



## Network Intelligent Fire Alarm and Audio System





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## Configuration

The FleX-Net™ system, FleX-Net™ FX-4000 system, and the FX-MNS-6000 network system is configured using MGC software MSW-036.

| NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIES  |   |   |   |
|---|---|---|---|
| This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, and the Standard for Control Units for Fire Alarm Systems, CAN/ULC-527-11 certain programming features or options must be limited to specific values or not used at all as indicated below. |   |   |   |
| Program feature or option   | Permitted in UL 864/CAN/ULC-S527-11 (Y/N) | Possible settings   | Settings permitted in UL864/CAN/ULC-S527-11   |
| Optional Delay of Transfer from live paging to alert/alarm  | Yes                                       | 0 to 20 seconds   | 0 to 5 seconds                                |
| Alarm Transmit Silence  | No  | Enabled or Disabled   | Disabled or unchecked                         |
| Automatic Signal Silence  | Yes                                       | 30sec, 1,3,10,15,20,30min or Disabled   | UL minimum 3 minutes<br>ULC minimum 5 minutes |
| Powerfail Send Delay (AC power trouble signal transmits to remote station after this selected delay)  | Yes                                       | 0 to 18 Hours   | UL 1, 2, 3 Hours<br>ULC 0, 1, 2, 3 Hours      |
| COPTIR/A Detector Sensitivity Levels  | Yes                                       | Levels 1 through 6  | Levels 2 through 6                            |
| APB-200/COA Sounderbase correlation to Fire input   | Yes                                       | No sound (no correlation), Temporal-3, Temporal-4, March Code, Maintenance Chirp, Continuous Tone | Temporal-3                                    |



|  |    |  |                              |
|--|----|--|------------------------------|
| APB-200/COA<br>Sounderbase<br>correlation to CO<br>input | No | No sound (no<br>correlation),<br>Temporal-3,<br>Temporal-4, March<br>Code,<br>MaintenanceChirp,<br>Continuous Tone | No Sound (no<br>correlation) |
|--|----|--|------------------------------|

## Overview

In order to operate as a fire alarm, a fire alarm panel must be loaded with firmware and configuration data. A set of configuration data, to uniquely describe and control a given set of hardware, is called a Job. The Configurator allows the user to create and manage jobs. It also allows the user to send firmware to a panel and all its related nodes and CPUs

On the first use of the configurator the user is prompted for the paths and file names where jobs, backups, the database, etc. are to be stored. Registry entries remember many of the user's preferences.

The configurator is typically run on a portable notebook or lap top computer that is taken to the job site and connected to the panel. The technician prepares a job using the configurator's Graphical User Interface. The job can then be sent to the panel. The same or a different authorized technician can later retrieve the job from the panel, modify it and send it back.

The job repository is a Relational Database (MS-Access). Jobs can be imported from another database, copied, deleted, and archived in various formats. A job can be printed, or two versions of a job can be compared.

## GUI - Major Components

The configurator uses a familiar Microsoft Windows Graphical User Interface (GUI) to present a job. The screen is divided into (max.) three panes.

On the left of the screen, the job is represented as a tree, similar to a file explorer. At the highest level in the tree are sections describing panel functions are not dependent on nodes. These are Job Details, Common System Statuses, Walk Test Areas, Custom Timers, Custom Intervals, Equation Summary, Input Summary, Output Summary, and Node Grouping. The Nodes are under the Job Details section. Under each node are its components - Annunciators, Loop Controllers, etc. Some items are further subdivided, for example, an annunciator into display adders and a loop controller into loops.

The top level items in the tree do not directly represent physical components. Some are for configuration options, like Job Details or Node Grouping. Some are for virtual devices, like



Custom Timers or Walk Test Areas. The others are to allow you to view groups of things in the job without having to search through the node, like Input Summary.

The top right pane is used to display the details of the currently selected tree branch. This can be a form view or a list view. For example, this pane is used to list the devices on a loop controller (list view) and to display the options and messages of a main display (form view).

The third, bottom right pane is used to show correlations from an item selected in the top right pane, where appropriate. For example, when a loop is selected in the tree, the top right pane would show all of its devices or circuits. When one or more input circuits are selected in the list, then the bottom pane would show the output circuit(s) to which this is correlated.

In addition to standard menus (File, Edit, etc.), a specialized menu hierarchy (Job, Panel, Tools) is provided for such functions at Create New Job, Delete Job, Connect to Panel, etc.

A tool bar provides convenient short cuts to the more frequently used functions

Standard keyboard short cuts and mouse operations are supported for such operations as copy and paste, drag and drop, etc.

## Edit Menu

The Edit Menu contains the following commands.

Some commands may be disabled (greyed) depending on what items are currently selected on the user interface.

| Name        | Short cut | Description   |
|-------------|-----------|---|
| Delete Item | Del       | Deletes the currently selected item.  |
| Modify Item | Ctrl+M    | If the currently selected item is a row in an editable list, then the first changeable cell is selected and prepared for editing. |
| Copy        | Ctrl+C    | Copies the selected item(s) to the clipboard.   |
| Paste       | Ctrl+V    | Pastes items from the clipboard to the selected destination.  |



|               |               |  |
|---------------|---------------|--|
| Paste Special | Ctrl++Shift+V | Similar to Paste: Opens the Paste Special dialog to allow defaults to be changed before pasting. |
|---------------|---------------|--|

## File Menu

The File Menu contains the following commands:

| Name             | Short cut | Description   |
|------------------|-----------|---|
| Backup Database  |           | By default the backup database makes a copy of the Master Database in the File folder specified in the User Preferences. The backup file by default will have a name of the form YYYY-MM-DD-Vnn-nn-nn.mdb (the "n"s standing in for the digits in the version number of the current configurator). The back up can be used by the Restore Database command to recover all of the jobs in the database. The Import command can be used to recover selected jobs from a backup. Backup your Master Database often and store a copy of the resulting file on a USB drive or other media. |
| Restore Database |           | Restores the database from a backup copy. Note: This operation will replace the entire contents of the current, working database with the backup.   |
| Compact Database |           | To ensure optimal performance, you should compact and repair your database on a regular basis. If you have purged job versions or deleted jobs, Compacting the Database will regain the space occupied by those records.  |
| User Preferences |           | Specifies User Preferences, such as the location of database, backups, job files, etc.  |
| Open Folder      |           | Opens a submenu allowing you to choose the Backups, Job File, or Job Builds directory. The configurator then opens up a Windows Explorer window for the chosen folder. This feature can be used to quickly locate a recently exported job, which can then be emailed or saved elsewhere.  |



The *Backups* folder is the default location for database backups.

The *Job Files* folder is where exported jobs are stored. These include \*.MDB files, \*.fx2job files and a variety of XML formats.

The *Job Build* folder is the default location for .c files produced by Tools / Build Job. It is also the location of log files which Mircom technical support may request when investigating a problem.

|               |        |   |
|---------------|--------|---|
| Print         | Ctrl+P | Print the active job.   |
| Print Preview |        | Display a Print Preview of the active job.                      |
| Print Setup   |        | Select the printer, paper size and orientation for a print job. |
| Exit          |        | Closes the configurator.  |

## Insert Menu

The Insert Menu contains the following commands.

Some commands may be disabled (greyed) depending on what items are selected on the user interface.

Some items may be suppressed depending on the product.

| Name                 | Description  |
|----------------------|--|
| Add Network Nodes    | Add a network node to the job.   |
| Add Loop Controllers | Add an Addressable or Conventional Loop Controller to the selected network node. |
| Add Annunciators     | Add an LCD or LED Annunciator to the selected network node.                      |
| Add Display Adder    | Add a Display Adder to an Annunciator or Main Display.                           |



Add UDACT     Add UDACT capability to the selected network node.

Context  
Dependent

Add Device     If the selected tree item is a device loop, add a device or circuit.

Add Message    If the selected tree item is the Custom Messages branch of a remote annunciator, add a Message.

Add Zone        If the selected tree item is the Input Zones branch of a CPU (QLA or Base I/O of a Master), add a zone.

Add Group       If the selected tree item is Output Zones branch of a CPU (QLA or Base I/O of a Master), add a group.

Add  
Correlations     If the selected tree item is Zone, Group, Status, or Device, or a Display Item that can have correlations, launch a dialog that allows correlations to be added to the selected item. This does not apply to items selected in the Input Summary or Output Summary.

**Note:** Most of these options may also be accessed by right clicking on the appropriate item in any of the configurator windows.

## Job Menu

The Job Menu contains the following commands:

| Name     | Short cut | Description   |
|----------|-----------|---|
| New Job  | Ctrl-N;   | This command will open the Create Job dialog which will allow you to start a new job. The new job can be based on a supplied template or on the job currently open in the configurator. |
| Open Job | Ctrl+O    | This command opens a dialog from which you can select any job or job version that is in your database.  |



|                      |        |  |
|----------------------|--------|--|
| Import Job           |        | This command opens a dialog from which you can select any job or job version from an external database or serialized job archive. The selected job will then be imported and converted to the current job format if necessary.                               |
| Export Job           | Ctrl+E | Exports the current job. The job can be exported as a single job database file, a compact, serialized archive format, or as one of several styles of XML files for specific uses. The exported file can then be archived or transferred to another computer. |
| Merge Job            | Ctrl+M | Merges a selected job into the current job, retaining all correlations.  |
| New Version          | Ctrl+W | Make a copy of the current job, assigning it the next highest version number. The user is prompted for mandatory comments and may also override the Author field. The Job Name cannot be changed. The new version is un-locked for editing.                  |
| Delete Job Version   | Ctrl+D | This command permanently deletes the current Job / Job Version from the database   |
| Version History      |        | Display the Version History (Date, Author, Comments) for the current job.  |
| Compare Job Versions |        | Compares the current version of the current job to another version of the same job, or a completely different job.   |
| Convert Job          |        | Legacy feature. No longer used.  |
| Validate Job         |        | This action performs all of the steps normally performed when preparing to send a job to the panel.  |
| Edit Job             |        | Toggle the lock on a job that is protected against unintentional edits. If the job has more than one node and has been built or up loaded to a panel this option will not function and the job can not be unlocked for editing.                              |



## Panel Menu

The Panel Menu contains the following commands.

| Name                        | Short Cut | Description   |
|-----------------------------|-----------|---|
| Connect                     | Ctrl+L    | This command will establish a connection between the configuration tool and the panel, enabling most of the other commands in this menu. Remember to disconnect when you are finished, as a trouble will be indicated on the fire alarm panel as long as the laptop is connected. |
| Send Job                    | Ctrl+S    | Build the job and send the configuration to the panel.  |
| Get Job                     | Ctrl+G    | Get the job from the panel and store it on the configuration tool's database. The job becomes the current job, shown in the user interface and is writable.   |
| Manage Jobs                 |           | Reads the list of configurations in the panel's file system and opens the Manage Jobs dialog.   |
| Panel Information...        |           | Displays basic information about the panel to which the configuration tool is connected. Also gives access to the Update time/date button and the Advanced Panel Info button (which will open up a new window with more detailed information about the panel).                    |
| Security Key Information... |           | Displays information about the security key for those products that support a key. The user must have entered the correct PIN when prompted - either when configurator was started or when the key was inserted - to enable this command.   |
| Upgrade Firmware...         |           | Loads firmware to the panel from a firmware archive file.   |



## Tools Menu

The items under the Tools Menu are used mainly for troubleshooting and diagnostic purposes by the factory.

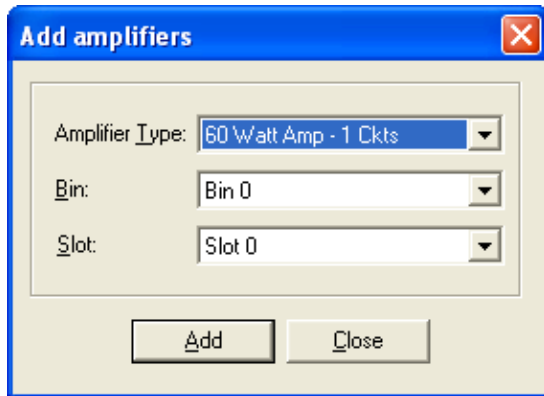
| Name                       | Short Cut | Description   |
|----------------------------|-----------|---|
| Extract All DB             |           | Extracts the latest version of every job to individual database files.  |
| Build Job                  | Ctrl+B    | Builds the job, assuming the latest product version, creating a ".c" file in the Job Build folder.  |
| Build Job (old version)... |           | Builds the job ".c" file for a specified, older product version.  |
| Link Statistics            |           | Displays the connection link statistics   |
| Log Send                   |           | Toggle the current state of the "dump on send" option. Causes the ".c" file to be produced and dumped on a Get Job.                       |
| Log Get                    |           | Toggle the current state of the "dump on get" option. Causes the ".c" file to be produced and dumped on a Send Get.                       |
| Log Comms                  |           | Toggles logging of serial communications.   |
| Trace                      |           | Toggles the current state of the trace option. When turned on this causes debug information to be written to a trace file.                |
| Display Structure          |           | This command will display a dialog that will allow you to view and log panel data structures.   |
| External Bus               |           | Toggles the "Use External Bus" setting. When turned on, this signals that the configurator is connected to the External Bus of the panel. |



Note: The Tools menu is only available if you checked the Show Tools Menu option. See User Preferences

## Add Amplifier

This dialog is displayed in response to an Add Amplifier command, which is available when an Amplifier Loop is selected in the Job Tree.



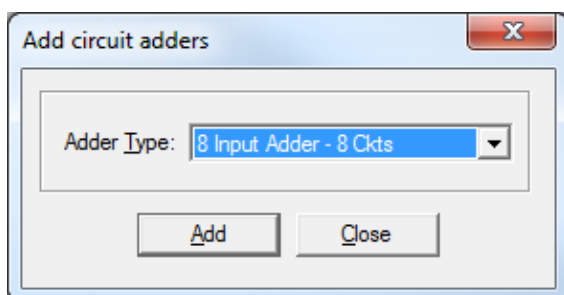
Select the amplifier type. Choose from a single 60 Watt amp., 2\*30 Watt or 4\*15. If Splitter Circuit Operation is selected in the Audio Setup dialog then each of those amplifiers will also have a Split version available for selection.

Choose the bin and slot for the location of the amplifiers. The program will suggest the next available, suitably aligned location, but you can choose another that does not immediately follow those amplifiers that are already configured.

Click the add button to add the amplifiers. The dialog remains open so that you can add more. The Slot and Bin locations are recalculated.

## Add Circuit Adder

This dialog is displayed in response to an Add Circuit Adder command. That command is available when a Conventional (hard wired) Loop is selected in the Job Tree, and the user right click on the upper right pane.





**Adder Type** – Select the type of Circuit Adder to add, from the drop down list of those available on your system.

The FleX-Net™ system supports 3 types:

- 8 Input Adder - 8 Ckts:  
Will add additional DM-1008A Input Module with 8 Class B (4 Class A) Input Circuits.
- Supv Opt. Adder - 4 Ckts:  
Will add a SGM-1004A Signal Module with 4 Supervised Output Circuits.
- Relay Opt. Adder - 8 ckts:  
Will add RM-1008A Relay module with 8 Relay circuits.

After the operation is complete the dialog remains open for re-use.

**Close** - Press to dismiss the dialog.

**Note:** Some products have a fixed number of conventional circuits and the user cannot delete them or add more.

### **Examples:**

Add 8 Input Adder - 8 Ckts:

Will add additional DM-1008A Input Module with 8 Class B (4 Class A) Input Circuits

Add Supv Opt.adder 4 Ckts:

Will add a SGM-1004A Signal Module with 4 Supervised Output Circuits

Add Cntct Opt - 8 ckts:

Will add RM-1008A Relay module with 8 Relay circuits.

### **Custom Sub Types**

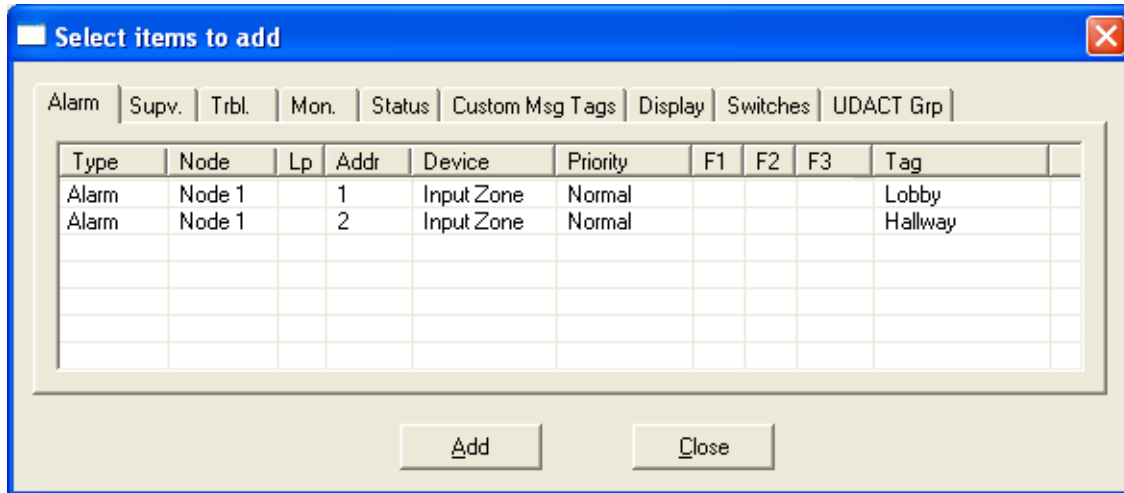
There are 16 Custom SubTypes for each circuit. Each circuit can have a custom subtype assigned which then can be exported to OpenGN. In OpenGN when events in the system are reported, it shows the custom subtypes assigned instead of just the device types.

Custom Sub Types are used only for OpenGN reports. For example, input module, it can have Manual Station, Monitor Input, Flow Switch, Low Pressure, Low Temperature, etc...



## Add Correlations

This dialog is displayed in response to the Add Correlations command.



The dialog shows a tab for every category of circuit or display item, etc. that can be correlated to the items selected in the top, right pane view of the user interface. The tab categories mirror those of the Correlations View.

The content of each tab is dynamically updated as correlations are added or deleted so that the dialog always shows only the items that are available.

The correlation view and the add correlations dialog are also synchronized: when a tab is selected on one the corresponding tab is activated on the other.

Select the items to be correlated (hold down the Ctrl key and right click the mouse to select multiple rows) and click the Add button.

The dialog remains open and more correlations can be made, selecting items from other tabs if necessary. The dialog remains open when another target is selected in configurator's top, right pane.

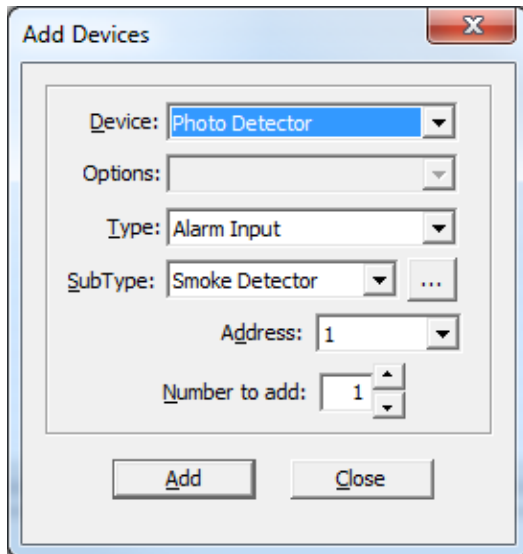
Click the Close button to dismiss the dialog.

## Add Device

This dialog is displayed in response to an Add Device command, which is available when an Addressable Loop is selected in the Job Tree.

(**Input zones** and **Output Groups** are also treated as a special kind of device and are added using the same dialog - refer to the Add Zone Dialog and Add Group Dialog.)





**Device:** is the major devices list, with choices such as Photo Detector, Ion Detector, Supervised Output Module, etc.

**Options:** Currently only used with AP devices to select what type of base (normal, sounder, etc.) the device is mounted in.

**Type:** is the type of device (e.g. Alarm, Supervisory, etc.) being added. The list of available device types in the combo box is adjusted according to the Device field.

**SubType:** is the attribute of the Device Type. Combo box is adjusted according to the Device. Many devices have no SubType.

**Address:** in this field you can specify the address for the new device. (The address set here will be one of the first four types described in Address Scheme according to the Device Type selected. Any virtual address(es) required will be added automatically.). This defaults to the lowest available address for the chosen type.

**Number to add:** You can specify how many devices to add by changing this value. The configurator will attempt to allocate the devices sequentially, starting with the address you selected. If there are insufficient sequential addresses you will be shown a message with three options. "Yes" tells the configurator to continue adding devices, starting at the next available address and continuing to do so each time it runs out of sequential addresses. "No" tells it to add as many as will fit and stop. "Cancel" tells it to stop without adding any devices.

The dialog remains open so that you can add more.

Click **Add** to continue.

After the operation is complete the dialog remains open for re-use. The Address value is adjusted to account for the devices just added.



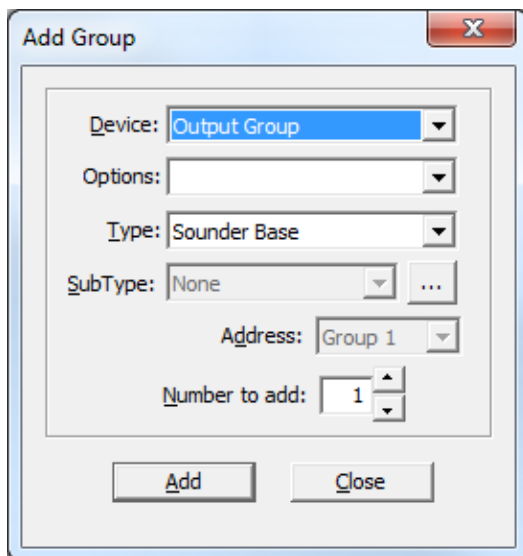
If at any time during the transaction there are no more available addresses, the entire transaction is rolled back. No devices will have been added.

If there are no available addresses for the chosen Type then the Add button is disabled. You can select another type, or close the dialog.

The **Close** button dismisses the dialog.

## Add Group

This dialog is displayed in response to an Add Groups command, which is available when Output Groups is selected in the Job Tree.



**Device:** is the Device Type, currently only Output Group is available.

**Options:** Currently not used.

**Type:** is the type of device (Sounder Base, Relay Base or Output Module) being Grouped.

**SubType:** Currently not used.

**Address:** assigned automatically. Currently not editable.

**Number to add:** You can specify how many groups to add.

Click **Add** to continue.

After the operation is complete the dialog remains open for re-use. The Address value is adjusted to account for the devices just added.

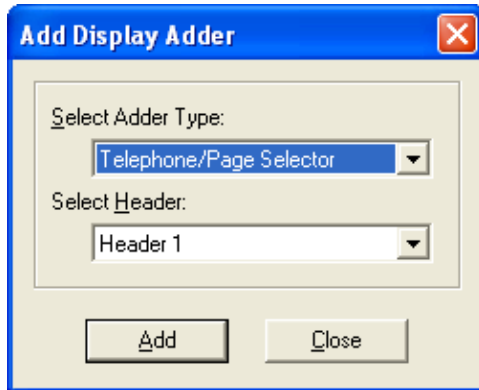
The dialog remains open so that you can add more.



The **Close** button dismisses the dialog.

## Add Display Adder

This dialog is displayed in response to an Add Display Adder command, which is accessible when a Main Display or Remote Annunciator is selected in the Job Tree.



**Select Adder Type** - This control lists valid adder types.

The list only shows adder types that are allowed for the chosen annunciator.

**Select Header** - This control lists the headers (connectors) of the annunciator.

You may distribute display adders among the headers if an annunciator lists more than one.

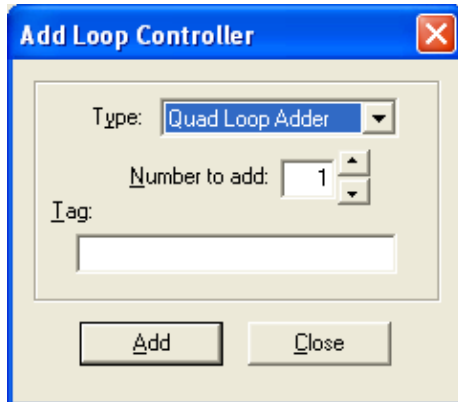
**Add** - Press Add to insert an adder of the selected type. The Job Tree will be updated to show the new adder. If the frame limit for the annunciator/header is exceeded an error message will be displayed. Some Adders consume two or three frames.

The dialog remains open for adding more Display Adders. Press **Close** to dismiss the dialog.



## Add Loop Controller

This dialog appears in response to an Add Loop Controller command.



**Type** - Choose the type of adder you want to add. Different products may list different options. Only the Quad Loop Adder is available in FleX-Net™ jobs.

**Number to add** - Enter the number of loop controllers you want to add. You can have a maximum of 7 Quad Loop Adders per node, 6 if an Audio Controller is used.

**Tag** - Enter the optional tag to describe the loop controller.

Click **Add** to continue.

Loop controllers will be added, up to the capacity of the target panel. If the capacity would be exceeded a message is displayed and the operation is stopped after the configurator has added as many Loop Controllers as it can. If a tag was specified and more than one loop controller was added, they will all receive the same tag. Tags can be edited in the Loop Controller Information view

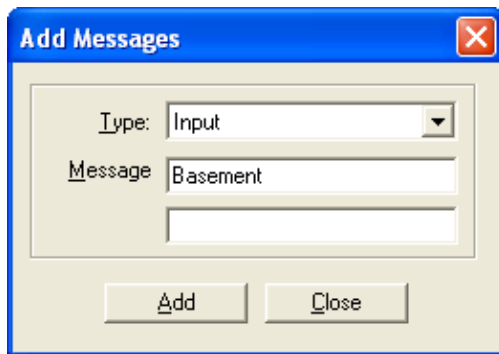
The dialog remains open so that you can add more.

Press **Close** to dismiss the dialog.



## Add Message

This dialog is displayed in response to an Add Message command, which is available when Custom Messages is selected under a LCD Annunciator.

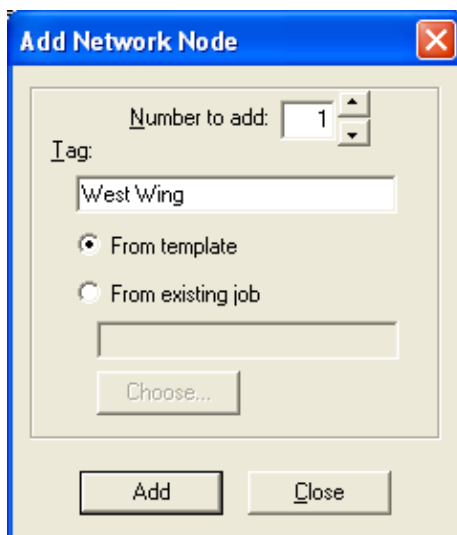
The 'Add Messages' dialog box has a blue title bar with a close button. It contains a 'Type' dropdown menu set to 'Input', a 'Message' text field containing 'Basement', and an empty text field below it. At the bottom are 'Add' and 'Close' buttons.

You can select from Input or Output Type. The Add button is disabled until you type at least one character into the first row of the Message fields. You can type a maximum of 40 characters - 20 in each of the two fields.

The dialog remains open so that you can add more.

## Add Network Node

This dialog is displayed in response to an Add Network Node command.

The 'Add Network Node' dialog box has a blue title bar with a close button. It contains a 'Number to add' spinner box set to '1', a 'Tag' text field containing 'West Wing', and two radio buttons: 'From template' (selected) and 'From existing job'. Below the radio buttons is an empty text field and a 'Choose...' button. At the bottom are 'Add' and 'Close' buttons.

**Number to Add** - Select the number of network nodes to add. Defaults to one. You can have a maximum of 63 nodes in a network.

**Tag** - the name or description for the new network node.



**From Template** – Selecting this radio button adds a standard, blank node.

**From existing Job** – Selecting this radio button opens the job selection window from which you can select any node on any job in the library to use as a pattern for your new node.

Click **Add** to continue.

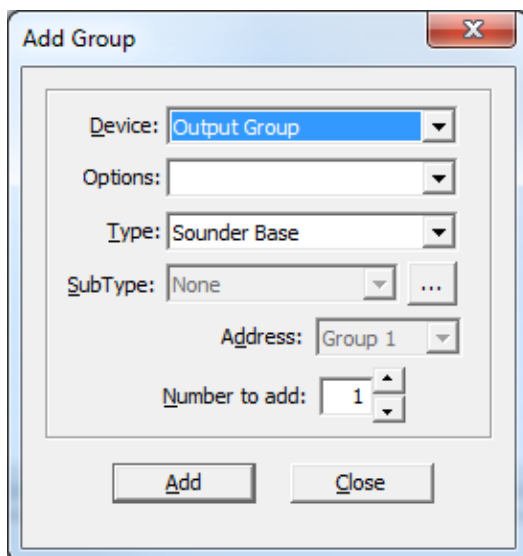
The next available Node Address will be allocated. This can be edited later. If the capacity would be exceeded a message is displayed and the operation is stopped after the configurator has added as many nodes as it can. If a tag was specified and more than one loop controller was added, they will all receive the same tag.

The dialog remains open so that you can add more.

The **Close** button dismisses the dialog.

## Add an Output Group

This dialog is displayed in response to adding a group when "Output Groups" in the Job Tree is selected. Input zones are also treated as a special kind of device and are added using the same dialog.



**To open up this dialog box:**

1. Click **Output Groups** in the **job tree** under **Base I/O**.
2. Click **Insert** in the menu bar, then click **Add Groups**.
3. In the Device menu, select **Output Group**.
4. In the Type menu, select **Sounder Base**, **Relay Base**, or **Output Module**.



5. Click **Add**.

**Note:** After the operation is completed, the dialog box will remain open for re-use. The address value is adjusted to account for all the devices added. If at any time during the operation there are no more available addresses, the operation will be rolled back and there will be no change.

### Information on each category in the dialog box.

**Device:** Automatically set to Output Group since an Output Group is being added.

**Type:** Lists the choices of Sounder Base, Relay Base, and Output Module.

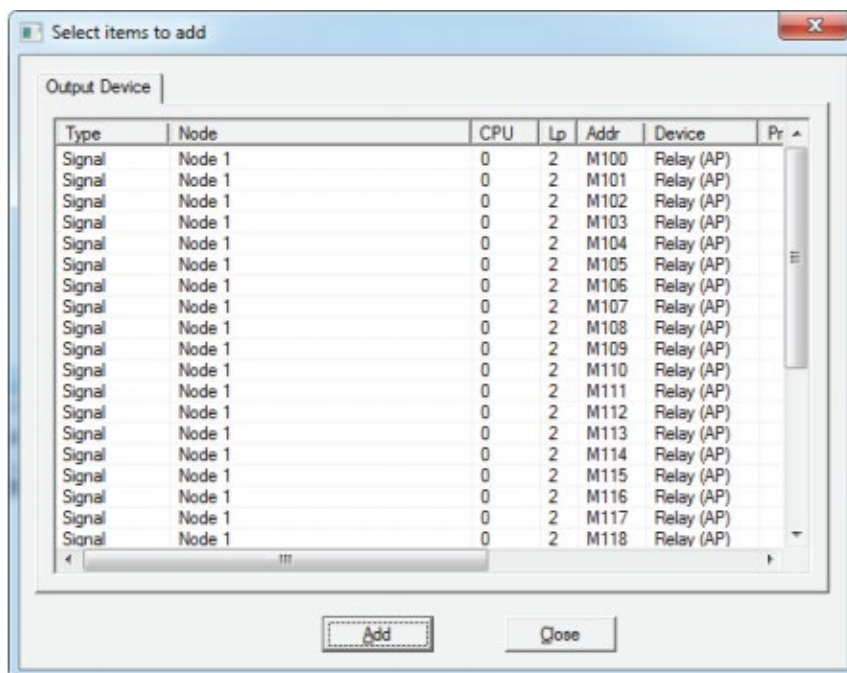
**Address:** Defaults to the lowest available group. Not editable.

**Numbers to add:** specify how many groups to add by changing the value in this box.

### Group Output Devices Together

1. Select a output group in the top pane which the devices will be grouped in.
2. Click **Insert** in the menu bar, then click **Add Correlations**.

The **Select items to add** window will appear.



3. Select which output devices you want to add. To select more than one device, hold down the Ctrl key and click on the devices.



**Note:** If you selected **Sounder Base** in the Type menu, then you can only add Sounder Base (AP) devices. If you selected **Relay Base** in the Type menu, then you can only add Relay Base (AP) devices. If you selected **Output Module** in the Type menu, then you can only add Control (AP), Six Relay Control (AP), and Relay (AP) devices.

4. Click **Add**.
5. Click **Close**.

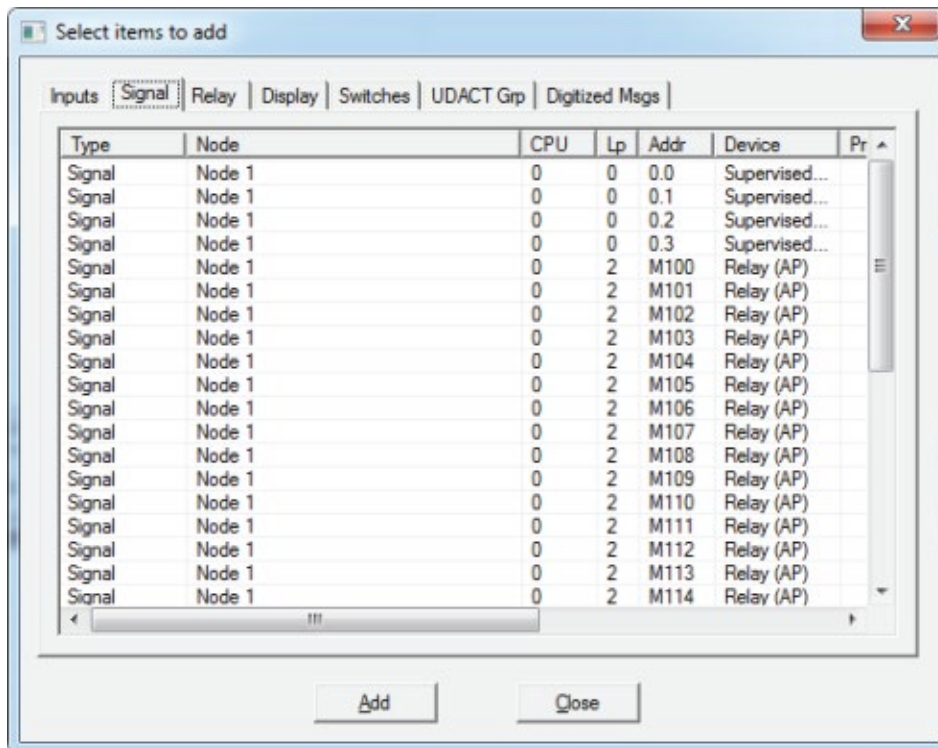
### Correlate Output Devices to an Input Zone

To configure output devices so that they activate simultaneously when they are triggered by an input, you must also correlate the output devices to an input zone.

**Note: The list of outputs in the output group must match the list of correlated to the input zone.** If the input zone contains more outputs than there are in the output group, then the outputs that are not in the output group will not activate simultaneously when they are triggered by the input. However, if the output group contains more outputs than there are in the input zone, no outputs will activate simultaneously.

1. Select the input zone that you want to add the output devices to.
2. Click **Insert** in the menu bar, then click **Add Correlations**.

The **Select items to add** window will appear.



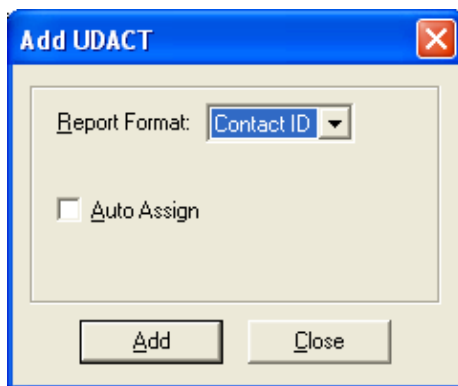


3. Select the **Signal** tab for Control (AP) and Sounder Base (AP) devices, and select the **Relay** tab for Relay (AP) devices.
4. Select the same output devices that you added to the output group when grouping them. To select more than one device, hold down the Ctrl key and click on the devices.
5. Click **Add**.
6. Click **Close**.

If the output devices are both in an output group and correlated to the input zone, they will activate simultaneously when the input zone activates.

## Add UDACT

This dialog is displayed in response to an Add UDACT command, which is available when any part of any node is selected in the Job Tree. The UDACT will be added to the node that is selected.



**Report Format** - Choose from Contact ID, SIA300 and SIA110. This is used only to set limits on the UDACT Ref ranges.

**Auto Assign** - This option will automatically assign a UDACT group of the correct type for every Input Zone and Output Circuit.

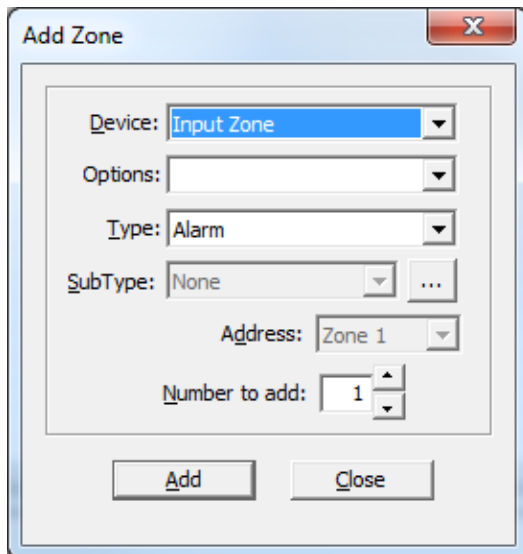
Click **Add** to continue. The dialog will automatically close.

The **Close** button dismisses the dialog.



## Add Zone

This dialog is displayed in response to an Add Zone command, which is available when Input Zones is selected in the Job Tree.



**Device:** is the Device Type, currently only Input Zone is available.

**Options:** Currently not used.

**Type:** is the type of zone (Alarm, Supervisory, Trouble, or Monitor) being added.

**SubType:** Currently not used.

**Address:** assigned automatically. Currently not editable.

**Number to add:** You can specify how many zones to add. Maximum is 999 per job.

Click **Add** to continue.

After the operation is complete the dialog remains open for re-use. The Address value is adjusted to account for the groups just added.

The dialog remains open so that you can add more.

The **Close** button dismisses the dialog.



## Address Scheme

The configurator currently uses a sophisticated addressing scheme designed to avoid conflicts with virtual devices. The different types of address are described below:

- **nn** a two digit number is the legacy addressing format for a CLIP sensor.
- **1nn** a two digit number with a 1 in front of it is the legacy addressing scheme for a CLIP module. The actual address on the device will match the two digits after the 1.
- **nn.1nn** a two digit number with a decimal number starting with 1 followed by the two digit number on the left of the decimal is the new addressing scheme for the virtual device of a dual address CLIP module (like the Dual COPTIR). The actual address on the device will match the two digits after the 1.
- **Bnnn** a three digit number with a B in front is the new addressing scheme for a Sounder Base or a Relay Base attached to an AP sensor. The actual address on the mounted device will match the three digits after the B.
- **Mnnn** a three digit number with an M in front is the new addressing scheme for an AP module. The actual address on the device will match the three digits after the M.
- **Snnn** a three digit number with an S in front is the new addressing scheme for an AP sensor. The actual address on the device will match the three digits after the S.
- **Vnnn** a three digit number with a V in front is the new addressing scheme for a virtual device attached to an AP sensor. The actual address on the device will match the three digits after the V.
- **Wnnn** a three digit number with a W in front is the new addressing scheme for a virtual device attached to an AP module. The actual address on the device will match the three digits after the W.
- **Wnnnn** a four digit number with a W in front is the new addressing scheme for virtual devices attached to an AP module that requires more than one virtual device. The actual address on the device will match the first three digits after the W with the fourth digit representing the virtual devices sub address.



## Advanced Panel Information Dialog

To access this dialog, select Panel Information from the Panel Menu, and then click on the Advanced button.

This dialog polls all the nodes and CPUs on the panel and checks their status against the configuration. This dialog is available from the Panel Information dialog, which is open by a command on the Panel Menu.

The following information is displayed for each CPU on the network:

- Node
- CPU/Address
- Type - CPU Type
- Version - current firmware version (n/a for RA1000)
- Language - language in firmware (standard messages/menu etc.)
- HW Type - "BF\_Base" or "Exp. Master" for the Large board
- HW Vers - currently always VX.X.X
- Status - one of the following
  - Online
  - Not responding
  - Wrong type (configured as "xxxx" )
  - Unconfigured CPU
  - Firmware version mismatch.
  - Address mismatch (configured as node xx).
  - Offline trouble: xxx xxx
- Config Version GUID



## Node Control (Request/Grant/Deny)

### Functionality overview

As per *Section 4.16.1 of the ULC standard* the Voice Alarm Feature (Paging), the phone system and some manual control switches should only be operated from one location at any given time. In a multi-node setup, this is accomplished by having a display and control centre take over control of the system. Indication at the rest of the centres is provided as to which is in control.

Furthermore, centres which are not currently in control can make a request to take ownership of the system. It is up to the operator at the controlling centre to decide whether or not control shall be transferred. A means for fail-safe auto-transfer from one command centre to another should also be provided.

### System configuration

The following is required at every control centre:

QAZT-5302DS switch adder

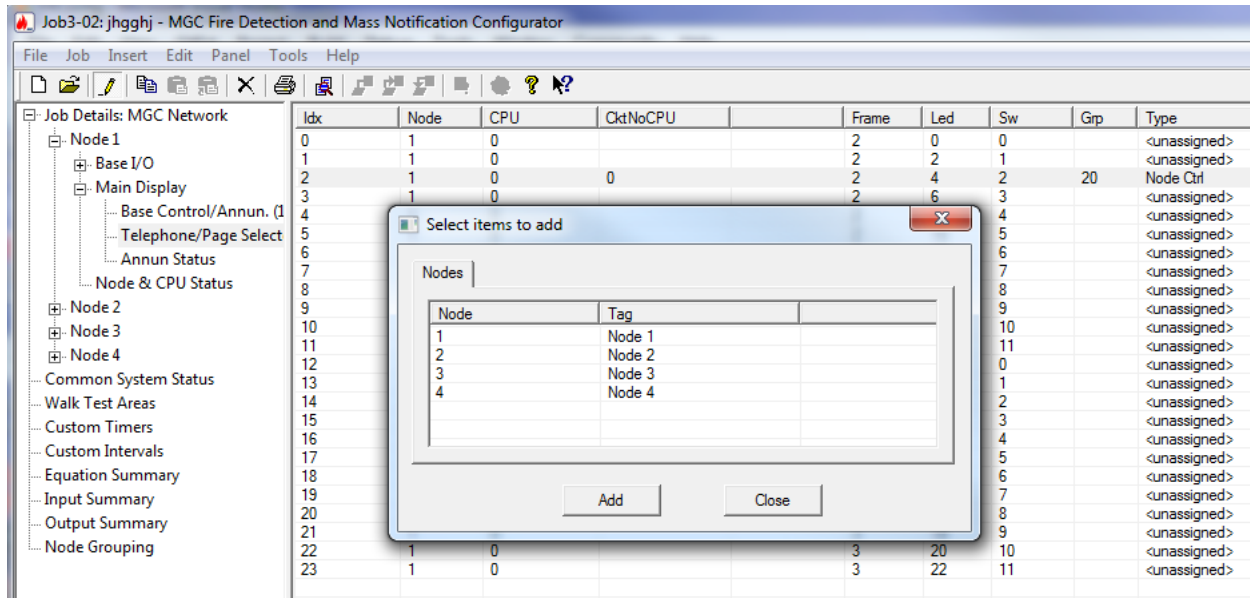
- A switch correlated to the local node:
  - Used for requesting and releasing control at this node
  - When the green LED for this switch is OFF, the node is not in control, when it is ON the node is control
- Switches correlated to all remote control centres:
  - Used for granting control to remote nodes
  - When the green LED for any of these switches is blinking, the corresponding node is requesting control

Procedure for configuring a Node Control switch in Configurator:

- Add a Telephone/Page Selector display adder
- Select a switch and set its type to Node Ctrl
- Right click on the switch, select Add Correlations and choose a node from the list



## Configuring a switch for Node Control:



User is responsible for selecting which features shall be locked when a node is not in control. This is done by adding the *ER flag* to the switches for these features - see Loop Detail.

### Node states

Nodes in the system can be in one of the following three states:

**Idle:** This is the state a node goes into after Network Restart or when it is initially powered on. This state indicates that no node is currently in control. Control will be granted to the first node that requests it.

**Not in control:** This state indicates that a remote node is currently in control. Events generated by all switches with the *ER flag* set will generate the error message: "Switch Disabled. Node Control Required." on the LCD display where the button was pressed and cause no other effect on the panel.

**In control:** This node owns control. Access to all features and manual control switches is granted.

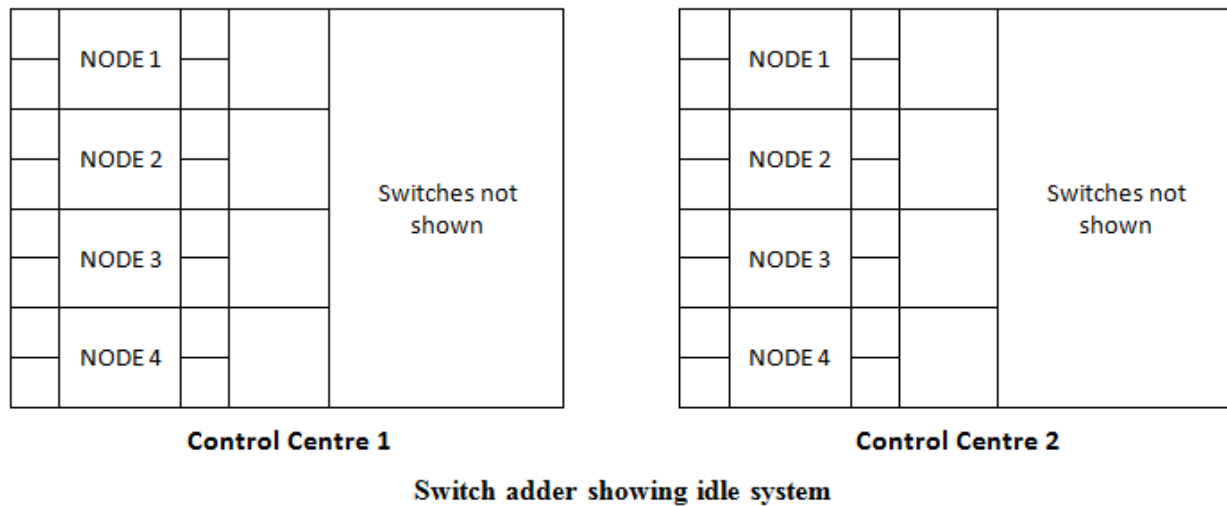
**Note:** There is a timer that is started with every request for control. When it expires the request for control is canceled if it has not been granted before the timer expires. The duration of this timer is set by the user with the "Node Ctrl request timeout (Secs)" variable in the *Timers* section of the Job Details. Default value is 30 seconds.



## Requesting control

### Scenario 1: Idle System

Example: The system is Idle and a user on Node 1 wishes to access a function which is restricted by Node Control. The user presses the local Telephone/Page Selector switch that has been correlated with Node 1. Since the system is idle, control is granted automatically. The LEDs correlated with Node 1 control illuminate steadily everywhere on the network and Node 1 has control of the system and access to all functions restricted by Node Control.



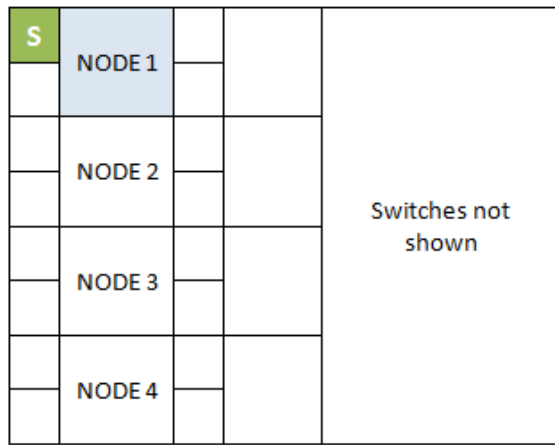
When the system is idle control is granted on first come first serve basis. Sequence of operation:

- User presses the switch correlated to the node he is at
  - Control is automatically granted
  - Green LEDs start blinking to indicate that a node is requesting control

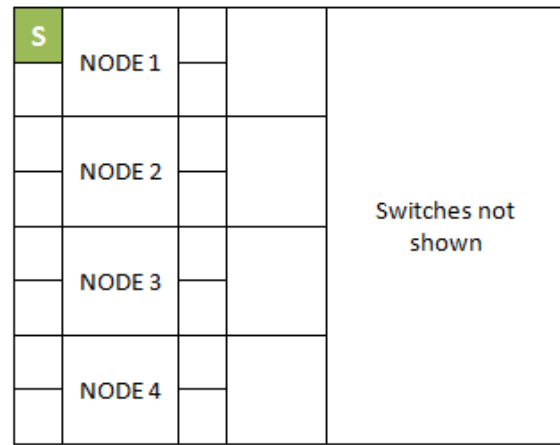
### Scenario 2: Non-Idle System

Example: Node 1 has control, as in the previous example, and a user on Node 3 wishes to access a function which is restricted by Node Control. The user at Node 3 presses the local Telephone/Page selector switch that has been correlated with Node 3. The LEDs correlated with Node 3 control begin to blink everywhere on the network, indicating a request for control from Node 3.





**Control Centre 1**



**Control Centre 2**

**Switch adder after Node 1 is in control**

When the system is not idle control has to be explicitly granted to the requesting node by the node currently in control. Sequence of operation:

- User presses the switch correlated to the node he is at
  - Transfer of control is requested
  - Green LEDs start blinking to indicate that a node is requesting control

**Note:** There is a timer which is started when a node requests control. The request expires when this timer times out. The timer is set by the “Node Ctrl request timeout (Secs)” variable on the Job Details page. The timer can have any value between 30 and 60 seconds.

**Scenario 3:** Controlling node surrenders control without passing it to a requesting node

If requests are pending and the controlling node loses control without passing it (by pressing it's own button or being disconnected) the current requests are cleared. Sequence of operation:

- Controlling node loses control without passing it
  - Control reverts to first come first serve
  - Green LEDs turn OFF on all the node switches that were requesting control
- User presses the switch correlated to the node he is at
  - Control is automatically granted (see the Figure *Switch adder showing idle system* at Scenario 1)
  - Green LEDs turn ON solid to indicate which node is control



Example: The user at Node 3 has control of the system and is finished using the functions that are restricted by Node Control. The user wishes to automatically grant control to the next user who needs it, so the user presses the local Telephone/Page Selector switch that is correlated with Node 3 (the LED of which is illuminating steadily). By pressing that switch, the user surrenders control of the system without passing it to any pending request. All Node Control LEDs on the network go dark and the system returns to the Idle state (described in Scenario 1).

## **Granting control**

**Scenario 4:** Transfer of control from one node to another Sequence of operation:

- User A presses the switch correlated to the node he is at
  - Transfer of control is requested (see the Figure *Switch adder after Node 1 is in control* at Scenario 2)
  - Green LEDs start blinking to indicate that a node is requesting control
- User B acknowledges the request by pressing the switch correlated to the requesting node
  - Control is transferred to the requesting node:



|   |        |  |  |                    |
|---|--------|--|--|--------------------|
| S | NODE 1 |  |  | Switches not shown |
|   |        |  |  |                    |
| B | NODE 2 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 3 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 4 |  |  |                    |
|   |        |  |  |                    |

**Control Centre 1**

|   |        |  |  |                    |
|---|--------|--|--|--------------------|
| S | NODE 1 |  |  | Switches not shown |
|   |        |  |  |                    |
| B | NODE 2 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 3 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 4 |  |  |                    |
|   |        |  |  |                    |

**Control Centre 2**

#### System state when Node 2 requests control

|   |        |  |  |                    |
|---|--------|--|--|--------------------|
|   | NODE 1 |  |  | Switches not shown |
|   |        |  |  |                    |
| S | NODE 2 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 3 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 4 |  |  |                    |
|   |        |  |  |                    |

**Control Centre 1**

|   |        |  |  |                    |
|---|--------|--|--|--------------------|
|   | NODE 1 |  |  | Switches not shown |
|   |        |  |  |                    |
| S | NODE 2 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 3 |  |  |                    |
|   |        |  |  |                    |
|   | NODE 4 |  |  |                    |
|   |        |  |  |                    |

**Control Centre 2**

#### Control is transferred from Node 1 to Node 2

- Green LEDs of the granted node stop blinking and turn ON solid
- Green LEDs of the previously in control node extinguish

Example: Node 1 has control, and a user on Node 3 wishes to access a function which is restricted by Node Control. The user at Node 3 presses the local Telephone/Page selector switch that has been correlated with Node 3. The LEDs correlated with Node 3 control begin to blink everywhere on the network, indicating a request for control from Node 3. The user at Node 1 sees the blinking LED and has finished using the function which is restricted by Node Control. The user at Node 1 presses the Telephone/Page Selector switch that is correlated to node 3, granting control to Node 3. The blinking LEDs on the switches correlated with Node 3 begin to illuminate steadily and The LEDs correlated with Node 1 go dark. The user at Node 3 now has access to all of the functions that are restricted by Node Control and the user at Node 1 can no longer use them.

### Modes of operation

Nodes in the system can operate in any of the following modes:

**Normal:** This is the default mode of operation. In a multi-node setup it indicates that a node can communicate with the rest of the nodes in the system.



**Degraded:** In a multi-node setup a cluster of nodes can get disconnected from the rest of the system if the communication links are broken. When that happens, the nodes in each group enter degraded mode of operation. Following Figure shows two clusters of nodes that were initially part of the same system.



**Two clusters of nodes in degraded mode of operation that were initially part of one system**

**Standalone:** When a node gets completely isolated from the rest of the system it enters standalone mode of operation. The rest of the nodes go into degraded mode of operation - see following Figure.



**A group of nodes in degraded mode and one node in standalone mode of operation**

The following scenarios illustrate how the system will behave under various conditions.

**Scenario 5:** Disconnected node is not currently in control

- 5-Node system
- Node 2 is in control
- Node 5 gets disconnected - refer to the Figure *A group of nodes in degraded mode and one node in standalone mode of operation* above

When Node 5 gets disconnected, it begins to operate independently of the rest of the system and enters the idle state since it is not in communication with any controlling node. Therefore, the degraded cluster enters the idle state and control will be automatically



granted when requested at that node. Node 2 continues to hold control since it is still connected to nodes 1,3 and 4.

#### Scenario 6: Disconnected node is currently in control

- 5-Node system
- Node 5 is in control
- Node 2 gets disconnected - refer to the Figure A *group of nodes in degraded mode and one node in standalone mode of operation* above

When Node 5 gets disconnected, nodes 1,2,3 and 4 are still in a network and none of them is in control. Therefore, control will be granted on first come, first serve basis. Node 5 begins to operate in a standalone mode and continues to hold control.

#### Scenario 7: Network heals

- 5-Node system
- Node 2 gets disconnected - refer to the Figure A *group of nodes in degraded mode and one node in standalone mode of operation* above
- Node 5 gets reconnected

When Node 5 gets disconnected, nodes 1,2,3 and 4 are still in a network and none of them is in control. Therefore, control will be granted on first come, first serve basis. Node 5 begins to operate in a standalone mode. If the connection between Node 5 and the rest of the network is restored, all the nodes (if any) which were previously in control will automatically lose it, even if there is only one node in control of the healed network. All nodes will be put into idle state. Control will be granted on first come, first serve basis.

The current mode of operation of a node is indicated by an LED. Such LED can be configured on a 48 LED adder with Type=Node Status, Assignment=Node ModeOfOperation and a correlation to the local node.

Job3-02: jhggj - MGC Fire Detection and Mass Notification Configurator

| Idx | Node | CPU | CktNo... | Frame | Led | Sw | Grp | Type         | Assignment        | Node Gr |
|-----|------|-----|----------|-------|-----|----|-----|--------------|-------------------|---------|
| 0   | 1    | 0   |          | 4     | 0   |    |     | <unassigned> |                   |         |
| 1   | 1    | 0   |          | 4     | 2   |    |     | <unassigned> |                   |         |
| 2   | 1    | 0   |          | 4     | 4   |    | 22  | Node Status  | Mode of Operation |         |
| 3   | 1    | 0   |          | 4     | 6   |    |     | <unassigned> |                   |         |
| 4   | 1    | 0   |          | 4     | 8   |    |     | <unassigned> |                   |         |
| 5   | 1    | 0   |          | 4     | 10  |    |     | <unassigned> |                   |         |
| 6   | 1    | 0   |          | 4     | 12  |    |     | <unassigned> |                   |         |
| 7   | 1    | 0   |          | 4     | 14  |    |     | <unassigned> |                   |         |
| 8   | 1    | 0   |          | 4     | 16  |    |     | <unassigned> |                   |         |
| 9   | 1    | 0   |          | 4     | 18  |    |     | <unassigned> |                   |         |
| 10  | 1    | 0   |          | 4     | 20  |    |     | <unassigned> |                   |         |
| 11  | 1    | 0   |          | 4     | 22  |    |     | <unassigned> |                   |         |



LED states meaning:

- OFF – normal
- Solid - degraded
- Blinking - standalone

Naturally, the LED will not accurately indicate the condition (for example degraded vs. standalone) of a node that is not in communication with the node the LED is located on.

## Node Grouping

Node grouping is a way of isolating nodes from each other. Nodes that belong to one group are isolated from nodes that belong to another group. Alarms and troubles that occur in one group are not annunciated on the nodes of another group.

The Job Tree Node Grouping view allows user to view/create/delete node groups and make node a member of one or more groups. Nodes that belong to one Group will be isolated from nodes that belong to another group. This means that alarms and troubles that occur within one group are not annunciated on the nodes of another group. For example, in the case of a two tower complex, the DGP nodes of the North Tower would be placed in the North group and the DGP nodes of the South Tower would be placed in South group. If there is a CACF Node in a common area (e.g. a lobby) it could be placed in both groups. Alarms, Fire Dill activation, etc. initiated in the North Tower would not be transmitted to the South Tower and vice versa. The CACF, because it is a member of both groups, will receive and annunciate events from both towers.

In a combined fire and Mass Notification System (M.N.S.) installation Node Grouping can be used to separate the M.N.S. nodes of from those nodes supporting fire. Create two Groups, Fire and M.N.S. Place the nodes to which the fire devices are connected in the Fire group. Place those nodes that support M.N.S. in the M.N.S. group. Priority can be given to either MNS or Fire depending on the results of the client's risk analysis. For example, if it was determined that M.N.S. has priority over fire, then all M.N.S. controls must be given a higher priority than fire inputs. See Input Zones and Display Adders for details on setting priorities.

### Creating node groups and adding nodes to groups

1. Create two nodes, and give them appropriate tags, for example **Fire Panel** and **MNS Panel**.
2. In the left pane, select **Node Grouping**.
3. Click **Insert - Add Group**.
4. Type a name for the group, for example **Fire Group**, and then click **OK**.







## Deleting a group

1. Right-click the group then click **Delete Group**
2. Click **OK**.

**Note:** A group can only be deleted if it contains no member nodes. If the group has member nodes, the nodes must first be removed then the group can be deleted.

## Removing a node from a group

1. Double-click the **X** under the node.
2. Select the blank line in the drop-down menu.

| Group | Node 1 | Node 2 |
|-------|--------|--------|
| Fire  | X      |        |
| MNS   | X      |        |
|       |        |        |

The node is now removed from the group.

## Audio Message Composer

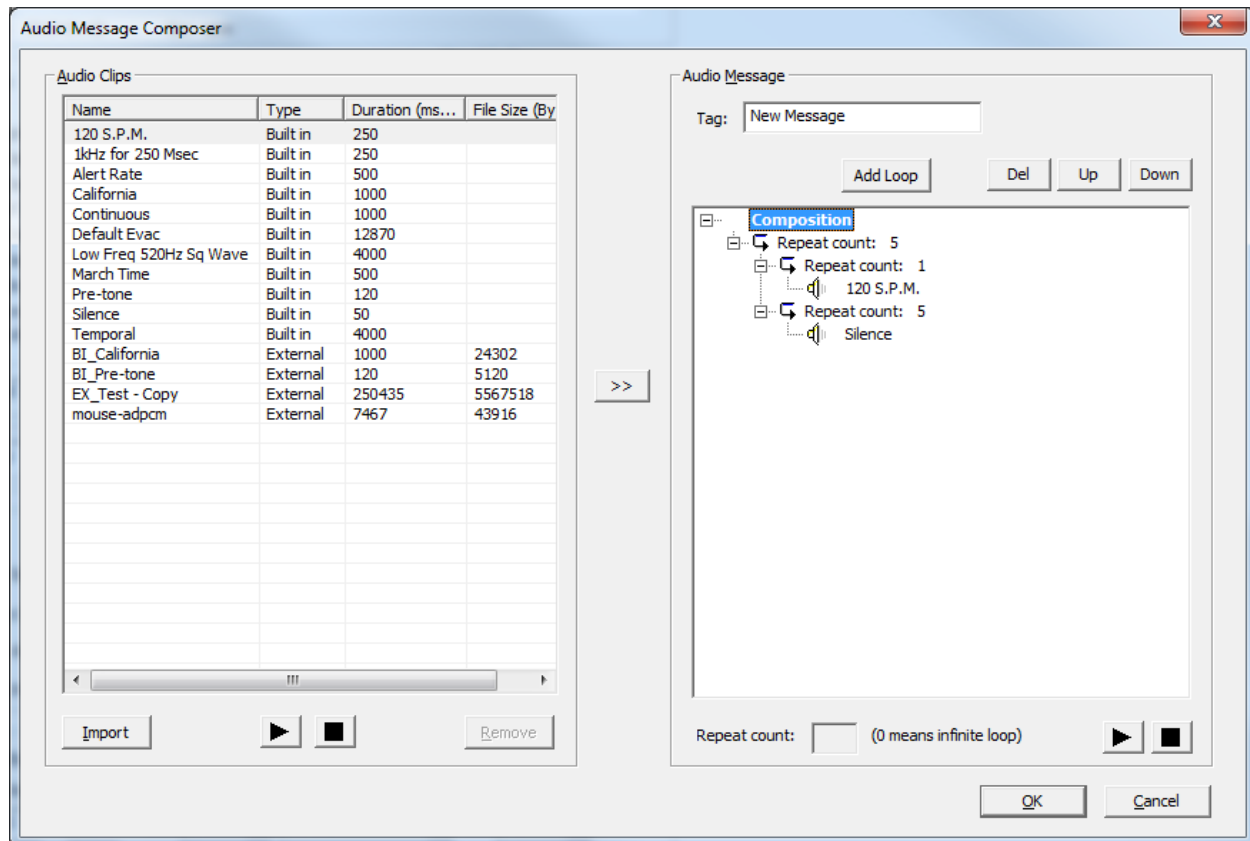
To reach this dialog you must first click on Set Up in the Audio section of the Job Details page. This opens the Audio Setup dialog. Next you must click on the "Manage Messages..." button. In the Manage Messages dialog, you either click on Add or select a custom message and click on Edit to open the Audio Message Composer dialog.

Digitized messages are composed in the form of graph tree nodes using WAV files. Maximum number of composed messages is 96. Maximum number of entries in one compose message (audio clips and repeat loops together) is 32. A collection of loops and clips describes how the wave sounds are to be combined. **Repeat count** loop property defines how many times clips under that loop shall be played. For example, a message could be composed of a sound that is played once, followed by sound that is repeated three times, and finally, a sound to conclude the message.

Once the message is inserted from the Audio Message Composer left panel (Audio Clips), it will be inserted under the loop or clip in selection on the right panel (Audio Message). If no messages are defined on the right panel there is always root node called **Composition** that is never deleted; new message in that case will be inserted under the root node Composition.



## Audio Message Composer dialog



User can define the number of repetitions in the **Repeat count** edit box (editable only for loops). Repeat forever (Repeat count = 0) should be used with care. If there are following clips, they will never be played. Repeat count value is auto populated in the loop node property upon typing in the edit box. Repeat count 0 can be entered for any loop level.

### Audio Clips

This pane lists all of the available clips, or WAV files. Some are built in to the firmware of the Audio Controller, and are listed here to be used in messages. Others were recorded by the user and imported. The Built in clips can be simple clips which the firmware uses as building or firmware messages. There are two simple built in clips: '1 kHz for 250 msec' and 'Silence'. Each clip can be played using the Play button from 'Audio Clip' section.

**Import** When this button is pressed a standard file chooser is launched. Browse to the location of a WAV file. This can be a file you have recorded, or any other suitable wave file.

They must be (.wav) files sampled at 11.025 KHz, 16-bit mono, ADPCM 4-bit. It is also possible to use RAW (or PCM) in addition to ADPCM, but since this format is not compressed it takes up more serial flash memory.

The file will be copied to the database and given a unique name (a Microsoft GUID). The file



will receive another RIFF section, to include some naming and versioning information. Once a WAV file has been imported, it will be listed in the Audio Clips and is available for use in digitized messages.

**Play** When this button is pressed it plays the selected clip.

If the type is **External**, a user's recorded WAV file is played.

If the type is **Built In** then either a single firmware WAV or a complete firmware message is played.

**Stop** This button can be pressed to stop the audio playback.

**Remove** When this button is pressed the selected clip is removed from the database. The deletion will not succeed if the clip is referenced by any message in any job on the database or if a Built In clip is selected. Once the clip is deleted it is no longer available for use in **any** job.

## Audio Message

This pane lists the WAV files and commands that comprise a message.

You can give the message a name. Refer to this name when configuring a Digitized Message switch, or for use as Alert or Evac, etc.

## Composition

Commands in the Composition list view (loops and clips) can be added, deleted and moved up and down (within the same parent node). **Add Loop** command will add a loop under the selected node. Repeat count for inserted loop is 1 by default. Maximum number of nested loops is 4.



## Del button

Del button will delete the node in selection (loop or clip) AND, if it's a loop, all its children loops and clips from the right panel. Delete called from the root **Composition** node will delete all loops and clips in the entire message collection except Composition node itself (never deleted).

## Up, Down buttons

Up, Down buttons will move the selected node (loop or clip), together with all its children nodes up and down within its sibling nodes ONLY. There is no option in the GUI to move selected node under the parent or child node. If User needs to move selected mode outside its current level, just delete it and recreate on the proper level.



Commands in the Composition list view can be played using the  button. At any time the  button can be used to stop the Composition playback.

### **Errors / Warnings**

If User constructed the message composition with loops that do not have clips under them, the error will be issued when User clicks the Play button or the OK button.

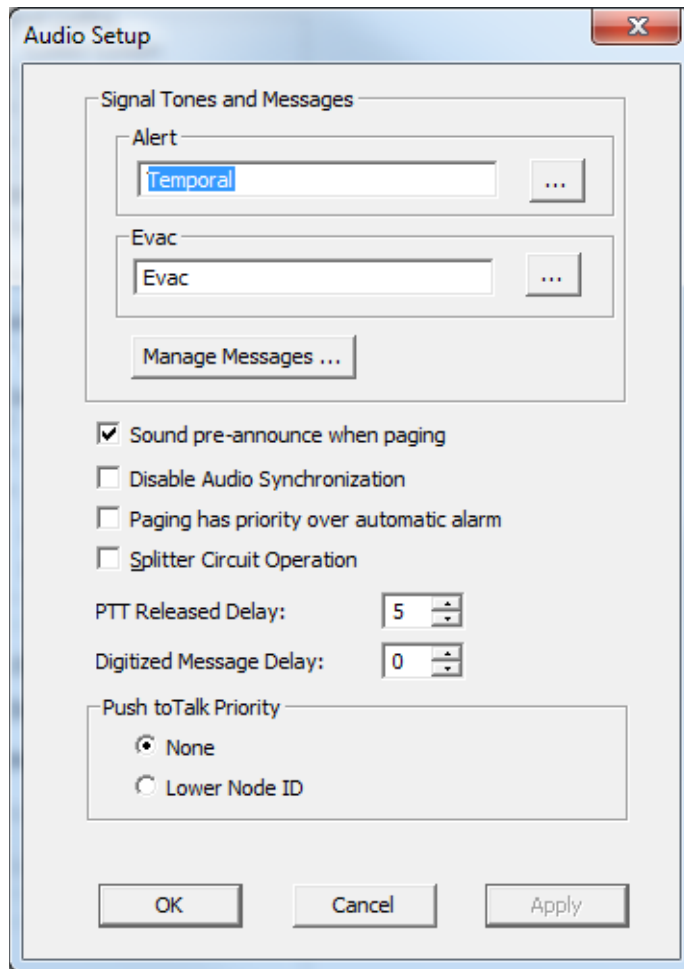
If User constructed the message composition with clips outside infinite loops (i.e. such clips will never be played), the error will be issued when User click on Play button or the OK button.

Warnings and Errors are not cascading, i.e. if there is more than just one problem in the constructed composition, only one warning/error will be displayed. Once User fixes that issue another warning/error might be displayed.



## Audio Setup

This dialog is displayed in response to clicking the Setup button in the Audio section of the Job Details page.



Alert and Evac state options – press the ... (ellipsis) button to launch the Manage Message Dialog to select which audio tone or digitized message to broadcast when the system reaches that state. You can select an existing message or create a new one. On return the selected message is assigned to the chosen Alert or Evac state.

*As per UL 864 and UL 2572 only Built-in tones or custom tones that are verified to have the standard-specific duration are permissible.*

**Manage Messages...** - also launches the Manage Message Dialog allowing you to add, delete or edit messages. These messages then become available for use here (for Alert, Evac, etc.) or to be assigned to a Digitized Message switch.

**Sound pre-announce tone when paging** – when enabled, a 900Hz pre-announce tone is sounded for 2 seconds before the paging audio source is applied. This special tone will un-silence speakers that are currently silenced.



**Disable Audio Synchronization** – when checked, audio synchronization between nodes is disabled. When un-checked audio is synchronized between the nodes.

**Paging has priority over automatic alarm** – when checked, Flex-Net™ system with paging will have priority over alarm: if PTT (PushToTalk) is active during alarm the paging is not disabled. When un-checked the paging does not have priority over automatic alarm.

**Splitter Circuit Operation** – enables the use of Class D amplifiers, used with suite silence.

**PTT Released Delay** - If strobes are correlated to the Page Ready status, such that they operate when PTT is pressed, they will continue to operate for the specified number of seconds after PTT is released, if a non-zero delay is configured.

**Digitized Message Delay** - This will cause a delay (in seconds) on the de-activation of the node and common Page Ready status when PTT is released or when a message playing on the paging channel ends. The statuses can be used to delay strobe de-activation.

**Push to Talk Priority** - Choose between None (first come, first served) and Lowest Node ID, where the PTT on the lowest addressed network node has priority over all others.

**Note:** Any data changed by the user will be recorded in the database when User clicks OK button (that closes this Dialog), or Apply button (Dialog remains opened). Cancel button will revert all User entered but not saved data.

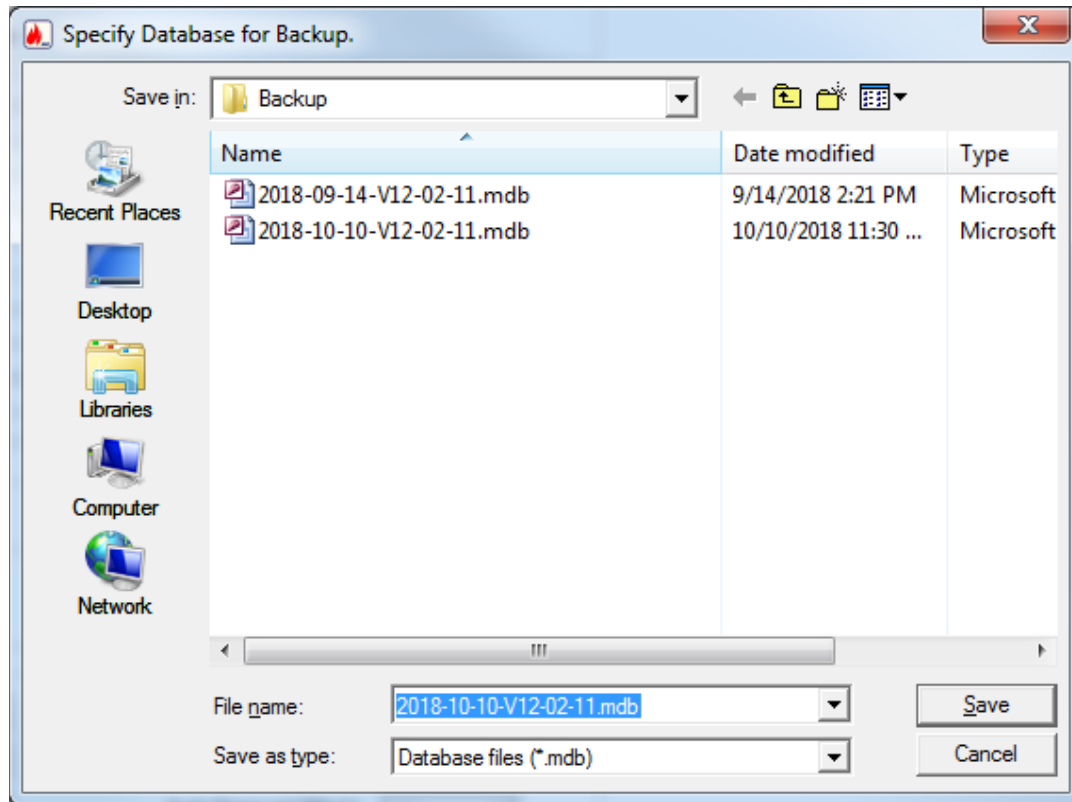
## **Backup Database**

To access this dialog, select Backup Database from the File Menu.

Backup database makes a copy of the Master Database.

By default the backup is made in the File folder specified in the User Preferences. The backup file by default will have a name of the form YYYY-MM-DD-Vnn-nn-nn.mdb (the "n"s standing in for the digits in the version number of the current configurator).





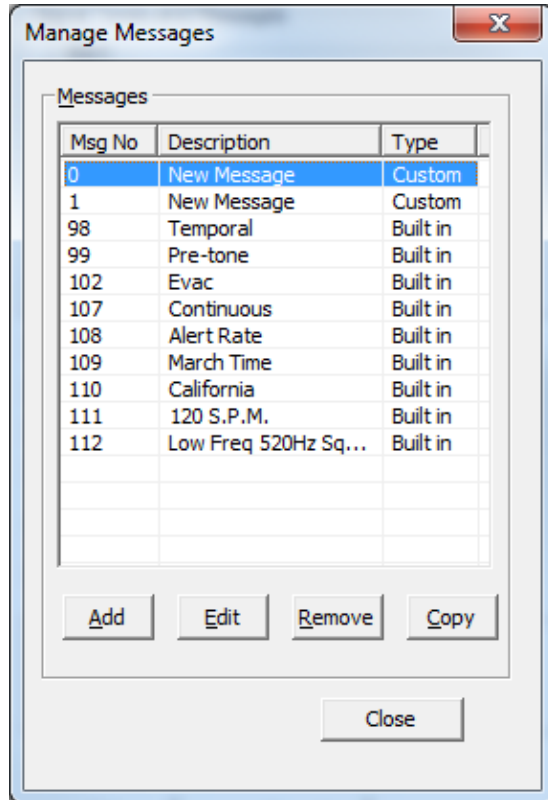
After the Backup is complete, if the Keep Only Latest Versions After Backup option of User Preferences is enabled, old versions of each job in your main database will be deleted, retaining only the latest version of each job.

The backup can be used by the Restore Database command to recover all of the jobs in the database. The Import Job command can be used to recover selected jobs from a backup. Backup your Master Database often and store a copy of the resulting file on a USB drive or other media.



## Manage Messages

To access this dialog click the Manage Message... button in the Audio Setup dialog.



It lists all of the available messages.

Some standard messages and tones are built into the firmware and can be chosen for use as Alert or Evac. They can also be built into custom messages.

Custom messages are those that the user composed by combining recorded WAV files, built in tones and looping commands.

**Add** - launches the Audio Message Composer Dialog where you can create a new message.

**Edit** - launches the Audio Message Composer Dialog where you can view or modify the selected custom message.

**Remove** - deletes the selected message. Built in messages cannot be deleted.

**Copy** - copies the selected message (prompts user to enter the 'Save As' name). Built in messages cannot be copied.



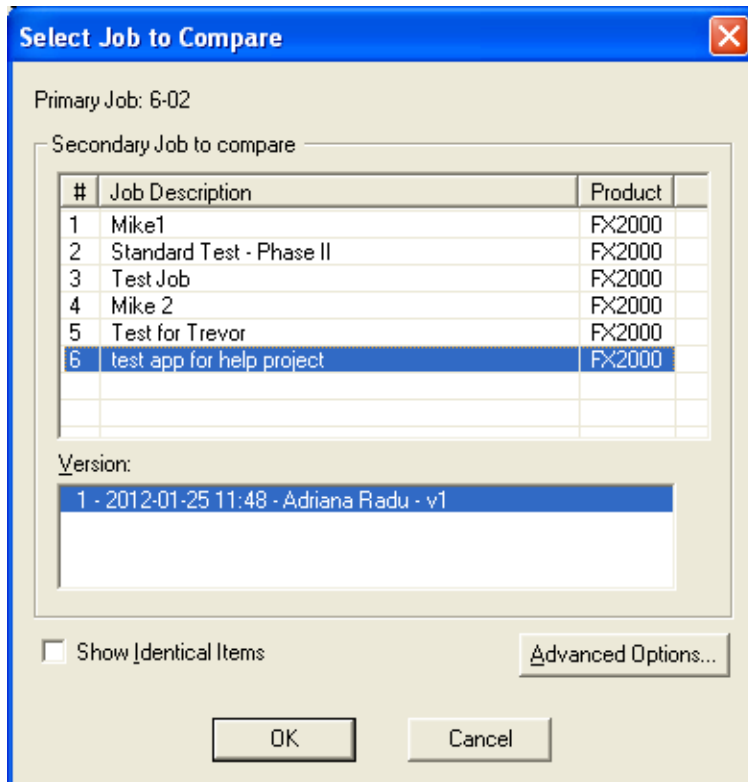
## Compact Database

A database that has been the subject of many deletions and additions can become fragmented and occupy more space than required. Compact Database executes a standard MS-Access utility to recover the space and improve performance.

Note: This may take several minutes for a large database

## Select Job to Compare

To access this dialog, select Compare Job Versions from the Job Menu.



**Primary Job** - This field reminds you which job you have already established as primary job: the base job against which the secondary job will be compared.

**Select Secondary Job: Select Version** - Use the combination of Job and Version to select the secondary job. The job defaults to the same one you established as Primary. Normally you will only need to choose a newer version of the same job. You are prevented from choosing the same Job and Version for Primary and Secondary.

Just as when establishing the primary job, you can sort the list of secondary jobs by Job Number, Description or Product.



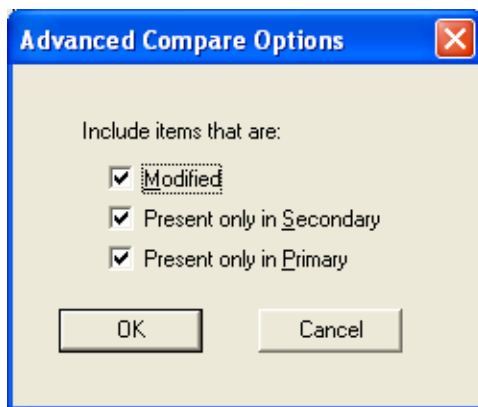
**Show Identical Items** - Check this box if you want to see not only changes, but also those items that stayed the same. Normally you will leave this un-checked. Differences are easier to see and Print generates less output if identical items are *not* included.

**Advanced Options** - When you press this button the Advanced Options dialog is launched. Here you can change some of the more advanced filtering options. They are normally all checked by default and in most situations do not need to be changed.

See How to Compare Job Versions for full details

## Compare Jobs Advanced Options

To access this dialog, click on the Advanced Options button in the Compare Job Versions dialog.



**Modified** - Check this box to include any item that has been modified. (Modified means that it is the same adder, circuit, switch, etc. but some attribute has been changed.) This box is checked by default. You would only un-check this box if you did not want to see items that have been modified.

**Present only in Secondary Job** - Check this box to include items that are only present in the secondary job. This means that Loop Adders, Annunciators, Display Adders, circuits, etc. that were not on the base job will be included. This box is checked by default. You would only un-check this box if you did not want to have new additions reported.

**Present only in Primary Job** - Check this box to include items that were only present in the primary job. This means that that Loop Adders, Annunciators, Display Adders, circuits, etc. that were removed from the primary job will be included. This box is checked by default. You would only un-check this box if you did not want to have deletions reported.

Note:

Filtering of 'Present only in Secondary' and 'Present only in Primary' do not apply when presenting the tree. The tree is shown in its entirety, regardless of these settings. The



filtering is only applied to the Device, Display Item and similar lists. It is intended to make it easy to see what components have been physically added or removed from the job.

Correlations are not considered to be items in this context. If a correlation was added, then that is effectively a modification to the item that received the correlation.

If you chose to check Present only in Secondary Job and/or Present only in Primary Job, but you do not check Modified, then the circuits, etc. that have only had correlation changes will not be included.

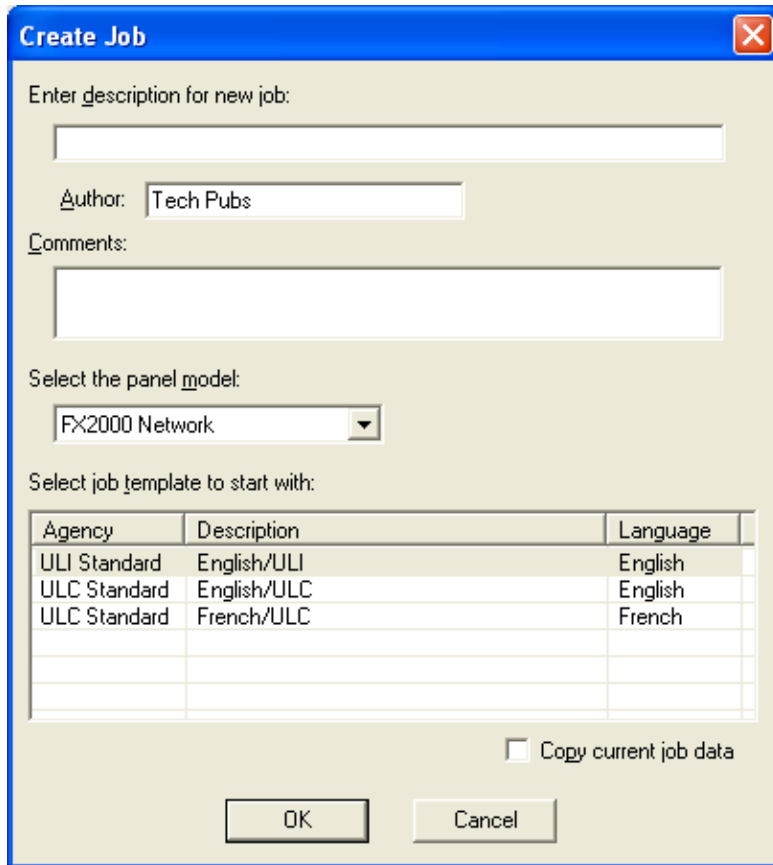
## Create Job

To access this dialog, select New Job from the Job Menu or click the New Job icon on the tool bar.

- **Enter a description for new job** This name, which should be unique, will identify the job throughout its lifetime. Note that in a multi-product environment the same job name cannot be used for jobs of different products, even if you don't currently have access to all possible products. An error message is displayed if the name is not unique. The error message will help you identify duplicates that belong to other products or brands.
- **Author** The technician who is creating the new job. The default is automatically inserted but can be overridden.
- **Comments** (Must be entered) Enter a comment. It can span multiple lines. This will become part of the job's version history.
- **Model** Choose the Panel Model for your new job.
- **Select Job Template** After you have selected a model the list view will show only templates jobs for the that model. The list view has the following columns.
  - **Agency** There are two copies of most template jobs: one for ULI and one for ULC. The new job will be pre-configured for the chosen agency, but can be subsequently changed.
  - **Description** A short description of the template job. For a given combination of Product, Agency, System Type and Language there may be more than one template job. Each is pre-configured with different features. The Description field summarizes the features.
  - **Language** If the panel firmware supports it, there may be template jobs for more than one language. e.g. English or French. For panels with multiple CPUs, this is the language of the Main CPU. The firmware must match otherwise the job cannot be sent to the panel.



- **Copy current job data** As an alternative to choosing a standard template, check this box to make a copy of the current job (which is presently open in the configurator). In this case the Panel Model and Job Template controls are disabled.



The 'Create Job' dialog box has a blue title bar with a close button. It contains the following fields and controls:

- Enter description for new job:** A text input field.
- Author:** A text input field containing 'Tech Pubs'.
- Comments:** A large text area.
- Select the panel model:** A dropdown menu showing 'FX2000 Network'.
- Select job template to start with:** A table with columns 'Agency', 'Description', and 'Language'.
- Copy current job data:** A checkbox that is currently unchecked.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

| Agency       | Description | Language |
|--------------|-------------|----------|
| ULI Standard | English/ULI | English  |
| ULC Standard | English/ULC | English  |
| ULC Standard | French/ULC  | French   |
|              |             |          |
|              |             |          |
|              |             |          |

Note: This dialog is also shown when Get Job is used to retrieve a job from the panel and no previous version of the job is stored on the database. The same dialog is used if the job name on the panel and the database are the same, but the Product is different. You will be prompted for a new, unique name. In these cases the Panel Model, Job Template and Copy current job data controls are disabled.

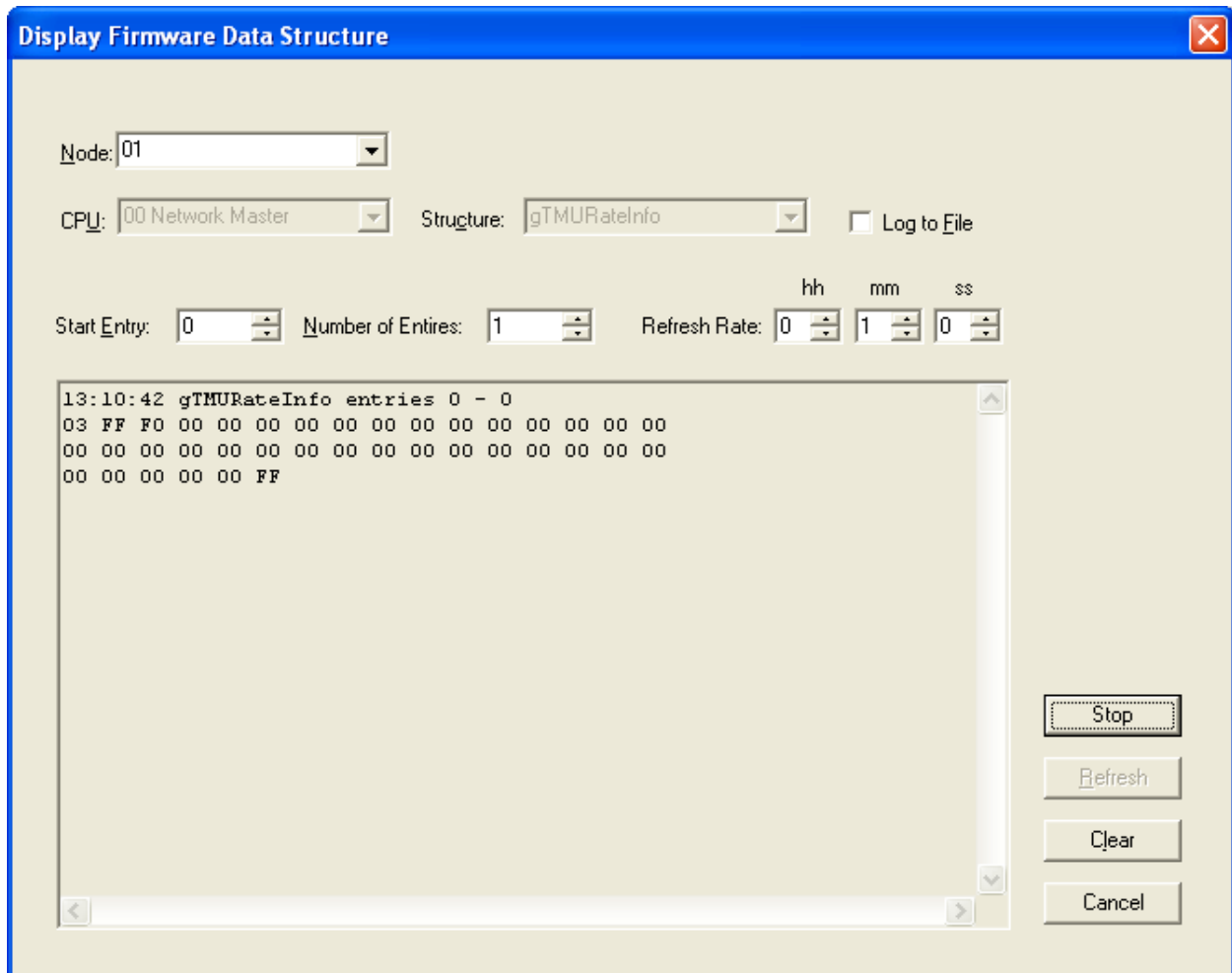
## Display Structure

This utility allows you to view the contents of a panel data structure. You have the option of continually retrieving and displaying the same structure at a refresh rate you specify. You can also log the results to a file.

To display a structure proceed as follows.

- Connect to the panel and click Display Structure under the Tools menu (you must have selected Show Tools Menu under preferences). The following dialog appears.





- Choose the Node and CPU.
- Choose the Structure on that CPU. Loop structures are qualified with a loop number. e.g. gLCUPollData - Loop 2.
- Choose the entry (for Poll Data there is one entry per device, other structures may be organized differently).
- Choose how many entries to display. The maximum is adjusted automatically to compensate for the selected start entry. Note: The actual entries on the panel may be less than the maximum. If you choose a start entry higher than the actual number of entries on the panel you will get an error message. If you choose a number of entries greater than those actually on the panel, you will receive only those that are present.
- You can get a "one shot" display by pressing Refresh.
- To run continuously, select a refresh rate and press Start.



- To log to file check the Log To File box and specify a destination file.

You can adjust the refresh rate, the start entry and the number of entries while the display is running. They will take effect after the next interval has expired.

To view a different structure you must first press stop.

## Edit Job

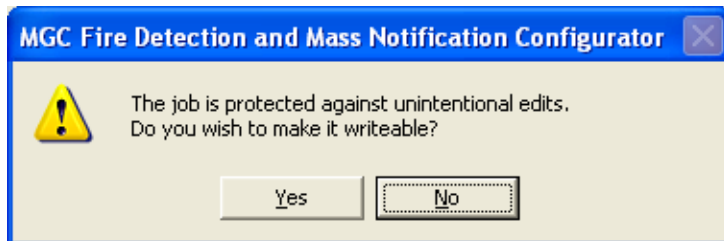
To access this dialog, select Edit Job from the Job Menu or click the Edit Job icon on the tool bar.

This command toggles the edit lock on a job.

A newly created job or a new version of an existing job can be edited immediately. When you leave a job (by closing the configurator or shifting to a different job) the job is automatically soft locked.

An existing job, freshly opened can be locked at two levels. A job that has never been Built or loaded to a panel is locked against accidental change. The locking of such a job can be simply toggled by using the Edit Job menu option. If a job is locked and the user enters keystrokes on any of the editable forms or lists, a dialog will be shown, asking you to confirm your intent to edit the job.

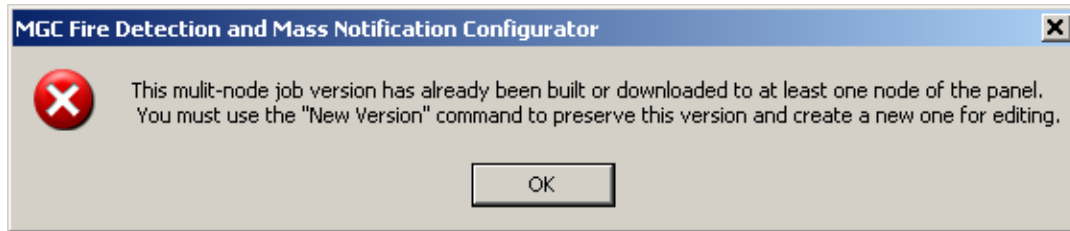
If you answer Yes, the job is unlocked (as if the menu option had been selected). The GUI's list and forms then allow editing, with changes taking immediate effect. If you answer No, all subsequent keystrokes (or mouse clicks) on that form or list are ignored.



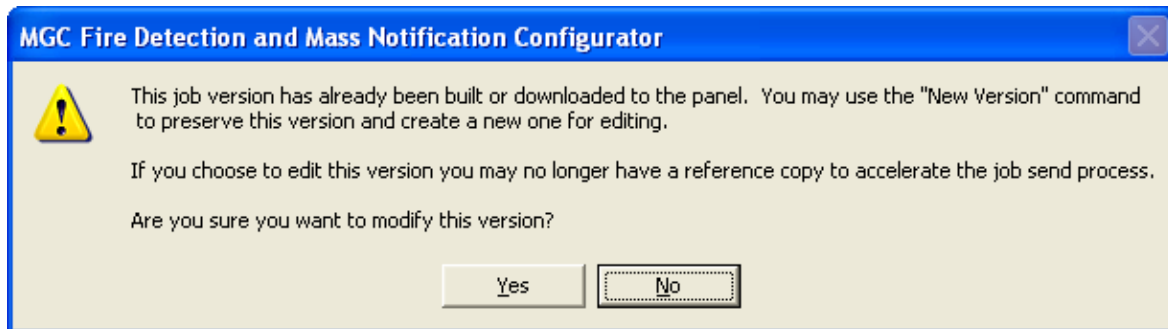
A job that has been Built or loaded to the panel has a harder level of locking. It is intended to prevent the database and panel copies of the job diverging.

If the job has more than one network node and the user attempts to toggle the lock from on to off then the following message appears. The user has no choice but to create a new version. This is to ensure that all nodes receive configurations with the same version and content even though they may be sent at different times.





If job has only one network node and the user attempts to toggle the lock from on to off, then the following message appears. (If an attempt is made to edit the same job on one of its lists or forms, a similar dialog is shown but without the option to unlock the job.)



If you choose to proceed, the job is unlocked.

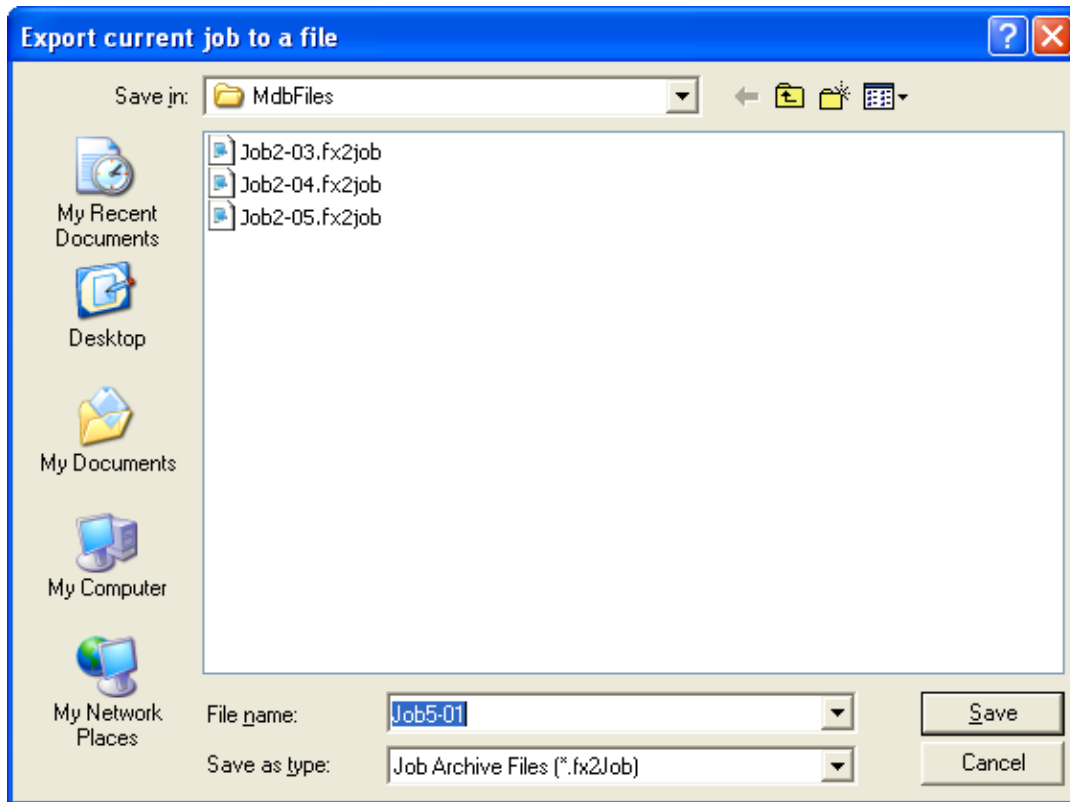
## Export Job

To access this dialog, select Export Job from the Job Menu.

This command exports the current job in one of several formats.

The user is presented with a File Chooser dialog.





Export can be used to exchange a single job, for example between technicians. The fx2job format results in a very small file, suitable for electronic transmission. These and other formats are described below.

- Database Files (\*.mdb) - A Microsoft Access database containing a single job is produced. This format can be the subject of a Job Import
- Job Archive Files (\*.fx2Job) - A compact archive file is produced. This format can also be the subject of a Job Import
- OpenGN Phase II (\*.xml) - produces meta data for the Phase II OpenGN tool.
- BACnet Report - Excel (\*.xml) - produces an XML file listing all of the job's BACnet IDs. A second dialog will open to prompt for the firmware version. It is important to choose the correct version. Changes in firmware capacities affect the Device ID calculations. The exported file will open with Microsoft Excel.
- Job Details (\*.xml) - produces an XML file listing all of the job's Nodes, CPUs and devices, etc. A dialog opens to allow the user to select the correlation to be included.

By default, the file is given a name "DDDD\_nn-vv" where DDDD is the job description, nn is the job number and vv is the version. You can change the name to make it easier to identify the job.

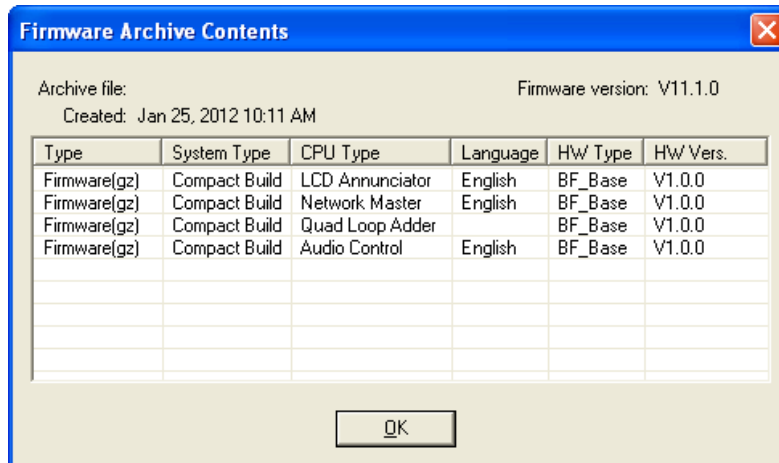


Shortcuts

Keys: Ctrl-E

## Firmware Archive Contents

To access this dialog, click the View Archive button on the Upgrade Firmware dialog.



It lists all of the files in the archive.

### Type

Either Firmware (the firmware image) or Dnld Program (a small boot strap program sent by Upgrade Firmware).

### System Type

For products with more than one system type. For example Compact and Large.

### CPU Type

The CPU Type for which the firmware file is intended.

### Language

For Annunciators or Base Panels, the language of the built in system messages.

### HWType

The type of hardware compatible with this firmware.



## HW Vers

The compatible hardware version.

## About Dialog

Displays the copyright notice and version number of your copy of the Configuration Utility.

## Holidays

This dialog allows you to add and remove holiday definitions for use when a panel is configured with the After Hours option.

To access this dialog you must first ensure that the Enable Auto After Hours checkbox on Job Details is filled. Then you can click on the Modify button in the same section of the Job Details page.

**Holidays**

"9999" & "99" for wildcard

YYYY MM DD Duration

2012 01 01 01

Add Holiday

Holidays defined

| Start Date | End Date   |
|------------|------------|
| xxxx-01-01 |            |
| xxxx-12-25 | xxxx-12-26 |
|            |            |
|            |            |

Delete Selected Holiday

Close

Compose a new holiday definition in the **YYYY MM DD** edit boxes and press **Add Holiday**. You can specify recurring holidays by using wild cards.

Enter 9999 for the year to specify that the holiday happens every year.

- e.g. 9999 01 01 for New Years Day.

Enter 99 for a month or day to specify a recurring holiday.



- e.g. 9999 99 01 to specify that the first of every month is a holiday.
- e.g. 9999 07 99 to specify that the site is shut down for the whole of July for summer vacations.

By default the holiday has a **Duration** of 1 day. Change this to specify a longer holiday.

- e.g. 9999-12-25 2 to specify a two day break beginning on December 25th.

Note: The program prevents you from entering duplicate holidays, but does not check for "nested" holidays.

As holidays are added or removed, the list on the "parent" form is maintained to be in agreement. An error message is displayed if the limit for the total number of holidays would be exceeded.

To remove a holiday, select it in the lower **Holidays defined** list and press **Delete Selected Holiday**

Press **Close** to return to the Job Details form.

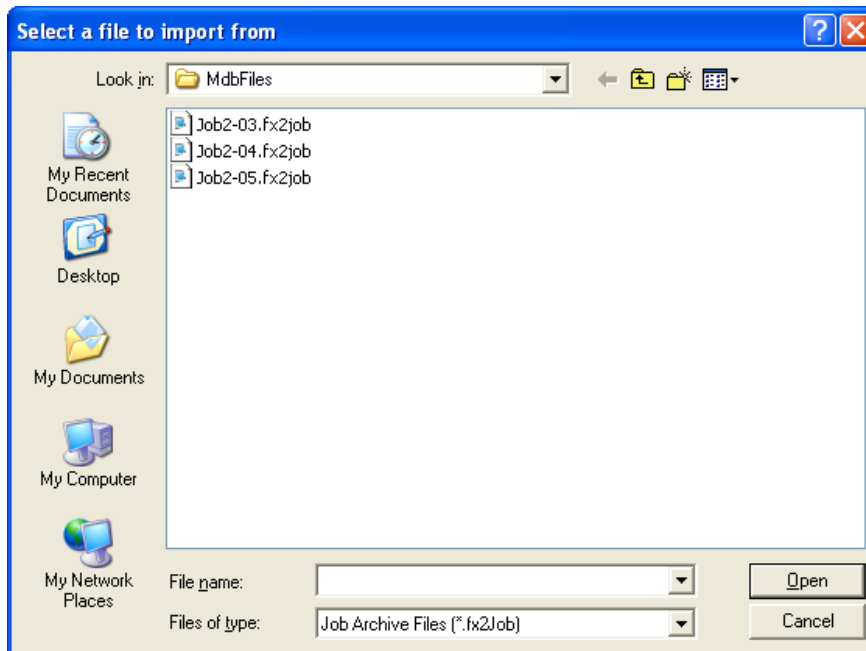
## Import Job

To access this dialog, select Import Job from the Job Menu.

This command imports a selected job/version from an external database or serialized job archive as created by the export or Backup Database commands and converts the job to the current version if necessary. The user chooses the type (MDB or Serialized Archive) and



location of the file to read. The location defaults to the Job File folder specified in User Preferences



If the selected type is MDB, then the Microsoft Access database (usually a database that resulted from a Backup Database) is opened. A list view, similar to the Open Job dialog, displays jobs contained in the database. The list will be restricted to the Products for which the user is authorized.

The chosen job is read and copied to the current database using logic common to Restore Database. If the version of the source database is not too old (no forward conversion is possible) and is not younger than the current database, then any necessary conversion is performed. If the database version is not compatible, an error is displayed.

If the selected type is fx2job (a serialized archive, usually the result of Export) then the Jobs found in the archive's index are listed. The data structures are de-serialized and treated very much as if they had been downloaded from a panel. The program adjusts older versions of data structures to the current standard, extracts the data and stores the job on the database.

If the same job (identified by its name) is already on the database, then the next highest version is assigned to the job.

If a job with the same name is not on the database, then a new job is created.

## Logic Editor Dialog

Displays in response to the Edit button on the Advanced Logic correlation tab (refer to the Correlations Help topic.).



Using this dialog the user can compose an equation to be applied to a local, dummy input zone. The input zone is then correlated, using regular IO corrs, to the output which is ultimately the object of the equation. This is done by specifying any number of local and remote inputs zones, local input circuits, timers and intervals (operands) and boolean expressions (operators).

When the result of the equation, evaluating the TRUE/FALSE state of all inputs, is TRUE the associated output will be energized. The equation overrides any other Input/Output correlations.

**WARNING:** Applying an equation directly to an output bypasses all of the associated inputs and outputs. That is - coded inputs are not processed, etc. Use of a dummy input zone as the intermediary is the preferred method.

The operands recognized by the equation builder are

- AND
- OR
- NOT
- EQU
- ANY x OF( inputs )

### Examples:

*Example 1:* Use the status of two input detectors to turn on a relay

If we have two smoke detectors:

01-00-L2-SM-001 (in the lobby)

01-00-L2-SM-002 (in the elevator machine room)

the following equation will turn a relay on when the detector in the lobby is in alarm, but the one in the machine room is not:

01-00-L2-SM-001 AND NOT 01-00-L2-SM-002

*Example 2:* Use the ANY x OF ( inputs ) operand to turn on an output

Release halon in a semiconductor clean room only if 3 of the 11 verified alarms in the area are active.

ANY 3 OF ( 01-00-L2-SM-001 , 01-00-L2-SM-002 , 01-00-L2-SM-003 , 01-00-L2-SM-004 ,



01-00-L2-SM-005 , 01-00-L2-SM-006 , 01-00-L2-SM-007 , 01-00-L2-SM-008 , 01-00-L2-SM-009 , 01-00-L2-SM-010 , 01-00-L2-SM-011 )

Associate an equation with a dummy input and then reference that input in several equations attached to outputs. In this example zone 3 will be TRUE if smoke detectors 5, 6 and 7 are active. Zone 3 is then re-used in the equations for four different relays. Relay 1 will be energized if the equation for zone 3 is TRUE and smoke detector 8 is **not** active. This simplifies the relays' equations, which would otherwise all have to include zone 3's equation.

*Example 3: Common to activation of relay #1,2,3,4*

01-00-\*\*-IZ-003 = 01-00-L0-SM-005 AND 01-00-L0-SM-006 AND 01-00-L0-SM-007

// First relay

01-00-L1-RL-001 = 01-00-01-00-\*\*-IZ-003 AND NOT 01-00-L0-SM-008

// 2nd relay

01-00-L1-RL-002 = 01-00-01-00-\*\*-IZ-003 AND NOT 01-00-L0-SM-009

// 3rd relay

01-00-L1-RL-003 = 01-00-01-00-\*\*-IZ-003 AND NOT 01-00-L0-SM-010

// 4th relay

01-00-L1-RL-004 = 01-00-01-00-\*\*-IZ-003 AND NOT 01-00-L0-SM-011

*Example 4: logic equation used for an HOA switch to bypass an alarm input zone:*

02-01-\*\*-IZ-001:A AND NOT 02-08-\*\*-HA-000 EQU HOA\_ON

## Device Status

The Device Status drop-down menu applies a status (also called a mask) to an input. If you apply a status to an input, then the equation becomes true when the input has that status

The statuses are:

- **:A** - Alarm
- **:B** - Bypass
- **:F** - Fault
- **:L** - Level (used with 4-20 mA modules)

For example:

- The equation **07-02-01-IZ-001:B** is true only when this zone is bypassed.



- The equation **01-00-02-IN-001:A** is true only when this input device is in alarm.

If you do not apply a Device Status to an input, any change in the input's status results in the equation becoming true. For example, the equation **01-00-02-IN-002** (a single input device with no Device Status) is true whenever this input device changes status.

### **Apply a Device Status**

1. Click a Device Status in the drop-down menu.
2. Double-click the input in the Inputs list.

The input and Device Status appear in the equation box.

### **Left hand pane**

The left hand pane lists all of the eligible inputs. These are currently limited to:

- Local input circuits (IN)
- Output circuits (OU)
- Local input zones (IZ)
- Remote input zones (IZ)
- Custom Intervals (IT)
- Custom Timers (TM)
- Switches (Common Controls) (SW)
- Zone Switches (ZS)
- Common System Status (ST)
- Local Node Status (NS)
- HOA Switches (HA)

*As per UL 864 and UL 2572, the use of Custom Timers which would delay the operation of Input Zones or Outputs is not permissible.*

The columns of the list view include an ID. This is a short hand form of the circuit's location. It is constructed from the input's Node, CPU, loop (if any), a two character code indicating the type and the address or number of the input.

The ID is intended to assist the user in recognizing the input when it appears in the final equation.



The remaining columns are the Node, Type and Tag of the input. It is highly recommended that Tags be assigned to all zones and devices intended for use in Advanced Logic for clarity sake.

The circuit, timer or switch can be simply tested for TRUE and FALSE, or a particular Device Status can be tested. If a status is selected in the Device Status drop down, it will be appended in the form of :x to the device ID when it is inserted into the equation. Each one applies a different mask to the device's state.


## Right hand pane

The right hand pane shows the current equation, if any, on entry or the equation under construction.

Although the user can type into the right hand pane, it is recommended that they insert operands and operators using the controls.

To enter an input, double click it in the left hand list or select it and press the insert button >. The ID of the input will be inserted in the equation at the current cursor location.

To enter an operator, click one of the operator buttons, over top of the Equation window.

To enter multiple inputs separated by commas, select them in the list by using the mouse in combination with the Ctrl key or Shift key. Press the insert button. If an operation is to be applied on the inputs, such as Ckt1 OR Ckt2 OR , select the inputs from the list and then press the operator button. The complete expression, enclosed with parentheses, will be inserted into the equation.

## EQU

The EQU operand is used in combination with a System Define (a constant) and Device Status. It tests a device's state and produces a TRUE|FALSE result. You may have to apply a device mask to isolate the states you want to test.

e.g. \*\*-\*-\*\*-TM-016 EQU TIMER\_RUNNING Test for a timer running.

e.g. 01-00-02-IN-003:L EQU ALARM\_LEVEL2 Test an input's alarm level

Note: not all Sys Defs can be applied to all circuit types. The user is responsible for choosing a valid combination of device mask and Sys Def.

*As per UL 864 and UL 2572 only usage of an input's immediate TRUE|FALSE value (without the application of a mask and a test for equality) is permissible. That is, no combination of Device Status, the operator EQU or Sys Def should be used.*



## Sys Def

The Sys Def button inserts a named constant into the equation. You can select a named System Def in the drop down list before pressing the button.

Note: named constants HOA\_ON and HOA\_OFF from the drop down list shall be used only for HOA Switches.

## Lower, right hand pane

Comments can be written in this area to describe the purpose and logic of the equation.

## Description

You can use this input box to give your equation a name. This field must be filled in to save the equation.

## OK

The OK button causes the equation to be parsed and verified. If there are syntax errors an error message will indicate the location of the error in the string.

## Cancel

Press the cancel button to dismiss the dialog without making any changes.

Advanced Logic Editor

Device Status:

Inputs:

| ID              | Node | Type          | Tag                  |
|-----------------|------|---------------|----------------------|
| **_**_**-IT-000 |      | Intervals     | INTVL_TROUBLE        |
| **_**_**-IT-001 |      | Intervals     | INTVL_NIGHT          |
| **_**_**-IT-002 |      | Intervals     | INTVL_WKEND          |
| **_**_**-IT-003 |      | Intervals     | INTVL_HOLIDAY        |
| **_**_**-ST-000 |      | System Status | Common Alarm         |
| **_**_**-ST-001 |      | System Status | Common Supv          |
| **_**_**-ST-002 |      | System Status | Common Trouble       |
| **_**_**-ST-003 |      | System Status | Common Monitor       |
| **_**_**-ST-004 |      | System Status | Sys Reset            |
| **_**_**-ST-005 |      | System Status | Sys Reset Inactive   |
| **_**_**-ST-006 |      | System Status | Fire Drill           |
| **_**_**-ST-007 |      | System Status | Alarm Ack            |
| **_**_**-ST-008 |      | System Status | Alert Active         |
| **_**_**-ST-009 |      | System Status | Evac Active          |
| **_**_**-ST-010 |      | System Status | Subsequent Alarm     |
| **_**_**-ST-011 |      | System Status | Total Evacuation     |
| **_**_**-ST-012 |      | System Status | Signal Silence       |
| **_**_**-ST-013 |      | System Status | Sig Silence Pulse    |
| **_**_**-ST-014 |      | System Status | Sig Sil Inhibit      |
| **_**_**-ST-015 |      | System Status | Aux Disc             |
| **_**_**-ST-016 |      | System Status | Aux Reset Pulse      |
| **_**_**-ST-017 |      | System Status | New Alarm Active     |
| **_**_**-ST-018 |      | System Status | Signals Active       |
| **_**_**-ST-019 |      | System Status | Silenceable Opts Act |
| **_**_**-ST-020 |      | System Status | Auto Ga Timing       |
| **_**_**-ST-021 |      | System Status | Auto SS Timing       |

Equation:

( \*\*\_\*\*\_\*\*-IT-001 AND \*\*\_\*\*\_\*\*-IT-002 AND \*\*\_\*\*\_\*\*-IT-003 AND \*\*\_\*\*\_\*\*-ST-006 )

Description:

Fire Drill after hrs

Comments:

This equation will evaluate to TRUE if Fire Drill is pressed outside of normal hours. It does this by combining the three intervals (Night, Weekend and Holidays) and the System Status "Fire Drill" using and AND operation.

It is correlated to a relay.

OK Cancel

## Limitations

Following are limits for equations:

- Max number of terms within an equation - 4000 terms per CPU;

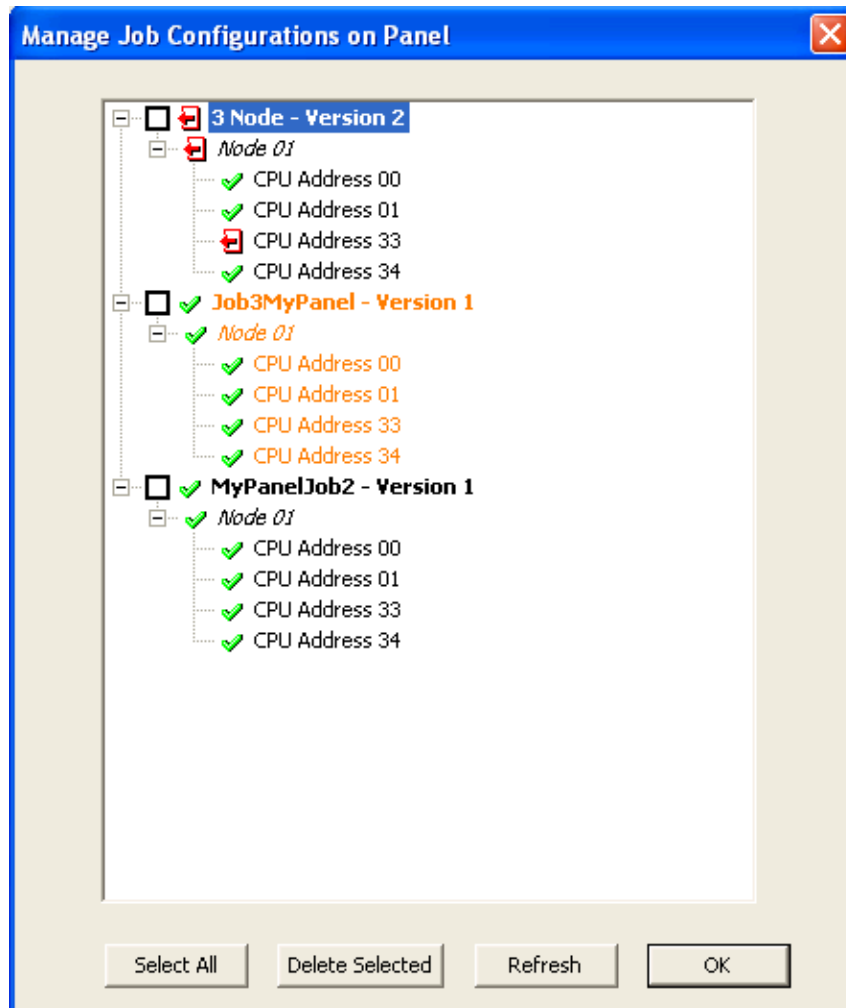


- Max number of characters within all equation comments - 65536 characters per CPU;
- Max number of equations within input zones - 880 equations per CPU;
- Max size of single equation - 4096 characters.




## Manage Jobs

This dialog appears in response to the Manage Jobs command (Panel Menu).



The configurator detects the Nodes and CPUs actually present and on-line. It then reads the panel's file system directory from each CPU.

The result is displayed in tree form. Normally, for any given job there will be a file on every CPU. But if jobs were configured for fewer Nodes and CPUs, files may be missing from some CPUs. The tree will indicate where there are missing files with the  symbol.

In the example, Version 1 of both MyPanelJob2 and Job3MyPanel was configured with an annunciator at address 33. This was removed in Version 2 of "3 Node". Therefore Job "3 Node" Version 2 is correctly shown with the file missing from CPU 33. If however, both versions required the annunciator, the user must interpret the result to mean that job "3 Node" version 2 is incomplete.

To delete a job (that is, delete the file from every CPU) right click on the job name and choose Delete. After all files are deleted the tree is refreshed. User can only delete an



inactive Job. The Active Job in the panel is shown in Orange color. You can also delete an inactive job by highlighting it and clicking the Delete button at the bottom of the dialog or pressing the Delete key on your keyboard.

To activate an inactive job, right click on the job name (in black color) and choose Activate. After the Activation, the system will set to the job selected and reboot, the Manage Job tree is refreshed.

To deactivate the active job, right click on the job name (in orange color) and choose Deactivate. After the deactivation, the system will set to factory default and reboot. This will disconnect the configurator and you will need to reconnect after the panel finishes rebooting. If you still need to do other tasks, you will need to reopen the Manage Jobs dialog.

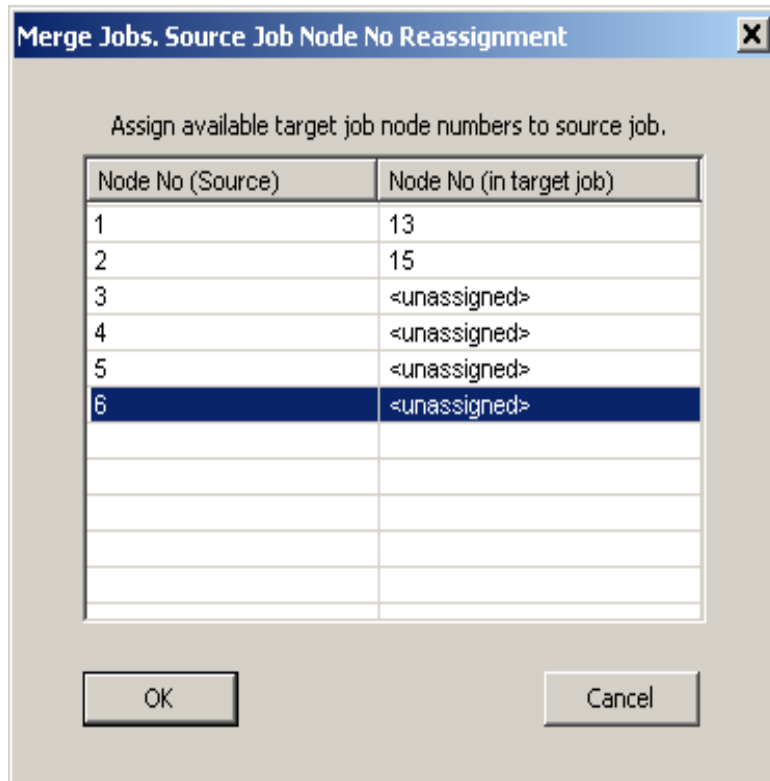
The Select All button allows user to quickly select or deselect all jobs. Then user can Click Delete Selected button to delete all select jobs. Or user can use mouse to click the checkbox beside the job name to select the job to be deleted. The Refresh button will refresh the Manage Job tree view.

There is a limit of 3 jobs. Send Job will fail if this limit would be exceeded. You can use this dialog to remove jobs to make room for a new one.



## Network Node Merge

This form view appears when the user is merging two jobs. The source job's Node Addresses must be reassigned if they would clash with those of the target job.



A dialog box titled "Merge Jobs. Source Job Node No Reassignment" with a close button (X) in the top right corner. The dialog contains the instruction "Assign available target job node numbers to source job." Below this is a table with two columns: "Node No (Source)" and "Node No (in target job)". The table has 10 rows. The first two rows are pre-filled: row 1 has "1" in the source column and "13" in the target column; row 2 has "2" in the source column and "15" in the target column. The remaining eight rows have "3" through "10" in the source column and "<unassigned>" in the target column. The row with source node "6" is highlighted in blue. At the bottom of the dialog are two buttons: "OK" and "Cancel".

| Node No (Source) | Node No (in target job) |
|------------------|-------------------------|
| 1                | 13                      |
| 2                | 15                      |
| 3                | <unassigned>            |
| 4                | <unassigned>            |
| 5                | <unassigned>            |
| 6                | <unassigned>            |
|                  |                         |
|                  |                         |
|                  |                         |
|                  |                         |

The form lists all of the source job's nodes in the left column. If the same Node Address is unused in the target job, it will be automatically assigned in the right column. If not, the user must choose a free target job node to be assigned during the merge process.

The merge cannot proceed if there are any un-assigned nodes.

Press OK to start the merge, or Cancel to dismiss the dialog without merging.

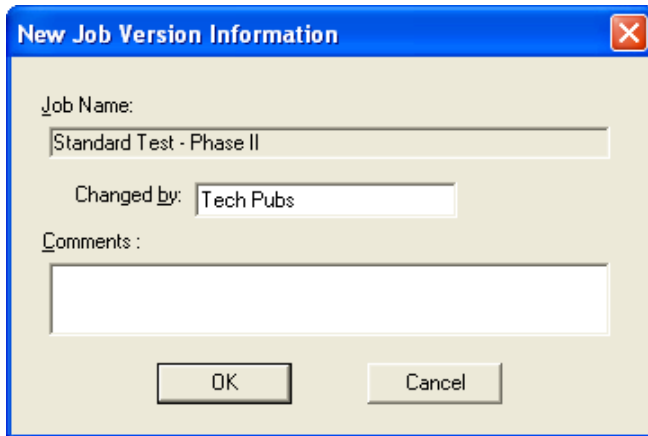
## New Job Version Information

Displays in response to the New Version command from the Job Menu.

Also when a job is uploaded from the panel and a job with the same name already exists on the database.



Default user spec'd in user preferences (may be changed).

A screenshot of a Windows-style dialog box titled "New Job Version Information". The dialog has a blue title bar with a close button (X) in the top right corner. The main area is light beige. It contains three input fields: "Job Name:" with the text "Standard Test - Phase II", "Changed by:" with the text "Tech Pubs", and "Comments:" which is an empty text area. At the bottom, there are two buttons: "OK" and "Cancel".

**Note:** A Comment MUST be entered for the Version history when you create a new Version of a Job.

## Open Job

This dialog, which appears in response to the Open Job command from the Job Menu, allows the user to select a job and job-version in the database and open it in the user interface.

(**Merge Jobs** is using the same dialog - refer to the Merge Jobs Dialog.)

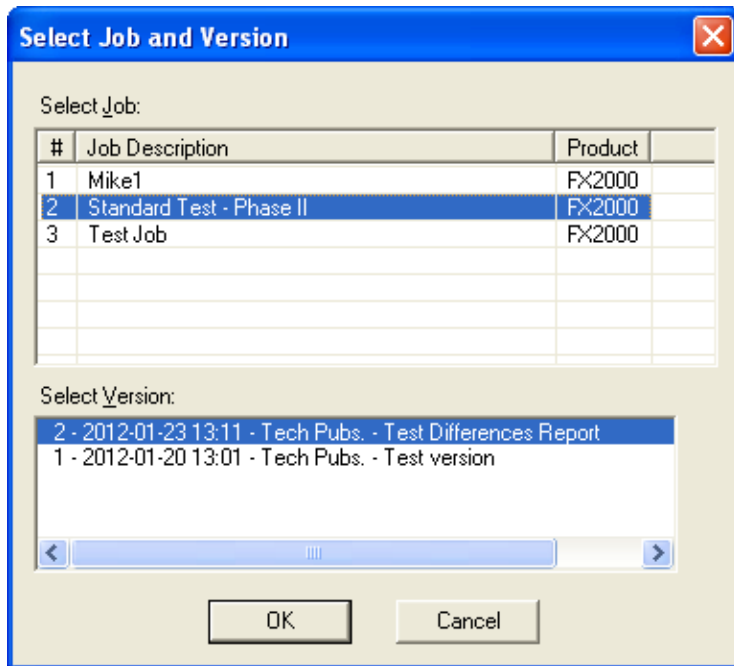
The Select Job list view shows all of the jobs on the database. By clicking on the column heading you can sort the jobs by

- Job Number
- Job Description
- Product (where more than one product is supported)

The Select Version list view shows all of the versions of the selected job. This includes the date and a description.

Click OK after you have selected a job and version.





## Panel Information Dialog

Displays in response to the Panel Information command from the Panel Menu.

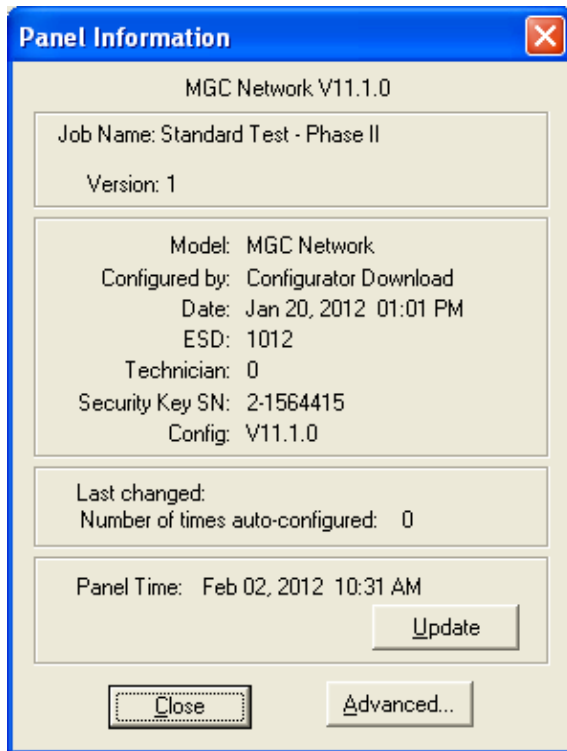
This dialog displays a summary of panel and the configurator information, with options to view more detail. The information includes:

- The Product Version
- Name and Version of the job currently loaded on the panel.
- Model (deduced from Product, System (build) Type and Hardware Features).
- The Date it was sent
- The ESD and Tech who sent / owns the job. (For products secured with a key)
- Security Key SIN. (For products secured with a key)
- FXConfig Version
- Date and Time Last Changed
- Number of times auto config'd.
- The Panel Time.

An Advanced button launches Advanced Panel Info which retrieves and displays the Type, Product Version, Language, on line status, etc. of all Nodes and their CPUS.



An Update button allows the panel time to be corrected/updated from the configurator for those products that support the feature.



## Paste Special

This dialog appears in response to a Paste Special command from the Edit Menu, or right click where you want to paste and select Paste Special from the pop up menu. Used when pasting circuits, conventional adders or entire loops.



The text summarizes what is being pasted and its destination.



e.g. Copying Node 1, or Pasting 3 devices to loop 2.

**Number of copies** - specifies the number of copies to make. The paste operation will attempt to make the specified number of copies. If the capacity of the destination is exceeded a message will be displayed to inform the user how many were successfully made.

**Copy I/O correlations** - If this box is checked the copied device(s) will have the same I/O correlations as the original.

**Copy display correlations** - If this box is checked the copied device(s) will have the same display correlations as the original.

**Retain Address** - Check this box to retain the same addresses on the copied devices. A message will inform the user if this is not possible. Retain Address can fail if the destination loop controller does not have sufficient free addresses. Retain Address will always fail if the source and destination are the same loop.

## Paste Special

This dialog appears in response to a Paste Special command from the Edit Menu, or right click where you want to paste and select Paste Special from the pop up menu when pasting display items, display adders or entire annunciators.



The text summarizes what is being pasted and its destination.

e.g. Copying Node 33, or Pasting 3 display items to frame 0.

- **Number of copies** - specifies the number of copies to make. The paste operation will attempt to make the specified number of copies. If the capacity of the destination is exceeded a message will be displayed to inform the user how many were successfully made.



- **Make New Copy** - Choose this option to make an unrelated replica of the source.
  - **Copy I/O Correlations** - If this option is checked, the new display item(s) will be correlated to the same circuits and devices as the source.
- **Make Reference Copy** - Choose this option to make a reference copy of the source.

A regular copy is defined as follows.

- The LEDs and/or switches are copied and become separate entities from the original LEDs or switches.
- Common Control Status LEDS are an exception - all similar types operate in parallel. e.g. A copied and pasted Signal Silence would retain the internal LED Grp of the source.
- All attributes (tags, flags, etc.) are replicated.
- If IO Corrs is checked, then these too are assigned to the new copy. This is a "deep" copy.
- If IO Corrs is not checked they are not copied. This is the "shallow" copy.

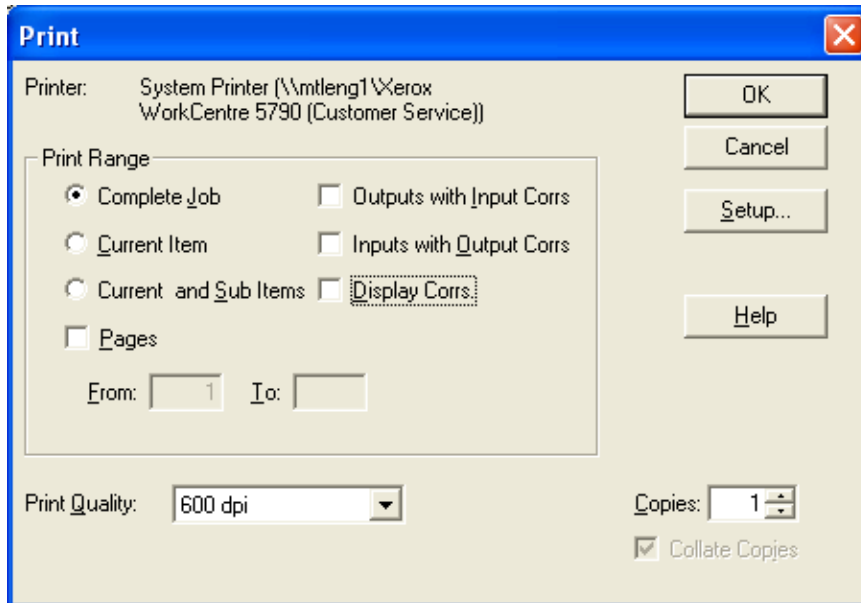
A Reference copy is defined as follows.

- New LEDs and switches are defined, but they are linked closely to the original source.
- If any 3 POSITION SLIDE SWITCH is encountered while attempting a "Reference Copy" of individual items, a complete adder or an entire annunciator, an error message is displayed and a roll back of the operation occurs.
- Both the new copy and the source (and any subsequent reference copies) will be marked with an asterisk to warn the user that the items are "linked" or cross referenced. A change to one (e.g. addition of CORRS) affects the others.



## Print Dialog

To access this dialog, select Print or Print Preview from the File Menu, or click on the print button in the tool bar.



**Print Range** - You can specify the range or scope of the print job using these controls

**Complete Job** - Regardless of what item in the Job Tree you currently have selected, the complete job will be printed. The print program will iterate through the network nodes. This process continues in a depth first manner, until the entire job has been traversed and printed. Each major item of the tree is started on a new page.

**Current Item** - If you choose this option, the print job is restricted to details of the tree item or job component that you currently have selected in the Job Tree. No details of contained loops, etc. are printed.

**Current Item and Sub Items** - this option prints details of the currently selected tree item and all of its sub-items (and those items' sub-items, if any).

**Outputs with Input Corrs** - If this box is checked, then the Inputs correlated to Output circuits are printed in addition to the regular print. This is done for any relevant tree items / loops that are included in the scope of the print job.

**Inputs with Output Corrs** - If this check box is checked, then the Outputs correlated to Input circuits are printed. Status correlations are included with this option. This is done for any tree items / loops that are included in the scope of the print job.

**Display Corrs** - If this check box is checked, then the Display correlations are printed. This is done for any relevant tree items / loops that are included in the scope of the print job.



## General Note - Correlations

If a tree item has no correlations, then it is skipped entirely by the print program. If a tree item has correlations, then a header is printed for every "correlated from" device. Beneath it, and tabbed, are all of the devices correlated to it. If it has none, the major header is still printed.

**Setup** - This button launches the standard Windows printer setup dialog. You may choose a printer other than the default, or select a different paper size. The print program is designed to fit all information on Letter sized paper (8 ½ by 11) in portrait orientation. You may also choose Legal sized paper (8 ½ by 14). The print program will take advantage of the longer paper and fit more devices on one page for list views and correlations. If you choose smaller paper the font will be scaled down accordingly (within practical limits).

**Pages** - this check box is only available when performing a print. It is disabled for print preview.

During preparation of a print preview or a print you will notice that the program makes one first pass through the tree items and loops that are in scope. It does this to calculate the page count. However, the program cannot insert the Max Page Number into the dialog because it is not known at that time.

If you need to repeat part of a print job (e.g. because the printer jammed part way through a job), then you must note the start page and the end page - up to the maximum number of calculated pages - and enter them in the From and To fields.

Generally, you can more easily control which portions of a job you wish to have printed by selecting an item in the tree and printing only that item.

**Okay** – Accepts your choices and sends the document to be printed.

**Cancel** – Closes this dialog without sending anything to be printed.

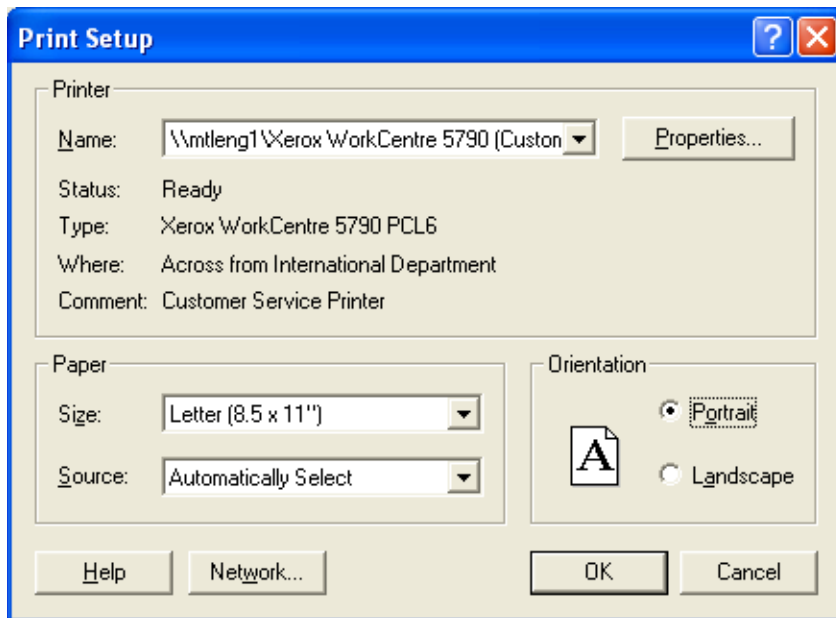
**Setup** - This button launches the standard Windows Printer Setup dialog.

**Help** – Opens this page in the Flex-Net™ help system.



## Print Setup

Launch the standard Windows Print Setup dialog to specify the printer, paper size and orientation, etc.

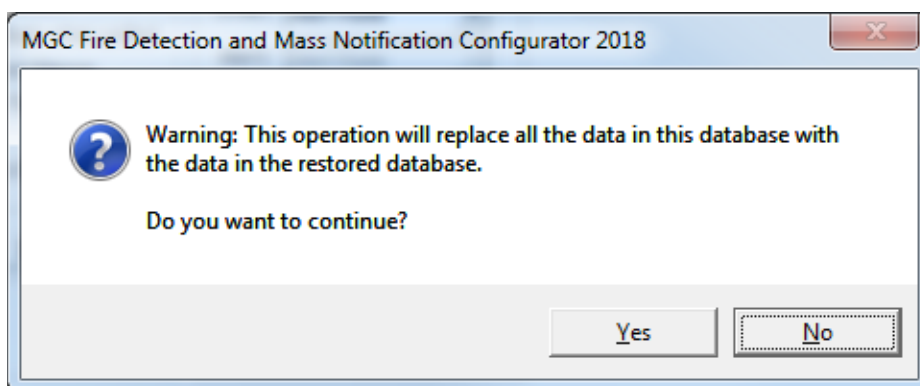


## Restore Database

To access this dialog, select Restore Database from the File Menu.

Restore database reads a database file and imports every job found there, after first deleting all of the jobs in the current database.

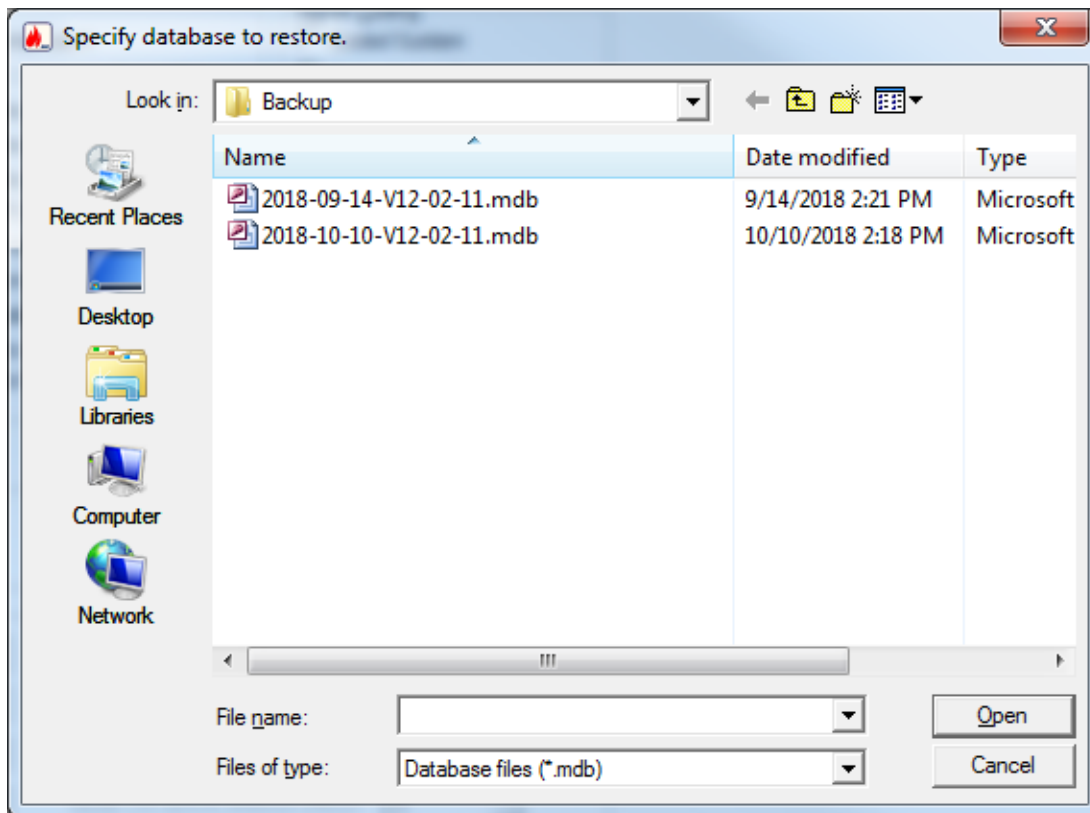
**Warning:** When you restore from an older backup you will lose any changes that have been made since the time of the backup.



If you choose to continue the following dialog will open. By default backups are stored in the Backup File folder specified in the User Preferences. The backup file will have a name of



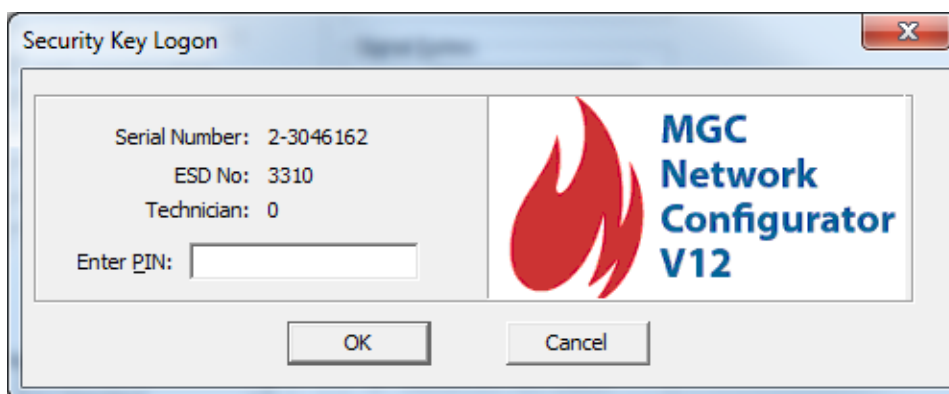
the form YYYY-MM-DD-Vnn-nn-nn.mdb (the "n"s standing in for the digits in the version number of the current configurator).



The backup database could have been produced by an older version of the configuration tool, in which case all necessary conversion is performed. Conversion is sometimes necessary when a new version of the configuration tool is released.

## Security Key Logon

This dialog appears if the Security Key is present when the configurator is first started. It also appears if the key is inserted at a later time while the configurator is running.





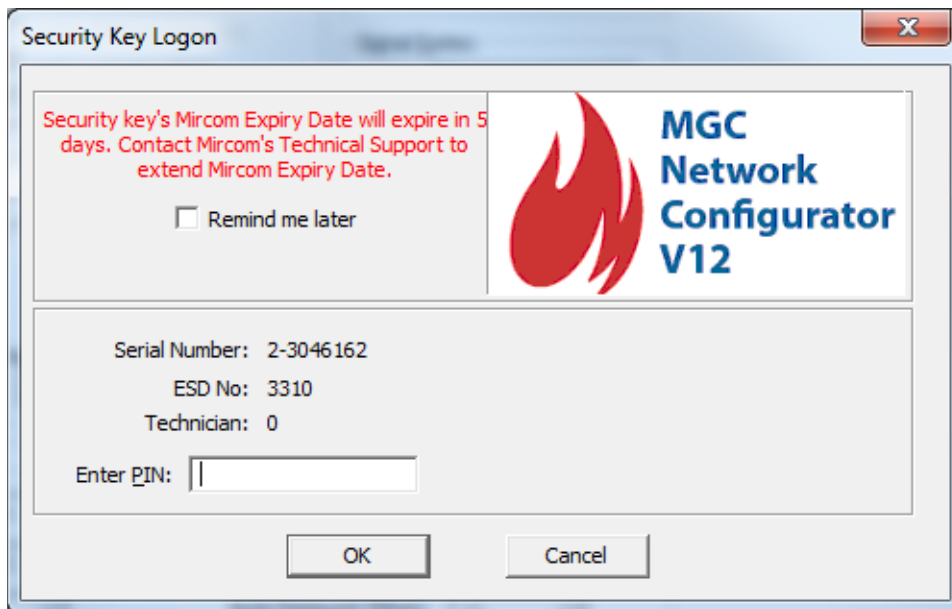
When the dialog appears, enter your PIN and press OK. If the PIN is accepted all future, privileged operations will proceed with no further prompting as long as the key is still inserted.

If the user dismisses the dialog (by pressing escape) or removes the key, then any attempt to perform a secure operation will fail with the message

*You need a valid security key to perform this operation.*

You must reinsert the key, or choose the Security Key Logon option from the Panel Menu, and enter the correct PIN. Also see: Security Key Information

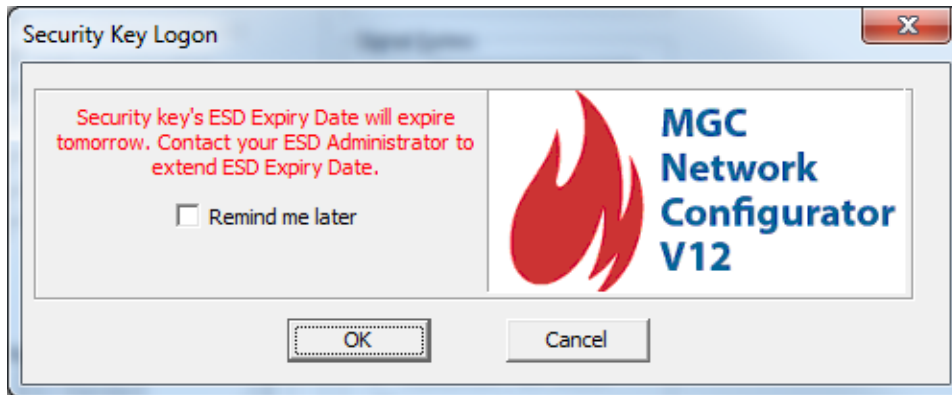
This dialog will be expanded to include a warning for Security Key expiry date if there are less than 30 days until it will expire. Each Security key has two types of Expiry Date: Mircom Expiry Date and ESD Expiry Date, as can be seen here: Security Key Information



The warning message for the Expiry Date contains a 'Remind me later' check-box that will delay any warning message until next day if it is selected and the OK button is pressed.

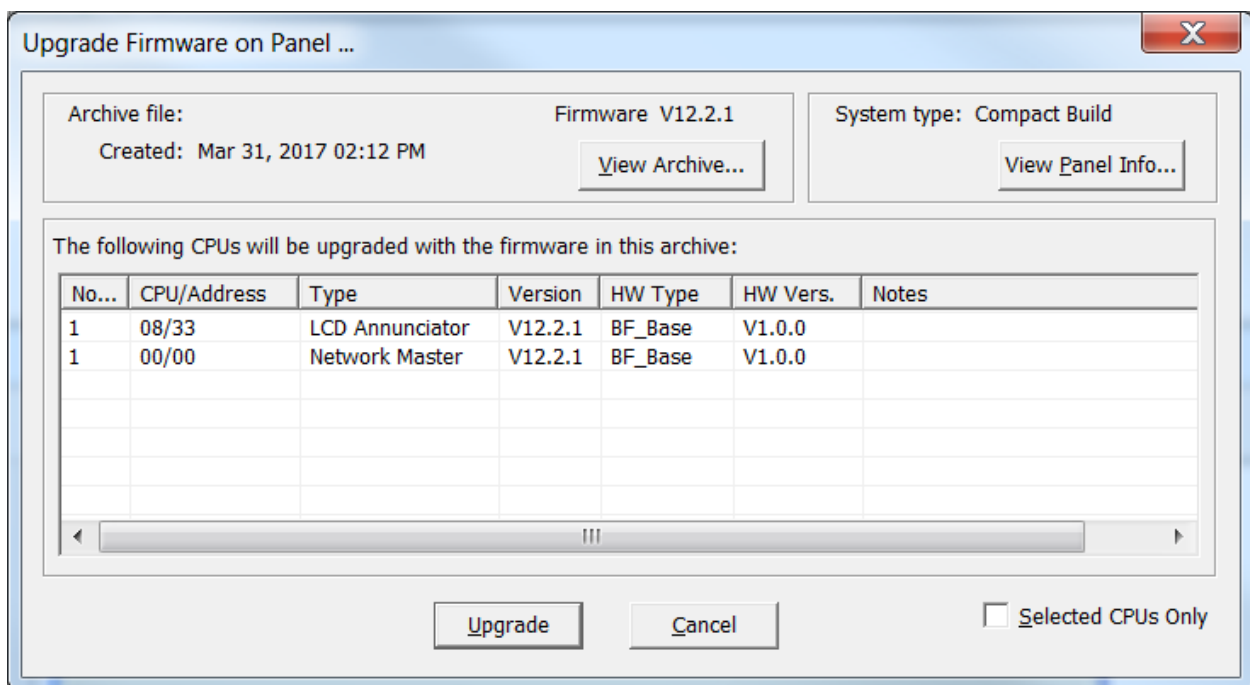
If the Security Key PIN is set to 0 (zero), which is considered no-PIN, then there is no need for the Security Key Logon to appear. In this case the Security Key Logon dialog will display only the warning message for Expiry Date when necessary and the dialog will look like this:





## Upgrade Firmware

This dialog appears in response to the Upgrade Firmware command from the Panel Menu. This will open a standard Windows File Browser so that the user may select the firmware he wishes to upgrade to from his hard drive. After User has selected the firmware to upgrade to, the Upgrade Firmware on Panel dialog will open.



**View Archive...** - clicking this button opens the Firmware Archive Contents dialog, which lists all of the files in the archive. There should be a file for every combination of System Type (Compact and Large), Node Type and where appropriate, Language.

**View Panel Info...** - clicking this button opens the Advanced Panel Information dialog, which lists all of the CPUs actually present (Online or Not Responding) on the panel.



The configurator interrogates the panel to which it is connected and lists all of the CPUs actually present and on-line. The list view shows the CPU Number and Type and other information.

**Selected CPUs Only** - check this box and select the CPUs you wish to upgrade. You can select multiple rows by holding down the Ctrl key and right clicking anywhere in the row. If this box is not checked all of the CPUs will be upgraded.

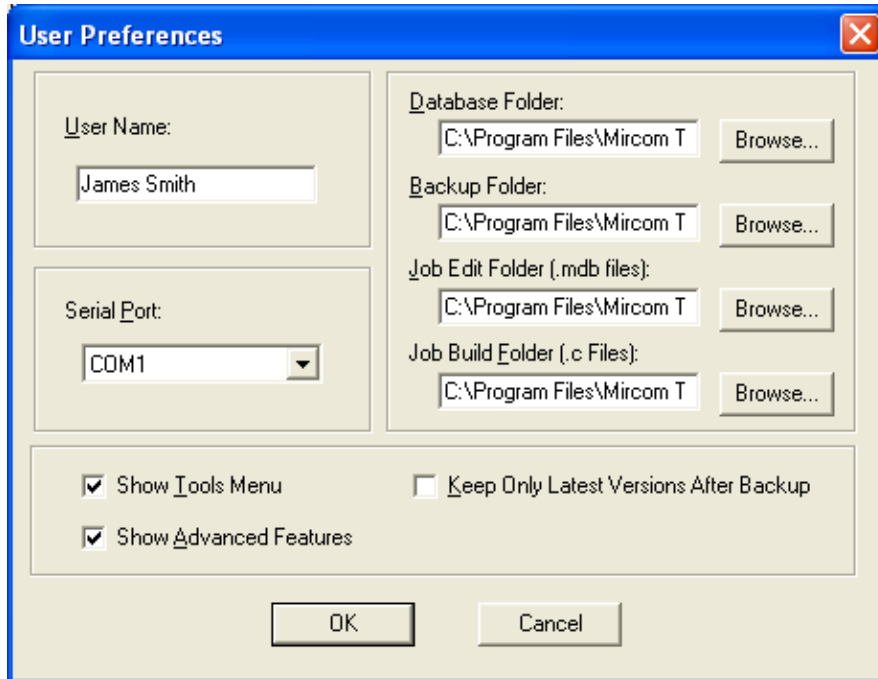
**Upgrade** - click this button to start the firmware upgrade.

**Cancel** – click this button to exit this dialog without making any changes to the panel.



## User Preferences

To access this dialog, select User Preferences from the File Menu.



- **User Name** - used for the Author of all new jobs and job versions
- **Serial Port** - designates which COM port (or USB pseudo COM port) the configurator will use to connect to the panel.
- **Database Folder** - specifies where the main configurator.mdb database file resides. Usually the folder where the configurator is installed.
- **Backup Folder** - specifies where backup database files are written to and restored from.
- **Job Edit Folder** - specifies where the 'C' and log file output files are written by Job Validate and other trace or debug facilities.
- **Job Build Folder** - specifies where the 'C' file output files are written by Job Validate and other trace or debug facilities.
- **Show Tools Menu** - display or hide an additional Tools menu. This menu contains trace and debug facilities and some features that Technical Support may require a user to turn on to gather diagnostic information.



- **Keep Only Latest Versions After Backup** - if enabled, only the latest versions of all jobs will be kept after a successful Backup Database command, all older versions are removed from the current database.
- **Show Advanced Features** - if disabled, some of the more advanced features are hidden.

These values are stored in the registry (per configurator version) so that a returning user operates in the same folders, etc.

On the first execution of the configurator this dialog is popped up automatically to establish these values. It can be used at any time thereafter to change the settings.

## Update Panel Time

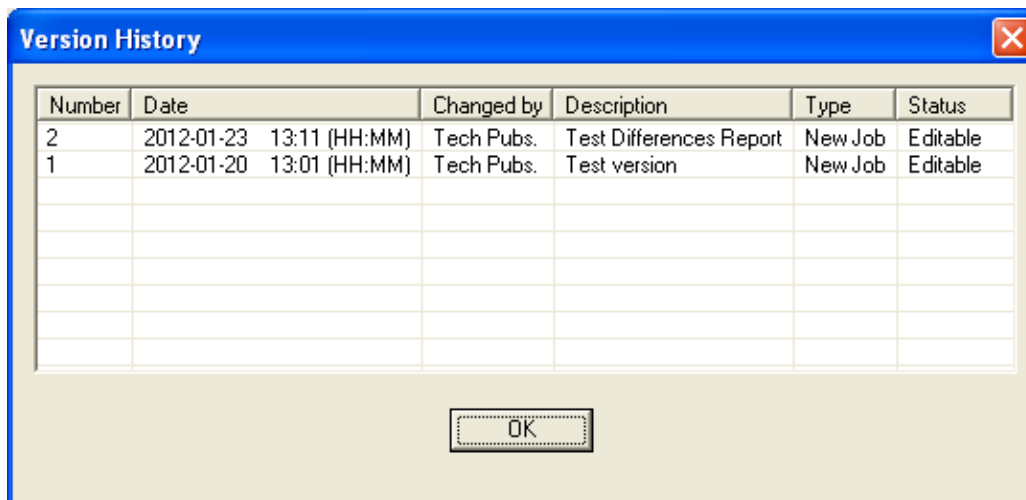
To access this dialog, click on the Update button on the Panel Information dialog, which is opened by selecting Panel Information from the Panel Menu.

It is also displayed when the configuration tool detects that the panel time is significantly different from the PC time.

New Time: defaults to the current PC time. Adjust this time if necessary and press OK to update the panel time

## Version History

This dialog appears in response to the Version History command from the Job Menu.



The version history of the current job is displayed in list form, beginning with the most recent version.



**Number** - The version number. Each time a new version is created, either with the New Version command or by getting a job from the panel or an archive, a new version number is allocated.

**Date** - The date and time the version was created.

**Changed by** - The user who created the version.

**Description** - The description, as entered when the new job version was created.

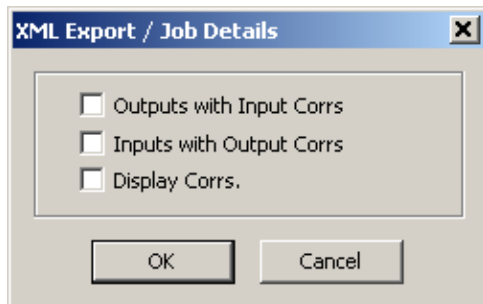
**Type** - *Uploaded*- the new job version was a result of a Get Job. *New Job* - the user created a new version manually.

**Status** - Either *Locked*- the job has been sent to the panel and is locked against editing or *Editable*.

## XML Export / Job Details Options Dialog

To access this dialog, select Export Job from the Job Menu. Next choose Job Details (\*.xml) from the Save as type pull down menu. When you click the Save button, this dialog will appear.

The Job Details report can optionally include the Inputs that are correlated to Outputs, Outputs correlated to Inputs and display correlations.



**Outputs with Input Corrs** - If this box is checked, then the Inputs correlated to Output circuits are included in the XML file in addition to the basic information.

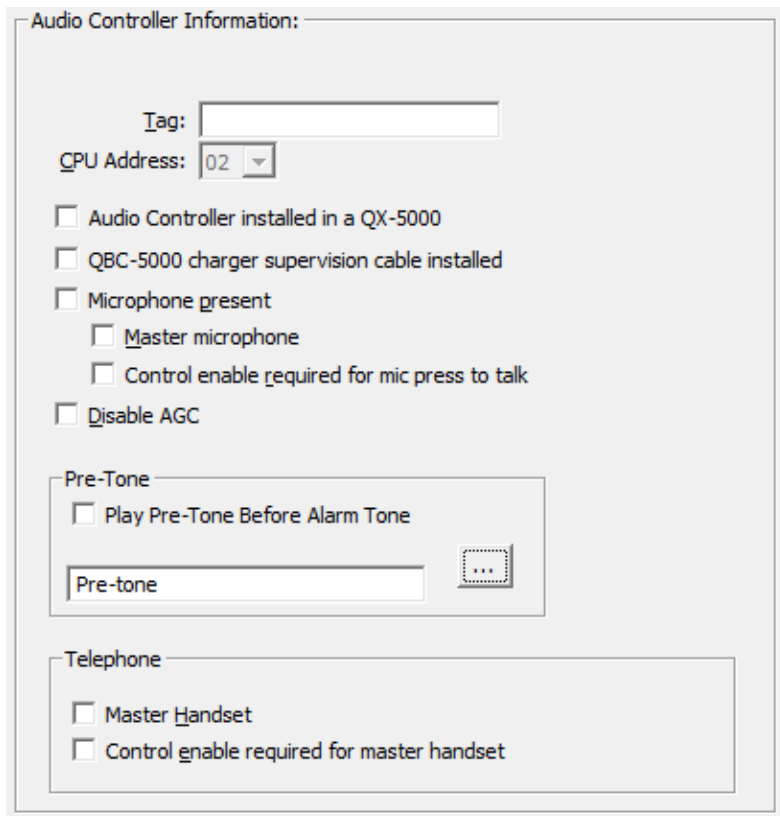
**Inputs with Output Corrs** - If this check box is checked, then the Outputs correlated to Input circuits are included in the XML file. Status correlations are included with this option.

**Display Corrs** - If this check box is checked, then the Display correlations are included in the XML file.



## Audio Controller Details

This form view appears in the top, right pane when an Audio Controller item is selected in the Job Tree view.



The screenshot shows a form titled "Audio Controller Information:". It contains several input fields and checkboxes. At the top, there is a "Tag:" label followed by a text input field. Below that is a "CPU Address:" label followed by a dropdown menu showing "02". There are five checkboxes: "Audio Controller installed in a QX-5000", "QBC-5000 charger supervision cable installed", "Microphone present" (which has two sub-checkboxes: "Master microphone" and "Control enable required for mic press to talk"), and "Disable AGC". Below these is a section titled "Pre-Tone" containing a checkbox "Play Pre-Tone Before Alarm Tone" and a "Pre-tone" text input field with a small icon to its right. At the bottom is a section titled "Telephone" containing two checkboxes: "Master Handset" and "Control enable required for master handset".

- **Tag:** Enter a description for the audio controller. This will appear in the Job Tree view.
- **CPU Number:** Enter the CPU address for the audio controller. A drop down combo box lists the available addresses.
- **ANC-5000 installed in a QX-5000 box:** check this box if the amplifier bin arrangement is that of the QMB-5000B. The legacy QMB-5000B has seven amplifier slots. If the box is not checked the QMB-5000N is assumed. It has only four amplifier slots. During conversion from QMB-5000N to QMB-5000B any existing amplifiers in expansion bins are re-arranged to first fill the additional bins of the QMB-5000B. During conversion from QMB-5000B to QMB-5000N any existing amplifiers in the base unit's extra slots are moved to the expansion bins.
- **QX-5000 charger cable installed:** check this box if the amplifier battery charger is a legacy QBC-5000B. Leave the box un-checked if a QBC-5000N charger is in use. WX-518 cable is required for the QBC-5000N operation (charger



supervision). Selecting the wrong charger can affect battery supervision and charging.

- **Microphone present:** check this box if there is a microphone installed on this audio controller. If there are two or more microphones on the job, then one must be flagged as Master and the control enable required option must be checked on every node with a microphone.
- **Master microphone:** check this box if there is a microphone installed on this audio controller and it is to be designated as the Master. If there are two or more microphones on the job, then one (and only one) must be designated as master. If you choose to support a master handset, it will consume one of the five lines of the controller.
- **Control Enable required for mic press to talk:** if this box is checked the operator must enable use of the microphone (through the menu or a key switch). This option must be checked if there is a microphone present on this node, and there is at least one other microphone on another audio controller on the job.
- **Disable AGC:** check this box if Automatic Gain Control (AGC) is to be disabled. The default is for the box to be un-checked: AGC is enabled.
- **Play Pre-Tone Before Alarm Tone:** check this box if User wants Pre-Tone being played before the actual Alarm Tone
- **Pre-Tone:** press the ... (ellipsis) button to launch the Manage Message Dialog to select which audio tone or digitized message to use as the pre-tone. You can select either the standard, built in Pre-Tone or select an existing custom message or create a new one.
- **Master Handset:** If you specify a master handset, the first telephone line is used for that purpose. The line will be hidden from view and cannot be used.  
If line 0 is currently in use (either as a voice line serving addressable phone modules, or as a conventional phone) and you check this box you will be asked for confirmation before the line is removed.  
If you remove the master handset, line 0 will become available for use. If there is a correlation from a telephone selector switch to Call Control at this network node, you will be asked for confirmation before the master handset is removed.
- **Control Enable required for master handset:** if this box is checked the operator must enable use of the master handset (through the menu or a key switch Control Enable).



## System/Node/CPU Status

This list view appears in the top, right pane when either the Common System Status (available under Job Details), Node & CPU Status Status (available under Node) or Annun Status (available under the LCD Annunciator and Main Display) item is selected in the Job Tree.

System Statuses are pseudo inputs that can be correlated to outputs. For example:

- Correlate a signal circuit to operate as a power supply. (using Init Done).
- Customize the Fire Drill operation.
- Correlate a relay to operate on Reset Command (using Sys Reset)

System Statuses are can also be correlated to LEDs.

System statuses can have three different scopes.

- Common System Status - as the name suggests, their scope is system wide. Common Alarm, Fire Drill and Signals active are some examples. They need no further qualification.

For a complete list see System Status Details

- Node Status - Node Active and AC On are examples of Node status. The list view appears once for each network node on the system. When you choose one and correlate to it, you are specifying, for example, the AC On status of the selected Node. The Scope column specifies the Node of the status.

For a complete list see Node Status Details

- CPU Status - These fall into two categories.
  - The list view containing the special Annunciator Statuses, Control Enabled and its complement, appears in the job tree under each Main Display and LCD Annunciator for every CPU that has a LCD.
  - The list view containing the other CPU statuses appears in the job tree for each network node and is combined with the Node Statuses. These CPU Statuses are assumed to be associated with the main CPU of the Node.



The Scope column specifies the Node and CPU of the status. You must have defined a suitable LED to accept the correlation from the Node or Node/CPU specific status.

For a complete list see [CPU Status Details](#).

| F/W Status | Scope             | Status               | F1 | F2 |
|------------|-------------------|----------------------|----|----|
| 0          | Node 1            | Node Active          |    |    |
| 0          | Node 1 - Main CPU | CPU Online           |    |    |
| 1          | Node 1            | AC On                |    |    |
| 1          | Node 1 - Main CPU | CPU Sys Reset Ac...  |    |    |
| 2          | Node 1            | Node Sys Reset A...  |    |    |
| 2          | Node 1 - Main CPU | CPU Alarm            |    |    |
| 3          | Node 1            | Node Alarm           |    |    |
| 3          | Node 1 - Main CPU | CPU Supv             |    |    |
| 4          | Node 1            | Node Supv            |    |    |
| 4          | Node 1 - Main CPU | CPU Monitor          |    |    |
| 5          | Node 1            | Node Monitor         |    |    |
| 5          | Node 1 - Main CPU | CPU Trouble          |    |    |
| 6          | Node 1            | Node Trouble         |    |    |
| 6          | Node 1 - Main CPU | CPU Alert Active     |    |    |
| 7          | Node 1            | Node Alert Active    |    |    |
| 7          | Node 1 - Main CPU | CPU Evac Active      |    | GA |
| 8          | Node 1            | Node Evac Active     |    | GA |
| 8          | Node 1 - Main CPU | CPU Subseq Alarm     |    |    |
| 9          | Node 1            | Node Subsequent ...  |    |    |
| 9          | Node 1 - Main CPU | Alarm Verif          |    |    |
| 10         | Node 1            | Node Alarm Verif     |    |    |
| 10         | Node 1 - Main CPU | W/flw Retard         |    |    |
| 11         | Node 1            | Node W/flw Retard    |    |    |
| 11         | Node 1 - Main CPU | Pre-alarm            |    |    |
| 12         | Node 1            | Node Pre-alarm       |    |    |
| 12         | Node 1 - Main CPU | Maint. Alert         |    |    |
| 13         | Node 1            | Node Maint. Alert    |    |    |
| 13         | Node 1 - Main CPU | Pos Ground Fault     |    |    |
| 14         | Node 1            | Node Signals Active  |    |    |
| 14         | Node 1 - Main CPU | Neg Ground Fault     |    |    |
| 15         | Node 1            | Node Signal Silence  |    |    |
| 15         | Node 1 - Main CPU | Remote Trouble       |    |    |
| 16         | Node 1            | Node Ground Fault    |    |    |
| 16         | Node 1 - Main CPU | Battery Trouble      |    |    |
| 17         | Node 1            | Node Trbl Xmit Activ |    |    |
| 17         | Node 1 - Main CPU | Power Fail           |    |    |

Some columns containing advanced or internal information are normally hidden. They are listed as Visible / No in the following table.



| <b>Name</b> | <b>Visible</b> | <b>Description</b>  |
|-------------|----------------|---|
| Item        | No             | The database status number. For debugging purposes.   |
| F/W Status  | Yes            | The firmware status number.   |
| Node        | No             | The Node Number (only applicable for Node and CPU statuses).  |
| CPU         | No             | The CPU Number (only applicable for CPU statuses).  |
| Scope       | Yes            | Either Common for system wide statuses or the Node name, or Node CPU combination of the status.   |
| Status      | Yes            | A short description of the status.  |
| F1          | Yes            | Flag field: NS for Non-Silenceable or blank.  |
| F2          | Yes            | <p>Flag field: GA for General Alarm or blank.</p> <p>The GA flag is only applicable in a Two Stage system. The outputs correlated to a Common System Status with the GA flag set will sound at the General Alarm (aka Evac) rate, else they sound at the Alert Rate.</p> <p>In a single stage system, where all outputs correlated to alarm inputs sound at the Evac rate, the column is hidden.</p> <p>The actual tone sequences or digitized messages to be used for Evac and Alert are specified on the Job Details and Audio Setup dialogs.</p> |

Some System Statuses can also be correlated to a switch. Examples are Signal Silence, Fire Drill, Aux Disc, Total Evacuation. When one of these items is selected the Switches tab will appear on the associated Correlation View. This will show any display adder switches that have been correlated to the System Status. Note however, that this does not include remote switches (input circuits or devices of type Input Module that are assigned to a Common System Status).

When correlating from a Common System Status to display items and switches, the behavior is different from correlating to Signals and Relays. The Add Correlations dialog will



## Correlations

[illegible]

If the currently selected circuit(s) is/are outputs then the correlation view typically has tabs for:

- 90



## **Input Circuit Correlations**

If the currently selected circuit(s) is/are inputs then the correlation view has a tab for Input Zones only. Input Circuits must be combined into input zones before they can be correlated to outputs or LEDs, etc. Input Circuits can only be correlated to Input Zones of a matching type (e.g. Alarm, Trouble, etc.).

### *Add Correlations*

When the user selects Add Correlations a non-modal dialog is used to display the circuits and display items that are eligible to be correlated to the selected items in the top, right pane. It has the same set of tabs as the correlation view. It is kept synchronized with the correlation view: if a certain tab category is selected on one, its counterpart is automatically selected on the other. As correlations are added to the current set, they are removed from the available set.

If multiple items are selected in the top pane, then the correlations view will only show those correlations that are common to all of them. This means the set of displayed correlations can shrink to the empty set. If the user selects a mix of input and outputs no correlations can be shown.

## **Input Zone Correlations**

If the currently selected object is an Input Zone then the correlations view has tabs for:

- Inputs
- Signal
- Relay
- Custom Message Tags
- Display
- Switches
- UDACT Grp
- Digitized Msgs
- Advanced Logic



## Advanced Logic

Individual outputs circuits or inputs zones can also be assigned an equation. If only one of these items is selected in the top pane, an Advanced Logic tabbed pane appears. If an advanced logic equation has been composed the text string will appear on the tab. To create a new equation or edit an existing one, use the Edit... button to launch the Advanced Logic Editor.

If an equation is associated with an output there should be no other IO correlations driving the output. If an equation is associated with an input zone there should be no input circuits correlated to the input zone.

## Interval List View

This list view appears in the top, right pane when the Custom Interval item is selected in the Job Tree view.

Custom intervals complement the system intervals (HOLIDAYS, WEEKEND, EVENING, etc.). Unlike system intervals, which can have beginning and end calendar dates, custom intervals are only comprised of start and end times (HH:MM) and optionally a day of the week. Thus, they can be used to turn on a dedicated air handling system once a week for testing for example, or to reduce sensor sensitivity during certain hours of the day.

Custom intervals can be referenced by equations. If an interval appears on the right hand side of an equation controlling an output or an input zone, it can be tested for TRUE (current system time is within the bounds of the interval) to affect the result of the equation.

A custom interval has only one time range. If you need to test for multiple ranges, you must create multiple intervals and OR them using an equation.

For example:

06:00 to 09:00 "Kitchen in use - breakfast."

11:00 to 13:00 "Kitchen in use - lunch."

The table describes all of the columns in the list view. Some advanced or system columns are hidden by default.

| Name | Visible | Description |
|------|---------|-------------|
|------|---------|-------------|

|       |     |   |
|-------|-----|---|
| CktNo | Yes | Internal CKtNo or Index. This number does not start at zero because there is a block of System Intervals that occupy the lower range. The address uniquely identifies a custom interval, and is included in the Device-ID in equations. |
|-------|-----|---|



|             |     |   |
|-------------|-----|---|
| Interval No | No  | An interval, allocated number: the single interval range associated with this interval.                               |
| Start Year  | No  | Not used for simple intervals.  |
| Start Month | No  | Not used for simple intervals.  |
| Start Day   | No  | Not used for simple intervals.  |
| Start Hour  | Yes | The hour (0-23) when the interval period is to start.   |
| Start Min   | Yes | The minute (0-59) when the interval period is to start.   |
| Start DoW   | No  | Not used for simple intervals.  |
| End Year    | No  | Not used for simple intervals.  |
| End Month   | No  | Not used for simple intervals.  |
| End Day     | No  | Not used for simple intervals.  |
| End Hour    | Yes | The hour (0-23) when the interval period is to end.   |
| End Min     | Yes | The minute (0-59) when the interval period is to end.   |
| DoW         | Yes | The day of the week if the interval period is restricted to one day. Leave blank if the period is to occur every day. |



|     |     |  |
|-----|-----|--|
| Tag | Yes | A 20 character tag to identify the interval. This will appear in the "Symbol Table" when composing equations that reference intervals. |
|-----|-----|--|

The End Hour and End Minute must always be greater than the Start Hour and Start Minute. This means that you will need to set the End Hour and End Minute first or you will get an error message when you try to enter the Start Hour and Start Minute.

## Timer List View

This list view appears in the top, right pane when the Custom Timer item is selected in the Job Tree view.

Custom timers can be referenced by equations. By attaching an equation to a timer, it can be started or stopped. If a timer appears on the right hand side of an equation controlling an output or an input zone, it can be tested for EXPIRED, etc. to affect the result of the equation.

All timers are initially un-assigned. To Enable a timer, edit the Enable column to make it 'Y'. *As per UL 864 and UL 2572 only a setting of un-assigned is permissible.*

| Name     | Visible | Description  |
|----------|---------|--|
| CktNo    | No      | Internal CKtNo or Index. This number does not start at zero because there is a block of System Timers that occupy the lower range.   |
| Address  | Yes     | The address of the timer. The address uniquely identifies a timer, and is included in the Device-ID in equations. If the timer is not enabled, the address field shows "unassigned". |
| Enable   | Yes     | Edit this field, changing it to Y, to assign a timer.  |
| Duration | Yes     | The duration, in seconds, of the timer. Valid range 0-32767 seconds.   |
| Tag      | Yes     | A 20 character tag to identify the timer. This will appear in the "Symbol Table" when composing equations that reference timers.   |



## Dialer

This form is displayed when the optional Dialer tree item is selected. It allows you to view and to configure the UDACT / Dialer.

The dialer can dial out on two phone lines. You must configure an account and specify the line attributes for both. Line 2 can dial a cell phone. If this is the case the auto test can be reduced from daily to monthly.

The UDACT can be configured either by using the FX-2000NConfig tool or with the Mircom Dialer Configuration Utility.

To configure using the FX-2000NConfig utility remove the RS485 / UIMA cable from the FX2000N panel and plug it directly to the dialer. You must short JW2 on the dialer to enable configuration. Edit the dialer parameters, described below, and press the Send... button. You will be prompted for a password.

You can use the FX-2000NConfig utility to retrieve the configuration from the dialer by pressing the Get... button. The Sent/received field will tell you if the configuration you are viewing is potentially out of date.

The Auto Assign button will automatically assign a UDACT group of the correct type for every unassigned Input Zone and Output Circuit.



|   |   |
|---|---|
| <b>Account 1</b><br>Account ID: <input type="text" value="123456"/><br>Telephone: <input type="text" value="101"/><br>Report format: <input type="text" value="Contact ID"/>  | <b>Report priority</b><br>Alarm: <input type="text" value="Account 1"/><br>Supervisory: <input type="text" value="Account 1"/><br>Trouble: <input type="text" value="Account 1"/>   |
| <b>Account 2</b><br>Account ID: <input type="text" value="654321"/><br>Telephone: <input type="text" value="101"/><br>Report format: <input type="text" value="Contact ID"/>  | <b>Timers</b><br>AC loss delay: <input type="text" value="0"/> Hours<br><input type="checkbox"/> Line 2 cellular test<br>Day of month <input type="text" value="1"/><br>Auto test <input type="text" value="12:30 AM"/>   |
| <b>Line 1</b><br>Dial using: <input checked="" type="radio"/> Tone <input type="radio"/> Pulse<br><input checked="" type="checkbox"/> Wait for dial tone before dialing   | <b>Dialer</b><br>Line retries: <input type="text" value="7"/><br>Rings: <input type="text" value="5"/><br>Mode: <input type="text" value="UDACT"/><br><input checked="" type="checkbox"/> Enable<br><input type="checkbox"/> Aux disconnect<br><input type="checkbox"/> Advanced Addressing |
| <b>Line 2</b><br>Dial using: <input checked="" type="radio"/> Tone <input type="radio"/> Pulse<br><input checked="" type="checkbox"/> Wait for dial tone before dialing   |   |
| <b>Attached Fire Alarm</b><br>Communication Protocol: <input type="text" value="Level 2"/><br>Checksum: <input type="radio"/> 8 Bit <input checked="" type="radio"/> 16 Bit<br>Event <input checked="" type="radio"/> Ckt No <input type="radio"/> Loop Addr<br>Output <input type="text" value="0"/> |   |
| Send... Get...<br>Sent / received: <input type="text" value="Never"/><br>Auto-Assign  |   |

## Account 1

Account ID

Six digit decimal for the SIA report formats and four digit hexadecimal for Contact ID.

Telephone

Text Field for telephone number.

Report Format

Choose from SIA110, SIA300, Contact ID



## **Account 2**

Account ID

Six digit decimal for the SIA report formats and four digit hexadecimal for Contact ID.

Telephone

Text Field for telephone number

Report Format

Choose from SIA110, SIA300, Contact ID

### **Line 1**

Dial Using

Tone/Pulse

Wait

Check to wait for dial tone before dialling

### **Line 2**

Dial Using

Tone/Pulse

Wait

Check to wait for dial tone before dialling



## **Attached Fire Alarm**

### Communication Protocol

Level 0, Level 1, Level 2 or Level 1G. Only Level 2 (FX2000) is appropriate.

### Checksum

8 Bit / 16 Bit. For FX2000 16 bit is appropriate.

### Event Format

Ckt No / Loop Addr. Specifies whether the internal Ckt No or a combination of Loop and Address is sent to the monitoring station.

### Output Offset

0-9999. This value is added to outputs to differentiate them from inputs with the same Ckt No.

## **Report Priority**

### Alarm

Choose one of the two accounts to use to report Alarms

### Supv

Choose one of the two accounts to use to report Supervisory alerts

### Trouble

Choose one of the two accounts to use to report Troubles

## **Timers**

### AC loss delay

0-20 hours, tells the dialer how long to wait after an A/C power loss before reporting the trouble.



## Line 2 Cellular Test

Check this box to indicate that Line 2 dials a cell phone. Use the Spin box to specify the day of the month (1 - 28) for the cell phone test.

## Auto test at

Use this spin box to set the time for a daily test of land lines.

## Dialer

### Line Retries

Use this Spin Box to specify the number of retries to make (5-10)

### Rings

Use this Spin box to specify the number of rings when dialing in to configure.

Warning: if set to zero the next dial in session will not be able to connect.

### Mode

Choose between DACT and UDACT

### Enable

Uncheck this box if you wish to set the dialer to the disabled state when you send the job to the panel. If you receive a job from the panel when the dialer was temporarily disabled then this check box will be un-checked. The dialer is enabled by default.

### Aux disconnect

If enabled, the dialer will block the alarm and supervisory events from being reported after the auxiliary disconnect button is pressed.

### Advanced Addressing

In order to report Node address, Loop address and device address through UDACT, we will need to use Advanced Addressing method which supports larger range of device addresses.



## Display Adder

This list view appears in the top, right pane of the user interface when a display adder is selected in the Job Tree. The list displays items (LEDs and Switches) of all the frames on the selected Display Adder.

| Idx | Node | Type         | Assignment       | F1 | F2 | F3 | Tag            | Tag2 |
|-----|------|--------------|------------------|----|----|----|----------------|------|
| 17  | 1    | Zone Trb     |                  |    |    |    | AMP 1 TRBL     |      |
| 18  | 1    | Zone Trb     |                  |    |    |    | AMP 2 TRBL     |      |
| 19  | 1    | Zone Trb     |                  |    |    |    | AMP 3 TRBL     |      |
| 20  | 1    | Zone Trb     |                  |    |    |    | AMP 4 TRBL     |      |
| 21  | 1    | Zone Trb     |                  |    |    |    | AMP 5 TRBL     |      |
| 22  | 1    | Zone Trb     |                  |    |    |    | AMP 6 TRBL     |      |
| 23  | 1    | Zone Trb     |                  |    |    |    | AMP 7 TRBL     |      |
| 24  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 1          |      |
| 25  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 2          |      |
| 26  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 3          |      |
| 27  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 4          |      |
| 28  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 5          |      |
| 29  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 6          |      |
| 30  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 7          |      |
| 31  | 1    | Opt Zone     | Signal Stat      |    |    |    | NAC 8          |      |
| 32  | 1    | Zone Trb     |                  |    |    |    | NAC 1 TRBL     |      |
| 33  | 1    | Zone Trb     |                  |    |    |    | NAC 2 TRBL     |      |
| 34  | 1    | Zone Trb     |                  |    |    |    | NAC 3 TRBL     |      |
| 35  | 1    | Zone Trb     |                  |    |    |    | NAC 4 TRBL     |      |
| 36  | 1    | Zone Trb     |                  |    |    |    | NAC 5 TRBL     |      |
| 37  | 1    | Zone Trb     |                  |    |    |    | NAC 6 TRBL     |      |
| 38  | 1    | Zone Trb     |                  |    |    |    | NAC 7 TRBL     |      |
| 39  | 1    | Zone Trb     |                  |    |    |    | NAC 8 TRBL     |      |
| 40  | 1    | Ipt Zone     | Alarm Stat       |    |    |    | COPTIR         |      |
| 41  | 1    | Ipt Zone     | Supervisory Stat |    |    |    |                |      |
| 42  | 1    | Ipt Zone     | Monitor Stat     |    |    |    |                |      |
| 43  | 1    | Ipt Zone     | Trouble Stat     |    |    |    |                |      |
| 44  | 1    | Ipt Zone     | Alarm Stat       |    |    |    | 4-20mA         |      |
| 45  | 1    | Ipt Zone     | Alarm Stat       |    |    |    | Manual Station |      |
| 46  | 1    | <unassigned> |                  |    |    |    |                |      |
| 47  | 1    | <unassigned> |                  |    |    |    |                |      |

### Name Visible Description

|         |     |  |
|---------|-----|--|
| Idx     | Yes | Index - the zero based position of the item on the adder.  |
| Node    | No  | The Node Number of the Annunciator to which the adder is attached.   |
| CPU     | No  | The CPU Number of the Annunciator to which the adder is attached.  |
| Unnamed | Yes | Linked Item - contains an asterisk if the item shares the same LedGrp with other items. This means that correlations to one such item are added to all linked items. Linked Items can be created |



when Paste Special is used. The linked items can be viewed with the Linked Items dialog.

|            |     |   |
|------------|-----|---|
| Frame      | No  | The Frame Number. An adder may contribute several frames to an annunciator. The frame numbers are zero based.   |
| LED        | No  | The number (zero based) of the first LED of a logical group. For example, an HOA adder has three LEDs per slide switch. This column would show 0 for Idx 0, 3 for Idx 1, etc. Due to the way some adders are arranged (hardware) the LED numbers are in irregular sequences.  |
| Sw         | No  | The Switch number (if any) associated with the Idx.   |
| LedGrp     | No  | An internal number, allocated when a LED is assigned a role other than un-assigned. In the case of Linked Items, multiple LEDs can share the same LedGrp and hence the same LED Definition, behavior and correlations.  |
| Type       | Yes | Initially <i>unassigned</i> this is the Type of display item. The values in the combo box depend on the Adder/Frame type.   |
| Assignment | Yes | Dependent on the Type.  |
| Node Group | Yes | <p>Applies only to common control switches. The column displays the Node Group to which the common control operation is to be limited. Global means that the operation is system wide and is the default. If the user has created Node Groups, then one of those groups can be chosen. The common control then applies only to the member nodes of that group.</p> <p>In a combined fire and Mass Notification System (M.N.S.) installation where Node Grouping is used to separate the M.N.S. nodes of from those nodes supporting fire, limit the common controls to the appropriate group.</p> |
| Priority   | Yes | Specifies the priority to be given to digitized messages correlated to correlatable switches. Choose from a range of priorities. -95% (lowest) through Normal (default) to +95% (Highest). Activation of a  |



switch with a higher priority will cause its message to be played, and any lower priority message will cease to play.

In a combined fire and Mass Notification System (M.N.S.) installation, choose appropriate priorities. For example, if risk analysis has determined that M.N.S. has priority over fire, assign a higher priority to all M.N.S. digitized message switches. Within M.N.S. relative priorities can be set, so that higher priority messages will have precedence over lower priority messages.

|       |             |  |
|-------|-------------|--|
| Code  | Conditional | If the Type is Zone Sw (correlatable switch) and Coded System is specified, then Code is displayed and editable as for an Input Circuit.   |
| F1    | Yes         | If the item is some form of switch (Bypass, Slide Switch) etc, then this flag column can be set to ER (enable required) or none.   |
| F2    | Yes         | For Bypass and Manual Switches, this flag can be set to AR (Aux Reset Required). For Correlatable Switches it can contain NS (Non silenceable)   |
| F3    | Yes         | For Correlatable Switches this flag can contain GA (2nd stage, GA device). For Bypass and Manual Push Switches it can contain SR (System Reset Required).  |
| F4    | Yes         | If the item is some form of switch (Bypass, Slide Switch) etc., then this flag column can be set to CR (Control Required) or none. When the CR flag is set it is replicated on all switches with that control, system wide. This includes 24 Switch Adder switches that are later configured to the same type of common Control. All other switches that accept the CR flag must be set per switch, rather than per switch type. This means that, for example, a Paging switch or a Bypass switch can be configured to require control on one node, but to always allow operation on a different node, regardless of which node has control. |
| Tag 1 | Yes         | Except for Common Controls, System Status and Man Ena, a 20 character tag can be entered. It will be used to identify the control in messages, etc. For some Type/Assignment combinations the tag is generated and cannot be edited.   |



Tag 2      Conditional      Correlatable Switches (being analogous to Input Zones) accept a second line of 20 characters.

## Equation Summary List View

This list view appears in the top, right pane when the Equation Summary item is selected in the Job Tree view.

An equation can be attached to an empty Input Zone, an Output Circuit (not recommended) or a Timer. This list view summarizes all of the equations defined for the job.

The table describes all of the columns in the list view. Some advanced or system columns are hidden by default.

| Name            | Visible | Description   |
|-----------------|---------|---|
| Equation No     | Yes     | Internal Equation Number.   |
| Equation Name   | Yes     | The 20 character name of the equation.  |
| CKT_TYPE        | No      | Internal circuit type.  |
| Controlled Type | Yes     | The type of circuit (Input, Output or Timer) that is the subject of the equation.                                       |
| Node No         | No      | The Node No (does not apply to Timer).  |
| Node            | Yes     | The Node Name (does not apply to Timer).  |
| Loop            | Yes     | The Loop Number or the lowest Loop Number on the CPU if the Equation activates an Input Zone (does not apply to Timer). |
| Address         | Yes     | The address of an output or input zone. The number of a Timer.  |
| Process Type    | Yes     | The process type. Applicable only when the equation is controlling an output directly.                                  |



Tag                      Yes                      The output, zone or timer's tag.

Maximum number of equations per CPU is 220.

## Input / Output Circuit Summary

The Job Tree always contains an Input Summary and Output Summary item. Select either of these items to see a list of all of the circuits on the job.

On products that support them, this list may include Correlatable Switches. These will not have a value in the Loop and Address columns.

| Node         | Loop | Addr | Type          | Priority | Tag                                      |
|--------------|------|------|---------------|----------|--|
| FX-MNS Panel | 3    | 0    | Phone         |          |  |
| FX-MNS Panel | 3    | 1    | Phone         |          |  |
| FX-MNS Panel | 3    | 2    | Phone         |          |  |
| FX-MNS Panel | 3    | 3    | Phone         |          |  |
| FX-MNS Panel | 3    | 4    | Phone         |          |  |
| FX-MNS Panel | 0    | 3.0  | Alarm Input   | Normal   | Fire Alarm Input DM 1008A 3.0            |
| FX-MNS Panel | 0    | 3.1  | Alarm Input   | Normal   | MNS Alarm Input DM 1008A 3.1             |
| FX-MNS Panel | 0    | 3.2  | Latched S...  | Normal   | Fire Latch.SUPV Ipt DM 1008A 3.2         |
| FX-MNS Panel | 0    | 3.3  | Latched S...  | Normal   | MNS Latch.SUPV Ipt DM 1008A 3.3          |
| FX-MNS Panel | 0    | 3.4  | Trouble Input | Normal   | Fire Trouble Input DM 1008A 3.4          |
| FX-MNS Panel | 0    | 3.5  | Trouble Input | Normal   | MNS Trouble Input DM 1008A 3.5           |
| FX-MNS Panel | 0    | 3.6  | Monitor       | Normal   | Fire Monitor Input DM 1008A 3.6          |
| FX-MNS Panel | 0    | 3.7  | Monitor       | Normal   | MNS Monitor Input DM 1008A 3.7           |
| FX-MNS Panel | 5    | 1    | Alarm Input   | Normal   | COPTIR Detector Fire Alarm Input         |
| FX-MNS Panel | 5    | 2    | Latched S...  | Normal   | Acclimate Detector Fire Alarm Input      |
| FX-MNS Panel | 5    | 3    | Monitor       | Normal   | Photo Detector Fire Alarm Input          |
| FX-MNS Panel | 5    | 4    | Trouble Input | Normal   | Heat Detector Fire Alarm Input           |
| FX-MNS Panel | 5    | 105  | Alarm Input   | Normal   | Manual Station MNS Alarm Input           |
| FX-MNS Panel | 5    | 101  | Alarm Input   | Normal   | 4-20mA Module Gas Alarm Input            |
|              |      |      | Monitor       | +40%     | Mass Notification P1Priority Level 1.wav |
|              |      |      | Monitor       | +50%     | Mass Notification P2Priority Level 2.wav |
|              |      |      | Monitor       | +60%     | Mass Notification P3Priority Level 3.wav |
|              |      |      | Monitor       | +70%     | Mass Notification P4Priority Level 4.wav |
|              |      |      | Alarm Input   | +10%     | Evacuation Message 1Arabic 1.wav         |
|              |      |      | Alarm Input   | +20%     | Evacuation Message 2Arabic 2.wav         |
|              |      |      | Monitor       | Normal   | MONITOR NO DISPLAY ARABIC MSSG 1         |
|              |      |      | Monitor       | Normal   | MONITOR NO DISPLAY ARABIC MSSG 2         |
| Secutron MMX | 0    | 1.0  | Alarm Input   | Normal   | Alarm Input Address 1.0                  |
| Secutron MMX | 0    | 1.1  | Alarm Input   | Normal   | Alarm Input Address 1.1                  |
| Secutron MMX | 0    | 1.2  | Latched S...  | Normal   | Latched - Supv InputAddress 1.2          |
| Secutron MMX | 0    | 1.3  | Latched S...  | Normal   | Latched - Supv InputAddress 1.3          |
| Secutron MMX | 0    | 1.4  | Trouble Input | Normal   | Trouble Input Address 1.4                |
| Secutron MMX | 0    | 1.5  | Trouble Input | Normal   | Trouble Input Address 1.5                |
| Secutron MMX | 0    | 1.6  | Monitor       | Normal   | Monitor Input Address 1.6                |
| Secutron MMX | 0    | 1.7  | Monitor       | Normal   | Monitor Input Address 1.7                |



| Node         | Loop | Addr | Type   | Tag                      |
|--------------|------|------|--------|--------------------------|
| FX-MNS Panel | 0    | 0.0  | Signal | Fire Signals FIRE STROBE |
| FX-MNS Panel | 0    | 0.1  | Signal | Fire Signals             |
| FX-MNS Panel | 0    | 0.2  | Signal | Fire Signals             |
| FX-MNS Panel | 0    | 0.3  | Signal | Fire Signals             |
| FX-MNS Panel | 4    | 0    | Signal |                          |
| FX-MNS Panel | 4    | 1    | Signal |                          |
| FX-MNS Panel | 4    | 2    | Signal |                          |
| FX-MNS Panel | 4    | 3    | Signal |                          |
| FX-MNS Panel | 4    | 4    | Signal |                          |
| FX-MNS Panel | 4    | 5    | Signal |                          |
| FX-MNS Panel | 4    | 8    | Signal |                          |
| FX-MNS Panel | 4    | 12   | Signal |                          |
| FX-MNS Panel | 0    | 1.0  | Signal | Fire Signals             |
| FX-MNS Panel | 0    | 1.1  | Signal | Fire Signals             |
| FX-MNS Panel | 0    | 1.2  | Signal | Fire Signals             |
| FX-MNS Panel | 0    | 1.3  | Signal | MNS Signal MNS STROBE    |
| FX-MNS Panel | 0    | 2.0  | Relay  |                          |
| FX-MNS Panel | 0    | 2.1  | Relay  |                          |
| FX-MNS Panel | 0    | 2.2  | Relay  |                          |
| FX-MNS Panel | 0    | 2.3  | Relay  |                          |
| FX-MNS Panel | 0    | 2.4  | Relay  |                          |
| FX-MNS Panel | 0    | 2.5  | Relay  |                          |
| FX-MNS Panel | 0    | 2.6  | Relay  |                          |
| FX-MNS Panel | 0    | 2.7  | Relay  |                          |
| Secutron MMX | 0    | 0.0  | Signal | Base Signal              |
| Secutron MMX | 0    | 0.1  | Signal | Base Signal              |
| Secutron MMX | 0    | 0.2  | Signal | Base Signal              |
| Secutron MMX | 0    | 0.3  | Signal | Base Signal              |
| FX-MNS Panel | 6    | 101  | Relay  |                          |

The table describes all of the columns in the list view.

## Name Description

**Node** The Node Name where the device is located.

**Loop** The Loop Number where the device is located.

**Address** The device address of the device.

**Type** The device type (e.g. phone, Signal, Alarm Input, etc.).

**Node No** The Node No (does not apply to Timer).

**Priority** The priority adjustment, from -95 to Normal to +95, applied to the device. This row only appears in the Input Summary.



Tag      The Tag label assigned to the device.

## Input Zones

The list view displays the Input Zones. Input Zones are used to combine multiple input circuits into zones which can then be correlated to signals and other outputs and to display LEDs, etc.

Some columns containing advanced or internal information are normally hidden. They are listed as Visible / No in the following table. Other columns are conditionally visible.

| Name       | Visible | Description  |
|------------|---------|--|
| Addr       | No      | A sequentially assigned zone address. Allocated for consistency with other loop types.   |
| Lp         | No      | Loop Number. Not meaningful for zones  |
| Lp Addr    | No      | A sequentially assigned zone number or address.  |
| Ckt No     | No      | An internal, sequentially assigned number.   |
| Ckt No CPU | No      | An internal, sequentially assigned number: the CKT_NO within the CKT_IPT_ZONES.  |
| Device     | Yes     | Always Input Zone.   |
| Type       | Yes     | The process Type (Alarm, etc.) of the Zone. Can be edited (combo box).   |
| SubType    | Yes     | Additional refinement of the type. Always has a value of "None" for Input Zones.   |
| Priority   | Yes     | Specifies the priority to be given to digitized messages correlated to this input zone. Choose from a range of priorities. -19 (lowest) through Normal (default) to +19 (Highest). Activation of a zone with a higher priority will cause its message to be played, and any lower priority message will cease to play. |



In a combined fire and Mass Notification System (M.N.S.) installation, choose appropriate priorities. For example, if risk analysis has determined that fire has priority over M.N.S, assign a higher priority to all fire input zones – higher than those of M.N.S. digitized message switches.

|            |                  |   |
|------------|------------------|---|
| Code       | On Coded Systems | Inputs on Coded Systems only. Devices or circuits may optionally be associated with a code to be sounded on the signal circuits to indicate where the alarm has occurred. The code consists of 1 to 4 digits, each digit consisting of 1-15 pulses on the signals. Each coded circuit can be configured to sound the complete code 1 - 15 times after which the signals will either go silent or revert to the programmed GA rate. Embedded zeros and zero repetition counts are illegal and your pattern will be adjusted to make a legal pattern. For example, (1-0-2(3) is illegal and will be changed to 1-2(3), as is 4(0) and will be changed to (4). |
| Sens       | No               | No applicable to input zones.   |
| Sens B     | No               | No applicable to input zones.   |
| Tag1 and 2 | Yes              | The text of the tag, in two 20 character fields, representing the two lines displayed on the front panel when an alarm occurs, etc.   |

## Flag Columns

There are up to five Flag columns (F1, F2, F3, F4 and F5) for flags of various types:

- **NS** - Non Silenceable - used on inputs and supervised Outputs
- **GA** - 2nd Stage Alarm - in two stage system
- **ND** - No Display - indicates that activation of this zone is not to be displayed in the queue. A similar flag applies to individual devices. By default, devices do not have the flag set and zones do.
- **CO** - CO Alarm - used to indicate that this is a CO detection zone. Sounder bases correlated to this zone will sound the corresponding CO pattern. Can be set for zone Type='Supv.' or 'Alarm'
- **SA** - Zone activation equivalent to cancelling Signal Silence. Can be set only for zone Type='Supv.' or Type='Mon.'



## To set priority for a zone or a switch

1. In the configurator, double-click in the **Priority** column for the zone or zone switch.
2. Click a Priority in the pulldown menu.

This number is the priority given to digital messages that are correlated with this zone or switch. The priority ranges from -19 (lowest) through Normal (default) to +19 (highest).

**Note:** Priority for the Input Zones correlated to Message will be exported if:

- Audio controller is defined
- At least one Amplifier is defined
- User correlated Input Zone to a Digitalized Message

## Audio Splitter Zones

The Audio Splitter Zones are added automatically when a "split" amplifier is added to the configuration. Split Amplifiers are only available if the "Splitter Circuit Operation" check box is selected in Audio Setup. Two Audio Splitter Zones (of the Monitor type) are automatically created for each split amplifier. These zones are used to allow annunciating devices in suites and common areas to share a single physical circuit but to be controlled separately.

## LED Annunciator Summary

A FleX-Net™ job's Network Node can have multiple LED Annunciators, but they all share the same programming. There is therefore a maximum of one such item per Network Node in the tree view.

This list view is displayed in the top, right pane of the user interface when a LED Annunciator item is selected in the job tree. It shows the addresses and tags of each instance.

| CPU | Tag          |
|-----|--------------|
| 34  | Basement     |
| 36  | Second Level |
|     |              |
|     |              |
|     |              |
|     |              |

The data in the list view can be edited by pressing Enter or by choosing Edit / Modify Item from the menu. The first editable cell in the row opens for editing. Or you can double click in the field you want to edit.



The CPU Address can be changed. A drop down list appears, listing all of the available addresses.

The tag can also be edited.

LED Annunciators can be added or deleted from this view. If the last instance of the Annunciator is deleted a confirmation message appears. When the last Annunciator is deleted, the item is removed from the job tree.

## Loop Controller

This form is displayed when a Loop Controller is selected in the Job Tree view.

|        | Allowable CLIP Addresses |           | AP Start | Allowable AP Addresses |             |
|--------|--------------------------|-----------|----------|------------------------|-------------|
|        | Sensors                  | Modules   |          | Sensors                | Modules     |
| Loop 3 | 1 - 99                   | 101 - 199 | 100      | S100 - S159            | M100 - M159 |
| Loop 4 | 1 - 99                   | 101 - 199 | 100      | S100 - S159            | M100 - M159 |
| Loop 5 | 1 - 99                   | 101 - 199 | 100      | S100 - S159            | M100 - M159 |
| Loop 6 | 1 - 99                   | 101 - 199 | 100      | S100 - S159            | M100 - M159 |

- Type - Conv Adder or Loop Adder
- Daughter board installed - Set to true/checked if the Quad Loop Controller's daughter board is installed. If checked, the firmware monitors the presence of the additional two loops. Set to false/un-checked if the board is not present.
- Tag - Enter a description for the loop controller. This will appear in the Job Tree view
- CPU Number - Enter the CPU address for the loop controller. The list shows all available addresses in the internal bus range.
- **Overrides**
  - These items override similar attributes on the Job Details page. They initially show the state of the choices made on the Job Details page.
- **CLIP/Advanced Protocol Address Space** - Defines the address boundary between CLIP devices and Advanced Protocol devices



- AP Start - Enter the starting address of the AP devices on the loop. The address space below this entry will be allocated for CLIP devices and the address space above and including this entry will be allocated for AP devices. Valid AP Start values - 001 to 100.

## Loop Detail

The list view displays the hard wired (Conventional) circuits or addressable devices of a Loop, when that loop is selected in the tree. The same view is also used for an audio controller's loops: Phone Lines (inputs) and Amplifiers (outputs). The base set of columns is the same for all, but there are some Product and Loop Type dependencies.

Some columns containing advanced or internal information are normally hidden. They are listed as Visible / No in the following table. Other columns are conditionally visible.

| Name    | Visible               | Description   |
|---------|-----------------------|---|
| Addr    | Yes                   | For regular addressable devices, the displayed address is the same as device address. For conventional circuits display adder & circuit on adder.   |
| Lp      | No                    | Loop Number   |
| Lp Addr | No                    | For conventional, its relative position on the loop. For addressable, the actual address setting.   |
| Ckt No  | No                    | An internal, sequentially assigned number. One set for inputs, another for outputs.   |
| Device  | Yes                   | Conventional - fixed, depending on the circuit adder. See Add Circuit Adders.<br>Addressable - chosen when Adding Device(s). Can be edited conditionally. For example, a Photo Detector can be changed to other types of detector, a Relay Opt module can be changed to a Supv. Opt module. Other changes can only be achieved by deleting the device and adding another. |
| Options | On Addressable Loops. | Used with AP devices to determine what type of base they are mounted in, regular, sounder, or relay.  |



|                |                           |   |
|----------------|---------------------------|---|
| Type           | Yes                       | The process Type of the Device. Can be edited (combo box). The list of Types shown in the combo box will depend on the Device. E.g. Device Relay Output Module can be assigned Relay, Signal or Strobe. |
| SubType        | Yes                       | Additional refinement of the type. Always has a value of "None" for Input Zones.  |
| Code           | No                        | Applies only to input zones.  |
| Sens Lvl Pre   | On Addressable Loops.     | The Pre-alarm (or for some device types the trouble) sensitivity level. Optional.   |
| Sens           | On Addressable Loops.     | The alarm level 1 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Required for sensors.  |
| Sens Lvl 2     | On Addressable Loops.     | The alarm level 2 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Optional.  |
| Sens Lvl 3     | On Addressable Loops.     | The alarm level 3 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Optional if Lvl2 specified.  |
| Sens B Lvl Pre | If after hours specified. | The after hours and night time Pre-alarm (or for some device types the trouble) sensitivity level. Optional.  |
| Sens B         | If after hours specified. | The after hours and night time alarm level 1 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Required for sensors.                               |
| Sens B Lvl 2   | If after hours specified. | The after hours and night time alarm level 2 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Optional.   |



|                                   |                           |  |
|-----------------------------------|---------------------------|--|
| Sens B Lvl 3                      | If after hours specified. | The after hours and night time alarm level 3 sensitivity of the sensor. Displays a combo with sensitivity in appropriate units for the device type. Optional if Lvl2 specified.  |
| Tag (Line 1 and Line 2)           | Yes                       | The text of the tag, in two 20 character fields, representing the two lines displayed on the front panel when an alarm occurs, etc. The two fields are concatenated, trimmed of trailing spaces and saved on the database.   |
| Alternate Tag (Line 1 and Line 2) | Yes                       | Specifies tags to be used on displays where Alternate Tags is specified. See Main Display / LCD Annunciator. The primary tags will be used on all other displays. The alternate tags will typically be in a different language, but the characters must be supported by the same code page. For example, the primary tags could be in Arabic and used on most displays, but other displays could be showing English. |

## Flag Columns

There are up to four Flag columns (F1, F2, F3 and F4) for flags of various types.

- **AR** - Auxiliary Reset required - used on Relay
- **BU** - Back Up amplifier - used on audio controller. Designates the amplifier as the back up. It must be of sufficient power to substitute any of the other configured amplifiers. The back up amplifier can only accept correlations to status LEDs, trouble LEDs and UDACT groups.
- **ER** - Enable Required - used on switches for security (code or key)
- **GA** - 2nd Stage Alarm - in two stage system or to return the supervised signal to EVAC rate after code is completed in coded System
- **NB** - Relay is Non Bypassable when 'Relay disconnect' is used or when an "Aux Disc" switch is pressed.
- **NC** - Not coded - used on supervised outputs i.e. Strobe to keep the strobe operating until Reset (even after Code has ended)
- **ND** - No Display - indicates that activation of this input device is not to be displayed in the queue. A similar flag applies to Input Zones. By default, devices do not have the flag set and zones do.
- **NS** - Non Silenceable - used on inputs and supervised Outputs



- **SR** - System Reset required - used on Switches used for Fan control
- **NF** - No LED Activation - do not turn ON an addressable device's LED (and activate sounder when present) when the device is active. The LED turn ON by default and may only be changed to NF if the Authority Having Jurisdiction allows.

## Sens Columns

Sensitivity level for COSAP provides 6 levels of sensitivity, which are categorized as below:

- **Alarm 1** - Level 1 - 1%/ft of smoke. No delays from processed photo output.
- **Alarm 2** - Level 2 - 2%/ft of smoke. No delays from processed photo output.
- **Alarm 3** - Level 3 - 3%/ft of smoke. No delays from processed photo output.
- **Alarm 4** - Level 4 - 3%/ft of smoke. Maximum of 10 minutes delay from processed photo output.
- **Alarm 5** - Level 5 - 4%/ft of smoke. Maximum of 10 minutes delay from processed photo output.
- **Alarm 6** - Level 6 - Heat only alarm. If the heat level limits.

Once the CO cell has reached its end of life, and enters PTIR mode, the following sensitivities apply:

- **Alarm 1** - Level 1 - 1%/ft of smoke. No delays from processed photo output.
- **Alarm 2** - Level 2 - 2%/ft of smoke. No delays from processed photo output.
- **Alarm 5** - Level 5 - 3%/ft of smoke. Time elapsed from smoke detection is
- **Alarm 6** - Level 6 - Heat only alarm. If the heat level on either thermistor exceeds 1 limits.
- **CO Operation** - CO Operation - CO only alarm.

## Address Scheme

The configurator currently uses a sophisticated addressing scheme designed to avoid conflicts with virtual devices. The different types of adder are described in the Address Scheme.



## Main Display / LCD Annunciator

|  |  |
|--|--|
| <b>Options</b> <ul style="list-style-type: none"><li><input type="checkbox"/> Supervise Printer</li><li><input type="checkbox"/> Report Form Feed</li><li><input type="checkbox"/> Manual Enable on Menu</li><li><input type="checkbox"/> Node Control on Menu</li><li><input checked="" type="checkbox"/> Low Power Lamptest</li><li><input type="checkbox"/> Ring telephone buzzer</li><li><input checked="" type="checkbox"/> Ring buzzer on this CPU</li></ul> <b>Print Colour</b> <ul style="list-style-type: none"><li><input checked="" type="radio"/> Black</li><li><input type="radio"/> Alarms in red</li><li><input type="radio"/> Multi colour</li></ul> | <b>Passcodes</b><br>Level 1: <input type="text" value="1111"/><br>Level 2: <input type="text" value="2222"/><br>Level 3: <input type="text" value="3333"/><br><br><b>Main Display</b><br>Type: <input type="text" value="4x20 (Default)"/>   |
| <b>System Messages</b><br><b>System Normal Message</b><br>Line 1: <input type="text" value="MGC Network"/><br>Line 2: <input type="text" value="Fire Control System"/><br>Line 3: <input type="text" value="- System Normal -"/><br><br><b>After Hours Message</b><br>Line 1: <input type="text" value="MGC Network"/><br>Line 2: <input type="text" value="Fire Control System"/><br>Line 3: <input type="text" value="- After Hours Mode -"/><br><br><b>Locale</b><br>Language: <input type="text" value="English"/><br>Time: <input type="text" value="Sep 10, 2019 3:09:04"/><br><input type="checkbox"/> Use alternate tags                                     | <b>Access Levels</b><br>Level 0: No Passcode Required<br><br>Reports: <input type="text" value="0"/><br>Aux Bypass: <input type="text" value="0"/><br>Device Bypass: <input type="text" value="1"/><br>Walk Test: <input type="text" value="1"/><br>Set After Hours: <input type="text" value="0"/><br>Set Time/Date: <input type="text" value="1"/><br>Clear Event Log: <input type="text" value="2"/><br>Clear Verification: <input type="text" value="2"/><br>Config/Network Reset: <input type="text" value="2"/><br>Manual Enable: <input type="text" value="0"/><br>Node Control: <input type="text" value="0"/> |

### Major Sections

- Options
  - Supervise Printer - check this box to indicate that a printer is permanently attached to this annunciator and its presence should be supervised. If the box is not checked, a printer can be connected at any time (e.g. for debugging) but no trouble will be reported when the printer is removed.
  - Report Form Feed – sends a message to the panel when a form feed occurs on the printer.
  - Manual Enable on Menu - check to add a Manual Enable option on the LCD's user menu.
  - Node Control on Menu - when checked, an entry will be added to the menu on the display. The entry will read: "Unlock Common Ctrl's". When the operator selects this entry in the menu he will be able to temporarily unlock



the Manual Ctrl. switches which have the CR flag set. For details refer to the section Node Control.

- Low Power Lamp Test – uses a Lamp test where the LEDs are not as bright and consume less power.
- Ring telephone buzzer - check this box if the buzzer on this CPU is required to ring for incoming calls.
- Ring buzzer on this CPU - allows users to configure (enable/disable) the buzzer on Network masters and Rem. Annunciators.
- Print Colour - choose the colour in which log items will be printed. The choices are black, red for alarms only or multi colour (a different colour for Alarm, Supervisory, Monitor and Trouble). The configurator cannot verify that the attached printer can support the selected option.
- System Messages
  - Three 20 character text fields for System Normal Messages. A fixed font is used so that the user can view the actual spacing and alignment of characters as they will appear on the LCD. The standard text, from the template jobs, is in the language specified in the Locale section.
- Locale
  - Language - sets the language for this Annunciator. When the job is sent to the panel, the Firmware will use the strings (menus and error messages, etc.) for the chosen language. Any generated messages (Proving / Man Ctrl) will be constructed using the tag of the control plus System defined tokens for the selected language. The Main Display's chosen language becomes the default for other Annunciators that are added to the job, but the language does not have to be the same on all Annunciators of a job. But if languages are mixed, they must all be supported by the same Code Page. For example, there can be a mix of English and French displays. A mix of Eng/Arabic with French cannot be supported, because the French accented characters and the Arabic letters are not all on one Code Page. Note that a Main Display cannot currently support Arabic or Hebrew. The main must either be deleted or set to Eng/Arabic or Eng/Hebrew and hidden from the user's view.
  - Time Format - choose between a fixed number of time and date formats. The combo box shows a sample of each for the current time of day. The chosen format will be used for all time reporting (reports, LCD display) for this Annunciator.



- Use alternate tags - if checked, this display will use the alternate, or secondary tags. This feature can be used to show tags in a different language on designated displays. Alternate tags can be entered on device loop list view. The tags can be in a different language from the primary tags, but must use characters from the same code page.
- Passcodes - this section only appears on the main display.

- Level 1, 2 and 3 - specify the passcode for three levels of access. Passcodes must be composed from the digits 0-3 only.
- Access Levels

Specify the level of access for various front panel actions.

- **0** means that the panel operator does not need to enter a passcode.
- **1** means the operator must enter the code specified for Level 1, in the **Passcodes** section.
- **2** means the operator must enter the code specified for Level 2, in the **Passcodes** section
- **3** means the operator must enter the code specified for Level 3, in the **Passcodes** section.
- Node Control - this is the access level required to temporarily unlock the Manual Ctrl. switches which have the CR flag set when the "Node Control on Menu" checkbox is selected on this display. For details refer to the section Node Control.

User can set a passcode for certain panel actions. An operator given level 3 access automatically has access to the actions assigned to lower access levels, etc. Level 0 is the default for all actions that need no protections.

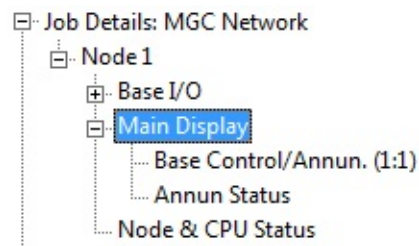
- Remote CPU - this section only appears on Remote Annunciators.



- Tag - enter a tag for the annunciator. The tag appears in the tree view.
- CPU Address - enter the Remote CPU number for the remote annunciator. The combo box lists the available addresses in the external CPU range.

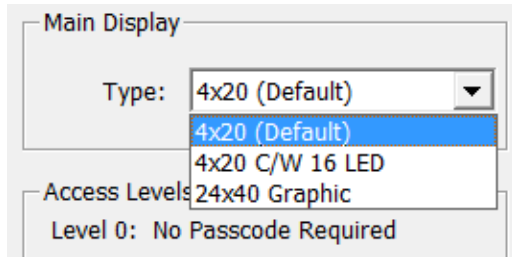
## Changing the Man Display

- Deleting the Main Display.

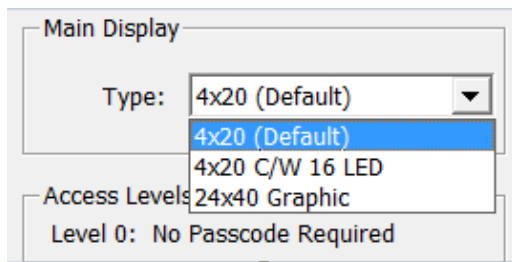


- To delete the Main Display, first highlight the "Main Display" item in the Job Tree List. Once you have it selected, you may delete the Main display by either pressing the DELETE key on your keyboard or right-clicking on it and choosing Delete from the pop up menu. Finally, click on OK in the confirmation window to delete the Main Display.
- Note that the actual Main Display item remains in the Job tree list, but that it no longer has the sub tree items of "Base Control/Annun." and "Annun Status".
- Restoring the Man Display.
  - To restore the Main Display after it has been deleted, you must right click on the "Main Display" item in the Job Tree List and select "Add Main Display" from the pop up menu.
- Changing the Main Display Type (Main Display only).
  - Note: User cannot change the Main Display Type if Main Display has been deleted.





- There are currently three types of Main Display supported on the FleX-Net™ panel. User can change the type from Main Display drop box.
- Another way to change it is from the Main Display submenu item "Base Control/Annun." Right click on the "Base Control/Annun." item and a pop up window will open showing the three types of displays supported, with a check mark beside the currently selected display type. Click on the display type that you are using on your panel.



- Click on the "Yes" button on the confirmation window to finish changing your Main Display type.

## Job Details

This form view appears in the top, right pane when the Job Details item is selected in the Job Tree view.

Some items can be overridden at the Loop Controller (CPU) level. Those check boxes are tri-state and are greyed if the choices made at the lower levels have been edited to be different from the system wide values on this page. They can be forced back into agreement by editing them here.



Job Info:

Job 2: "Test Job"

Version 1: Test Job

Created on: 2019-06-06 by: John Smith

Options:

☐ Two stage  
☒ Fire drill  
☒ Manual Signal Silence  
☐ Style D (Class A) Conv Inputs  
☐ Style D (Class A) Input modules  
☐ Style 6 and 7 (Class A) Loop  
☐ Style Z (Class A) Fire Phone  
☒ Style 7 (Class A) Network  
☐ Digital Audio  
☐ Digital Phone  
☐ Single Trouble Bypass  
☐ Silence NAC Audibles Only  
☐ Disable Waterflow Retard  
☐ Subsequent Alarms: ONLY In Separate Zones

☐ Monitor alert  
☐ Second stage alarm relay  
☐ Relay follows node alarm  
☐ Relay follows node supv  
☐ Relay follows node trbl  
☒ Drift Compensation  
☒ Device leds flash when polled  
☐ Alarm Transmit Silence  
☐ Disable Auto Test  
☐ Auto All Call  
☐ Auto Page To Evac  
☐ Enable Page Sw. Evac Annun.

Agency

ULC Standard

Audio:

Set up...

Signal Coding

☐ Coded System  
☐ Extended code  
☐ Delay Code  
☐ Sound Evac after code

Signal Rates:

Evac: Temporal

Alert: Alert Rate

Node Control:

☐ Node Control Enable  

Control Transfer

☒ Standalone/Degraded Mode  
☐ Node Ctrl Switch  
☐ Manual Key Enabled

Key Operation

☐ Momentary key  
☒ Maintained key

Timers:

Auto GA:

Powerfail Send Delay (Hrs): 0

Auto Signal Silence: Disabled

Proving Circuit Delay (Secs): 30

Signal Silence Inhibit (Secs): 0

Auto Resound (Mins): 10

New Alarm (Secs): 60

Node Ctrl active timeout (Mins): 5

Page Inhibit (Secs): 60

Node Ctrl request timeout (Secs): 30

Date and Time

Daily clock adjustment (Secs): 0

☒ Enable Daylight Saving

Start: 02 : 00 on: 2nd Sunday in: Mar

End: 02 : 00 on: 1st Sunday in: Nov

☐ Enable Auto After Hours

Daytime Start: 08 : 59

Weekend Start: Friday 18 : 00

End: 18 : 00

End: Monday 08 : 59

Holidays:

| Start Date | End Date   |
|------------|------------|
| xxxx-01-01 |            |
| xxxx-12-25 | xxxx-12-26 |

☐ Reprogram Holiday Trouble  
2019-06-06

Modify...

☐ Sync Enable

HH : MM : SEC

02 : 00 : 0

119



- **Job Info**

- Shows details of the job's name, number, creation date and author. The multi-line comments field can be edited and become part of the job's version history.

- **Options**

- Two Stage - check to enable two stage. *As per UL 864 and UL 2572 only a setting of Single Stage (disabled) is permissible.*
- Fire Drill - check to enable the panel's Fire Drill switch.
- Manual Signal Silence- check to enable the panel's Signal Silence switch.
- Style D (Class A) Conv Inputs - check this box to indicate that the panel has Class A (formerly Style D) conventional inputs.
- Style D (Class A) Input Modules - check this box to indicate that input modules' field wiring is Class A (formerly Style D).
- Style 6 and 7 (Class A) Loop - check this box to indicate that the panel has Class A or Class X (formerly Style 6 and 7) addressable loop(s).
- Style Z (Class A) Fire Phone - check this box to indicate that the wiring from an addressable fire phone module and the handset is Class A (formerly Style Z).
- Style 7 (Class A) Network - check this box to indicate that the wiring between Network Nodes is Class X (formerly Style 7).
- Digital Audio - check this box to indicate that the audio signals use the Arcnet wiring between Network Nodes. If not checked, then the audio runs over a separate pair of wires.
- Digital Phone - check this box to indicate that the Fire Phones use the Arcnet wiring between Network Nodes. If not checked, then the phone conversations use a separate pair of wires.
- Single Bypass Trouble - Setting this option will suppress troubles for ALL bypassed output ckts. Only the Signal Bypass switch active trouble will be generated by Bypassing from a switch on a DSPL or IPS-2424.
- Monitor Alert- When set, all monitor should activate the buzzer as a supervisory, otherwise the buzzer will stay silent.



- Silence NAC Audibles Only - If both flags "Silence NAC Audibles Only" and NS are checked the signal silence will silence the horn but the strobe will continue to flash.
- Disable Waterflow Retard - this flag indicates there is no extra delay on validating water-flow input activation.
- Subsequent Alarms: Only In Separate Zones. Unchecked Upon activation of a subsequent alarm for any device in any zone the signals will re-sound. Checked Upon activation of a subsequent alarm for only a device in a different zone the signals will re-sound.
- Second stage alarm relay - Sets alarm relay to operate only when the 2nd alarm stage is reached on a Two Stage system. Disabled unless Two Stage checked. *As per UL 864 and UL 2572 only a setting of Disabled is permissible.*
- Relays follow node alarm - Sets Alarm relay to activate on node level alarm - else system level alarm. Mutually exclusive with Second stage alarm relay.
- Relays follow node supv - Sets Supervisory relay to activate on node level supervisory - else system level supervisory.
- Relays follow node trbl - Sets Trouble relay to activate on node level trouble - else system level trouble.
- Drift Compensation - Enable drift compensation on photo detector. *As per UL864 and UL 2572 only a setting of Enable is permissible.*
- Device LEDS flash when polled - check this box to indicate that the LEDs of the addressable devices on the Base IO's loop flash when polled.
- Alarm transmit silence causes the PR-300 City Tie module to stop transmitting the Alarm signal when Signal Silence is active.
- Disable Auto Test - check this box to disable the automatic testing of System Sensor addressable devices.
- Automatic All Call - check this box to enable automatic "ALL-CALL" when PTT or Digital message SW is pressed.
- Enable Page Switch with Evac Annun. - this check box will enable Amplifier Evac/Alert Channel LED annunciation via the correlated Page Select Switch.
- Automatic Page To Evac - check this box to enable automatic "Page To Evac".



- System Type - indicates the System Type (compact or large) of the current Job/Version. This field cannot be edited, but for some products the job can be converted between System Types. See Convert Job
- Agency - choose between ULI Standard and ULC Standard.
- **Audio**
  - Audio Setup... - launches the Audio Setup dialog.
- **Signal Coding**
  - Coded System - check to enable coded system features.
  - Extended Code - Code pulse duration. 1/4 (disabled) 1/2(enabled).
  - Delay Code - Time between codes. 3 (disabled) 10 (enabled).
  - Sound Evac after code returns NAC operation to the general Evac signaling pattern after the coded signal has run all repetitions.
- **Signal Rates**
  - Evac - choose the evacuation signal rate.
  - Alert - choose the alert signal rate.
- **Node Controls**
  - Node Control Enable - setting this option will enable the Node Control feature and make available Control Transfer section options (radio buttons), to allow the user to select which method of node control is desired. The default selection is Standalone/Degraded Mode. Controls that are to be restricted have the CR flag set in column F4. Controls without this flag set can be used on any node, regardless of control.
  - Standalone/Degraded Mode:
    - Restricted controls can be used freely on any node designated as a Primary node.
    - There may be multiple Primary nodes active at the same time.
    - Restricted controls become available to non-Primary nodes if they lose communication with all Primary nodes on the network.



- Node Ctrl Switch:
  - Restricted controls can be used only on the in control node.
  - Only one node can be in control at a time.
  - Control is acquired, requested, and passed using node control switches on each node.
- Manual Key Enable:
  - Primary nodes can use restricted controls freely until control is passed to the Secondary node.
  - There can be any number of Primary nodes but only one Secondary node (which must be present).
  - The Secondary node can take control of the system with a switch, which disables access to restricted controls on all other nodes.
  - Restricted controls become available to non-Primary/Secondary nodes if they lose communication with all Primary/Secondary nodes on the network.
- Momentary / Maintained key - will define a type of key switch for the Manual Key Enable feature.

- **Timers**

- Auto GA Timer - select a time value from 30 **seconds** to 30 **minutes**, or Disabled. The control is disabled unless Two Stage Operation is selected
- Auto signal silence timer - select a time value from 30 **seconds** to 30 **minutes**, or Disabled. The auto signal silence timer cannot be set shorter than auto GA or signal silence inhibit timers. *As per UL 864 and UL 2572 only a Signal Silence Inhibit Timer setting of Disabled is permissible.*
- Signal silence inhibit timer - 0-180 **seconds**. *As per UL 864 and UL 2572 only a Signal Silence Inhibit Timer setting of 0 is permissible.*
- New Alarm - 10-120 **seconds**, the available values are in 10 second increments. The timer is started by a new alarm. When it expires, the new alarm system status is cleared. It is stopped by system reset. *As per UL 864 and UL 2572 only a setting of disabled is permissible.*
- Page Inhibit 0-120 **seconds**. Started by the first active alarm. Paging is inhibited while the timer is running. The internal system status Page Inhibit is



TRUE while the timer is running. *As per UL 864 and UL 2572 only a setting of 0 is permissible.*

- Powerfail Send Delay - if the only trouble on the system is an AC power failure, transmission of the status through the UDACT can be delayed up to 18 **hours**. The default is set to 3 hours.
- Proving Circuit Delay - 5-90 **seconds**. This timer is used for fan dampers, etc. If the monitor inputs do not activate (indicating that the fan has started running, or the damper has moved to its commanded position) within the specified time, then a trouble will be reported and LEDs associated with the fan damper switch will flash.
- Auto Resound 5-12 **minutes**. This timer specifies the time after which the signals will resound. The timer is stopped by (1) new alarm (2) Alarm Acknowledge or (3) system reset.
- Node Ctrl active timeout 5-10 **minutes**. Timer is started when a node gets control. This timer is reset every time a switch belonging to that node is pressed. When this timer expires the system is automatically brought back to idle state. Default value is 5 min. For how to use information please refer to the section Node Control. **Note:** Node Ctrl active timeout is enabled if Node Control Enable and Node Ctrl Switch flags (Node Controls section) are set.
- Node Ctrl request timeout 30-60 **seconds**. Timer is started with every request for control. When it expires the request for control is canceled if it has not been granted before the timer expires. Default value is 30 seconds. For how to use information please refer to the section Node Control. **Note:** Node Ctrl request timeout is enabled if Node Control Enable and Node Ctrl Switch flags (Node Controls section) are set.

- **Date and Time**

- **Daily clock adjustment**
  - Specifies the number of seconds (positive or negative) by which the panel's clock is to be adjusted every 24 hours. The adjustment, if any, is made at 01:55 every day.
- **Daylight Saving**
  - Enable Daylight Saving - Enables automatic change to and from daylight saving.
- **After Hours**
  - Enable Auto After Hours

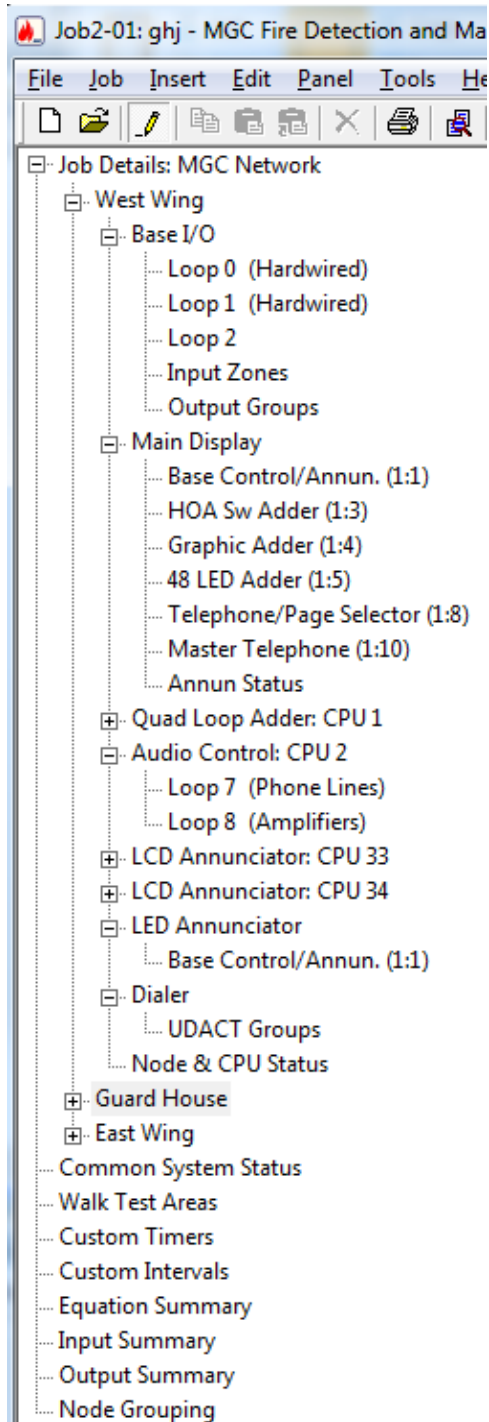


- Daytime Start and End - specify when daytime begins and ends.
  - Weekend Start and End - specify when the weekend begins and ends.
  - Holidays - list the defined holidays.
  - Modify... - open the Edit Holidays dialog
  - Reprogram Holiday Trouble - check this box to put the panel into trouble when there are no future holidays programmed. Specify the date after which there are no programmed holidays. The panel will be in trouble until the job is re-configured to have more holidays or the check box is un-checked.
- **Sync Enable** this check box prompts the panel to reset its time from an external link every day at the time specified. This option requires Sync Input to be defined (Conventional loop - Input Circuit, Type Sync Input).



## Job Tree

The Job Tree view represents the job in the form of a tree.



At the highest level are items common to the whole system, like Job Details and Custom Timers. Under Job Details, you will find the Network Nodes. Expanding a Node displays all the CPUs on that Node (Base I/O, QLA, Audio, LCD Annunciator), the Main Display, Led



Annunciators, and the Node and CPU Status. These can be expanded to reveal their sub-components: individual loops, display adders, etc.

When an item in the tree is selected, its details appear in the top, right pane of the user interface.

Components can be added to or deleted from the tree. You can also copy and paste or drag and drop most of the tree elements.



## Network Node Details

This form view appears in the top, right pane when a Network Node item is selected in the Job Tree view.

|   |   |
|---|---|
| <b>Options</b>  |   |
| <input type="checkbox"/> Alternate Ground Fault Detection | <input type="checkbox"/> Day Light Savings  |
| <input type="checkbox"/> Two stage                        | <input checked="" type="checkbox"/> Primary Node  |
|   | <input type="checkbox"/> Secondary Node   |
| <b>Network Settings</b>                                   |   |
| Tag:  | <input type="text"/>  |
| Node Address:   | 01 <input type="button" value="v"/>   |
| IP address:   | 10 . 10 . 0 . 1   |
| Subnet mask:  | 255 . 255 . 255 . 0   |
| Default gateway:  | 10 . 10 . 0 . 99  |
| <input type="checkbox"/> Supervise Ethernet Connection    |   |
| <b>Graphics Workstation</b>                               |   |
| <input type="checkbox"/> Enable                           | <input type="checkbox"/> Supervise Connection   |
| <b>Web Services</b>                                       |   |
| <input type="checkbox"/> Enable                           | <input type="button" value="Activate Web Services"/>  |
| User Name: Admin  | Password: mircom  |
| <b>BACnet</b>   |   |
| <input type="checkbox"/> Enable                           | <input checked="" type="checkbox"/> Devices <input type="checkbox"/> Zones <input type="button" value="Activate BACnet"/> |
| Model Name  | FlexNet/MMX   |
| Description   | Fire Ctrl Panel   |
| Location  | rty   |
| Device Name   | MGCNetwork FACP   |
| Device ID   | 10000   |
| Vendor Name   | Mircom Technologies Ltd   |
| Vendor ID   | 505   |
| App Version   | V12.2.14  |
| Base ID   | 20000   |

- **Options**

- Alternate Ground Fault Detection - If checked, the firmware will use alternate ground fault detection settings to compensate for the capacitance and resistance of long audio cable runs.



- Two Stage - check to enable two stage. *As per UL 864 and UL 2572 only a setting of Single Stage (disabled) is permissible.*
- Primary Node and Secondary Node - options for the Node Control functionality.
- **Network Setting**
  - Tag - Enter a description for the Network Node. This will appear in the Job Tree view
  - Node Address - Enter the Node address. The control lists all of the available addresses.
  - IP Address - Enter the Internet Protocol (IP) address of this node's Ethernet connection.
  - Subnet mask - This number is combined with the IP Address to identify which network segment the FX2000N Node is on.
  - Default gateway - This is the address of the local IP router that is used to forward traffic to destinations beyond the local network.
  - Supervise Ethernet Connection - If checked, the Ethernet connection on the Node will be supervised. A trouble will be reported if no Ethernet cable is plugged into the node.  
**Note:** If not checked, then neither Web Services not BACnet Services can run.
- **Graphics Workstation**
  - Enable - If checked, enables the Graphics Workstation. This enables the panel to communicate with computer graphical interfaces, like OpenGN. If checked User may check Supervise Connection.
  - Supervise Connection
- **Web Services**
  - Enable - If checked, enables Web Services.
  - Activate Web Services – This button allows Web Services license transfer from the CodeMeter Security Key into the current job. This button will disappear after Web Services license activation.
  - User Name and Password - The user name and password required to access the Node's web server. If the User Name and Password are edited, the changes will be applied to all nodes on the job. Also, if new nodes are



inserted or copied and pasted, new nodes will have the same User Name and Password as existing nodes. The defaults are "admin" and "mircom".

- **BACnet**

- Enable - If checked, the Node will run a BACnet (Building Automation and Control Networks) Server. This option becomes available only after the Web Services activation using the "Activate BACnet Services" button.
- Activate BACnet Services – This button allows BACnet Services license transfer from the CodeMeter Security Key into the current job. This button will disappear after BACnet Services license activation.
- Model Name: read only, BACnet Model Name
- Description: read only, BACnet Description
- Location: BACnet Location. Defaults to the first 25 characters of the Job Name, but can be overridden.
- Device Name: read only, BACnet Device Name.
- Device ID: the BACnet ID for the entire fire alarm system (In BACnet terminology, the Device).
- Vendor Name: read only.
- Vendor ID: read only.
- App Version: read only, configurator version.
- Base ID: The starting ID for all BACnet objects. These are the circuits, switches and system statuses of the configured job.

## **Walk Test Areas**

The list view displays the Walk Test Areas. This view allows User to configure walktest areas to be loaded to the panel. Top right panel within the view holds walktest names and sequence number, and bottom right panel is using to define the walktest relationship.

From the view the user can right click anywhere in the upper right pane to add a new Walk Test Area (Dialog will be called prompting User to enter a walktest area Name), or delete an existing one. If the user right clicks on an existing Walk Test Area, the pop up menu includes an option to add a walktest relationship (Add Input Devices Menu option). New entered walktest name will be added at the end of the list. Walktest sequence number is not editable, it is auto generated by the Configurator starting from 1. User can edit existing walktest name or copy the name.



From the walktest relationship view User can add a new walktest relationship for the selected in the top pane walktest name or delete walktest relationship.

### **OneMan vs. assisted walktest**

- Walktest areas will be exported for all systems (Single or Multi-node) if defined.
- In single node, if no Walk Test Areas are defined then the "OneMan" will be the only option selectable on the panel.
- In case there are no Walk Test Areas defined on multimode system, when walktest menu is selected, the panel displays following message and exits: "No walktest lists! Exiting..."

### **Operational restrictions**

- Multiple Selection of walktest name for displaying walktest relationship is not allowed.
- Copy / Paste walktest name is not allowed (but User can copy the name field from the walktest name), Copy / Paste walktest relationship is not allowed.
- User can't insert walktest between existing ones; new added walktest name will be added at the end of the list. Walktest number is not editable, it is auto generated by the Configurator starting from 1.
- User can enter the same name as already defined one; Configurator will create another walktest name record with unique id. During the build job Configurator will generate a warning about duplicated names, but they still can be sent to the panel.
- Maximum walktest name length is 80 chars.
- Maximum number of walktest names is 100.
- Maximum number of Inputs per walktest name is 1000.

### **Drift Compensation**

Contamination in smoke sensing chambers, whether ion or photo, can result in a shift to sensor sensitivity. Drift compensation adjusts the sensor sensitivity level to compensate for this contamination. Drift compensation applies to photoelectric, laser and ionization sensors.

The approach is to continually adjust the alarm threshold of a sensor to compensate for shifted clear air values from the sensor. Drift compensation is only effective in adjusting for long-term drift. If drift compensation were to adjust the alarm threshold of a sensor too



often it may become possible for an actual fire condition to be compensated out. Agency approval requirements like UL 864 are being established to prevent this from happening.

## **Differences Mode / Differences Report**

### **Introduction**

To access this dialog, select Compare Job Versions from the Job Menu.

The configurator has the capability of comparing two jobs. Once differences mode is entered the job tree shows which elements have been added, removed or changed. The list views show in more detail which items have been modified or whether correlations have been added or removed.

In differences mode a report can be printed. The scope and depth of the print report can be chosen, similar to when printing a single job.

The differences report is intended primarily to provide the authorities with a detailed list of what has (and what has not) been changed. Such a report can be used to justify only minor re-testing of an installation.

### **Primary vs. Secondary Job**

In this document we will refer to Primary and Secondary jobs. The primary is normally the older job, currently in service. It is the base against which the secondary job - the newer, modified job - is to be compared.

You will normally first establish the primary job by opening it using the Job Menu and choosing the desired Job and Version. Then you will invoke differences mode, where the secondary job is chosen.

This document occasionally refers to items that have been added or deleted. These terms are used with respect to the primary - assuming that the primary is the older job. There is nothing to prevent you from reversing this convention and establishing a newer job as the primary.

### **Initiating Differences Mode**

Differences mode can be initiated either by selecting Compare Job Version from the Job Menu, or by clicking the Differences icon in the tool bar.

When you initiate Job Compare, the Job Compare Dialog is displayed.

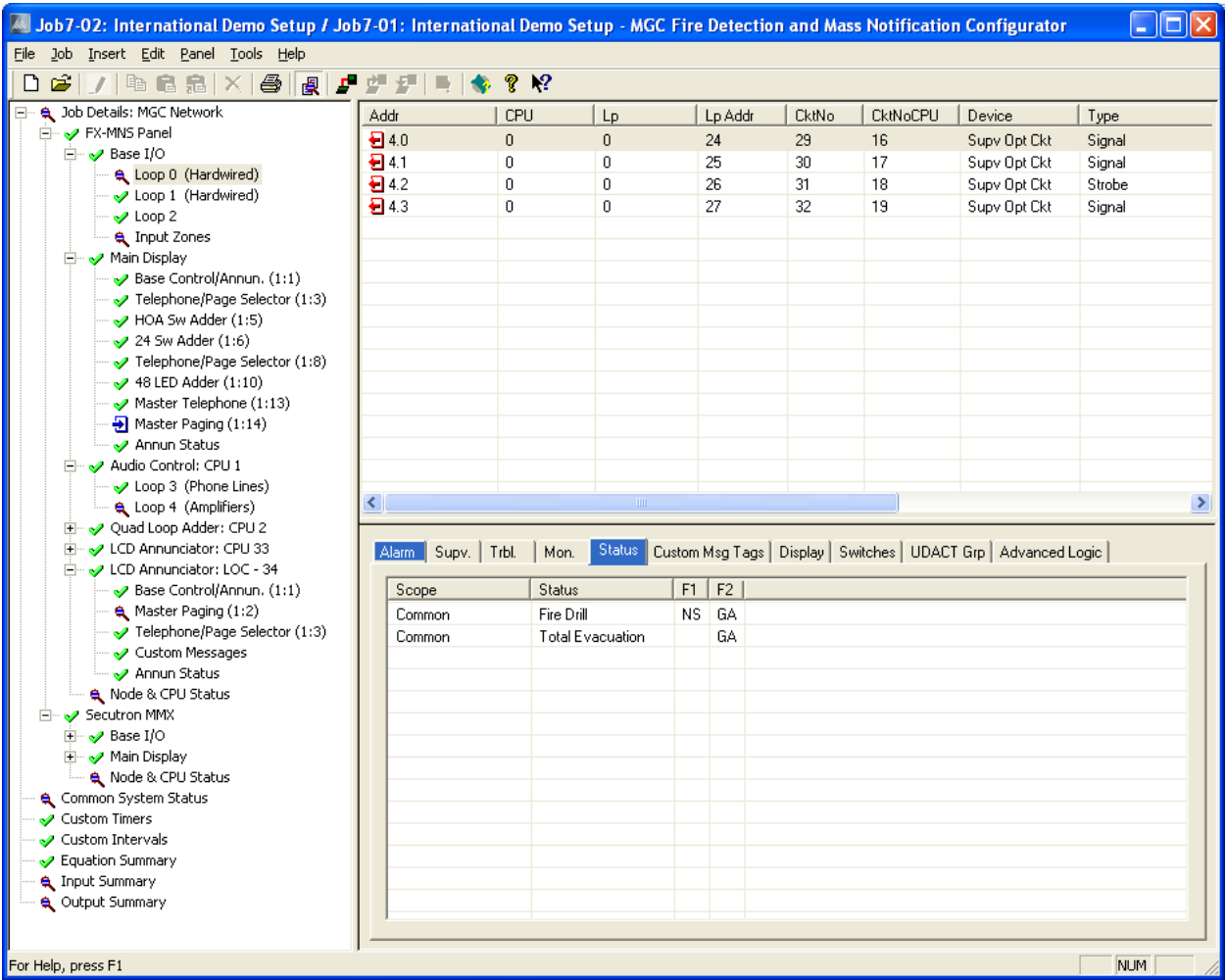
Press OK to enter differences mode. This can take several minutes, as the program examines every component of each job and decides if it is added, removed or changed. Correlations are also compared during this phase. A changed correlation is reflected not only in the correlations list, but is propagated (as a modification) up to the device or circuit list and



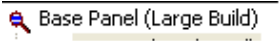
from there to the Device Loop in the job tree. A dialog is displayed to inform the user of the progress of difference reporting and to allow the action to be canceled. If you cancel, the display reverts to the primary job, in normal mode.

**Interpreting the results**

When the comparisons have all been made, the jobs are presented as one job tree. See below.



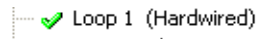
The magnifying glass icon represents an item that has been modified, symbolizing that it warrants a closer look: some lower level attributes have changed.



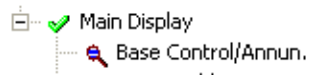
Items that have not changed are given the green check mark icon. More precisely, this means that there were no reportable changes on this item or any of its lower levels. If you chose a non-standard set of options and excluded, for example '..items that are modified', then a green check mark will appear if there are modifications, but no deletions and



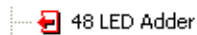
additions. This is because you chose to ignore or exclude them. This icon is only used in the job tree. Items in list views are suppressed completely if you choose not to include items that are identical. If you include items that are identical, then they have no icon at all. This is to avoid clutter and aid readability of the lists.



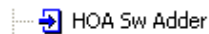
Notice that here (below) the Main Display itself did not change. None of its attributes, such as Pass Codes, System Messages, etc. were changed. The fact that some changes were made to its Base Control/annun. does not cause the Main Display itself to be marked as changed.



An item that has been removed (is present on the primary job, but not present on the secondary) is depicted with this symbol.



And, conversely, items that have been added are identified with this symbol.



The above symbols or icons are also used in the list views. Where a minor modification to a form, a device, LED or switch has been made, two adjacent rows are presented. The attributes that remained the same are represented by ditto marks in the second row.

| Section | Name             | Value       |
|---------|------------------|-------------|
| ↶       | Current Version: | Version 17: |
| ↷       | ---              | Version 20: |

Where the only difference between two list items is in its correlations, the magnifying glass symbol is used. Again, this means that the user can click on it to view the actual changes: in this case, the correlations in the bottom, right pane.

## Printing

The print and print preview operations function just as in regular mode. (See [Print](#)) You can choose to print the differences of the entire job, a single node, or a node and its sub-nodes. In addition to choosing how much of the job to print, you can also decide whether to print Outputs with Input Correlations, Inputs with Output Correlations or Display Correlations.



If you chose to suppress identical items when you entered differences mode, then any node in the tree that is marked with a green check mark will not be printed. Items whose only difference is in the lower level correlations are also not printed: only the actual correlations. On the printout the symbols - - > and < - - are used in place of the added and removed icons. The same symbols are used on pairs of lines to indicate which one is from the primary ( < - - ) and secondary ( - - > ).

If the print range of the job was Complete Job, then you may decide to choose only one of Input or Output Correlations, since every input has a corresponding output somewhere on the job. Be aware that if the print range does not encompass the complete job, then selecting only Input or Output may not include all correlations.

The Input and Output summaries will list any changes to the UDACT numbers to be reported to the authorities.

TIP: Print Preview works best if you maximize the Preview window (other windows can't cover part of it, requiring a redraw when moved) and zoom in/out so that a complete output page fits in the window (you don't have to scroll to view other parts of a page, which would cause frequent redrawing).

### **How Does the Program Decide what's Added/Removed/Changed**

Each item on the job has some attributes that are considered to be the key. For a Base Annunciator or Loop Controller it is the Node number. You may have changed the tag, or added Display Adders, but the item is still considered to be same one.

If you had removed and added Annunciators such that the node numbers changed, then these are no longer considered to be the same and will be reported as major additions / deletions.

For a circuit or device, the combination of Loop No and Device Address is considered to be the key. The internal Circuit Number (or UDACT) is not considered the key. Through deletions and additions, a circuit at the same loop/device address may receive a different UDACT number. This will be reported as a modification.

Display Items (Leds/Switches) are treated a little differently. They cannot be removed, but they can be assigned different roles, or completely un-assigned. The key for these items is a combination of the Node number and their relative position on the adder combined with their Type and Assignment. This means that a seemingly minor change to an LED's assignment (e.g. from Alarm Status to Mixed lpt) will be treated as though the LED had been deleted and re-added. This makes the handling of correlations more meaningful. Very often there is only a small sub-set of correlation types that are common to two different LED or Switch assignments. By treating the Type and Assignment as key, we can show the complete before and after correlations.



# Fire Phone Configuration

## Introduction

The configurator allows the user to set up an Audio Controller, conventional phones, addressable phones, remote field phones, master telephone handsets and telephone selectors, and connect them together.

There must be at least an Audio Controller, a Telephone Master Controller (QMT-5302N) and Telephone/Page Selector (QZP-5101). The Audio Controller supports conventional fire phone circuits or addressable fire phone circuit, which also require addressable fire phone modules. If you configure addressable fire phone modules you must also ensure that there is an addressable line to support them.

## Adding Audio Controller

This can be done by shifting the focus on the job tree to the network node where you wish to add the Audio Controller and:

- By pressing the right mouse button and choosing Add Audio Controller from the pop up menu;
- By using the Insert menu and choosing Add Audio Controller.

The new Audio Controller appears in the job tree. Its CPU Number is initially set to the next available address. Below it, looking very much like loops of a loop controller, are two more items: Phone Lines and Amplifiers.

You must also specify whether the four or five lines are to be configured as conventional phones or as addressable phone lines to serve addressable phone modules. After the Audio Controller is added you can still edit these attributes, or change just some of the lines between addressable and conventional.

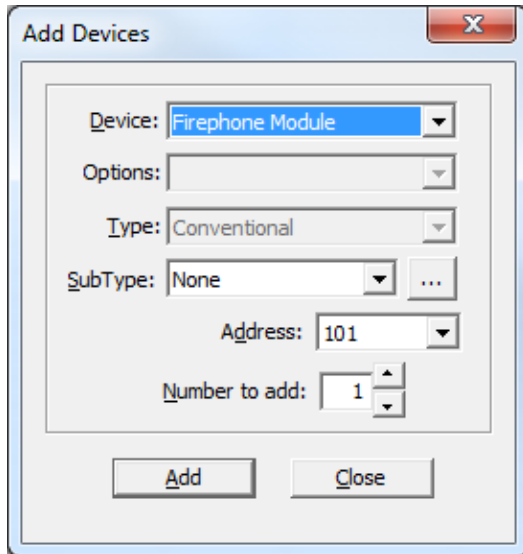
## Adding Fire Phone Module

Invoke Add Device function. This can be done...

- By pressing the right mouse button, with focus on an addressable device list.
- By using the Insert menu and choosing Add Device.



The following dialog appears.



**Device:** set this to Firephone Module.

**SubType:** the only available option is "None"

**Address:** specify the address for the new device. This defaults to the lowest available address.

**Number to add:** You can specify how many devices to add by changing this value. The configurator will attempt to allocate the devices sequentially, starting with the address you selected. If there are insufficient sequential addresses you will be shown a message with three options. "Yes" tells the configurator to continue adding devices, starting at the next available address and continuing to do so each time it runs out of sequential addresses. "No" tells it to add as many as will fit and stop. "Cancel" tells it to stop without adding any devices.

Click **Add** to continue.

After the operation is complete the dialog remains open for re-use. The Address value is adjusted to account for the devices just added.

If at any time during the transaction there are no more available addresses, the entire transaction is rolled back. No devices will have been added.

If there are no available addresses for the chosen Type then the Add button is disabled. You can select another type, or close the dialog.

The **Close** button dismisses the dialog.



## Adding Master Telephones

Only one Master Telephone can be added to either a RAX or the main display per node.

Invoke the Add Display Adder function. This can be done...

- By pressing the right mouse button, with focus on the tree item representing either an annunciator or another display adder belonging to an annunciator.
- By using the Insert menu and choosing Add Display Adder, with focus on the tree item representing either an annunciator or another display adder belonging to an annunciator.

The following dialog appears:



Master Telephone only appears in the Adder Type Combo Box if the annunciator does not already have one. It consumes one frame. It is initially set up to have all of the required standard LEDs and switches and the display items should not be edited.

## Adding Telephone/Page Selectors for Telephones

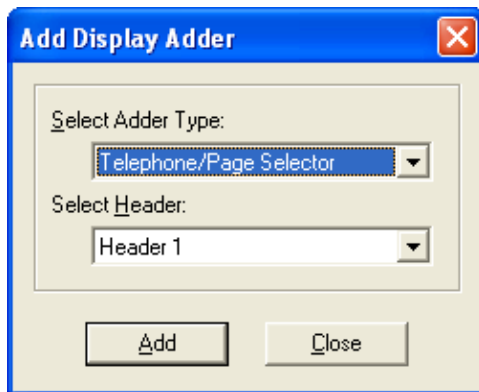
Any number of Telephone/Page Selector adders can be added to each RAX LCD Annunciator or to the Base Panel's Main Display, up to the maximum frame count for an Annunciator. An Annunciator can accommodate 14 frames: A Telephone/Page Selector occupies 2 frames.

Invoke the Add Display Adder function. This can be done...

- By pressing the right mouse button, with focus on the tree item representing either an annunciator or another display adder belonging to an annunciator.
- By using the Insert menu and choosing Add Display Adder, with focus on the tree item representing either an annunciator or another display adder belonging to an annunciator.



The following dialog appears.



A Telephone/Page Selector is added to the current Annunciator. It has 24 switches, all of which are initially un-assigned. They can be configured as Zone Sw, Phone Sel, Dig Msg, Page Select, or Node Ctrl.

### **Assigning Selector Switches**

Any of the 24 switch positions can be edited to be assigned as Phone Sel. You can also assign each switch a different Tag.

When a Phone Sel switch is highlighted, the lower pane shows its correlations.

### **Correlating Selector Switches to Telephones**

The following constraints are applied to Telephone / Switch correlations.

- Each dual LED/Switch combination on a Selector can control and annunciate only one telephone (conventional circuit or addressable module).
- If a switch on one CPU (Annunciator) is already controlling a telephone, then no other switch on that same CPU can be associated with the same telephone. However, any given telephone module can be controlled from a similar LED/Switch combination on another CPU.

Typically, a bank of selectors on one Annunciator will mirror those on another. This is not a requirement though, and the Selector Switches at the Main Panel, for example, could control all the phone modules on a job, while each remote Annunciator controls only a subset.

Correlations can be added from either end of the relationship.



## **Adding Switch Corrs to a Phone**

1. Navigate to the addressable loop or Audio Controller phone list view containing the telephone and highlight it (one phone at a time) in the device list view.
2. Invoke Add Correlations.
3. The Add Correlations dialog appears and presents a list of all of the available Selector Switches, from all CPUs.
4. Select maximum one switch from each CPU that you want to be associated with this telephone.
5. Press Add

If you selected more than one switch from the same CPU, then only the first one will be correlated, and an error message will halt the adding of correlations.

If you had previously correlated one or more switches to this telephone module, then you will not see any available switches from the same CPU as those existing correlations.

## **Correlating Phone Module to a Switch Corrs**

1. Navigate to the Display Item list containing the Selector Switch and highlight it (only one switch at a time) in the list view.
2. Invoke Add Correlations.
3. The Add Correlation dialog appears and presents a list of Addressable Phone Modules and Conventional Phone Circuits. If the Selected switch already has a correlation, then no available phones are shown.
4. Select only one Phone Module (a switch cannot control more than one telephone).
5. Press add

If the Phone you selected to add was already correlated to another switch on the same CPU, you will receive a message "A select switch already exists for control circuit number nnn. A circuit can only be assigned to one Telephone Switch per CPU".



If you selected more than one Phone to add, or if you press add again, then you will receive the error message "Cannot correlate a Phone Select switch to more than one phone module".

NOTE: The general purpose nature of the Add Correlations dialog means that it cannot prevent multiple selection. The error is detected after you press Add.

### Linked Items

Selector Switches whose operation is linked with a switch on another CPU will be marked with an asterisk. By right clicking and selecting View Linked Items, you can see the CPU, Frame and Index of the other switch(es).

### Call Control

The call control feature allows an operator at one node to execute a call-in to all other master handset in the network.

Call Control can be configured if two or more nodes are equipped with an audio controller and master telephone.

Assign a Telephone Selector Switch on the node where the user is to receive the Call Control. If this node has a master telephone, and if there are remote nodes with masters, an additional tab - **Call Control** - appears on the Add Correlations dialog. It lists all of the remote nodes that can potentially participate in Call Control. Select the node that is to initiate Call Control.

When the remote user picks up the master telephone and presses Call Control, this sets the remote node's Call Control status and initiates a call-in. The LED associated with the correlated telephone selector begins to flash and the operator can press the switch to accept the call as if it were from a remote handset. The two master telephones are then connected. It is recommended that you assign switches for each master handset at each node that has a master handset to ensure that a Call Control call can be accepted or canceled.

Call Control is a toggle operation. Pressing the switch again cancels the call-in.

In order to be able to define Call Control correlation (master telephone correlation) User needs the following:

- Audio Controller shall be defined, Master Handset checkbox on it shall be checked;
- Master Telephone adder shall be defined.

**Note:** Once master telephone correlation is defined the user will not be able to delete Phone Select switch, Telephone/Page Selector adder or the Node where the switch with



master telephone correlation is defined. Master telephone correlation shall be removed prior to deletion.

### **Drag & Drop / Copy & Paste**

A Fire Phone device cannot be copied if it is already correlated to a selector switch. Doing so would break the rule of one switch, one phone. If you attempt to copy such a device (or a loop that contains one) an error message is displayed. If you need to copy phones, do so with Paste Special and un-check the Copy display correlations option.

### **Get Job**

To access the Get Job feature, you must first connect to the panel and then select Get Job from the Panel menu, or click on the Get Job button in the Toolbar.

You can get all job data from the panel by using Get Job. This command retrieves a job from the panel, transposes the data and stores it on the database. If the panel is loaded with an older version of the firmware, the appropriate size and layout of data structures is built to receive the data.

If the job is determined to be a newer version of one already stored on the database (it compares the Job's Globally Unique ID or GUID) then the next highest version is created.

If no prior version of the job is already stored on the database, then a new job is created. The New Job dialog is used to collect information such as the Job Name, Author and Comments.

If a job with the same GUID is already on file - meaning that the jobs are of the same "lineage"- then the New Version dialog is used to collect comments for the version history.

### **Send Job**

To access the Send Job feature, you must first connect to the panel and then select Send Job from the Panel menu, or click on the Send Job button in the Toolbar.

You can send the current open job to the panel by selecting Send Job from the Panel menu.

The job can be sent to every network node or to selected nodes. This can be useful when nodes are brought on-line in stages, or if only some nodes need to have their programming refreshed. However, all nodes of the job must ultimately be programmed with the exact same job/version.







# Suite Silence Configuration

## Introduction

The configurator allows the user to configure a combination of System Statuses, timers, input zones and signal zones to satisfy the requirements of the Ontario Building Code with respect to "Suite Silence".

The code allows the signals (speakers) in suites other than the suite where the alarm occurred to be automatically silenced. But it specifies that the automatic signal silence cannot occur until a minimum time has elapsed. It also specifies that the signals must resound immediately if there is a subsequent alarm anywhere in the building, or if ten minutes elapse and the alarm has not been acknowledged.

An excerpt of the code is reproduced below.

(13) Audible signal devices, within dwelling units that are wired on separate signal circuits, need not include a means for silencing as required by Sentence(9) provided the fire alarm system includes a provision for automatic signal silence within dwelling units, where,

- (a) the automatic signal silence cannot occur within the first 60sec. of operation or within the zone of initiation,
- (b) a subsequent alarm elsewhere in the building will reactivate the silenced audible signal devices within dwelling units,
- (c) after a period of not more than 10 min., the silenced audible signal devices will be restored to continuous audible signal if the alarm is not acknowledged...

## Timers

Two timers were added to support Suite Silence. And the existing Signal Silence Inhibit timer also plays a role. The duration of all three timers can be set on the Job Details form. The conditions which start and stop these timers are also described there.

- Auto Resound (mins) - This timer specifies the time, in minutes, after which the signals will resound if an alarm remains un-acknowledged. The configurable range is from 5 to 12 minutes with a default of 10 minutes.
- New Alarm (secs) - This timer is started by a new alarm. The configurable range is from 10 to 120 seconds, in 10 second steps with a default of 60 seconds.
- Signal Silence Inhibit (secs) - This timer already existed prior to the introduction of Suite Silence and specifies how long the signals must sound before they can be silenced by any means.



## Common System Statuses

Two Common System Statuses were added to support Suite Silence.

- New Alarm Active - This status is set to true when a new alarm occurs and remains true while the New Alarm timer is running.
- Auto Suite Resound - This status becomes true when the Auto Resound timer expires.

The "Subsequent Alarm" common system status, which was used before Suite Silence was officially supported, should **not** be correlated to suite signals.

## Configuration

- Set the job to be Two Stage.
- Set the alert rate to "Alert" and the Evacuation rate to "Temporal". Do this on the Job Details form in the signal rates section and if the job has audio, within the Audio Setup dialog.
- Set the New Alarm timer to 60 seconds. Do this on the Job Details form.
- Set the Auto Resound timer to 9 minutes. Do this on the Job Details form.
- Set the Signal Silence Inhibit timer to 60 seconds. Do this on the Job Details form. You may have to adjust the Auto Signal Silence timer since the two are related.
- Add the detectors that are located in each suite. Create an alarm zone for each suite and place the corresponding detectors in each zone.
- Add signal circuits for each suite.
- Correlate each suite alarm zone to the corresponding suite's signal circuits.
- Add signal circuits for areas not within the suites. E.g. Hallways.
- Correlate Common Alarm to the Hallways' signal circuits.
- Correlate the "New Alarm Active" common system status to all suite signal circuits.
- Correlate the "Auto Suite Resound" common system status to all suite signal circuits.



## Delete Item

Use this command to delete selected items. You will be prompted to confirm the deletion.

The effect of the delete command varies according to what item in the job is selected.

By selecting an item in the Job Tree, you can delete an Annunciator, Loop Controller or Display Adder from the job.

If you navigate to the Device List View and select one or more devices, they will be deleted. If the Devices are conventional circuits, then the whole group of circuits will be deleted.

If you navigate to a Display List and select an item for deletion, its assignment will change to un-assigned.

Correlations can also be removed by selecting them on the Correlation View.

## Modify Item

Use this command to modify selected items.

The effect of the modify command varies according to what item in the job is selected.

If you navigate to any list view, select a row and click *Modify* the first editable cell in the row will open for editing. If the cell is a multi choice cell, then a drop down box will appear. If the first editable cell in the row is a text field, it will be selected and opened for editing. You can change the contents and press Enter or Tab to accept the change. The next editable cell in the row will now be selected for editing. You can press Esc if you do not need to change any more values in the row.

Some cells have custom edit controls. An example is the Code of a device on a job where the Coded Signals option has been selected.

If you have not yet unlocked the job against unintentional edits (see Edit), you be prompted to do so.

## Copy

Use this command to copy selected items to the clipboard to be pasted in other locations.

Note: If you copy Addressable devices to the same or another loop, they will receive the lowest available address. (To retain the address on loop to loop copies use Paste Special)

See Copy and Paste for full details.



## Paste

Items that have been copied to the clip board can be pasted to another location in the job using this command.

See Copy and Paste for full details.

## Paste Special

Items that have been copied to the clip board can be pasted to another location in the job. By choosing Paste Special you can override some of the defaults.

One of the Paste Special dialogs will open.

Paste Special or Paste Special for Display Items

See Copy and Paste for full details.

## User Preferences

This Command opens the User Preferences dialog, where you can specify the locations of the file folders Configurator uses and customize the configuration tool.

## Print

Prints details of the active job.

The Print dialog lets you choose the scope and amount of detail to be printed.

Shortcuts

Toolbar: 

Keys: CTRL+P

## Print Preview

This command lets you preview pages before printing them.

It uses the same Print Dialog as the Print command to specify exactly what parts of the job should be previewed.

## Add Loop Controller

The Add Loop Controller command will display the Add Loop Controller dialog, where you can choose the type and number of controllers to add to your job.



The new Loop Controller will be added alongside any existing controllers under the currently selected network node.

Some models may have a fixed number of addressable and conventional loop controllers, in which case this Insert Menu item will be disabled.

## **Add Annunciator**

This command will display the Add Annunciator dialog where you can specify the type and number of annunciators to add to your job.

For a network job, the new annunciator will be added to the currently selected Node. For non-network the new annunciators will be added alongside any existing annunciators.

## **Add Display Adder**

This command will display the Add Display Adder dialog where you can specify the type and number of adders to add to the currently selected annunciator or main display.

Display Adder is only enabled when a target Annunciator can be uniquely identified. This means that an Annunciator or one of its Display Adders must be selected in the job tree.

## **Add Item**

Depending on what is currently selected in the job tree, one of the following add commands can appear in the insert menu.

Add Device - if a Dev Loop is being displayed.

Add Amplifier - if an Amplifiers loop of an audio controller is being displayed.

Add Zone - If the selected tree item is the Input Zones branch of a CPU (QLA or Base I/O of a Master), add a zone.

Add Message - If the selected tree item is the Custom Messages branch of a remote annunciator, add a Message.

Add Group - If the selected tree item is Output Groups branch of a CPU (QLA or Base I/O of a Master), add a group.

## **Add Device**

If you select Add Device from the Insert Menu then one of these dialogs will be displayed, depending on the loop type.



Hardwired Modules:

If a conventional, hard-wired loop is selected, the Add Circuit Adders dialog is opened.

Addressable Devices:

If the currently selected tree item is an addressable device loop this command opens the Add Device dialog allowing you to add one or more devices.

### **Add Amplifier**

On products that support Audio, select this menu item then the Add Amplifier dialog will appear.

### **Add Zone**

If the currently selected tree item is Input Zones this command opens the Add Device dialog (zones are treated as a special form of input device) allowing you to add one or more input zones.

### **Add Message**

On products that support Custom Messages, select this menu item then the Add Message dialog will appear.

### **Add Correlations**

The Add Correlations dialog appears in response to the Add Correlations command and is generally available when the top, right pane of the user interface is showing a list view.

For example, if a Device Loop is being displayed you can add correlations between its devices and circuits and devices, display points, messages and Common System Statuses anywhere on the job.

### **New Job**

This Command opens the Create Job window to create a new job from a job template. Templates exist for most combinations of Agency (ULI or ULC), System Type (Compact or Large) and language. Alternately, a new job can be created by copying the current job data.

Shortcuts

Toolbar:

Keys: Ctrl-N



## Open Job

This Command launches the Open Job dialog. Use this command to choose a job to open. If a job has more than one version, you can also select the version.

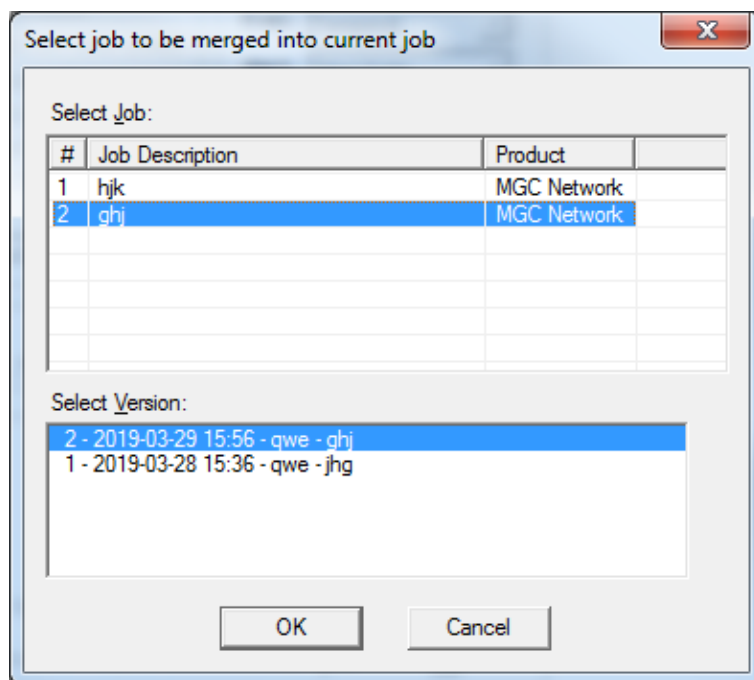
### Shortcuts

Toolbar:

Keys: Ctrl-O

## Merge Job

To access this dialog, select Merge Jobs from the Job Menu.



This command merges a selected job/version (the source) into the current job (the target). All of the source job's correlations, IO, LEDs & Switches, Zone Members, Node Grouping, etc. are retained. Both jobs must be in the working database. If the source job originates from a different user or organization, it must be first imported.

The resulting job is not tested for capacity overflows or other constraints during the merge process. The user must validate the resulting job and resolve any warnings and errors.

e.g. The resulting job could have more than one node with the same IP Address, or more than one master microphone.



The source and target jobs may have used the same Node Addresses. The user is prompted to resolve any Node Address conflicts. New Node Addresses for the source job are chosen from the list of available addresses in the target job.

**Intervals:** System intervals such as Holidays, Weekend and Night Time are not copied from the source job. The target job's settings are retained. Custom intervals are copied from the source to the target and assigned new CktNo's without regard for their content. This can result in exact duplicates of similar intervals which are already on the target. Duplicate intervals can be deleted and any equations that refer to them adjusted to refer to the target job's intervals.

**Custom Timers:** Custom timers are copied from the source to the target and assigned new addresses without regard for their content. This can result in exact duplicates of similar timers which are already on the target. Duplicate timers can be deleted and any equations that refer to them adjusted to refer to the target job's timers.

**Digitized Messages:** Digitized message are copied from the source to the target and assigned new message number without regard for their content. This can result in exact duplicates of similar messages which are already on the target. No duplicate clips are produced in the process. Duplicate messages can be deleted and any switches, etc. that refer to them adjusted to refer to the target job's messages

**License-able Features:** Features such as BACnet and Web Services can only be enabled when the user has purchased a license for a specific job. A feature will be enabled in the final, merged job only if the target job has the required license. Careful choice of source and target (where the target already has the licenses) will allow the features to be transferred. But if the source has a feature enabled and the target does not have the corresponding license, the merged job will have the feature disabled.

## **New Version**

Make a copy of the current job, assigning it the next highest version number. The New Version dialog displayed. The user is prompted for mandatory comments and may also override the Author field. The Job Name cannot be changed. The new version is un-locked for editing.

You would use the New Version command to preserve jobs that have been sent to the panel or to make a copy before making extensive changes.

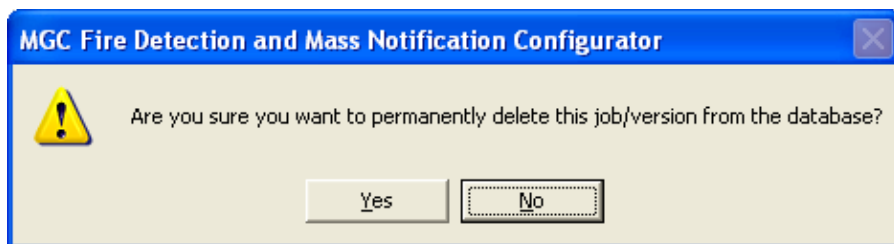
## **Shortcuts**

Keys: Ctrl-W



## Delete Job Version

Permanently deletes the currently established Job / Job Version from the database. A confirmation dialog is presented to ensure that this was the user's intent.



Shortcuts

Keys: Ctrl-D

## Version History

This command will show you a list of the versions of the current job that are in the database.

See the Version History dialog.

## Convert Job

This command allows you to convert a job from one System Type to another.

A new version of the job is created in the process, thus retaining the original job and type. When conversion is complete, the new job version is opened and displayed.

See the product specific help topic for more details.

## Validate Job

This action performs all of the steps normally performed when preparing to send a job to the panel. It builds the data structures, assuming the current version of the product, by extracting data from the Job database.

Validation can fail if a job's capacity is exceeded. Cross checks that cannot be performed as the job is configured are performed at validation time and errors issued if the checks fail. It can also fail if the database has been manipulated outside of the Configuration Utility.

At the completion of the validation, the user has the option of producing a capacity report. This report lists all of the internal data structures and gives an indication of how close to capacity they are. A short description of each data structure tells the user what it is used and therefore what must be changed to reduce its size.



## **Connect**

Use this command to toggle the state of the connection with the fire alarm panel.

When a connection is established, other menu and toolbar commands become available.

## **Manage Jobs**

This Command launches the Manage Jobs dialog, allowing the user to view and delete the jobs stored on the fire panel's file system.

## **Panel Info**

This command displays a summary of Panel and Configurator information, with options to view more detail.

## **Security Key Information**

This command displays a summary of the Security key information.

This menu item is greyed for those products that do not use a security key. See the product specific documentation for detailed information.

## **Upgrade Firmware**

The Upgrade Firmware command steers you through the procedure to load new firmware into your fire alarm panel.

- Connect to the panel
- Browse to locate the firmware archive containing the new software.
- Follow the on-screen instructions. The exact procedure varies from product to product.

## **Extract All**

This command extracts every job on the database and produces an individual database file for each. It has the same effect as running Export Job for every job. Unlike Export Job, you do not have the choice of making a compact serial archive (FX2Job)

## **Build Job**

This command validates and builds the current job, producing a C file in the Job Build folder.

It performs the build assuming the latest product version.



## **Build Job**

This command validates and builds the current job, producing a C file in the Job Build folder.

It first shows the Build dialog so that you can choose the product version. You can use this command to produce the C files for older versions of the panel.

## **Link Statistics**

This command displays statistics for the connection between the configurator and the fire alarm panel.

## **Display Structure**

This command opens the Display Structure dialog, allowing you to display the contents of any fire alarm panel data structure.

## **Custom Messages**

This feature allows a single message to be used for a group of output circuits or input zones. This is used for consolidating the annunciating of a group of circuits. In the example shown below the input zones in the Exhibits Hall would be annunciated individually on the Main Display, but on the East Wing Exit LCD annunciator, the message "Exhibits Hall" will be displayed for any device that activates.







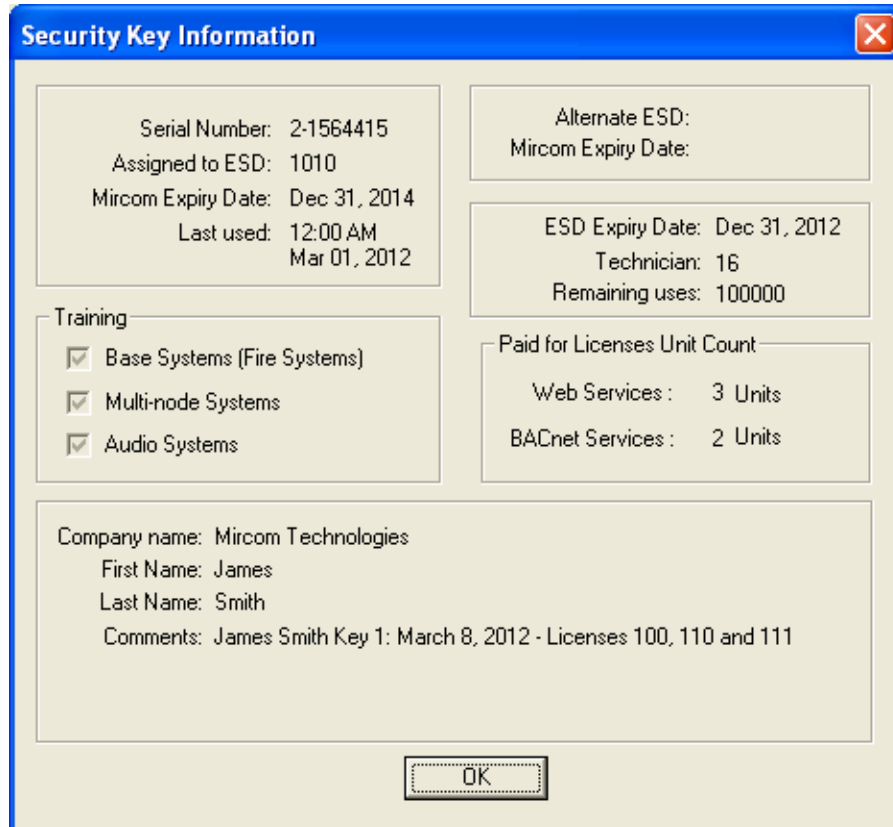
The Add Correlations Dialog therefore adapts to changing conditions. When you select an input message on an annunciator that has no correlated circuits, the Add Correlations dialog shows a list of all existing input circuits, in all four categories. If you now correlate the selected message to an alarm circuit, that circuit is removed from the list of available choices on the Alarm tab and all available circuits are removed from the other tabs: the message is committed to displaying only a group of alarms.

Similar constraints to correlations apply in the other direction, when you select a circuit or device on the Loop Detail View. The Add Correlations view will only display Messages that are available for correlation. If the circuit is already correlated to a message on an annunciator, then no other messages from that same CPU will be presented. Add Correlations also prevents you from correlating mixed circuit types (Alarm, Supv., Monitor and Trouble) to the same message. For example, if you have selected an Alarm circuit you will not be presented with messages that are already correlated to another type of circuit. For the same reason, if you select a mixture of circuit types on the Loop Detail View, then the Add Correlations dialog will show no available message on its Msgs tab.



## Security Key Information

This dialog displays a summary of the Security key information.



The dialog box titled "Security Key Information" contains the following information:

- Serial Number:** 2-1564415
- Assigned to ESD:** 1010
- Mircom Expiry Date:** Dec 31, 2014
- Last used:** 12:00 AM Mar 01, 2012
- Alternate ESD:**
- Mircom Expiry Date:**
- ESD Expiry Date:** Dec 31, 2012
- Technician:** 16
- Remaining uses:** 100000
- Training:**
  - ☒ Base Systems (Fire Systems)
  - ☒ Multi-node Systems
  - ☒ Audio Systems
- Paid for Licenses Unit Count:**
  - Web Services :** 3 Units
  - BACnet Services :** 2 Units
- Company name:** Mircom Technologies
- First Name:** James
- Last Name:** Smith
- Comments:** James Smith Key 1: March 8, 2012 - Licenses 100, 110 and 111

OK

## System Status Details

The following table describes the conditions under which each of the system statuses become true:

| NumberDevice ID |                 | Short Name   | Description  |
|-----------------|-----------------|--------------|--|
| 000             | **_**_**-ST-000 | Common Alarm | Set to TRUE when any of this job's NODEs have their "Node Alarm" status equal to TRUE. |
| 001             | **_**_**-ST-001 | Common Supv  | Set to TRUE when any of this job's NODEs have their "Node Supv" status equal to TRUE.  |



|     |                 |                   |  |
|-----|-----------------|-------------------|--|
| 002 | **_**_**-ST-002 | Common Trouble    | Set to TRUE when any of this job's NODEs have their "Node Trouble" status equal to TRUE.   |
| 003 | **_**_**-ST-003 | Common Monitor    | Set to TRUE when any of this job's NODEs have their "Node Monitor" status equal to TRUE.   |
| 004 | **_**_**-ST-004 | Sys Reset         | Set to TRUE while any of the Job's nodes have their "Node Sys Reset Activ" status set to TRUE.   |
| 005 | **_**_**-ST-005 | SysReset Inactive | The inverse of Sys Reset.  |
| 006 | **_**_**-ST-006 | Fire Drill        | Set to TRUE when the Fire Drill operation has been initiated. Remains TRUE until the Fire Drill switch is pressed again or until a real fire alarm or supervisory input is activated.  |
| 007 | **_**_**-ST-007 | Alarm Ack         | The Alarm Ack status is set to TRUE to indicate that the auto GA timer has been cancelled by the alarm acknowledge or common signal silence common controls. It is applicable only a 2 stage system.   |
| 008 | **_**_**-ST-008 | Alert Active      | On two stage systems the Alert Active status is set to TRUE to indicate that a first stage alarm has been initiated as a result of the activation of an input zone or zone activation switch configured for alarm at an alert state.<br>Once the status is set it will stay active until system reset. |
| 009 | **_**_**-ST-009 | Evac Active       | Set to TRUE when the "Node Evac Active" status is TRUE on any of the job's Nodes.  |
| 010 | **_**_**-ST-010 | Subsequent Alarm  | Set to TRUE when "Node Subsequent Alarm" status is TRUE on any of the job's Nodes.   |



|     |                 |                   |   |
|-----|-----------------|-------------------|---|
| 011 | **_**_**-ST-011 | Total Evacuation  | <p>The Total Evacuation alarm status is set to TRUE to indicate that the total general alarm common control has been activated or the auto GA timer has timed out.</p> <p>Once the status is set it will stay active until system reset.</p>  |
| 012 | **_**_**-ST-012 | Signal Silence    | Set to TRUE if Signal Silence has been pressed AND there are outputs which are currently silenced   |
| 013 | **_**_**-ST-013 | Sig Silence Pulse | This status will be TRUE for 4 seconds after the Signal Silence switch is pressed.  |
| 014 | **_**_**-ST-014 | Sig Sil Inhibit   | <p>This status is TRUE when signals cannot be silenced. This is the case from the time when an alarm or active supervisory input has been detected or General Alarm has been activated until the signal silence inhibit timer expires.</p>  |
| 015 | **_**_**-ST-015 | Aux Disc          | This status is set to TRUE when the common auxiliary relays are bypassed (via the front panel Bypass menu).   |
| 016 | **_**_**-ST-016 | Aux Reset Pulse   | This status is set to TRUE when the Aux Reset button is pressed and remains on for 4 seconds  |
| 017 | **_**_**-ST-017 | New Alarm Active  | <p>Set to TRUE when a first alarm occurs, when a subsequent alarm occurs, when the GA timer expires, when the GA switch is pressed or when a zone switch configured as alarm is pressed.</p> <p>The status remains TRUE until system reset. System Reset is inhibited until the Signal Silence Inhibit timer expires.</p> |
| 018 | **_**_**-ST-018 | Signals Active    | Set to TRUE when audible signals are active on any of the job's Nodes.  |



|     |                 |                    |  |
|-----|-----------------|--------------------|--|
| 019 | **_**_**-ST-019 |                    | Silenceable Set to TRUE when silenceable signals are active on Opts Active any of the job's Nodes.   |
| 020 | **_**_**-ST-020 | Auto GA Timing     | <p>Set to TRUE when the Auto GA Timer is running.</p> <p>If the system is configured as two stage and the Auto G.A. timer is enabled, it is started when the common alarm sequence is activated in response to the first alarm condition. It is cancelled if either alarm acknowledge or common signal silence is activated before it times out. A subsequent alarm after the timer has been acknowledged restarts the timer to its full period.</p> |
| 021 | **_**_**-ST-021 | Auto SS Timing     | <p>Set to TRUE when the Signal Silence Timer is running.</p> <p>The Signal Silence inhibit timer is started when the common alarm sequence is activated in response to the first alarm condition. While the timer is running, signal silence, zoned signal silence, system reset, and paging operations are inhibited, and the signal silence inhibited status is active.</p>  |
| 022 | **_**_**-ST-022 | Auto Suite Resound | <p>This status becomes TRUE when the Auto Resound timer expires.</p> <p>The Auto Resound timer specifies the time, in minutes, after which the signals will resound if an alarm remains un-acknowledged. The configurable range is from 5 to 12 minutes with a default of 10 minutes.</p>  |
| 023 | **_**_**-ST-023 | Page Inhibit       | <p>This status is set to TRUE when the page inhibit timer is running.</p> <p>The timer is started by the first active alarm.</p>   |
| 024 | **_**_**-ST-024 | Alarm Xmit Active  | <p>This status is set to TRUE when the common alarm is active, but not if Aux Disc is active. NOTE: When this is TRUE a signal will be sent to the UDACT/PR-300 (thru a relay)</p>   |



|     |                 |                        |  |
|-----|-----------------|------------------------|--|
| 025 | **_**_**-ST-025 | Trouble<br>Xmit Active | This status is set to TRUE if "Node Trbl Xmit Activ" is true on any of the job's Nodes.                              |
| 026 | **_**_**-ST-026 | All Call               | This status is set to TRUE when All Call is active.  |
| 027 | **_**_**-ST-027 | Page to<br>Evac        | This status is set to TRUE when Page to Evac is active.  |
| 028 | **_**_**-ST-028 | Page to<br>Alert       | This status is set to TRUE when Page to Alert is active  |
| 029 | **_**_**-ST-029 | Page by<br>Phone       | This status is set to TRUE when Page by Phone is active.   |
| 030 | **_**_**-ST-030 | All Call<br>Minus      | This status is set to TRUE when All Call Minus is active.  |
| 031 | **_**_**-ST-031 | Pre-Tone<br>Active     | Set to TRUE if the Pre-Tone is active on any of the job's nodes.   |
| 032 | **_**_**-ST-032 | Page Ready             | Set to TRUE when Page Ready is TRUE on all of the job's nodes.   |
| 033 | **_**_**-ST-033 | Telephone<br>Call in   | Set to TRUE when any fire phone goes off hook.   |
| 035 | **_**_**-ST-035 | Alm Buzzer             | This status is set to TRUE if the conditions which would cause the buzzer to sound at the alarm rate are true.       |
| 036 | **_**_**-ST-036 | Supv<br>Buzzer         | This status is set to TRUE if the conditions which would cause the buzzer to sound at the supervisory rate are true. |



|     |                 |                        |  |
|-----|-----------------|------------------------|--|
| 037 | **_**_**-ST-037 | Trbl Buzzer            | This status is set to TRUE if the conditions which would cause the buzzer to sound at the trouble rate are true.   |
| 038 | **_**_**-ST-038 | Alm Buzzer Silence     | This status is set to TRUE if the alarm buzzer is currently silenced. The buzzer resounds, and the status goes to FALSE if there is a new alarm, if the system is reset or if the alert resound timer expires.                   |
| 039 | **_**_**-ST-039 | Supv Buzzer Silence    | This status is set to TRUE if the supervisory buzzer is currently silenced. The buzzer resounds, and the status goes to FALSE if there is a new supervisory alarm, if the system is reset or if the alert resound timer expires. |
| 040 | **_**_**-ST-040 | Trb Buzzer Silence     | This status is set to TRUE if the trouble buzzer is currently silenced. The buzzer resounds, and the status goes to FALSE if there is a new trouble, if the system is reset or if the alert resound timer expires.               |
| 041 | **_**_**-ST-041 | Relay Auto Test Active | Set to TRUE when any of this job's nodes have their "Relay Auto Test Active" status equal to TRUE.   |
| 042 | **_**_**-ST-042 | Ground Fault           | Set to TRUE if there is a ground fault (positive or negative) on any of the job's nodes.   |
| 043 | **_**_**-ST-043 | Auto Day/Night         | This status is TRUE if the job was configured (or set through the menu) to automatically change between "prime time" and "after hours"   |
| 044 | **_**_**-ST-044 | Off Hours              | This status is TRUE if the job was configured (or set through the menu) to automatically change between "prime time" and "after hours" and the current system time lies within the configured after hours times.                 |
| 045 | **_**_**-ST-045 | Pre-alarm active       | Set to TRUE when any of this job's nodes have their "Pre-alarm" status equal to TRUE.  |



|     |                 |                                  |  |
|-----|-----------------|----------------------------------|--|
| 046 | **_**_**-ST-046 | Amp<br>Trouble                   | Set to TRUE if there is an amplifier trouble on any CPU of the job.  |
| 047 | **_**_**-ST-047 | Telephone<br>Call In<br>Silenced | This status is set to TRUE if there the buzzer silence switch was used to silence an incoming call buzzer. It is set back to FALSE if a new telephone call in is received or if the alert resound timer expires. |
| 048 | **_**_**-ST-048 | Latched<br>Relays                | Set to TRUE if there are relays on any node of the job that are latched and awaiting a system reset or auxiliary reset.  |



## Node Status Details

The following table describes the conditions under which each of the node statuses become true:

| Number | Short Name           | Description   |
|--------|----------------------|---|
| 000    | Node Active          | Set to TRUE when the system is booted and under normal circumstances, never set to FALSE.                                   |
| 001    | AC On                | Set to TRUE when all of this Node's CPU have their "AC Power" status equal to TRUE. Set to FALSE when one of more does not. |
| 002    | Node Sys Reset Activ | Set to TRUE when any of this Node's CPUs have their "CPU Sys Reset Active" equal to TRUE.                                   |
| 003    | Node Alarm           | Set to TRUE when any of this NODE's CPUs have their "CPU Alarm" status equal to TRUE.                                       |
| 004    | Node Supv            | Set to TRUE when any of this NODE's CPUs have their "CPU Supv" status equal to TRUE.  |
| 005    | Node Monitor         | Set to TRUE when any of this NODE's CPUs have their "CPU Monitor" status equal to TRUE.                                     |
| 006    | Node Trouble         | Set to TRUE when any of this NODE's CPUs have their "CPU Trouble" status equal to TRUE.                                     |
| 007    | Node Alert Active    | Set to TRUE when any of this NODE's CPUs have their "CPU Alert Active" status equal to TRUE.                                |
| 008    | Node Evac Active     | Set to TRUE when any of this NODE's CPUs have their "CPU Evac Active" status equal to TRUE.                                 |



|     |                       |  |
|-----|-----------------------|--|
| 009 | Node Subsequent Alarm | Set to TRUE when any of this NODE's CPUs have their "CPU Subseq Alarm" status equal to TRUE.   |
| 010 | Node Alarm Verif      | Set to TRUE when any of this NODE's CPUs have their "Alarm Verif" status equal to TRUE.  |
| 011 | Node Wflw Retard      | Set to TRUE when any of this NODE's CPUs have their "Wflw Retard" status equal to TRUE.  |
| 012 | Node Pre-alarm        | Set to TRUE when any of this NODE's CPUs have their "Pre-alarm" status equal to TRUE.  |
| 013 | Node Maint. Alert     | Set to TRUE when any of this NODE's CPUs have their "Maint. Alert" status equal to TRUE.   |
| 014 | Node Signals Active   | Set to TRUE when any of this NODE's CPUs have their "CPU Signals Active" status equal to TRUE.   |
| 015 | Node Signal Silence   | Set to TRUE when any of this NODE's CPUs have their "CPU Sig Sil Active" status equal to TRUE.   |
| 016 | Node Ground Fault     | Set to TRUE when any of this NODE's CPUs have their "Pos Ground Fault" or "Neg Ground Fault" status equal to TRUE.   |
| 017 | Node Trbl Xmit Activ  | Set to TRUE when any of this NODE's CPUs have their "CPU Trouble Xmit" status equal to TRUE.   |
| 018 | Node Relay Auto Test  | Set to TRUE when any of this NODE's CPUs have their "Relay Auto Test Active" status equal to TRUE.   |
| 019 | Node Call Control     | This status is TRUE when the Call Control switch on a Master Telephone display adder on this Node is depressed. This status is typically correlated to a Telephone Selector switches LED and is used to manage calls from one master phone to another. |



|     |                    |  |
|-----|--------------------|--|
| 020 | Node Tel Call In   | This status is TRUE when telephone is off hook, or when a user at a Master Telephone presses Call Control.   |
| 021 | Alm Relay Active   | Set to TRUE when the alarm relay on this node is active. The alarm relay is active when there is an alarm on any of this node's connected CPUs.                          |
| 022 | Spv Relay Active   | Set to TRUE when the supervisory relay on this node is active. The supervisory relay is active when there is an active supervisory on any of this node's connected CPUs. |
| 023 | Trb Relay Active   | Set to TRUE when the supervisory relay on this node is active. The supervisory relay is active when there is an active supervisory on any of this node's connected CPUs. |
| 024 | Node PTT Pressed   | Set to TRUE of the PTT (Press To Talk) button is depressed on the master telephone of this node.   |
| 025 | Page Ready         | Set to TRUE if the Audio Controller on this node is ready to page.   |
| 026 | Pre-Tone Active    | Set to TRUE when the pre-tone is playing on the Audio Controller on this node.   |
| 027 | Microphone Trouble | Set to TRUE if any of the microphones on this node are in trouble.   |
| 028 | Node Amp Trouble   | Set to TRUE if any of the amplifiers on this node have a trouble condition.  |
| 031 | Pretone Active     | Set to TRUE pre-tone is sounding on this node.   |
| 032 | Latched Relays     | Set to TRUE if there are relays on this node that are latched and awaiting a system reset or auxiliary reset.  |
| 033 | Running a Walktest | Walktest in progress on this node.   |



## CPU Status Details

The following table describes the conditions under which each of the CPU statuses become true:

| <b>Number</b> | <b>Short Name</b>    | <b>Description</b>  |
|---------------|----------------------|---|
| 0             | CPU Online           | Set to TRUE when the system is booted and under normal circumstances, never set to FALSE  |
| 1             | CPU Sys Reset Active | Set to TRUE for the duration of the System Reset process  |
| 2             | CPU Alarm            | Set to TRUE when any input zone of process type Alarm on this CPU is in the alarm state. This status will propagate to Node Alarm and from there to the job wide Common Alarm status.   |
| 3             | CPU Supv             | Set to TRUE when any input zone of process type Supv on this CPU is active. This status will propagate to Node Supv and from there to the job wide Common Supv status.  |
| 4             | CPU Monitor          | Set to TRUE when any input zone of process type Monitor on this CPU is active. This status will propagate to Node Monitor and from there to the job wide Common Monitor status.   |
| 5             | CPU Trouble          | Set to TRUE when any input zone of process type Trouble on this CPU is in active state or when any circuit, of any type on this CPU has a trouble condition. This status will propagate to Node Trouble and from there to the job wide Common Trouble status. |
| 6             | CPU Alert Active     | On a Two Stage system, set to TRUE when any input zone of process type Alarm on this CPU has reached the pre-alarm or alert state. This status will propagate to Node Alert Active and from there to the job wide Common Alert Active status.                 |



|    |                  |   |
|----|------------------|---|
| 7  | CPU Evac Active  | Set to TRUE when any input zone of process type Alarm on this CPU has reached the evac state. This status will propagate to Node Evac Active and from there to the job wide Common Evac Active status.  |
| 8  | CPU Subseq Alarm | Set to TRUE when the second input zone on this CPU reaches the Alarm state. The "Subsequent Alarm" common system status, which was used before Suite Silence was officially supported, should not be correlated to suite signals. See the Help Topic on Suite Silence.  |
| 9  | Alarm Verif      | Set to TRUE when an input of type "Verified Alarm" is in the process of being verified.   |
| 10 | Wlfw Retard      | Set to TRUE from the time when waterflow is detected on an Input Module of type Waterflow on this CPU until expiry of the retard timer.<br>Note that this does not apply to sensors with their own built in retard mechanism. It only applies to waterflow detection sensors where the retard mechanism is managed by panel firmware. |
| 11 | Pre-alarm        | Set to TRUE when any input device on this CPU that is not bypassed has reached the pre-alarm threshold. The status is set back to FALSE if all inputs advance to the Evac or Alarm state.   |
| 12 | Maint. Alert     | Set to TRUE when any input device on this CPU that is not bypassed is detected to be dirty.   |
| 13 | Pos Ground Fault | Set to TRUE when the ground fault detection circuitry detects a positive ground fault on this CPU.  |
| 14 | Neg Ground Fault | Set to TRUE when the ground fault detection circuitry detects a negative ground fault on this CPU.<br>Note: This is only detected on the main board.  |
| 15 | Remote Trouble   | This is a status coming from the UDACT to indicate there is a problem with the phone line or the UDACT is defective. Note: This is only detected on the main board.   |



|    |                        |   |
|----|------------------------|---|
| 16 | Battery Trouble        | Set to TRUE when the battery monitoring circuitry detects a trouble with batteries on this CPU.   |
| 17 | Power Fail             | Set to TRUE when AC power has been lost on this CPU.<br>Note: This is only detected on the main board.  |
| 18 | CPU Trouble Xmit       | Set to TRUE if there is any trouble on this CPU. An exception is made for power fail. If power fail is the only trouble and the Power Send Delay Timer has not yet expired, Trouble Xmit remains FALSE.   |
| 19 | CPU Latched Opt        | This status is set to TRUE if any relay on this CPU remains active after the trigger input de-activates or is reset. This can be the case if a relay is configured to be latched until a System Reset or Auxiliary Reset. If a relay is correlated to the CPU Latched Opt status its state is re-evaluated.   |
| 20 | CPU Signals Active     | Set to TRUE when audible signals are active on this CPU.  |
| 21 | CPU Sig Sil Active     | This status indicates that there are outputs on this CPU that can be silenceable and it will be set to FALSE when the SignalSilence switch is pressed.  |
| 22 | Relay Auto Test Active | Not in use.   |
| 23 | Control Enabled        | <p>This status is TRUE if</p> <ol style="list-style-type: none"> <li>1) If the local manual enable switch is activated: control is unconditionally enabled</li> <li>2) If a manual enable switch is activated at a control point "linked" to this control point it is unconditionally enabled</li> <li>3) Otherwise if a lockout time is running on another node in the same control group, control is disabled (unless the two displays are linked)</li> <li>4) If this is a backup control point, control is only enabled if communication to all the primary control points in the same control group is down.</li> </ol> <p>This may not yet be implemented. It is related to Display Linking and Grouping.</p> |



|    |                            |   |
|----|----------------------------|---|
| 24 | Control Disabled           | This is the inverse of Control Enabled  |
| 25 | CPU Lamp Test              | This status is TRUE when the lamp test switch on this CPU is depressed. It is set to FALSE when the switch is released or when the Lamp Test supervision timer (in case of a stuck switch) expires. |
| 26 | CPU Back Light Off         | TRUE when the CPU's LCD backlight is off. The backlight is turned off to conserve power when running on battery.  |
| 27 | CPU Command Mode           | Set to TRUE when a user at the front panel keyboard of this CPU accesses a menu command. The status reverts to FALSE after 3 Minutes of inactivity. NOTE: The time-out is 3 min.                    |
| 28 | CPU Info Sw Depressed      | Set to TRUE when the INFO switch on this CPU is depressed   |
| 29 | Amp Trouble                | Set to TRUE if this CPU is an Audio Controller and there is an audio line or amplifier trouble.   |
| 30 | Page Active                | Set to TRUE when paging is active on this CPU, if the CPU is an Audio Controller.   |
| 31 | Pretone Active             | Set to TRUE if this CPU is an Audio Controller and the pre-tone is playing.   |
| 32 | Microphone Trouble         | Set to TRUE if this CPU is an Audio Controller and there is a microphone trouble.   |
| 33 | CPU PTT Pressed            | Set to TRUE when the PTT (Press To Talk) button is depressed on this CPU.<br>NOTE: This is used by the LOC when multiple microphones are connected on the same audio card.                          |
| 34 | CPU Man Ctrl Enable Active | True if manual controls are enabled (through the menu) on this CPU.   |



|    |                                 |  |
|----|---------------------------------|--|
| 35 | Battery<br>Charger<br>Trouble   | Set to TRUE when the battery charger monitoring circuitry on this CPU detects a trouble.   |
| 36 | CPU Batt<br>Charge Supv<br>Trbl | Similar to Battery Charger trouble, but a indicates a trouble with the supervision circuitry as opposed to the charger itself.   |
| 37 | CPU Supply<br>Voltage Trbl      | Set to TRUE if the supply voltage to this CPUs power supply is outside of the specified range.   |
| 38 | NAC Supply<br>Volt. Trb         | The NAC can be powered by 2 sources, the 24 V rectified from the main board power supply or from an external source (depending on the wiring on connector TS2 (NAC PWR). This status will set to TRUE when the power is missing. |
| 39 | NAC Driver<br>Trbl              | The NAC has a missing EOL resistor.  |

## Linked Display Items

Linked Display items share the same Led Group.

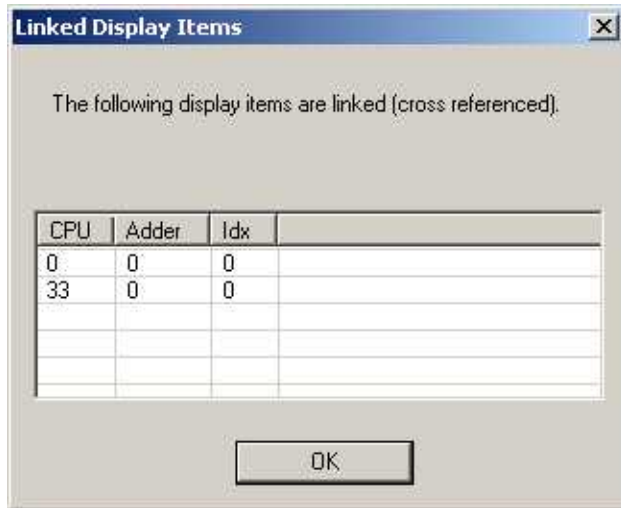
The LEDs and switches of Linked Display items will "follow" the actions of others in the same group. Correlations added to one are effectively added to other linked items.

Linked Items can be created by copying existing items and using paste special to paste them to the new location, specifying "Make Reference Copy" (See Paste Special.)

Items that are linked to others are identified by an asterisk (\*) in a column located between Idx and Type in all Display Lists . The column is otherwise empty. There is no header on the column.

By highlighting ONE such item you can view all of the items linked to it (including itself) by right clicking and choosing "View Linked Items". This dialog is displayed.





It contains a list control with the CPU, Adder and Indx of all of the linked items. It can be dismissed by pressing OK. The menu option is not enabled if you highlight items that do not have the asterisk, or if you highlight more than one item with an asterisk.

## Convert Job

This dialog appears in response to the Convert Job command

**Converted by** - The user making the conversion. This field is defaulted to the user specified on the Preferences dialog.

**Comments** - This field is required. The comments become part of the job's version history.

**From System Type** - The current system type is displayed. It cannot be changed.

**To System Type** - Select the type to which the job is to be converted.

**OK** - Press OK to proceed with the conversion.

The configurator first checks that the current job will not exceed the major limits of the target job.

NOTE: This is not a full validation or build check. Only those values that would prevent the job being worked on in the configurator are checked. The job may still fail to validate after conversion.

The items that are currently checked are:- MAX\_IPT\_CKTS, MAX\_OPT\_CKTS, MAX\_LOOPS, MAX\_PROVING\_CKTS.

If the job would not meet the limits of the target job (e.g. more than 9 loops when converting to Small) then an error message is displayed. If the job meets the basic limits of the new System Type, conversion continues. This essentially means re-arranging the Loops.



## Compact to Large:

The Compact build has one addressable loop (Loop 2) on the master CPU, and the remainder, in pairs on Loop Controllers. To accommodate the loop that is moved from the master CPU, an empty loop must be present. One is added if necessary. Loop two is moved to the first addressable controller. This displaces the second Loop from that controller. The process "ripples" through the Addressable loops. Any conventional loops that are encountered can obviously not be moved to an addressable controller. Instead, their loop numbers are re-arranged as the search for the next addressable controller continues.

## Large to Compact:

The process is essentially the reverse. Loops are "rippled" towards the master CPU, vacating one loop on the last controller.

NOTE: The current MAX\_LOOPS for a compact job is 9. Since a Large job always has an even number of loops, and we have to add one to the last loop to make it up to its full complement of 2, the large job cannot have more than 8 loops before conversion begins. .

In both cases the System Type and Master CPU type are changed on the data base

The tree is refreshed to reflect the job's new system type.

## Copy and Paste

This section describes some of the ways you can use the Copy and Paste and Drag and Drop features of configurator.

### Drag & Drop Conventional or Loop Adder

Entire Adders can be *copied* using Drag and Drop in the Job Tree in the left hand pane.

Entire Adders cannot be *moved* within a Node but they can be moved from one Node to another.

To make one default copy of an adder move the mouse pointer to the tree item to be copied and press the left mouse button and the Ctrl key. Drag the tree item to a neutral zone in the tree (for non- network) or a valid destination and release the mouse button.



To override the defaults, press the Shift key before initiating the drag. On dropping the node on the target a Paste Special dialog will appear. You can specify the number of copies to make. You can specify whether I/O correlations and Display Correlations are copied.

## **Copy Display Items**

Display items can be copied from a list that is currently displayed in the right hand pane, to the same list or another compatible node. Select the rows you wish to copy by highlighting them. Right click the mouse or click on the Copy icon in the tool bar.

You can paste them to the same node, or you can navigate to another display node. In order to paste the copied items, there must be a contiguous block of un-assigned LEDs in the target list. The paste operation will use the first empty block that is as big or bigger than the copied block. The empty block must be correctly aligned on a frame boundary if the copied items span frames.

The default paste operation will make an exact copy of the display items, assigning the next logical LED and switch numbers. The new copy will have the same correlations, Type, Assignment and Tags.

Display Items of type Custom cannot be copied using the default paste. If Custom items are included in the selection to copy, then the whole operation will fail.

Paste Special allows you to choose whether a new, separate copy or a so called *reference* copy is made. A reference copy usually applies to switches. A reference copies of a switch and its LEDs operate in parallel. For example - circuits can be bypassed from one location and un-bypassed from another. Correlations added to one switch are automatically applied to its reference copies. A normal copy of a switch will operate alone.

If a block of items includes un-assigned LEDs then the same pattern will be retained in the copy. That is, the un-assigned LEDs are effectively copied along with the assigned LEDs.

Note: Copying Master Phone (Call Control) correlations is not allowed.

## **Drag&Drop of Display Items**

Similar to Copy and Paste, you can Drag and Drop a range or selection of display items.

Select the rows you wish to drag by highlighting them. With the mouse pointer over the selected items, hold down the left mouse button and drag them. You can drag them to the job tree in the left hand pane. The mouse cursor will change to indicate whether the current drop target is suitable. For display items the allowed targets are display adders within/under the Main Display, LCD Annunciators or LED Annunciators. If the adders are not currently visible, let the mouse pointer "hover" over the parent node. It will expand and you can continue dragging to the desired destination adder.

Release the mouse button.



The same rules apply to Drop as for Paste. There must be sufficient un-assigned LEDs in one block to accommodate the dragged items. The destination must be compatible. E.g. Switches cannot be dragged to an LED annunciator.

The default drag & drop operation is to move the items. That is, all attributes of the dragged items are replicated on the new node, with new frame numbers assigned. The items are marked as un-assigned on the adder from which they were dragged.

To copy items, hold down the Ctrl key while dragging.

To perform a Paste Special hold down the Shift key while dragging. When you release the mouse button the Paste Special dialog will be displayed. This allows you to specify whether a "deep" (include Corrs, Grp assignments) or "shallow" copy is to be made.

### **Drag & Drop of Display Adders**

Entire Adders can be copied using Drag and Drop in the Job Tree in the left hand pane.

To make one default copy of an Adder move the mouse pointer to the Node to be copied. Suitable sources are any switch or Display adder beneath the Main Display or LCD or LED Annunciators. The Base Control/Annunciator cannot be dragged. Press the left mouse button and the Ctrl key. Drag the tree node to a suitable target. A target can be the Main Display LCD or LED Annunciators. Release the mouse button. The adder and all of its frames and display items are replicated on the target.

To override the defaults, press the Shift key before initiating the drag. On dropping the node on the target a Paste Special dialog will appear. You can specify the number of copies to make.

To move the adder, press the Shift key while dragging. The dragged adder will be replicated on the target and removed from the source, with the frame numbers packed down if necessary.

### **Drag & Drop of Annunciators**

Entire Annunciators can be copied using Drag and Drop in the Job Tree in the left hand pane.

Entire Annunciators cannot be moved, since they are at the top level of the tree.

To make one default copy of an Annunciator move the mouse pointer to the Node to be copied and press the left mouse button. Press the Ctrl key. Drag the node to a neutral zone in the tree (that is, somewhere that is not a node in the tree) and release the mouse button.

To override the defaults, press the Shift key before initiating the drag. On dropping the node on the target a Paste Special dialog will appear. You can specify the number of copies to make. You can specify whether I/O correlations are copied.



## Add Annunciator

This dialog is displayed in response to an Add Annunciator command.



**Type** - This control lists the types of Annunciator that can be added to the job.

The list will only show the types that are allowed for your product type.

**Number to add** - Edit this number to add more than one Annunciator to the job.

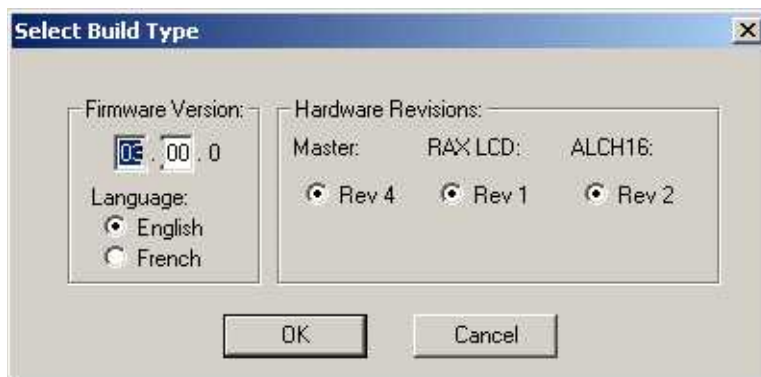
**Tag** - This field is enabled only if the panel product supports this feature. If enabled, enter a description for the Annunciator. If more than one Annunciator is added they will all receive the same tag. Tags can be edited in the Annunciator Information view.

**Add** - Press Add to add Annunciator(s) of the selected type. The Job Tree will be updated to show the new Annunciator(s). If the limit for the job is exceeded an error message will be displayed.

The dialog remains open for adding more Annunciators. **Close** - Press to dismiss the dialog.

## Select Build Type

This dialog is used to specify the type of build. It appears in response to Build Job (Old Versions) command.





- Firmware Version
  - Select the Major and Minor version to build. You can choose any version in the range from V2.0 up to and including the current version.
  - Choose the language for the main CPU (for products that support multiple languages).
- Hardware Revisions
  - These options are there for the firmware build script embedded in the C file if there are multiple versions of hardware to be supported.



