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RIOT Station Operating and Maintenance Manual

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24/03/2006

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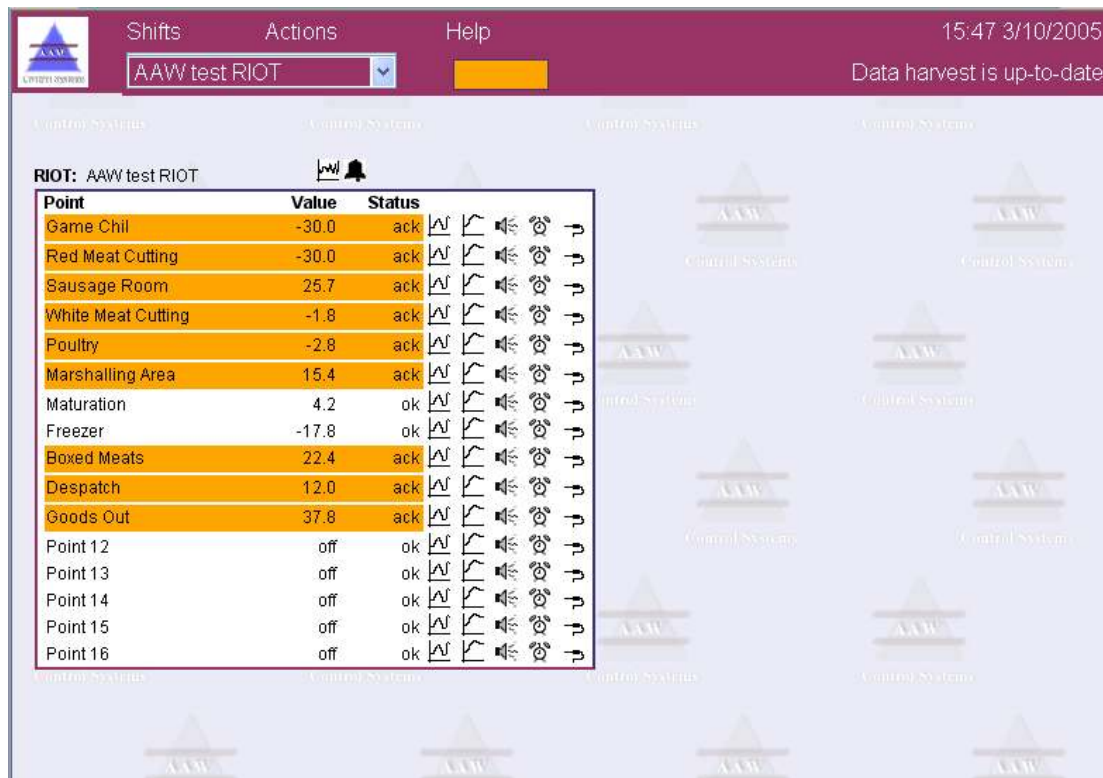
1 Introduction

The RIOT Station is a basic PC based system that is designed to allow recorded data held with in AAW's RIOT (Remote Input Output Transceiver) to be stored and viewed on a Windows PC.

This entry level system allows users to view current status, history data with in a trend form, view and acknowledge alarms and modify RIOT configuration and alarm parameters.

It is possible to monitor and set up multiple RIOTs from one PC.

2 Overview



From this overview screen it is possible to initiate all other pop up windows.

3 Point Data

Each point has a line entry showing the point Name, Value and Status.

For temperatures this will be a + or – temperature, for a Digital signal this will be **on** or **off**.

The symbols following the point data are as follows

- Point day trend graph
- Point hour trend graph
- Point alarm status
- Point alarm setting
- Point probe setting

Above the Point Data are two symbols which are options for viewing historical data.

- Week trend
- Alarms

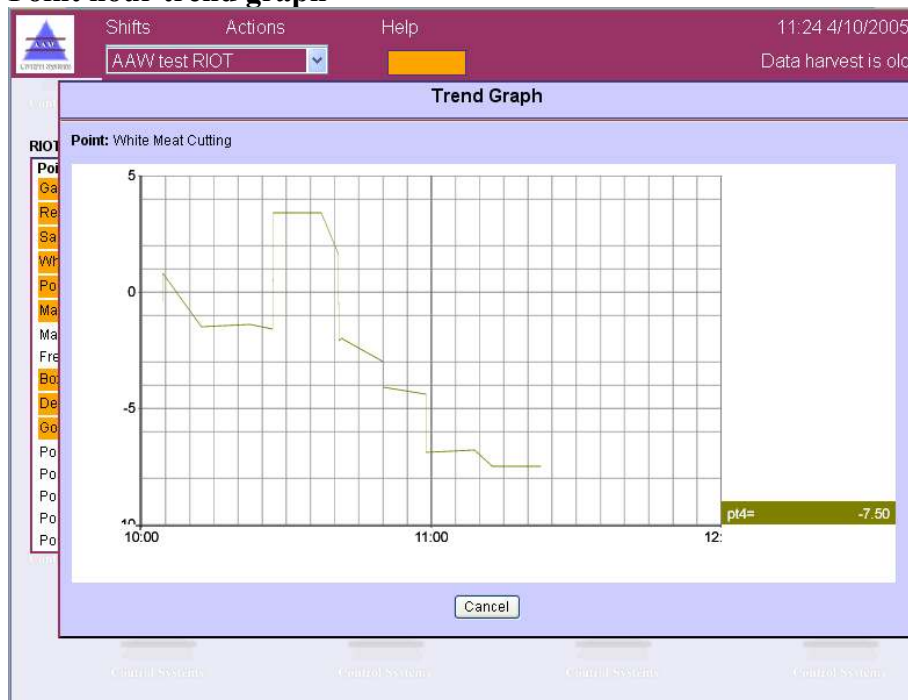
The following shows each of the above.

Point day trend graph



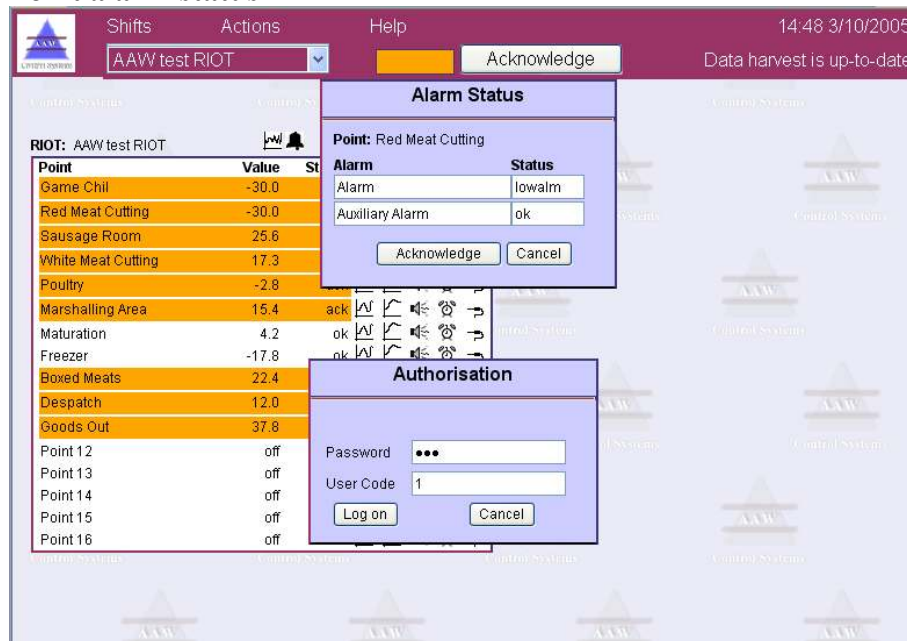
Left mouse click on the cancel button takes you back to the overview screen

Point hour trend graph



Left mouse click on the cancel button takes you back to the overview screen

Point alarm status



This screen shows the Alarm status pop up screen and the Authorisation pop up screen.

When you select the Alarm status icon to clear a single alarm then this pop up will appear.

This pop up will show you what type of alarm it is

ack	The alarm has been acknowledged
ftack	Flatline fault acknowledged
highalm	new High alarm
lowalm	new Low alarm
highret	High alarm that has returned to within set points
lowret	Low alarm that has returned to within set points
flt	Flatline fault
clr	Cleared alarm
ftclr	Flatline fault cleared
mod	setting modified

See **Alarm Settings** section for details on the Auxiliary Alarm.

You will then Left mouse click the Acknowledge button.

The Authorisation pop up will appear, you now have to input the authorisation password (factory default is **ack**) select a user code, this is a number from 1 to 255. Your department management will have selected the meaning of this code. e.g. Action Code or User Identification.

Left mouse click the Acknowledge button and once the data has been sent to the RIOT and the alarms acknowledged on the RIOT then the screen will change. This could take up to 30 seconds.

NOTE:

CURRENTLY ALL SUBSEQUENT ALARMS THAT ARE ACKNOWLEDGED WILL HAVE THE SAME USER CODE.

Should you wish to acknowledge and alarm with a different user code the you can either wait 3 minutes until the systems has timed your login out or access one of the other point options.

Point alarm setting

Point	Status	Action	Message	Low limit	High limit	Limits	Delay	Action
Game Chilli								
Red Meat Cutting								
Sausage Room								
White Meat Cutting								
Poultry								
Marshalling Area								
Maturation								
Freezer								
Boxed Meats								
Despatch								
Goods Out	37.8	ack						
Point 12	off	ok						
Point 13	off	ok						
Point 14	off	ok						
Point 15	off	ok						
Point 16	off	ok						

It is possible to have two alarm settings for each point, the Master alarm and the Auxiliary alarm. These can be set to cover different times if need be with different high and low limits.

Message this can be any alpha character or number, other characters are not allowed () around characters will stop those characters from being displayed.

Low limit These need to be set at a realistic level or consistent alarms will cause the system alarms to be ignored.

High limit These need to be set at a realistic level or consistent alarms will cause the system alarms to be ignored.

Limits This setting will be part of a future release, this will allow limits to be displayed on the week trend.

Delay delay in seconds before an alarm will sound this is from the time the limit is breached.

Action select preset Action setting – please refer to Action section in this manual

Once you have changed any of these settings left mouse click on the OK button. The Authorisation pop up will appear and the authorisation password would have to be entered (factory default is **conf**).

A user code can also be entered, this is a number from 1 to 255. Your department management will have selected the meaning of this code. e.g. Action Code or User Identification.

Left mouse click the OK button.

Point alarm setting

The screenshot shows the 'Probe Settings' dialog box for the 'Sausage Room' point. The dialog has the following fields:

- Name:** Sausage Room
- Enable:** On
- Probe type:** 4-20mA
- Values:** -56.90146 and 42.29768

The background shows a list of points and their status:

Point	Status	Value	Unit	Alarm	Test	Print	Help	Refresh	Close
Game Chil									
Red Meat Cutting									
Sausage Room									
White Meat Cutting									
Poultry									
Marshalling Area									
Maturation									
Freezer									
Boxed Meats	22.4	ack							
Despatch	12.0	ack							
Goods Out	37.8	ack							
Point 12	off	ok							
Point 13	off	ok							
Point 14	off	ok							
Point 15	off	ok							
Point 16	off	ok							

Name Any 22 alpha Numeric Characters can be entered.

Enable if the sensor is out of use or faulty it can be disabled until it is required / repaired.

Probe type PT100 or
 PT1000 or
 PT1 or
 PT2 or
 PT3 or
 4-20mA or
 Normally open
 Normally closed
 Digital

This will be set on system setup but can be changed if the sensor type is changed at a later time.
 (base board will be either PT100, PT1000 or PT1/2/3)

If you have chosen 4-20mA then it is possible to set the equivalent values, again this would be done upon set up of system by AAW.

Week graph

When entering the Historic Graph screen the graph will display the current information available for all points on this RIOT.

Use the date drop down list at the top of the historic graph to select the historic data for the dates you wish to see.

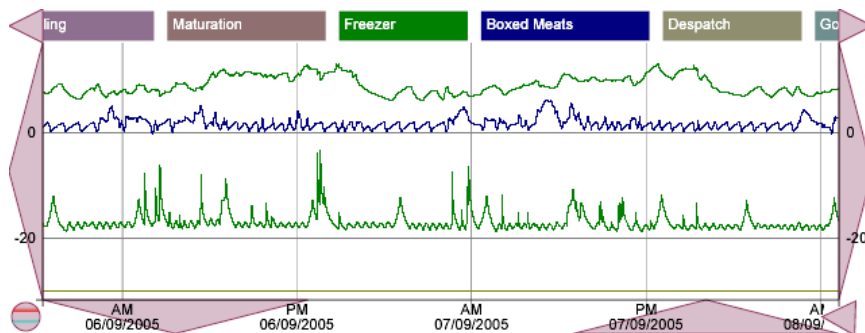
If the RIOT you are looking at has 16 points this can make the graph very cluttered. To turn all but one points trend off - double left mouse click on the points name at the top of the graph.

Scroll through the point names by mouse clicking the small right and left arrows either side of the point names.

Single mouse click will turn that point either on or off.

Bottom left of the graph pop up is a round button which can be used to displayed the LIMITS on the graph, if all points are showing then it will be the LIMITS of the first point on the list which is ON.

Bottom right of the graph pop up is a button in the shape of a magnifying glass (not show on this view), selecting this will zoom the graph out once you have used the option below to zoom in.

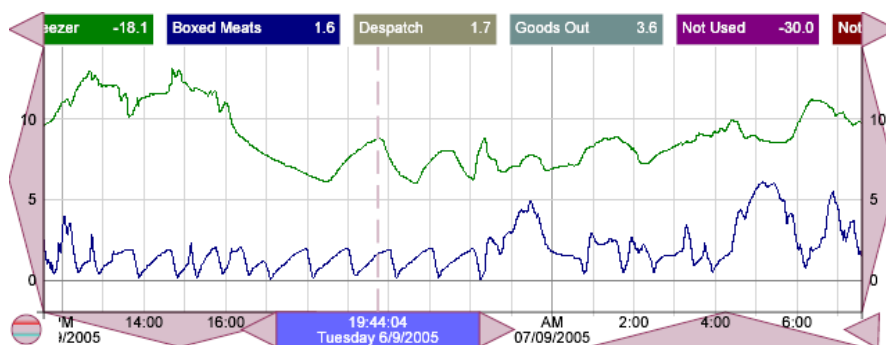


Displaying the graph cursor

Displaying the temperature or state for each of the trends at a given moment on the graph is achieved by double clicking on the required location on the graph.

The graph cursor can then be moved left or right by mouse clicking the small arrow buttons either side of the time and date display that has appeared at the bottom of the graph.

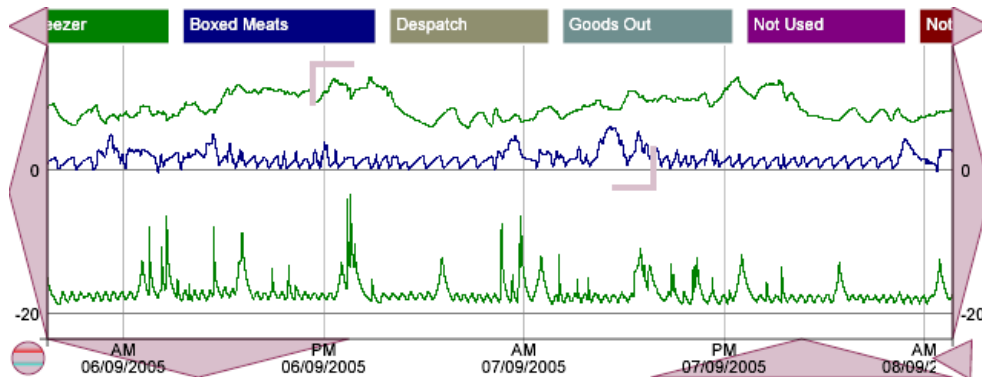
The graph cursor will move different amounts depending on how far you have zoomed in to the graph.



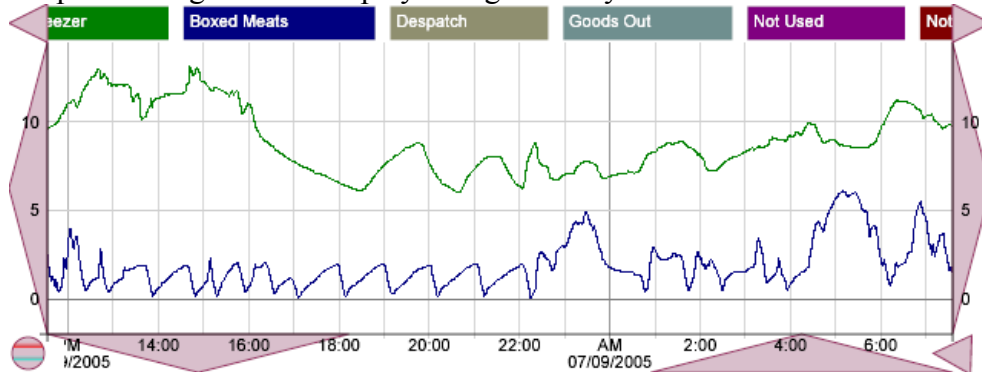
Graph area selection

To view an area in more detail place the cursor in any corner of the area you wish to view in more detail, mouse click either mouse button, a Right-angle symbol will appear. Repeat this process for the opposite corner of the required area and another Right-angle symbol will appear.

Mouse click in the centre of the required area and the graph will be redisplayed in greater detail. This process can be used repeatedly for greater detail.



Graph showing how the display changes once you have zoomed in.



It is now possible to move the graph in any direction by mouse clicking on either Up, Down, Right or left large arrow buttons.

Alarms



Time	Input	Alarm	User	Value	Limit	State
03/10/2005 14:58:20	White Meat Cutting		1			ack
03/10/2005 14:57:21	White Meat Cutting	Alarm		-1.8	4.0	lowalm
03/10/2005 14:56:08	White Meat Cutting	Alarm				clr
03/10/2005 14:49:18	Red Meat Cutting		1			ack
03/10/2005 14:47:57	Red Meat Cutting	Alarm		-30.0	4.0	lowalm
03/10/2005 14:47:13	White Meat Cutting		1			ack
03/10/2005 14:46:09	White Meat Cutting	Alarm		17.2		highalm
03/10/2005 14:44:42	White Meat Cutting	Alarm				clr
03/10/2005 14:42:48	Goods Out		1			ack
03/10/2005 14:42:48	Despatch		1			ack
03/10/2005 14:42:47	Boxed Meats		1			ack
03/10/2005 14:42:46	Marshalling Area		1			ack
03/10/2005 14:42:46	Poultry		1			ack
03/10/2005 14:42:45	White Meat Cutting		1			ack
03/10/2005 14:42:45	Sausage Room		1			ack
03/10/2005 14:42:44	Game Chil		1			ack

Historic alarms can be viewed for any selected week

Use the date drop down list at the top of the historic alarm list to select the historic data for the dates you wish to see.

- ack The Alarm has been Acknowledged by a user.
These will always be in black
- highalm This is a new alarm caused by High or Low temperatures, Defrost
lowalm overrun or plant fault and will be in red.
- highret The input has returned to within its alarm parameters. These will be in
lowret Blue.
- flt Flatline alarm
- clr Cleared alarm.

4 Top Menu Bar

Shifts

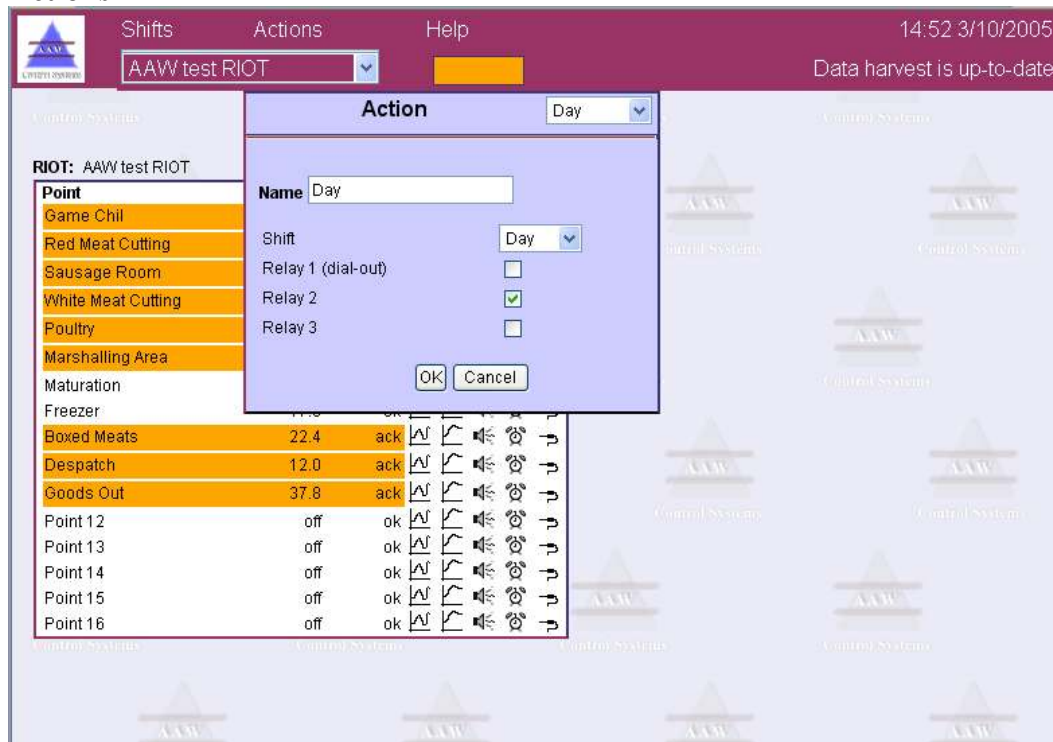
Day	From	To	Day	From	To
Sunday	12:00:00	12:00:00	1 / 1	12:00:00	12:00:00
Monday	02:00:00	20:00:00	26 / 12	12:00:00	12:00:00
Tuesday	07:00:00	20:00:00	26 / 12	12:00:00	12:00:00
Wednesday	02:00:00	20:00:00	26 / 12	12:00:00	12:00:00
Thursday	02:00:00	20:00:00	26 / 12	12:00:00	12:00:00
Friday	02:00:00	20:00:00	26 / 12	12:00:00	12:00:00
Saturday	02:00:00	10:00:00	26 / 12	12:00:00	12:00:00

When you select the shifts option from the menu bar a pop up window appears from which in the top left hand corner you can select and set up 5 different settings for different shift types.

For each Shift you can change the name, and standard operating times. Each Shift can have 8 special days for which you select the date and month and then the times for that special day.

Once you have changed any of these settings left mouse click on the OK button. The Authorisation pop up will appear, you now have to input the authorisation password (factory default is **conf**) select a user code, this is a number from 1 to 255. Your department management will have selected the meaning of this code. e.g. Action Code or User Identification.

Actions



When you select the action option from the menu bar a pop up window appears from which in the top left hand corner you can select and set up 8 different settings for different action types.

For each setting you can change the name, shift and an action relay.

These Relays can be connected to dial-out machines, remote sirens, flashing lights or any switched device that may be required.

Once you have changed any of these settings left mouse click on the OK button. The Authorisation pop up will appear, you now have to input the authorisation password (factory default is **conf**) select a user code, this is a number from 1 to 255. Your department management will have selected the meaning of this code. e.g. Action Code or User Identification.

Selecting the RIOT

If there are multiple RIOTs on your site then as long as they are connected to the network then it will be possible for you to select them from the RIOT Station software on the PC.

With in the menu bar at the top of the screen there is a drop down list.

Left mouse click on the arrow and you will be able to left mouse click any RIOT available on your site.



once the data has been collect from the RIOT which could take 30 seconds the screen will display the selected RIOTs data.

Please Note

If you make changes to one RIOT for the SHIFT or ACTION settings they will **NOT** be changed on other RIOTs.

Each RIOT will have to be selected in turn and the same changes made if required.

Global RIOT alarm status

Next to the RIOT name is a Global alarm status Block, this will either

Flash Orange if there is an alarm on ANY RIOT connected to the PC

Show Solid Orange if there is an alarm which has been acknowledged but not cleared on ANY RIOT.

You will have to check each RIOT in turn to find which ones have alarms and it may be more than one.

Global RIOT acknowledge

When there are alarms waiting to be acknowledge then a Global Acknowledge button will show next to the Global Alarm Status.

CAUTION

All alarms on all RIOTs could be acknowledged when you use this option.

Date Time and Data

On the right of the menu bar the date and time of each RIOT as the PC collects the data from it will be displayed.

If the RIOTs date or time are different then you will see the time the last data was collected.

A data message shows that the data is

Data Harvest is

Up-to-date
is-Old

being

Call AAW as the RIOT data is not

is-Full

by the PC. AAW will need to dial-in to reset or advise redeemable action.

If the Data Harvest indicates 'Old' then redeemable actions is required as data will start to be lost, RIOTs connected to a PC will only hold data for up to 3 days, dependent on how often the monitored temperatures are changing.