Store Configuration Guide
AK-EM 100
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Introduction

The AK-EM 100 provides a web based graphical user interface of a store which allows a range of daily users to monitor data, alarms and reports, either locally or remotely, regarding all of their refrigeration equipment.

Advantages of the AK-EM 100
- complete overview of store
- alarm monitoring
- provides up-to-date information in real time
- multi-user access
- easy to use web based front end
- allows staff to focus on key daily tasks
1. Establish Network Connection

1.1 The Commission Toolbox

The first part of the procedure is to establish connections between the gateway and controllers to allow the data to be fed into the AK-EM 100.

Commissioners should already have a plan of the store to be commissioned, and so should have at their disposal all of the required settings and addresses for connecting to local networks, gateway settings, port numbers, passwords etc. This process should then be just a case of entering data to match the requirements.

From the main menu, select the Commission Toolbox to enter the main setup options page. The toolbox contains several sections which should be executed in a certain order for the process to be completed successfully.

The Commission Toolbox is comprised of 4 sections:

1. Gateway Details
   The Gateway Details section contains information regarding the set up of the Gateways. From here, multiple gateways can be added and configured to the AK-EM 100, as well as the connection addresses to the gateway. There is also a link to the advanced settings options.

2. Network Communications
   Once the Gateways are set up, this section is where the runs are made to detect and connect to the controllers which are available in the Gateway. When connected, a table will be displayed which contains the assets found in the network.

3. Additional Tasks
   Additional Tasks contains links to pages which need to be carried out once the connection has been successfully completed. These include configuring the assets, setting up user accounts, and building the store mimic.

4. Site Details (Ethernet)
   The final section contains fields for entering addresses for connecting the AK-EM 100 to a local server.

Hint

Use the Event Log in the Administration section to view a list of actions and changes carried out within the system, including those actions within Commissioner's Toolbox.
1.2 Site Details

This stage of the process involves the Site Details section, where the address for the local server is added. This allows the AK-EM 100 to be viewed on a network. The screenshot below contain the default settings which are all editable.

1. Site Name - Enter the name of the site.

![Site Details Screenshot]

2. IP Address - Enter the IP address where the AK-EM 100 will be situated at.

3. Subnet Mask - Select the submask number.

4. Default Gateway - Enter the address of the default Gateway.

5. Primary DNS - Enter the address of the Primary Domain Name System.

6. Secondary DNS - Enter the address of the Secondary Domain Name System.

1.3 Gateway Details

When finished, press the 'Save' button to store the settings. Once these settings are set up, the Gateway details can be entered.

When the AK-EM 100's site details are entered, the next task is to add the Gateways. An AK-EM 100 is capable of having up to 2 types of gateways attached at any one time. The gateways comprise of:

* ADAP-KOOL*
* System Manager

They can be mixed in any combination, such as having one of each type, or two of one and one of another etc. This depends entirely on the specification of the store.

When configuring the Gateway Details section for the first time, the settings are always set to the default. Fields which have a pink background require an entry, otherwise the gateway will not be able to save.

Serial Port set up.
The AK-EM 100 comes with 2 serial ports: Com Port 2 is the modem connection, while Com Port 1 should be made available for the gateways.
1.3.1 Adding an ADAP-KOOL® gateway

The fields which need to be altered are:

- **Name of Process** - The name is automatically selected as MPH-01, while any additional gateways will be incremented as MPH-02 etc. The connection will also be displayed and is dependant on what Connection Type is selected further down the list.

- **Gateway Type** - Select ADAP-KOOL® from the drop down menu.

- **Language** - Select the language. When selected, it will be the language which will be displayed throughout the whole site as it searches for the language within the DES file. (Refer to section 2.2 for information regarding the DES file).

- **Network (0-255)** - Enter the network number, which you should already know.

- **PC Net:Node** - Enter the PC network address and the node number which it is attached to, this should already be known by the commissioner.

- **Format Date:Time** - Not needed for ADAP-KOOL®.

- **Destination Name** - Applies only to System Manager

- **Pass Code** - Applies only to System Manager

- **Account : Password** - No account number is necessary, while a password is optional for access.

- **Connection Type** - Choose a connection type, either ethernet or serial port. Whatever is selected will be shown in the Name's title.

- **Baud Rate** - Choose a rate from the drop down menu. The default is set to 9600.

- **IP number:port** - If the connection type is on a serial port, then the IP number:port number does not need to be added, whereas an address must be included if an ethernet connection is chosen.

Once the data is entered and all required fields are filled, press the ‘Save’ button to store the settings. The Save button will not be available for selection unless all required (pink background) fields are entered.

**Advanced Options**

On the ADAP-KOOL® gateway, clicking on the ‘Advanced’ link will take you to the Network List. Once the gateway has been connected to the network and the assets have been established, it will produce a table of all of the current assets connected to the gateway.
From here, this section can be used for off line commissioning, so that the assets can be set up from scratch beforehand, prior to the data runs.

From here you can:
- New Network Info - Create a new asset for the gateway.
- Edit Network Info - Edit all of the assets at once.
- Delete Network Info - Remove the whole list of assets.
- Delete - Remove a single asset from the list by pressing the 'Delete' button on the asset’s row.
- Build Site - When pressed, it will populate the database with the asset descriptions.

1.3.2 Adding additional gateways

1. To add more gateways, press the 'New' button.

2. This will bring up a new window (see figure below) which needs to be filled out in the similar way to the above.

Fields with a pink background need to be filled out to allow it to be saved.

The new gateway will be added to the Gateway Details. Use the scroll buttons to view the different gateways.
1.3.3 Adding a System Manager gateway

To add a System Manager gateway, press the ‘New’ button. The available options for entry are:

- **Name**: Again, the name will increment e.g. MPH-02 etc.

- **Gateway Type**: Select System Manager from the drop down menu.

- **Language**: Select the language. When selected, it will be the language which will be displayed throughout the whole site as it searches for the language within the DES file.

- **Destination**: Enter the Destination name. Does not need to be added if Connection Type is Serial.

- **Pass Code**: Enter a password to allow you to connect to the SM. Does not need to be added if Connection Type is Serial. NOTE: Matching destination and pass code must be configured in the System Manager.

- **IP number:port**: Add the IP address and port number. Does not need to be added if Connection Type is Serial. Connection Type - Choose a connection type, either ethernet or serial port. Whatever is selected will be shown in the Name’s title. If a gateway is already being used on serial port1, then the only available option will be ethernet.

Fields that are greyed out are not required; whereas pink fields are required.

When finished, press the ‘Save’ button to store the it.

**Advanced Options**

This option only applies to the System Manager gateway and is a means of viewing the System Manager’s Service Tool on the Unix server. This allows you to access the SM remotely, and make any necessary changes. Follow the on-screen instructions to connect and refer to the Service Tool manual for more information.

1.3.4 Deleting Gateways

Gateways can be deleted so long as they are not connected to the controllers.

1. Scroll through to the desired gateway

2. Make sure that there are no connections to any controllers by stopping the network uploads or communications (see next section). Then press the ‘Delete’ button.
3. Press the ‘Delete’ button to remove the gateway.

4. The next dialogue box will ask if you are sure you want to delete the gateway.

5. Press ‘OK’ to remove it.

If a gateways has been previously connected and the network uploads have been setup, then all of this data will be removed.

1.4 Network Communications

When first viewed, the Network Communication section will look empty, because no network discoveries or data runs have been initiated.

1.4.1 Network Upload

The first stage (once the Network Details have been correctly entered) is to perform a network discovery, which will determine what controllers are available in the Gateway.

1. To begin the discovery, press the ‘Start’ button for Network Upload. In the new dialogue box, press the ‘Confirm’ button to continue. The Assets will then begin to be displayed in the new window. When complete, you will be presented with the choice of either ‘Accept’ or ‘Reject’ buttons. Checking the ‘Auto Accept’ box will bypass this section.

2. Press the ‘Accept’ button to add the assets to the Network list.

3. Wait until the Network Upload is complete; this will take some time depending on the amount of assets attached to the controller. The status will change to Stopped and assets will be displayed in the Network list table.
1.4.2 Network Comms

The next stage is to start the data collection from the available controllers.

1. To start gathering the data to the AK-EM 100, press the 'Start' button to connect and run the available alarm, configuration, and data runs.

2. These will connect and run continuously according to each upload interval. The status will change to Running, and will remain so until stopped.

3. When the whole procedure is completed successfully, then the Network Communications section should look like the image below, where the connection to the Gateway is continually running and the assets have been initialised.

4. Repeat procedures for all other gateways.
1.5 Log Files

Viewing Log files is available on the ADAP-KOOL® and System Manager gateways. Log files contain the list of points which are to be monitored from an asset's controller and will therefore be available to adjust in the Asset Configuration (section 3.1) and view in the Store Mimic. Selected points which are to be assigned to log files will also be automatically assigned to Trending and HACCP reports.

Log files are normally added into the Gateway and are then available to view once the data runs have been complete. Clicking on the log icon (left) of an asset will take you to the Log Details page for that asset, while clicking on the topmost log details icon will show you the Log Details page for all assets together.

<table>
<thead>
<tr>
<th>Asset Name</th>
<th>Name</th>
<th>Type</th>
<th>Status</th>
<th>Interval</th>
<th>Period</th>
<th>Edit</th>
<th>Delete</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1234567890</td>
<td>15 - EKC 414C1</td>
<td>Food Safety</td>
<td>Started</td>
<td>15 mins</td>
<td>30 hrs</td>
<td>Edit</td>
<td>Delete</td>
<td>Copy</td>
</tr>
<tr>
<td>1234567890</td>
<td>15 - EKC 414C1</td>
<td>Food Safety</td>
<td>Started</td>
<td>15 mins</td>
<td>30 hrs</td>
<td>Edit</td>
<td>Delete</td>
<td>Copy</td>
</tr>
<tr>
<td>033:017 17</td>
<td>EKC 414C1</td>
<td>Food Safety</td>
<td>Started</td>
<td>30 mins</td>
<td>30 hrs</td>
<td>Edit</td>
<td>Delete</td>
<td>Copy</td>
</tr>
<tr>
<td>033:010 100</td>
<td>AKC 114A</td>
<td>Food Safety</td>
<td>Started</td>
<td>30 mins</td>
<td>30 hrs</td>
<td>Edit</td>
<td>Delete</td>
<td>Copy</td>
</tr>
<tr>
<td>033:101 101</td>
<td>AKC 121A</td>
<td>Food Safety</td>
<td>Started</td>
<td>30 mins</td>
<td>30 hrs</td>
<td>Edit</td>
<td>Delete</td>
<td>Copy</td>
</tr>
</tbody>
</table>

1.5.1 Editing Log Files

1. When viewing an assets' log details, press the 'Edit' button to show the logs' details.

2. This will show the log name, what parameters are available for log selection, the current status, type (Service or Food Safety), interval and period of time for logging. To edit a log, the Mode (or status) must be changed to 'Stopped' and saved first before editing can begin. This will enable the 'Edit' button on the Log Details page.

3. Points can be added or removed to the Selected Points list for logging by either double clicking on the points or selecting then pressing the Add or Remove buttons.

4. The name, log type interval and period can now also be changed. Once the points have been added/removed, make sure that the Mode is changed back to 'Started' before saving. Once saved, it log will be updated in the Log Details list.
1.5.2 Creating New Log Files

1. To create a new Log file, press the 'New' button at the bottom of the page.

2. The Log needs to given a name.

3. Select the Type. Depending on which type is selected, the options under the Interval section will be limited down to a certain amount of available options.

4. Select the Period of time you wish the log to be held in the Gateway before being overwritten by a new log.

5. Select the points to be added from the Point list and then press the Save button, remembering to start it in the Mode section. Once saved, the new Log will appear in the Log Details page.

1.5.3 Copying Log File Data

Points from one log can be copied to another log. This function will be able to save time if starting a new set of logs which contain the same points from similar controllers.

Copying log data can only be used by controllers which share the same Code Id and version number only on similar assets and versions, found in the Network List of the Commission Toolbox.

1. In the Log Details page, press the 'Copy' button to bring up the Log Copy screen.
2. The Log copy page will already display the controllers which share the same Code Id and version number as the controller which is being copied from. Give the Log a new name and select the controllers which to copy to, either select them individually or select 'All Destinations.

3. Press the OK button to go ahead with the changes, which will then be updated and can be edited in the Log Details page.

1.5.4 Deleting Log Files

Logs can only be deleted from the Gateway once the Mode has been stopped in the Log setup page. When stopped, the delete button is made available. When pressed, you will be given a warning about deleting.
2. Network Communications

The additional tasks listed in the Commissioners Toolbox act as a guide for the fine tuning of the system, and are listed in the Additional Tasks section. They are as follows:

- **Asset Configuration** - Configures the settings for the controller to each asset
- **Upload DES file** - upload the DES file for controller changes
- **Save Configuration** - Saves the current configuration/set-up
- **Print Asset Details** - Print an Asset’s details
- **Export All Asset Details** - Export all asset details to an XML file
- **User Administration** - Create users and groups
- **Mimic Set up** - Create the store UI
- **Restore Configuration** - Restore the configuration of the AK-EM 100 to a back up configuration
- **Modem Settings** - set the modem address and user name for remote access

### 2.1 Asset Configuration

The Asset Configuration screen can be accessed by either clicking on the link in the Additional Tasks section or by clicking on an individual asset name from the network list table in the Network Communication section.

The Asset Configuration page consists of a table which lists all of the parameters within the currently selected asset. The parameters are all grouped under their respective headings. The parameter names all come from the Log Files of each asset once the communication process has been initialised.

From these pages, you can configure each asset. The header names can be edited by hovering over the text and individual parameter names and can be edited as well (changes will also be exported). All settings can be copied to other similar assets.

### 2.1.1 Viewing the Assets

1. To view a different asset, select one from the drop down menu at the top of the page. From there, you can run through the other assets by using scroll buttons.
2. To open a parameter heading and view the list of parameters, click on the '+' to the left of the heading to display the parameters. Press the 'Collapse All' button to close all headers.

2.1.2 Configuring an Asset

Click on a parameter's text field or drop down menu to edit. The fields contains the following information:

**Display name** - The Display Name can be edited and saved by entering a new or modifying the existing name and pressing the 'Return' key. This will change the display name throughout the site, such as in the Store Mimic, overriding the current DES file. Deleting the name entirely and pressing 'Return' will revert to the original name of the DES file.

**Setting** - This displays the current value of the setting. This can be changed manually if a text field is available, such as increasing a time interval, turning something off, or adjusting a temperature control. When entering a new value/setting, the field is predictive and will recognise the first letter for the parameter e.g. a switch will recognise either 'True' or 'False'. If, for example, a number is entered in place of a letter, then the text field will change colour indicating a wrong value has been entered. Similarly, if a wrong number is entered, such as a '-4a'; then the error warning will also occur.

When a new value or setting is entered while 'off line', the new value will appear in brackets '***()' beside the old value, indicating that it will be updated once back 'on line'. When it is online, it will take a few seconds to update.

**HACCP** - HACCP points are automatically filtered (refer to section 1.5) during the set up of the log files. Those parameters which have the function available means that the parameters will be made available for selection in any further HACCP reports for that asset. The options available in the HACCP section are produced in the administration section 4.8, Food Types. Select which food type the parameter is linked to.

**Trend** - Like the HACCP settings, the trending option will be available if the parameters are selected in the set up of the log files. If available, they can then be used for display in the graph trending reports.

**Asset Details** - The default setting for all of the parameters is set to Advanced, as all parameters for all assets will be made available for display in the Advanced Assets Details section. The choice here is whether you wish the parameter to also be displayed in the Basic or Advanced Assets Details section, or not at all. This could include parameters which will need monitoring to those users which will only have access to the Basic Details page.

**Enumeration** - Some parameters can have states of 2 or more, such as a switch or an EKC unit. Select the enumeration state if required from the available options in the drop down menu. When run, the parameter will be displayed according to the value and converted based on the enumeration selected. The type of enumeration required is determined by the parameter's setting, where a boolean value (either true or false) would typically have a 2
state, whereas a parameter with varying states could have many different enumeration values. (For further details on Enumeration and how to create the different states, refer to section 4.9 in the Administration section).

Units - Select the unit of measurement for the parameter from the list.

2.1.3 Switches
There is a separate Switches parameter heading at the bottom of the Asset Configuration page which relates to the functional switches of the controller itself, such as the main switch and defrost switch, which are used in the Store Mimic (refer to section 3).

<table>
<thead>
<tr>
<th>Switch</th>
<th>Point</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Switch</td>
<td>r12 Main switch</td>
<td></td>
</tr>
<tr>
<td>Manual Defrost</td>
<td>--- Def. start</td>
<td></td>
</tr>
<tr>
<td>Defrost Indicator</td>
<td>--- EKC State</td>
<td></td>
</tr>
</tbody>
</table>

Main Switch relates to the main switch on the controller, and should be connected to the main switch parameter which will already have been diagnosed and enumerated, and can be found by finding the parameter under the group heading from the drop down menu.

Manual Defrost follows the same procedure as the Main switch, in that it should be linked to an already enumerated parameter. Again, the parameter is found under one of the parameter headings found in the drop down menu.

Defrost Indicator indicates which parameter indicates a defrost state. The defrost Indicator should have already be set up and then selected from the drop down list which contains only selected log files relevant to HACCP reports. The value would then be the relevant enumeration setting or settings and should be entered numerically, separated by a comma, so that when a defrost cycle takes place, a defrost symbol will be shown in the HACCP reports, and not fluctuating temperature values brought on by a defrost cycle.

2.1.4 Go On Line
This option allows you to work off line, so that you can configure assets from any location without any interference from updating data.

Press the button to work off line and then again for vice versa. Values or settings that have been edited while off line will be displayed beside the old value and will update once the status is changed to ‘On Line’.

2.1.5 Copying an Asset
When an asset has been finally edited, there is an option of copying the settings and applying them to those assets that are of similar version and code ID. This function saves you a lot of time and effort by not having to go through every single asset separately.

1. Click on the ‘Copy Asset’ button.

2. Select the asset from which you will copy from the list at the top of the page.
3. When selected, the destinations box will be populated automatically with similar assets to that of the selected one. Select the asset which you wish to copy to, or select the 'All' box to select all of the assets.

4. You can then choose the individual columns which you wish to copy across, or select 'All Columns' to select them all.

5. Press the 'Copy' button to transfer the settings. This will take a few moments to update, depending on the amount copied over and the number of assets targeted. When done, an icon will be displayed (left) signifying that everything has been copied across successfully.

6. The Assets settings can also be saved to the AK-EM 100 system by typing in the name for the setting and pressing the 'Save' button in the Save section. When saved, the configuration can also be restored (once the asset to be restored has been selected first). The configuration file can also be saved locally - as well as uploaded - using the appropriate section.

Note - Copied asset's settings and values will only update if the system is 'on-line', if not, they will display the old values until 'on-line' is selected (see section 2.1.4).

2.1.6 Custom Files
Custom files are DES files which are customised to alter an asset's parameters descriptions and group headings. No parameters settings or measurements are affected, only the names. These custom files can be specific to individual assets and will only affect that asset, depending on the version number of the asset and DES file matching.

1. Go to the Upload DES file link (refer to section 2.3 ), and from the drop down list select CUSTOM. This will then load the custom file into the CUSTOM folder in the AK-EM 100.

2. Browse to the custom DES file and press the 'GO' button.

3. Go back to the Asset Configuration screen, and from drop down menu, select the custom file.

4. The screen will then automatically update to the name structure contained in the customised DES file.

2.2 Loading a New DES file
If a custom DES file has already been selected, the fields will be amended (unless manually changed). If a new custom DES file is required and the manual amendments in the Display Names are to be overwritten, then the following procedure is necessary:

1. Highlight the text in the 'Display Name' column and delete the entry pressing the 'Return' key to save. This will revert back to the original text and not the text from the previously loaded Custom file.

2. Then De-select the custom DES file by clicking on the empty selection (right). This will put back the original text (unless manually changed).

3. Now Re-select the newly required Custom DES file from the drop down list.
2.3 Upload DES file

The information for the DES file is automatically taken from the controllers during the Network Discovery runs, where during these runs, all parameter details and languages are taken from each controller type.

However, there may be occasions when additional DES files will need to be added manually to the AK-EM 100 if certain DES files do not exist within the system for some controllers.

They can be added by clicking on the 'Upload DES file' link.

1. Select which language folder you want the DES file to upload to from the drop down menu. It is important to store the correct DES file into the corresponding language folder, i.e. a French DES file stored in the French folder in the AK-EM 100.

2. Browse to the location of the DES file. Make sure the DES file extension is in uppercase.

3. Press the 'Go' button to upload the file to the AK-EM 100.

2.4 Save Configuration

Once you are happy with the overall set up of the EM100, the settings can be saved as a means of safety and for transferring settings to similar sites. If something were to go wrong, then the saved file can be reloaded and reinstate the saved configuration to the previously working state. This saves all of the settings within the asset configuration screen. When a configuration is saved, it then becomes available for restoration and downloading by appearing in the respective drop down lists. Saved files are automatically given a time extension to the name of the file as an indication of when it took place. When completed, click on the finished Zip file to save locally.

2.5 Restore Configuration

Saved configuration files can be used to restore the configuration settings of the whole site instead of individual assets. This includes all assets, settings, alarms, images etc.

To restore configuration to a previously saved setting:

1. Browse to the locally saved file and press the 'Go' button.

2. Wait until the whole system has been completely restored - this could take a few minutes.
2.6 User Administration

User administration is used for creating new users or editing existing users of the system. Different users can belong to different groups, which allow them to have access to different parts of the system. So the first thing to do in user administration is to create the user groups so that users can be allocated into groups.

2.6.1 Group Management

1. Click on the icon (right) to display the group management page.

2. Enter a name for the new group name and then press the ‘New’ button to add it to the group list.

3. Make sure the new group is highlighted, then select which options the group will have access to.

4. Groups can have access to certain sub sections of available options, so remember to select the sections if necessary.

5. Press the ‘Save’ button at the bottom of the page when finished to store the group. Repeat the process for adding more groups.

When the groups have been added, close the Group window.

2.6.2 Adding New Users

1. Press the ‘New User’ button.

2. Fill out the necessary details. Fields with an asterisk need to be filled in to allow the user’s details to be saved.

3. Some selections have a several options, these are:
   - Group - select the group to which the user will belong to.
   - Language - select the default language for the user.
   - Username - Enter new user’s username.
   - Password - Enter new user’s password. This will have to be changed after the user first logs in.
   - HACCP Type - Not Applicable to the AK-EM100
   - Expire Day - enter a date of expiry. Leave blank for unlimited access.

The fields marked with an asterisk (*) must be completed to continue.
2.7 Modem Settings

The modem settings section is where the set up connections to the AK-EM 100 are made for remote or on site access via a modem on Serial Port 2.

If the Serial Port 2 has not been configured, the access to the modem settings will not be accessible. The installation of the modem must be set up previously to access the settings page. Normally, the image which is copied across to the AK-EM 100 when it is being installed will contain the IP settings and user name and password.

1. The number of rings, Local and Remote IP addresses should already be populated, so simply enter the User Name and Password e.g. Admin and AK-EM 100 respectively, the IP addresses and check the Enable box.

2. Press the ‘Apply’ button to store the settings.

3. Connect to the modem by opening a VPN connection.

4. On the login box, click on the ‘Properties’ button and type in the phone number of the receiving modem you are connecting to in the General tab (see next page).
5. Once a connection has been made and you are dialled into the modem, open a new browser and type in the Local IP address (IP address of the AK-EM 100’s modem).

### 2.8 Print Asset Details

This section allows you to print out an asset’s details in a print friendly table.

1. Select an asset to print from those available in the list.

2. Press the ‘Go’ button to display the list for printing.

3. At the bottom of the parameter list, press the ‘Print’ button and choose your printer settings.
2.9 Export All Asset Details

This option allows you export every asset’s details into an XML page.

Wait for the details to be gathered and then right click on the link to save locally as a hardcopy.

Export all asset details

Right click on the following link and choose save target as ...AssetDetails20081121122058355.xml

DO NOT LEFT click on the link unless prepared for a long wait for page to display.
3. Configuration of UI

3.1 Overview

Once the general set up has been completed, the final part of the system configuration process is the User Interface of the store via the Store mimic.

The Store Mimic is a visual representation of a store which displays the readings of all the assets and their controllers contained within the store. Once set up, it provides an overall view of the store and its individual assets in real time, providing up-to-date information due to automatic refreshes. The Store Mimic allows you to see at a glance if there are any assets in a state of alarm and act upon them quickly.

The Mimic is set up by importing a series of ready-made templates and images. This saves time and effort as there is no need to create individual mimics from scratch. Templates allow predefined mimics (such as freezer units) to be imported, which then only have to be linked to the main mimic, as well as individual assets to be configured to them.

3.2 Create Store Name

The first task when the store mimic is accessed is to give the site a name. When the 'Store Mimic' button is pressed, a reminder will be displayed which will give you helpful options for viewing and editing the mimics. The reminder can be turned off by ticking the box in the bottom right corner.

There will be a dialogue box prompting you to name the top-most mimic, which should typically be the floor plan of the store.

Enter the name in the dialogue box and press the 'Create Layout' button.

When the name is set, you will be presented with a blank page in Edit mode. The first thing to do now is to upload all of the necessary templates and images which will be used to create the mimic.
3.3 Uploading Templates and Images

The next stage (if the AK-EM10 unit has not been already installed previously) is to upload all of the background images, graphics and templates to the site. Go into the Administration section and choose Images/Upload, and browse to the images in your directory for upload. Make sure to check the box for any images which will be used for backgrounds so that they will be stored in the correct location.

3.3.1 Importing Templates
1. While in still in Edit mode, select the ‘Administration’ button, then select the ‘Templates’ option, then the ‘Import’ button.

2. Browse to the Template .zip file to upload.

3. Give the template a name in the field below to allow it to appear in the template list.

4. When the ‘Go’ button is pressed, the template will be added to the template list.

5. Repeat the process until all of the templates are loaded.

6. To view all of the available templates, press the ‘Edit’ button to display the drop down menu with all of the templates. This list will also include all of the Template Objects. (Refer to section 3.7 for more information regarding Template Objects.)

3.3.2 Importing Images
1. While still in the Administration section, press the ‘Images’ button, then the ‘Upload’ button.

2. Browse to the image to upload.

3. Give the image a Title.

4. If the image is to be used as a background, then check the box. When selecting backgrounds for templates or mimics in the future, only those that are specified as backgrounds will be available.

5. Press the ‘Go’ button when finished to upload the image.

6. Repeat the stages until all images are uploaded. Once the images are loaded, the background can be added to the top level mimic.

3.4 Adding background image to the Top Level Mimic

The top level mimic can be set up first by adding a background image as this acts as a platform from which the other mimics are linked.

1. While still in Edit mode, press the ‘Mimic’ button, select the top level mimic from the drop down list, and then press the ‘Go’ button.

2. Press the ‘Edit’ button and right click anywhere on the empty mimic and select ‘Background’ / ‘Select’.

3. Choose the store layout image from the list of background images you have previously loaded and press the ‘OK’ button.

**Hint**
Have a plan of the overall layout for the mimic. This makes linking, templates, parameter configuration etc, easier once all of the images are downloaded at once.

**Hint**
Images can be created using a variety of formats, although jpeg or gifs are the preferred choice. It is advised not to use .bmp format as these images tend to be larger in size and will take longer to load onto the page.

**Hint**
Images can be created using a variety of formats, although jpeg or gifs are the preferred choice. It is advised not to use .bmp format as these images tend to be larger in size and will take longer to load onto the page.
When done, it should look something like the example below.

Once done, the templates can be added and then linked to the top level mimic.

3.5 Creating a New Template

Before you begin linking the predefined templates to the top level mimic, it is important to first learn how a template is made up and created. Once they are created the next section of applying the templates to mimics will apply.

*Skip to section 3.8 for more information of creating mimics from templates.*

The easiest way of creating lots of similar mimics is by using templates to represent specific types of an asset which are found within a store, such as similar refrigeration units. They save time in producing individual mimics as the initial layout needs to be completed only once. Once mimics are created from the templates, they simply need to be mapped to the appropriate assets.

1. While in ‘Edit’ mode, press the ‘Create Template’ button.

2. In the Template dialogue box, enter a name for the template in the first text field. The next item to choose is whether the template is a full page template e.g. a template for an asset, or an object template, e.g. a template which can group a series of parameters which are widely used and can be inserted into a mimic as a group, instead of going through each parameter individually. This example will use a Full Page template.

*Refer to section 3.7 for more information regarding Object Templates.*

3. You will then be presented with a blank screen, so the first thing to do is to add a background to the template. This is done the same way as selecting the background for the top level mimic in section 3.4. Right click anywhere on the empty template and select ‘Background’ / ‘Select’, and then choose the background from the list of images.

Right Clicking and Selecting ‘Background’ / ‘Clear’ will remove the background, allowing you to choose a replacement if the wrong one was selected, this will only clear the background and not any features on the template. Right clicking on the template will also bring up a list of available options for adding to the mimic, such as adding parameter readings, images, or links.

3.6 Template Options

3.6.1 Adding a parameter


2. As this is a template, no assets or their respective points can be called as a mimic from a template could reference any number of assets. Instead, Assets and parameters are available to act as a guide
when adding points to a template, so that the point name is referenced in the template and subsequent mimics, this makes it easier mapping the point to a mimic later on. When the asset and point is selected, the point will be duplicated into the tooltip field, and when the parameter point is finished and edited again, the asset and point name are reset, but the tooltip remains the same.

3. Select a text Colour from the drop down list.

4. Select a Background Colour for the text box if necessary, as well as the font size.

5. If the point is to be linked to something, like an additional mimic, or even another template or report, then select it from the menu. This could be to other existing mimics (such as the top level mimic) or reports, like the alarm list or HACCP report. Linking to another template saves time and reduces the risk of making incorrect links other mimics.

6. The Tooltip will act as a copy tool once asset and point have been selected, and remains as the name of the point acting as a guide or reference.

7. Check the ‘Prefix Parameter Text’ box to add the parameter’s name to the value. This will be shown once the asset and point are applied to a mimic.

8. When the ‘OK’ button is pressed, the parameter is represented by unique signature (left). This can then be dragged around the template and placed anywhere.

9. Right clicking on the signature allows you to edit it using the above dialogue box, or remove it from the template.

3.6.2 Adding an Alarm

1. Right click on the template and select ‘Dynamic’ / ‘Alarm’ from the menu.

2. Because the Alarm cannot be assigned to an asset yet, press the ‘OK’ button. Again, this will be assigned to an asset when it’s created as a mimic based from the template.

3. The Alarm will be represented by a swinging alarm bell, and can also be moved around the template.

3.6.3 Adding a Multivalue

A multivalue is a parameter which consists of more than one image depending on the value that is sent to it. For example, if an asset’s parameter has three different states depending on its value, then an image can be used as a visual representation for each state.

1. Right click on the mimic and select ‘Dynamic’ / ‘Multivalue’ from the menu.
2. Just like adding a parameter, you have the ability to select existing assets and points which act as a reference to the name once a mimic is created from the template. Select the asset and the parameter from the drop down menus - notice that the tooltip will change to the point name reference, and then press ‘OK’ button.

3. The multivalue signature can be placed where necessary.

4. To edit the parameter, add states and images, right click on the signature and select ‘Configure’.

5. Select a default image if required

6. Enter a value for indicate the first state. For example, a freezer’s defrost cycle could be illustrated by indicating a normal state and a defrost state, so it would be ‘0’ or ‘1’(or the correct enumeration) for ‘Normal’ or ‘Defrost’ respectively. Note that it is also possible to enter ranges of values, such as 1,3,15, as well as 1,3,15-18, which will then share the same image. Then select an image for that state from the list.

7. Press the ‘Add’ button to add another state and enter as many states as possible. When finished, it should look something like the example below.

When ‘OK’ is pressed, the dialogue box will change (and allow you to show the graphical image for each state by pressing the ‘Show’ button. When ‘OK’ is pressed again, the multivalue signature will change to the default image.
8. Right clicking on the multivalue signature will allow you to:

- **Inspect**: show all of the image states.
- **Configure**: add, remove or edit the states of the multivalue.
- **Edit**: enter the initial set up screen and change the asset and point.
- **Remove**: remove the whole multivalue.

### 3.6.4 Adding a fixed image

Static images can be placed into templates and can be linked to other mimics or reports. An example of this would be an icon linking back to the top level mimic.

1. Right click on the template and select ‘Fixed’ / ‘Image’ from the menu.

2. Select the image from the top drop down menu.

3. Choose a link from the list if you want the image to act as a link to another mimic (for example, a link back to the home mimic), a template or a report, or leave it blank for no links.

4. Enter the dimensions of the image. Leave blank for the default image size.

5. Enter text for the tool tip and press ‘OK’.

6. Drag the image to the desired location on the template. Right clicking on the image allows you to edit the image or remove it.

### 3.6.5 Adding Fixed Text

Annotated text can be added to templates and can be used for information purposes or navigational aids. They also work in a similar manner as adding an image. Like images, they can also be used to link to other mimics and reports.

1. Right click on the template and select ‘Fixed’ / ‘Annotation’ from the menu.

2. Type the text in the top text field of the menu.

3. Choose the colour of the text.

4. Select the font size for the text.

5. Choose a link if you want the text to act as a link to another mimic, template or report, or leave blank.

6. Enter text for the tool tip and press ‘OK’ to display and reposition the annotation. The text can then be positioned on the template. Right clicking on the text allows you to edit the text or remove it.

### 3.6.6 Adding a Background

Refer to section 3.5 Creating a Template for adding a background to a template.
3.6.7 Status Report

A Status Report is a summary of all of the current points, images etc on the template / mimic on view. It shows information such as the element name, the search text, the point name, it’s current value, which controller it belongs to, and an option for further editing.

<table>
<thead>
<tr>
<th>Element</th>
<th>Search Text</th>
<th>Point Name</th>
<th>Point Value</th>
<th>Controller</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>alarm</td>
<td></td>
<td></td>
<td></td>
<td>NOT mapped</td>
<td>Edit</td>
</tr>
<tr>
<td>parameter</td>
<td>tooltip</td>
<td></td>
<td></td>
<td></td>
<td>Edit</td>
</tr>
<tr>
<td>multivalue</td>
<td>tooltip</td>
<td></td>
<td></td>
<td></td>
<td>Edit</td>
</tr>
<tr>
<td>image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Edit</td>
</tr>
<tr>
<td>annotation</td>
<td>annotation</td>
<td></td>
<td></td>
<td></td>
<td>Edit</td>
</tr>
</tbody>
</table>

Points with are 'Not Mapped' indicate that they don't have the correct point name attached to it or the asset hasn't been selected. When building a template, because the points and assets cannot be assigned to anything yet, they can be ignored until template based mimics are created. Elements such as the images and annotations don’t require any further assignment.

3.7 Template Objects

With mimics, it is often desired to show one and often several specific parameter values for the various controllers, e.g. the S3 temperature (using a dynamic parameter), and the defrost state, (using multivalue) and a link back to the top level mimic.

With the current solution it will be a huge task to do this. Especially, the same multivalue set up is often desired for a large list of controllers. Currently, if the same multivalue set up is wanted for a list of controllers, it must be made for each controller.

The template object now allows you to create a series of points together, minus a background image, which can then be added to a mimic and be controlled as one signature point. When added to a mimic, the points still need to be checked and mapped to assets.

3.7.1 Adding a Template Object

1. When creating a new template, select ‘OBJECT’ from the template drop down list.

2. You will then be shown a blank layout. The point of the Object is that no backgrounds need to be added, so add the selection of points and images as you would for a normal template (refer to previous section 3.6 for more information on adding elements).

3. Place the points and additional images in the area, using the grey border as a guide, starting from the top left corner (see next page for example). When added to a mimic, the single object signature can be moved around as necessary.

Once the templates (both Background and Object) are completed, then the mimics can be produced by selecting the 'Create Mimic' button while in 'Edit' view.
3.8 Creating a Mimic based on Template

1. Select which asset the mimic will be based on from the first drop down list.

2. From the middle option, choose the template which the mimic will be based on.

3. Enter a name for the new mimic, then press the ‘OK’ button.

![Create Mimic]

4. The first screen to appear will be the Status Report for the mimic, which will show which points still need to be assigned to the asset. The example below shows that the Alarm element has been mapped to the selected controller automatically; while two parameters have also been mapped across successfully using the search text; the multivalue element needs to be edited with the appropriate points selected. What this could mean is that the template controller didn’t really match the controllers on the new mimic, this could be because the differences in controllers were too many, or that the search text has slightly different variations that don’t match exactly. Unmapped objects will not be displayed when ‘live’.

![Status Report]

5. Press the ‘Edit’ button for each unmapped element which needs to be changed and select the correct point from the respective drop down list.

6. Make any additional changes to the mimic as necessary. These additions include adding:
   - Alarms
   - Parameters
   - Static Images and Annotations

**NOTE:**
If you adjust a template, such as add new images, parameters etc, then any mimics which have been created from the template will also be updated, but with one exception; the asset’s parameters.

If a parameter is changed on a template, such as a ‘s3’ to an ‘s4’, then the mimics which are based on it will not be mapped automatically. Instead, each mimic will have to be updated manually by editing the mimic and changing the parameter. This applies to parameters and multivalues, and will also include object templates.

3.9 Edit Mimics

3.9.1 Add an image

Additional preloaded images (such as buttons, fans etc) can be added to a mimic.

1. Right click on the mimic and select ‘Fixed’ / ‘Image’ from the menu.

2. Select the image from the top drop down menu.

3. Choose a link from the list if you want the image to act as a link to another mimic or report or leave it blank for no links.

4. Enter the dimensions of the image. Leave blank for the default image size.

5. Enter text for the tool tip and press ‘OK.’
3.9.2 Add an Annotation
Annotated text can be added to a mimic and works in a similar manner as adding an image, and can also be used as links to other mimics.

1. Right click on the mimic and select 'Fixed' / 'Annotation' from the menu.
2. Type the text in the top field of the menu.
3. Select a colour for the text.
4. Select a font size.
5. Choose a link from the middle list if you want the text to act as a link to another mimic, template or report, or leave blank.
6. Enter text for the tool tip and press ‘OK’ to display and reposition the annotation by dragging it to a new location.

3.9.3 Adding a parameter
1. Select ‘Dynamic’ / ‘Parameter’ to add a point.
2. Go through the normal stages as you did for a template (section 3.6.1), where this time the asset’s point will be the actual point which will be displayed.
3. Check the box to add the parameter’s name to the value when ‘live’.
4. Underneath this there is an extra option called ‘Create Multiple’. This allows you to view the same point across all assets which share the same Code ID and Version number. This is instead of having to create the same number points many times for different assets manually.
5. When selected, you will be shown the screen of all similar assets

6. Select either ‘All’ the assets or choose them individually and press the OK button.
7. All of the parameters will then be displayed together and can be moved around the mimic individually.

3.9.4 Add an Alarm
When an alarm is activated, an alarm bell icon will be displayed on the mimic for an asset. When the alarm icon is clicked in the ‘live’ view, it will display the current alarm list for that asset. When the site is live, the alarm will remain hidden until raised.

1. Right click on the mimic and select ‘Dynamic’ / ‘Alarm’ from the menu.
2. Select the asset in the drop-down list.
3. Like the adding of multiple parameter points described in the previous section, so too can multiple alarms be created. Check the ‘Create Multiple’ box and from the next screen select the assets which you would also like to view the alarms for.
4. When the site is live, the alarm will remain hidden until raised.
3.9.5 Add a Multivalue
A multivalue point is a parameter which consists of more than one image depending on the value that is sent to it. For example, if an asset’s parameter has three different states depending on its value, then an image can be used as a visual representation for each state.

1. Right click on the mimic and select ‘Dynamic’ / ‘Multivalue’ from the menu.

2. The asset is automatically selected, so select the point from the asset, and then name the multivalue and press ‘OK’.

3. The multivalue signature can be placed where necessary.

4. To edit the parameter, add states and images, right click on the signature and select ‘Configure’.

5. Select a default image if required

6. For example, a freezer’s defrost cycle could be illustrated by indicating a normal state and a defrost state, so it would be ‘0’ or ‘1’ (or the correct enumeration) for ‘Normal’ or ‘Defrost’ respectively. Note that it is also possible to enter ranges of values, such as 1,3,15, as well as 1,3,15-18, which will then share the same image. Then select an image for that state from the list.

7. Press the ‘Add’ button to add the state and enter as many states as possible.

Selecting the Inspect option now will display the values and images of all states for the point, where each image can be checked by clicking on the ‘Show’ button.

3.10 Status Report
To view the current status of the selected page of the mimic, right click and select the ‘Status Report’ option.

The table displays all of the points within the current page of the mimic and provides a quick view of the overall store. It shows information such as the element name, the point name, it’s current value, which controller is belongs to, and indicates whether or not it has been configured or not. If a point needs to be reconfigured, such as change controller or choose a different display option, then choose the ‘Configure’ option in the Action column.

3.11 Adding Template Objects
Template Objects are a means of adding a selection of elements to a mimic all at once, therefore saving time instead of entering each component individually to every mimic. For instance, if a store’s top level mimic required several elements for each asset, then it would be easier to create an object containing all of the elements which can be replicated over and over for each asset, instead of creating each individual element for each asset. So if a store of 100 assets wanted 4 elements displayed per asset, it would be easier to create a template object and attach it to each asset (100 moves). Otherwise, it would amount to 400 separate elements.

Refer to section 3.7 for information regarding the creation of Object Templates.
Template Objects are templates which contain no background images and can contain a collection of elements, made up of points, images etc, and can be added on top of a mimic. In the ‘Edit’ view, the collection of elements are represented by a single signature, whereas in the ‘Live’ view, all of the elements are shown as individual readings, images etc.
1. When in 'Edit' mode, right click on the mimic and select 'Parameter' / 'Object Template' from the menu.

2. Select the asset from the drop down list.

3. Then select the object template from the list.

4. Select the link from which the parameters in the object will all link to. This will override any link which was set during the set up of the original object template.

5. Underneath this there is an extra option called 'Create Multiple'. This allows you to view the same point (or series of points, images etc) across all assets which share the same Code ID and Version number. This is instead of having to create the same number of points many times for different assets manually.

6. When selected, you will be shown the screen of all similar assets.

7. The object will be represented by the icon (left), which can be moved around the mimic. The individual elements of the object cannot be altered unless they are altered from the object template.

Once all of the mimics are completed, then all that needs to be done is to link the top level mimic to them all.
3.12 Mimic Administration

When in ‘Edit’ mode, pressing the ‘Administration’ button provides you with a variety of options relating to Templates, Mimics, and Images, as well as options for importing and exporting.

Pressing either the ‘Mimics’, ‘Templates’, or ‘Images’ buttons will present a list of options on the right hand side of the screen.

3.12.1 Mimics Administration

Go To
When this option is selected, choose the mimic to view from the drop down list and press the ‘Go’ button to advance to it. It will show the mimic in the ‘Live mode.

Edit
This option is the same as the above, except it will take you to the mimic in ‘Edit’ mode, so the mimic can be modified.

Rename
This option allows you to change the name of the mimic. Select the mimic from the list and enter a new name in the text field underneath it. Press the ‘Go’ button when finished.

Once a mimic has been renamed, it will update all links automatically which refer to that mimic.

3.12.2 Templates Administration

Edit
Select the template from the menu to edit. The menu contains both templates and object templates. When selected, it will display the template in ‘Edit’ mode.

Rename
Works the same as renaming a mimic (above), by selecting the template to change and then entering a new name.

Export
Exporting templates is a means of transferring a template to your local PC so that it can then be imported into other systems so that the same template can be reused over and over again, saving time by not having to recreate the same templates.
Select the Template to export from the list and press the ‘Go’ button. The list contains both templates and object templates.

Wait a few moments and then click on the link and save the file locally as a zip file.

Import
Once templates have been exported as zip files, they can be imported to another store by clicking on the ‘Import’ button. Select the ‘Browse’ button and locate the zip file, then give the template a new name. Then press the ‘Go’ button.

When done, a message will be displayed to say that the import has been import successfully, and the template will be added to the template list.

Delete
Templates can be deleted from the system, but only those that are not in use in the store mimic can be deleted.

Those that appear in the list are currently unattached, and so can be deleted.

3.12.3 Images Administration
In the images section, it is possible to export images locally, as well as import them to another store. Images can also be renamed and listed.

Select
This is the default page for Images, and from here you can look at every image available by either scrolling through the list by using the scroll buttons, or selecting an image from the drop down menu.
To download a picture, select one from the list and right click on the actual image and save the image to your local PC or device.

Rename
To rename an image, select an image from the Select menu (as described above) and then press the 'Rename' button. The selected image will then be available to rename by filling out the New Title text field.

Replace
Old images can be replace with updated versions if necessary. Like renaming an image, first select an image in the Select section to be replaced, then press the 'Replace' button.

Upload
To upload a new image to the system, press the 'Upload' button and then browse to the file to be uploaded. Give the image a Title in the appropriate text box, making sure to check the box if the image is to be used as a background. Then press the 'Go' button.

List
To view a list of all current images and their respective filenames, press the 'List' button.
3.12.4 Reset Site

This option allows you remove content from the whole site or from separate mimics belonging to the site. It is important to remember that once a removal has been implemented, there is no way of undoing the action back to the previous state; so make sure you are aware of what you are doing and what is being removed before you begin.

The section starts off with the top level mimic, and then lists all of the other mimics which are referenced from other mimics or the top level mimic. Below that are the mimics which are not referenced from anything. Only mimics that are not referenced can be deleted, while those that are linked will need to be manually unlinked by editing them before they can be deleted.

Remove Content
This will remove the content from either the Top Level mimic or referenced mimics.

Free Standing mimics
Free standing mimics (which have no references) can be deleted from the system. They can be selected individually from the list, or by pressing the 'All On' button to select them all. Press the 'Delete Selected Mimics'.
4. Administration Options

The Administration section contains a variety of options for the general set up of the AK-EM 100, some of which will have more importance than others when setting up the store for the first time by a Commissioner or Technical Engineer.

4.1 User and Groups

Refer to section 2.6 for information regarding the set up of new users and groups.

4.2 Reason Administration

Reason Administration is where the Standard Reasons that appear in the Alarm List can be edited, and where raw reasons can be mapped against Standard Reason also. The main page displays the standard reasons their priority (which relates to what level of user has access to levels of alarms) and severity level (critical or caution alarms) and whether they should be an exception. Click on the ‘Edit’ button to change the severity level and edit the name of the reason.

New entries can be entered by filling out the top row of the list and pressing the ‘Save’ button to add it.

1. Type in a new reason in the first text field. To change a priority for a reason, select a new priority from the drop down menu. Choose from (in order of highest priority to lowest) Important, Medium, or Information.

2. To alter the severity of an alarm, select from either critical or caution.

3. Press the ‘Save’ button at the bottom of the page to store the settings. Any changes will then be reflected in the Alarm List. Also take into account that changing the priority of an alarm will affect what alarms certain users will have access to depending on their level of access.

Raw Reasons

To View all of the raw reasons which make up the Standard Reasons, press the ‘Raw Reason’ radio button. To change the mapping of a raw reason to different or new Standard Reason, or simply edit a name, press the ‘Edit’ button, remembering to save when finished.
View Reason Exceptions
To make a Standard Reason an exception, press the link in the Exception column. The Exceptions page will allow you to override a standard reason and not allow it to come through onto the alarm list.

An exception to a standard reason can be targeted to a specific asset, so in the event of an alarm for that particular asset and reason, it will be ignored. Select the asset, the reason and the exception text that will override the default text, then the severity level.

Press the ‘Reason Administration’ button to go back to the Standard Reason table.

4.3 Favourites and Settings Refer to the Graphical Interface Guide for more details regarding the features here.

4.4 Event Log
The Event Log provides a record of actions by any of the users within a specified time period and displays a table of the actions taken, on what page and what time. There are several ways of displaying the information by selecting a report type over a time period.

1. Select the time period from the left hand side - week, month or quarter.

2. Select the user whose actions you wish to view.

3. Select the report type:

   List - Shows each action and what page was affected, including when certain processes were started.

   Summary - Displays the most frequently viewed page over the system by the user.

   Page - Displays the most frequently viewed page over the system

   Role - Similar to the above, except it displays the pages alphabetically based on the user role.

4. Press the ‘GO’ button to display the report. Below is an example of the List report.
4.5 Hide Alarm Times

This creates the number of different time periods for when alarms need to be hidden (refer to section 2.7.7 in the Graphical Interface Guide for more information about hiding alarms).

4.5.1 Add A New Alarm Time

1. Enter a new time and preview title in the appropriate fields, selecting the default option if necessary.
2. Press the ‘Add’ button to add it to the list.

4.5.2 Modify an Alarm Time

1. Edit an existing alarm time and press the ‘Save’ button when finished.
2. Press the appropriate ‘Delete’ button to remove an Alarm Time from the list.

4.6 News Menu

This is where any relevant items of news can be entered and then shown on the homepage.

1. The default is set to English, so enter text in the top field and press the ‘New’ button to add it to the list below.
2. To add text in a different language, complete the first stage as above and add it to the list.
3. Select the language from the drop down menu, then enter the language translation in the text field.
4. Press the ‘Modify’ button when finished to save the entry.
5. Pressing the ‘Delete’ button will remove the English entry as well as all other language translations.

4.7 Phrase Translation

The Language Admin section is able to change text according to which language the user has selected in the Favourite and Settings section. This means that the user can recognize key phrases throughout the site in their own language.

The phrase lists contains the default format (or chosen language) and also allows you to search through the ‘English’ phrase as well as phrase found in the code used in the software which links to it - the last function would only really be used by developers. When the translation into another language is made, the code is automatically changed to the chosen language translation.

4.7.1 Modifying a Phrase

1. Firstly, select the language you wish to translate to from the drop down menu at the top of the screen.
2. Select a radio button to display all of the available phrases or those phrases that are currently not translated.
3. To search for a specific phrase or piece of text, use either the search arrows to scroll through the
pages, or enter the phrase (or part phrase) in either of the 3 search fields (Phrase, English or Code) and press the appropriate ‘Go’ button.

4. Once the correct phrase is found, edit the phrase and press the ‘Modify’ button when finished to save the phrase. Code phrases cannot be modified.

4.7.2 Adding a New Phrase
1. Add the English phrase and Code into the empty text fields.

2. Press the ‘Modify’ button to add it to the list.

4.8 Food Types Configuration

The Food Types Configuration screen relates to the food types and report types available in the HACCP reports. Food Types refer to the different categories of food found within the store, such as fish, dairy products, frozen meat etc. From this section, you can create the low and high temperature ranges for each of these types, as well as creating extra reports in addition to the HACCP report. These food types are then referenced by the HACCP report when the parameters are automatically configured in the Asset Configuration section 2.1.2.

4.8.1 Configuring an existing Food Type

1. Enter the Low and High temp values for the food type. This provides the safe temperature threshold, where the HACCP report will display it’s coloured range if the temp goes outside either of the levels.

2. Keep the setting at ‘Default’ for the normal HACCP report.

3. Press the Save button to store the settings.

4.8.2 Add a new Food Type

1. To add a new Food Type to the list, enter the name in the New Food Type field and press the ‘Save’ button.
2. When saved, it is updated into the food type drop down list. Select it and then enter the Low and High Temperature limits and the Default HACCP setting.

3. Press the Save button to store the settings. As it will be a new Food Type, it won’t have any points assigned to it, so you will have to go into the Asset Configuration section and assign points to the HACCP report. Notice that when saved you have the option to delete it. This is because it has no parameters assigned to it, whereas the others in the example below have. To delete others, they must all be unassigned in the Asset Config section.

4.8.3 Making Specific Reports

As HACCP reports are based only on temperature readings, there may be times when you require a HACCP based report which uses a different type of measurement parameter, such as pressure or volume. Creating a separate report for this type makes sense as it wouldn’t be right to have it alongside a HACCP report with temperatures.

1. Make a new Food Type as above in the previous section.

2. Select it from the Food Type drop down list and set the safety threshold levels. When it comes to reports, select one of the 4 reports. These report titles can be manually changed in the Report Types section.

3. Once the report name is changed and saved, the Report drop down in the Food Type section will update to contain the name. Again, points will have to assigned to the new food type in the Asset Configuration section, as well as new log points may well have to be created to match the new report.

4. When a HACCP report is now selected, it will contain the new reports alongside that of the default HACCP report.

4.8.4 Import/Export Food Types

You can export and import the Food Type list as an XML file. This can be a way of easily exporting a list from a completed site onto a new similar site without having to manually do it from the beginning.

1. Press the Go button in the Export/Import section and then right click on the link when it appears to save it locally.

2. Similarly, browse to the locally stored copy to upload and update the Food Types.

4.9 Enumerated Types Configuration

The Enumerated Type configuration page is where written translations can be entered against parameter values which signify more than one possible state. For instance, the example, right, displays a MainSwitch with 3 possible states with value readings of ‘1’, ‘0’ and ‘-1’, whereas the written descriptions are ‘Off’, ‘Regulating’ and ‘Service’ respectively.

The enumerated descriptions are then selected in the Asset Configuration section (2.1.2) of the Commission Toolbox, and are available to view in such pages as the Basic and Advanced Asset Details pages.
1. To add a new enumeration, enter a name in the top text field and press the ‘New’ button. It will then appear in the list alphabetically.

2. In the blank text boxes of the new enumeration, enter the a value and display name and press the ‘New’ button.

3. This will then add the state to the enumeration. Enter as many states as necessary.

4. Any other enumeration can be modified by altering the text and pressing the ‘Save’ button.

5. To delete a complete enumeration, press the ‘Delete’ button on the far right. To delete an enumeration state, press the ‘Delete’ button attached to it.

4.9.1 Import/Export Enumerations

You can export and import the Enumeration settings as an XML file. This can be a way of easily exporting a list from a completed site onto a new similar site without having to manually do it from the beginning.

1. Press the Go button in the Export/Import section and then right click on the link when it appears to save it locally.

2. Similarly, browse to the locally stored copy to upload and update the Food Types.

4.10 Technical Admin

The Technical Information section should only be accessed by experienced personnel or commissioners. It is where processes can be monitored and started or stopped if absolutely necessary, and also includes logs of these processes.

4.11 Mimic Setup

Refer to section 3 for more information regarding the set up of the Store Mimic.

4.12 Upload Patch

If there are any additional upgrades to be added to the AK-EM 100, such as new specifications, they can be uploaded from here.

1. Press the ‘Browse’ button to select the patch. The patch must be a compressed tgz file.

2. When selected, press the ‘Go’ button to install the patch and complete the upgrade.
4.13 Data Expire Time

When live readings are displayed (such as in the Mimics, Basic and Advanced Details, and the Asset Configuration pages), then it is important to the correct data is displayed at all times.

Readings with ‘***’ will indicate that data isn’t available for the point, that the controller isn’t connected, or there is another problem.

This section allows you to set a timer for live data against a controller, making sure that the data received is the latest data within the expire time; the system will check that the data for the asset is fresh within the set time.

Enter the timeout in the correct format (hh:mm), and press the 'Update' when finished.

<table>
<thead>
<tr>
<th>Asset</th>
<th>Timeout (hh:mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>001:002 AK2-CC303A</td>
<td>00:05</td>
</tr>
<tr>
<td>001:003 AK2-CC303A</td>
<td>00:05</td>
</tr>
<tr>
<td>001:004 AK2-CC303A</td>
<td>00:05</td>
</tr>
<tr>
<td>001:005 AK2-CC303A</td>
<td>00:05</td>
</tr>
<tr>
<td>001:006 My controller</td>
<td>00:05</td>
</tr>
<tr>
<td>001:007 AK2-PC 311A</td>
<td>00:05</td>
</tr>
<tr>
<td>001:010 EKC device 010</td>
<td>00:05</td>
</tr>
<tr>
<td>001:026 EKC device 026</td>
<td>00:05</td>
</tr>
</tbody>
</table>
5. Initial Configuration of Refrigeration System

Once all of the connections have been successful, the next stage of the process is to start the initial configuration of the refrigeration system.

This entails adding settings to parameters. Editing the Basic and Advanced Details pages are done by selecting either from the Store Operations page.

Basic and Advanced Details

Basic Details
The basic details page gives access to measurements and settings belonging to an asset’s controllers. Settings are identified by fields with a white background, where you can change a setting by clicking on the parameter value.

When clicked, the user is presented with the Set Value window, in which they increase/decrease the value.

Advanced Details
Advanced Details provides a broader range of settings and measurements than Basic Details. Parameters are grouped logically under each tab. Settings are changed by clicking on a parameter value in an editable field with a white background.
6. User Manuals

To view the user manuals in a pdf format within the website, select which language translation and which manual to look at, either the User Manual or Commissioning Manual, from the table.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Danish</td>
<td>🇩🇰</td>
<td>🇩🇰</td>
</tr>
<tr>
<td>English</td>
<td>🇬🇧</td>
<td>🇬🇧</td>
</tr>
<tr>
<td>French</td>
<td>🇫🇷</td>
<td>🇫🇷</td>
</tr>
<tr>
<td>German</td>
<td>🇩🇪</td>
<td>🇩🇪</td>
</tr>
</tbody>
</table>

The manual will open within the same browser window as the EM100, so it is suggested that the manual is viewed in a separate window by using the right-click option for this.
7. List of menu options

Certain functionality will be made available / unavailable according to the user's access rights. This also applies to the menu system. Here, particular options like Comms and Technical Admin, would normally be inaccessible to a daily user.

**Store Mimic** - A graphical representation of the store which contains all of the assets and their points of measurement. This is where the mimic templates and images are uploaded onto the system, and where points are configured for display.

**Store Operations** - Store Operations contains information relating to both the overall store and it's individual assets. View several types of reports, graphs, check the current alarm status, and configure asset details, as well as carry out some commands such as defrosting or switching on/off a refrigeration unit.

**HACCP Reports** - Provides a HACCP report for all of the assets measurement points within the store. These are set up using some of the administration options, such as Food Types and Food Types Configuration.

**Historical Alarms** - Depending on access rights, Historical Alarms provides seven types of reports, ranging from the total number of alarms to the worst performing asset.

**Trending** - Depicts a graph of a point(s) which updates automatically to provide live data for a set period of time. Used for closely monitoring points.

**Graphs** - Displays a graph for one or more points over a user specified time. Points

**Commission Toolbox** - This is where the majority of the configuration between the AK-EM 100 and the gateway takes place.

**Administration** - The administration section contains different levels depending on access rights of the daily user. Commissioners and Engineers would have full access to the section, where they can set up users and groups, configure the system, change the set points of assets.

**User Manual** - Download the user and commissioning manuals.

**Home** - Link to the user's Home page.

**Contact Us** - Link to Danfoss's contact details.

**Logout** - Log off from the AK-EM 100.

**Store Name** - Displays the Store's name.

**Current Alarm List** - Indicates there are alarms. Shows the latest alarm when the mouse is placed over it. Clicking on the icon takes you to the Current Alarm list page.

**Network Communication** - Displays whether or not there is a connection to the network. If there is not, an alarm bell icon will be displayed.

**MPH Performance** - Indicates that an MPH may be performing slower than normal - such as a data run being performed for the first time. This will disappear once the MPH has run its course and is back to normal. It could also indicate that the MPH has stopped completely.
8. Commissioning Quick Task List

The Commissioning Overview list is to provide a quick reference guide for the Commissioner and contains a list of tasks they would typically perform when installing the AK-EM 100 system after the physical connections are completed. The section following this task list provides a more detailed look at the procedures for each task.

In sequential order - they would typically perform the following 4 steps:

Establish network communication
This features the Commissioning Toolbox, where details of the site would be entered such as the network connections to be configured and established for the controllers to be able to connect to the Gateway, perform the runs to upload the uploaded, and view the details of the data runs.

Establish communication with Gateways and Controllers.
Tasks include:
- Upload the controller information so that we can verify that:
  a. Correct number of controllers is visible on the uploaded list
  b. Correct type of controllers is visible on the uploaded list

All the DES files should be available.

Initial configuration of refrigeration system
Get the refrigeration system up and running.
Tasks include:
- Once the controller information is uploaded, the individual set point values for the parameters can be configured. In this initial configuration stage it is not necessary for the Commissioning Engineer to adjust the set point values with great accuracy, but just enough to have the system up and running.

Fine tuning of refrigeration system
Ensure system is fully running with accuracy and can output the correct information for all reports.
Tasks include:
- Continue with adjustment of Set Point Values with greater accuracy and for all the parameters.
- Define enumeration points, include or exclude them in trending.
- Select which page (basic or advanced) the parameter details link to.
- The option of importing and exporting saved configuration settings for multiple assets which share the same settings.
- Once the main configuration has been completed, then certain functions can be redefined from the Administration section. This would include adding more enumeration displays, setting up the users and groups tables, loading the DES file which contains the controller settings, and saving the configuration setting.

Configuration of UI
Set up the Graphical User Interface on the store layout so that there is a Visual Representation of a two tier site structure showing top level site floor layout with cabinets, and then 2nd level: the individual cabinet detail.

Tasks include:
- Uploading the images for the store.
- Creating templates and/or mimic, creating the top level mimic.
- Assigning parameters to the mimics based on a template.
9. AK-EM 100 Technical Specification

- 1GHz VIA CPU
- 1GB RAM
- 40 GB hard disk
- 1 10/100Mbit network
- PSU supply 60W max
- Operation Temperature 0 – 40°C
- Operation Humidity 5 – 90% @40°C non-condensing
Appendix A: Time Change Reboot

If a time change is detected from the Gateway (such as the time being set back i.e. clocks being set back), a pop-up window will open, as well as a banner at the top of the screen. The pop up window will always stay on top of the open web page.

Both the banner and the popup window will give a warning message to say a time change has been detected. A reboot will take place in 10 minutes and there is a message informing the user the time the reboot will happen and a count down from 10 minutes. There is also a button called "Reboot Now" and the user can click this to start the reboot process immediately.

On this page, the user has 3 options:

1. Do nothing and a re-boot will take place in 10 minutes and a count down will be shown on the page.

2. Select the "Re-Boot Now" button, which will perform a re-boot immediately.

3. Click the button which tells the user what time the reboot will happen. The window will then close and the user can complete any tasks they are working on. Once this window has closed, the banner will continue to display the count down so the user knows when the reboot will happen.

When the re-boot process begins, a message will appear saying “Reboot in Progress”.

If the user has pop-ups blocked or if they close the window by clicking the 'X' on the top right, then the banner on the main web page will give the same warning. Again, the user has the option of waiting for 10 minutes or they can click the Re-boot Now button.
Appendix B: Installation Guide

This section will describe how to install an AK-EM 100 on site for the first time when used in conjunction with an ADAP-KOOL®, AK-SC 255 or System Manager gateways, in order to extract data concerning the monitored refrigeration control system within the store.

The AK-EM 100 unit

The AK-EM 100 contains a web server that provides an interface to the electronic control equipment fitted in a store. The AK-EM 100 communicates directly with via a RS232 connection or by a LAN connection, if the Gateway is fitted with a DigiOne box.

Installation

The sections below describe how to communicate with an AK-EM 100 to extract data from the system.

Hardware Setup
Plug the AK-EM 100 into the mains network and connect the AK-EM 100 to a keyboard, mouse, monitor and network cable.

Set up mini network
When the image has been successfully moved across, use the hub/switch to connect the AK-EM 100 to a laptop. The Network cable must be in port number 1.

Set IP Address
This can be done via the Commissioning Toolbox once logged on to the AK-EM 100 (refer to the Establish Network Connection section of the manual).

Verify Remote access via network
If no network is available, set up mini network as described in point 3.

Connect to the Gateway
When the physical installation is complete, log on to the AK-EM 100.
<table>
<thead>
<tr>
<th>DATE</th>
<th>No.</th>
<th>CHANGE</th>
<th>DESCRIPTION</th>
<th>TRAC No.</th>
<th>Page</th>
<th>Chpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.11.07</td>
<td>001</td>
<td>Display Name change (section 3.3.6)</td>
<td>Press the 'Return' key to overwrite the DES File name</td>
<td>671</td>
<td>14</td>
<td>3.1.2</td>
</tr>
<tr>
<td>06.11.07</td>
<td>002</td>
<td>DES file</td>
<td>Overwriting a selected DES file</td>
<td>671</td>
<td>14/16</td>
<td>3.2</td>
</tr>
<tr>
<td>07.11.07</td>
<td>003</td>
<td>Reason Admin change</td>
<td>Added Priority to Standard Reason, and deleted alarm assignment and Map Standard Reason section</td>
<td>683</td>
<td>36</td>
<td>5.2</td>
</tr>
<tr>
<td>07.11.07</td>
<td>003</td>
<td>Data Expire Time</td>
<td>Added section for editing time delays of live data.</td>
<td>507</td>
<td>42</td>
<td>5.15</td>
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<td>07.11.07</td>
<td>003</td>
<td>Standard Reasons and Adap Kool</td>
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<td>740</td>
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<td>13.12.07</td>
<td>004</td>
<td>Restore Configuration</td>
<td>Restore a configuration style by selecting individual columns</td>
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<td>3.5</td>
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<td>07.02.08</td>
<td>005</td>
<td>Time Change Reboot</td>
<td>Provides a warning when a time change has been implemented via a gateway, requiring a complete reboot</td>
<td>969/1118</td>
<td>48</td>
<td>App A</td>
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<td>19.1.08</td>
<td>006</td>
<td>New Coms Toolbox image</td>
<td>Updated image</td>
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<td>1.1</td>
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<td>007</td>
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<td>Updated image</td>
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<td>1.2</td>
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<td>19.11.08</td>
<td>009</td>
<td>New image for Network List</td>
<td>Updated Image</td>
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<td>1.3.1</td>
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<td>010</td>
<td>New image for new Gateway</td>
<td>Updated Image</td>
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<td>1.3.2</td>
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<td>011</td>
<td>Added new screen and text for adding new SM gateway</td>
<td>Updated text fields when adding a new SM.</td>
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<td>19.11.08</td>
<td>012</td>
<td>Removed section for adding new 255 gateway</td>
<td>255 not supported now.</td>
<td>8-9</td>
<td>1.3.4 - 1.3.5</td>
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<td>013</td>
<td>New image for deleting gateway</td>
<td>Updated Image</td>
<td>9</td>
<td>1.3</td>
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<td>19.11.08</td>
<td>014</td>
<td>New image and text for new discovery</td>
<td>Updated image and added Auto Select function.</td>
<td>EM1716</td>
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<td>1.4.1</td>
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<td>015</td>
<td>New images for Network Coms</td>
<td>Updated images</td>
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<td>1.4.2</td>
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<td>20.11.08</td>
<td>016</td>
<td>Removed reference to 255</td>
<td>255 not supported now.</td>
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<td>20.11.08</td>
<td>017</td>
<td>Log Details</td>
<td>New images and rewritten Log section</td>
<td>EM1714/EM1729</td>
<td>11-12</td>
<td>1.5</td>
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<td>20.11.08</td>
<td>018</td>
<td>Moved Installation of hard disk to App B</td>
<td></td>
<td>1047</td>
<td>from 4 to 49</td>
<td>was 1, now App B</td>
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<td>20.11.08</td>
<td>019</td>
<td>Additional Tasks</td>
<td>New image and new Export menu item.</td>
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<td>Version</td>
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<td>20.11.08</td>
<td>020</td>
<td>Remove Expand All reference No longer available.</td>
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<td>20.11.08</td>
<td>021</td>
<td>Asset Config options Added updated images and amended text.</td>
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<td>21.11.08</td>
<td>022</td>
<td>Added new Switches section New Switch section regarding mimics and HACCP reports.</td>
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<td>023</td>
<td>New image for Online function Updated image.</td>
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<td>21.11.08</td>
<td>024</td>
<td>New images for copy assets function Updated images.</td>
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<td>21.11.08</td>
<td>025</td>
<td>New images for DES files Updated images.</td>
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<td>026</td>
<td>New image and text for save config Updated image and added saving the file locally.</td>
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<td>027</td>
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<td>21.11.08</td>
<td>028</td>
<td>New image and text for user admin Updated images as well as new options when adding new user.</td>
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<td>21.11.08</td>
<td>029</td>
<td>New image and text for modem settings Updated images as well as new options when adding settings.</td>
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<td>21.11.08</td>
<td>030</td>
<td>Export all asset details Ability to export all details into an XML file.</td>
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<td>21.11.08</td>
<td>031</td>
<td>Added text to right click options on mimic. Updated clearing a background image from template.</td>
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<td>21.11.08</td>
<td>032</td>
<td>Adding a parameter to a template How the tooltip is created by choosing an asset and point name when adding a point.</td>
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<td>21.11.08</td>
<td>033</td>
<td>Deleted hint regarding tooltip. No longer applicable.</td>
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<td>24.11.08</td>
<td>034</td>
<td>Adding Multi-value Edited new section for selecting assets and points when creating multivalue.</td>
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<td>035</td>
<td>Adding an image to a template Linking image to a template etc.</td>
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<td>036</td>
<td>Adding an annotation to a template Linking annotation to a template etc.</td>
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<td>Creating a mimic Amended text</td>
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<td>038</td>
<td>Multiple points Amended add a parameter to a mimic to include multiple points</td>
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<td>039</td>
<td>Multiple alarms Amended add an alarm to a mimic to include multiple alarms</td>
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<td>040</td>
<td>Add multivalue to a mimic Amended text to include value range</td>
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<td>25.11.08</td>
<td>041</td>
<td>Reset Site Removed ‘Remove All Content’ as no longer applicable.</td>
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<tr>
<td>Date</td>
<td>Change Number</td>
<td>Section</td>
<td>Action</td>
<td>Reference</td>
<td>Page</td>
<td>Section</td>
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<td>25.11.08</td>
<td>042</td>
<td>Phrase translation</td>
<td>Amended phrase translation section.</td>
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<td>4.7</td>
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<td>043</td>
<td>Food Types</td>
<td>Removed from section as moved into Food type config.</td>
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<td>044</td>
<td>Food Types config</td>
<td>Added and refined section to include new report set up + Export.</td>
<td>EM1736</td>
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<td>045</td>
<td>Enumerated Food Types</td>
<td>Added Export/Import function</td>
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<td>046</td>
<td>Network Time-outs</td>
<td>Now removed from admin section.</td>
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<td>was 4.13</td>
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<td>047</td>
<td>Initial config of refrigeration unit</td>
<td>Removed set point reference.</td>
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<td>User Manuals</td>
<td>Updated User manual section to include language selection.</td>
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<td>Menu Options</td>
<td>Added MPH warning</td>
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<td>050</td>
<td>Adding a parameter to a mimic template</td>
<td>Added link to template option</td>
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<td>051</td>
<td>Adding Object Templates</td>
<td>Link template objects and adding multiple objects</td>
<td>EM1701 EM1705 EM1711</td>
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<td>052</td>
<td>Asset Config</td>
<td>Added text to show that headers and point names can be edited.</td>
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<td>Addition of Units</td>
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<td></td>
<td>Minor corrections after review</td>
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