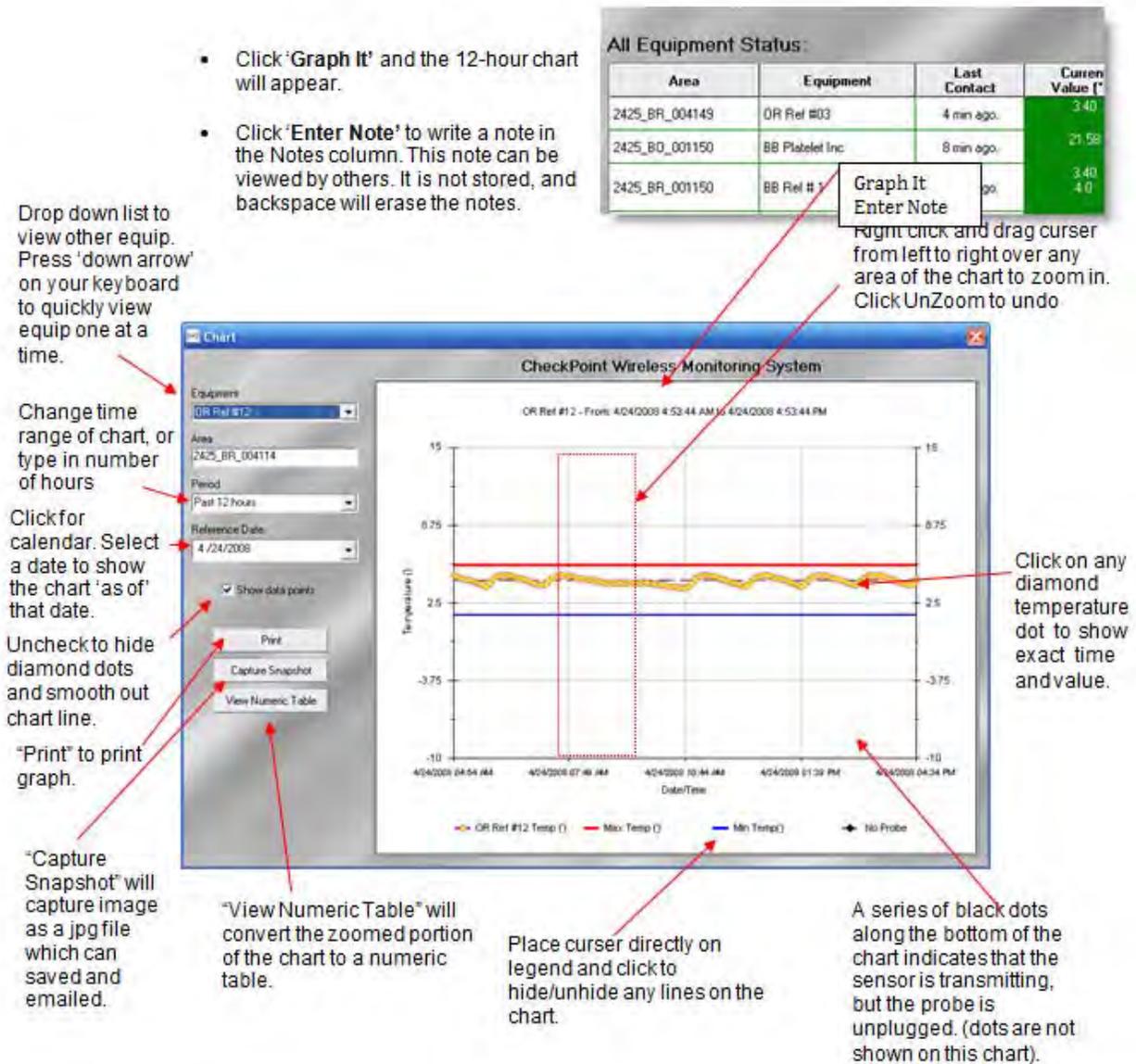


Figure 2 - Equipment Status Graphical Plot

CheckPoint User Manual & Training Guide

3.2 Equipment Status – Numeric Table View

The numeric table shows the time and value of each data point.

Numeric table can be opened by:

- From the menu bar, Graph \ Numeric Table
- From an opened chart (see page 5), click Numeric Table.

Select Equipment from the drop down list. Press keyboard down arrow to scroll through each equipment.

Change time range of table, or type in number of hours.

Click for calendar. Select a date to show the table 'as of' that date.

Use "Print" button to print the table.

Use the "Capture Snapshot" button to email the table thru the Email function on menu bar.

Click on the "View Chart" button to view the table back in the graphical format.

The "Export" button exports the data values to an Excel Spreadsheet.

Sensor reading and time stamp of when the sensor data was collected.

Time	Temperature [°C]	Range -37° C to -23° C
Apr 24 2008 4:42PM	-18.50	4.5°
Apr 24 2008 4:27PM	-18.50	4.5°
Apr 24 2008 4:12PM	-17.80	5.2°
Apr 24 2008 3:57PM	-18.17	4.83°
Apr 24 2008 3:42PM	-17.80	5.2°
Apr 24 2008 3:27PM	-17.40	5.6°
Apr 24 2008 3:12PM	-16.50	6.5°
Apr 24 2008 2:57PM	-10.57	12.43°
Apr 24 2008 2:42PM	-27.50	OK
Apr 24 2008 2:27PM	-28.33	OK
Apr 24 2008 2:12PM	-29.25	OK
Apr 24 2008 1:57PM	-27.50	OK
Apr 24 2008 1:42PM	-26.00	OK
Apr 24 2008 1:27PM	-19.50	4.5°
Apr 24 2008 1:12PM	-22.40	0.6°
Apr 24 2008 12:57PM	-26.75	OK
Apr 24 2008 12:42PM	-27.25	OK

Summary

- Number of Temp Readings: 11
- Over range: 11 23.40%
- Within range: 36 76.60%
- Below range: 0 0.00%
- Max: 4/24/2008 14:57 -10.57°C
- Min: 4/24/2008 14:12 -29.25°C
- Average: -25.50°C

A quick summary of all of the data points for the selected piece of equipment

Shows exact date, time, value and color coded status of each data point.

- Green = within min/max range
- Red = above high range
- Blue = below low range

Figure 3 - Equipment Status - Numeric Table View

CheckPoint User Manual & Training Guide

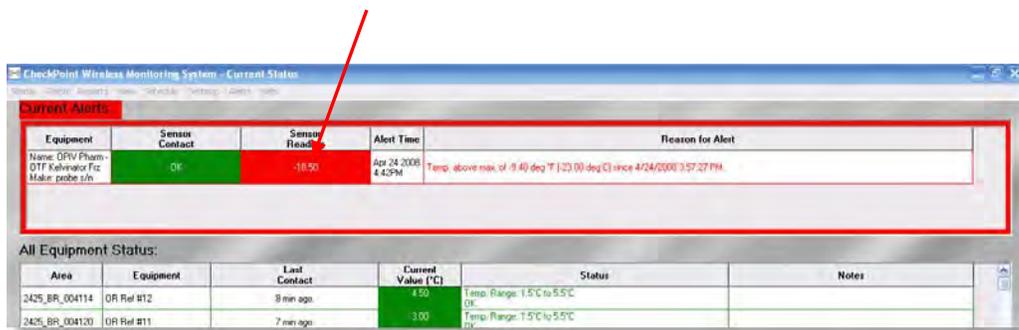
3.3 Addressing Alerts

An alert can occur if the temperature stays below or above the min/max limits over a specified time, as set up in Equipment Settings. Notification method can be:

- Red flashing alert on your screen
- Email, which can be sent to a cell phone.
- Text message to a pager
- Pop up on your computer screen
- Local audio-visual alert lamp

An alert can escalate to any number of recipients until the alert is properly cleared. The alert email can be sent to different recipients based on the day of the week or time of the day. An alert can be cleared in the following manner:

1. The red flashing box displays the equipment name, temperature and time of the alert and reason for its alert.



Equipment	Sensor Contact	Sensor Read	Alert Time	Reason for Alert
Name: DFRV Pham-DTF Kelvinator Ftz Matin pebbe.szh	OK	-18.50	Apr 24 2008 4:43PM	Temp. above max. of 19.40 deg F (7.00 deg C) since 4/24/2008 3:57:27 PM.

Area	Equipment	Last Contact	Current Value (°C)	Status	Notes
2425_BR_004114	DR Ref #12	9 min ago	4.50	Temp. Range: 1.5°C to 5.5°C OK	
2425_BR_004120	DR Ref #11	7 min ago	3.00	Temp. Range: 1.5°C to 5.5°C OK	

2. Investigate the equipment to determine the cause of the alert. If the cause is not immediately recognized, you will be prompted during the corrective action process.

CheckPoint User Manual & Training Guide

3. Place mouse pointer over the sensor of interest and *Right Click* to display available options to address an active alert in the Current Alerts window (Figure 4).

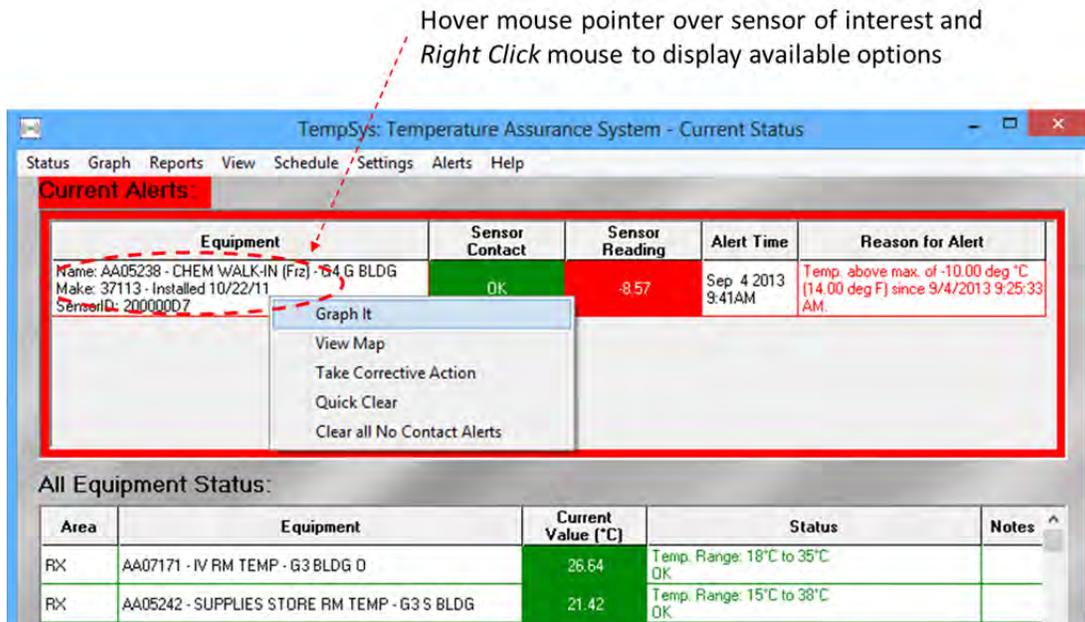


Figure 4 - Right Click Mouse to Address Current Alert



It is important to address alerts in a timely manner. The program will not repeat an alert for the same equipment if such an alert already exists. If an alert is neglected you may be subjecting products or samples to further risk.

4. Below are the options that you have to select from to address the alert:
 - a. **Graph It:** Study the temperature trend. This provides you with more information regarding possible causes of the alert.
 - b. **View Map** – To view the location of the sensor on a floor plan.

CheckPoint User Manual & Training Guide

- c. **Take Corrective Action:** Address a “**Current Alert**” and fully document the corrective action with a **Diagnosis Problem** (check a box or number of boxes in a list of frequently used explanations), followed by a detailed description of the “Name and Condition of Product or Sample” and typing in a detailed explanation of the “Corrective Action Taken” to resolve the issue. An electronic signature is required to sign off the corrective action documentation.
 - d. **Quick Clear:** Address a “Current Alert” and quickly document the corrective action with a brief explanation (“quick clear”), and an electronic signature is required to sign off the Quick Clear documentation.
 - e. **Clear All No Contact Alerts:** All sensors in the system may trigger a No Sensor Contact alert at the same time if the server or network may be down for a prolonged period of time. This feature allows you to clear all “No Sensor Contact” messages with just one click.
 - i. No Sensor Contact alert occurs if no data is received from a sensor for a period of time equal to the alert time threshold plus the sensor logging interval, as set up in Equipment Settings.
 - ii. If the alert threshold is 0 (zero), then the alert will occur in twice the time of the sensor logging interval, as set up in Equipment Settings.
5. The bottom edge of the Red and Yellow alert windows can be dragged down to show multiple alerts.

CheckPoint User Manual & Training Guide

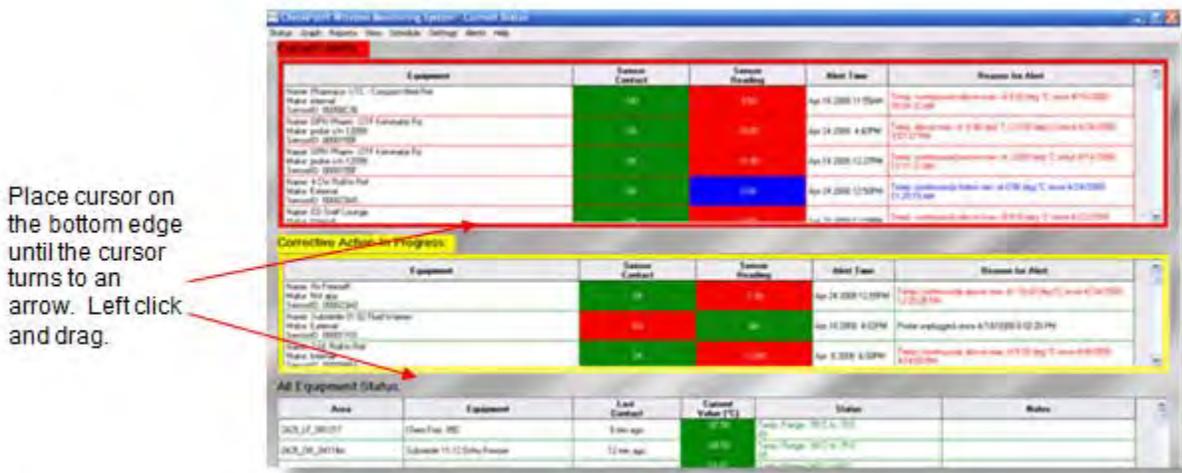


Figure 5 - Adjust Window Size

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

3.4 Taking Corrective Action

The Corrective Action process is a set of rules to ensure full documentation of the proper resolution of the alert event. It is divided into two phases:

1. First phase documents the cause of the alert for the equipment, such as open door and what action had been taken.
2. Second phase documents the status of the content of the refrigerator or other equipment, and the disposition of the content which may have been affected by the event.

Once the cause of the alert is determined, then it is time to document the cause and actions taken. Process is as follows:

1. Right click on the alert that you are addressing
2. Click “Take Corrective Action” and check appropriate cause(s).

Diagnose Problem
Name: Rest Refrigerator Grill Make: Troulsen SensorID: c0001138

Problem Description
Temp. continuously above max. of 50.00 deg F since 8/24/2004 9:49:51 AM.

Check the items from the checklist below that apply to the problem and then click the Next >> button to get the appropriate actions to perform.

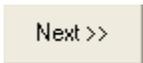
Category	Select	Diagnosis
Circumstantial	<input type="checkbox"/>	Power switch turned off.
	<input type="checkbox"/>	Temperature setting knob changed.
Mechanical	<input type="checkbox"/>	Door left open
	<input type="checkbox"/>	Door blocked open
	<input type="checkbox"/>	Large amount of hot food cooling
	<input type="checkbox"/>	Temproys sensor damaged or not attached.
	<input type="checkbox"/>	Door left open during prep work.
	<input type="checkbox"/>	Object blocking the fan or air flow.
	<input type="checkbox"/>	Object blocking the compressor.
	<input type="checkbox"/>	Dirty condensor.
Operational	<input type="checkbox"/>	Fan not turning properly.
	<input type="checkbox"/>	Door latch fails to shut completely.

Print Check List Next >>

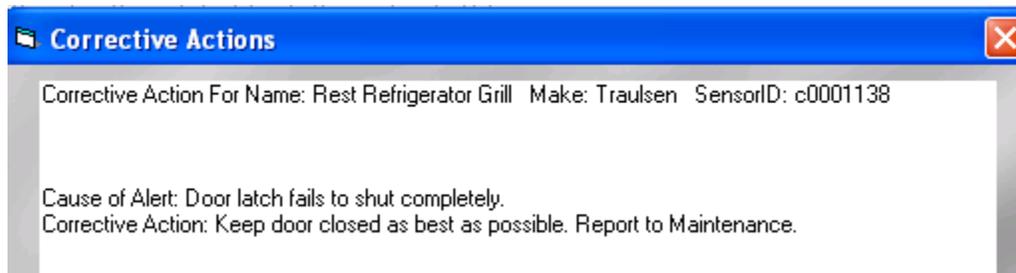
The list of Diagnoses is editable. See section “Diagnosis Configuration” Section of the manual.

CheckPoint User Manual & Training Guide

3. After clicking,

A rectangular button with a light beige background and a thin black border. The text "Next >>" is centered in a dark grey font.

the recommended action will appear.



4. Click →

A rectangular button with a light beige background and a thin black border. The text "Next >>" is centered in a dark grey font.

5. This second phase documents the status of the products or samples that may be affected. Enter in free text the description of the alert event.

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

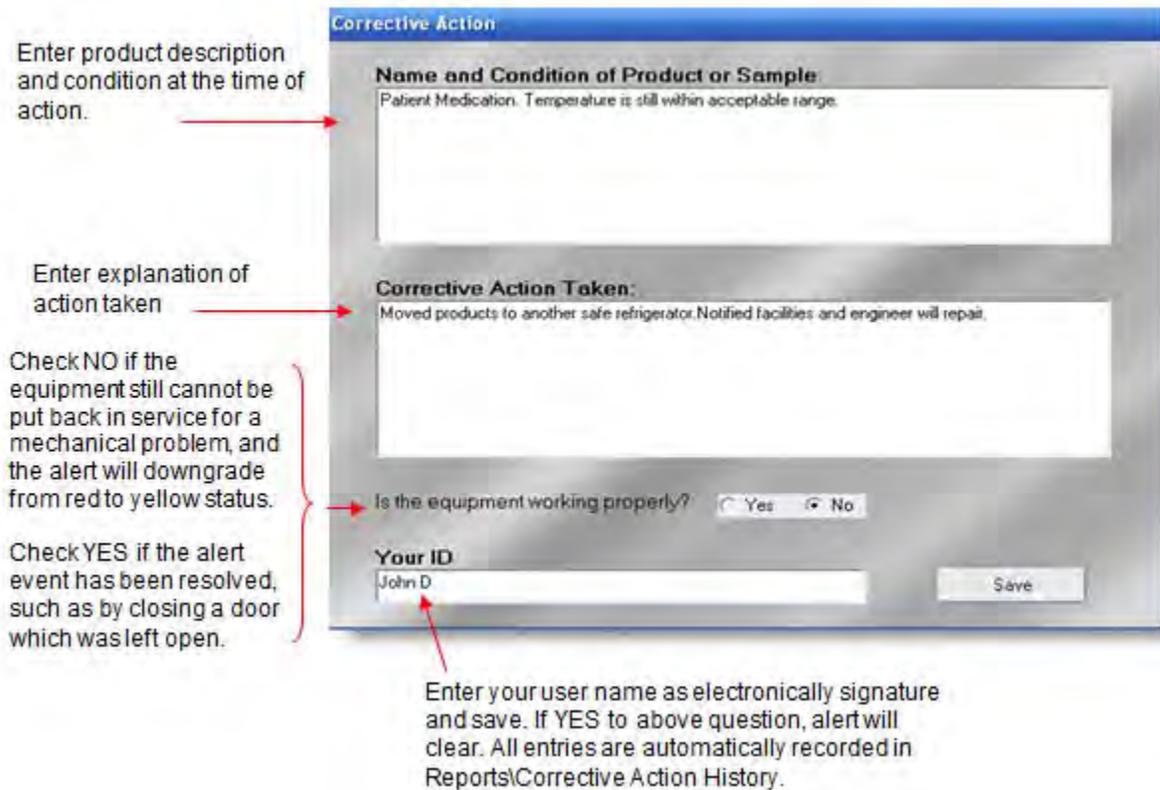


Figure 6 - Document Corrective Action Window

CheckPoint User Manual & Training Guide

If equipment is NOT working properly, the alert will downgrade to yellow status “Corrective Action in Progress.”

- This will stop further email alert escalation.
- Yellow status will be a reminder that the alert has not been completely addressed.

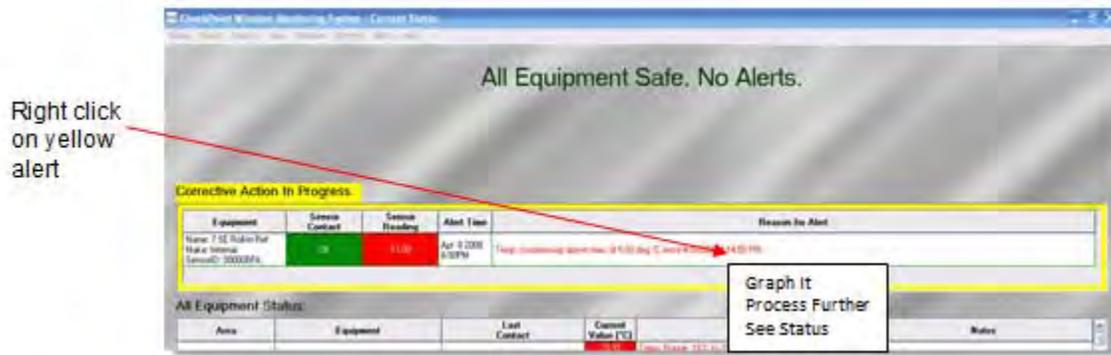


Figure 7 - Take Corrective Action



New red alerts for the same reason will not appear for any equipment kept in yellow status. For example, if the alert was for a high temperature, then another high temperature alert will not appear for the same equipment while the status is in yellow.

CheckPoint User Manual & Training Guide

3.5 Clearing the Yellow Alert (Corrective Action in Progress)

After the equipment is returned to normal operations, clear the yellow alert.

- Right click on the yellow alert row.
- **Graph It** will allow you to view the chart to verify that the temperature is back in range.
- **Process Further** will repeat step 4 above and require the entry of the product status. All entries will be documented in Corrective Action History.
- **See Status** will automatically open the appropriate page in Corrective Action History to allow you to view the entries made so far.

3.6 Other Alert Messages

In addition to measurement value alerts, such as high and low temperature, other alert messages are:

3.6.1 No Sensor Contact

The time required to generate No contact alerts is proportional to the entered logging interval. The minimum time for a No contact alert is three times the logging interval. However, if the temperature alert threshold is greater than the logging interval, No contact alerts occur after 2 times the **Plot Interval** plus the temperature **Alert Threshold**. Consider this table:

Table 3.6.1–1 – No Sensor Contact Calculations

Alert Threshold (min)	Plot Interval (min)	No Sensor Contact (NSC) After (min)
0	15	45
15	15	45
30	15	60
0	5	15
15	5	25

3.6.2 Probe Unplugged

CheckPoint User Manual & Training Guide

If the sensor is transmitting but the probe is unplugged, or if the temperature is out of range for the sensor, a series of black dots will appear at the bottom of the chart.

3.6.3 Wireless Device Stopped Communication

If a repeater or Access Point stopped communicating.



If a sensor has been unable to communicate for more than 2 hours, the sensor will stay dormant and will attempt to reconnect only once every 2 hours to conserve battery. It may take a few minutes or up to 2 hours for sensors to restore communication after a prolonged system outage.

4.0 Status Menu

The status menu from the tool bar allows you to refresh the screen or exit the software.



- **Refresh** updates the displayed values at an interval as set up in the Settings\Configuration\Application. New data in the database may not be displayed on the main screen until the screen refreshes. To manually refresh, press F5.
- **Wireless Network** is a powerful feature to constantly display the communication status of all repeaters and Access Points. The point of failure can immediately be found to facilitate troubleshooting.

CheckPoint User Manual & Training Guide

- Repeaters and Access Points send a link status every 2 hours. If it is not received by the program, a red flashing alert will appear on the main page.

Access Point and Repeater ID's will automatically appear after several minutes of activation. ID's with:
 "r" = Access Point or Receiver
 "d" = Repeater

Double click to enter description of the device locations. It is very useful to later find repeaters and Access Points at large installation sites.

Double click and enter any useful information, such as IP addresses, installation notes, etc.

Click on any header box to sort the column alphanumerically

Device ID	Name	Notes	Alert threshold	Last Contact
0000685	French Campus	10.345.667.5	3 Hours	4/24/2008 4:13:00 PM
0000686	601 Van Ness Nurse Station under desk	Mezz	3 Hours	4/24/2008 4:26:35 PM
0000650	450 Pasteur Bldg	10.456.789.6	3 Hours	3/1/2008 10:25:16 AM
0000d2cf	450 Bldg, 5 Fl: Reception, computers closet	installed	3 Hours	4/24/2008 12:37:05 AM
0000d31f	450 Bldg, 3 Fl: next to elevator, 2nd door		3 Hours	4/24/2008 3:51:23 PM
0000d367	4131 Bldg, Basement Back door corridor		3 Hours	4/24/2008 3:43:48 PM
0000d70f	4131 1st Fl: Pharmacy back desk		3 Hours	4/24/2008 4:33:56 PM
0000d5fd	4131 Bldg, Basement Cafe behind food line		3 Hours	4/24/2008 2:57:03 PM
0000f64d	4130 Bldg, 1st fl: Data Closet	10.456.778.6	3 Hours	3/1/2008 10:25:17 AM
0000d35f	2425 Bldg, 6 Fl: SW Supply Room 6342		3 Hours	4/24/2008 3:45:59 PM
0000d35f	2425 Bldg, 6 Fl: South Med Room		3 Hours	4/24/2008 2:46:39 PM
0000d276	2425 Bldg, 6 Fl: Center SE Nurse Station		3 Hours	4/24/2008 4:40:39 PM
0000d29e	2425 Bldg, 5 Fl: Nutritional services, storage rm		3 Hours	4/24/2008 3:17:44 PM

Number of hours the program will wait from 'Last Contact' before firing alert. Double click for drop down menu to change threshold.

Repeaters and Access Points updates every 2 hours. Anything longer than 2 hours may indicate a connectivity problem, such as an unplugged repeater or network problem. Sensor data may be stopped or delayed.

Figure 8 - Repeaters and Access Point Status

CheckPoint User Manual & Training Guide



Devices that are physically removed from the system must be manually deleted from this page to prevent unnecessary alerts. Highlight the row, right click and Delete.



It is highly recommended that this page be printed or saved as html (Capture Snapshot) in case of a database loss or other disaster.

- **Services** are Windows Services, always running as long as the server is ON, and does not require anyone to be logged in.
 - **Temperature Service:** This is the data collection and alerting service.
 - It runs **only on the server**. This service cannot be controlled from the client.
 - If stopped, new data from the sensors will not be received and alerting will stop. During the time this service is stopped, individual sensors or the V3.5 Access Point will store the data, and dump when the service restarts so that data is not lost.
 - During database, server maintenance or other such scheduled work, stop the service first to avoid any loss of data during this time.
 - **Email Service:** This SMTP service sends alert emails.
 - It runs **only on the server**. This service cannot be controlled from the client.
 - If stopped, alert emails will not be sent.
 - It must be configured in Settings\Configuration\Server, and tested in Alerts\Email Setup and Test.
 - **Lamp Service:** This controls the Alert Lamp connected to any of the client computers.
 - It runs on each of the client computers attached to an alert lamp and a driver must be installed at each computer.

CheckPoint User Manual & Training Guide

- Lamp ID must be set up in Alerts\Recipient Setup, assigned into appropriate groups and escalation set up in Settings\Groups-Email Escalation.
- **Modbus Service:** This enables the export of data to other software, such as Johnson Control MetaSys or Siemen APOGEE system using the Modbus protocol.
- **Monitor Service:** This option service enables TempSys to monitor the status of health of the application server by monitoring its heartbeat. If two heart beats (one heart beat every 30 min) are missed, an alert can be sent to designated personnel to alert them to a loss of communications with the server. This is a separate monitoring service that must be set up with TempSys.

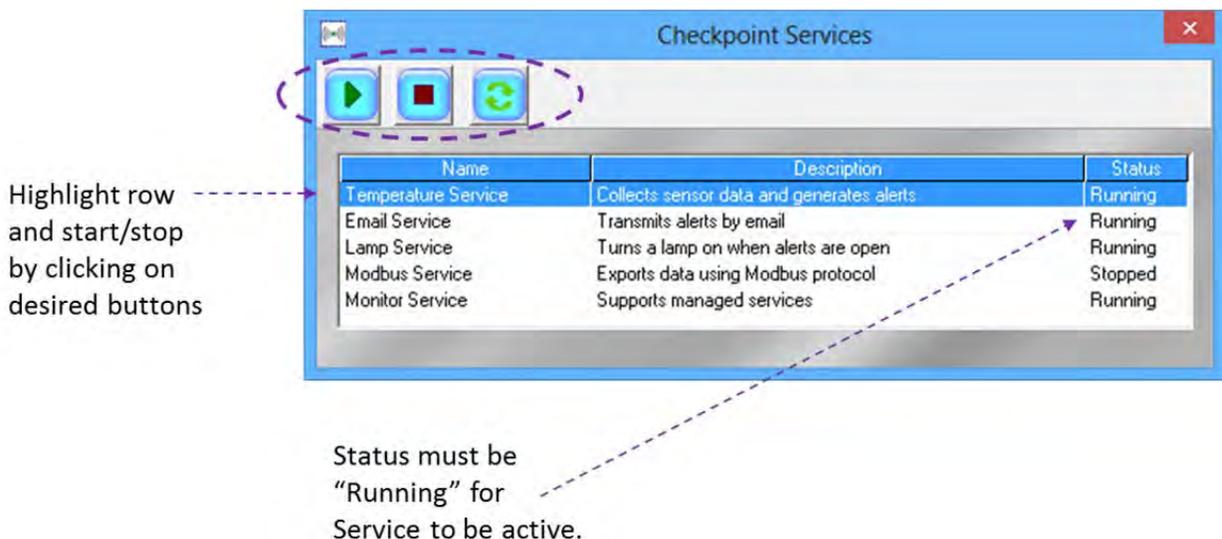


Figure 9 - CheckPoint Services Pop-Up Window

CheckPoint User Manual & Training Guide

5.0 Graph Menu

The graph menu from the tool bar opens a graphical (charting) or numerical table screen. Equipment will list in alphabetical order.

See previous sections for details on Charting and Numeric Table.

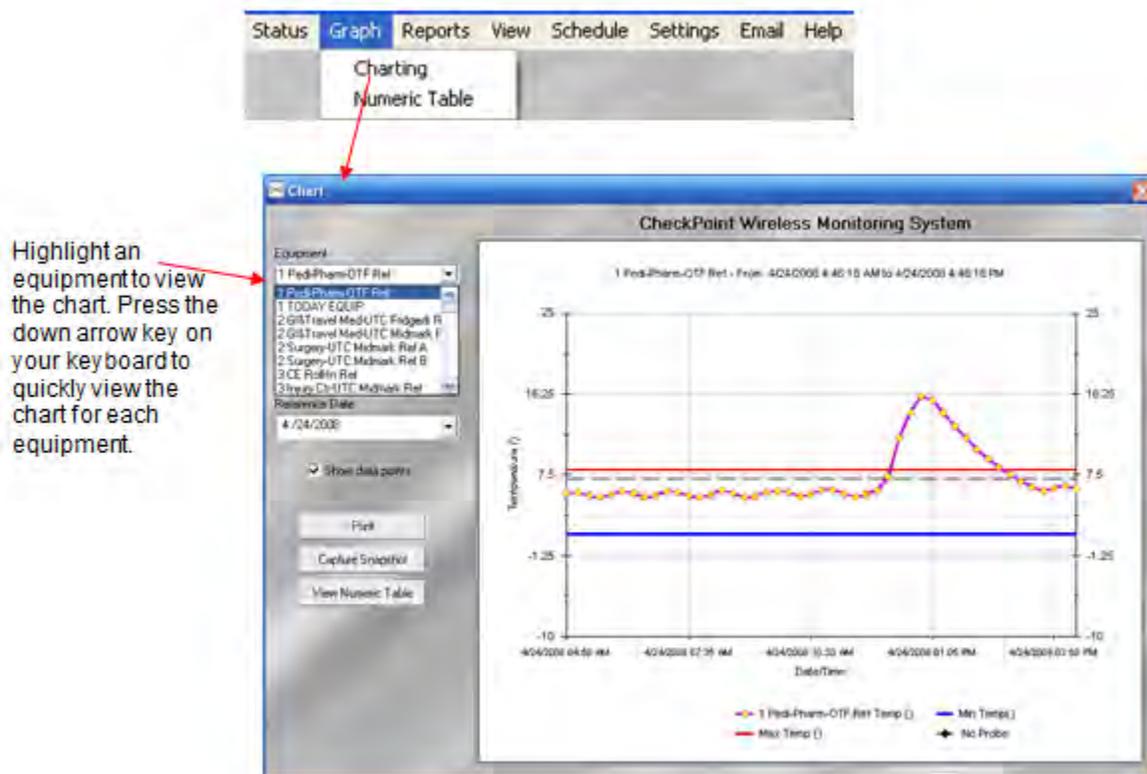
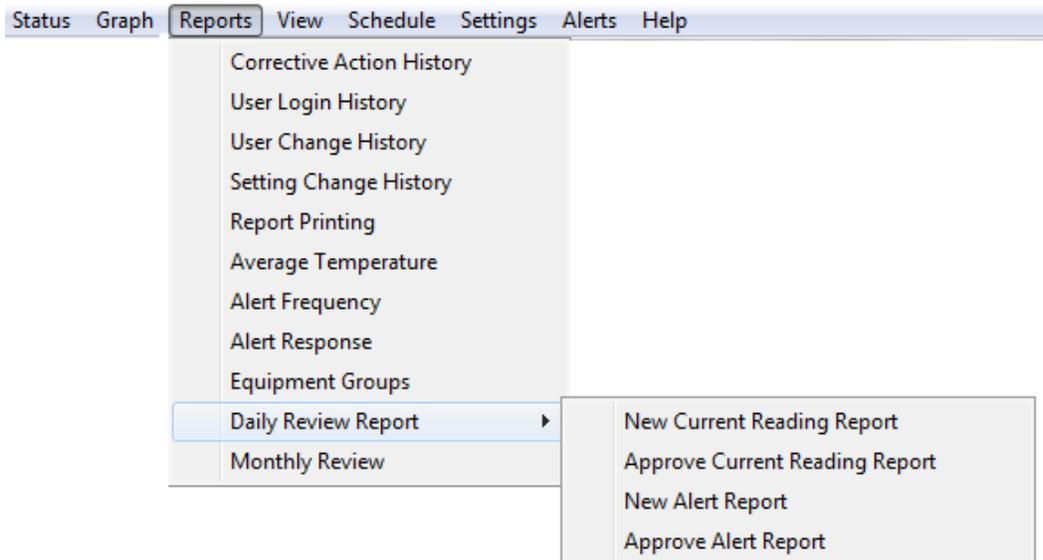


Figure 10 - Generate a Graphical Plot

CheckPoint User Manual & Training Guide

6.0 Report Menu

A comprehensive menu of reports is available in the Reports menu.



These standard reports help manage and monitor individual equipment performance as well as to provide a total picture of your monitoring system performance. These reports are also an integral part of an audit trail as they are intended to give visibility into equipment status, alert history, and user access of the software (log-in history).

Each report may be viewed on screen, printed and/or saved as an html file to be emailed.

1. **Corrective Action History**: A complete alert history report. This report shows all alerts and their respective corrective actions over time.
2. **User Login History**: This report shows all user login records by name and time over any specified time period.
3. **User Change History**: This report shows all user account changes, before and after the change, over a specified period of time.
4. **Setting Change History**: A complete record of all changes made to the equipment settings, including alert suppression information, by user name and time.

CheckPoint User Manual & Training Guide

5. **Report Printing**: This feature can print the charts of all equipment, such as a monthly or other specified time period.
6. **Average Temperature**: Averages the temperature daily in 3 to 24 hour time segments by equipment, and prints in report format.
7. **Alert Frequency**: A quick overview of all equipment sorted by the number of alerts over a specified period of time. This report is useful to quickly identify and quantify equipment problems.
8. **Alert Response** – A summary of alert response efficiency. This report lists, by equipment group, the following key metrics over a specified period of time: number of alerts, alerts / sensor, open alerts, pending alerts, closed alerts, and min / max / average time to close.
9. **Equipment Group**: Shows all equipment and their assigned group(s). In a large installation, this helps identify and troubleshoot equipment groupings.
10. **Daily Review Report**:
 - a. **New Current Readings Report**: Displays all equipment with each current temperature or other values. Each report can be electronically signed filed.
 - b. **Approve New Current Readings Report**: The filed Current Readings Report can be reviewed and electronically signed for approval by another person.
 - c. **New Alert Report**: Displays all alerts which may have occurred in the last user specified number of hours. Each report can be signed, reviewed and electronically filed.
 - d. **Approve New Alert Report**: The filed New Alert Report can be reviewed and electronically signed for approval by another person.
11. **Monthly Review Report**: A summary one-month report, at a specified time of day, for all sensors in an equipment group.

CheckPoint User Manual & Training Guide

6.1 Corrective Action Report

From the tool bar, select “Reports” and then select “Corrective Action History” report.

The screenshot shows the 'Alert And Corrective Action History' window. At the top, a menu bar includes 'Status', 'Graph', 'Reports', 'View', 'Schedule', and 'Set'. The 'Reports' menu is open, showing 'Corrective Action History' selected. A callout points to this menu item: 'Click any header box to sort.'

The main window displays an 'Alert History' table with columns: Equipment, Area, Alert Time, Status, and Reason for Alert. The table contains three rows of data. A callout points to the first row: 'Highlight any row, to show details in tabs below. Right click to add comments to alert. It will appear in the comments tab below.'

A context menu is open over the second row, with 'Add Comments to Alert' selected. A callout points to this menu item: 'Right click to add comments to alert. It will appear in the comments tab below.'

Below the table is the 'Corrective Action Details' section, which includes a 'Snapshot' button, a 'Print' button, and a 'Chart' button. A callout points to the 'Chart' button: 'Click to link directly to the section of chart at the time of alert for the highlighted equipment.'

The 'Corrective Action Details' section also includes a 'Time Period' dropdown (set to 'Past 1 month'), a 'Reference Date' dropdown (set to '4/13/2008'), and two dropdowns for 'Select by Equipment Name' (set to 'BB Freez #2') and 'Select by Area' (set to 'All'). A callout points to the 'Select by Area' dropdown: 'Select Equipment to view its history of alerts.'

Another callout points to the 'Time Period' dropdown: 'Display all alerts during selected time period.'

A callout points to the 'Reference Date' dropdown: 'Show alerts "as of" selected reference date.'

A callout points to the 'Add Comments to Alert' menu item: 'All Corrective Action taken (as in pages 9~11) are documented.'

At the bottom of the screenshot, a callout points to the 'Corrective Action Details' section: 'Select equipment by area (as defined in the Equipment Settings). As an example of its use, the maintenance dept can print a report of all alerts for the last 24 hours for a daily check list for repair or preventive maintenance.'

Figure 11 - Corrective Action Report Functions

6.2 User Login & User Change History Reports

This report provides and electronic “signature” of the users who have logged into the system.

From the tool bar, select “Reports” and then select “User Login History” report.

CheckPoint User Manual & Training Guide

User Login History

Login ID	Date
So, Denise	Apr 23 2008 8:09AM
So, Denise	Apr 23 2008 8:16AM
Wong,	Apr 23 2008 8:18AM
Wong,	Apr 23 2008 9:02AM
Chan,	Apr 23 2008 12:05PM
Lim, Cara	Apr 23 2008 5:23PM
Haugley,	Apr 23 2008 10:10PM
Cheung,	Apr 23 2008 10:20PM

Time Period: Past 24 hours

Reference Date: 4 /23/2008

Equipment Group: 2425_Blood Bank

Buttons: Print, Take Snapshot, Export

Annotations:

- Click header box to sort column
- Log In History by user name and time.
- Select time period to show log in history
- Show history 'as of' selected reference date. Calendar will appear.
- Only the user's assigned group will appear. If user belongs to multiple groups, each of the assigned group names will appear. Admin will always be able to see all groups.
- Print
- Exports displayed data to Excel
- Saves information in html file to attach to email

User Change History

User Change History

Changes	Date	Details	Changed
User List	Apr 23 2008 10:10PM	Changed/Updated User List Settings	Admin

Time Period: Past 24 hours

Reference Date: 9 / 3 /2008

Equipment Group: 0350_PathVPHC

Buttons: Print, Take Snapshot

Annotation: Details of the changes as made in Settings\ User List are recorded

Figure 12 - User Login & Change History

CheckPoint User Manual & Training Guide

6.3 Setting Change History Report

Every change made in Settings\Equipment and Schedule\Alert Suppression is visible in this report.

Equipment Setting Change History

Select a row to view details below.

Equipment	Changer	Time
E20 Refrigerator	Bob Yuan	Jun 24 2004 4:29PM
E19 Refrigerator	Bob Yuan	Jun 24 2004 4:29PM
E14 Freezer	Bob Yuan	Jun 24 2004 4:29PM
E04 Walk in Refrigerator	Bob Yuan	Jun 24 2004 4:30PM

Time Period: Past 7 days

Reference Date: 6/24/2004

Print

Capture Snapshot

Description

Added new equipment 'E20 Refrigerator' details 'Changes:
EquipMake: -> e20
EquipName: -> E20 Refrigerator
SensorID: -> 00000e20
Area: -> e20
SensorType: General Use: -> Tehama

Lists all equipment for which a change has been made in Settings\Equipment or Alert Suppression

Select time period to show changes.

The history "as of" the date listed. Click on arrow to display calendar.

Detail of changes or entry of new settings.

Figure 13 - Equipment Change History

CheckPoint User Manual & Training Guide

6.4 Average Temperature Report

From the tool bar, select "Reports" and then select "Average Temperature" report.

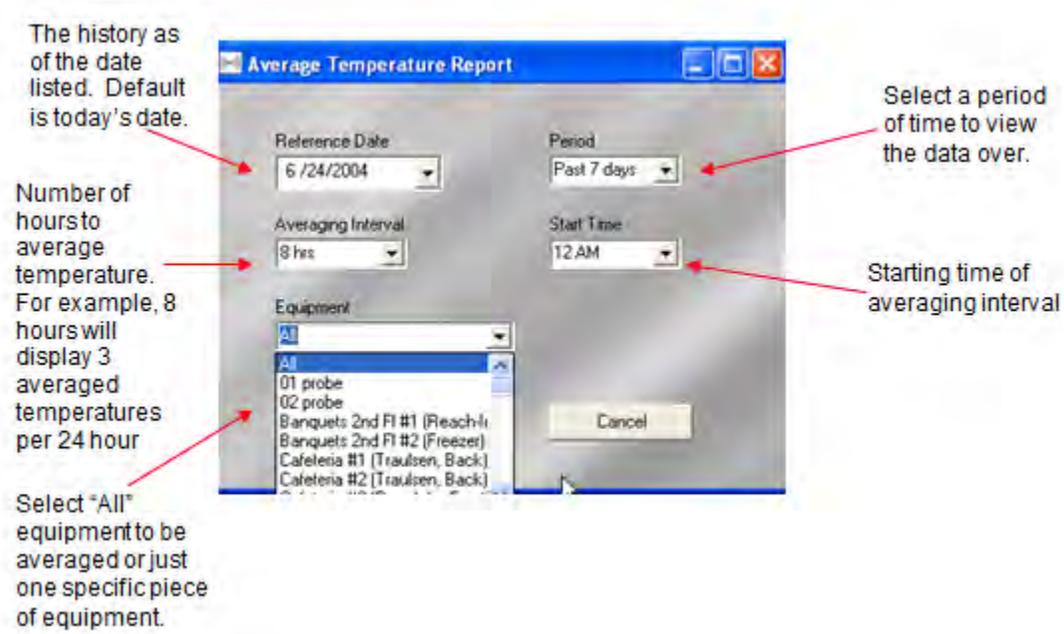


Figure 14 - Average Temperature Report

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

6.5 Alert Frequency Report

Use this report to compare the number of alerts for all equipment in a group and sort by the number of high temperature, low temperature and “other” alerts. It is a powerful report to quickly identify and quantify the problematic equipment.

Click on any header box to sort

Select Reference Date to view report “as of” selected date. Click arrow and calendar will appear.

Select time period

Week	Equipment Name	High Alerts	Low Alerts	Total High/Low	Contact & Other
2425 LD_CW1165	Fuson RT	0	2	2	0
2425 LD_CW1165	Micro_RT	0	2	2	0
2226 LD_2W0007	Clinic RT Phlebotomy	1	0	1	0
2425 BD_001150	BB Platelet Inc.	1	0	1	0
2425 LR_NW1165	Chem UC Ref Coag	1	0	1	0
2425 LR_CW1165	Hem UC Ref #2	1	0	1	0
2425 DR_004112	Tissue Ref	0	1	1	0
2425 DR_004124	DR Ref #8	0	0	0	-2
2425 DR_004123	DR Ref #9	0	0	0	1
2425 NR_005416	NS Mak Walk-in Ref	0	0	0	1

Equipment with no alerts may not appear

Figure 15 - Alert Frequency Report

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

6.6 Alert Response Report

This report is a summary of alert status and staff response efficiency. The following key metrics are reported over a specified period of time: number of alerts, alerts / sensor, open alerts, pending alerts, closed alerts, and min / max / average time to close.

Select Reference Data, Time Period and Eq. Group

Key Alert Response Statistics

The screenshot shows a window titled "Alert Response Report". On the left, there are three dropdown menus: "Reference Date:" (set to 8/24/2012), "Period" (set to Past 7 days), and "Group" (set to All). Below these are three buttons: "Print", "Capture Snapshot", and "Done". The main area contains a table with the following data:

Group	Sensors	Alerts	Alerts/Sensor	Open Alerts	Pending Alerts	Closed Alerts	Min. Time to Close	Max. Time to Close	Avg. Time to Close
Client Security	1	2	2	2	0	0	0.01	0.01	0.00
Food Services	1	2	2	2	0	0	0.01	0.01	0.00
global	2	7	3.5	7	0	0	0.01	0.01	0.00
Lab	1	2	2	2	0	0	0.01	0.01	0.00
Pharmacy	1	2	2	2	0	0	0.01	0.01	0.00
PTT	1	2	2	2	0	0	0.01	0.01	0.00

Click on column header to sort by category

Select Output Option

Groups with no alerts may not appear

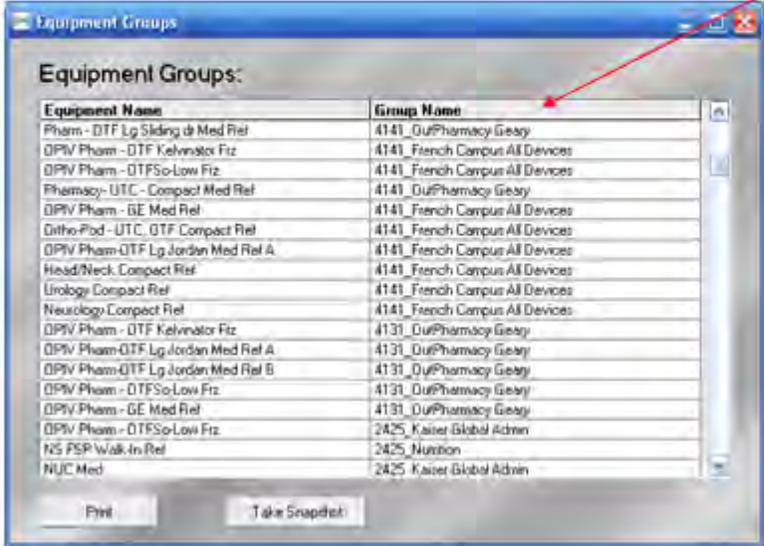
Figure 16 - Alert Response Report

CheckPoint User Manual & Training Guide

6.7 Equipment Group Report

In large installations with many equipment and groups, sometimes it can be difficult to verify that all equipment are in the proper groups, especially if some equipment may be in two or more groups.

This report will list all the equipment in the system with the assigned group(s).



Click on the header box to sort the column. Equipment in left column will group by group name.

Equipment Name	Group Name
Pharm - DTF Lg Sliding dr Med Ref	4141_OuPharmacy Geary
OPIV Pharm - DTF Kelvinstor Fitz	4141_French Campus All Devices
OPIV Pharm - DTFS0-Low Fitz	4141_French Campus All Devices
Pharmacy-UTC - Compact Med Ref	4141_OuPharmacy Geary
OPIV Pharm - GE Med Ref	4141_French Campus All Devices
Ortho-Pnd - UTC, DTF Compact Ref	4141_French Campus All Devices
OPIV Pharm-DTF Lg Jordan Med Ref A	4141_French Campus All Devices
Head/Neck Compact Ref	4141_French Campus All Devices
Urology Compact Ref	4141_French Campus All Devices
Neurology Compact Ref	4141_French Campus All Devices
OPIV Pharm - DTF Kelvinstor Fitz	4131_OuPharmacy Geary
OPIV Pharm-DTF Lg Jordan Med Ref A	4131_OuPharmacy Geary
OPIV Pharm-DTF Lg Jordan Med Ref B	4131_OuPharmacy Geary
OPIV Pharm - DTFS0-Low Fitz	4131_OuPharmacy Geary
OPIV Pharm - GE Med Ref	4131_OuPharmacy Geary
OPIV Pharm - DTFS0-Low Fitz	2425_Kaiser Global Admin
NS PSP Walk-In Ref	2425_Nurston
NUC Med	2425_Kaiser Global Admin

Print Take Snapshot

Figure 17 - Equipment Group Report



This report can be very helpful to troubleshoot alert escalation when many sensors are involved. If an appliance is erroneously assigned to a wrong group, this report can help identify the problem.

CheckPoint User Manual & Training Guide

6.8 Daily Review Report

The purpose of this report is to document the date, time and user name when the CheckPoint program was proactively checked. If the current reading at the time of the report is not in compliance, then the user can document a comment. The report can then be approved by a supervisor or a second reviewer.

Alternatively, a report documenting the number of alerts during a selected time period can be created. This is useful audit report for the blood bank, where a user can document the review of the alerts and corrective action which may have occurred during the time that a manager has not been present. For example, at 7:00 AM each morning, a manager can pull up a 15 hour report to review all alerts which may have occurred between 4:00 PM to 7:00AM of the next day.

The screenshot shows a window titled "New Current Reading Report" with the following details:

- Created At: 4/25/2008 3:48:54 PM
- Login Name: bob
- Reviewed By:
- Group Name: 2425_Kaiser Global Admin

Equipment Name	Checked	Current Temp(°C)	Comment
Urology Compact Ref	<input checked="" type="checkbox"/>	12.1	
Urgent Eye - UTC - Compact Med Ref A	<input type="checkbox"/>	5.38	Refrigerator was empty
UA UC Ref	<input checked="" type="checkbox"/>	4.8	
Tissue Ref	<input checked="" type="checkbox"/>	3.3	
TCU B NE Ref	<input checked="" type="checkbox"/>	10.09	
TCU B Med Rm.	<input checked="" type="checkbox"/>	2.6	
TCU A NW Ref	<input checked="" type="checkbox"/>	10.82	
TCU A Med Room	<input checked="" type="checkbox"/>	3.3	
Substerile 11-12 Ortho Freezer	<input checked="" type="checkbox"/>	-88.5	
Substerile 11-12 Med Ref	<input checked="" type="checkbox"/>	2.2	
Substerile 11-12 Fluid Warmer	<input checked="" type="checkbox"/>	42.44	
Substerile 10 Fluid Warmer	<input checked="" type="checkbox"/>	38.78	
Substerile 08-09 Med Ref	<input checked="" type="checkbox"/>	2.1	
Substerile 08-09 Fluid Warmer	<input checked="" type="checkbox"/>	36.13	
Substerile 06-07 Med Ref	<input checked="" type="checkbox"/>	7.9	
Substerile 05-06 Med Ref	<input checked="" type="checkbox"/>	5.38	
Substerile 05-06 Fluid Warmer	<input checked="" type="checkbox"/>	38.44	

Buttons: Save, Cancel

Figure 18 - Current Reading Report

CheckPoint User Manual & Training Guide

6.8.1 Current Reading Report

1. Click on New Current Reading Report
2. The report will show the current readings of all the equipment in the user's group (as set up in Settings\Groups).
3. All "Checked" boxes will be pre-checked.
4. If a reading is out of range or if a notation must be made, then uncheck the box and enter a comment.
5. SAVE, and then enter user ID and password.
6. The report will be recorded in the next "Approve Current Reading Report."

6.8.2 Approve Current Reading Report

1. From the drop down menu, select the reference date and time period.
2. All Current Reading Report during the selected period will appear in date/time order.
3. Double click on any report to review the report
4. A supervisor (or any other user) can approve the report, recorded with the date\time.
5. All reports can be retrieved by selecting the reference date and time period.

6.8.3 New Alert Report

1. Click on New Alert Report
2. Select the reference date and the number of past hours or days.
3. The report will show the number of alerts which occurred during this period.
4. All "Checked" boxes will be pre-checked.
5. The user can uncheck any box and enter comments.
6. SAVE, and then enter the user ID and password.
7. The report will be recorded in the next "Approve Alert Report."

6.8.4 Approve Alert Report

1. From the drop down menu, select the reference date and time period.
2. All Alert Reports during the selected period will appear in date/time order.
3. Double click on any report to review the report
4. A supervisor (or any other user) can approve the report, recorded with date\time.
5. All reports can be retrieved by selecting the reference date and time period.

CheckPoint User Manual & Training Guide

6.9 Time-of-Day Report

The Time-of-Day Report is a summary one-month report that shows the temperature at a specific time of day for sensors in an equipment group. Select the desired report parameters as shown below.

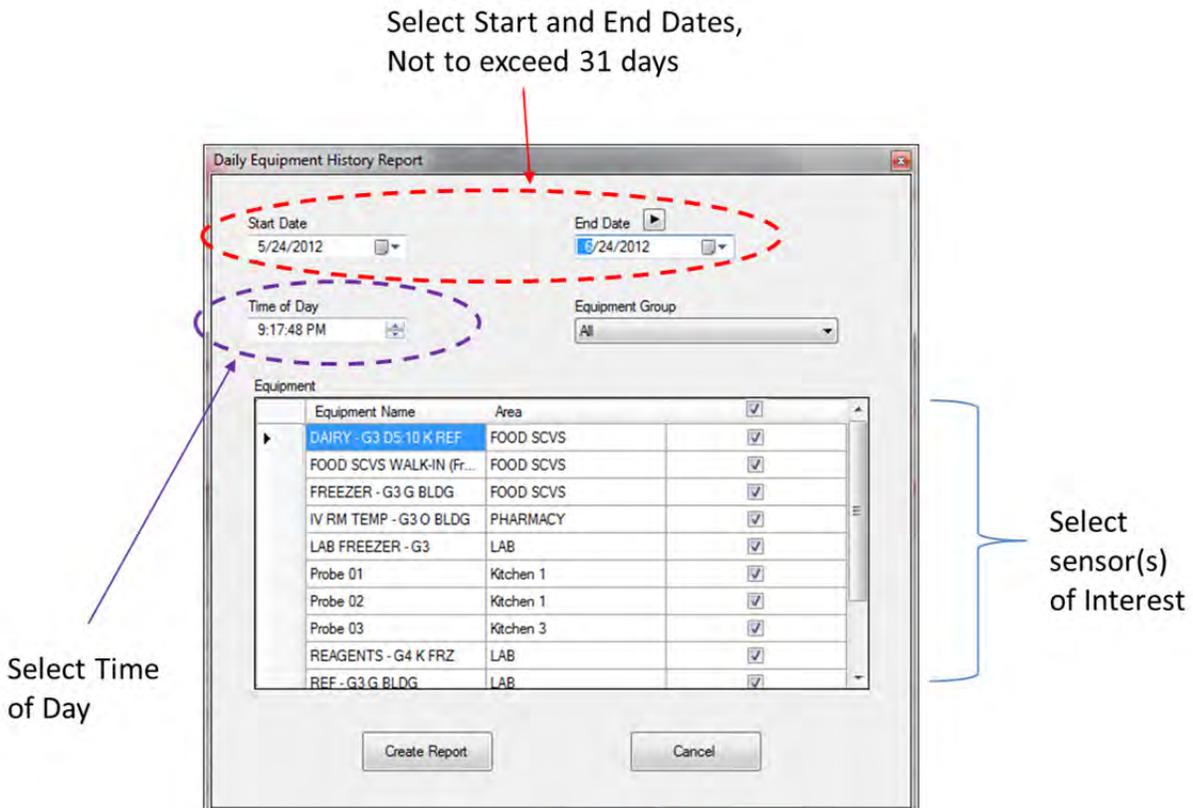


Figure 19 – Time-of-Day Report

CheckPoint User Manual & Training Guide

7.0 View Menu

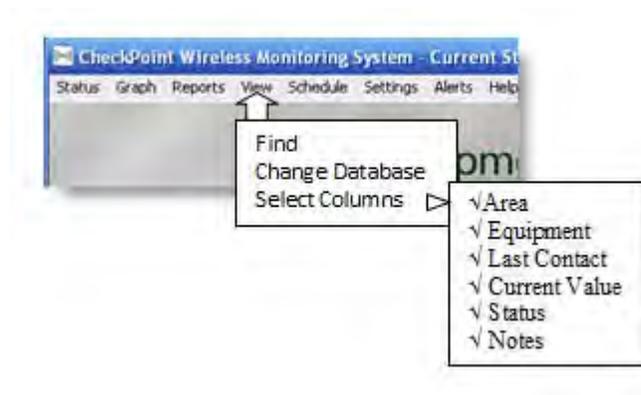


Figure 20 - View Menu

Find opens a search box on the main page. Enter any name or string of characters and every equipment row containing such name will be highlighted.

Change Database. Only for systems with multiple databases running on the same network, this feature allows you to view the databases from the same computer.

Change database can also be used to view an archived database. If a database becomes so large as to exceed the SQL size limit, the database may be archived and a new database created. For details, contact TempSys support.

Select Column can customize the view of the main page. Uncheck the check marks to hide columns on the main page.

CheckPoint User Manual & Training Guide

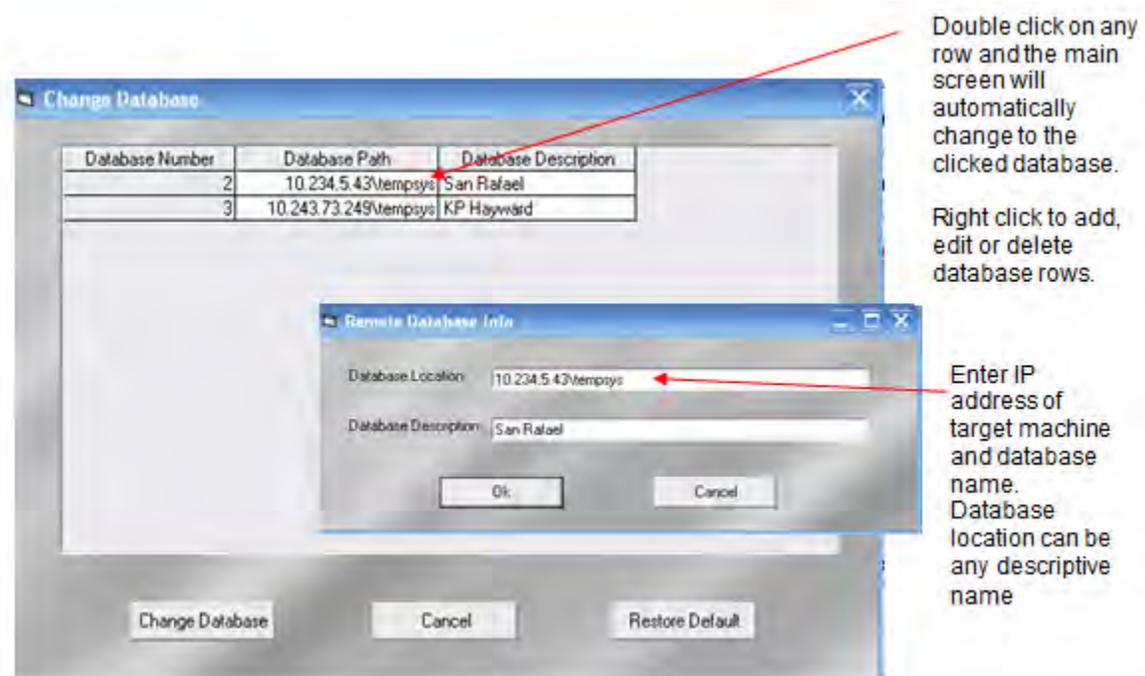


Figure 21 - Change Database

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

8.0 Schedule Menu

To schedule task reminders, database backups, and suppress alerts (one-time and repeating), select the Schedule menu from the Toolbar.

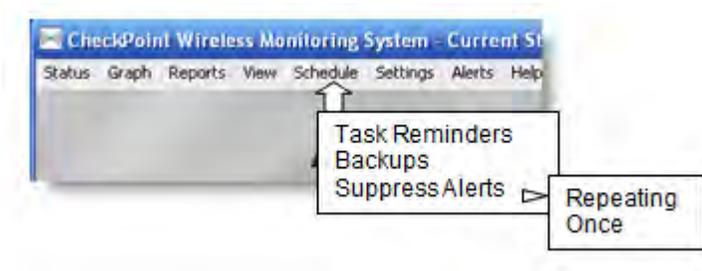


Figure 22 - Schedule Menu

The software allows a user and/or administrator to schedule events that occur on a routine basis. There are three different types of events that can be scheduled:

1. **Task Reminders:** Alerts users of equipment maintenance schedules, regular cleaning, etc. Once set, an alert will repeat as set, with the same notification functions as a temperature alert and an audit trail in the Corrective Action History Report. It will also follow the same set of escalation rules, if they apply.
2. **Backups:** It is very important to set up the daily back up of your data. If a secondary hard disk is available on your computer, then in Schedule\Backup, browse to this location. Otherwise, consult with the administrator to set this function.
3. **Suppress Alerts:** Stop false alerts when equipment is not in use during specific days and time. On the main All Equipment Status page, the row of any equipment in suppression will pulse with a color change to indicate that the equipment as a reminder that the equipment will not alert.

CheckPoint User Manual & Training Guide

8.1 Task Reminders

From the tool bar, select “Schedules” and then select “Task Reminders”

Right click on a new, blank row and click on “Add Task”

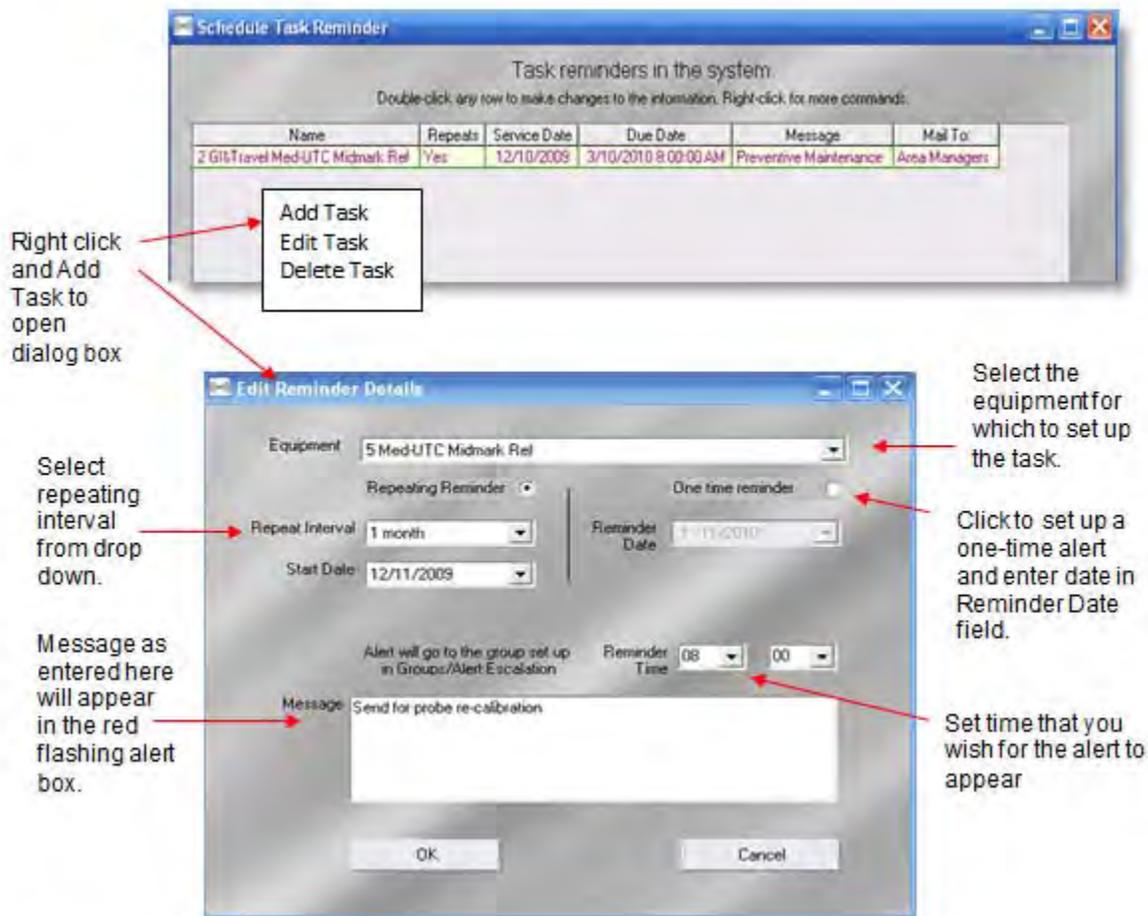


Figure 23 - Task Reminders

CheckPoint User Manual & Training Guide

8.2 Alert Suppression

Alert suppression is a convenient feature to stop an unnecessary alert for a known cause, such as when cleaning a refrigerator, preventive maintenance or after loading a refrigerator with warm products and a rise in temperature is expected.

Repeating Suppression is when the same event is expected to occur on a regular basis.

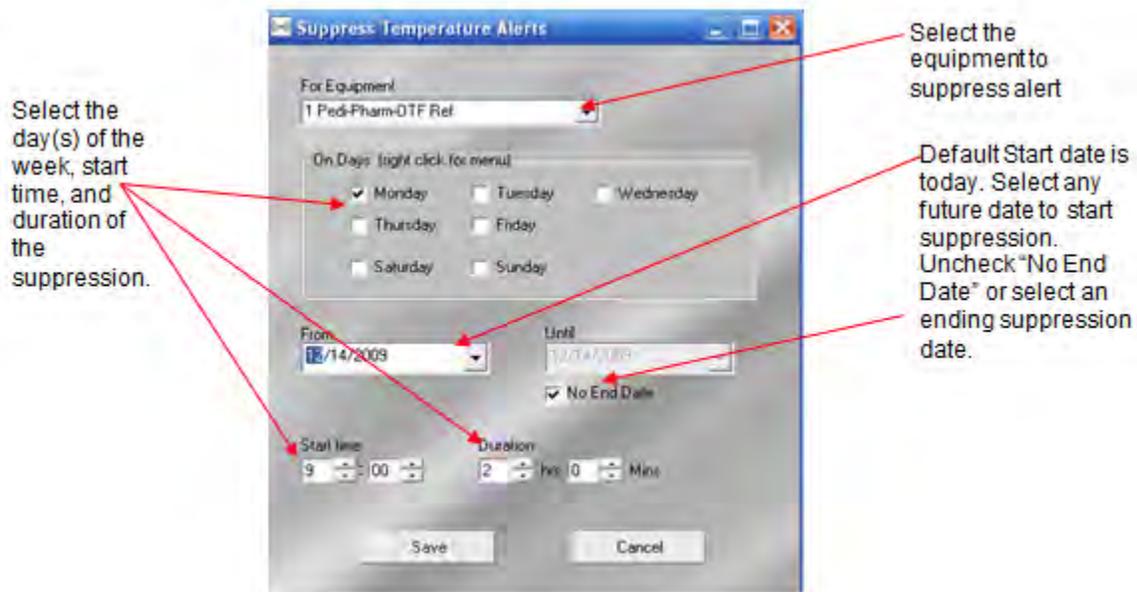


Figure 24 - Suppress Alerts

Once is to enable an alert suppression for one time, from the current time for however many hours as necessary. For example, after warm products are loaded in a refrigerator and if the temperature is expected to recover within 1 hour, you can set a 1-hour alert suppression.

CheckPoint User Manual & Training Guide



Figure 25 - Suppress Alerts Duration Settings



All suppression will be recorded in Setting Change History indicating the time and user name.



On the main All Equipment Status page, the row of any equipment in suppression will pulse with a color change to warn that the equipment will **not** alert.

CheckPoint User Manual & Training Guide

9.0 Settings Menu

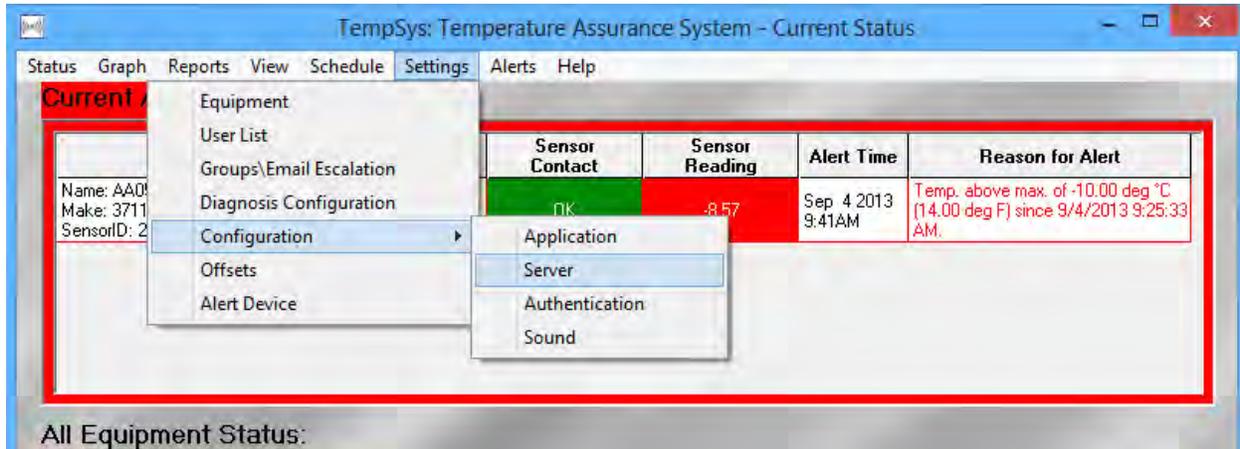


Figure 26 - Settings Menu

All the setting parameters for the system can be set up from this user interface area.

1. **Equipment:** Add, Edit and Delete equipment
2. **User List:** Add, Edit and Delete Users and change passwords
3. **Group\Email Escalation:** Add, Edit and Delete the groups for equipment, users and repeaters. Set up the alert escalation path for each group.
4. **Diagnosis Configuration:** Add, Edit and Delete the verbiage for equipment diagnosis and corrective action which appears each time the user clears an alert. The action items can be different based on the equipment type.

CheckPoint User Manual & Training Guide

5. **Configuration:** Set up for the database path, system name, email and other configuration settings.
 - a. **Application** – Allows the administrator to set up the application system identifier (i.e., the name of application for alerts received by users), screen refresh rate, inactivity logout interval, SQL database path, and mean kinetic temperature (MKT) activation energy.
 - b. **Server** – for changing server settings
 - i. **Receiver Settings** - USB-based receiver or 900 MHz wireless Access Point
 - ii. **Email Configuration** - SMTP Server settings
 - iii. **HL7** - Server ID and HIS Name
 - iv. **21 CFR Part 11 Electronic Signature Settings** – Local electronic signature requirements: Login ID only (1-credential) or Login ID + Password (2-credentials)
 - v. **Corrective Action in Progress Timeout** – Specify the timeout to move any alerts in the “Corrective Action in Progress” window to the “Current Alerts” window. The move also triggers a new alert and starts a new alert escalation protocol.
 - vi. **Voice Alerts** – Settings for voice alerts to be delivered by an external voice modem or VOIP (compatible with third-party *FAX2me.com* service provider).
 - c. **Authentication** – Select user login authentication option: CheckPoint, Active Directory, or Windows.
 - d. **Sound**
6. **Offsets:** Add an optional calibration to each of the sensors. Changes can only be made by an administrator. Note that a non-zero offset invalidates the NIST Certificate of Calibration issued by TempSys.

CheckPoint User Manual & Training Guide

7. **Alert Device:** Test the alert function of the audio-visual alert lamp.

9.1 Equipment Menu

From the tool bar, select “Settings” and then select “Equipment”

From this screen you can set up the equipment alert and other sensor parameters here.

Place your cursor over the equipment row and right click to add a new sensor or edit parameters on an existing sensor.

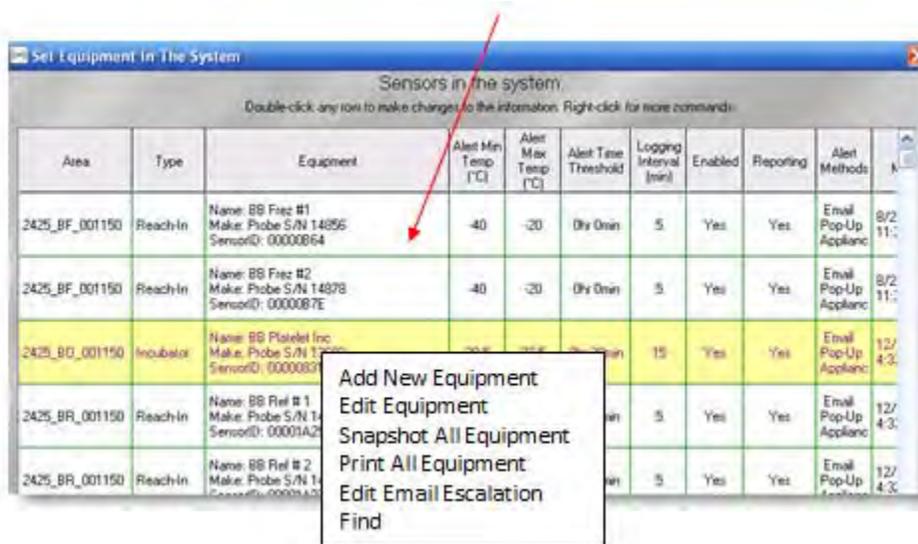


Figure 27 - Equipment Configuration Menu

CheckPoint User Manual & Training Guide

Add New Equipment: Set up parameters for each new sensor added to the system. See next page for details.

Edit Equipment: Double click on row to edit. All fields can be edited, except for the equipment name.

Snapshot All Equipment: Capture all equipment set up information as an html file and email it as an attachment.

Print All Equipment: Directly print all equipment set up information to a printer.

Edit Email Escalation: Edit the alert email escalation by individual equipment. See also Settings\Groups-Email Escalation to set up escalation by group of equipment.

Find: In a system with numerous sensors, finding an equipment to edit can be difficult. The Find feature helps to quickly search by entering any unique character strings, such as part of the equipment name, sensor ID or Probe serial number.



Figure 28 - Find & Search Box

CheckPoint User Manual & Training Guide

9.1.1 Add New Equipment

Use the Add New Equipment submenu to add a new sensor and enter configuration settings. Refer to Figure 29 for an overview of the features, fields, and parameter setting tabs.



No Sensor Contact occurs if data from a sensor is not received within two times (2X) the Plot Interval plus the alert threshold. (If Plot Interval = 15 min, then a NSC alert will be triggered in no new data is received for one hour).

[The Remainder of This Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

Enter Asset Tag number (**cannot be changed after saved**) and Equipment Name (can be edited).

Pull down to select Eq. Type

Click "OK" to save Settings

Enter Probe Serial No. and 12-month Cal Due Date

Area or Dept.

Enter unique 8-character Hexadecimal Sensor ID

Add applicable notes

Check (**uncheck**) box to **enable** (**disable**) sensor.

Click **Add/Remove Probe** icon  to set up other probe types (e.g. CO₂, humidity, differential pressure, etc.)

Period of time between data points and is used for correct time plotting of data points..
Do **NOT** change this setting to change the sensor's sampling period (or interval), which can only be changed by TempSys in sensor's firmware. Contact TempSys at support@tempsys.net to change sensor's sampling period.

Click [Temperature](#) link to change settings and [Summary](#) to view setup details

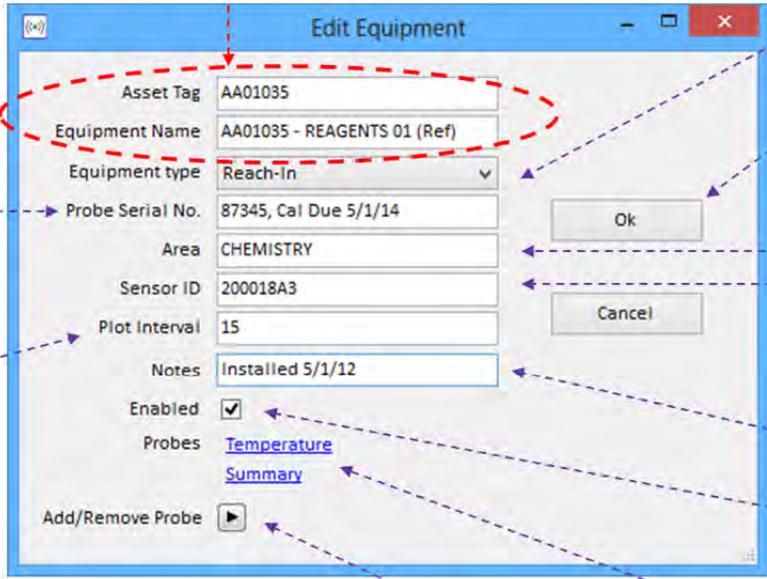
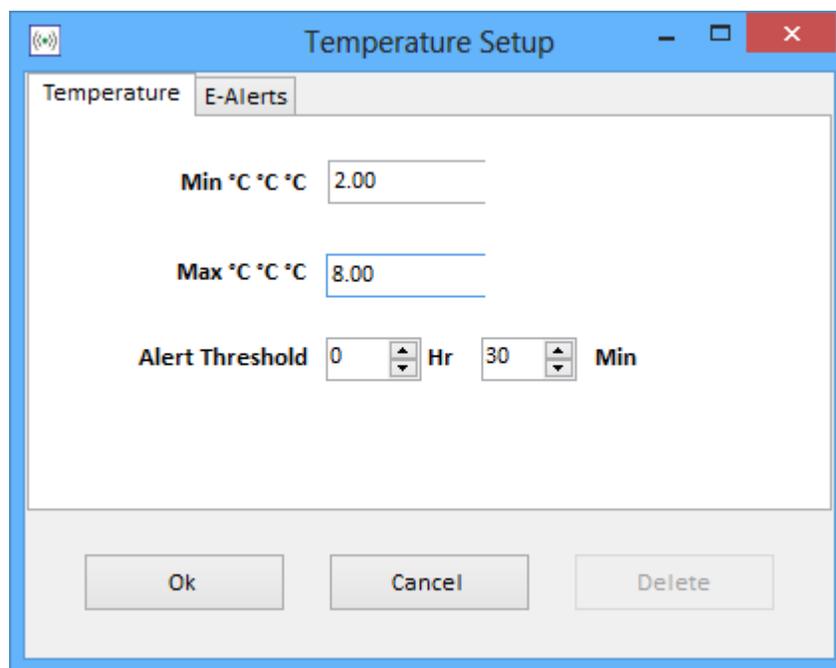


Figure 29 - Edit Equipment Configuration

CheckPoint User Manual & Training Guide

9.1.1.1 Temperature Settings

Click on the [Temperature](#) link (Figure 29) to set up the minimum and maximum temperature settings on the “Temperature” tab (Figure 30). Change the “**Alert Threshold**” to set the maximum amount of time the temperature can be out of range without an alert being sent. If the total amount of time the temperature is out of range exceeds the Alert Threshold, then an alert will be sent and the email escalation started.



The screenshot shows a window titled "Temperature Setup" with two tabs: "Temperature" and "E-Alerts". The "Temperature" tab is active. It contains three input fields: "Min °C °C °C" with the value "2.00", "Max °C °C °C" with the value "8.00", and "Alert Threshold" with a spinner set to "0" Hr and "30" Min. At the bottom of the window are three buttons: "Ok", "Cancel", and "Delete".

Figure 30 - Temperature Settings Page

CheckPoint User Manual & Training Guide

9.1.1.2 Emergency Alerts

Emergency alerts are for sending alerts if a “no cross” line is breached, either above the max or below the min threshold. If there is such a breach, CheckPoint does not wait for the alert threshold and sends an alert on the next sample time.

Click on the “**E-Alerts**” tab (Figure 31) to change settings for emergency alerts, which have a separate set of minimum and maximum E-alert temperature thresholds (“no-cross temperature limits”) and a fixed (cannot be changed) Alert Threshold of 0 min.

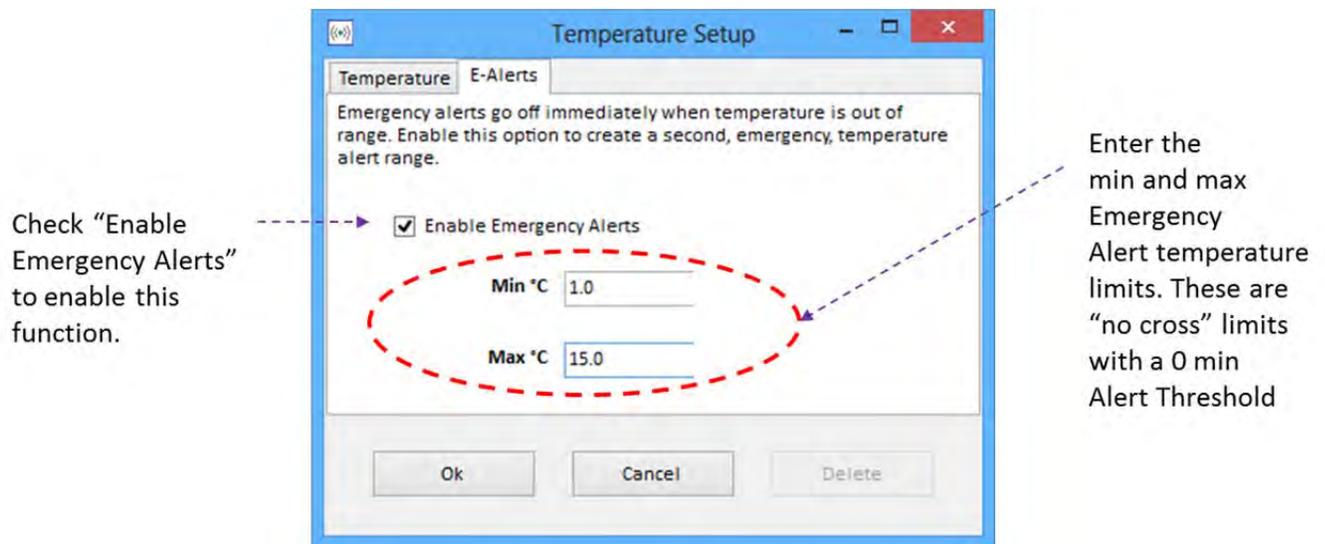


Figure 31 - Emergency Alerts Settings Page

9.1.1.3 Add / Remove Probe

Click on the Add / Remove Probe icon to add settings for second temperature probe or to set up a non-temperature probe (see Figure 32).

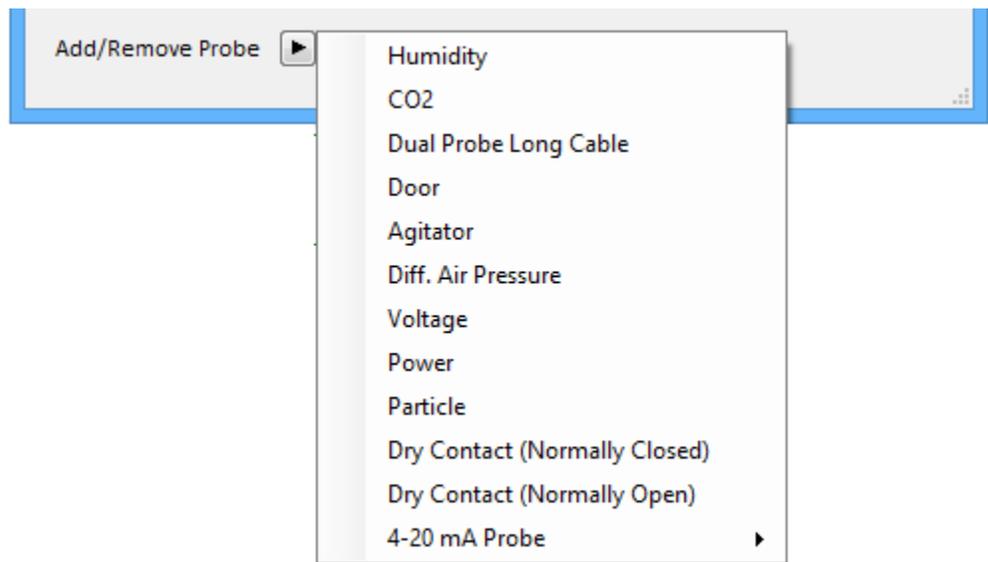


Figure 32 - Add / Remove Probe

9.1.1.4 Dual Probe Settings

For sensors with dual probes (e.g., to monitor an appliance with separate freezer and refrigerator compartments) click on the [Dual Probe](#) link in the Add or Edit Equipment pop-up menu to open the Dual Probe Long Cable Setup menu in Figure 33.

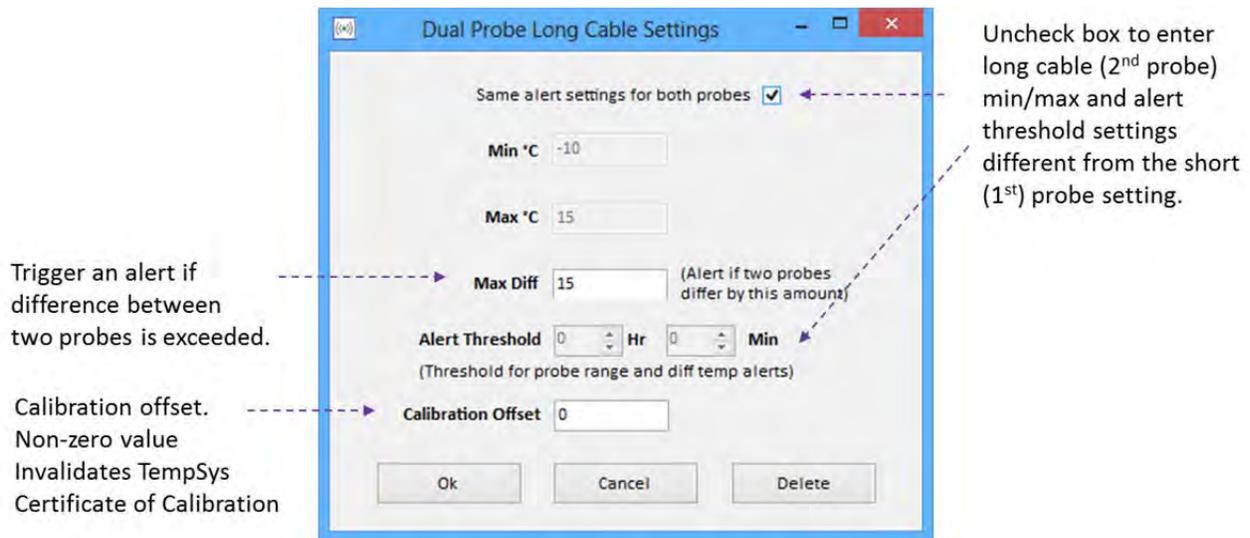


Figure 33 - Dual Probe Long Cable Settings Page

Dual-probe sensors with two probes are one of the types detailed in Table 9.1.1.4-1:

Table 9.1.1.4-1 – Dual Probe Sensor Types

Dual Probe Type	Lead Wire Length - Probe #1	Lead Wire Length - Probe #2	Application
Lead Wires with Equal Lengths	48" (Probe #1)	48" (Probe #2)	Freezer / Refrigerator Combo Appliance
Lead Wires with Different Lengths	24" (Short Cable or Probe #1)	36" (Long Cable or Probe #2)	Blood bank refrigerator to monitor top and bottom of refrigerator

9.1.2 Edit Equipment

Select this option to edit existing equipment that has previously been set up, but parameters need to be changed. Selecting this option takes the user to the Edit Equipment window in Figure 29.

9.1.3 Snapshot All Equipment

Select this option to take a “snapshot” of all the equipment and save it in an “html” format.

9.1.4 Print All Equipment

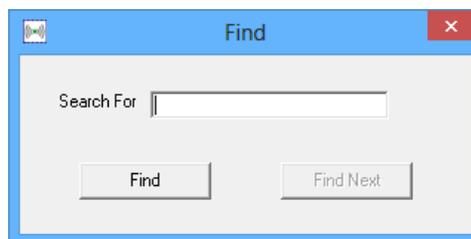
Select this option to print all of the equipment to a printer or save it as an electronic file (e.g., pdf format).

9.1.5 Edit Email Escalation

Select this option to edit the email (alert) escalation for the sensor of interest.

9.1.6 Find

Select this option to search the equipment (sensor) list to find a specific text string.



9.2 User List Menu

From the tool bar, select “Settings” and then select “User Lists.” Here you can set up new user parameters.

There are 3 User Levels:

Admin: This is the highest level administrator.

- Admin has all rights and can create other Admins, Group Admins and Users.
- If the Admin belongs to multiple groups, new equipment created by this Admin will be assigned to each of the groups to which the Admin belongs.
- An Admin will have email rights, even if the email box in User Set up is not checked.

Group Admin: This is the admin limited to one or more groups as set up by the Admin.

- A Group Admin has all rights and can create new users, but limited to within his group(s).
- A Group Admin cannot create other Group Admins.
- All new equipment can be assigned only to the groups to which the Group Admin belongs.
- A Group Admin will have email rights only if the Email box in user set up is checked.

User: A User can view data and take corrective action, but has none of the admin rights, including email rights.

Place your cursor over any user row and **right click** to add a new user, edit parameters on any user or change your password.



Password expiry interval is set in Settings\Configuration\Server. This must be set up at the server, not client.

Figure 34 - Set Up Users

9.2.1 Add User

The screenshot shows the 'Add User' dialog box with the following fields and options:

- Name:** Harry Potter
- Login ID:** Harry
- Password:** [masked]
- Confirm Password:** [masked]
- Role:** Administrator
- Temperature Scale:** Celsius (selected), Fahrenheit
- Status:** Email Admin
- Available Groups:** 0350_Path/RIHC, 2238_Outpatient Laboratory, 2425_INPT_Pharmacy, 2425_Kaiser All MOB Devices, 2425_Kaiser Global Admin, 2425_Lab, 2425_Nutrition, 2425_OR Blood Refrigerators, 4141_French Campus All Devices, Client Security, global
- Member of Group:** 2425_Blood Bank
- Options:**
 - Must change password at next login
 - Expired
 - Account Locked
 - Disabled
 - Active

Annotations:

- Enter full name or identification (points to Name field)
- Enter your login ID (points to Login ID field)
- Create password (points to Password field)
- Admin can create other Admins, Group Admins and Users.
- Group Admin can create users only within his group.
- User is limited only to user functions within the software.
- Admin can always edit email even if this box is un-checked.
- Group Admin must have this box checked by an Admin to have email editing rights.
- User is never allowed email editing rights.
- Select the scale preference. Based on this preference, all temperatures will appear in C or F throughout the program based on each user login.
- Only an admin can configure:
 - Force user to change password on next login.
 - Automatically changes to "expired" after expiry period as set in Config\Server (see page 35).
 - After 4 failed login attempts, account will be locked and email notice is sent to Client Security group. Admin must change to "Active" to re-activate.
 - Check to temporarily disable user's login.
- To assign one or more groups to this user, move groups to the member column. User will be able to interact with all equipment in the assigned groups

Figure 35 - Add User Menu

CheckPoint User Manual & Training Guide



The groups assigned to each user can also be changed by going to Settings\Groups-Email Escalation, then editing any of the available groups.



If a user belongs to more than one group, all equipment in the groups will appear when this user logs in.

9.2.2 Delete User

Select this option to delete a user account. CheckPoint prompts you to verify you would like to delete the user account.

9.2.3 Edit User

Select this option to edit an existing user's account. The user must have sufficient administrator privileges to edit another user's account.

9.2.4 Change Password

Select this option to change your password.

CheckPoint User Manual & Training Guide

9.3 Groups\Email Escalation Menu

The Groups\Email escalation menu (see Figure 36) is used to:

- Assign users and equipment into specific groups.
- Based on user's login ID, interaction will be restricted only to the equipment assigned to the user's group.
- Set up alert email and lamp escalation path for each group.
- Set up AlertWatch on a specific user's PC

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

9.3.1 Alert Escalation

The Alert Escalation menu is used to set up the alert protocols.

Click to open escalation set up page

Click and drag on the grid to highlight time slots to assign alert recipient groups. By filling out entire week, alerts can be sent to different recipients based on the day of week and time of

Instruction details to set up alert escalation

Email groups can contain email addresses, alert lamp ID's and phone numbers.

Refer to **Alert\Recipient Groups** from the menu for set up.

1) Click & drag to highlight time slots
 2) Right click highlighted slots, then click Schedule
 3) Highlight, and add email groups to escalation path
 4) Repeat to fill desired time slots. Save when done

Note: Alerts will not email during empty time slots

Wait time between escalation groups: 0 days 0 hrs 30 mins

Time program will wait before escalating to next group. Escalation will stop only when red alert on the main page is cleared.

Check "Repeat Email Escalation" Box to loop the Escalation Path protocol

Figure 37 - Alert Escalation

CheckPoint User Manual & Training Guide

9.3.2 Set Up Alert Watch on a User PC

To set up AlertWatch on a PC, select the equipment group of interest in the “Choose a group to modify” and then click on the “AlertWatch” button on the right (Figure 38). Alerts for the highlighted equipment group will trigger AlertWatch, which must be in the Startup Menu on the user’s PC.

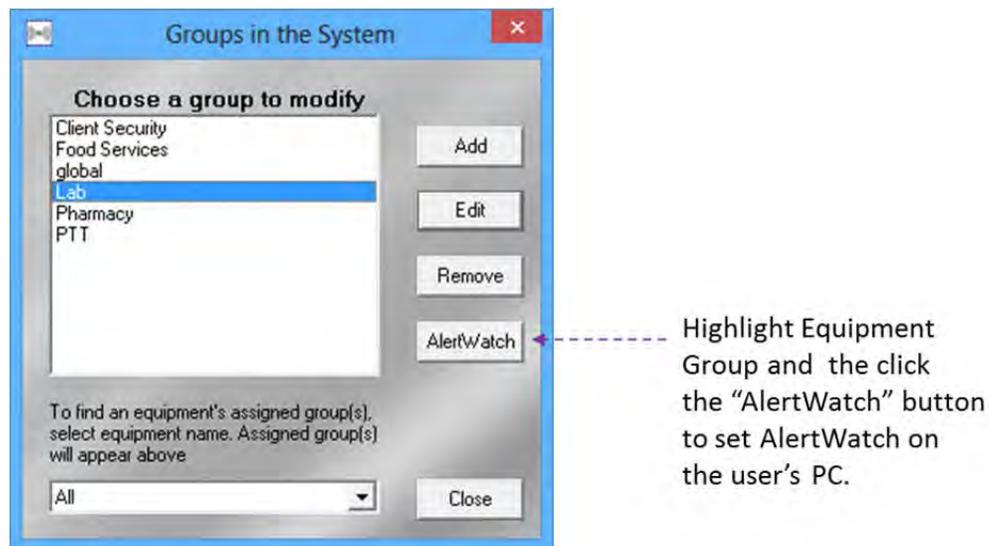


Figure 38 - Set Up AlertWatch on a User's PC

9.4 Diagnosis Configuration

From the tool bar, select “Settings” and then select “Diagnosis Configuration”. From this screen you can create unique list of values for Diagnosis and Corrective Actions.

CheckPoint User Manual & Training Guide

Select equipment type to set up Diagnosis and corresponding Corrective Action

Right Click to select action

Configure Diagnosis Actions

This screen allows you to set up the diagnosis texts for each type of equipment. In addition, for each diagnosis, there is a corrective action. You can also tell the system to automatically send email to a specific email group if that diagnosis is checked.

Equipment Type: **Cook-Chill**

Diagnoses And Corrective Actions:

Problem Category	Diagnosis	Corrective Action	Email To
Circumstantial	Power switch turned off.	Turn switch back on, identify and correct cause.	
	Temperature setting knob changed.	Turn back to normal operating temperature, identify and correct cause for change.	
	Power cord unplugged	Plug back in, identify cause and correct cause.	
Mechanical	Forgot to turn off power.	Staff training, Lock at staff schedule and instruct to close.	
	Door left open.	Staff training, Lock at staff schedule and instruct to close door.	
	Door blocked open	Check staff schedule and caution	
Operational	Tempsys sensor damaged or not attached.	Replaced, remove cover, verify battery life. Report to TempSys.	Staff
	Slow recovery.	Check staff schedule and caution	Maintenance
	Door seal blocked or damaged.	Check staff schedule and caution	Maintenance
	Door latch fails to shut completely.	Check staff schedule and caution	Maintenance

Context Menu Options:
 Add Diagnosis
 Edit Diagnosis
 Delete Diagnosis
 Take Snapshot
 Print

Add Diagnosis

Select the Diagnosis Type, and free-text the Diagnosis and Corrective Action in the appropriate boxes.

Edit Diagnosis

Equipment Type: **Reach-In** [Save]

Diagnosis Type: **Mechanical** [Cancel]

Diagnosis: **Ice build-up behind the evaporator.**

Corrective Action: **Keep door closed. Report to Maintenance.**

Send Email To: **Maintenance**

If a diagnosis is selected by the user when clearing an alert, an email will be sent to this selected email group.
 Email group is set up in Alerts>Email & Lamp Group.

Figure 39 - Diagnosis Configuration

CheckPoint User Manual & Training Guide

9.5 Configuration Menu

This menu is only available with the rich client on the application server.

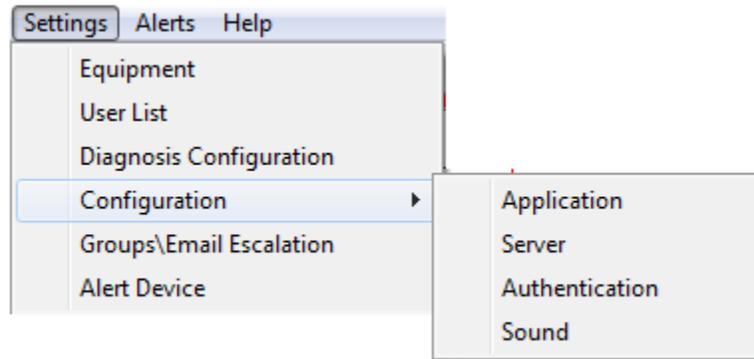


Figure 40 - Configuration Menu

9.5.1 Configuration Menu - Application

The Application configuration menu allows the system administrator to configure:

- Company identifier name
- Interval at which the main screen updates
- Location of SQL database
- User inactivity timeout
- Alert sound configuration

CheckPoint User Manual & Training Guide

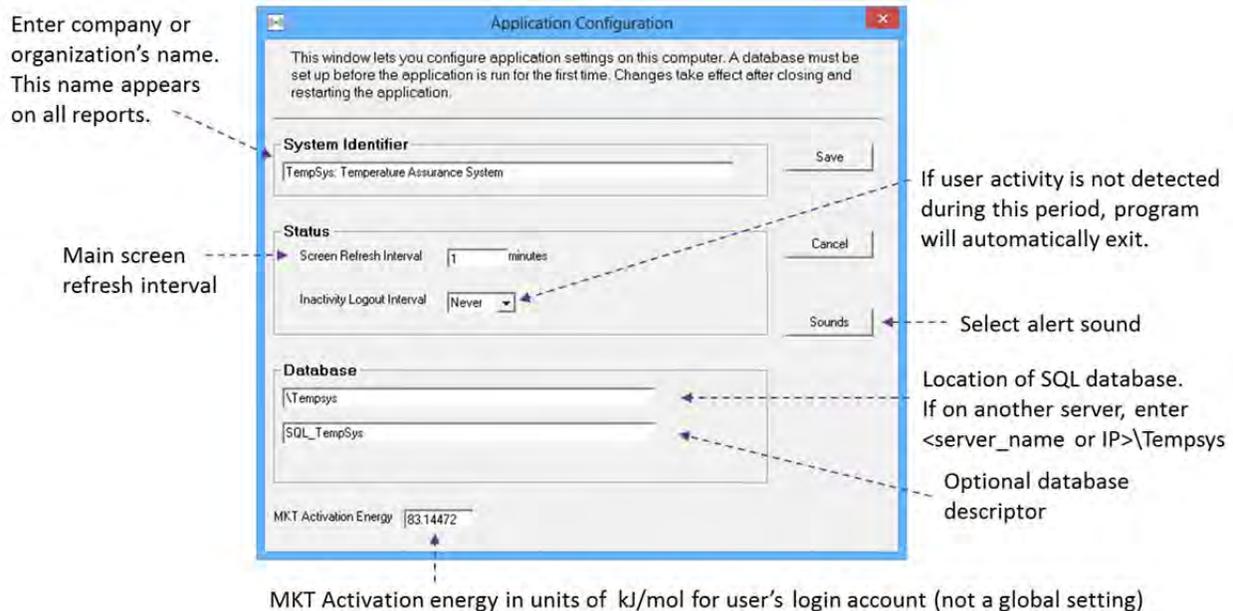


Figure 41 - Application Configuration Menu (Application Server Only)

Mean Kinetic Temperature (“MKT”), along with other statistics, is displayed in the Chart and Numeric Table windows. It is included in the printed versions of each. Users select the period and date controls on each window to select a desired interval for MKT reporting.

With a default value of 83.14472 kJ/mol, Activation Energy may be changed by users with admin privileges. To change the activation energy, use the Settings / Configuration / Application menu choices (MKT Activation Energy appears at the bottom of that window).

CheckPoint stores activation energy in the database on a per-user basis. Therefore, each user login can set a user-defined activation energy. Note that the application configuration window also appears on initial use of the CheckPoint client, or when the application detects that its database connection is invalid. In these cases, the MKT activation energy field is disabled. CheckPoint cannot accept MKT entry without a database connection and a valid user login.

CheckPoint User Manual & Training Guide

9.5.2 Configuration Menu - Server

The Server configuration is where the system administrator sets key network information:

- USB Receiver
- Network – For Access Points
- COM Port – Serial Port configuration
- Wi-Fi Network for Wi-Fi G4 Sensors
- Email Configuration
- HL7 Export
- 21 CFR Part 11 Electronic Signature Credential Requirements
 - Login ID and Password, -OR-
 - Login ID only
- Revert Yellow (Corrective Actions in Progress) to Red (Current) Alerts timeout – Global setting

CheckPoint User Manual & Training Guide

The screenshot shows the 'Server Configuration' window with the following sections and annotations:

- Receiver Hardware Configuration:** Includes tabs for USB, Access Point, Tab 2, and Tab 3. A link 'Edit 900 Mhz Access Point IP Addresses' is highlighted. Annotation: 'Enter 900 MHz G4 Access Point IP Addresses'.
- Email Configuration:** Fields for SMTP Server (mail.mylocation.com), SMTP Port (25), 'From' Email Address (system@TempSysTempAssura), Mail Login, and Mail Password. Annotation: 'Enter SMTP Email Config. CheckPoint SMTP or IIS SMTP Mail Transport must be selected and running'.
- HL7 Settings:** Fields for HL7 Export Server ID and HL7 HIS Name. Radio buttons for 'Require name and password for corrective action' and 'Require only name for corrective action'. Annotation: 'Enter HL7 settings'.
- Alert Options:** 'Revert Yellow Alerts to Red after' set to 4 hours. 'Voice alerts delivered by' with radio buttons for 'Voice Modem' and 'VOIP'. Annotation: 'Voice alert options: (1) External Voice Modem (physical server required), or (2) VOIP (FAX2me.com)'. Another annotation: 'Time to wait to move before moving an open alert from Corrective Action In Progress to Current Alerts window. A new alert is sent and escalations restarted'.

Buttons for 'Save' and 'Cancel' are at the bottom.

Figure 42 - Server Configuration with Access Point(s)

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

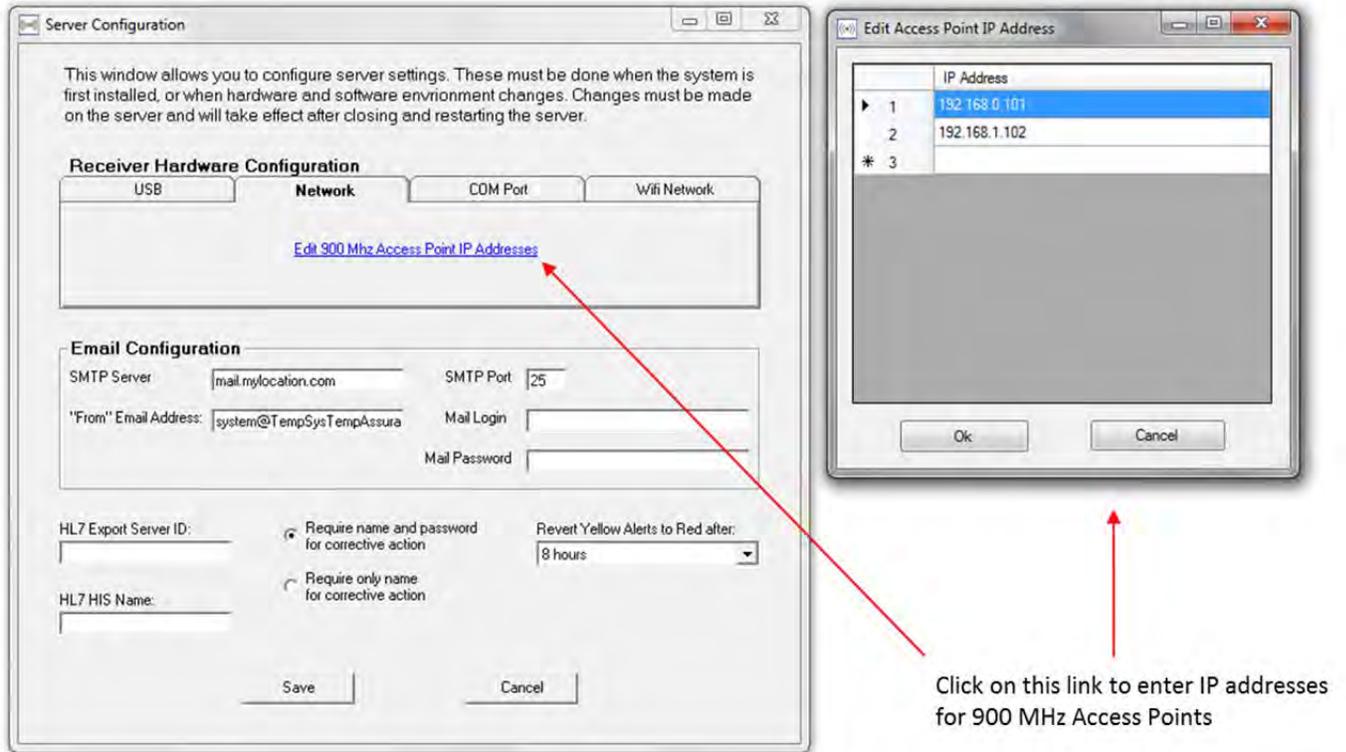


Figure 43 - Edit IP Addresses for 900 MHz Access Point(s)

Click on the USB tab and select "Not in use" when an Access Point is being used.

CheckPoint User Manual & Training Guide

If a USB receiver is being used instead of an Access Point, select the “USB” tab (Figure 44).

Select
“USB Serial Port”
if a USB receiver is
attached to the
application PC

If an Access Point
is instead being used,
select “Not in use”
since no USB receiver
is attached to the
application server.

The screenshot shows a window titled "Server Configuration" with a blue border. At the top, it says "This window allows you to configure server settings. Most settings are established when Checkpoint is installed and should only be altered when the hardware or software environment changes. Some changes require a restart to take effect." Below this is the "Receiver Hardware Configuration" section with three tabs: "USB", "Access Point", and "Tab 3". The "USB" tab is selected, and the "USB Device Name" dropdown menu is set to "USB Serial Port". Below this is the "Email Configuration" section with fields for "SMTP Server" (mail.mylocation.com), "SMTP Port" (25), "'From' Email Address" (system@TempSysTempAssura), "Mail Login", and "Mail Password". At the bottom, there are fields for "HL7 Export Server ID" and "HL7 HIS Name", radio buttons for "Require name and password for corrective action" (selected) and "Require only name for corrective action", a "Revert Yellow Alerts to Red after" dropdown set to "4 hours", and radio buttons for "Voice alerts delivered by" set to "Voice Modem" (selected) and "VOIP". "Save" and "Cancel" buttons are at the bottom.

Figure 44 - Receiver Settings for a USB Receiver

CheckPoint User Manual & Training Guide

9.5.3 Configuration Menu – User Login Authentication

Use the Authentication menu to select the desired user authentication configuration:

1. **CheckPoint Authentication** – Use Login ID and Password stored in CheckPoint SQL database.
2. **Active Directory (“AD”)** – Use Active Directory login authentication to allow user to access CheckPoint. No additional CheckPoint Login ID and Password are required after AD authentication
3. **Windows Authentication (“WA”)** – Use Windows authentication to allow user to access CheckPoint. After the user successfully logs into Windows, no additional CheckPoint Login ID and Password are required.

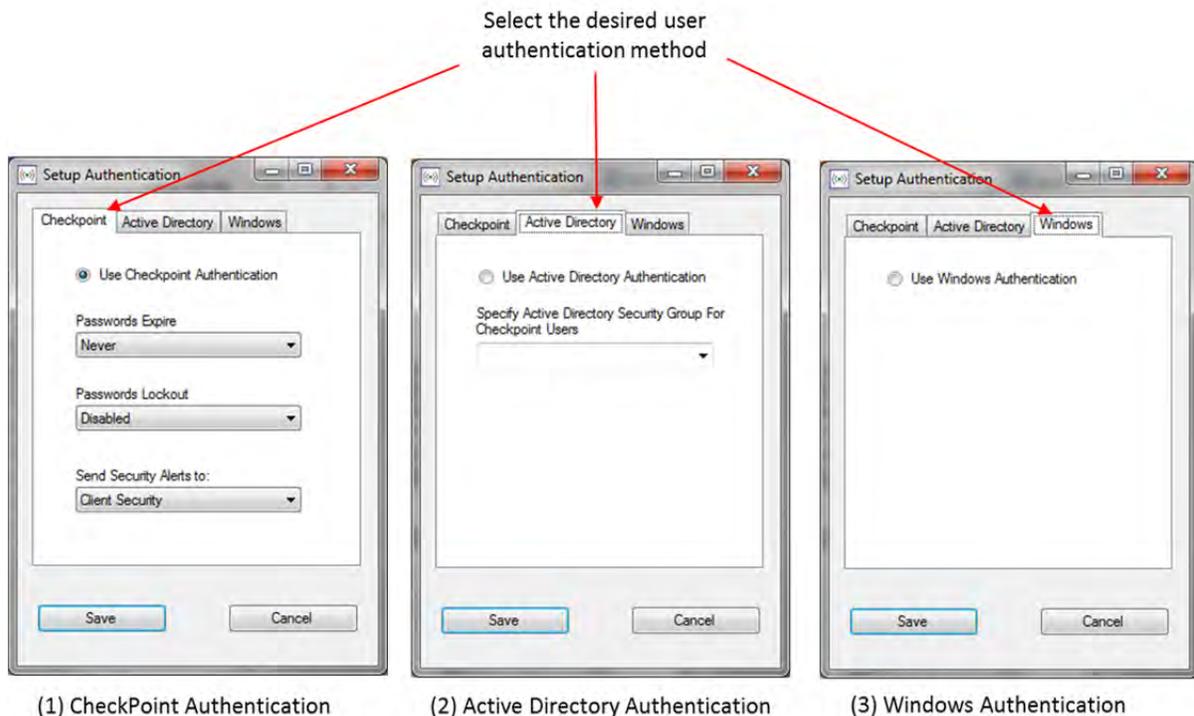


Figure 45 - User Login Authentication Options

CheckPoint User Manual & Training Guide

9.5.4 Configuration Menu - Sound

Use the Sound configuration pop-up to select the Alert Watch sound type to use for alert notification on the user computer.

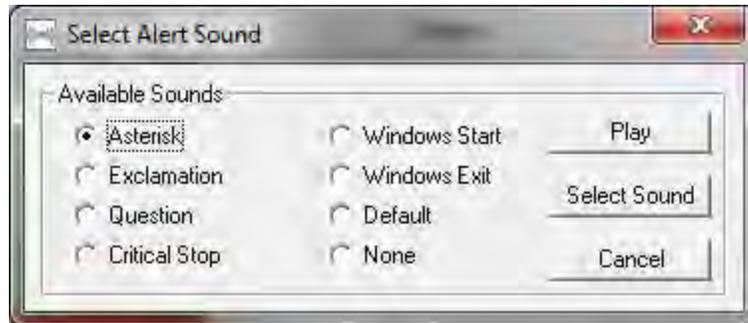


Figure 46 - Select Alert Watch Sound

[The Remainder of This Page Has Intentionally Been Left Blank]

CheckPoint User Manual & Training Guide

9.6 Calibration Offsets Menu

Select the Offsets menu option (Figure 47) to enable non-zero calibration offsets to be accepted for specific equipment groups only.

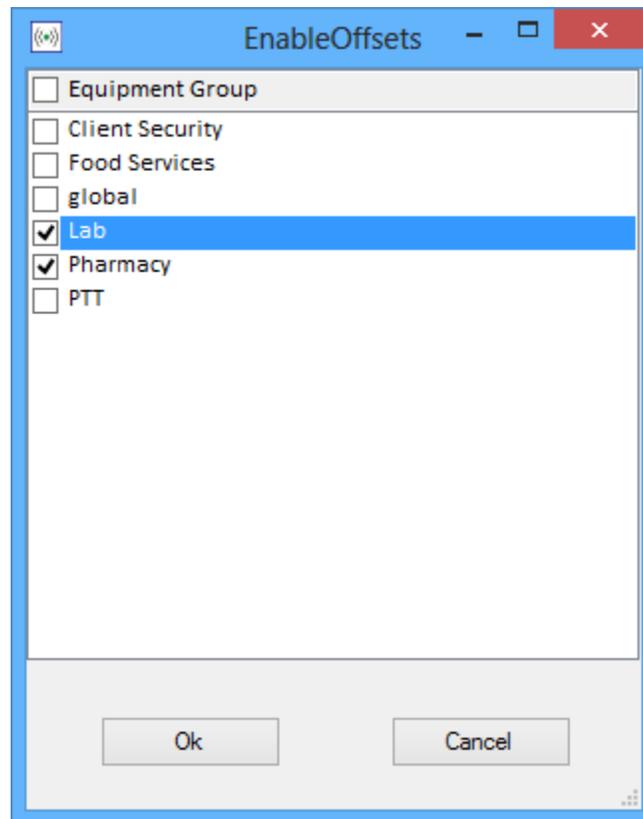


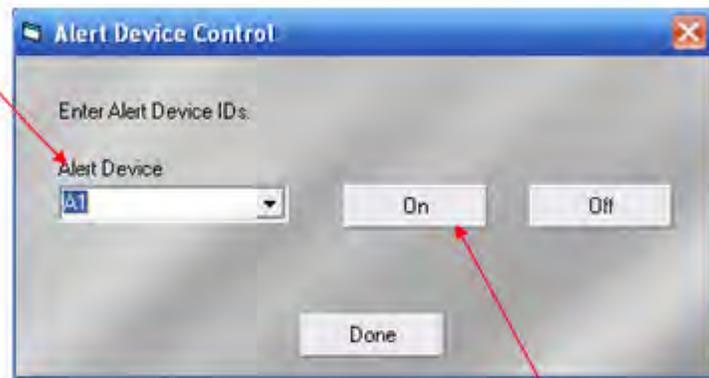
Figure 47 - Enable Offsets for Specific Equipment Groups

CheckPoint User Manual & Training Guide

9.7 Alert Device Menu

This is to test the performance of the lamp alert (an option where a lamp flashing is activated when an alert occurs).

From the drop down menu, select Lamp ID to test. Lamp ID must be previously set up in Alerts \ Recipient Set Up



Click ON to test if lamp functions, and then turn OFF.
A periodic alert lamp check is recommended.

Figure 48 - Alert Device Menu

CheckPoint User Manual & Training Guide

10.0 Alerts Menu

The Alerts menu is comprised of the following sub-menus:

Current Outbox: The status of sent emails can be checked here. All emails alerts, including the test email, are temporarily stored in the Current Outbox until the Email Service picks up and hands off the mail to the email server.

Recipient Setup: Set up Email Addresses, Phone Numbers and Alert Lamp ID's.

Email & Lamp Groups: Create Groups for receiving email and lamp alerts. Any number of recipients, as set up in Recipient Setup, can be included in each group.

Escalation Settings: Escalation Path can be set up by individual equipment. However, escalation path is typically set up by groups in Settings\ Groups-Email Escalation.

Email Setup & Test: During installation or troubleshooting, a test email can be sent. The test email can be sent via IIS SMTP (if enabled) or the CheckPoint SMTP. CheckPoint SMTP is recommended due to its troubleshooting tools, such as the SendMailLog, which automatically displays error messages from the mail server. This log appears at the server in c:\Windows\temp\sendmail.log.



CheckPoint User Manual & Training Guide

10.1 Current Outbox

The status of the test email sent from Email Setup & Test can be checked here. Message box will become blank when the Email Service picks up the mail.



Figure 49 - Email Alert Status

10.2 Recipient Setup

Right click on the Email Recipient Addresses or Alert Lamps Boxes and add or edit list.

CheckPoint User Manual & Training Guide

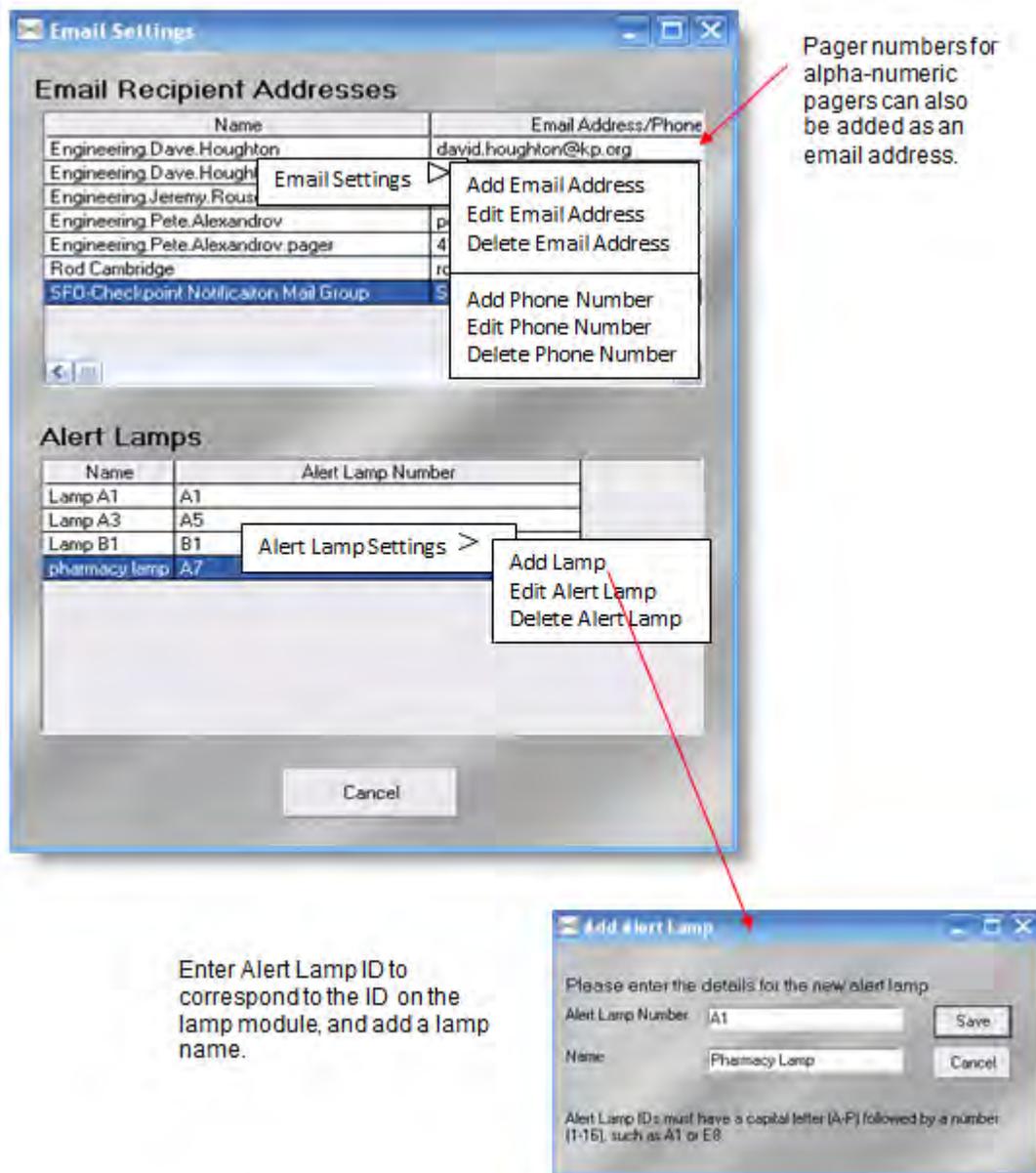
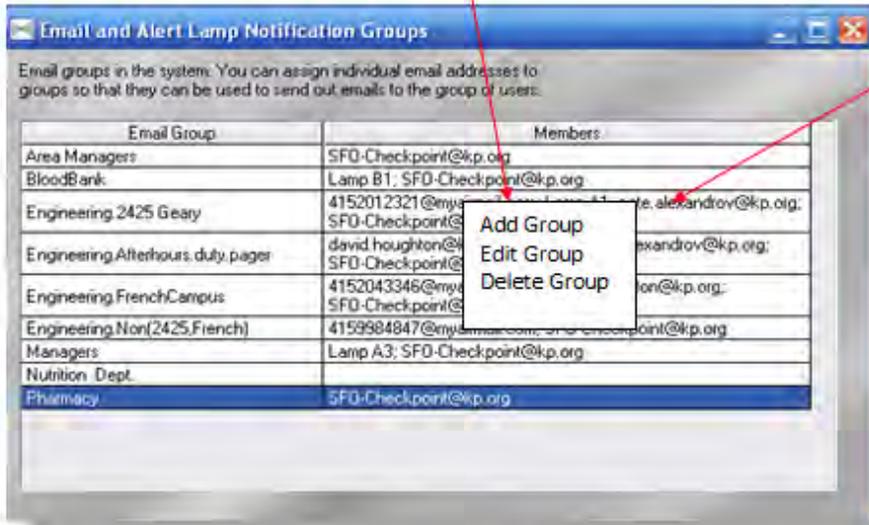


Figure 50 - Recipient Setup

CheckPoint User Manual & Training Guide

10.3 Email & Lamp Groups

Right click to create, edit or delete groups



At the time of an alert, notification will be sent to all email addresses and phone numbers in each group, as well as activate a Lamp assigned to the group.

If the alert is set to escalate, different recipients and different lamps can be activated based on time of day and day of the week.

(See Settings\Groups-Email Escalation.)

To add a group, create a group name and move addresses and Lamp ID's to the right side 'members' column.



CheckPoint User Manual & Training Guide

10.4 Escalation \ Equipment

We recommend that the alert escalation be set as a group through the ‘Settings\Groups – Email Escalation.’ It is much easier and consistent if escalation is set up by groups.

However, if an alert escalation path for a single appliance is required, then this section may be used.

Single equipment escalation can also be set up in Settings\Equipment.



Figure 51 - Set Escalation for a Specific Sensor



If an appliance is assigned to a group, and a group escalation path is already set up, then a separate escalation for the same equipment will be disallowed.

CheckPoint User Manual & Training Guide

Reports\Equipment Groups allows you to sort by equipment or groups, allowing you to easily find the group assignment of each monitored appliance.

Another way to find the group assignment is:

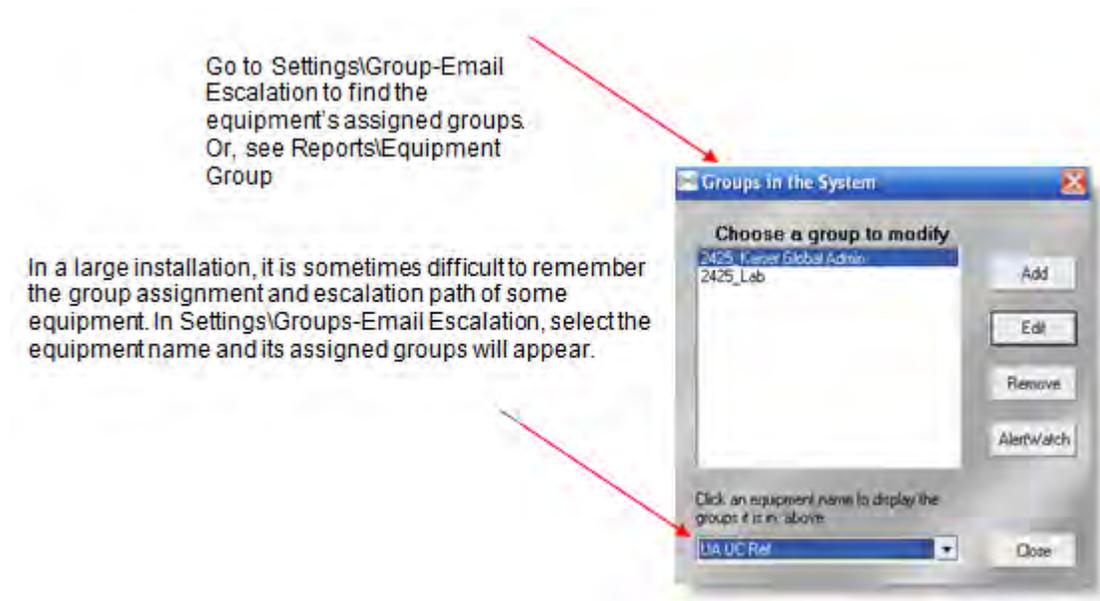


Figure 52 - Managing Equipment Groups

CheckPoint User Manual & Training Guide

10.5 Email Setup & Test

Email is set up and configured in Settings \ Configuration \ Server.

Use IIS SMTP if you wish to use the Microsoft SMTP which comes as a component of IIS.

Select CheckPoint SMTP which runs as a service. This is recommended for its troubleshooting and set up utilities.

Set up the email recipients in email groups, and click Test Email.

- Check status in Current Outbox
- When the email service hands off the email to the email server, Current Outbox will be empty.



CheckPoint User Manual & Training Guide

11.0 Help Menu

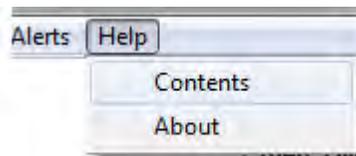


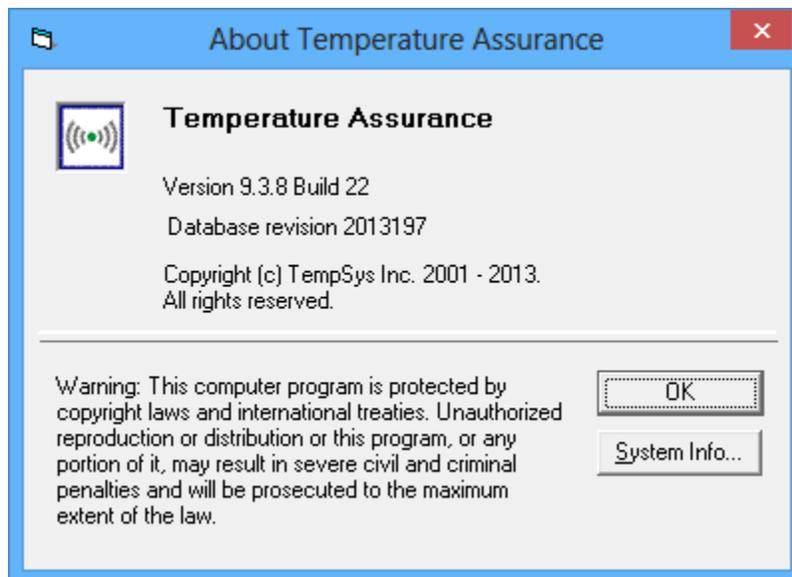
Figure 53 - Help Contents

11.1 Contents Submenu

The online user manual is available in the Contents submenu Figure 54.

11.2 About Submenu

The software version control number of database revision number are available in the “About” submenu.



CheckPoint User Manual & Training Guide

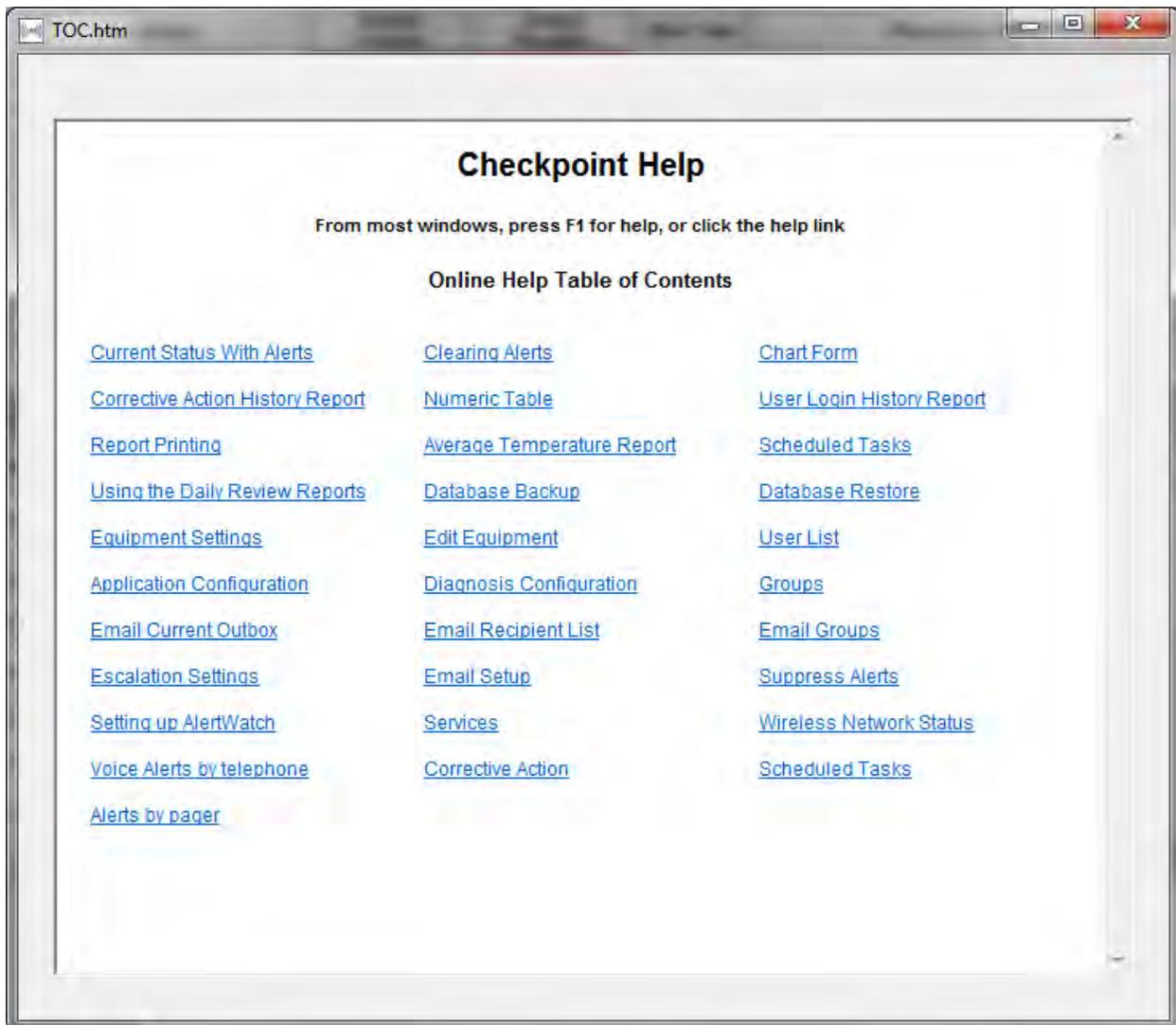


Figure 54 - Online User & Help Manual

CheckPoint User Manual & Training Guide

12.0 Code of Federal Regulations 21 CFR Part 11 Compliance

The CheckPoint System is not considered a medical device and as a result is not eligible for FDA Certification(s). The system can be validated / qualified to FDA guidelines in 21 CFR Parts 210 and 211 as well as 21 CFR Part 11 requirements. Since each application is custom to specific client needs, there is no specific overall registration certificate available. The FDA typically reserves such approvals and certificates for Medical Devices, and Environmental Monitoring Systems do not fall under such category.

CheckPoint offers:

- Software features to meet the FDA guidelines (see below),
- IQ/OQ/PQ protocol,
- NIST Traceable probes
- Calibration as an A2LA Accredited ISO/IEC 17025:2005 Calibration Laboratory.

The actual FDA requirement for user-id and passwords is in **21 CFR 11.300** – Controls for identification codes/passcodes.

Persons who use electronic signatures based upon use of identification codes in combination with passwords shall employ controls to ensure their security and integrity.

Such controls shall ensure that identification code and password issuances are periodically checked, recalled, or revised (e.g., to cover such events as password aging).

The requirements of 21 CFR 11.300 are met in the CheckPoint software through:

1. Corrective Action Documentation - Require both User ID and Password for corrective action processing

CheckPoint User Manual & Training Guide

2. Password expiration - Tests the time stamp on password expiration given by Administrator
3. Security – User is locked out of system and admin notified upon 4 unsuccessful log-in attempts
4. Failed Log-in Report to Administrator by email
5. Password Change Report - Documents changes to user passwords. The actual password is not recorded, but the date and time of user change is recorded.
6. Must change password at next login for new users. - An admin sets up a user, picks this choice and when the user first logs in, Checkpoint prompts the user to change password.

[The Remainder of This Page Has Intentionally Been Left Blank]