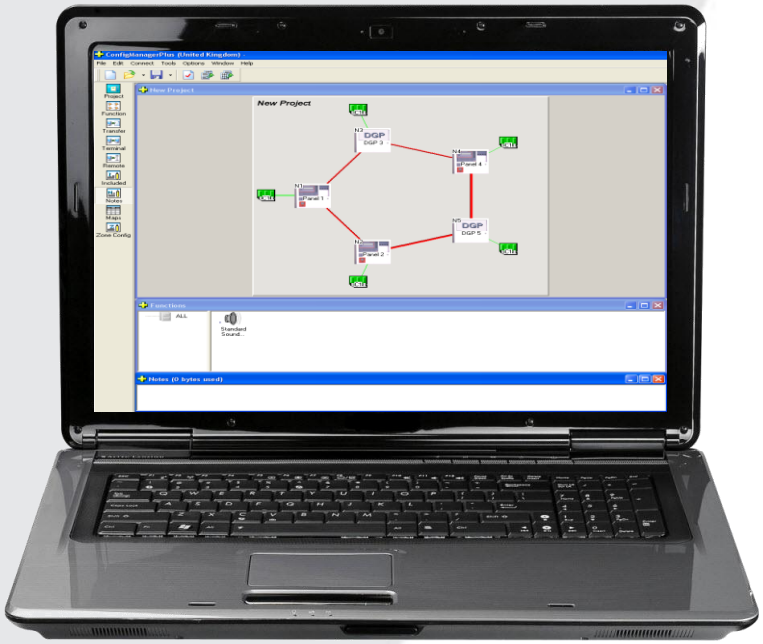
AMPAC

ADVANCED WARNING SYSTEMS

ConfigManager PLUS Marine



Programming Software for

FireFinder PLUS Marine

Fire Alarm Control Panel

MAN 3127 - 0

WORLD LEADER OF INNOVATIVE SOLUTIONS
IN FIRE DETECTION AND ALARM SYSTEMS

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1 About This Manual

1.1 Introduction

Configuration Manager PLUS:

- Is a software tool designed and written by AMPAC Technologies Pty. Ltd to enable users to create configuration files for transfer to and from the ***FireFinder PLUS*** Fire Alarm Control Panel.
- Is a universal program that meets the required standards of several different countries.
- Has been tested and verified on Windows XP, Vista and Win7 operating systems.

Included in the ***FireFinder PLUS*** configuration is:

- A spreadsheet component for entering the configuration data for the loops / sensors, zones (loop/conventional) and the inputs/outputs either in the panel or on the loops.
- A graphical interface for the entry of function data for input and output control.
- System networking ability.

1.2 General Requirements

The ***FireFinder PLUS*** FACP has been designed and manufactured from high quality commercial components so as to comply with major world standards. To ensure these standards are not compromised in any way installation staff and operators should;

- ✓ Be qualified and trained for the task they undertake;
- ✓ Be familiar with the contents of this manual prior to the installation, commissioning or operation of a ***FireFinder PLUS*** control system;
- ✓ Observe anti-static pre-cautions at all times; and
- ✓ Be aware that if a problem is encountered or there is any doubt with respect to the operational parameters of the installation the supplier should be contacted.

1.3 Symbols

ⓘ _____Important operational information

☞ **Note:**_____Configuration considerations

_____Observe antistatic precautions

2 Installation

If necessary, firstly consult the Introduction to Programming and Hardware Requirement Sections 9 and 10 for cabling information.

To install the software first install and run the Setup.exe file. ***ConfigManager PLUS*** will then automatically guide the operator through the installation.

To run the program, assuming the icon to the default Program Folder was added during the set-up procedure, click on the icon on the screen.

Alternatively, locate the folder C:\Program Files\ConfigManagerPlus1 via My Computer or Windows Explorer and double click on the ConManPlus1.exe file.

3 The Functions Menu and Tool Bar

Running ***ConfigManager PLUS*** will bring up a window with a Menu and Tool-bar in the top left hand corner of the screen as shown in the diagram below.

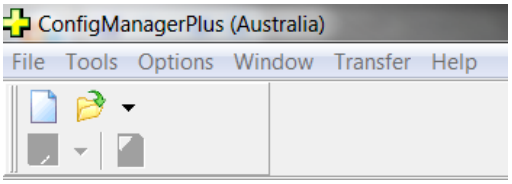


Figure 1: The Functions Menu and Tool Bar

3.1 The Menu Bar

3.1.1 File

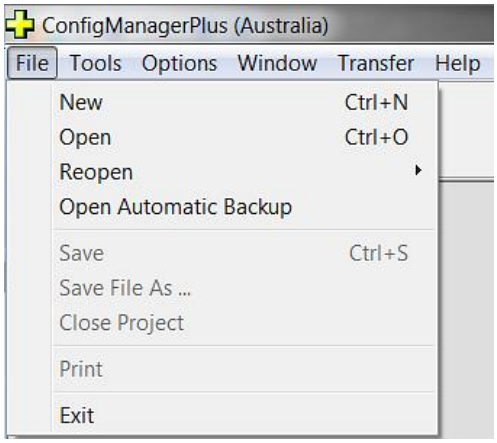


Figure 2: The "FILE" Drop Down Box

This menu gives access to the following functions:

New (Project) [CTRL + N]
Select this option to start a new project. The System Settings Dialogue Box will appear as a result.

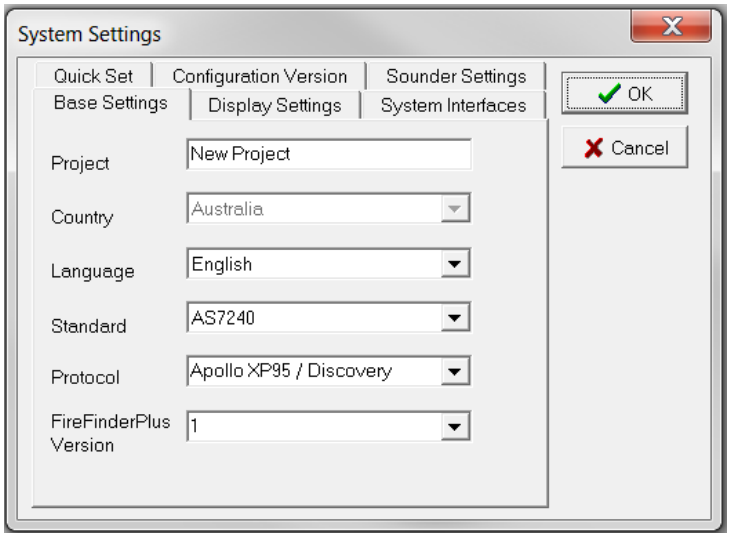


Figure 3: The Systems Settings Dialogue Box

Open (Project) [CTRL + O]
This will load of a previously saved project. The Open Project dialogue box will appear, locate the file to be opened and click on Open. Configuration Files are saved with the *.ffp extension.

Re-Open (Project)
Re-Open loads a previously saved project. A list of the 10 most recent projects will appear, from this list select the file to be opened. Configuration Files are saved with the .ffc extension.
Open Automatic Backup
This opens a file that has automatically been saved by ***ConfigManager PLUS***.

Save – (only selectable once a "Project" has been created)
Saves a file as a named file. The project name is usually the preferred option.

Save File As – (only selectable once a "Project" has been created)
Saves a file as an alternatively named file.

Close Project – (only selectable once a "Project" has been created)
Closes the Project after prompting Yes / No, Cancel to save.

Print – (only selectable once a "Project" has been created)
To print the network point and double click on the Node and follow the prompts.

Exit
To close down the Configuration Manager program select Exit. If changes have been made to the current project and have not been saved then the operator will be asked if they wish to save the file.

3.1.2 Tools

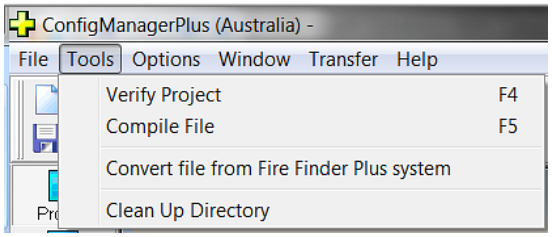


Figure 4: The "Tools" Selection Box

Verify Project
The verify function (F4) will verify there are no errors or omissions in the project.

Compile File
The compile file (F5) must be done every time that a modified file is to be downloaded to the ***FireFinder PLUS*** panel. This ensures that the data format is correct as per the required structures.

Convert File from *FireFinder PLUS* System
This will convert the information previously uploaded from the ***FireFinder PLUS*** FACP into a format such that it can be imported for use by ***ConfigManager PLUS*.**

Clean Up Directory
The clean up directory function will automatically erase unnecessary files that have been created during the compile process.

3.1.3 Options

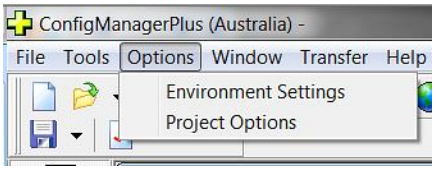


Figure 5: Options Selections

3.1.3.1 Environment Settings

Clicking on this option will display the Environment Settings Options Dialogue Box as seen below.

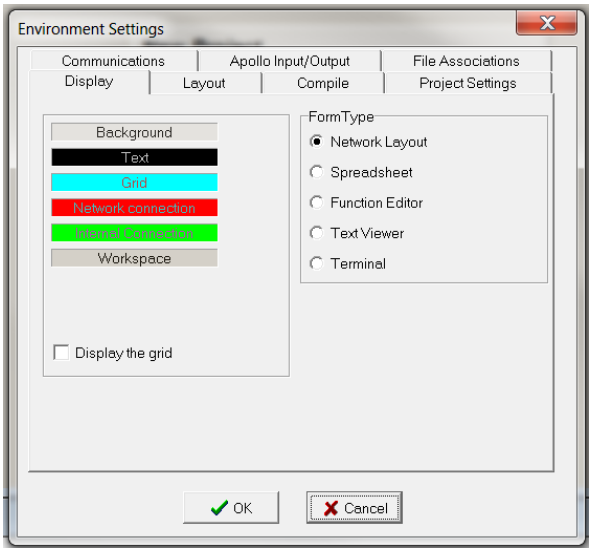


Figure 6: The Environment Settings Dialogue Box

From this dialogue box the following features to be set are:

Colours - Display

The colour of the various elements in the program can be set by selecting this tab. For each Form Type indicated on the right hand side simply click on the indicator and the colours selected will be shown on the left hand side. To modify these colours click on the colour and a colour selection chart will appear. Select the preferred colour, and press OK on the form.

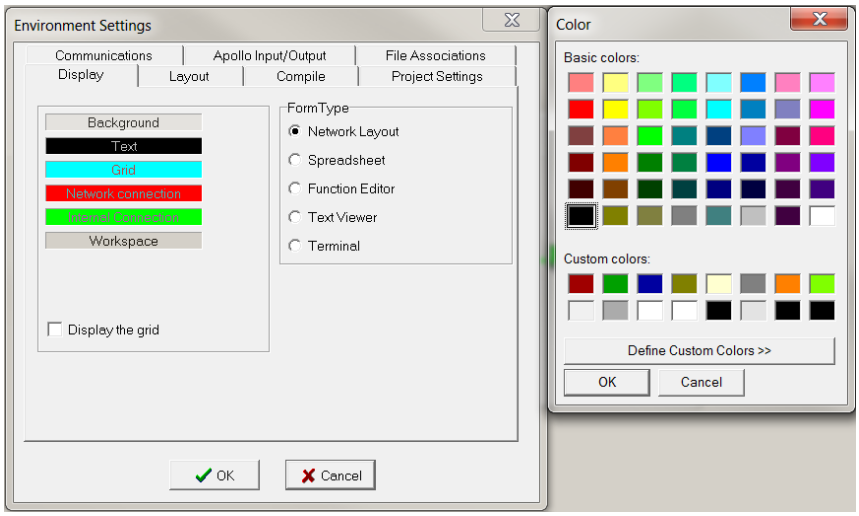


Figure 7: The Environment Settings Display Colors Settings

3.1.3.2 Layout

This option sets the format of the screen at start up.

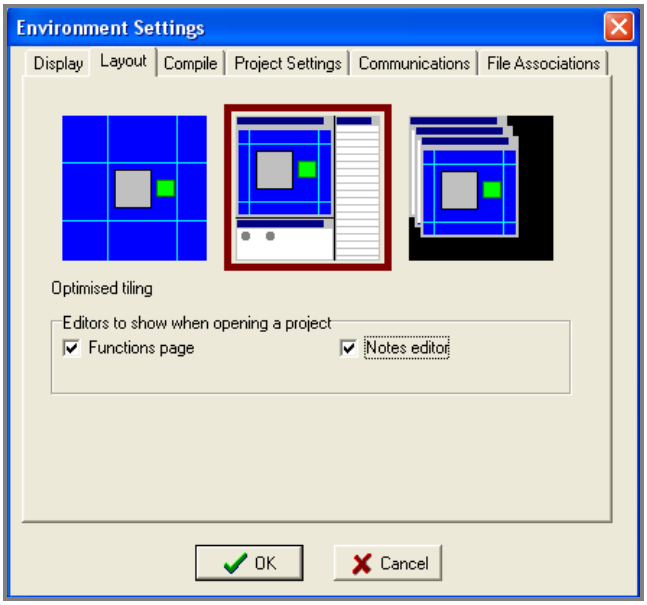


Figure 8: Layout Dialogue Box – with only "Functions Page" Ticked

☑ **Function Page (left hand tick box):** When ticked and a new project is started a window will open, as shown below, allowing functions to be edited.

☑ **Notes Editor (right hand tick box):** When ticked and a new project is started a window will open, as shown below, allowing notes to be added to the current project.

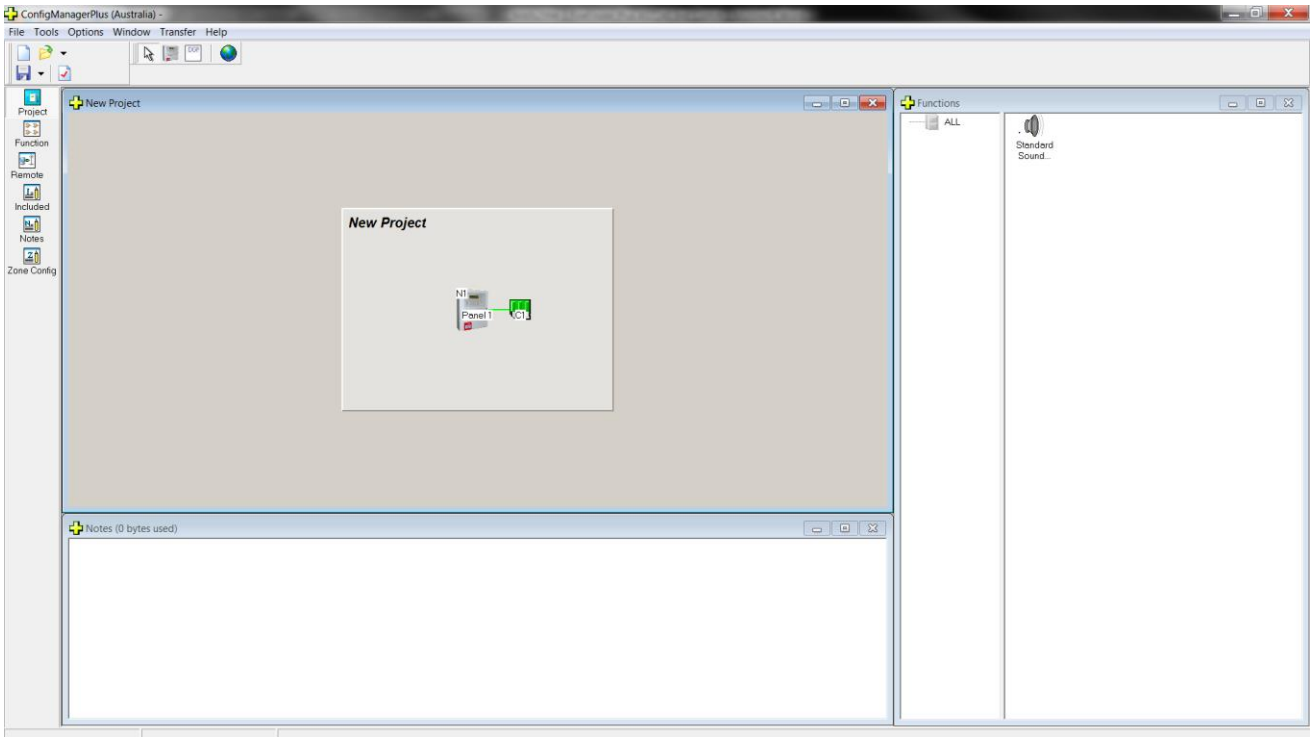


Figure 9: New Project showing Notes and Functions Windows if both are "Ticked"

3.1.3.3 Compile

Set options to display the compiled file and to choose whether to validate included text as functions. In most instances these will both be set to be on.

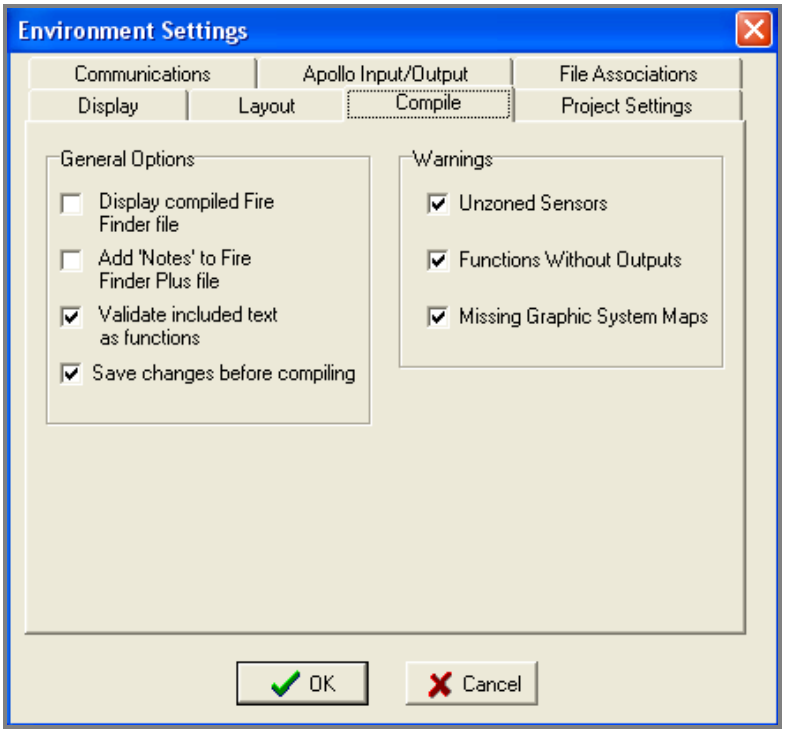


Figure 10: Compile Dialogue Box

General Options (left hand tick boxes in Fig 11)

Display compiled *FireFinder Plus* file: Selecting this tab option will display the compiled ***FireFinder PLUS*** file. This means that, after compiling the project the *.dat file is displayed in a window on the screen. *This is mainly for the advanced user and is usually not selected*.

Add 'Notes' to *FireFinder PLUS* File: Allows notes to be added to the file.

Validate included text as functions: This feature is used when SPECIAL functions are included in a project. SPECIAL functions are functions that are written in text form and included in the project in the INCLUDED file.

Save changes before compiling: Automatically saves any changes before compiling.

Warnings (right hand tick boxes in Fig 11)

A warning will be indicated during the Compiling process that the checked features do not meet the required criteria and must be corrected.

Un-zoned Sensors

Functions Without Outputs

Missing Graphic System Maps

3.1.3.4 Project Settings:

Set the “Options” for the project

Default Customer Text: Here 4 lines of default customer text (e.g. name) are entered. This saves having to enter the company's name for every configuration.

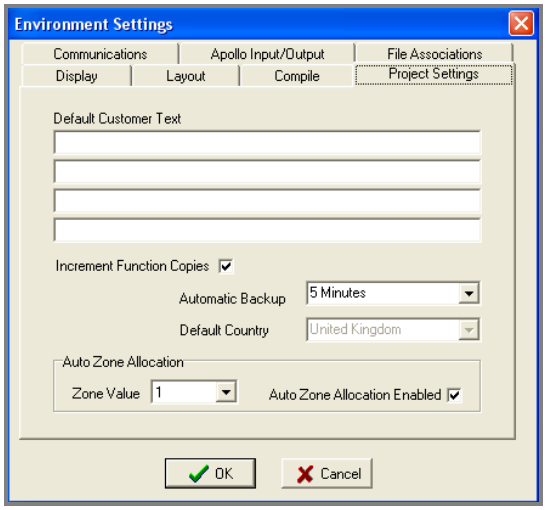


Figure 11: Project Creation Dialogue Box

Increment Function Copies: Click on the tick box to enable. Enable when copying or cloning Functions to automatically increment the number of the device’s inputs and outputs (1 to 3). Should a mistake be made when numbering the device, an error message will appear.

Automatic Backup: Select the timing for automatic periodic backup of the project from the drop down box (5, 15, 30, 45, 60 minutes or NEVER).

Default Country: Set by default (hence greyed out) to the country where the panel is to be installed.

Auto Zone Allocation Value: Open the drop down box to select a value (0-999). This will automatically assign zones when making multiple entries in the Module Data Entry screen**.**

Auto Zone Allocation Enabled: Click on the tick box to enable the auto zone allocation

3.1.3.5 Communications

This tab will display a page to set the port and methodology used to communicate with the ***FireFinder PLUS***.

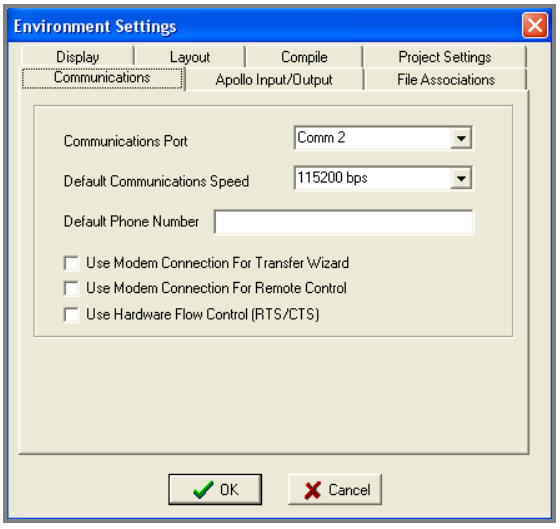


Figure 12: Communication Dialogue Box

Normally;

☑ ***Communications Port:*** *Comms 1 – 32. Default Port is 2.*

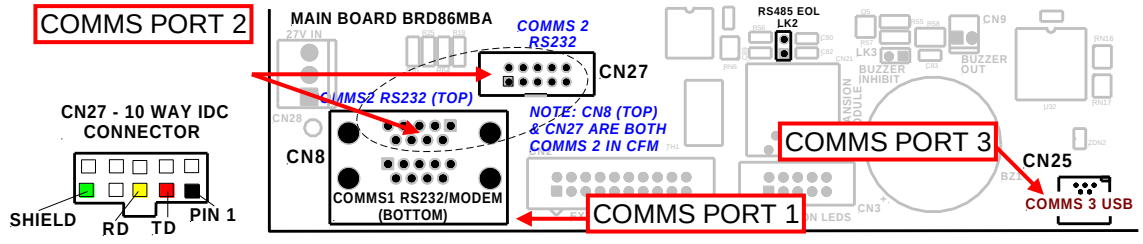


Figure 13: Comms Port Location on the Main Board and Port Numbering

☞ **Note:** *The modem I/O port is a Dual DB9 connector (CN8 situated on the lower left hand corner of the Main Board) is normally used for programming of the FACP via the serial port of a PC. There is also a USB connector (CN25) provided to allow programming of the FACP from a USB port of a PC.*

☑ ***Default Communications Speed:*** *The speed or baud rate of the communications used to communicate to the* ***FireFinder PLUS*** *and no adjustments are required by the user. Default speed is 115200 bps.*

☑ ***Default Phone Number:*** *Enter the phone number to be auto dialed for modem connection*

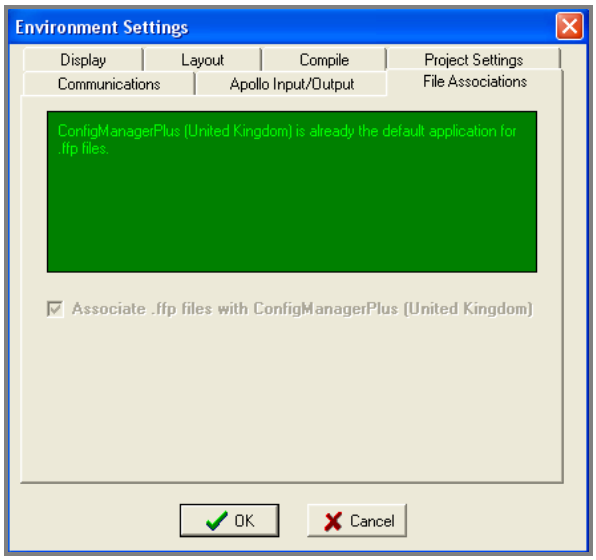
☑ ***Use Modem Connection for Transfer Wizard:*** *Tick if the Transfer Wizard is to be used as the communication vehicle.*

☑ ***Use Modem Connection for Remote Control:*** *Tick if remote control is via a modem*

☑ ***Use Hardware Flow Control (RTS/CTS):*** *Tick if hardware control is used for the transfer of data.*

3.1.3.6 File Association

Tick the check box if the project *.ffp files are to be associated with ***ConfigManager Plus*** - Australia.



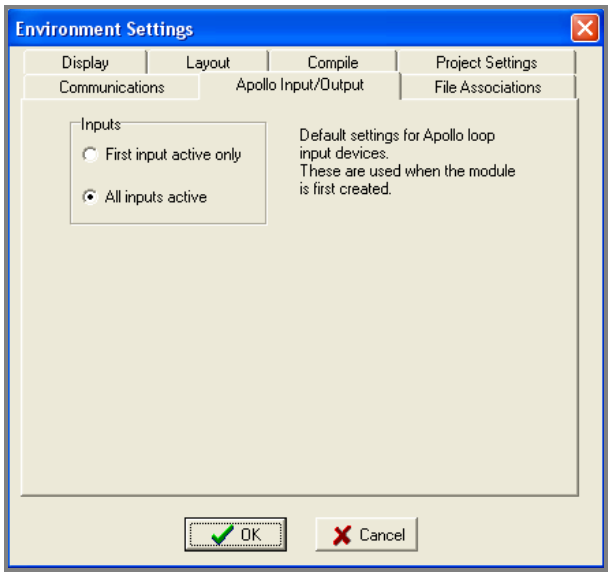
☞ **Note:** ***The displayed message confirms the status***

Figure 14: File Association Selection Box

3.1.3.7 Apollo Input/Output

This tab sets the default "zone configuration" of the Apollo/AMPAC loop device's inputs when a IO device is added to the loop. Each is simply selected by clicking on the appropriate check box. This setting is used when the loop module is first created.

For example, if the "First input active only" is selected, then new IO device that is added subsequently will have its first input automatically set to "General" and the remaining as "Inactive"; if the "All inputs active" is selected, then the new IO device will have all its inputs set to "General" automatically.

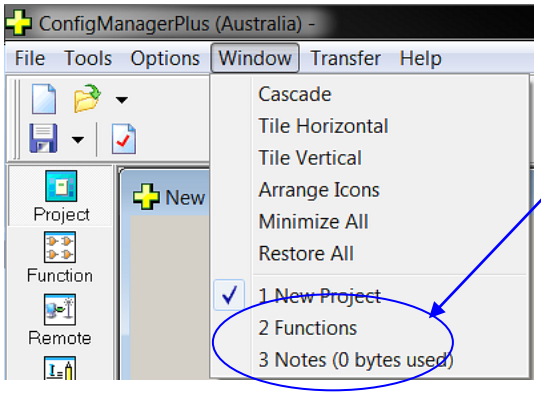


☞ **Note:** ***Only one choice can be selected***

Figure 15: Apollo Input / Output Screen

☑ ***First input active only:*** Tick if required or ☐ ***All inputs active:*** Tick if required.

3.1.4 Window



Note: New Project, Functions and Notes will only be shown if they have been "ticked in the Layout selection *screen*

Figure 16: Window Drop Down Box

Cascade - Displays windows stacked and cascading from the top left to the bottom right of the screen.

Tile Horizontal - Displays Project and Function windows top edge to top edge.

Tile Vertical - Displays Project and Function windows right edge to left edge.

Arrange Icons - Arranges minimised image windows within the program screen.

Minimise All - Iconizer's all active windows to the bottom left hand corner of the screen.

Restore All - Returns all active windows to those selected prior to "Minimise All".

3.1.5 Help

Figure 17: Help Drop Down Box

Contents
This is the on screen help file that provides a PDF version of this manual.

About
Displays the following screen giving the user the Version of ***ConfigManager PLUS*** being used, direct access to the Ampac website (highlighted in blue) and communication access (highlighted in blue).

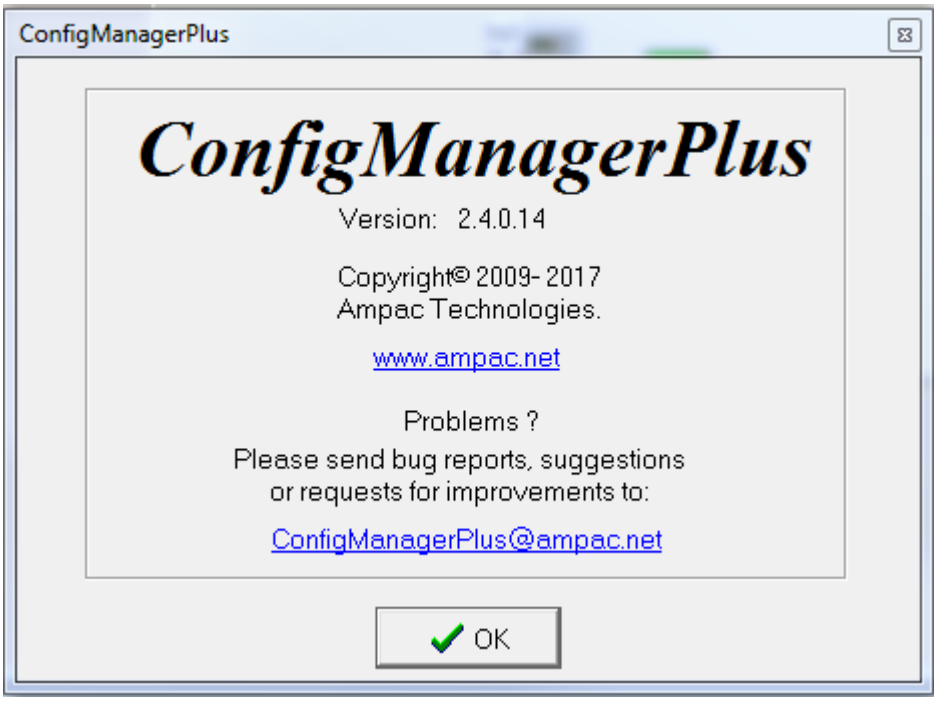


Figure 18: About Screen (version shown above may not be latest)

4 Creating a New Project

To create a new project either click on the **New Project Icon** on the tool-bar, **Ctrl + N** or;

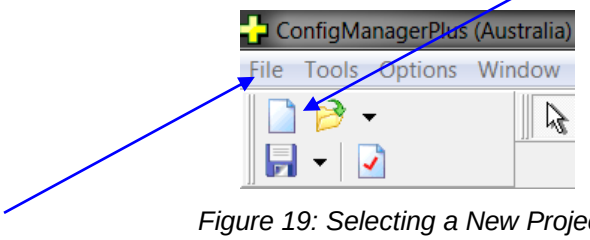


Figure 19: Selecting a New Project

Select: **File/ New Project**. This will bring up the System settings dialogue box as shown below.

☞ **Note:** Remember the Options / Environmental Settings MUST be entered before starting a new project.

4.1 The Systems Settings Dialogue Box

4.1.1 Base Settings

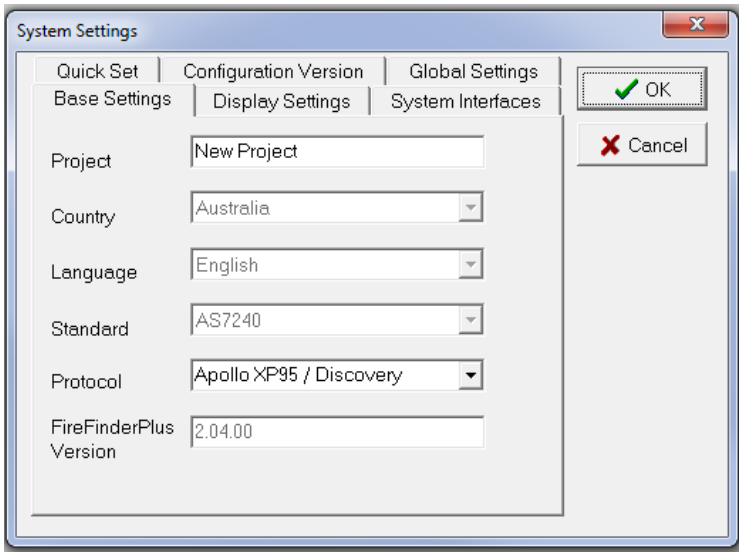


Figure 20: The System Settings Dialogue Box

Enter all the information described in the sub-headings set out below. Once completed press **OK**. If there are any errors the operator will be prompted to correct them.

☞ **Note:** To edit System Settings at a later date click on the "Globe" icon in the Tool Bar.

Project
Enter the project name. Naming is optional though it is advisable to make projects distinctive so they are easily identifiable at a later date.

Country
The drop-down list box defaults to the country particular to the version of software and takes into consideration the different panel functionality in different countries (not editable).

Standard
The drop-down list box defaults to the national standard particular to the version of software (not editable).

Language
The drop-down list box displays the default language being used for the standard (not editable).

Protocol
Use the drop-down list box to select the required option to become active.

FireFinderPlus Version
Displays the configuration structure's version currently in use (not editable).

4.1.2 Display settings

The display settings, sets the LCD message that will be displayed when the ***FireFinder PLUS*** LCD is in its normal state. The text on each line may be up to 40 characters long.

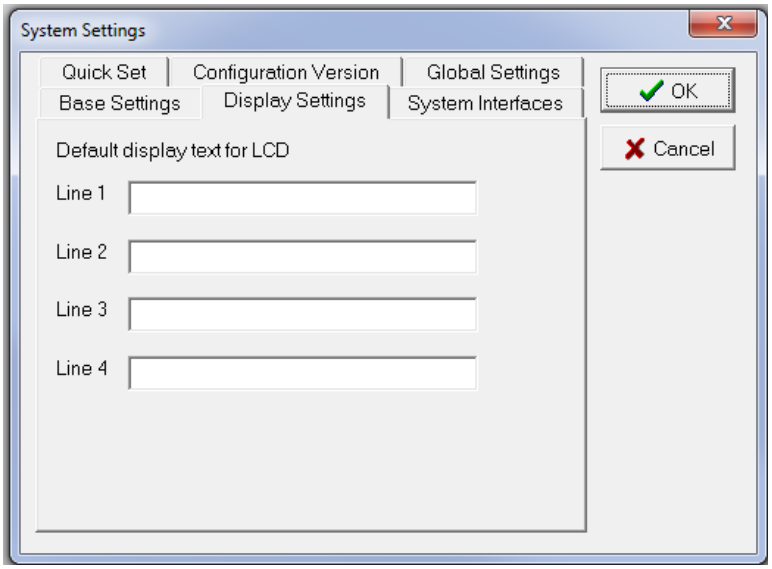


Figure 21: The Display Settings Dialogue Box

4.1.3 System Interface (*SmartGraphics*)

The Graphic Interface Fitted check box is selected if a ***SmartGraphics*** Interface is being installed in the system. This tick box turns on the "Map" allocation column in the Loop Device configuration spreadsheet (Refer section 5).

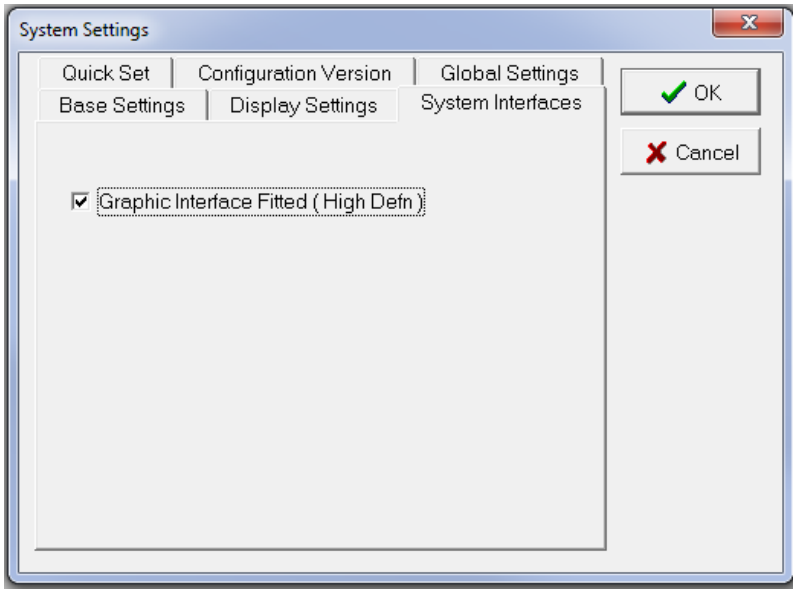


Figure 22: The Quick Set Dialogue Box – Selecting "Graphic Interface"

4.1.4 Quick Set settings

This option will save a considerable amount of work as it will automatically set up the required number of panels, DGP's and / or mimics.

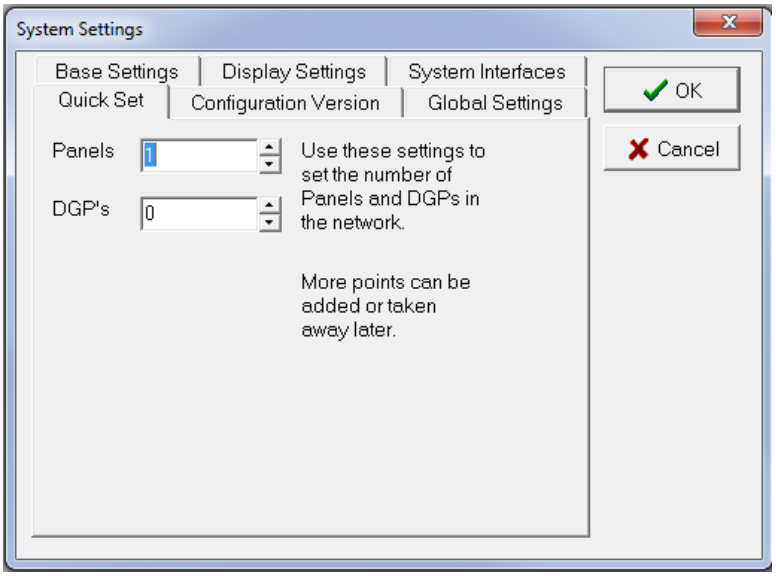


Figure 23: The Quick Set Dialogue Box

Panels

This sets the number of panels in the system. For non-network projects this will be set to one (1).

DGP's

Data Gathering Points (DGP's). This entry is used if DGP's are configured on a network. DGP's being a Slave FACP that, has no front panel controls, communicates directly with and is under the control of the Master FACP.

4.1.5 Configuration Version

Allows editing of the configuration versions for ease of traceability

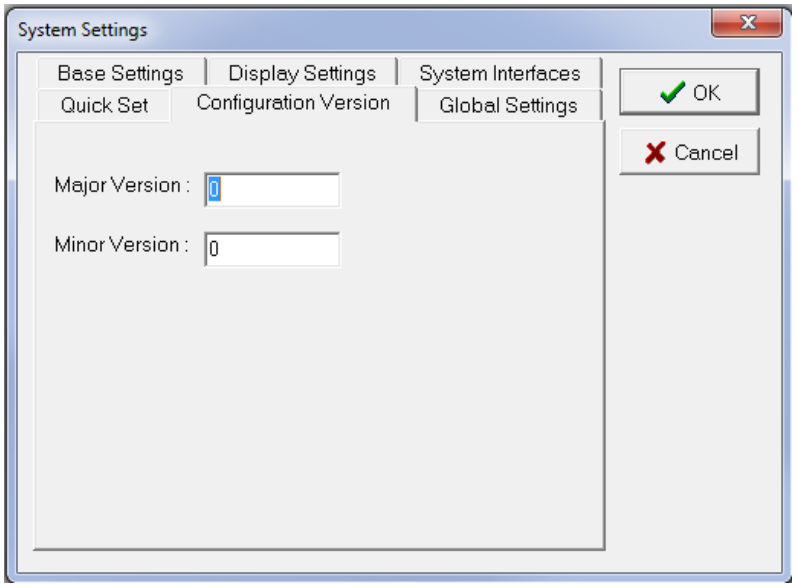


Figure 24: The Configuration Dialogue Box

The major and minor version information indicates changes that are made via the ***ConfigManager PLUS*** and ***FireFinder PLUS*** respectively.

That is,

Major Version: Each update via the ***ConfigManager PLUS*** increments the Major Version Number and clears the Minor Version Number to zero.

Minor Version: Each update via the ***FireFinder PLUS*** panel's programming increments the Minor Version Number.

Note that if the Major or Minor version number reaches 65535, it shall then remain at this value unless being reset manually via ***ConfigManager PLUS***. On the creation of a new configuration for the first time, ***ConfigManager PLUS*** software defaults both the Major and Minor Version Number to zero.

4.1.6 Global Settings

4.1.6.1 Alert Tone Global Setting

The Global Alert Tone pulse ON and OFF times can be set here.

4.1.6.2 ADF Timeout Global Setting

The default timeout for ADF groups can be set here. This will override all previous ADF timeouts that may have been set at on the Module Data Spreadsheet.

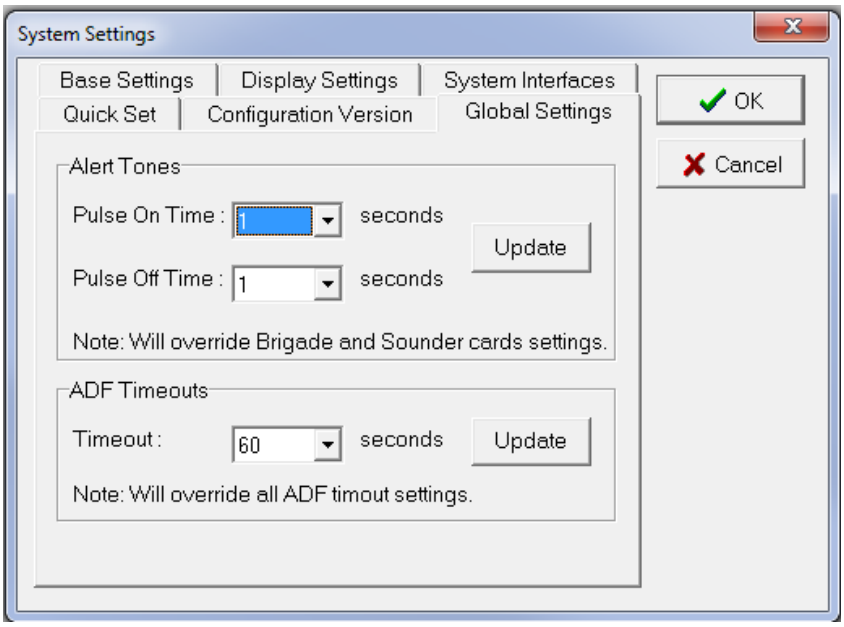


Figure 25: The Sounder Settings Dialogue Box

4.2 The New Project Screen

When all of the options above have been determined and the OK button has been clicked the following screen will be displayed. This may vary depending on the options selected in the layout options dialogue box. Each of these areas will be discussed in detail on the following pages.

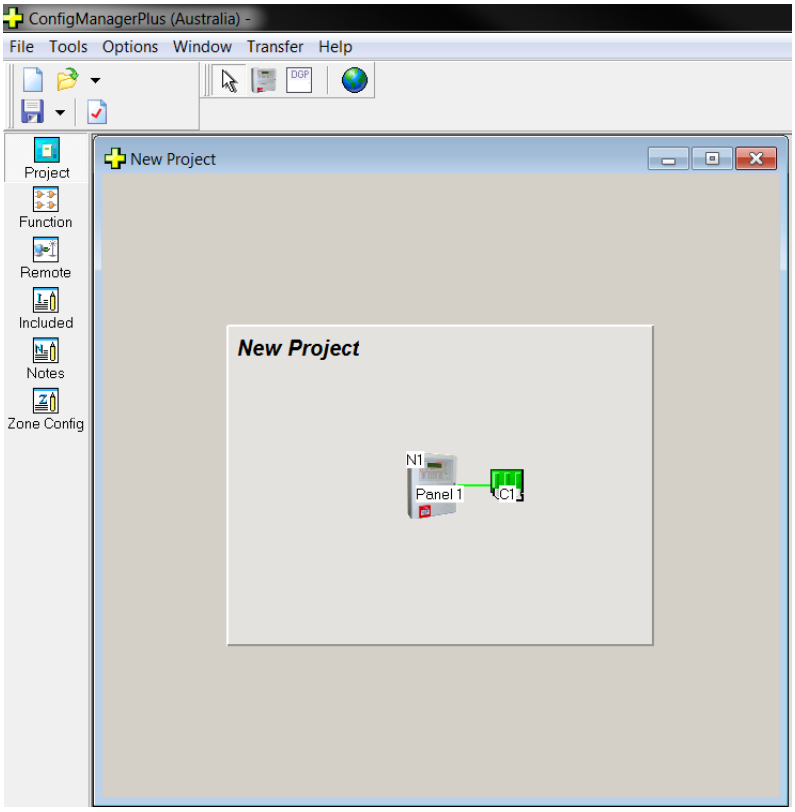


Figure 26: New Project Screen

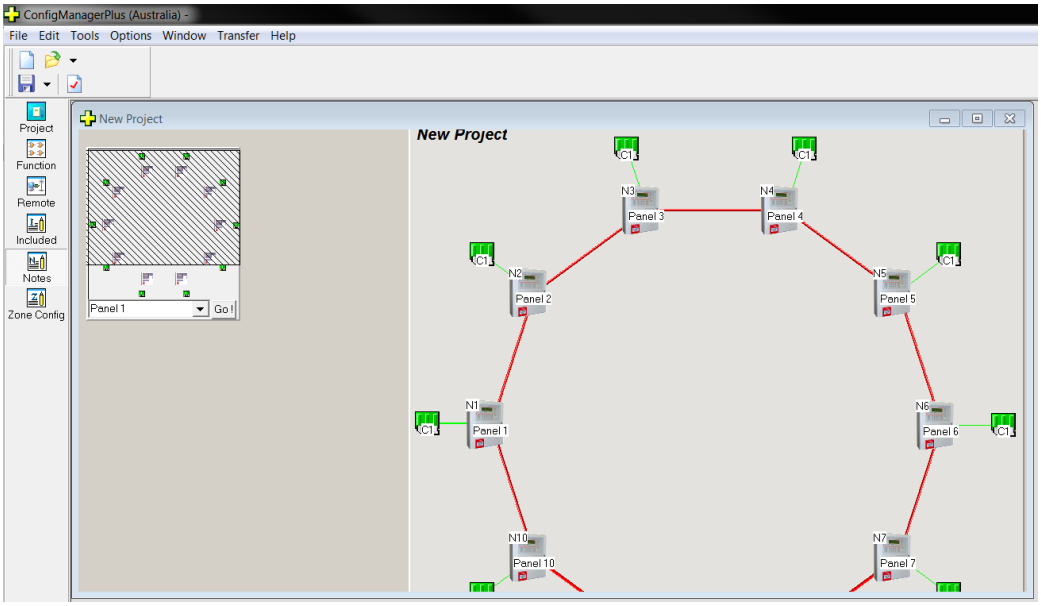


Figure 27: New Project Screen with Cross Hatch Screen

☞ **Note:** The cross hatch screen is used to move the Project Screen around the Monitor Screen so as to locate or centre specific parts of the system. For larger systems with multiple panels a panel can be selected from the drop down screen, selecting " Go " and that panel is automatically centered.

4.3 The Project View

The screen below is a typical view that will be seen by the operator when a single panel is to be programmed. The Panel represents the hardware which is common in all panels. C1 represents the controller that interfaces with up to 8 slave modules.

☞ **Note:** It is recommended that the panel section is programmed first followed by the controller.

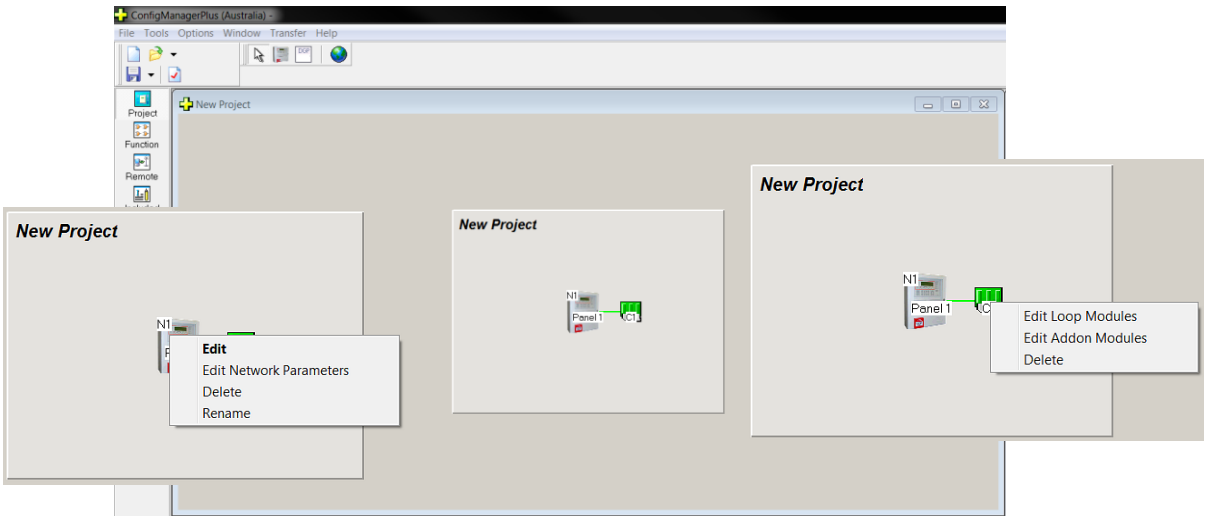


Figure 28: The Project View with Edit Options for the Panel & Controller

It is possible to **edit the parameters of the panel** by right clicking on the icon as shown above. Similarly it is possible to ***edit the module types*** as shown.

4.3.1 Panel Settings or Editing

Double click on the Panel to set or edit the Panel configuration.

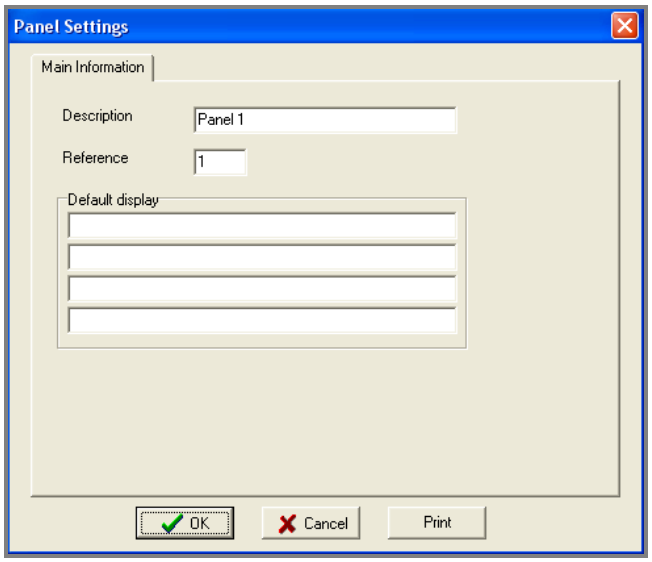


Figure 29: The "Main Information" Edit options for the Panel

☞ **Note:** Click on OK to go to or return to the main project screen at any time.

Main Information (Edit)

Shown above is the default screen ready for the "Main Information" to be entered.

Description: Default is Panel 1. This can be changed to a more apt description by simply deleting the text Panel 1 and typing a new description. This description will appear next to the panel in the "Project" screen.

Reference: Node number of the Panel (Networking). Default is 1 for a single panel and the "node NX" number as seen in the Project Screen for network panels.

Default Display: Type in the preferred FACP LCD front panel default information. (Default empty).

Network Parameters:
Right click on the Panel Icon and select Edit Network Parameters to set Global Access.

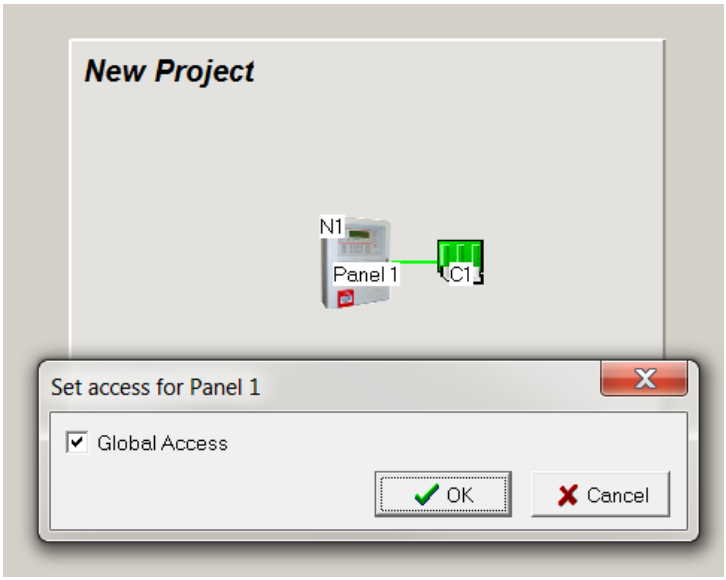


Figure 30: The Panel Access or Network Parameters Screens

If Global Access is assigned to a Panel they will see or monitor the entire system. If it is not set then the various panels, Loop/s and Group/s will have to be assigned by way of the Set Access screen. In other words the panels Loop/s and or Group/s that a Panel, DGP and / or Mimic will see or monitor must be individually entered.

4.3.2 Setting or Editing the Controller Module Types:

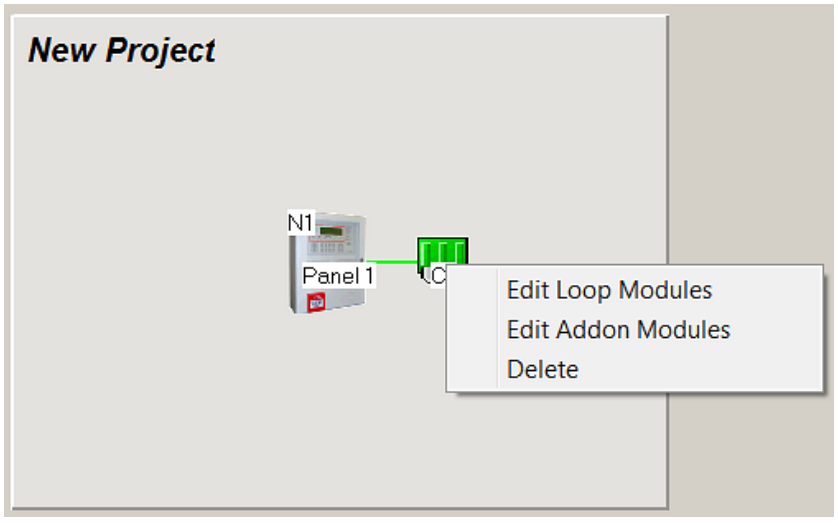


Figure 31: The Edit options for the CONTROLLER

4.3.2.1 Edit Loop Modules

Right click on the Controller and select "Edit Loop Modules Types" from the drop down screen. Using the "Classic" screen click the down arrow within the "Type" column to display the drop down box from which the module type is selected by clicking on it.

The Description and Ref [Reference] No [Number] is automatically assigned. The reference number represents whether the module is the first, second, third etc. of its **type.** For example if two Apollo modules are fitted the first module would have a ref. No. 1 and the second module would have the number ref No. 2. These numbers are unique over the whole system. They are generated automatically and should not need to be altered. For advance users the numbering does not have to be continuous and can be altered to suit specific applications.

Alternatively the “Graphic” screen can be used. This screen uses the click and drag method where the module type from the top of the screen is clicked on and dragged to the required position 1 to 8.

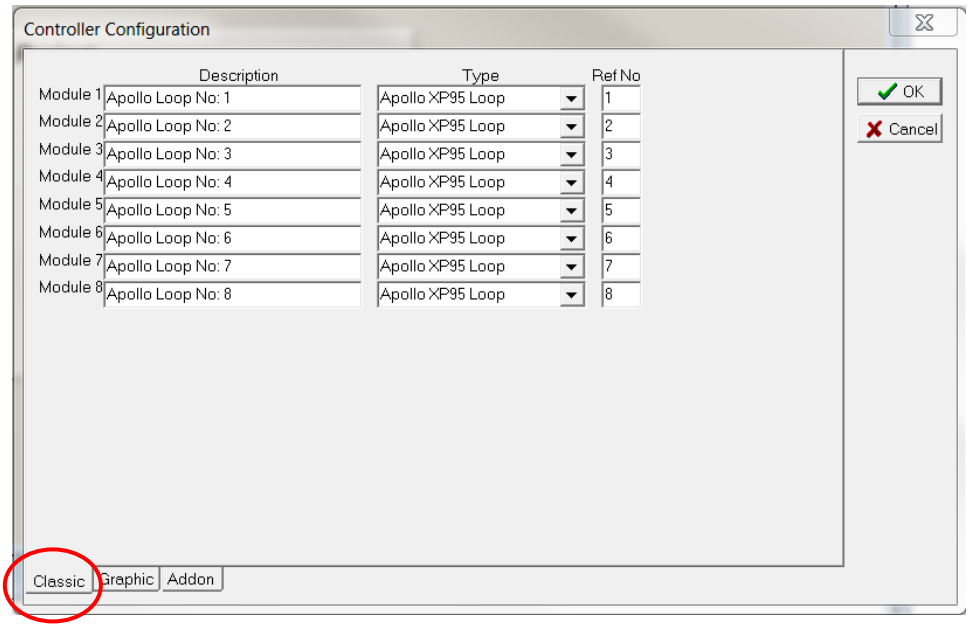


Figure 32: Edit Loop Module Type 'Classic View'

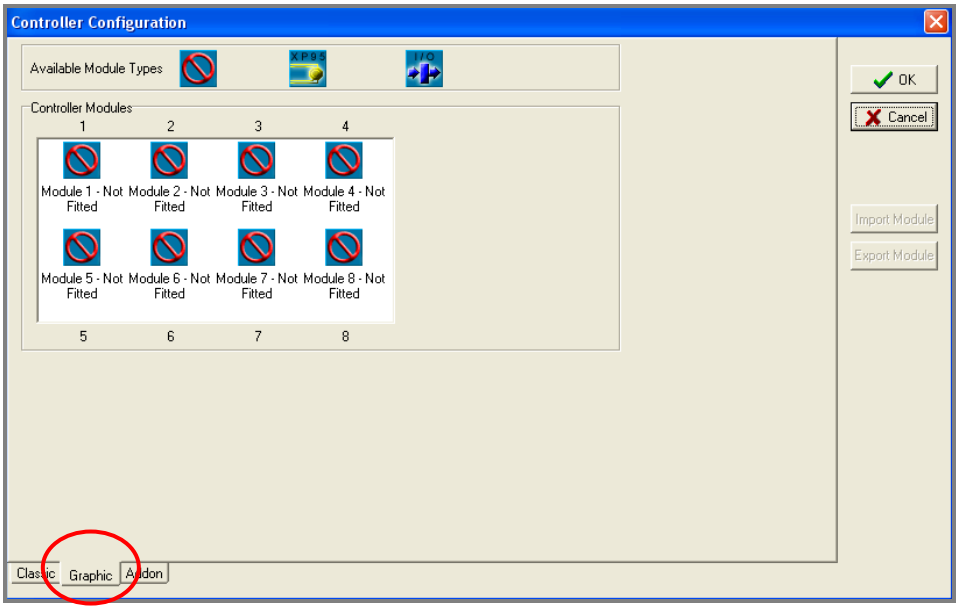


Figure 33: Edit Loop Module Type 'Graphic View'

4.3.2.2 Rearranging Module Order

Method 1: Select *Graphic* then click and drag each Module into the required order.

Method 2: Select *Classic*. Save and Import the modules to be rearranged. This is done by changing the *Type* to *Not Fitted* and selecting *OK*, the drop down screen shown below will appear, click *Yes*, then *Save* to a preferred file location. To reapply or Import a Module select the Controller Configuration option Graphic, select the available Module number then *Import Module*, repeating the process in the desired order for each Module.

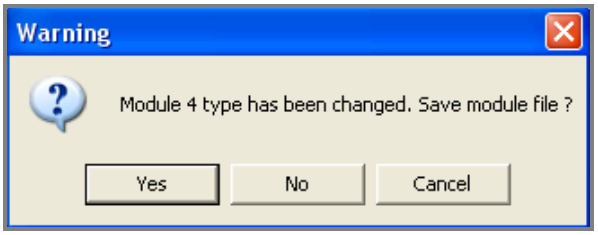


Figure 34: Warning Pop up Box

4.3.3 Controller (Loop and I/O) Setting or Editing

To access the Controller "Setting / Editing" facility double left click on the Controller "C1"

Edit LOOP Modules. To physically edit each Loop Device parameter left click in the appropriate square and enter or change the existing setting / information.

Refer to section 5 for full editing details of Loops and devices.

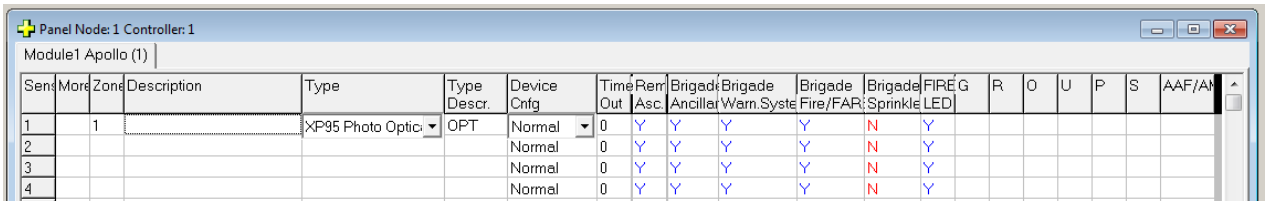


Figure 35: Controller Settings - Apollo XP95 Loop Module

Edit Module Input / Output. Here the Input and Output descriptions can be edited and the Inputs and Outputs can be made active / inactive. To physically edit the description click in the box and edit from the keyboard in the normal way. To set an Input or Output to active / inactive double click on the "Y" [Yes] active or "N" [No] inactive. Note – the Input will automatically change to "Y" (yes) if an "Input Description is inserted. This can be made inactive again by double left clicking on "Y"

Input Output settings

Displays Both Inputs and Outputs

Input setting only

Displays Inputs only

Output setting only

Displays Outputs only

For Input / Output settings the Input/Output module page displays:

1. The input (or output) numbers
2. An associated "Type In" descriptor
3. An option to determine if the input (or output) is to be **active.** To select if a module is to be active or inactive left-click on the box to toggle the contents between Y(Yes) or N(No).

To enter the descriptor just left-click on the box where you want to enter the data and type it in.

=

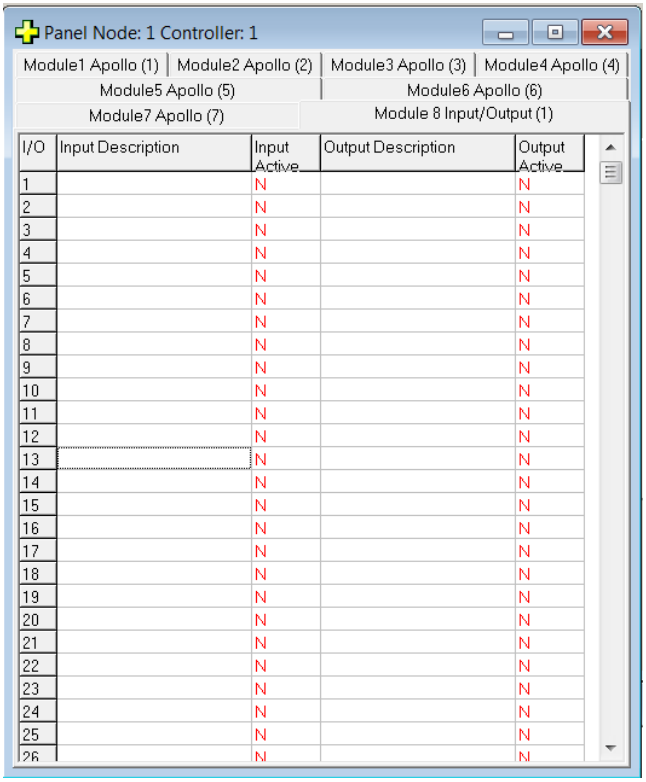


Figure 36: Controller Setting - Input / Output Module showing I/P and O/P Selection

=

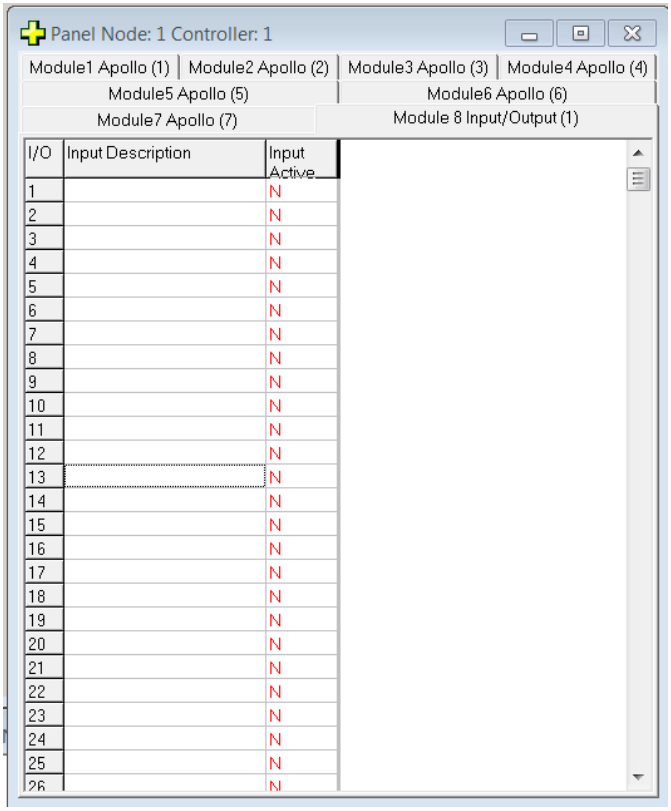


Figure 37: Controller Setting - Input / Output Module showing I/P Selection Only

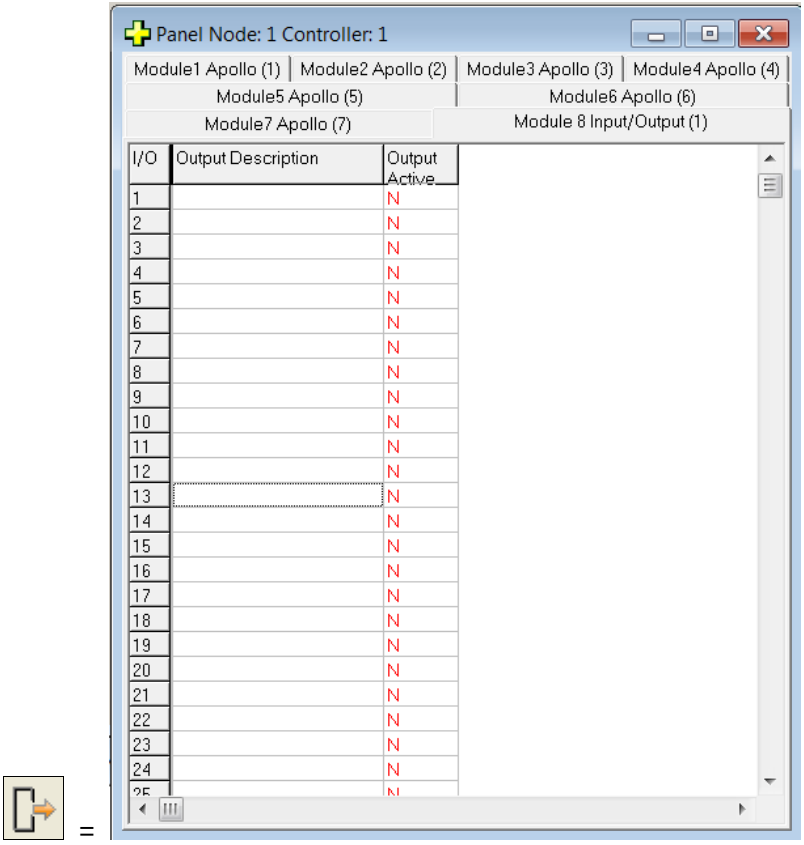


Figure 38: Controller Setting - Input / Output Module showing O/P Selection Only

4.4 Controller Settings (Addon Modules)

Right click on the Controller “C1” and select “Edit Addon Module” from the drop down screen.

Click the down arrow within the “Type” column to display the drop down box from which the Addon module type is selected by clicking on it.

The “Addr No” for each type is automatically assigned. The physical address (dip switch) of the module needs to match this.

Click on the “Edit” button to configure the Addon module.

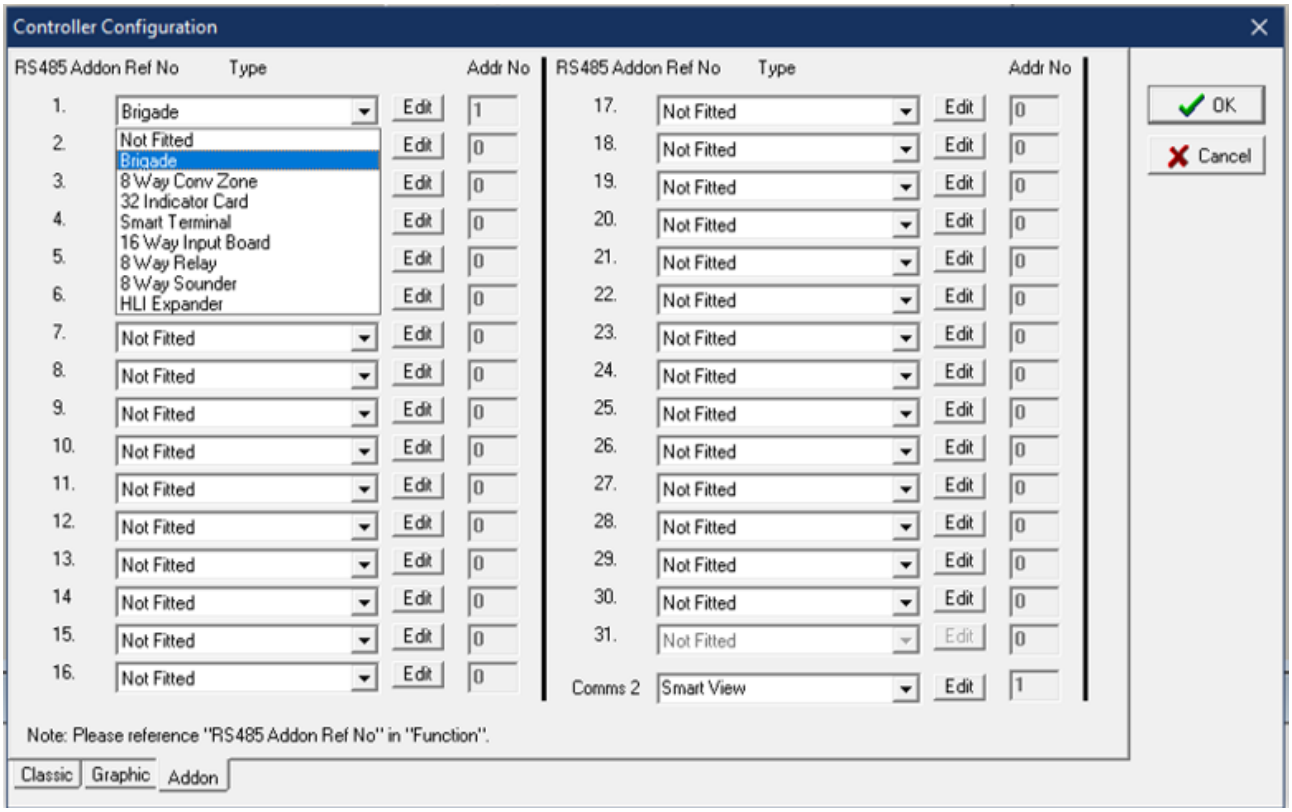


Figure 39: Controller Edit Addon Module Types

4.4.1 Edit Brigade Board

ⓘ It may be necessary to select the first “Input” and change the “Config Type to MCP in the first instances to be able to edit this facility.

Select “Brigade” from the “Config Type” column on the “Addon Module” page and click on the “Edit” button. Clicking on the “Edit MCP Property” button displays the dialogue box for the MCP input configuration.

The Brigade Board addon is limited to one per node and must be the first Addon Referenced if fitted as automatically allocated Addon No address 1.

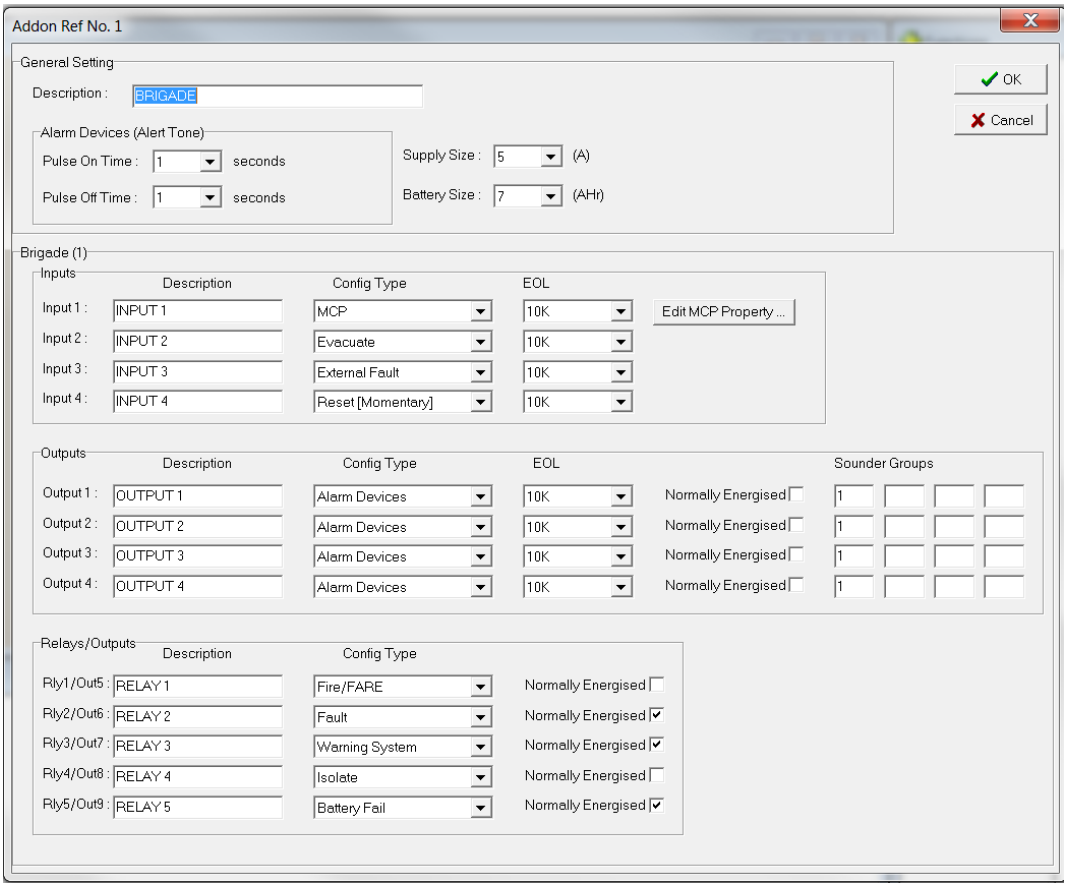


Figure 40: Controller Edit Addon Brigade Module

Description: This field is editable

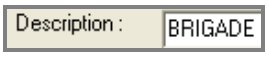


Figure 41: Brigade Board Description Field

Supply / Battery Size: This field is set via the drop down boxes for the power supply and size of the batteries installed.

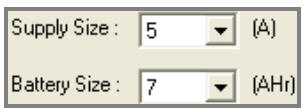


Figure 42: Brigade Board Supply and Battery Size Info9rmation setting

Pulse On/Off Time: These settings are meant for the Brigade board Outputs configured as “Alarm Device” outputs (“alert” tone).

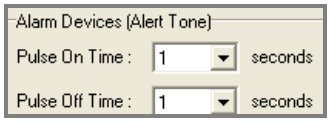


Figure 43: Brigade Board Alert Tone On Off Times

4.4.1.1 Brigade Inputs:

Description: There are 4 inputs available and each can be configured for a different purpose based on its "Config Type" normally describing the location of the Brigade Board. Click in the box to enter the description.

- **Class Change** – if activated all Sounders and Sounder Outputs in Sounder Group 1
- **External Fault** – if activated the FACP will indicate a Fault condition
- **Ancillary Disable** - if activated, the FACP's "DISABLED" and ANC OUTPUT STATUS LEDs will both be turned on. Note that this event is used to indicate an ancillary/auxiliary disablement or a door-opened condition if a door switch is fitted. It also activates any Relays on the Brigade board configured as "Isolate" relays and affects the Brigade Board's "Aux/Anc" outputs based on their "normally energised" settings.
- **Evacuate** – if activated the FACP goes into Evacuation.
- **Sounder Silence** – if activated all activated sounders are silenced.
- **Reset** – if activated a Master Reset is initiated.
- **Fire/Feedback** - if activated, the FACP's "Fire Output On" LED will flash (EN54-2 Clause 7.9.2). Note that this is a latched condition and will only be cleared a "Master Reset" command from the FACP.
- **General Purpose** – for use in Functions (Cause and Effects)
- **General/Muster Alarm** – if activated the FACP will enter the IMO General Alarm condition and any outputs or sounders configured as General/Muster Alarm will be activated
- **Mains Supply fault** – Used as a feedback when the Dual Mains supply changeover board is fitted

The default configuration types for the inputs are as follows:

- Input 1 – External Fault
- Input 2 – Reset
- Input 3 – Sounder Silence
- Input 4 – Fire/Feedback

.

Config Type:

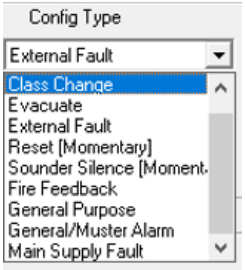


Figure 44: Brigade Module Config Type Input Options

Input EOL: - The available options for are.

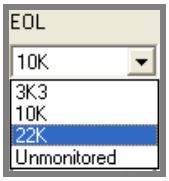


Figure 45: Brigade Input EOL Options

4.4.1.2 Brigade Monitored Outputs

There are 4 outputs available and each can be configured for a different purpose based on its “Config Type”.

- **Alarm devices** - activated when any of its four sounder groups is active. (EN54-2 Clause 7.7 and 7.8). The output is turned off during an Alarm (sounder) disable or Alarm (sounder) silence condition.
- **Fire / FARE** – activated by alarm condition (EN54-2 Clause 7.7 and 7.9.1). The output is turned off during a FARE disable condition.
- **Ancillary** - activated on device alarm conditions. The output is turned off during an Auxiliary disable condition.
- **Muster** - activated on General/Muster alarm conditions. The output is turned off during an Alarm (sounder) disable or Alarm (sounder) silence condition.
- **Fault** - activated on all fault conditions (EN54-2 Clause 8.9). The output is turned off during a FWRE disable condition.
- **General Purpose** – activated via the ConfigManager “Function” programmed logic.

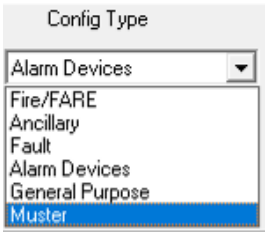
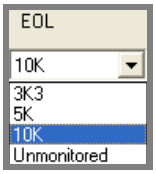


Figure 46: Brigade Output Selection Options

Output EOL - The available options for “EOL” are.



Output - Normally Energised

The checkboxes defines the state of the outputs when the panel is in the “Normal” state. Outputs configured as “Fault” default to Normally Energised

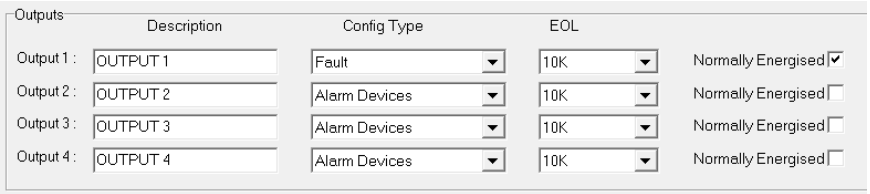


Figure 47

Sounder Groups

“Sounder Groups” are only available to outputs configured as “Alarm Devices”.

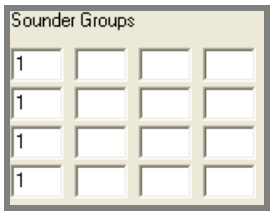


Figure 48: Sounder “Group Allocation” Entry

4.4.1.3 Brigade Relays/Outputs:

There are 5 relays available and each can be configured for a different purpose based on its “Config Type”. The available options for the “Config Type” are;

- **Fire/FARE** - activated on device alarm conditions and “Function” programmed logics. The relay is turned off during a FARE disable condition.
- **Sprinkler** - activated on device alarm conditions and “Function” programmed logics.
- **Fault** - activated on all fault conditions and “Function” programmed logics. The relay is turned off during a FWRE disable condition.
- **Disable** - activated on all Disable conditions and “Function” programmed logics.
- **Battery Fail** - activated on battery fail conditions and “Function” programmed logics.
- **Mains Fail** - activated on a mains failure.
-
- **Ancillary** - activated on device alarm conditions if selected on the Loop device configuration table.
- **General Purpose** - activated via “Function” programmed logics

Figure 49: Relays Config Type Selection Options

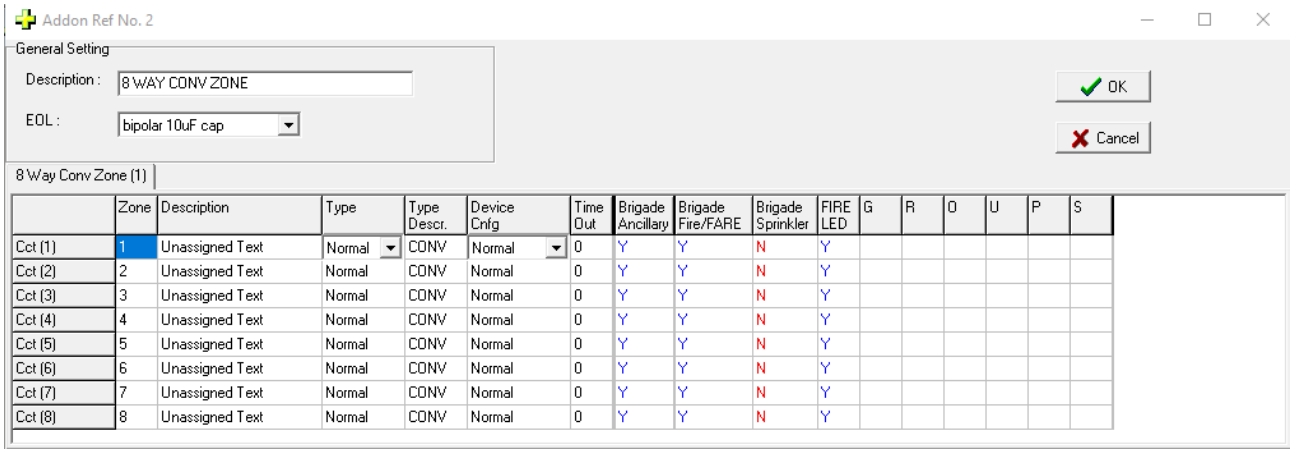
Relay - Normally Energised
The checkboxes define the state of the relays when the panel is in the normal state.

☞ **Note:** *Fault or Fail Config types are “Normally Energised” by default..*

4.4.2 Edit 8 Way Conventional Zone

Select “8 Way Conv Zone” from the “Type” column on the “Addon Module” page and click on the “Edit” button.

Each Card [8 Way Conv Zone (X)] is automatically allocated an Add No address from 1 to 15.



	Zone	Description	Type	Type Descr.	Device Cnfg	Time Out	Brigade Ancillary	Brigade Fire/FARE	Brigade Sprinkler	FIRE LED	G	R	O	U	P	S
Cct (1)	1	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (2)	2	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (3)	3	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (4)	4	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (5)	5	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (6)	6	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (7)	7	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						
Cct (8)	8	Unassigned Text	Normal	CONV	Normal	0	Y	Y	N	Y						

Figure 50: Controller Edit Addon 8 Way Conv Zone Module

Description: Normally describe the location of the 8 Way Conv Zone. Click in the box to enter the description.

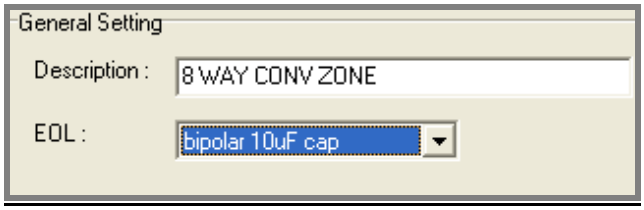


Figure 51: General Setting – Description / EOL Box

EOL: This defines the end of line setting for the 8 circuit inputs on board.

Figure 52: EOL Selection Drop Down Box

Circuit (1 to 8): The circuit number is set and cannot be modified.

Zone: The zone number must be a number between 1 and 2500.

Description: The description is limited to 33 characters and may contain numbers or characters.

Type: There is two types to choose from:
Normal: default setting
Combined: short and open circuits generate an Alarm condition (New Zealand Feature)

Type Descr: The type descriptor is automatically entered by the program. This may be modified if required but it is limited to 6 characters.

Device Cnfg: The Device Configuration column uses a drop down list box to display the options that a device may be set to; these are;

Figure 53: Device Configuration Drop Down Box

Time Out: This column is the used to enter the time out for the Self Reset configuration. A maximum of 999 seconds is allowable (60 seconds is considered a norm). An error message will be displayed if the operator attempts to enter something greater than 999 seconds.

ANC, Fire/FARE, SPRNKLR: These columns can be set to yes or no . If yes any outputs programmed as these types will activate when the applicable Zone is active.

Fire LED: The Fire LED refers to the Front Panel Fire LED (i.e. determines if an alarm event on the device in question is added to alarm buffer). This normally set to Yes.

Groups: The next six columns allow the user to enter up to 6 group numbers against each device. These group numbers are only used for I/O programming.

4.4.3 Edit 32 Way Indicator Card

Select “32 Indicator Card” from the “Type” column on the “Addon Module” page and click on the “Edit” button.

Each Card [32 Indicator Card (X)] is automatically allocated an Add No address from 1 to 15.

Description Normally describes the location of the 32 Indicator Card. Click in the box to enter the description.

Select Board Type: There are three board types that can be chosen from – refer to image below. The required board is selected by “checking” the appropriate board.

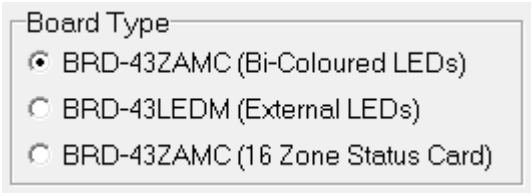


Figure 54: Board “Type Selection

Zone LED Statuses: These have default configurations depending on the Board Type Selected and are only applicable when the LED’s are set for “Zone” Activation.

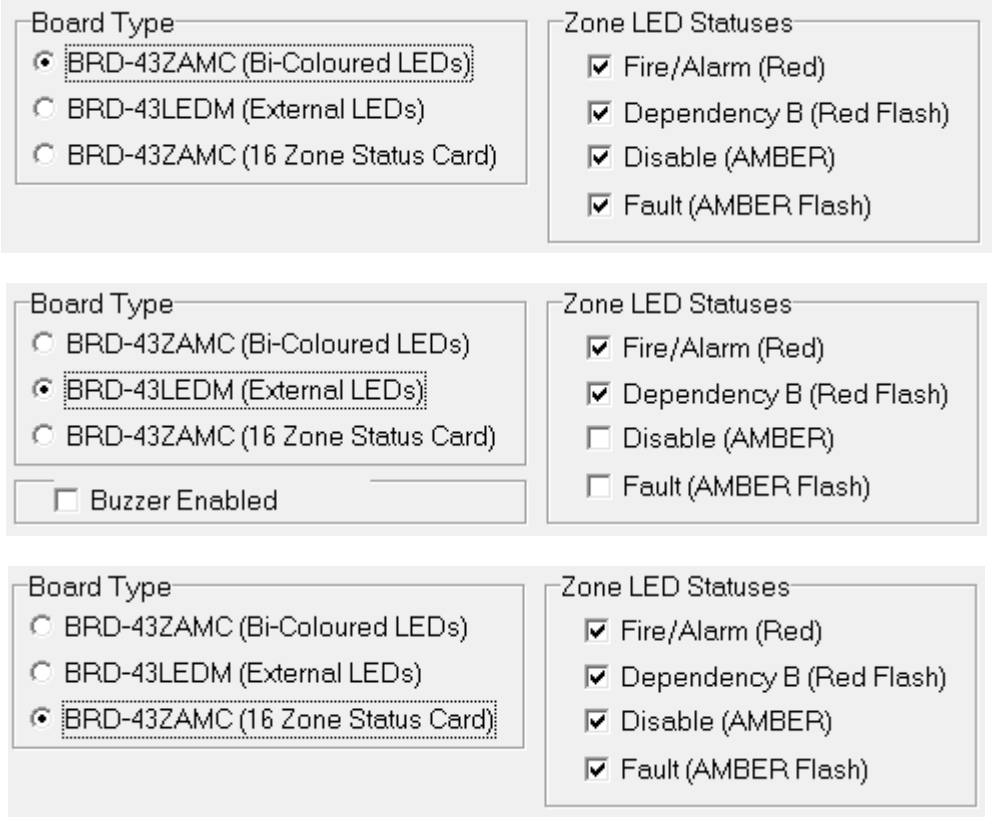


Figure 55: Zone LED Statuses

To alter the activation “Input Type” double click on the Activation field and edit using the pop up screen.

4.4.3.1 BRD43ZAMC (Bi-Coloured LED) option

This board allows for the configuration of the LED colour and mode as long as the “Activation” is not a zone input (Refer Led (10) in the image below).

A zone input in the Activation column disables the corresponding columns for LED colour and mode.

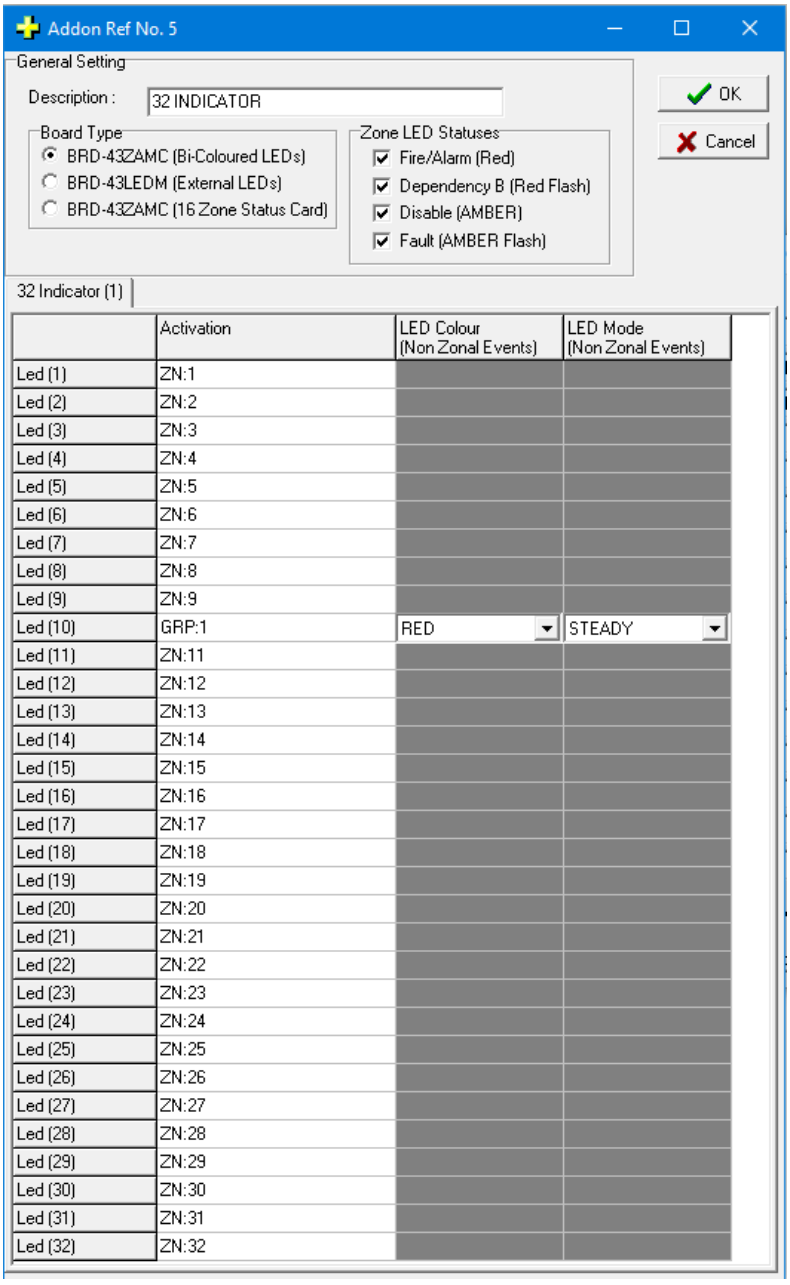


Figure 56: Controller Edit Addon 32 Indicator Card

4.4.3.2 BRD43LEDM (External LED) option

This board does not allow for the configuration of the LED colour and mode as the LED's are hard wired LEDs connected to the board.

The setting for the "Zone LED Status" is limited to either the first two or last two selections. These limitations are due to its single LED characteristics of the board.

The Buzzer Enabled option

(if ticked) allows the on board buzzer to operate. This is generally used when the BRD43LEDM is mounted external of the Fire Panel. (This option is not available in the NZS4512 verasion).

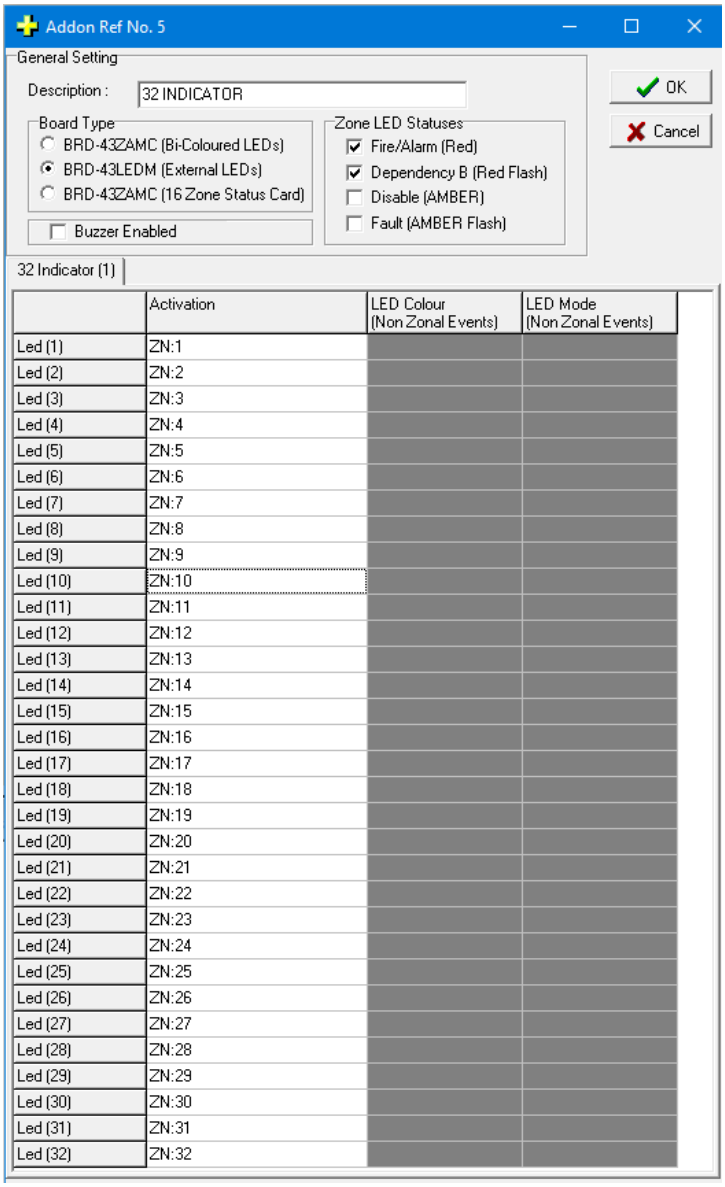


Figure 57: Controller Edit Addon 32 Indicator Card

4.4.3.3 BRD43ZAMC (16 Zone) option

This option only has 16 Zones and only allows Zone Activation therefore the Zone LED Statuses will always apply.

There are two LED's associated with each Zone. A Fire/Alarm LED and a common Disable/Fault LED.

☞ **Note:** This Option should not be used in the Marine panel

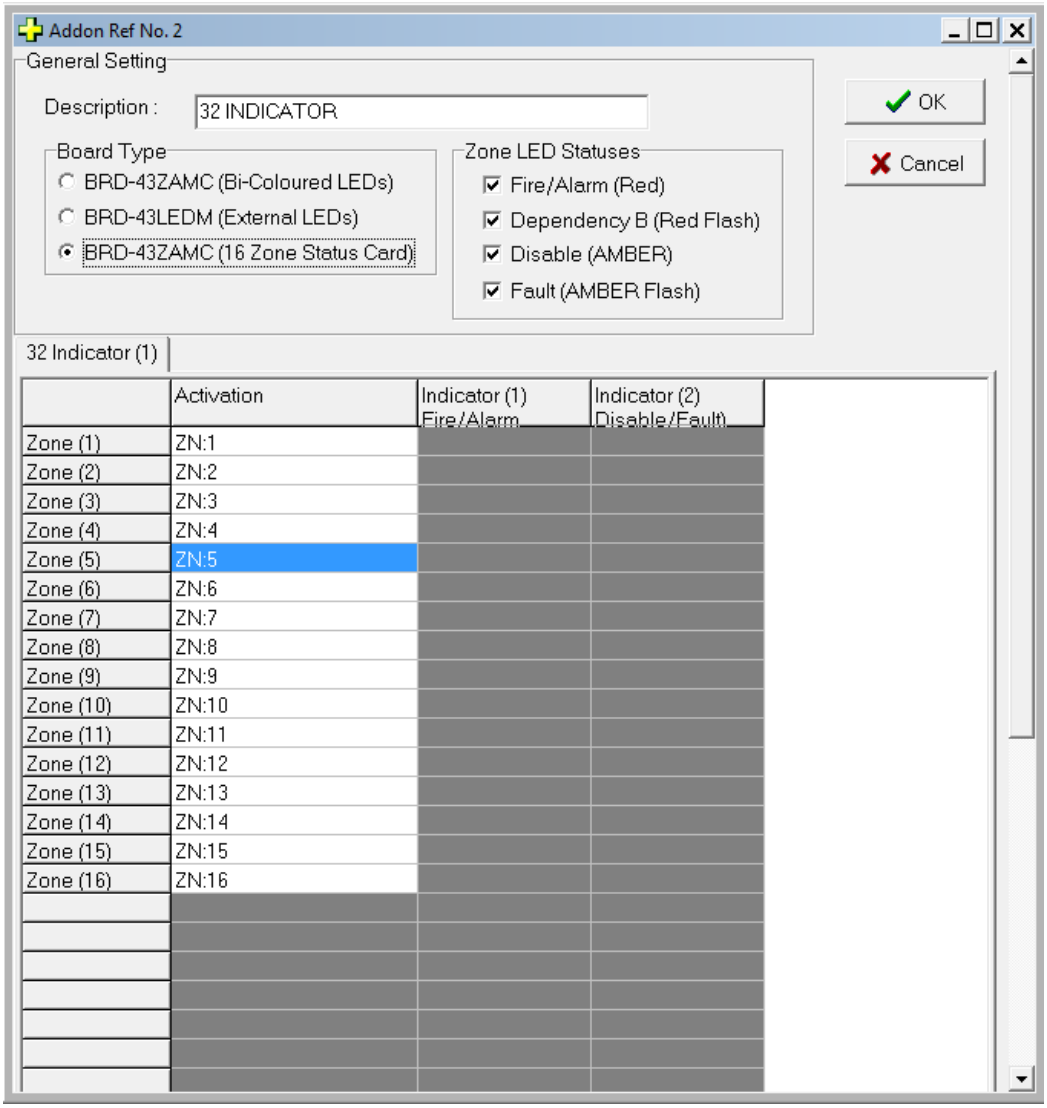


Figure 58: Controller Edit Addon 32 Indicator Card

4.4.4 Edit SmartTerminal/NFS SmartTerminal

Select “Smart Terminal” from the “Type” column on the “Addon Module” page and click on the “Edit”.

Description – (Type in)
The description should be a name given to the ***SmartTerminal*** or its physical location

Reporting Parameters
Double click in each of the “Report” boxes to display and set the, “Y” (Yes reports the parameter) and “N” (No does not report the parameter) “Alarms, Faults, Disables” parameters that ***SmartTerminal*** will display on each ***SmartTerminal*** at each location.

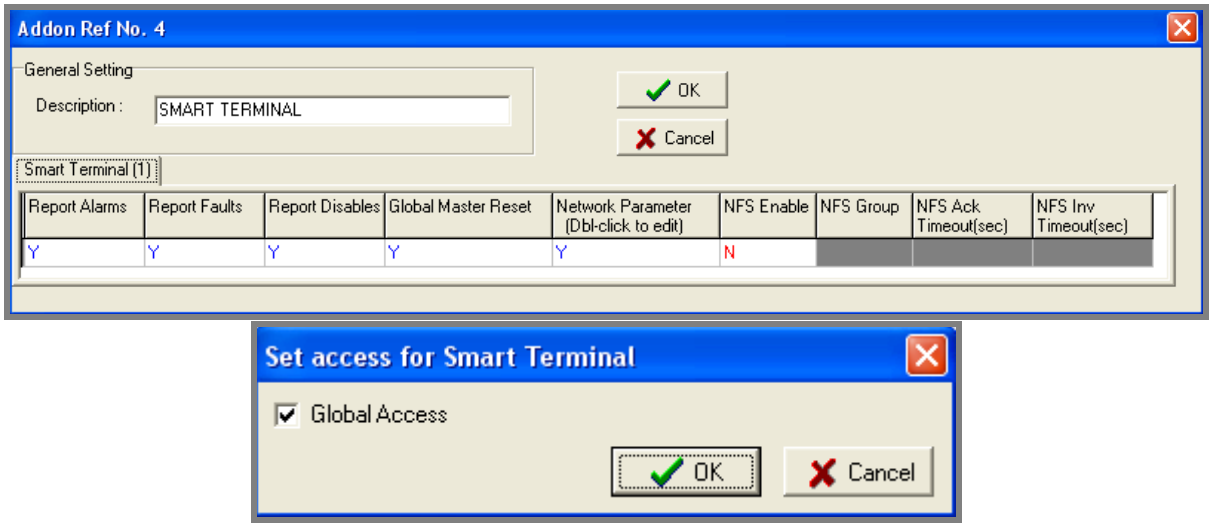


Figure 59: Smart Terminal Set up Screen & Global Access is Set by “Network Parameter” _ NFS NOT ENABLED

☞ **Note – *NFS*** *is used when a “**Nurse Fire Station** SmartTerminal” is installed.*

☞ **Note**: *When “NFS Enable” is set to “N” then the columns (Report Alarms/Fault/Disable, Global Master Reset and Network Parameter) are enabled (i.e. **not** grey out), and the columns (NFS Group/Ack Timeout/Inv Timeout) are disabled (i.e. grey out).*

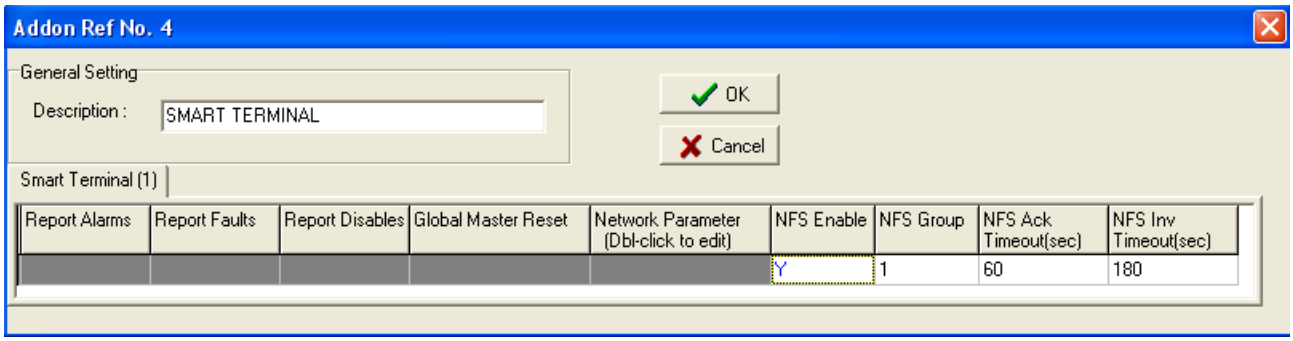


Figure 60: Smart Terminal Set up Screen – NFS ENABLED

☞ **Note** *When “NFS Enable” is set to “Y” then the columns (Report Alarms/Fault/Disable, Global Master Reset and Network Parameter) are disabled (i.e. grey out), and the columns (NFS Group/Ack Timeout/Inv Timeout) are enabled (i.e. **not** grey out).*

☞ **Note:** *A maximum of 30 **SmartTerminal’s** can be used in the configuration of the FACP and Each Card [Smart Terminal (X)] is automatically allocated an Add No address from 1 to 30.*

4.4.5 Edit 8 Way Relay Board

Select “8 Way Relay” from the “Type” column on the “Addon Module” page and click on the “Edit” button.

Each Card [8 Way Relay (X)] is automatically allocated an Add No address from 1 to 15.

Firstly enter a “Description” of the relays operation then double left click on the appropriate line under “Activation” to select the input to operate the relay.

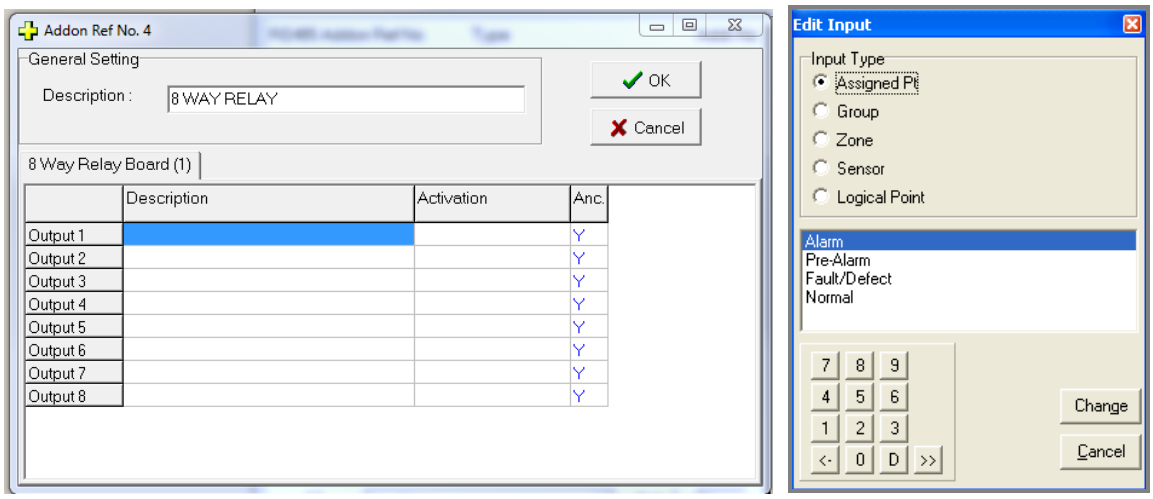


Figure 61: Edit 8 Way Relay Board – Screen and Control Input Settings (Assigned Point) ”Pop Up” Screen

Activation: *Double click* on the “Activation” column box of the corresponding output and enter the desired activating condition of the output in question.

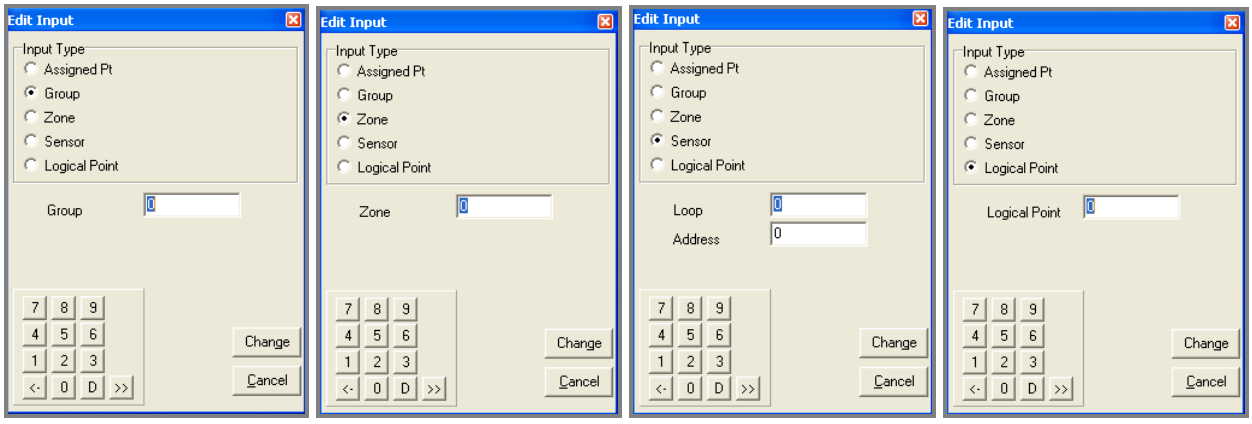


Figure 62: Activation Input Pop Up Selection Screens for each “Input Type”

Anc.: This column allows you to associate the selected relay with the Ancillary Disable button

4.4.6 Edit 16 Way Input Board

Select “16 Way Input Board” from the “Type” column on the “Addon Module” page and click on the “Edit” button and enter a functional descriptor for each input

Each Card [16 Way Input Board (X)] is automatically allocated an Add No address from 1 to 15.

Description would normally describe the location of the 16 Way Input Board. Click in the box to enter the description.

These inputs are designed to be used externally – e.g. by way of a “Function”.

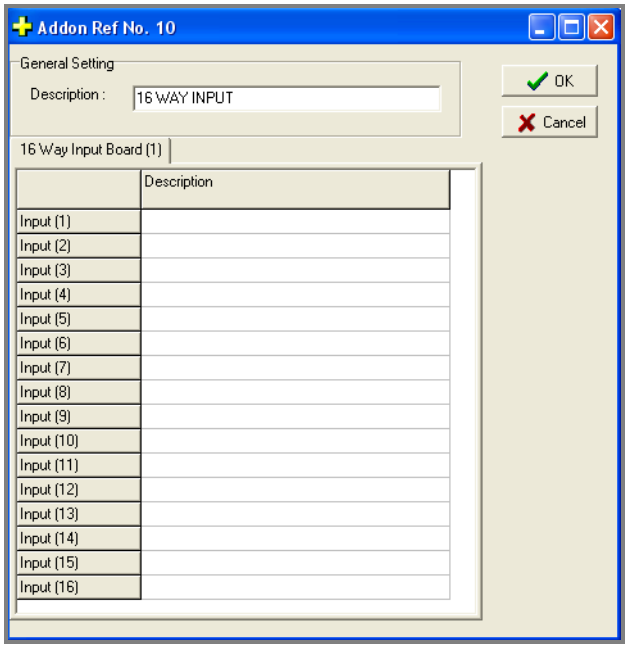


Figure 63: 16 Way Input Board Entry Screen

4.4.7 Edit HLI Expander

Select “HLI Expander” from the “Type” column on the “Addon Module” page, click on the “Edit” button and enter a functional descriptor for each input.

Each Card [HLI Expander (X)] is automatically allocated an Add No address from 1 to 3.

☞ **Note:** The “Graphics System Interface” and “EV3000” option are not applicable for Marine installations.

Description would normally describe the location of the HLI expander. Click in the box to enter the description.

Interface Type Select (Check) the appropriate interface type from the four displayed.

4.4.7.1 High Level Interface

This provides a text based output for dumb interfaces like “Nurse Call” and “Paging Systems”.

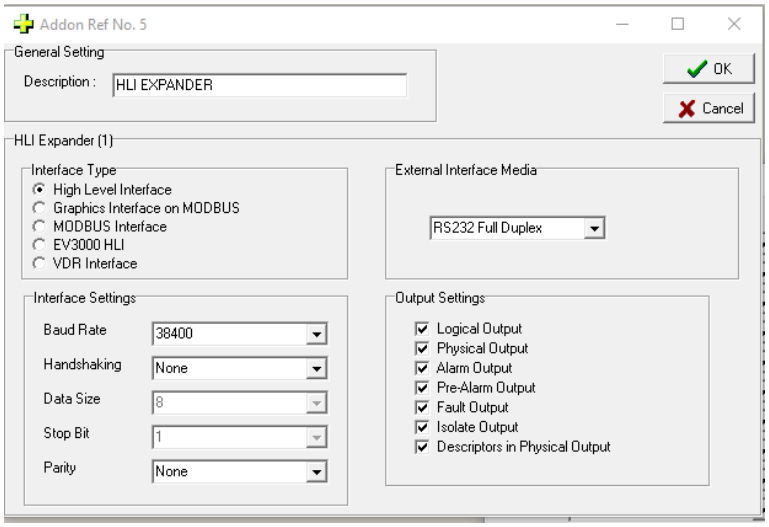


Figure 64: HLI Settings Pop Up Screen – High Level Interface (HLI)

4.4.7.2 Modbus Interface

This provides for a 2 way intelligent Modbus RTU standard interface for BMS and PLC based systems.

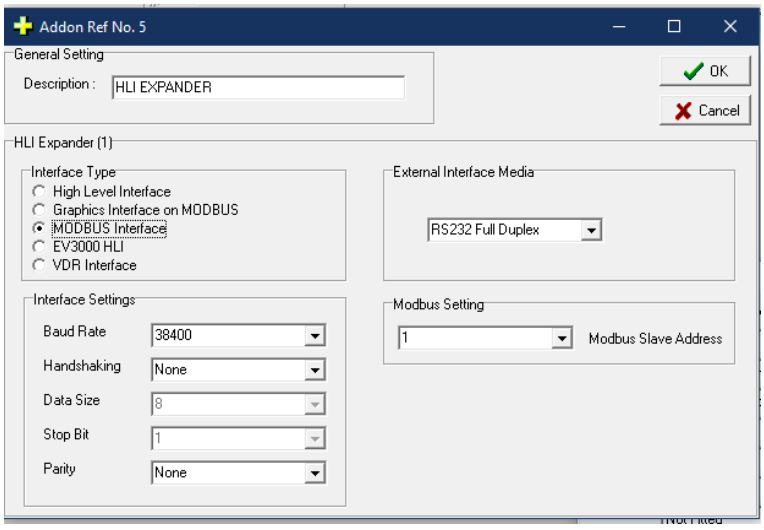


Figure 65: HLI Settings Pop Up Screen – Modbus Interface

4.4.7.3 VDR Interface

This provides an interface for communication with ships Voyage data recorders.

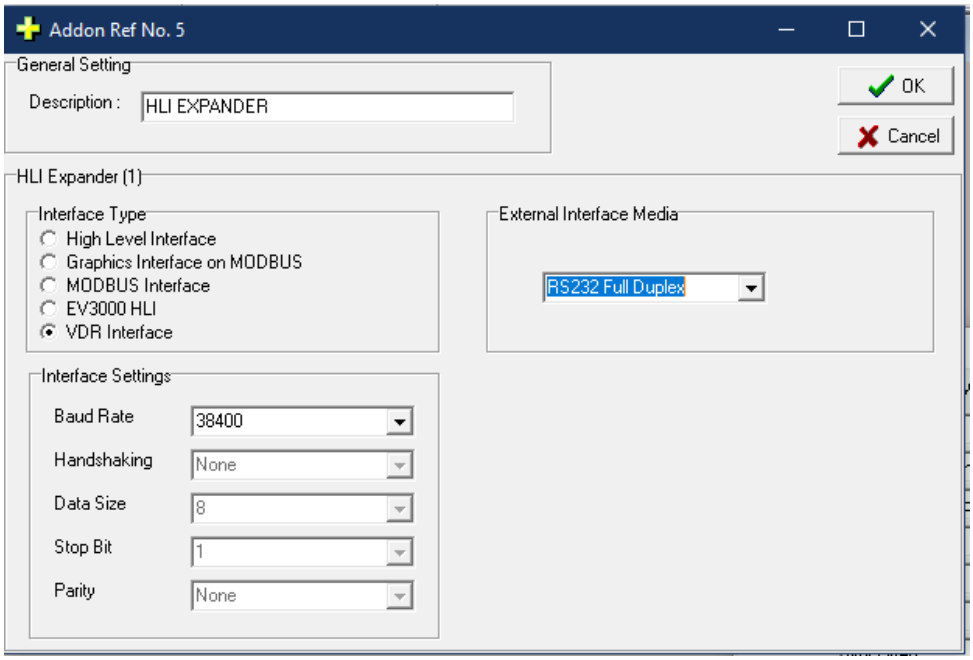


Figure 66: HLI Settings Pop Up Screen – VDR Interface

4.4.8 Edit 8 Way Sounder Control

Select “8 Way Sounder Control” from the “Type” column on the “Addon Module” page and click on the “Edit” button and enter a functional descriptor for each input.

Each Card [8 Way Sounder (X)] is automatically allocated an Add No address from 1 to 15.

Description would normally describe the location of the 8 Way Sounder. Click in the box to enter the description.

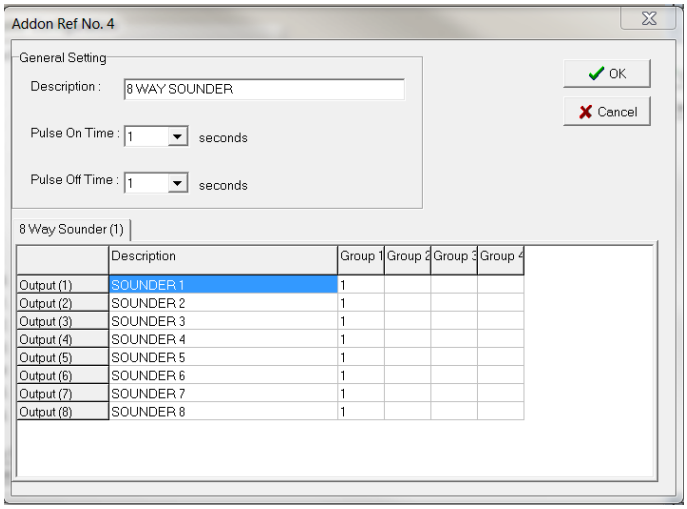


Figure 67: 8 Way Sounder Settings

Pulse On/Off Time These settings are applied to all the 8 sounder outputs (“Alert” Tone).

Group (1…4) The valid input for a sounder group is 0 to 255.

4.4.9 Edit SmartView (Comms 2)

The SmartView interface module must be configured in Comms 2 location on the Add-on editing window as the board does not connect on the standard internal RS485 add-on communications bus.

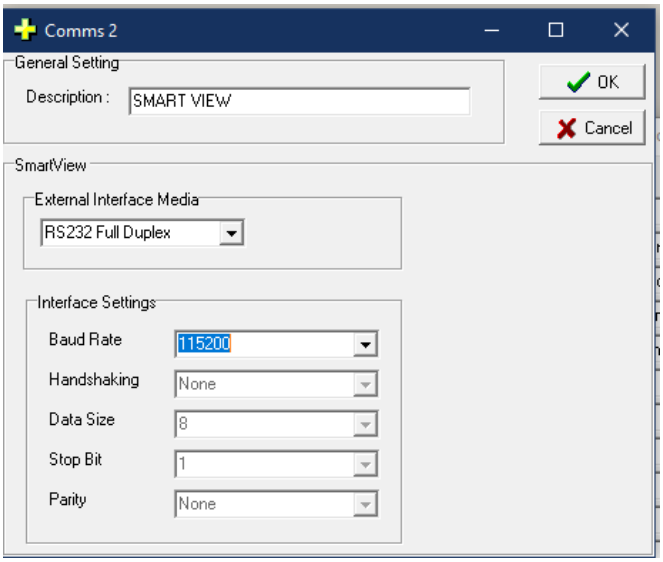


Figure 68: SmartView Settings

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5 The Module Data (Loop and Device) Entry Spreadsheet

Once all the Module data for the panel has been entered, the next step is the entry of specific data for each module. This is done via the Module Data Entry Spreadsheet. To access the Spreadsheet double click on the Controller (C1)

☞ **Note:** *If the Controller Configuration Information has not been entered the Controller Configuration Dialogue Box will appear rather than the spreadsheet shown below.*

The Module Data entry Spreadsheet appears as a window with a row of tabs along the top, one for each module. To enter the data for a module, click on the tab and in the area below a spreadsheet will appear in which you enter the data.

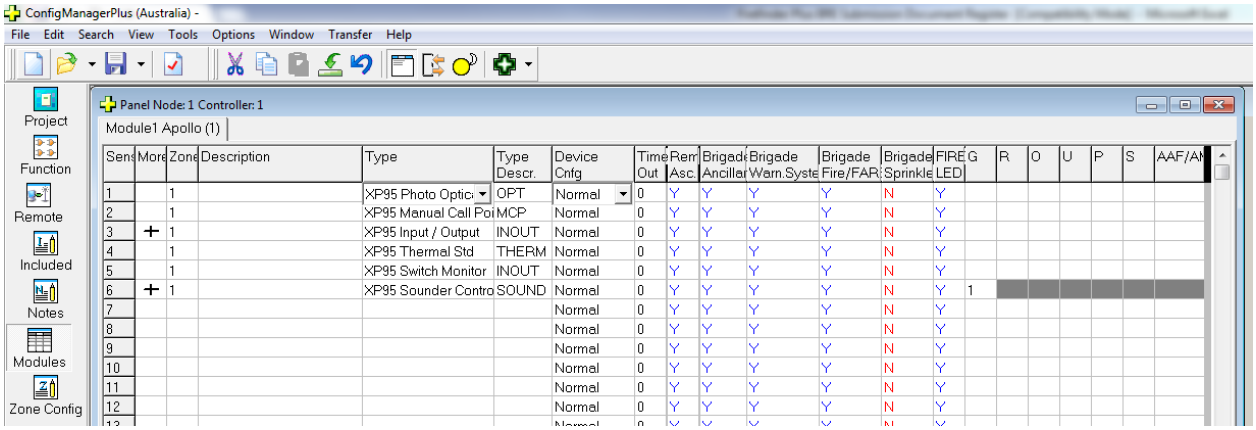


Figure 69: Apollo Module Data Entry Spreadsheet

5.1 Type and Device Configuration

To select the "Type" of module or device click on the item from the drop down menu within the spreadsheet or the in the tool bar or right click in the box and use the "Select Device" as shown above.

The screens below are those presented using the icon in the Tool Bar.

☞ **Note:** *The Marine panel is limited to device types that have Marine approval only.*

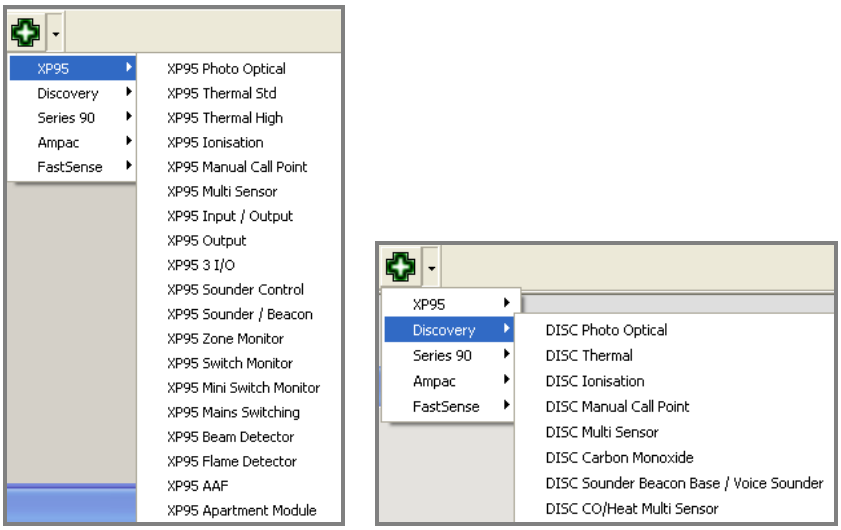


Figure 70: Device Type - XP95 & Discovery Selections (images shown are for reference only and do not represent the Marine Config tool)

The appropriate “Device Config” is then selected from the second drop down box.

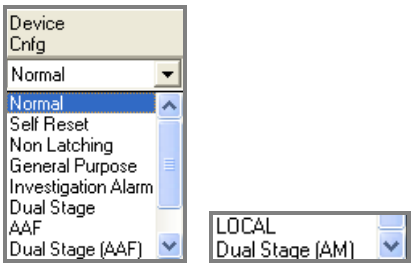


Figure 71: Device Configuration (Device Cnfg) Type

If a device is selected, such as I/O Modules, that requires programming or settings the “More” column will indicate this by automatically inserting a + in the column. Double clicking on the + will open another screen in which control data for that device can be entered. This is covered in more detail later in the manual under Input / Output Settings.

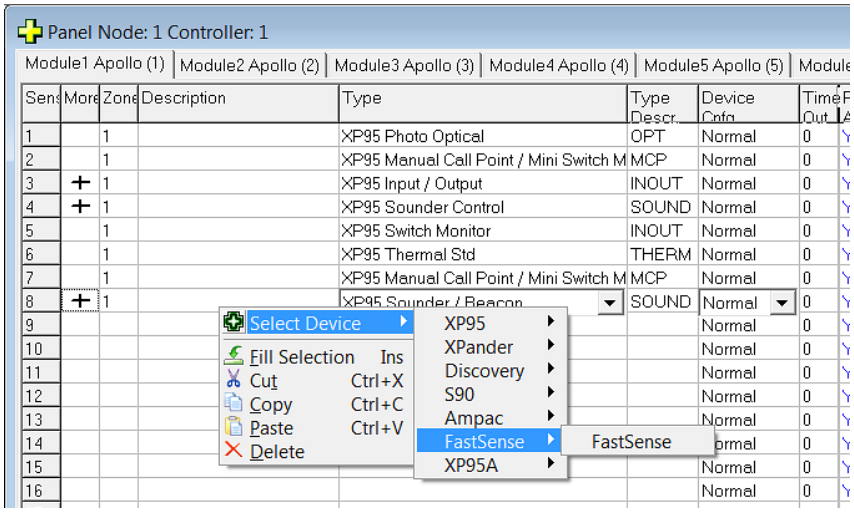


Figure 72: Short Cut Selection Window

☞ **Note:** *This shortcut selection screen (as above) is selected by right clicking within a column within which a selection is to be entered.*

Select Device categorises the types of devices that can be selected

Fill selection is used to fill and number multiple sensors of the same type. This is done by entering the first description or type etc then left clicking on it and dragging the Cursor down to the last desired insertion point.

Cut, Copy, Paste and Delete are used to edit either single or multiple entries in the normal way.

5.2 The Extended Menu and Toolbar

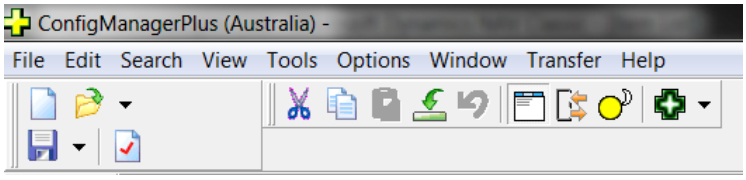


Figure 73: The Extended Functions Menu and Toolbar

5.2.1 File

New (Project) [CTRL+N]
Select this option to start a new project. The “Project Manager” dialogue box will appear as a result.

Open [CTRL+O]
Open loads a previously saved project. The “Open Project” dialogue box will appear, locate the file to be opened and click on Open. Configuration Files are saved with the .ffc extension.

Reopen
Re-open allows the user to select from a list of previously opened files.

Open Automatic Backup
Opens the automatic saved backup file.

Save [CTRL+S]
This option is initially greyed out until a project has been created or opened a project. It will save the project to the location from which it was opened, overwriting the older version. Note that the operator will not be queried as to whether they want to do this. If working on a new project that has not been saved before the “Save Project As” dialogue box will appear instead, this is described under the next heading.

Save File As
This option is initially greyed out until a project has been created or opened. It will bring up a dialogue box to enter the file name to use for the project and to locate or create the folder in which to save it.

Close Project
This option is initially greyed out until a project has been created or opened. Click here to close the project. A Dialogue Box will asked whether or not to save it, if yes and the project has never been saved before the “Save Project As” dialogue box will appear as described above.

Print
Selecting this will bring up the Print dialogue box. From here the printer can be set up. Once everything has been checked select OK and the Module Data Entry Spreadsheet will be printed.

Exit
To close down the Configuration Module program select Exit. If changes have been made to the current project and have not saved then a Dialogue Box will asked if the operator wishes to save it now.

5.2.2 Edit

Undo [Ctrl+Z]
This will take the operator back one step in case an error has been made or a change is required while entering data into the Module Data Entry Spreadsheet. Undo can go back up to 20 steps. Holding down Ctrl and pressing Z will also implement this function. Note – this function will be greyed out at the start of a project as there will be nothing to undo.

Delete [Del]
This will clear a highlighted area on the spreadsheet. To highlight an area left click on the spreadsheet and without releasing the mouse button drag it across the area to be selected such that it is all highlighted in black. Alternatively left click on the spreadsheet, then hold down shift on the keyboard and left click somewhere else on the spreadsheet. The intervening area will be highlighted.

This function can also select by right clicking on the area to be deleted. This will bring up a menu from which to select Delete.

Copy [Ctrl+C]
After highlighting an area of the spreadsheet or selecting a single entry click on copy (or hold down Ctrl and press C) to copy it to the clipboard so that it can be pasted into another area of the spreadsheet or into another program.

This function can also be selected by right clicking on the area to be copied. This will bring up a menu from which Copy Selection can be selected.

Cut [Ctrl+X]
After highlighting an area of the spreadsheet or selecting a single entry click on Cut (or hold down Ctrl and press X) to copy it to the clipboard so that it can be pasted into another area of the spreadsheet or into another program. Unlike the Copy function however, the contents of the selected area will be deleted.

This function can also be selected by right clicking on the area to be copied. This will bring up a menu from which Copy Selection can be selected.

Paste [Ctrl+V]
This function will insert the contents of the clipboard into the spreadsheet starting from the currently selected location, assuming the data is applicable to the application. Data can not be pasted from an external application into the spreadsheet via this function, however by right-clicking and selecting Paste Descriptions.

☞ **Note:** *Paste **can only be done** in the **Descriptions** by this method.*

Advanced

- This feature allows editing of **Module settings** / description and to view the default parameters for that module.

Note: It is not recommended to adjust any of these settings without consulting Ampac Technical Support

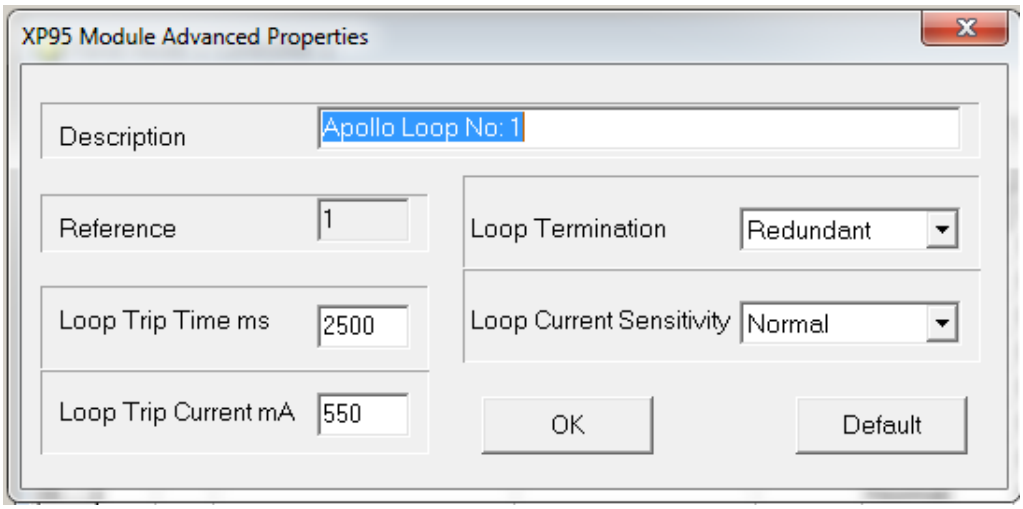


Figure 74: Advance Editing of I/O Module Pop up Screen

Replicate

This feature works by copying the last change made to all selected cells with the same original contents as the cell that was edited. All other cells selected or not, remain unaffected. For example if it was required to change all Heat A devices to Heat C, change one of these devices configuration to Heat C, select all devices, then Edit | Replicate.

Copy Change To Highlighted

When an area is highlighted and a change is made to a selected area, if **Copy change to highlighted** is used then the change is made to all of the relevant areas in the highlighted section. For View Highlights, add Highlights refer to that Section

Replicate On Highlighted

When an area is highlighted and a change is made to a selected area, if **Replicate on highlighted** is used then the change is made to all of the relevant areas in the highlighted section.

5.2.3 Search

Search

This option allows the operator to search for text when editing modules.

Search Again F3

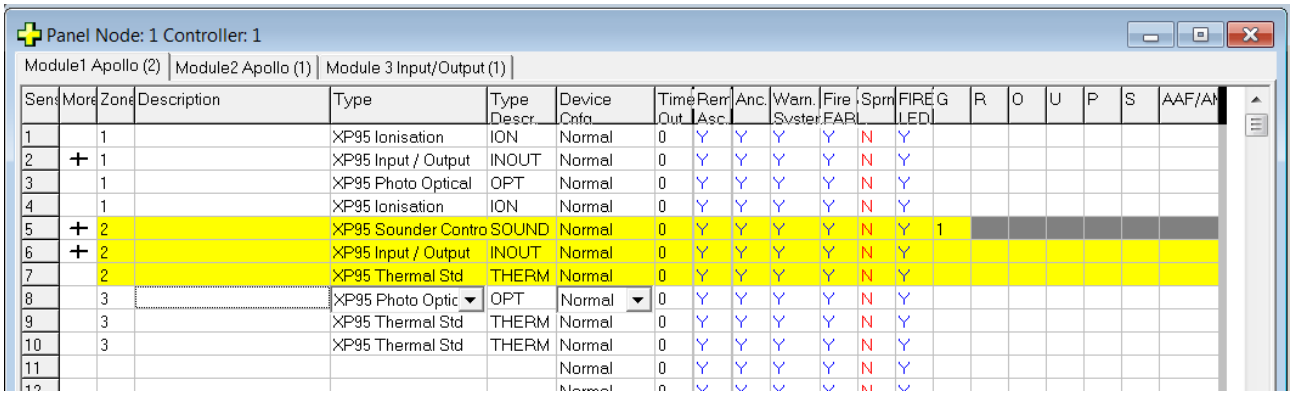
This allows the user to search for text again.

Replace In Description

This option allows the user to replace letters or words in the description fields.

5.2.4 View

Add Highlights
When this option is selected the “Select Parameter to Highlight” box appears. Select an option as shown and type in a parameter that is referred to in the region selected. In this case the word detector is entered. Selecting OK highlights all devices with the “Description - Detector



Sens	More	Zone	Description	Type	Type Descr.	Device Cnfg	Time Out	Rem Asc.	Anc.	Warn. Syster	Fire	FARL	Sprn	FIRE LED	G	R	O	U	P	S	AAF/AN
1		1		XP95 Ionisation	ION	Normal	0	Y	Y	Y	Y	N	Y								
2	+	1		XP95 Input / Output	INOUT	Normal	0	Y	Y	Y	Y	N	Y								
3		1		XP95 Photo Optical	OPT	Normal	0	Y	Y	Y	Y	N	Y								
4		1		XP95 Ionisation	ION	Normal	0	Y	Y	Y	Y	N	Y								
5	+	2		XP95 Sounder Contro	SOUND	Normal	0	Y	Y	Y	Y	N	Y	1							
6	+	2		XP95 Input / Output	INOUT	Normal	0	Y	Y	Y	Y	N	Y								
7		2		XP95 Thermal Std	THERM	Normal	0	Y	Y	Y	Y	N	Y								
8		3		XP95 Photo Optic	OPT	Normal	0	Y	Y	Y	Y	N	Y								
9		3		XP95 Thermal Std	THERM	Normal	0	Y	Y	Y	Y	N	Y								
10		3		XP95 Thermal Std	THERM	Normal	0	Y	Y	Y	Y	N	Y								
11						Normal	0	Y	Y	Y	Y	N	Y								

Figure 75: Highlighted Screen

Remove highlights
This simply removes the highlights on the selected screen.

The following three options from the View drop down screen if selected takes the operator directly to the appropriate working screen. Another method of selecting these options is to left click on the icons as shown below.

Edit descriptions, groups, brigade settings

View input / output settings – see also Input /Output Modules

Edit day / night settings

5.2.5 Tools

Verify Project [F4]

This function checks that the project produces a valid ***FireFinder PLUS*** configuration file. Any errors will be displayed on the screen.

Compile File [F5]

This function will create the ***FireFinder PLUS*** configuration file for the current project. This is the file that is actually sent to the ***FireFinder PLUS***.

A **SAVE FILE AS** dialogue box will appear so that you can select the file name and location of the file you are creating. The file created is a text file with a .dat extension.

By using the Compile tab of the Environment Settings you can select to display the Compiled ***FireFinder PLUS*** File and a window will appear showing the contents of the file after it has been generated.

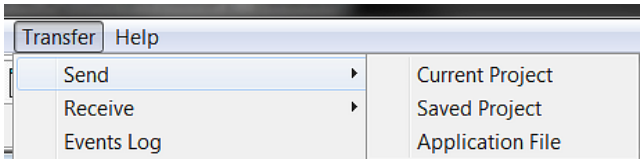
Convert File from *FireFinder PLUS*

This will convert the information previously uploaded from the ***FireFinder PLUS*** panel into a format such that it can be imported for use by ***ConfigManagerPLUS.***

Clean Up Directory

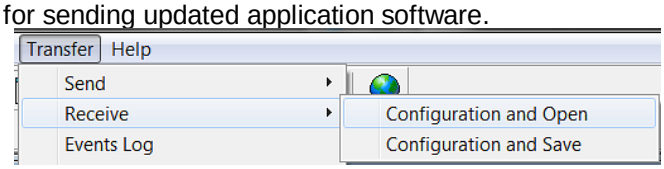
Used to cleanup file locations and unused files within that location.

5.2.6 Transfer



Send

This function is used to Send either the current project config or a saved project config into the panel/s. It is also used for sending updated application software.



Receive

This function is used to Receive a panel config from the panel and open it up a project in the programming tool or save to a directory on the pc.

Events Log

This function is used to download the panels event logs.

5.2.7 Clicking Tool Bar Icons;

Project
View displays the current project screen

Functions
View displays the Functions screen

Remote
Controller displays a graphical screen from which the FACP can be remotely controlled

Included
Text Editor displays the written Functions screen for editing a written Function

Notes
Editor displays an enter text screen for storing note on the project

Modules
Edit View displays the modules in the configuration for editing, adding or deleting

Maps
displays the map name and the description of each page in the graphics configuration

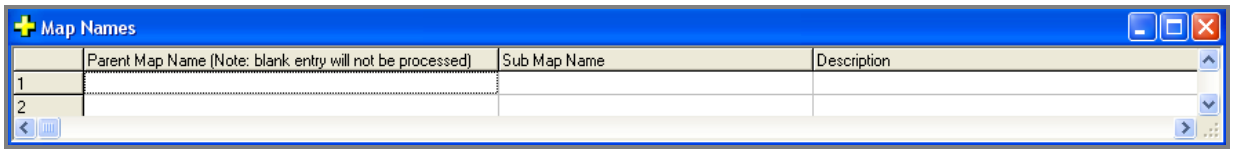


Figure 76: Entering Map Names and Screens

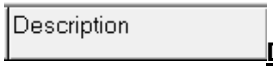
Main Map with no Sub Map
To set up a main map with no sub map -> provide a map name for the “Parent Map Name” and leave the “Sub Map Name” blank. For example, set Map (row) 1: Parent Map Name = "mainmap" and leave Sub Map Name blank.

Main Map with 2 Sub Maps
To set a main map with 2 sub maps -> use the same map name for the “Parent Map Name” of two records and provide an unique “Sub Map Name” for each. For example, set Map (row) 1: Parent Map Name = "mainmap" and set Sub Map Name = submap1; set Map (row) 2: Parent Map Name = "mainmap" and set Sub Map Name = submap2.

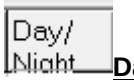
"tagcopy.ci" file includes a function “PageSum” that stores the parent-sub map records information. Note that a parent map with no sub maps will not be added to this function.

5.3 Zone Configuration Options

Zone Config displays the zone table configuration of the system. This is used to set zone(s) into its respective mode (i.e. Normal, dependency A/B/C or Delay-to-output) based on the BS EN54-2 1998 and AS7240-2 CIE standards.



Description: Zone description (e.g. location details)



Day/Night:

1. If set to 'Y', both the "Day Mode" and "Night Mode" settings will be used by the FACP.
2. If set to 'N', only the "Day Mode" settings will be used.

Day Mode or Night Mode:
Allows the Zone to be configured and operate in one of the six modes as follows depending on the time of day/night:

5.3.1 Normal:

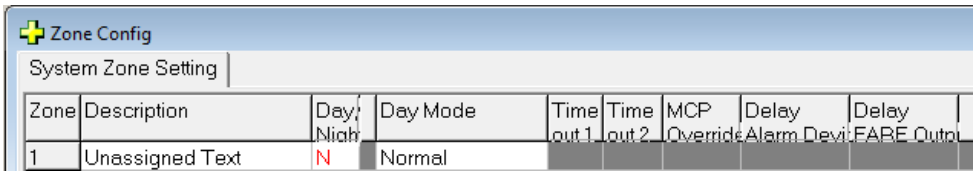


Figure 77: Normal Zone settings

No special zone functionality. Zone alarms and outputs are immediately activated.

5.3.2 Dependency A (EN54-2 and AS7240-2):

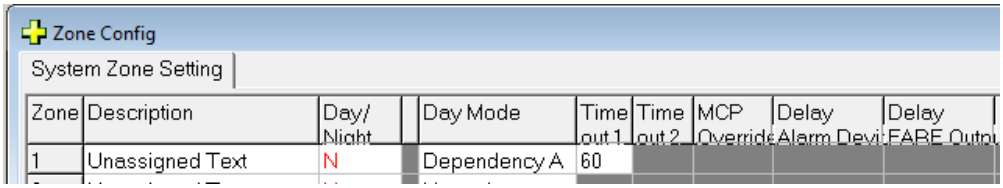


Figure 78: Dependency A settings

When a device in this zone goes into alarm the first alarm signal from the device is not reported and the fire alarm condition is inhibited until a confirmation alarm signal from the "same" detector or another detector in the same zone is received.

The confirmation time is set to 60 secs and can not be changed.

Time Out 1 is used to set the time to cancel the initial alarm state. This can be set from 60 seconds up to a maximum value of 1740 seconds.

If there has been no confirmation alarm during the first 60 seconds the time Out 1 counter starts.

If another alarm is received during this time the Zone will enter the full alarm state without requiring a confirmation alarm.

☞ **Note:** Dependency A zone settings DO NOT apply to Manual Call Points configured in the zone

5.3.3 Dependency B (EN54-2 and AS7240-2):

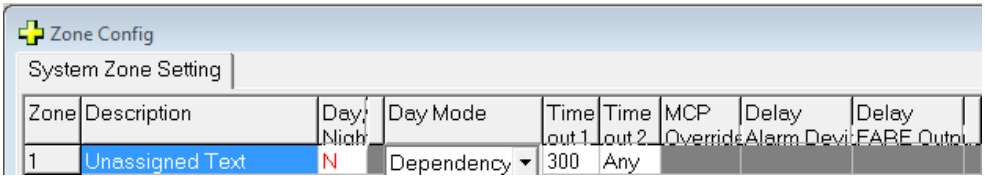


Figure 79: Dependency B settings

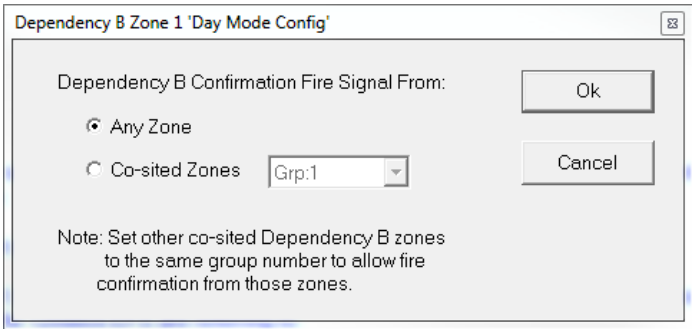
When a device in this zone goes into alarm the first alarm signal from the device is indicated on the panel but the fire alarm condition is inhibited until a confirmation alarm signal is received from another detector in the same or different zone.

Time Out 1 is used to set the time to cancel the initial alarm state. This can be set from 300 seconds up to a maximum value of 1800 seconds. A manual Reset will also cancel the initial alarm state.

If there has been no confirmation alarm during the first 60 seconds the time Out 1 counter starts.

If another alarm is received during this time the Zone will enter the full alarm state without requiring a confirmation alarm.

Time Out 2 column allows the user to configure whether the different confirmation zones are co-sited (that is a zone that is next to the zone determined by a Group number) or any zone.



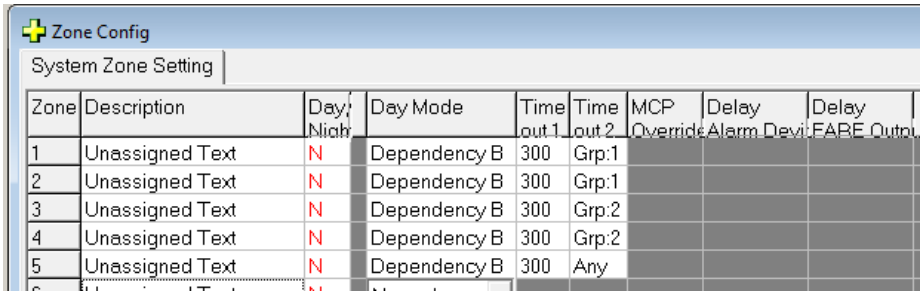


Figure 80: Dependency B Zone Grouping

☞ **Note:** Dependency B zone settings DO NOT apply to Manual Call Points configured in the zone

5.3.4 Dependency C (EN54-2 and AS7240-2):

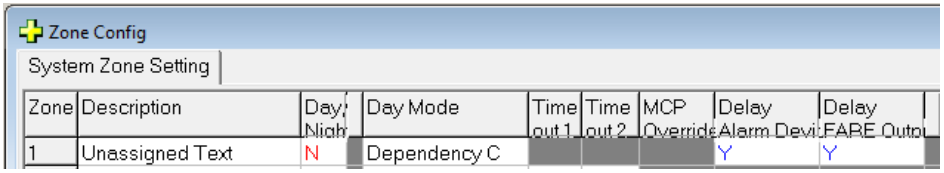


Figure 81: Dependency C settings

When a device or a MCP in this zone goes into alarm, the panel will enter the fire alarm condition however the outputs associated to alarm devices and the FARE output can be delayed.

5.3.5 Delays to Outputs (EN54-2 and AS7240-2):

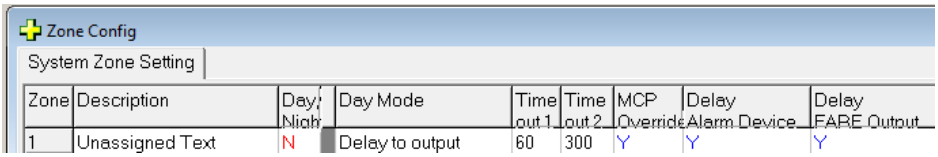


Figure 82: Delays to output settings

This allows delays to be configured to Alarm Device and FARE outputs.

Time Out 1 sets the initial delay period.

Time Out 2 sets the extended delay that the user can select on the panel by pressing the Delay Override button if delay Time out 1 is not long enough.

The combined delay (Time out 1 + Time out 2) must be between 1 and 600 seconds.

The MCP Override option allows the delays to be applied to MCP's or not. The default is all MCP's will turn outputs on and not start the delay time

5.3.6 AVF (AS4428.1):

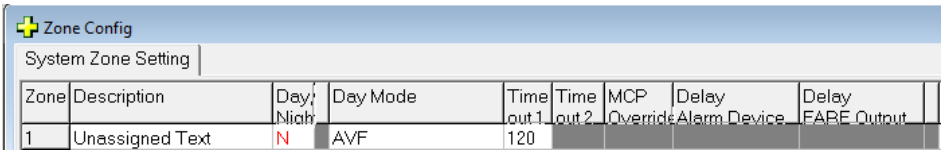


Figure 83: AVF settings

When a device in this zone goes into alarm the first alarm signal from the device is not reported and the fire alarm condition is inhibited until a confirmation alarm signal from the "same" detector is received.

The confirmation time is set to 20 secs and can not be changed.

Time Out 1 is used to set the time to cancel the initial alarm state. This can be set from 120 seconds up to a maximum value of 300 seconds.

If there has been no confirmation alarm during the first 60 seconds the time Out 1 counter starts.

If another alarm is received by the same detector or another detector during this time the Zone will enter the full alarm state without requiring a confirmation alarm.

☞ **Note:** AVF zone settings DO NOT apply to Manual Call Points configured in the zone

5.4 Loop and Device Configurations

Selecting Loop module tab on the Module Data entry Spreadsheet will display the page for entering the data for that module. The tool bar will also have the following buttons made active.

Edit description, groups, Brigade settings

View input / output settings

Edit day / night sensitivity settings

Add device to currently selected address

Select the tool for the settings you wish to enter.

5.4.1 Edit Loop Device Table Properties

Selecting this option will display a page on the spreadsheet like that shown below.

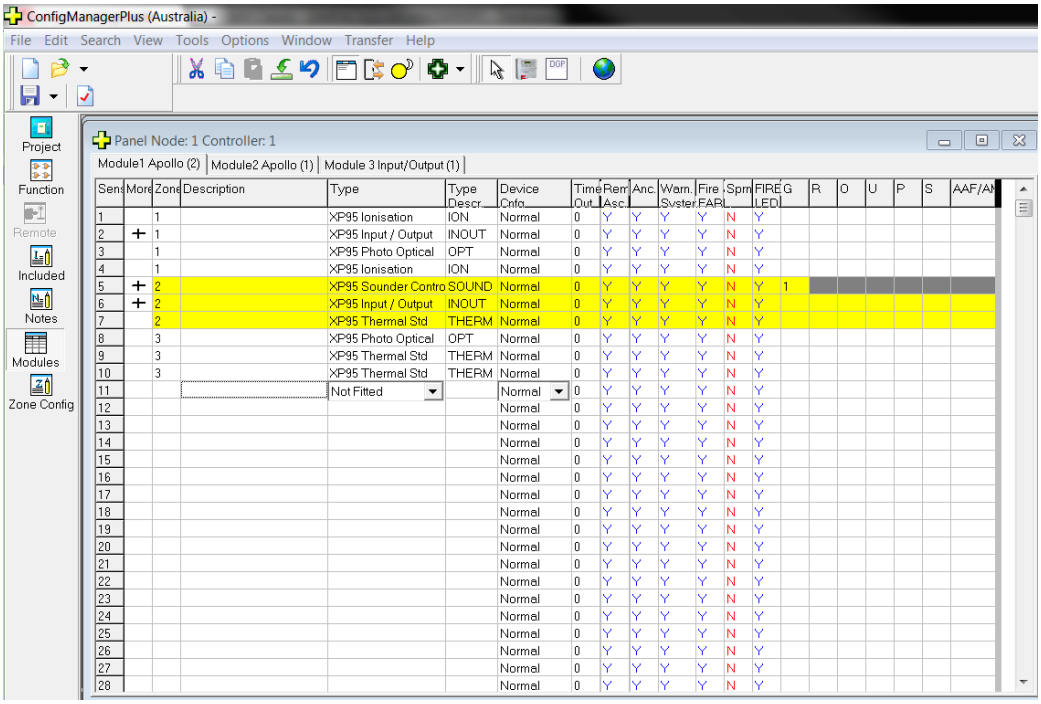


Figure 84: Sensor Properties

Sens (Sensor)

The sensor number is set and cannot be modified.

More +

Clicking on this box will reveal more specific configuration information for the device. This allows applicable inputs and/or outputs to be configured.

Zone

The zone number is mandatory and must be a number between 1 and 1024.

Description **Description**

The description is limited to 33 characters and may contain numbers or characters.

Type **Type**

The type of device is selectable from a drop down list box.

☞ **Note:** *Along with other devices* ***FastSense*** *is selected from this drop down box.*

Type Descr. **Type Descr (Description)**

The type descriptor is automatically entered by the program. This may be modified if required but it is limited to 6 characters.

Device Cnfg **Device Cnfg (Configuration)**

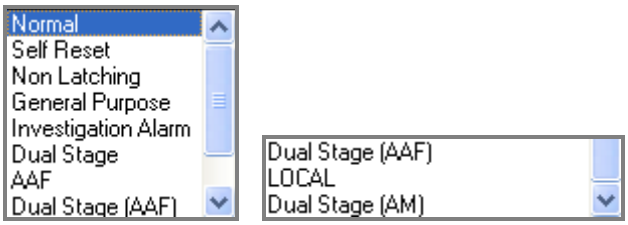


Figure 85: Device Config Drop Down Screen

The Device configuration column uses a drop down list box to display the options that a device may be set to, these are;

NORMAL – which is a normal or latching configuration for the zone. This configuration will allow the detector to go straight into alarm when it detects smoke (alarm calling).

Self Reset – The detector will be reset automatically after a predetermined period.

Non Latching – this is non-latching. The detector will automatically return to normal after a predetermined period when the source of the alarm e.g. smoke is removed.

General Purpose – ***Used for input output devices***. When set to general purpose any activated input is not displayed on the LCD. When using sub addressing input output units are set to general purpose. Clicking on the + (more) button will then allow you to set inputs for other options e.g.: Inactive, General (set a Function), Latching, Non latching, Fault. The **ADDRESS** will be the sequential number assigned to the device / sensor when the description is entered in the Module screen. The **SUB-ADDRESS** is the INPUT designator (1 to 3) that is assigned to the description entered for a particular INPUT. To access this screen click on the + icon in the Module screen.

Heat A - Used with XP95 Heat Detectors (Rate of Rise)

Heat B - Used with XP95 Heat detectors (Fixed Temp)

Heat C - Used with Discovery Heat Detectors (Rate of Rise)

Heat D - Used with Discovery Heat Detectors (Fixed Temp)

Investigation Alarm - Used with AAM modules. Allows for an investigation period before the device goes into full alarm.

Dual Stage – this option is only available for the Discovery Multi-sensor (default mode, night mode,

heat mode only).

ADF – allows the device to be associated with an ADF group. Refer section 5.4.5

AAF – the Alarm Verification Facility allows for the system to verify that smoke has been present in a smoke detector for 10 seconds before the system will go into alarm. AVF is not recommended for I/O devices as an input is either “ON” or “OFF”.

Dual Stage (AAF) – this option is only available for the Discovery Multisensor (default mode only).

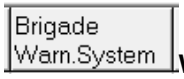
LOCAL - this option is only available for devices to be associated with an AM device via the AAF/AM column.

Dual Stage AM – this option is only available for the Discovery Multisensor (default mode only).

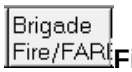
Time Out
This column is the used to enter the time out that is used only for Self Resetting, investigate alarm devices, and dual stage devices. A maximum of 999 seconds is allowable. *If something greater than 999 seconds is entered an error message will be displayed when the project is compiled.*

Remote Association
Set to Y allows the remote LED to be illuminated on Alarm, set to N disables the remote LED and will not be illuminated on Alarm although if the LED was under program control within a Function this setting will be over ridden. An example of its use is where a detector is located in a concealed space (e.g. Ceiling void) and the remote LED is mounted on the ceiling in full view.

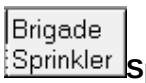
Ancillary Association
Set to Y allows the device to be associated with Brigade Board outputs configured as Ancillary Type. If the applicable detector goes is activated then outputs configured as Ancillary type will activate.



Warning System Association
Set to Y allows the device to be associated with Brigade Board outputs configured as Warning System Type. If the applicable detector goes is activated then outputs configured as Warning System type will activate.



Fire/FARE Association
Set to Y allows the device to be associated with Brigade Board outputs configured as Fire/FARE Type. If the applicable detector goes is activated then outputs configured as Fire/FARE type will activate.



Sprinkler Association
Set to Y allows the device to be associated with Brigade Board outputs configured as Sprinkler Type. If the applicable detector goes is activated then outputs configured as Sprinkler type will activate.

Alm (Alarm) LED
Is the Front Panel Alarm LED. This normally set to Yes.

Groups: The next six columns allow the user to enter up to 6 group numbers against each Alarm initiating device and only 1 group for Sounders. These group numbers are used in function programming (refer section 13).

Map: Not used in the Marine panel

5.4.2 Manual Call Point Settings (XP95)

Two options are available:
XP95 MCP – Fire which is used for Alarm calling
XP95 MCP – Emergency which is used for Evacuation and other none Alarm calling (AS1670.1:2015)

Selecting these will pre-configure the output option columns as per the image below.

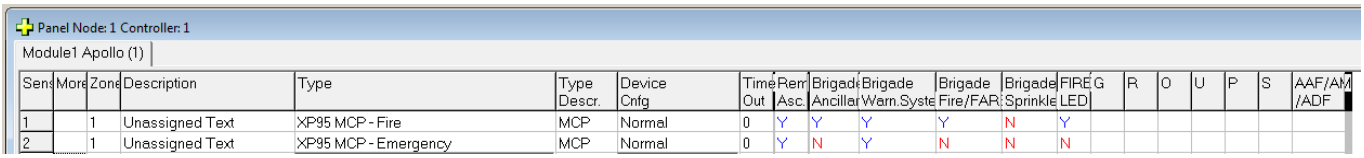


Figure 86: Device Type – MCP Selections

5.4.3 Input/Output Device Settings

If there is any device on the loop which has input or output, select the Input/Output icon for I/O Module or the More + column settings button in the Sensor Properties screen to show the I/O Settings page.

Some boxes in a spreadsheet will be filled with the background colour, data entry is prohibited in these boxes.

Clicking on the More + column presents the module edit screen.

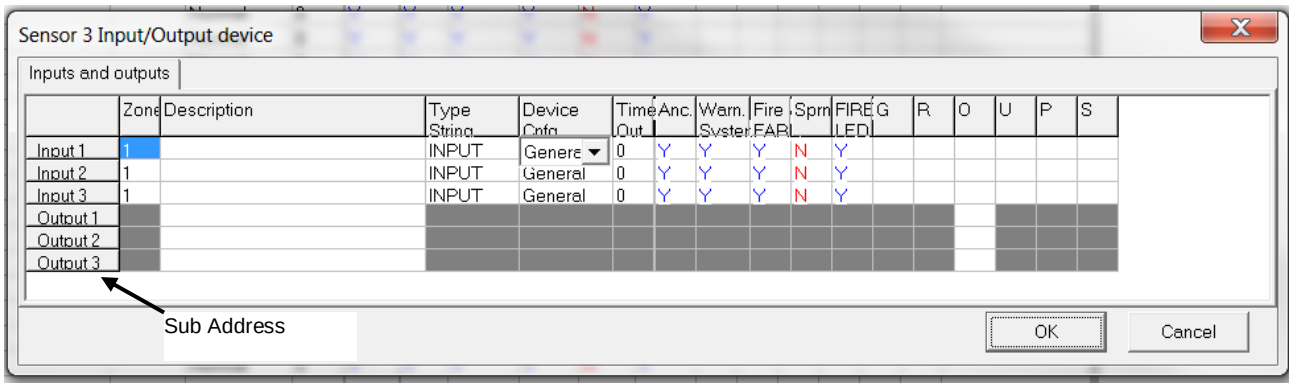


Figure 87: The Module Apollo I/O Settings Screen

The address and sub-address of an I/O device is determined by where the device is entered into the table in the Panel Node X Controller (address) and the Sensor Input/Output device (sub-address) screens.

The drop down screen under the heading of Device Configuration (Device Config) in the Sensor Input/Output device screen (double click on the + icon in the Panel Node X Controller screen) consists of;

1. **Inactive:** Sets the input so that it will not respond to a change of state at the input. An example of its use would be where one or two inputs of a 3 I/O device are not used.

2. **General:** General is selected when a non alarm calling device is used or where an input / output is used in a “Function”. The change of state at the input is actioned, displayed on the LCD and entered into the Logs.

3. **Latching:** If an alarm is initiated the alarm condition input will be considered to be on by the FACP, will be displayed on the LCD, is entered into the Logs and requires manual "Acknowledgement" and "Reset".

4. **Non-latching:** If an alarm is initiated the alarm condition input will be considered to be on until the alarm input is removed, the input will then be seen to be in its normal state and the FACP will display the condition on the LCD, is entered into the Logs and automatically "Acknowledges" the alarm.

5. **Fault:** If a fault condition is seen at the input to the I/O it will initiate the fault sequence as set in the configuration, display the condition on the LCD, enters it into the Logs and automatically "Acknowledges" the fault.

6. **Muster Alarm:** If activated the I/O will initiate the General/Muster Alarm condition and all configured outputs and Loop Sounders will sound the Alarm

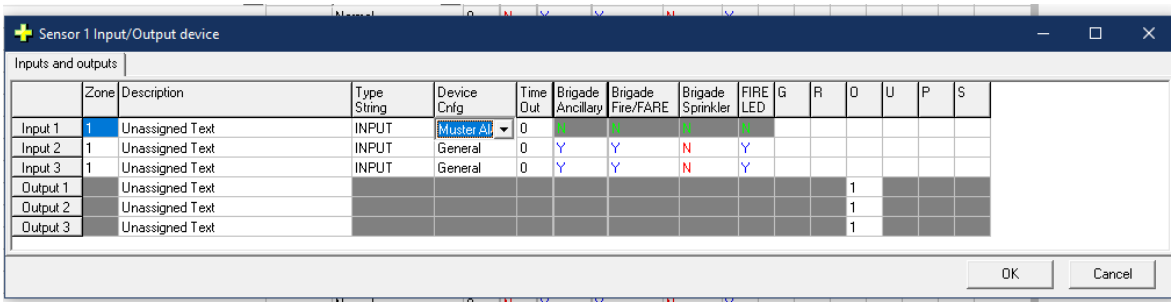


Figure 88: IO Muster Alarm Settings

To view and print the settings select the icon and print.

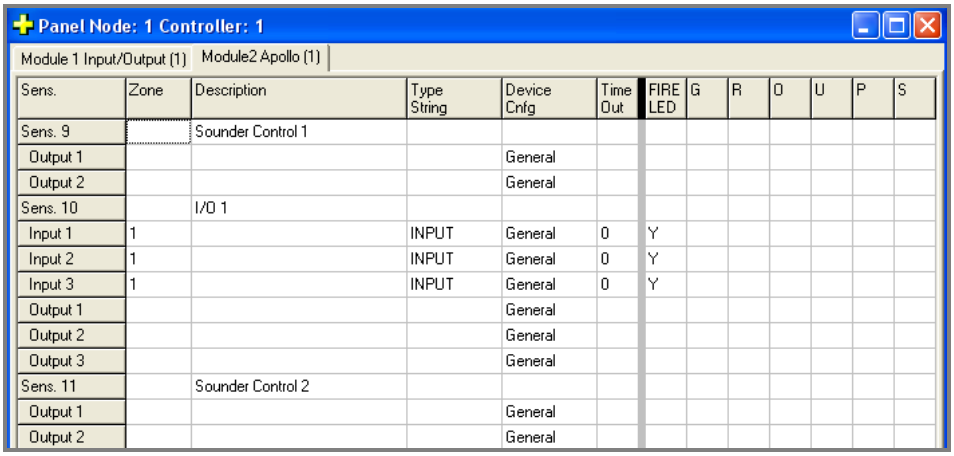


Figure 89: The Module Apollo I/O View and Print Screen

☞ **Note:** *To edit this information / screen return to the Edit Sensor Properties, double click on the More + box then edit in the new screen, returning by exiting in the normal way.*

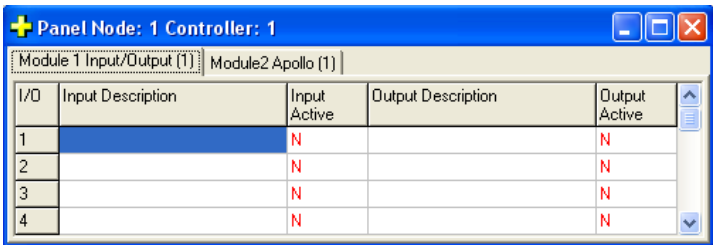


Figure 90: Module Edit I/O Screen

I/O: The I/O number is set and cannot be modified.

Input Description: The description is limited to 33 characters and may contain numbers or characters.

Input and Output Active: Toggling the values in this column will activate or deactivate the input or output.

Output Description: The description is limited to 33 characters and may contain numbers or characters.
Input / Output, Active / Inactive: Toggling the values in this column will activate or deactivate the input or output.

5.4.4 Discovery Sounder/Beacons Settings

Discovery Sounders and or Beacons (DSB) have 15 different Tone pairs and Volume levels that can be configured in the ConfigManager tool.

Each DSB can be configured to operate 3 different Tone pairs depending on the CIE functionality based on the Loop device table configuration, Class Change Function configuration and the General/Muster Alarm function configuration.

5.4.4.1 Loop device table configuration

Once the Sounder is placed on the loop table the sounder should be configured into a Sounder Group.

By selecting the + in the More column settings the Sounder device "Tone Properties" editing window will open.

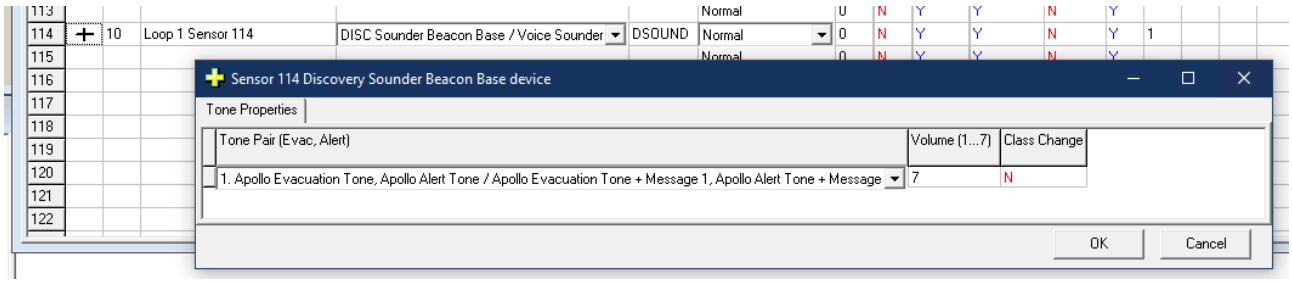


Figure 91: DSB Configuration

Tone Pair (Evac,Alert): This column has a drop down option which allows user to configure which Tone pair is set for the Evac and Alert conditions. By default all DSB's are set to Tone pair 1.

Byte Value	Primary Tone		Tone No.	Secondary Tone		Tone No.
1	Apollo Evacuation Tone *	550Hz for 0.5s, 825Hz for 0.5s	T1	Apollo Alert Tone *	1s off, 1s 825Hz	T0
2	Alternating - (Hochiki & Fulleon) *	925Hz for 0.25, 626Hz for 0.25s	T12	Continuous (Hochiki & Fulleon) *	925Hz	T11
3	Medium Sweep *	800Hz to 970Hz at 1 Hz	T14	Continuous *	970Hz	T13
4	Fast Sweep	2500Hz - 2850Hz at 9Hz	T16	Continuous	2850Hz	T15
5	Dutch Slow Whoop (sweep) *	500 Hz - 1200Hz for 3.5s, 0.5s off	T3	Continuous *	825Hz	T2
6	DIN Tone (sweep) *	1200Hz - 500Hz for 1s	T4	Continuous *	825Hz	T2
7	Swedish Fire Tone *	660 Hz, 150ms on, 150ms off	T18	Swedish all clear signal - Continuous *	660Hz	T17
8	Aus (fast rise sweep)	3 x (500Hz - 1200Hz for 0.5s), 0.5s off	T6	Aus Alert Tone	420Hz, 0.625s, 0.625s off	T5
9	NZ (slow rise sweep)	500Hz - 1200Hz for 3.75s, 0.25s off	T7	NZ Alert Tone	420Hz, 0.625s, 0.625s off	T5
10	US Temporal LF (ISO 8201)	3 x (970Hz, 0.5s on, 0.5s off) 1s off	T19	Continuous	970Hz	T13
11	US Temporal HF (ISO 8201)	3 x (2850Hz, 0.5s on, 0.5s off) 1s off	T20	Continuous	2850Hz	T15
12	Simulated Bell - Continuous	Continuous	T8	Simulated Bell - Intermittent	1s off, 1s on	T9
13	Emergency Warning Siren	N/A	T10	Emergency Warning - All clear	N/A	T10
14	Evacuation Tone *	970Hz continuous	T13	Alert Tone	Silence for 1s, 970Hz for 1s	T19
15	General Alarm *	1s off, (1311 Hz, 1s on, 1s off), 7s on	T25	IMO Code 2 - Continuous *	1311Hzz	T26

* EN54 Compliant

Volume (1…7): Allows the volume level to be set. Levels are detail below:

Nominal sounder output ± 3dB(A) at 28V

Level1 (60dB(A))*	1.0mA
Level 2 (70dB(A))	1.3mA
Level 3 (74dB(A))	1.6mA
Level 4 (78dB(A))	2.1mA
Level 5 (82dB(A))	2.8mA
Level 6 (86dB(A))	4.0mA
Level 7 (90dB(A))	5.5mA

* Not EN54-3 compliant

5.4.4.2 Class Change Configuration

The Class change configuration is also configured at the Loop Device editing table

Class Change: If ticked “Y” for yes then the DSB will also respond/operate in accordance to a configured Class Change Function (Refer Function 53 in section 13).

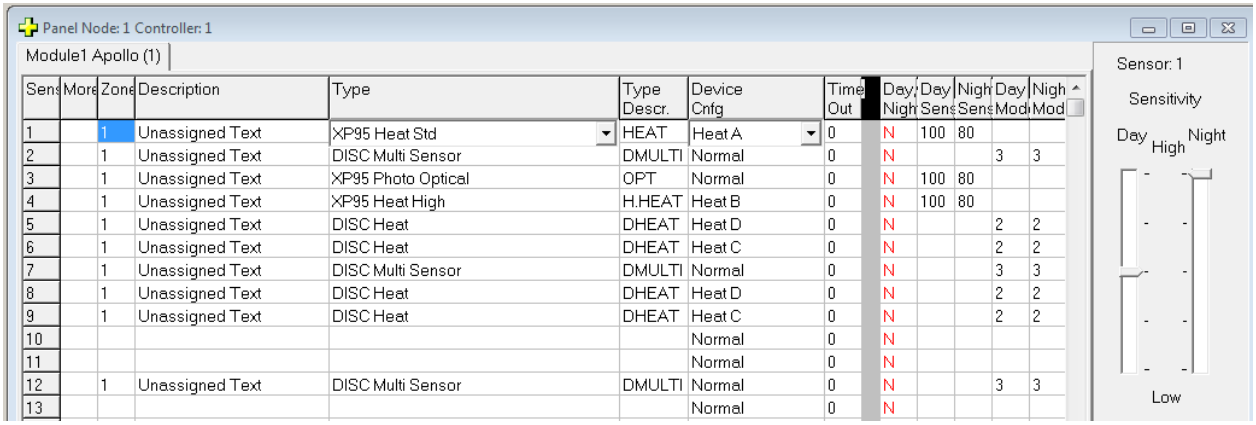
5.4.4.3 General/Muster Alarm Configuration

To configure the DSB’s to respond/operate in a Muster Alarm condition requires a Marine Sounder Function to be configured (Refer Function 89 in section 13).

In this configuration the DSB will play the Alarm device Tone Pair 15 General Alarm Tone

5.4.5 Day/Night Settings

If Day/Night settings are not required then this section may be ignored. If they are required select the icon and the screen below will be displayed.



Sens	More	Zone	Description	Type	Type Descr.	Device Cnfg	Time Out	Day/ Night	Day Sens	Night Sens	Day Mode	Night Mode
1		1	Unassigned Text	XP95 Heat Std	HEAT	Heat A	0	N	100	80		
2		1	Unassigned Text	DISC Multi Sensor	DMULTI	Normal	0	N			3	3
3		1	Unassigned Text	XP95 Photo Optical	OPT	Normal	0	N	100	80		
4		1	Unassigned Text	XP95 Heat High	H.HEAT	Heat B	0	N	100	80		
5		1	Unassigned Text	DISC Heat	DHEAT	Heat D	0	N			2	2
6		1	Unassigned Text	DISC Heat	DHEAT	Heat C	0	N			2	2
7		1	Unassigned Text	DISC Multi Sensor	DMULTI	Normal	0	N			3	3
8		1	Unassigned Text	DISC Heat	DHEAT	Heat D	0	N			2	2
9		1	Unassigned Text	DISC Heat	DHEAT	Heat C	0	N			2	2
10						Normal	0	N				
11						Normal	0	N				
12		1	Unassigned Text	DISC Multi Sensor	DMULTI	Normal	0	N			3	3
13						Normal	0	N				

Figure 92: The Day / Night Settings page (Note Sensitivity & Mode Default Settings)

To activate the day/night settings on a device, click in the Day/Night column in the spreadsheet, this will toggle between Y and N, set the entry to Y.

XP95 & *FastSense* Day / Night Settings

The two sliders on the right of the page show the Day/Night sensitivity settings; by moving them you change the values in the Day/Sens. and Night/Sens. Columns.

The lower the number the more sensitive the detector. The number is a percentage of the normal level of the initiating factor that would cause an alarm. E.g. an analogue return value of 55 for an alarm would return approximately 47 for a setting of 80%. Once set the sensitivity has to be enabled via the Function Menu on the panel for it to take control.

Discovery Day / Night Mode Settings

Selecting a Discovery device will enter a default value of 3 for both day and night. To set it for a particular mode click on the inserted number, delete and enter a new value between 1 and 5. Entering any other value will result in an error message, delete the entry and re-enter. E.g. In relation to Smoke detectors ***the least sensitive setting is Mode 5 while Mode 1 is the most sensitive***.

For each device applicable Mode settings refer to MAN3050 Discovery Product Guide.

6 Functions

This section of the program allows the operator to enter data that will allow the panel to activate outputs in accordance with the pre-determined conditions of specified alarm devices or inputs. See Appendix A for a full description of each Function, in particular “default” Function 17.

Function Icon

6.1 The Function View

Selecting the Function Icon will display a range of options as shown below

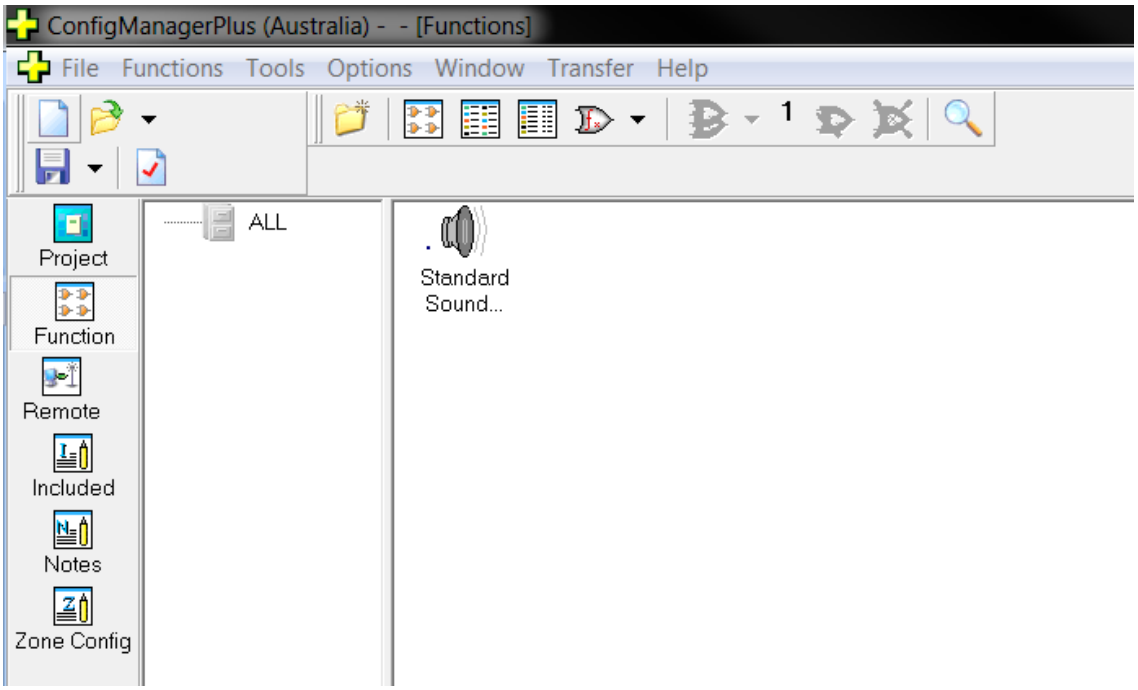


Figure 93: The Function Screen Displaying New Functions & Selection Menus

Once a Function is selected it can be modified to suit a particular purpose. A special feature is the availability of the Filing cabinet. This operates in the same way as the Microsoft Word and allows the saving of a Function (using Click and Drag) in the filing cabinet or folder within the cabinet for reuse at a later date.

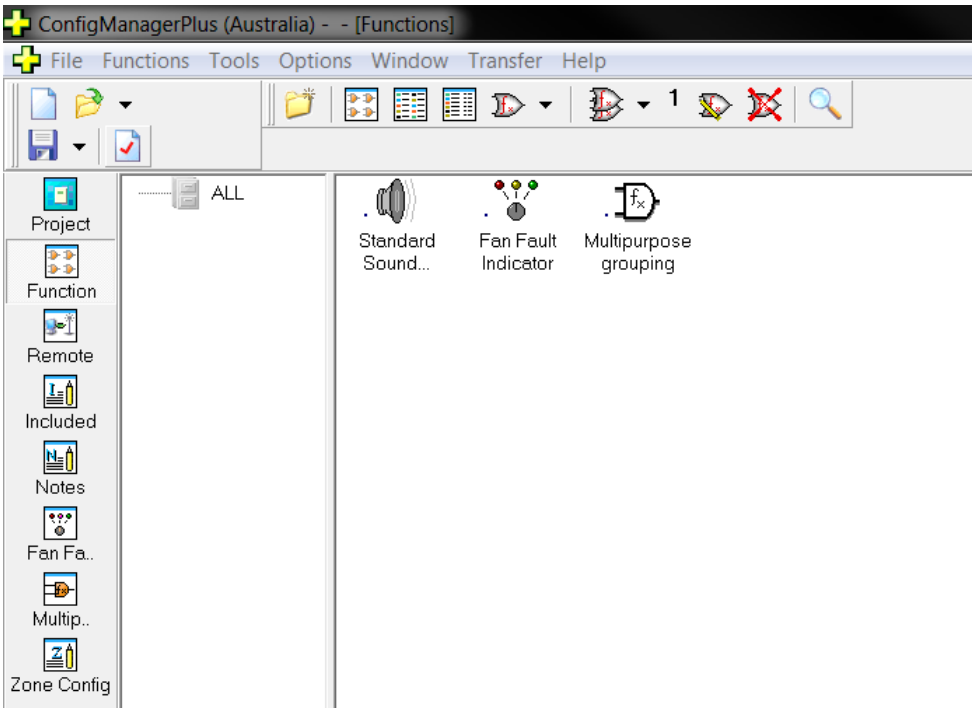
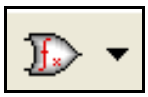


Figure 94:– The Secondary Control Icons are now Displayed – When a function is selected

 **New Functions**

As seen above by selecting this icon a box will appear on the screen with a selection of functions that can be scrolled through or by selecting the arrow head a complete list will be presented.

Clone Function n Times

This option allows the operator to create the selected number of copies. Using the Project Creation tab of the Environment Settings you can select weather the cloning of a function automatically increments the entries in each selected box.

Edit Function

This will bring up a list box of the functions currently in the system from which you can select the one you wish to edit. After selecting the function you wish to edit, that function's window will appear.

Delete Function

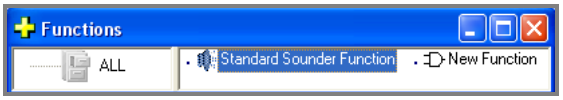
Select this option to remove a previously created function from the project.

Special Functions

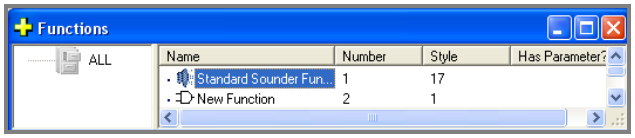
Selecting the “Included” Tab from the extended functions tool bar opens a text editor for the inclusion of special functions. This is an advanced feature that should not be used by the novice user. If you require a ***FireFinder PLUS*** function that is not currently handled by ***ConfigManager PLUS*** you can use this feature to enter text that contains the function and it will be included in the final configuration. This must be done in conjunction with an AMPAC office.

Display Large Function Icons
Functions in use are displayed as large Icons in the Functions Screen

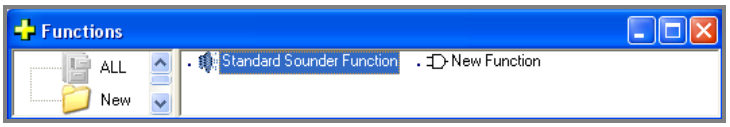
Display Small Function Icons
Functions in use are displayed as small Icons in the Functions Screen



Display Function List
Functions in use are listed by name in the Functions screen.



New Function Folder
Create a Folder to store specific, repetitive Functions for use in a project.



Find Function with given Parameter
Finds a Function that uses specific parameters as seen in the drop down box below.

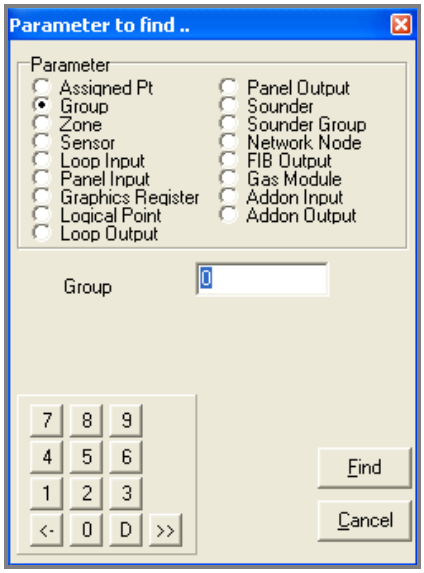


Figure 95: Find Function with Given Reference

☞ **Note:** *For a description of each Function refer to the Appendix – Function Descriptions*

To configure a function, select **Functions / New function.** This will bring up a Function window as shown below.

Each function will have its own Function Window. This graphically displays all the elements of the function.

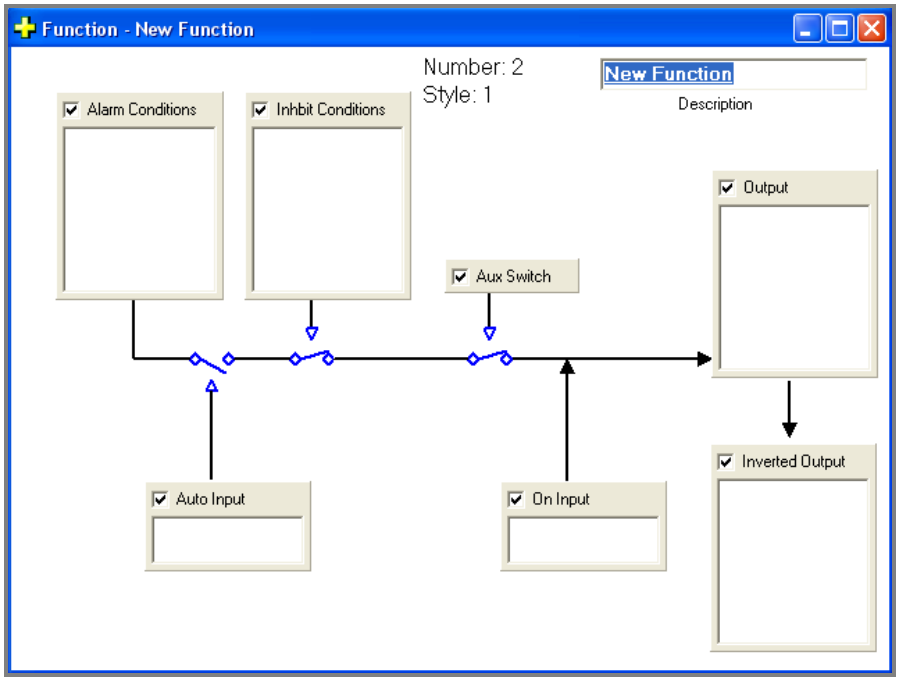


Figure 96: Function Window

Up to 4 Windows can be opened at once, although the operator may have as many functions as required in the system. Selecting **Functions / Edit Function** will give present a list of all the functions currently defined in the project. The operator can then sort them alphabetically or numerically to find the one to be edited.

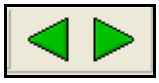
At present there are a number of functions supported by the configuration tool. These should be sufficient for programming 90% of all required functions.

Once a functions window has been selected, the functions menu and tool-bar will change to provide the operator with what is required while working on functions.

Each box in the functions window represents a logical part of the function. If it is required make sure the check box in its top left-hand corner is ticked. If it is not require it uncheck the box and that logical component will not take part in the function.

Right click or double click on a box to allocate its parameters. A menu will appear displaying the options of Add/Change or Delete.

To add a new parameter, click on **Add/Change** and a dialogue box will appear so that the input or output type and number can be set.

 These keys allow the operator to move to the “next” or “previous” Function in use.

7 Expanding the System

The basic ***FireFinder PLUS*** has the capacity to support up to eight slave CPU's which in turn may be any one of the two types of hardware mentioned, Apollo XP95 loops or Input/Output boards. There are also 31 Addon modules that can be configured at each panel. In addition to these, other types of configurations are possible.

On the tool bar shown below there are a number of items that can be selected and added to the basic configuration.

Add Panel

Add Data Gathering Point

In this option, only the "Project name" and the option to include "Smart Graphics" are available.

7.1 Adding a Panel

If a panel/s (N2, N3) are added to the system it will have to be set up for the required parameters. This is done in the same way as entering control parameters for Panel 1.

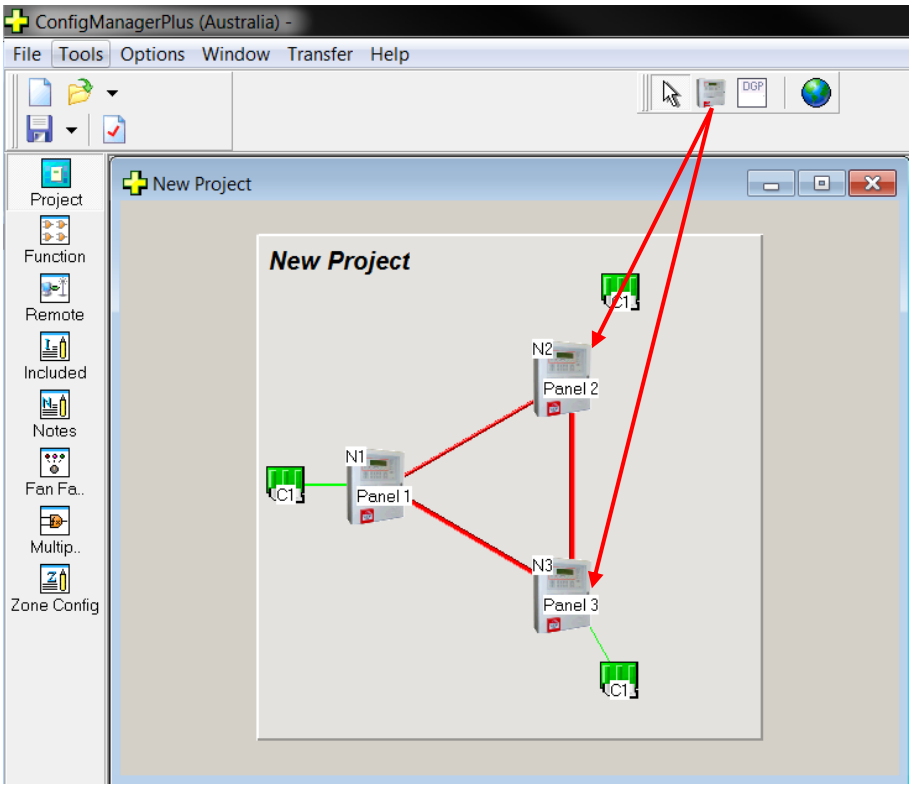


Figure 97: Adding Panels to a Screen

7.2 Adding a Data Gathering Point

To add a Data Gathering Point to the system left click on the DGP icon as shown so that is highlighted. Then left click on the Panel 2 and the DGP will be added.

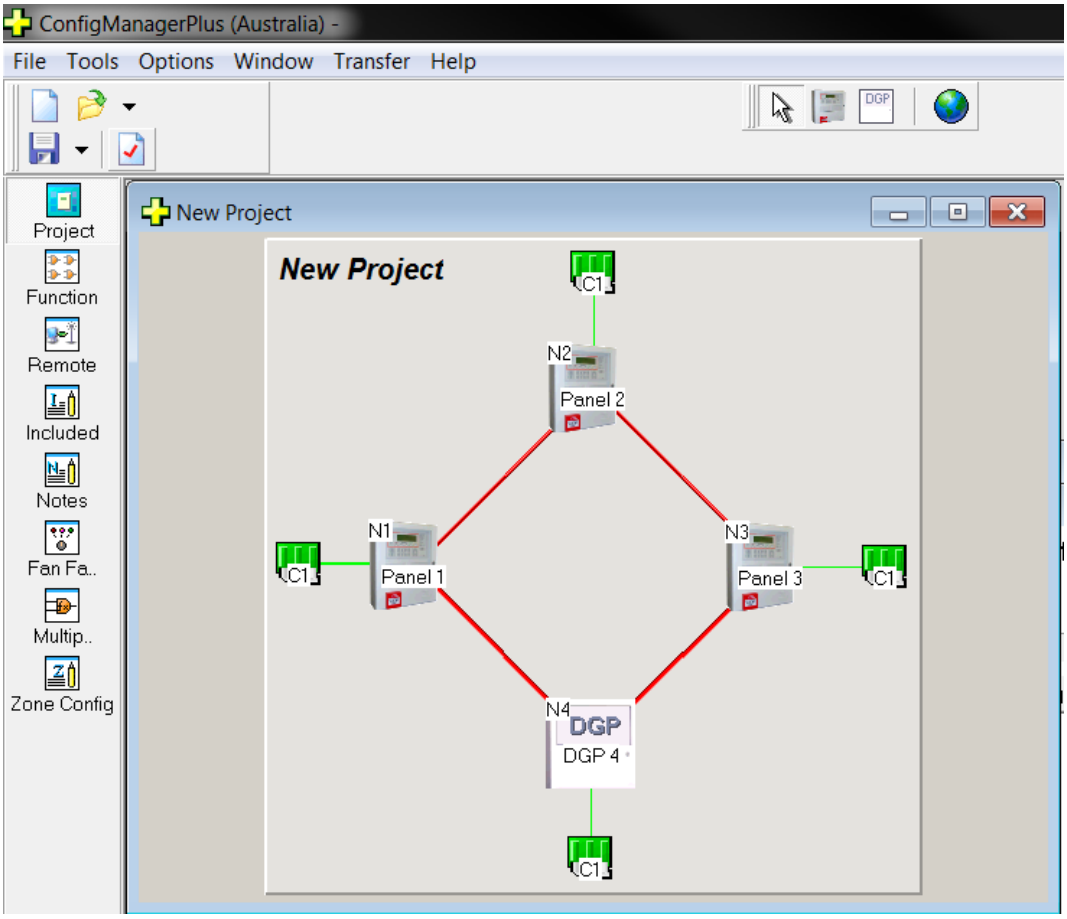


Figure 98: Adding Data Gathering Points (DGP) Screen

Once added, double click on the DGP to open the screen shown below. Here the description and the node numbering (Reference) of the DGP can be edited. In practice it is best to rely on the auto-numbering of “Reference”.

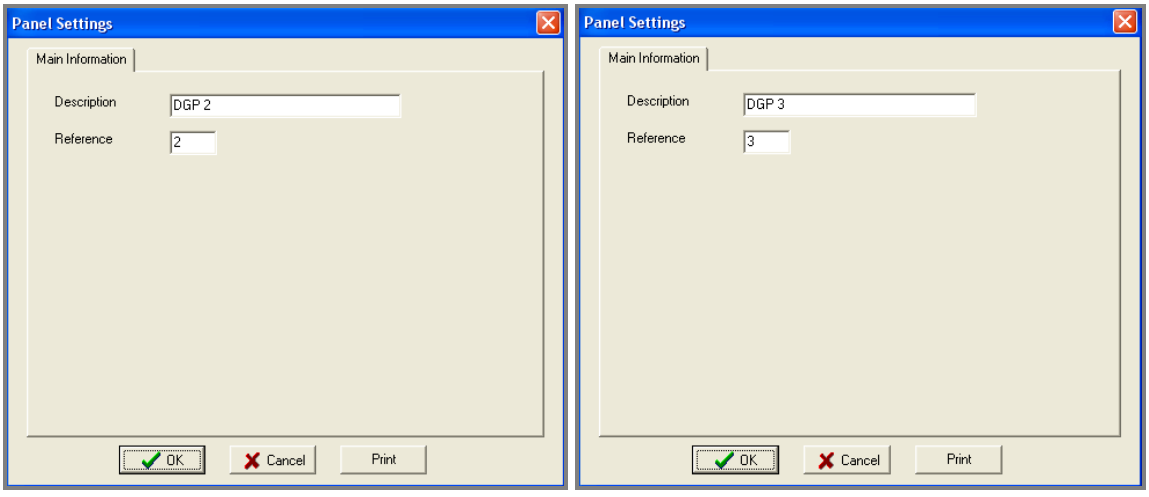


Figure 99: Adding a Data Gathering Point (DGP) Screen

C1 – the Controller parameters are then set in the same way as the others.

7.2.1 Global Access

Global Access refers to the access that any node in the network has to any other node in the same network and is accessed by right clicking on the Panel and selecting EDIT NETWORK PARAMETERS. The access refers to what the LCD will display and also what I/O functions will be operated on, and what testing is allowed. For stand alone panels the default is set to Global as the panel has full access to itself. This means for a stand alone panel with global access all of the I/O functions will be activated and all of the configuration will be displayed as required.

In a network this is selectable for each node in the network.

Selection Buttons [only available in the Panel screen]

Invert Selection: Selects / de-selects the highlighted panels.

Select None: De-selects all Panels shown on the screen and is of particular use on larger networks.

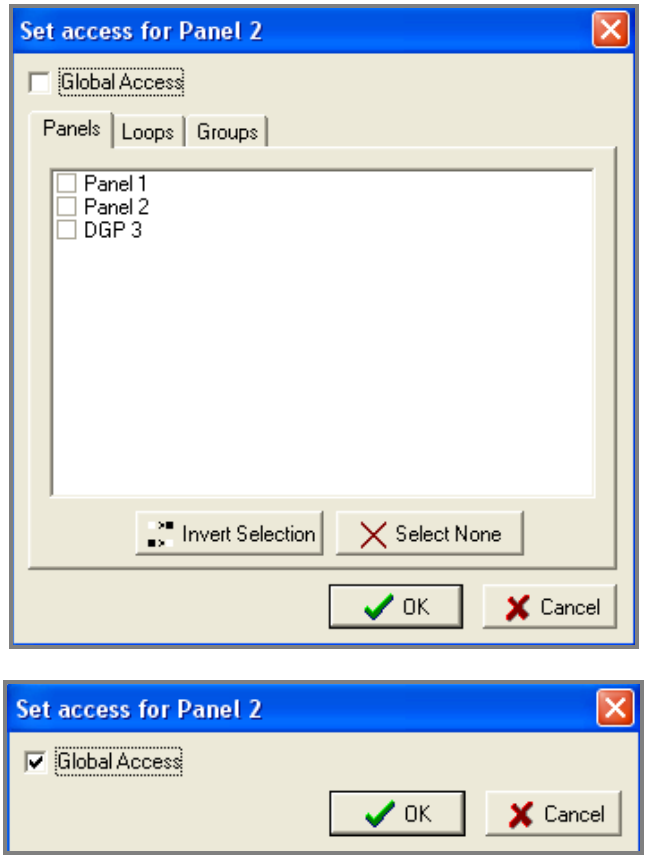


Figure 100: Panel, Loop, Group and Global Access screens

7.2.2 Panel, Loop or Group Access

If Global access is not selected then the user has the option to select any combination of Panels, Loops or Groups. This option allows the user then to determine what parts of the system any node may display, test, or affect the I/O (cause and effect).

The **LCD** access may be set to Global, Panel, Loop, or Group access. If the user only wanted particular information to be displayed then by selecting the Panels Loops or Groups option they could limit the information displayed. For example if the groups option was selected and group 2 was entered then only zones or devices with group 2 selected in the Group columns of the data entry spreadsheet would be displayed. If Loop 1 was entered then all of the devices on loop 1 only would be accessed, and finally if panels 1 and 2 were entered then only information from panels 1 and 2 would be accessed. The access for the mimic can be defined by either panels, loops or groups.

8 Network Panels

Networked panels are configured in a similar way to an individual panel. In a network each panel is configured with the hardware that is fitted into that particular cabinet (in the same way a stand – alone panel is). The main difference is the access levels that are set for each panel.

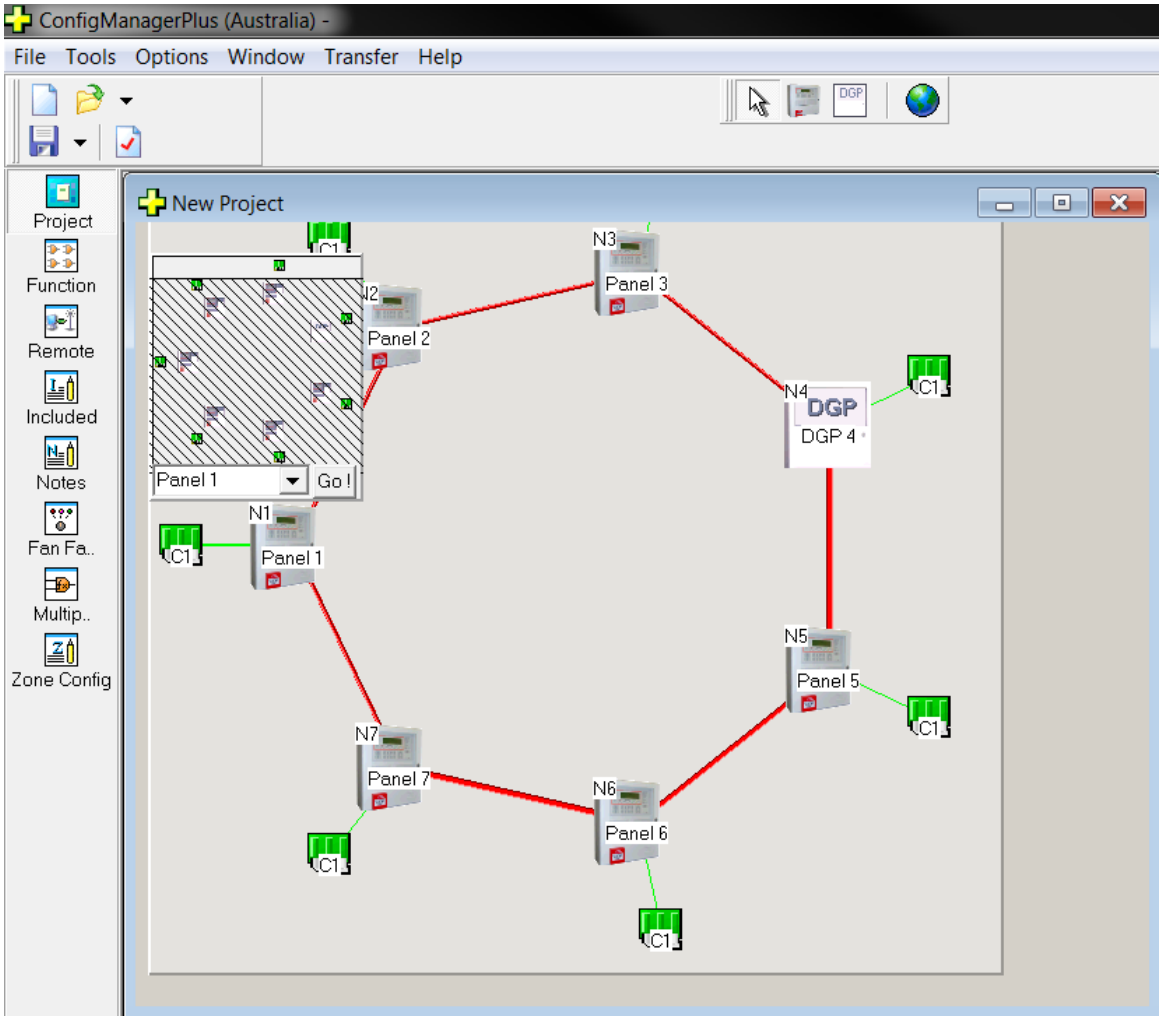


Figure 101: Networked Panels, DGP's, Mimics and Controllers

Again click on each controller to set its parameters. The user will configure the modules in each panel according to what is physically on site. It is normal to configure each panel in order. If this is not done the modules will be automatically assigned module numbers as they are entered. Once all of the zone/sensor information is entered, click on each panel and then set the access levels.

☞ **Note:** *Default access is set to global*.

9 Introduction to Programming

The ***FireFinder PLUS*** Fire Alarm Control Panel may be programmed from a computer / laptop either directly or via a modem. This manual outlines a number of programming options available to the operator. There are three areas of software that will be discussed as well as single panel programming and network programming.

All of the software except for the BOOT software is stored in FLASH memory.

The Boot software is stored in EPROMS on the main CPU board.

The EEPROM on board the BRD86MBA is used to store Controller node address and number, hardware and revision number and debug output control.

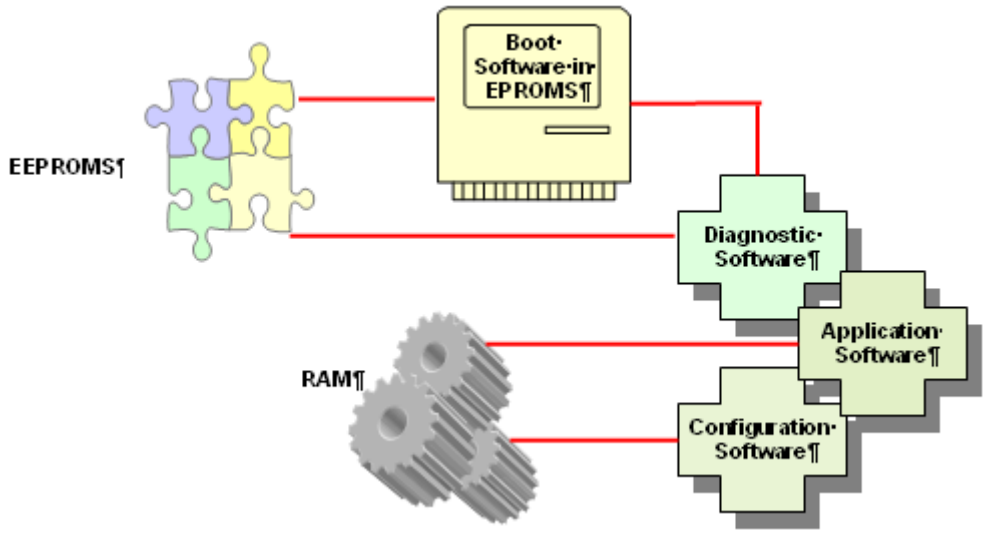


Figure 102: Areas of Software

9.1 Boot Software:

This is the start-up software that the panel uses to start and communicate with the laptop / computer during some of the programming. **This software is stored in EPROM's. In normal operation this software is unlikely to be changed**.

9.2 Application Software:

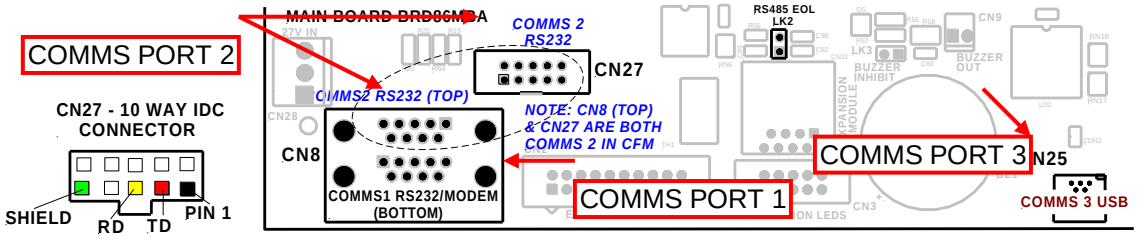
This is the software that the panel uses to run during normal operation. The application software includes a diagnostic mode to enable the operator to interrogate and control functions of the panel. In normal operation this software is unlikely to be changed.

9.3 Configuration Software:

This is the information (software) that the user down-loads to the panel to enable the panel to identify hardware such as modules and field devices. When a program change is made using the ***ConfigManager PLUS*** program, a data file is created. This data file is then down-loaded into the ***FireFinder PLUS***.

10 Hardware Requirements

The modem I/O port is a Dual DB9 connector (CN8 situated on the lower left hand corner of the Main Board BRD86MBA) that is normally used for programming of the FACP via the serial port of a PC or Laptop. There is also a USB connector (CN25) provided to allow programming of the FACP from a USB port of a PC.



The Controller also has the required hand shaking to support connection to a Modem, thus allowing the FACP to be programmed from a remote site that has an established telephone connection. This allows the system software to be upgraded by simply transmitting a file via the serial port of the PC or Modem external to the FACP. Diagnostic facilities are also available via the same connection.

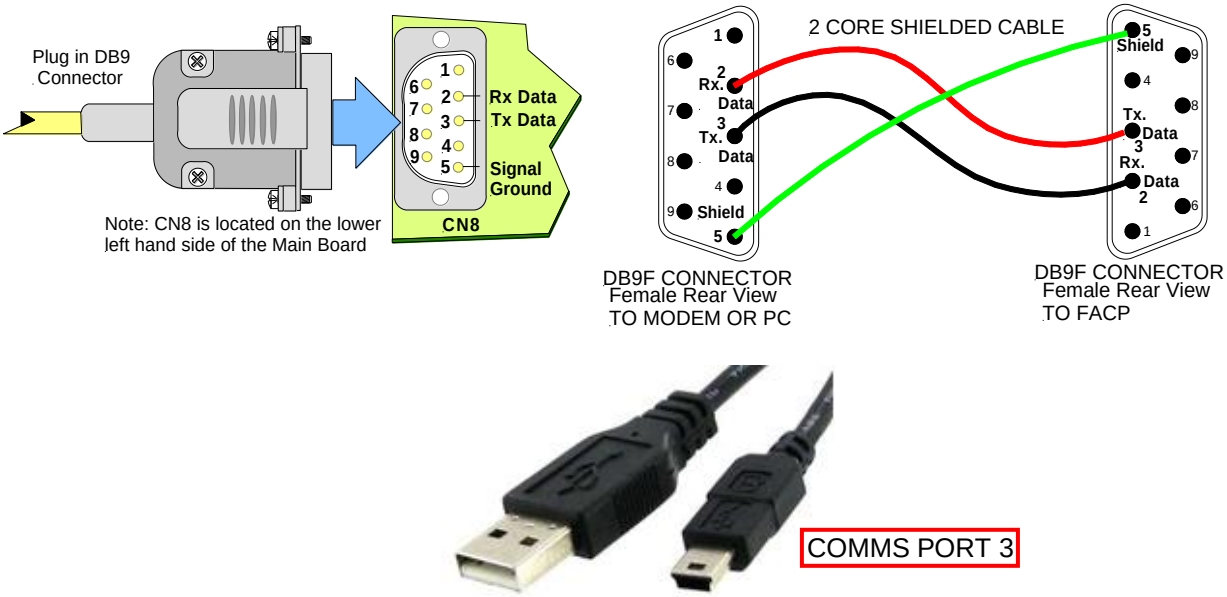


Figure 103: FireFinder PLUS Debug Cable Connections

Note: *the DB9F to DB9F cable is not sensitive to which end is plugged in to the* ***FireFinder PLUS*** *or serial port of the PC or vice versa.*

The connections between the PC/Modem and the panel are crossed. i.e. TD connects to RD.

Make sure the ***ConfigManager PLUS*** program is set to use the port you have connected the cable to and set up the configuration as follows:

Bits per second:	115200
Data bits:	8
Parity:	None
Stop bits:	1
Flow Control:	None

11 Configuration Programming

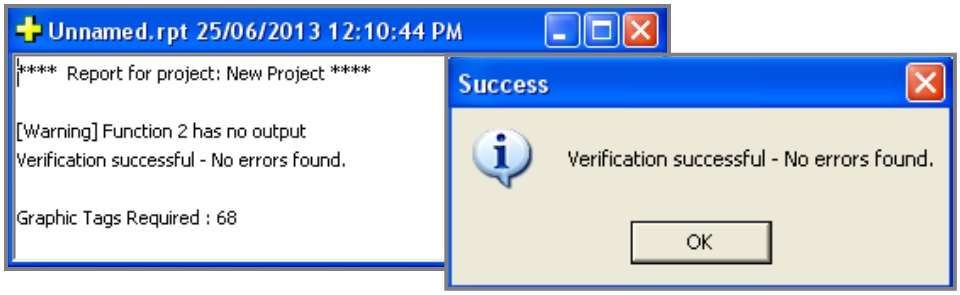
It is good practice to retrieve the configuration data from the panel before doing any programming.

CONNECT YOUR PC / LAPTOP TO THE FIREFINDER PLUS VIA THE DEBUG/MODEM PORT OR USB PORT ON THE BACK OF THE PANEL USING THE CORRECT CABLE. (Available from AMPAC)

ⓘ **IMPORANT!!!**

Retrieve the configuration file from the panel before doing any programming. This provides an emergency backup. Save any changes to the configuration file as a different file name.

Verify the Project – The following "Report" will be displayed



The report will provide a list of all compiling errors and warnings.

Where Errors are present, these must be fixed, however warnings will still allow the project to be complied.

Save the Project –

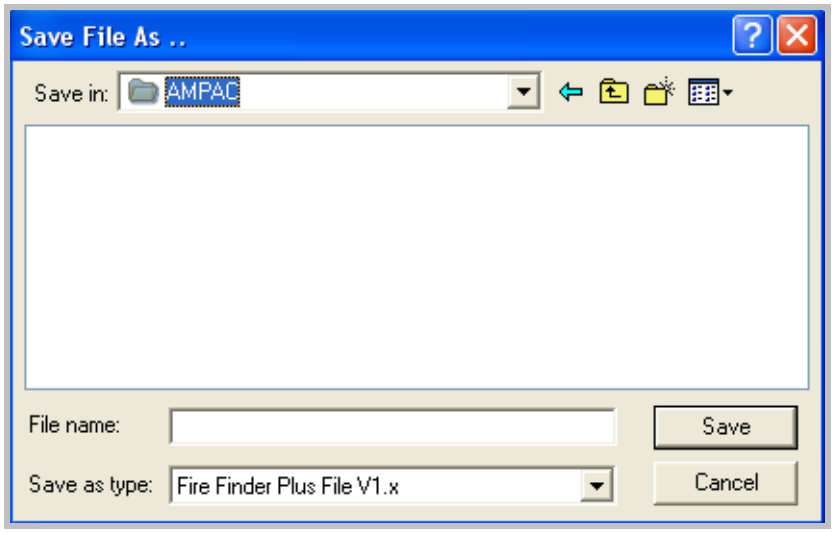
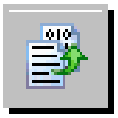


Figure 104: Verify Report and Backup File Creation Screens

Once a configuration has been created and saved;

Compile the file using  or (F5 save created file *.dat). This is the file that is sent to the FACP. Connect the PC to the FACP and check communications.

11.1 Transfer – Transfer Wizard

To Transfer panel / and panel network configurations to and from the fire panel/network use the Transfer menu option.

Send

This function is used to Send either the current project or a saved project into the panel/s. It is also used for sending updated application software.

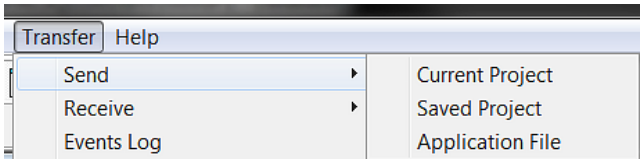


Figure 105: Transfer – Send options

The Send function will automatically verify and compile the project and request that the file is saved before sending the config file to the panel.

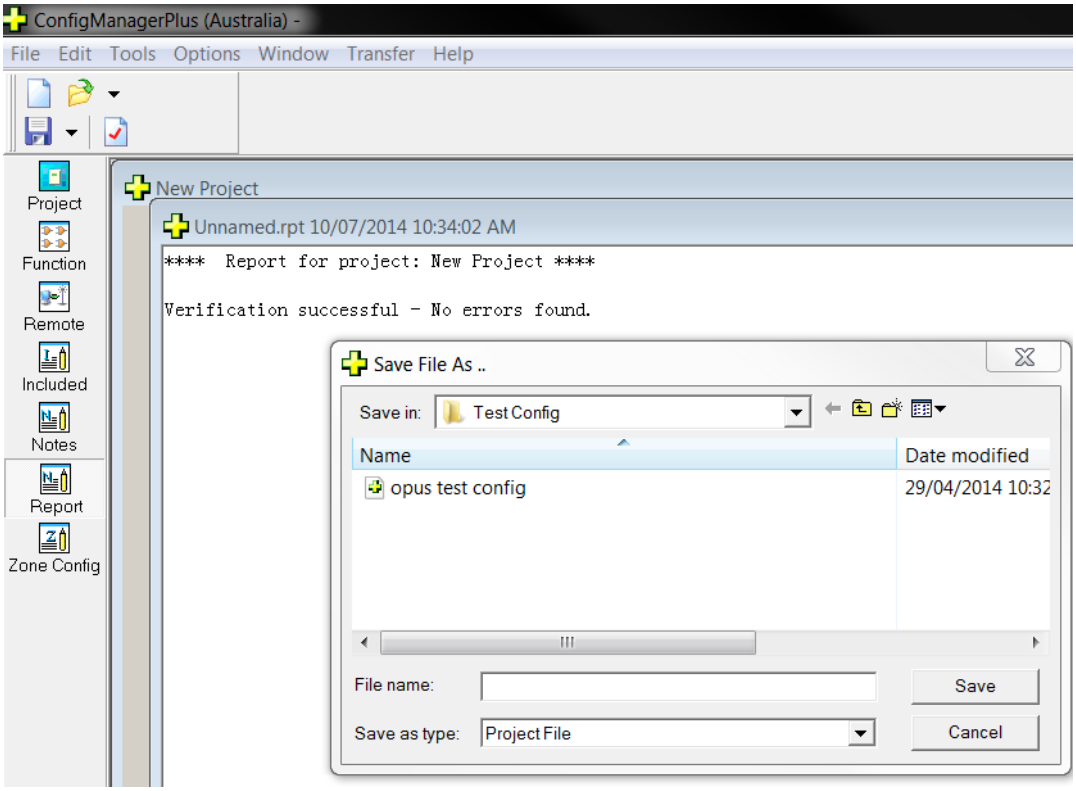


Figure 106: Transfer – Send , verify and Save as

The project will be saved as a DAT file (the file format that is sent to the panel) and as a FFP file (the file format that is used by the Configmanager Tool)

Figure 107: Transfer – Send saved file types

If there are any configuration errors or warnings the tool will not proceed with the file transfer

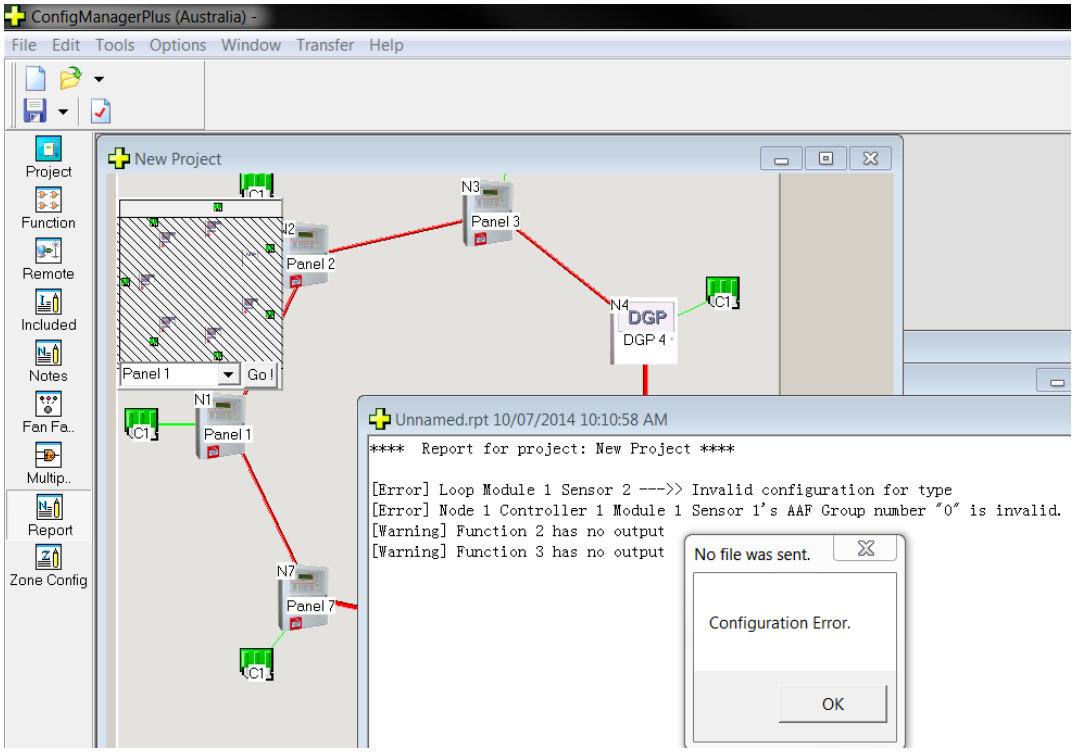


Figure 108: Transfer – Send Configuration Error

If the configuration is error free but there is a communication error a “Transfer Wizard Error” screen will appear

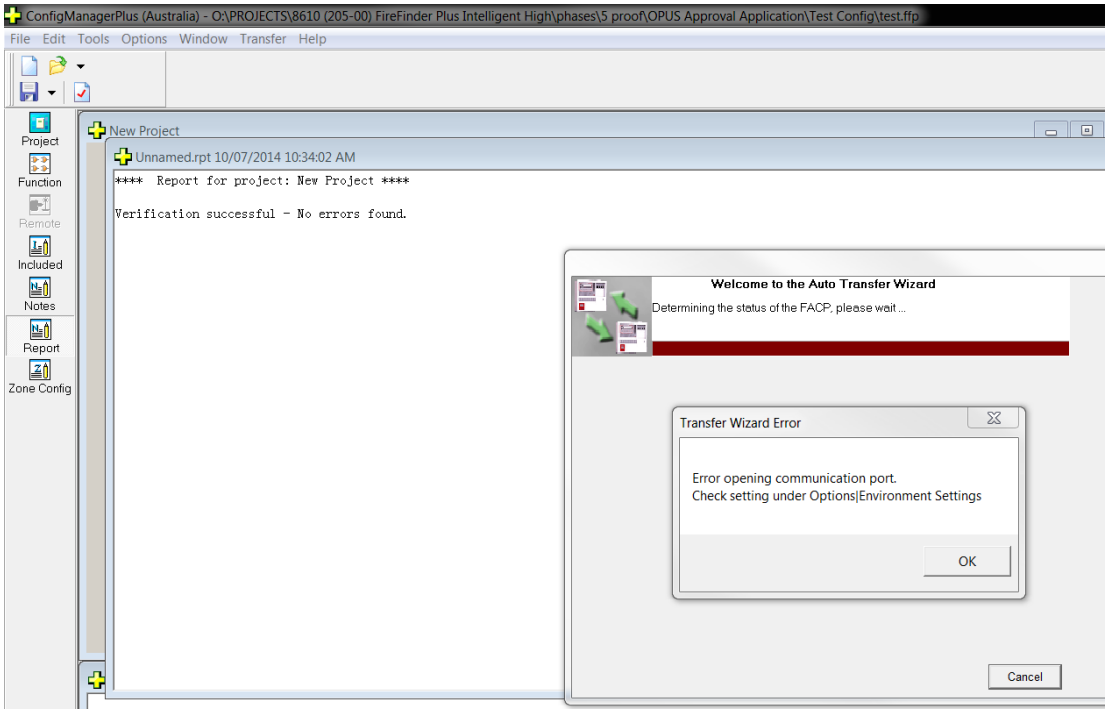


Figure 109: Transfer – Send Communication Error

If no errors exist the Transfer wizard will automatically place the panel/network into diagnostic mode and start the transfer process

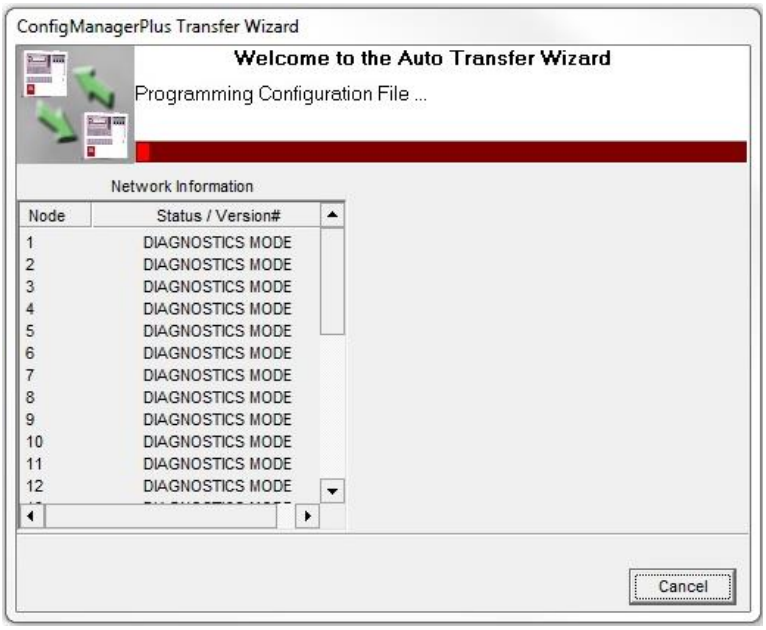


Figure 110: Transfer – Diagnostic Programming Config File

Once the file transmission is completed the panel / network will automatically be put back into application mode.

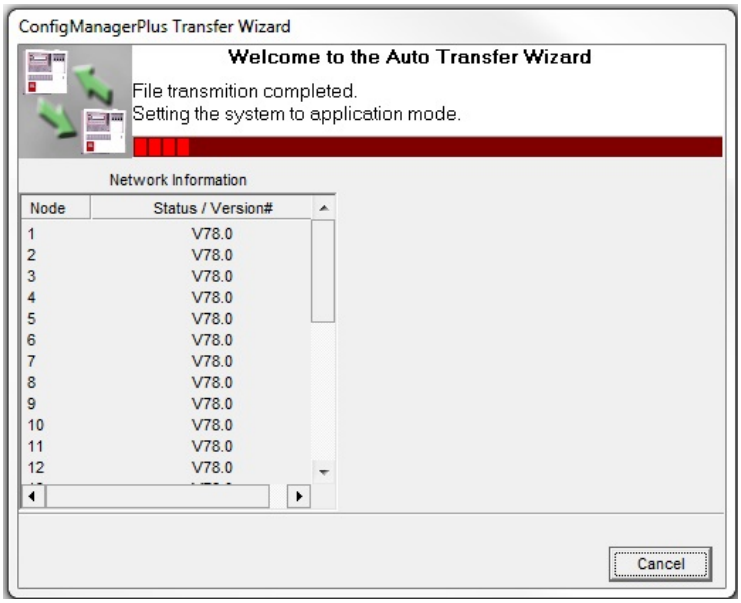


Figure 111: Transfer – Application mode Programming Config File

Once the panel / network has successfully returned to application mode the wizard will notify the programmer that the file transfer is completed.

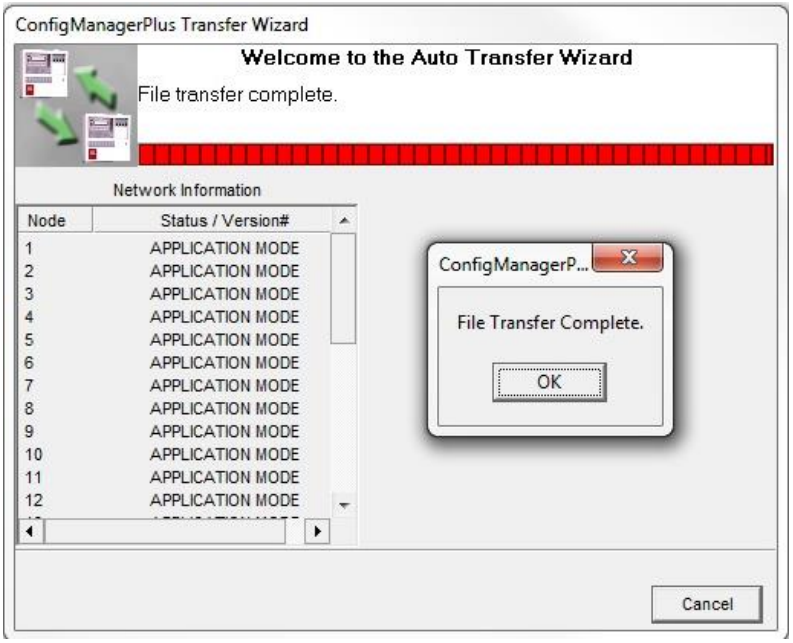


Figure 112: Transfer – Complete

Receive

This function is used to receive a panel config from the panel and open it up a project in the Configmanager programming tool or save to a directory on the pc.

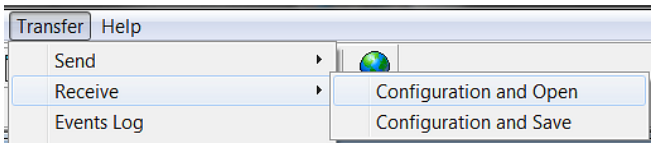


Figure 113: Transfer – Retrieve options

If there is a communication error a “Transfer Wizard Error” screen will appear

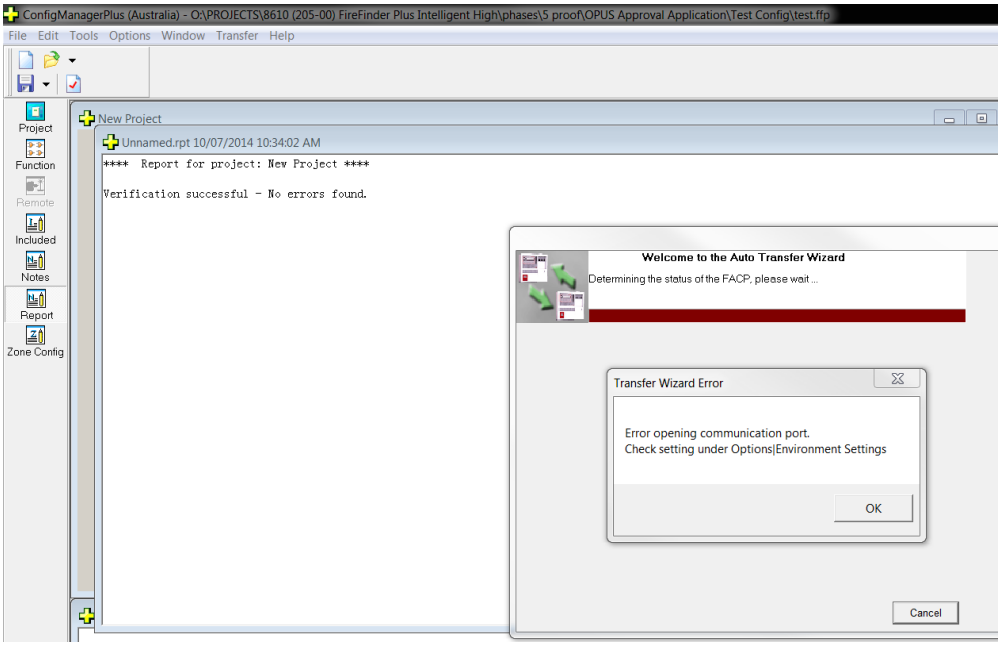
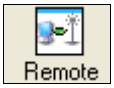


Figure 114: Transfer – Communication Error

12 Remote Controller

Click on the “Remote” icon 

to launch the “Remote Control” application. This application allows the user to operate the FACP remotely.

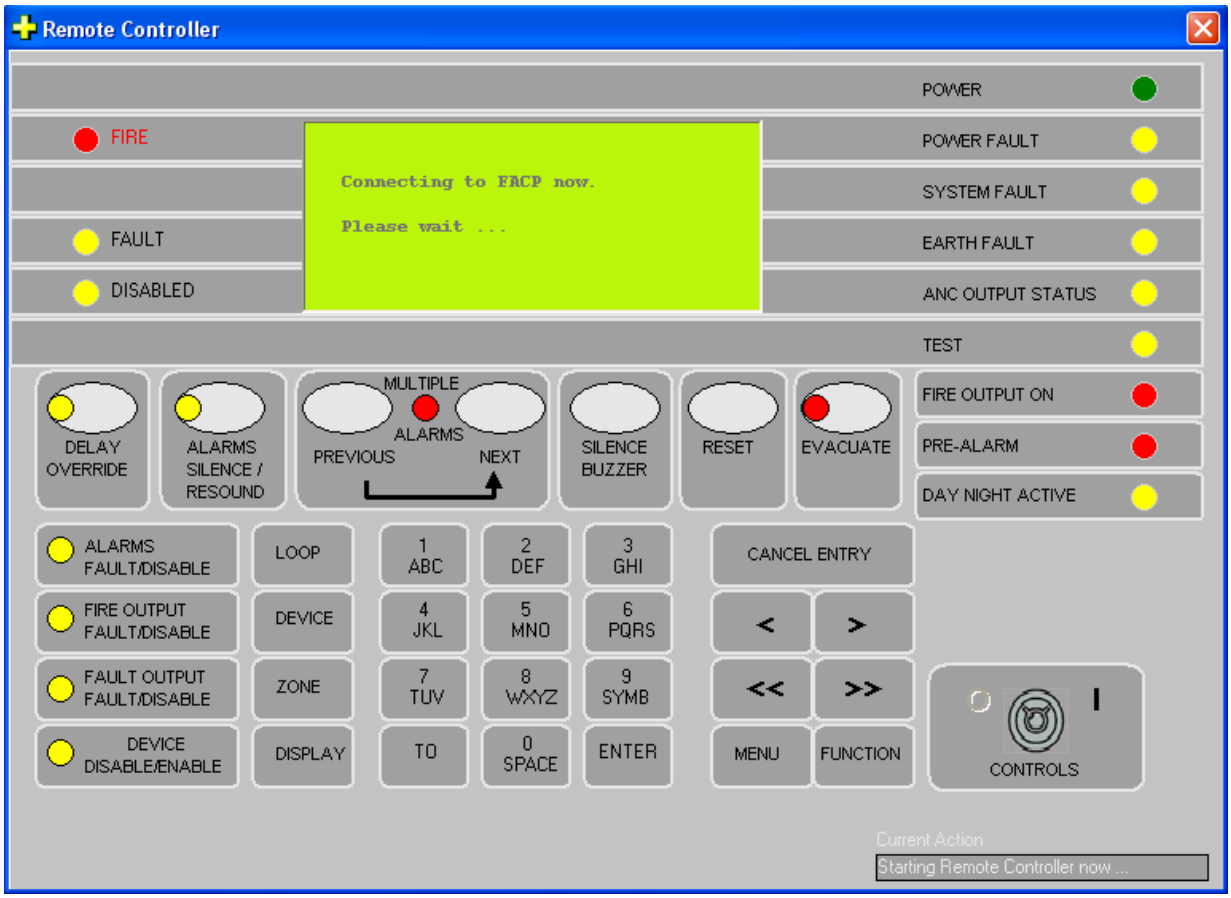


Figure 115: Remote Screen Establishing Comms with the FACP (UK Screen Shown)

If the communication setting is valid, the “Remote Control” window will be displayed, otherwise an error message will be displayed with the appropriate error message.

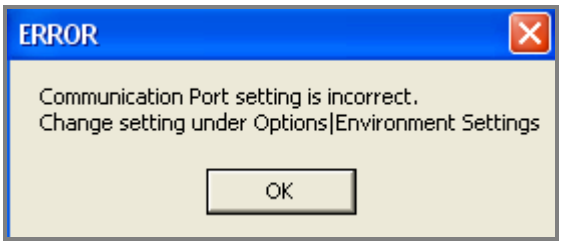


Figure 116: Remote Control Comms Error Message

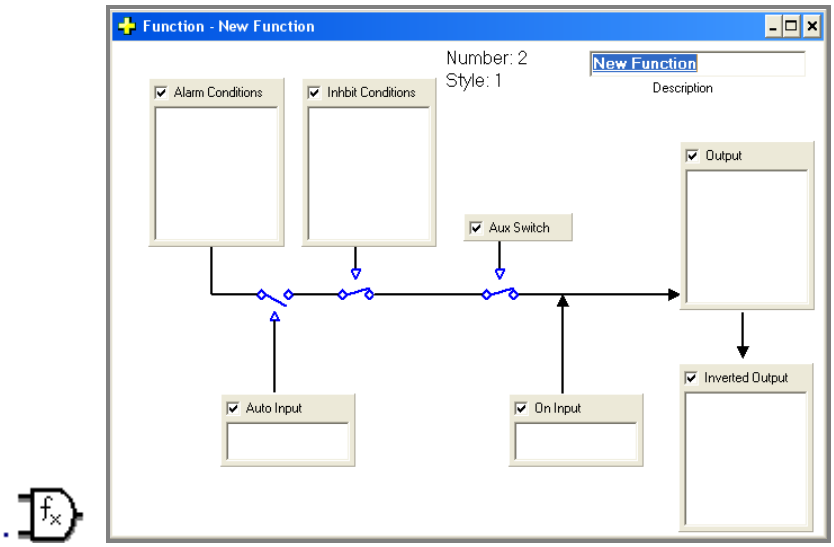
Note that all the keys (buttons) will only be enabled (i.e. clickable) when the connection with the FACP is established successfully.

Ensure that the “Remote Control” application is working correctly. Note that some lags between the key presses may be observed.

Click on the icon to close this application.

13 APPENDIX A – Function Descriptions

13.1 Function F1 - Standard Function

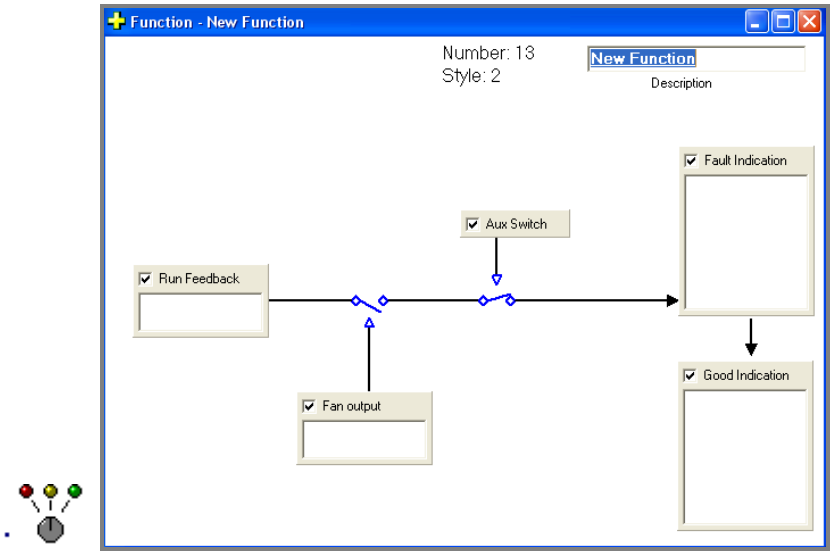


Description

The output is switched ON (and inverted output switched OFF) when:

1. The Alarm Conditions input is ON,
2. The Auto input is ON, and any alarm device (group, zone or sensor) is in alarm and not isolated, and all the inhibit devices are not in alarm, and providing the Aux Switch is normal

13.2 Function F2 - Fan Fault Indicator

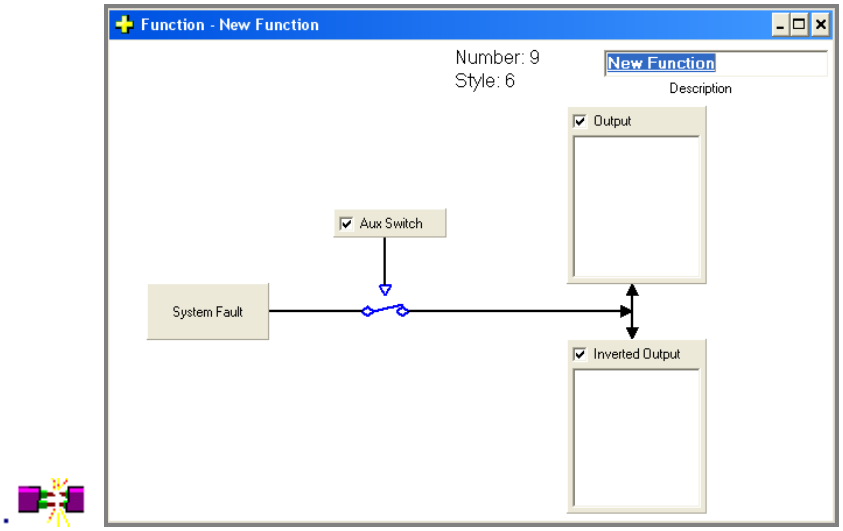


Description

The Fan fault indicator is turned On, when the fan start output is On and the run feedback from the fan is Off.

The fan run and stop indicators are driven from the Run feedback input using Function 1

13.3 Function F6 – Panel Fault Output

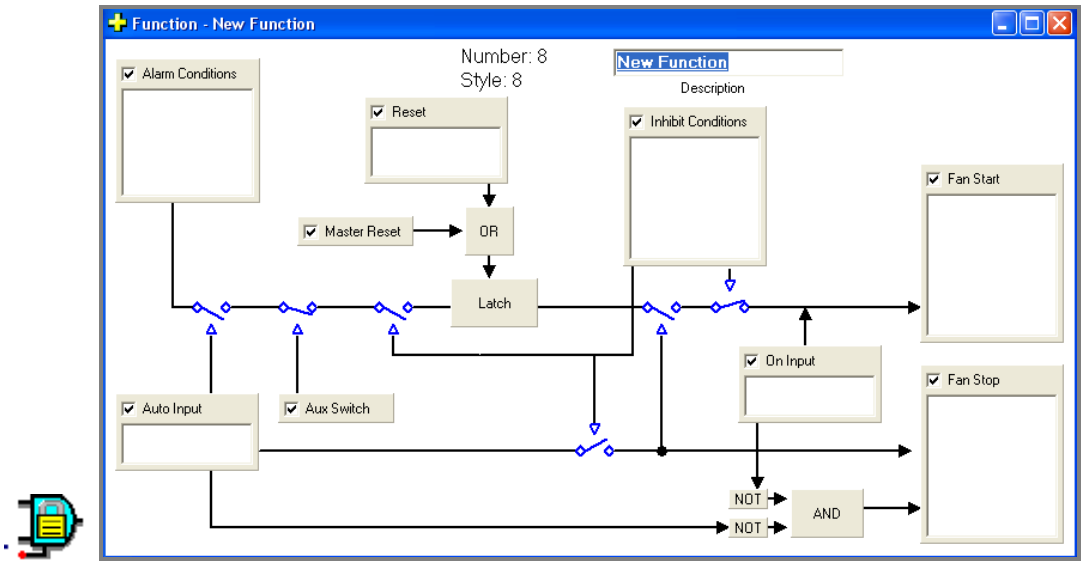


Description

The output is switched on and complementary output is switched off under the following conditions:

1. Any sensor or zone is in fault and not isolated	**9.** Warning output monitoring is in fault
2. Any module in the panel is in fault	**10.** Fault output monitoring is in fault
3. Any Apollo fire loop is in fault	**11.** Brigade silence is on (NZ only)
4. Brigade card is missing	**12.** Alarm Signaling Device (ASE) is in fault (if fitted)
5. Battery is missing	**13.** DBA is in fault
6. Battery has failed	**14.** Expansion Module is in fault
7. Bell output monitoring is in fault	**15.** Fan Expansion Module is in fault
8. Auxiliary output monitoring is in fault	**16.** External LED Mimic is in fault

13.4 Function F8 - Latched 1668 Fan Start-Stop with Reset (UK only)



Description

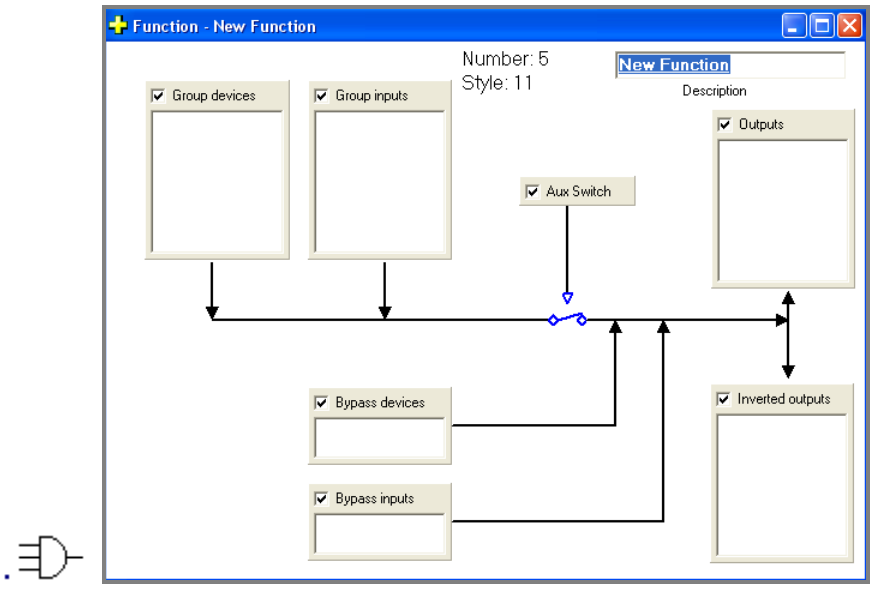
The internal output is latched ON, when the fan switch is in the auto position and any of the alarm devices are in alarm (and not isolated), providing the plant is not isolated (assuming plant enabled)

Activating the reset input or activating master reset with the master reset enable On clears the internal output.

The fan start output is turned on if the fan switch is in the ON position or if the switch is in the AUTO position and the internal output is on and all the inhibit devices are normal or isolated. Otherwise the fan start output is off.

The fan stop output is turned on if the fan switch is in the OFF position or if the switch is in the AUTO position and any of the inhibit devices are in alarm (and not isolated).

13.5 Function F11 - Triple Group Function

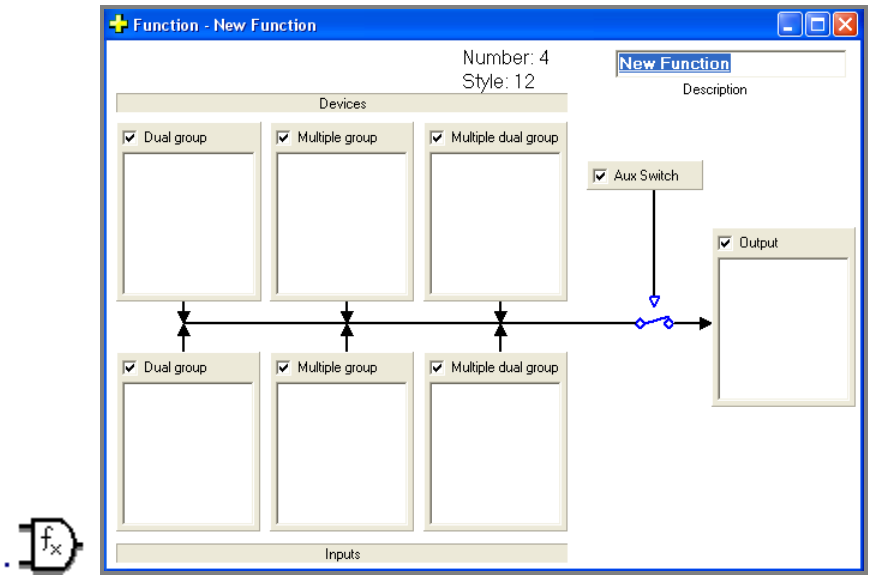


Description

The On output is switched ON (and Off output switched OFF) when:

1. Any one of the plant bypass single group alarm devices are in alarm
2. Any one of the plant bypass single group inputs are On
3. Any three of the triple group alarm devices are in alarm, proving the plant is normal (if the plant enable parameter is active)
4. Any three of the triple group inputs are On, proving the plant is normal (if the plant enable parameter is active)

13.6 Function F12 - Multipurpose Grouping Function

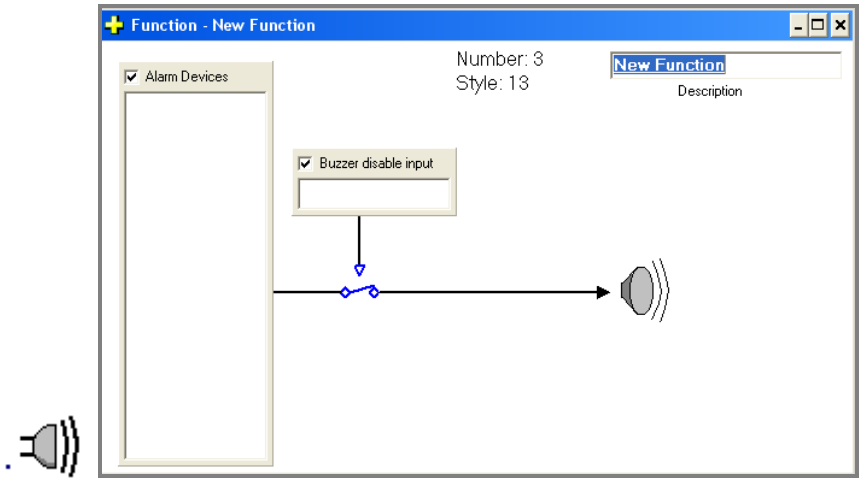


Description

The On output is switched ON when:

1. Any two devices in any of the zones or groups specified in the dual group of alarm devices are in alarm, providing the plant is normal (if the plant enable parameter is active)
2. Any two inputs in the dual group inputs are On, providing the plant is normal (if the plant enable parameter is active)
3. All of the multiple group alarm devices are in alarm, providing the plant is normal (if the plant enable parameter is active)
4. All of the multiple group inputs are On, providing the plant is normal (if the plant enable parameter is active)
5. Any group of the multiple dual group devices are in alarm
6. Any group of the multiple dual group inputs are On

13.7 Function F13 - Configurable Alarm Buzzer (UK only)



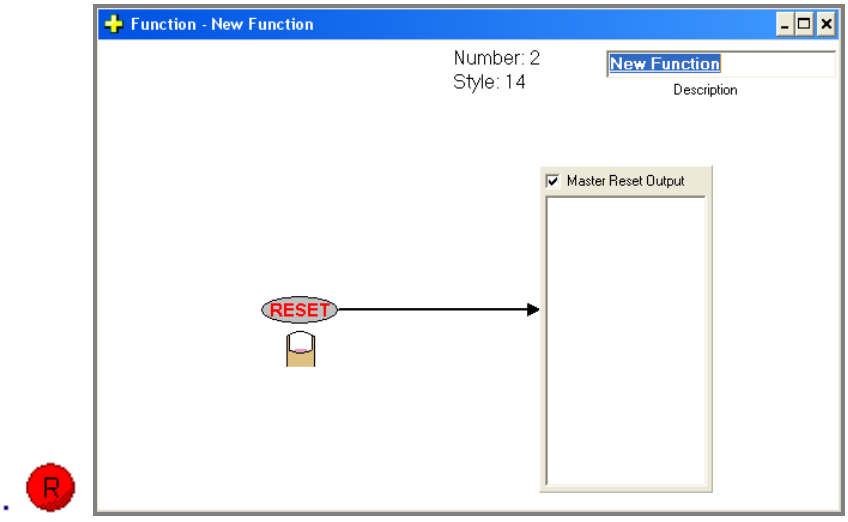
Description

The panel buzzer is turned on when any of the specified devices go into alarm, providing the disable input is Off.

The panel buzzer can then be muted. If a new alarm occurs within the specified devices, then the buzzer will resound.

13.8 Function F14 - Configurable Master Reset Output

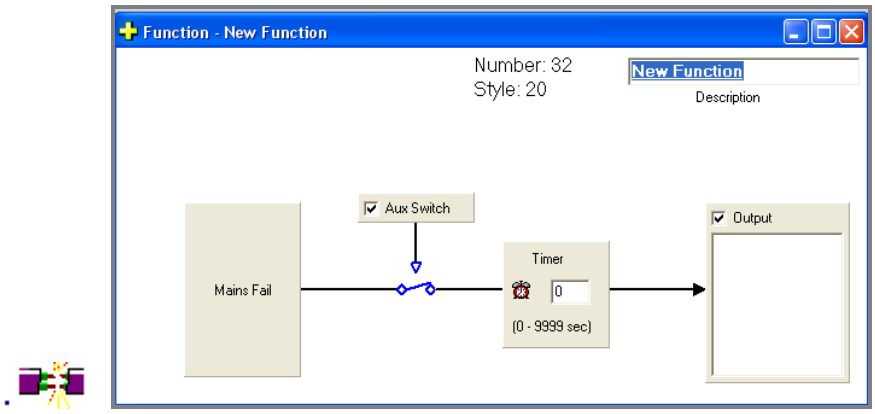
Note: EEPROM Location AD defines the *latch-timeout* seconds where 0xFFFF = 10 seconds (default) and 0x000A = 10 seconds (minimum).



Description

When Master Reset is depressed, the specified output is turned on for *latch-timeout* seconds.

13.9 Function F20 – Mains Fail/Door Holder

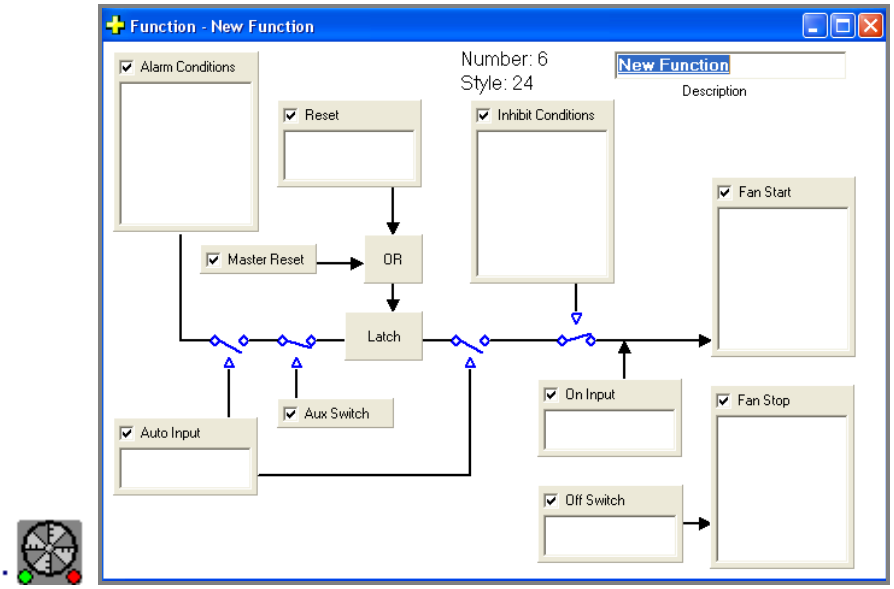


Description

The function is to control door holders in the event of a mains fail.

The specified outputs are switched On in the advent of a mains fail after an optional runon timer has expired.

13.10 Function F24 - Latched 1668 Fan Start-Stop Control with Reset and Stop Switch



Description

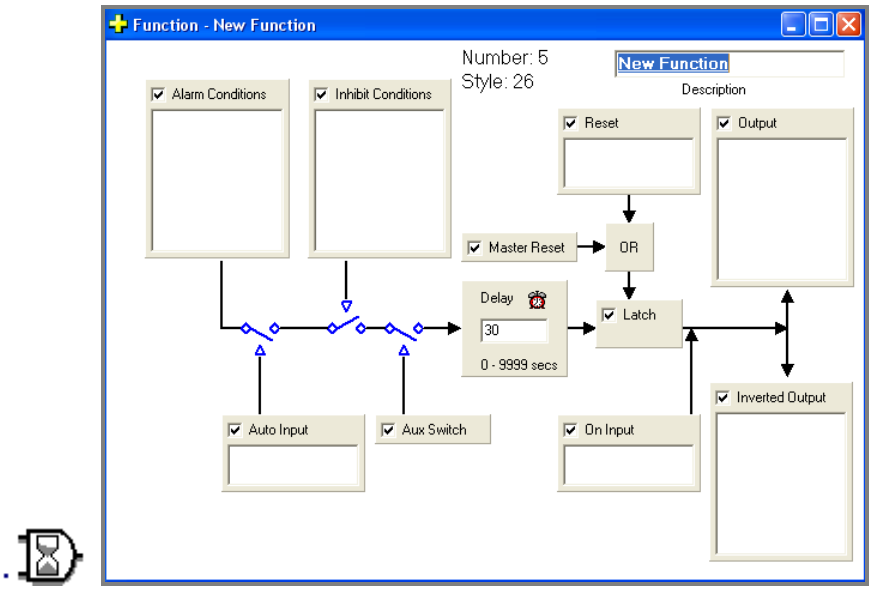
The internal output is latched ON, when the fan switch is in the auto position and any of the alarm devices are in alarm (and not isolated), providing the plant is not isolated (assuming plant enabled)

Activating the reset input or activating master reset with the master reset enable On clears the internal output.

The fan start output is turned on if the fan switch is in the ON position or if the switch is in the AUTO position and the internal output is on and all the inhibit devices are normal or isolated. Otherwise the fan start output is off.

The fan stop output is turned on if the fan switch is in the OFF position or if the switch is in the AUTO position and any of the inhibit devices are in alarm (and not isolated).

13.11 Function F26 - General Purpose Timer



Description

The fan start output is switched ON (and fan stop output switched OFF) when:

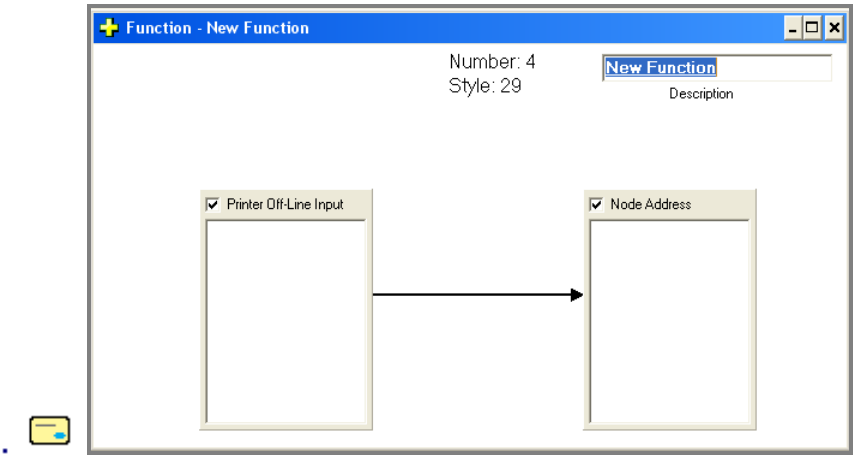
The Auto input is ON, and any alarm device (group, zone or sensor) is in alarm and not isolated, and all the inhibit devices are not in alarm, and providing the plant is normal if the plant enable parameter is active (set to 1).

OR

The On input is ON,

The 1668 control switch has three positions, ON, AUTO and OFF. The function only has inputs corresponding to the ON and AUTO positions. Since the switch can only be in one position at any one time, the OFF position is detected by the auto and on inputs both being Off.

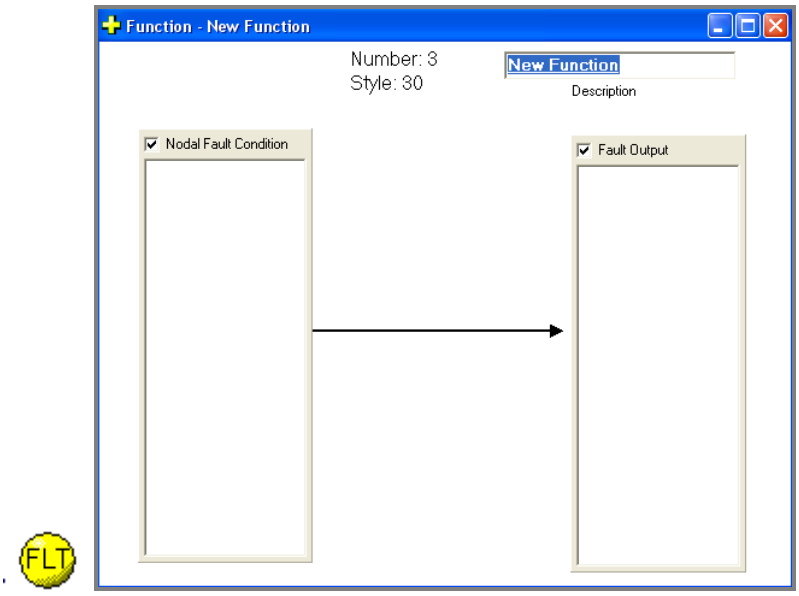
13.12 Function F29 - Configurable Nodal Printer Off-Line



Description

This function forces the panel printer off-line when the configured input is activated. It has priority over the on/off-line control in the panel printer menu.

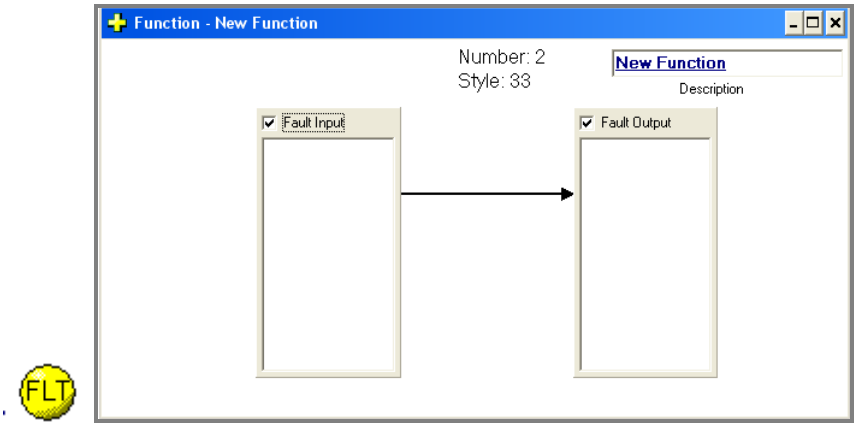
13.13 Function F30 - Configurable Nodal Fault Output



Description

This function allows a common fault output on a panel basis. The fault output does not include faults from devices which have been isolated.

13.14 Function F33 - Output Fault Function

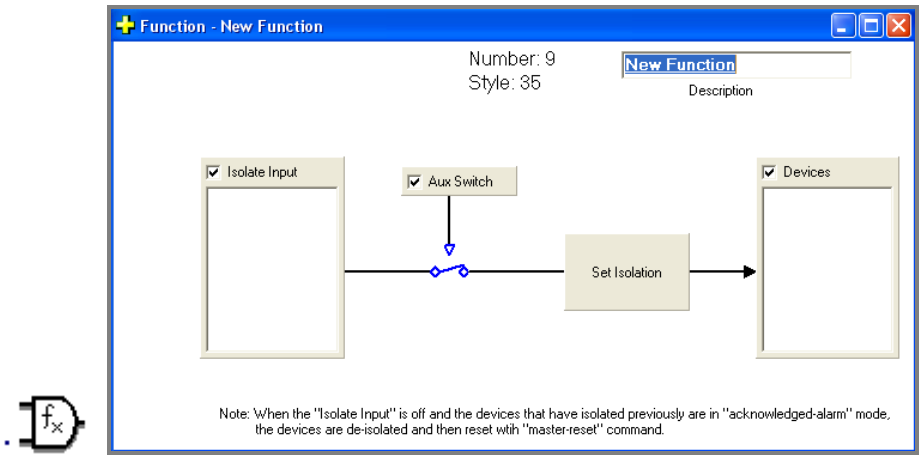


Description

The active state of the Input drives the Output into fault.

Supported Input types: Loop input, Panel input, Logical point
Supported Output types: Panel output, Loop Output

13.15 Function F35 – Isolate Control with Master Reset



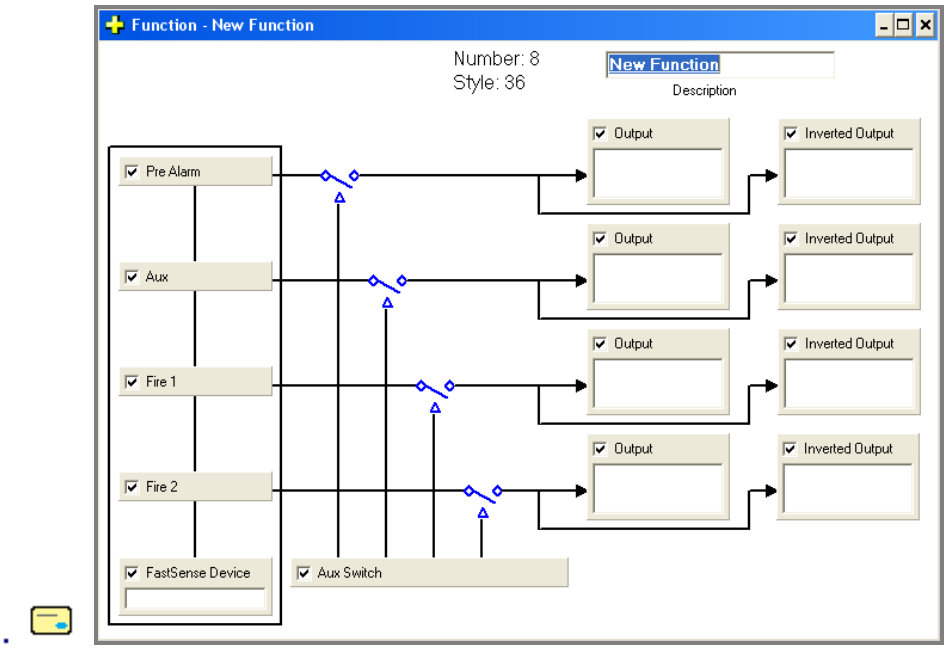
Description

When the isolate input is ON and the plant is satisfied, then the devices are automatically isolated. If the specified devices are returned to normal via the front panel, then they are automatically isolated again.

When the isolate input is turned OFF, the specified devices are returned to normal. If the devices are in acknowledged alarm, then they are automatically reset

The devices can then be isolated and returned to normal via the front panel.

13.16 Function F36 - FastSense Control



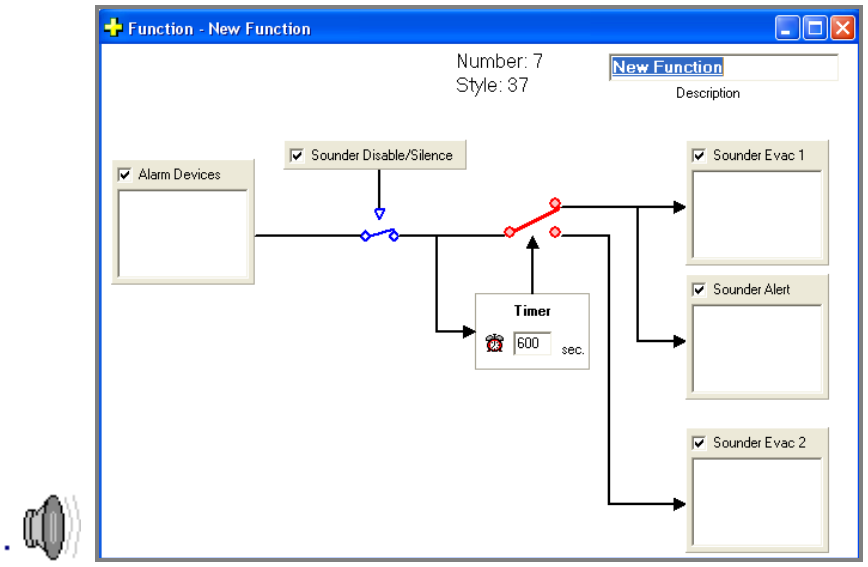
Description

The FastSense device has four alarm status conditions associated with it:

1. Pre-Alarm
2. Auxiliary Alarm
3. Fire 1
4. Fire 2

This function allows the user to drive loop outputs, panel outputs, and/or logical points according to the individual status conditions of the FastSense device.

13.17 Function F37 – Sounder Timeout (UK only)



Description

There are four requirements for MS1404 sounder programming. These have been addressed in this function.

Function 37 is a timeout function which activates a sequenced or all call evacuation in the event of an unattended alarm. When an alarm is activated the FACP can be programmed using function 37 to cater for the four MS1404 sounder requirements stated below:

1. The FACP will activate the local panel buzzer only. A programmable 0 – 10 minute timer is also activated. If the FACP remains unattended (panel is reset or bells are manually activated via the evacuate switch) for the preset time the FACP will activate all the bells on the system.

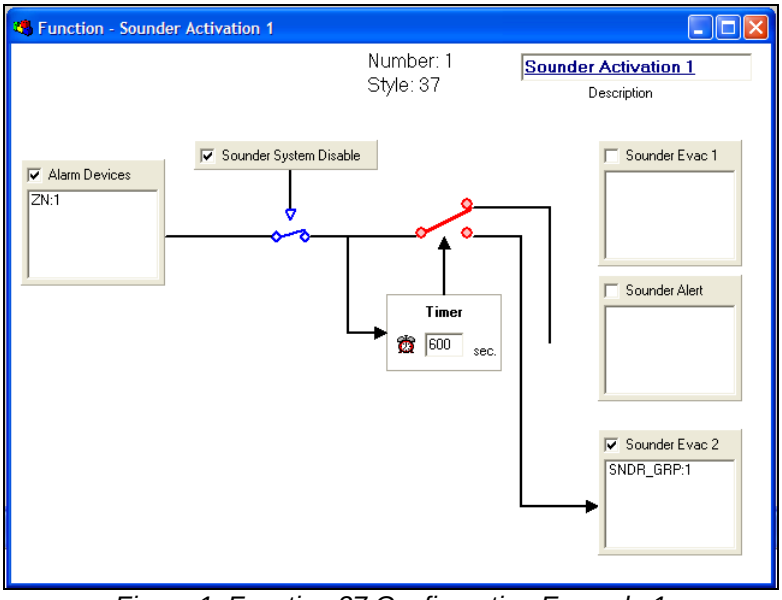


Figure 1: Function 37 Configuration Example 1

When Zone 1 goes into alarm, the local panel buzzer is activated as per normal panel operation. Function 37 when configured as illustrated above will activate the timer countdown, and after the set 10 minute (600sec) timeout period has expired, Sounder Group 1 will be activated.

2. The floor or zone in alarm will immediately go into the evacuate mode (the evacuate mode is a continuous/steady output). A programmable 0 – 10 minute timer is also activated. If the FACP remains unattended (bells have not been silenced) for the preset time the FACP will activate all the bells on the system.

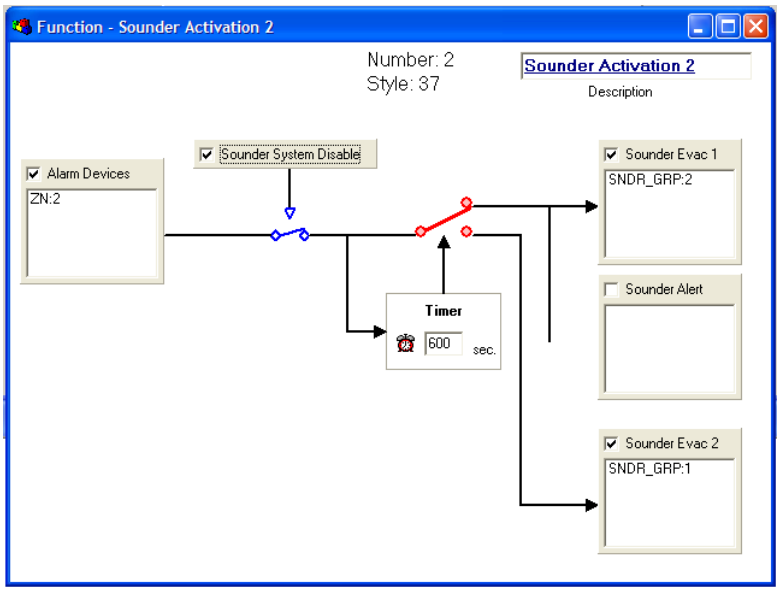


Figure 2: Function 37 Configuration Example 2

All the sounders in Zone 2 are grouped in sounder group 2. When Zone 2 goes into alarm, sounder group 2 is activated and so is the countdown timer. After the set timeout period has expired, Sounder group 2 will be de-activated, and sounder group 1 will be activated immediately.

3. The floor or zone in alarm will immediately go into the evacuate mode (the evacuate mode is a continuous/steady output) the adjacent floors or area (one each way) will immediately go into alert mode (the alert mode is a pulsing output with an on time of 2 seconds off time 2 seconds on time). A programmable 0 – 10 minute timer is also activated. If the FACP remains unattended (bells have not been silenced) for the preset time the FACP will activate all the bells on the system.

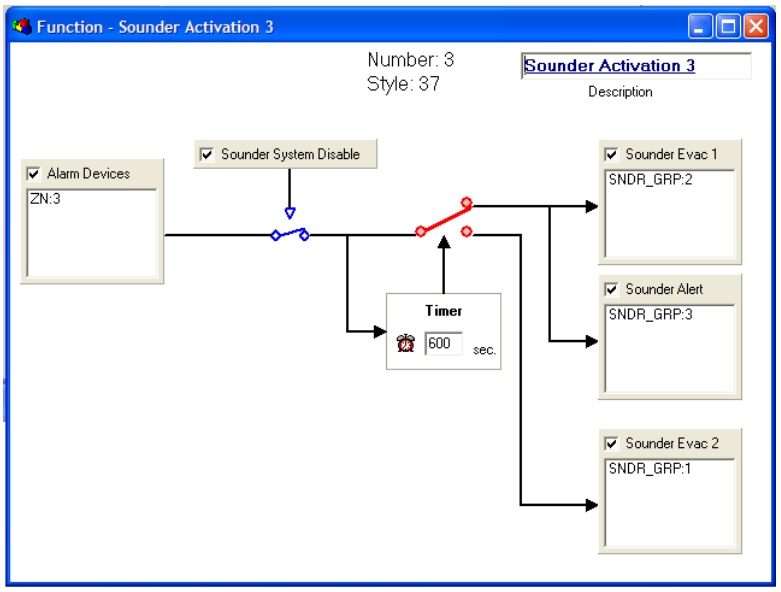


Figure 3: Function 37 Configuration Example 3

In the above example, all sounders in Zone 3 are grouped in sounder group 2. All the sounders in the adjacent floors to Zone 3 are grouped in sounder group 3. When Zone 3 goes into alarm, All sounders in sounder group 2 will sound the evacuate tone, all sounders in sounder group 2 will sound the alert tone, and the timer countdown will be activated. After the timeout period has expired, all sounders in sounder groups 2 and 3 are de-activated, and sounder group 1 will sound the evacuate tone.

Function 37 also supports logical points, and several instances of function 37 can be linked using logical points for staged evacuations in multi-storey buildings.

Note: The panel currently only supports 1sec ON/1sec OFF alert mode.

4. The system activates all bells immediately after an incoming alarm.

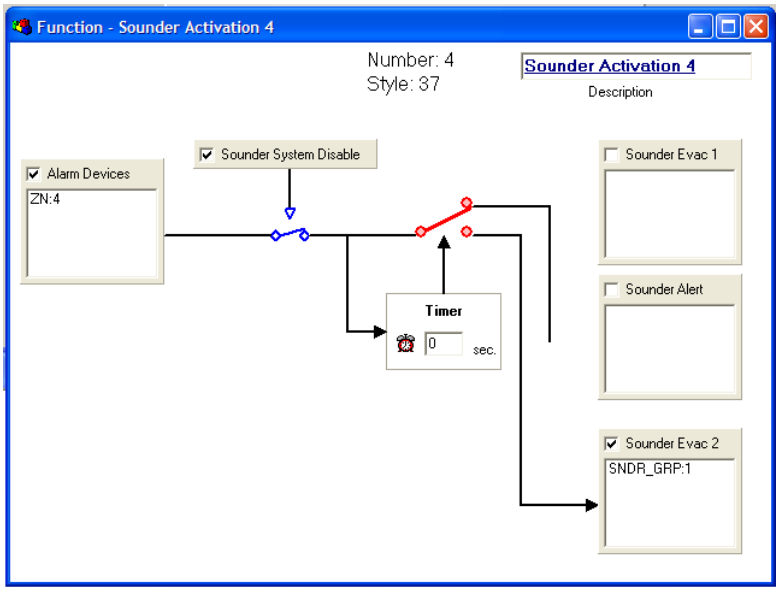


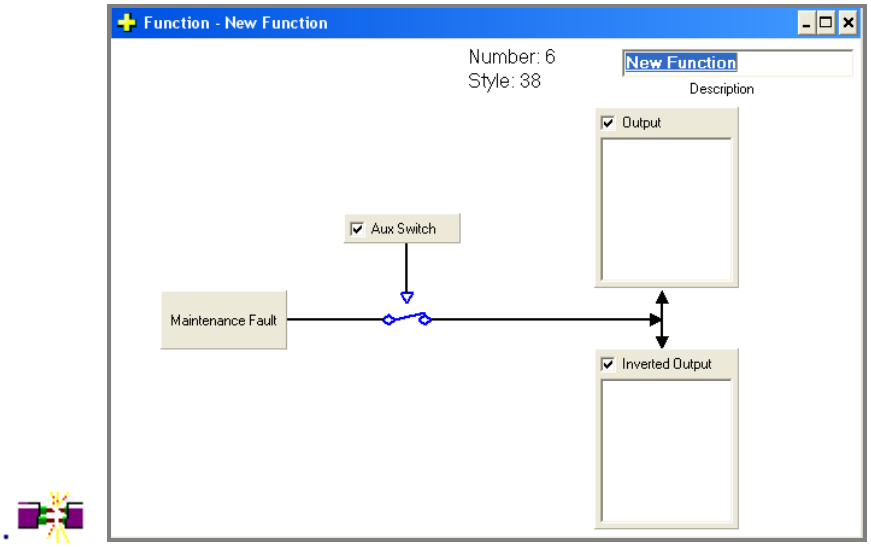
Figure 4: Function 37 Configuration Example 4

In the above example, the timeout period is set to 0, and the Sounder Evac 1 and Sounder Alert boxes are de-selected. When Zone 4 goes into alarm, all sounders in Sounder group 1 will activate immediately.

The Alarm Devices box also allows the user to include an assigned point. If the ALARM assigned point is used in the Alarm Devices box in the above example, any alarm in the system will activate sounder group 1 immediately.

Timer: If the FACP is attended within the pre-set time and the bells/sounders are silenced, the timer will reset. The timer is only activated by an Alarm condition and shall reactivate with a second alarm condition if the bells have been silenced from the first alarm condition.

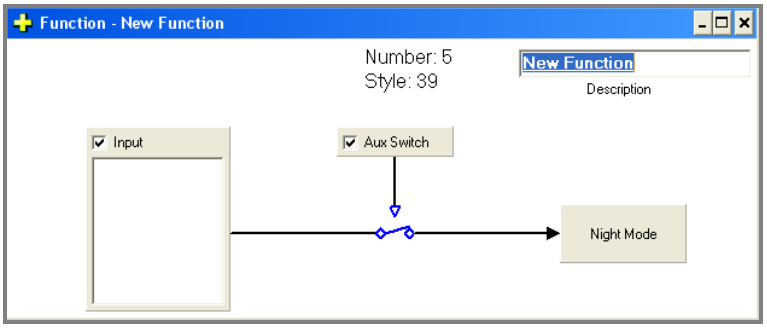
13.18 Function F38 – Maintenance Fault Output



Description

The On output is switched on and complementary output is switched off if a device maintenance fault is present on the panel.

13.19 Function F39 – Forced Night Mode Function



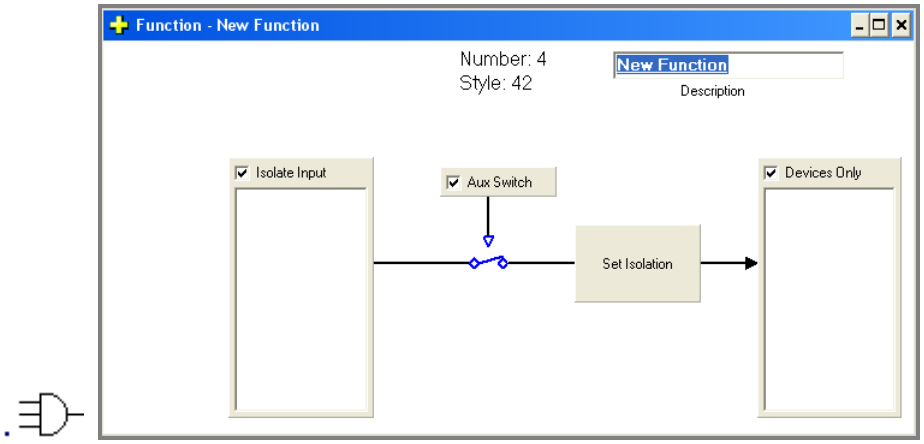
Description

When the input is ON and the plant is satisfied, then the panel is forced into night mode. If the input is off the panel returns to normal operation.

This function operates independently of day/night settings and has priority over them. Day/night modes operate as normal if function 39 input is not activated or function 39 is not configured.

Note: Only one instance of this function can exist in any configuration.

13.20 Function F42 – Sensor Isolate Control



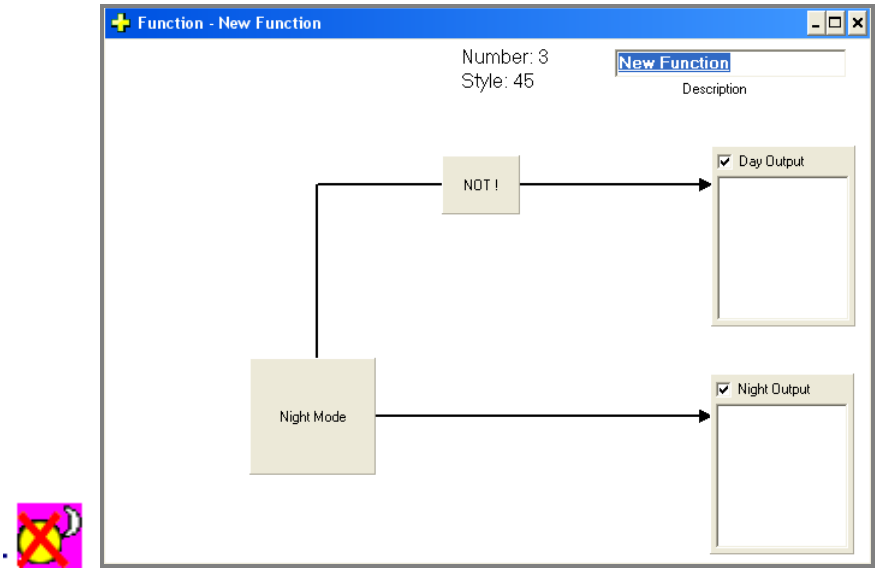
Description

This function operates exactly the same as function 9, but only sensor parameters are allowed for Parameter 3. This allows for much faster function execution.

When the isolate input is ON and the plant is satisfied, then the devices are automatically isolated. If the specified devices are returned to normal via the front panel, then they are automatically isolated again.

When the isolate input is turned OFF, the specified devices are returned to normal. The devices can then be isolated and returned to normal via the front panel.

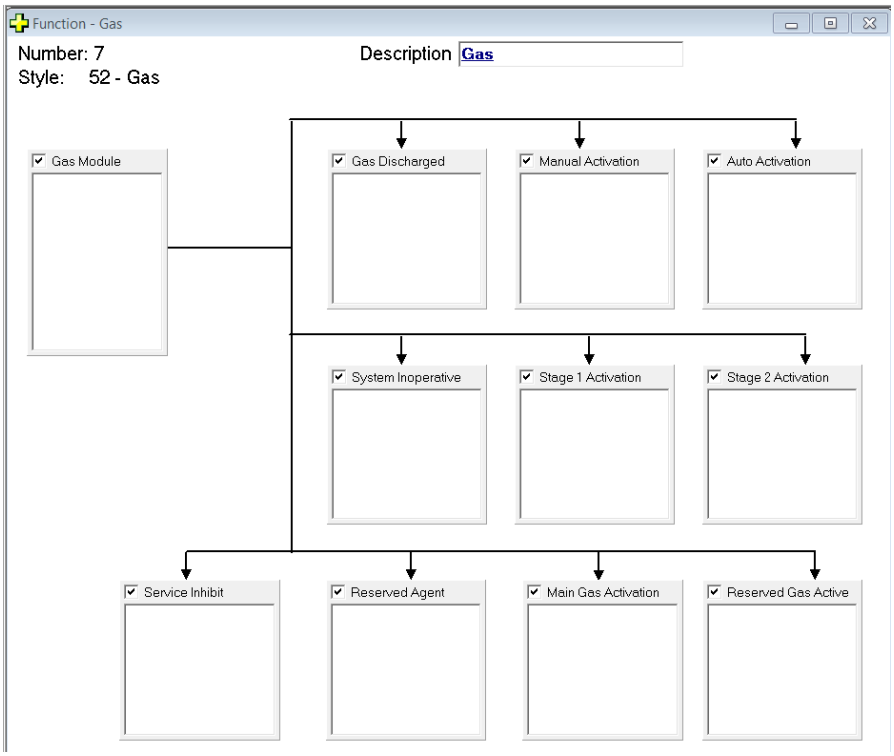
13.21 Function F45 - Day-Night Output Function



Description

Turn on the Day's Output and turn off the Night's Output if the Day-Night mode is either disabled completely OR enable and currently in the Day Mode; otherwise (i.e. in the Night Mode), turn on the Night's Output and turn off the Day's Output.

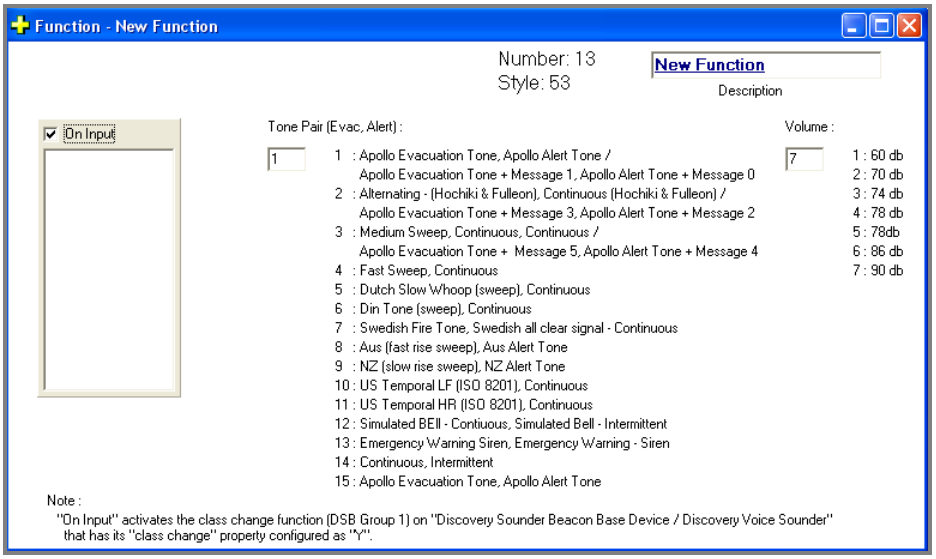
13.22 Function F52 - Gas Function



Description

Turn on the configured outputs appropriately when the configured (i.e. local) gas module's main conditions (i.e. gas discharged, manual activation, auto activation, stage 1 activation, stage 2 activation, system inoperative and service inhibit) becomes true.

13.23 Function F53 – Class Change (Evac)

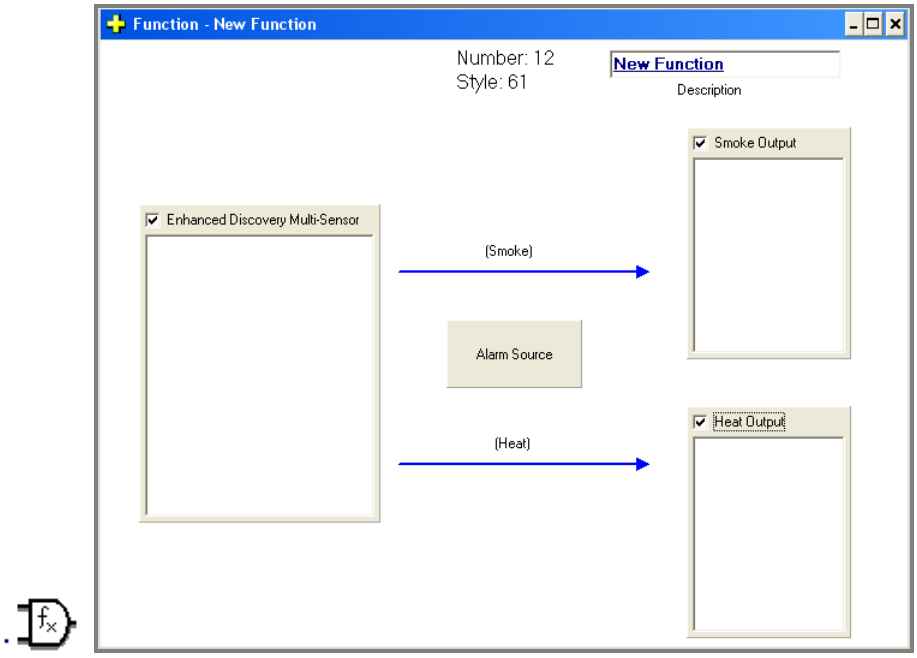


Description

Issue a Discovery Sounder Group Global **ON** command to DSG group 1 if any of the activation input is true while the *"reset condition"* is not true. A Discovery Sounder Group Global **OFF** command to DSG group 1 is issued when all of the activating inputs are off or the *"reset condition"* is true.

Note that a *"reset condition"* is when there is a (general fire alarm condition) or (any of the sounders is activated as a result of function 17 & 37 or general fire alarm condition).

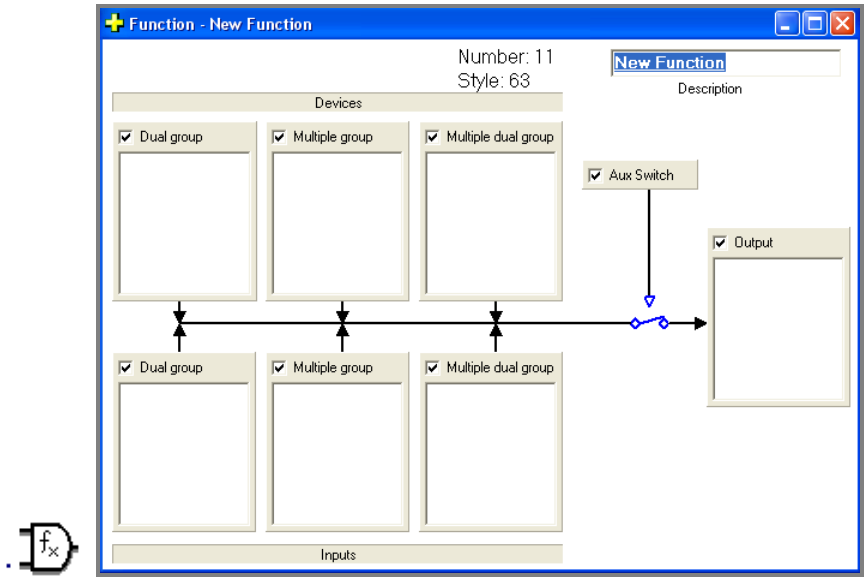
13.24 Function F61 - Enhanced Discovery Multisensor Alarm Output



Description

This function turns on the "smoke" or "heat" outputs accordingly based on the alarm source of the configured enhanced Discovery Multisensor.

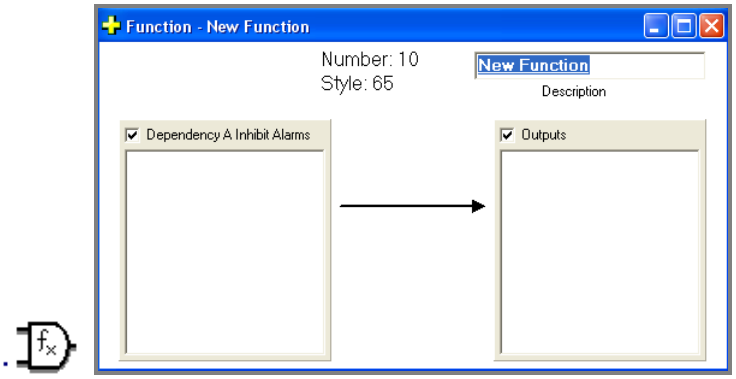
13.25 Function F63 - Multipurpose Grouping Function (Unique)



Note: This function works exactly like function 12 except that *uniqueness* is added to the processing of the group alarm counter for the "Devices". For example, Loop 1 Sensor 1 & 2 are configured to be in group 1 and Loop 1 Sensor 3 & 4 are configured to be in group 2; if Loop 1 Sensor 1 & 2 are both in alarm, these two events are considered as one alarm event since they are from the group.

Please refer to the "Function 12" document for more details of its operations.

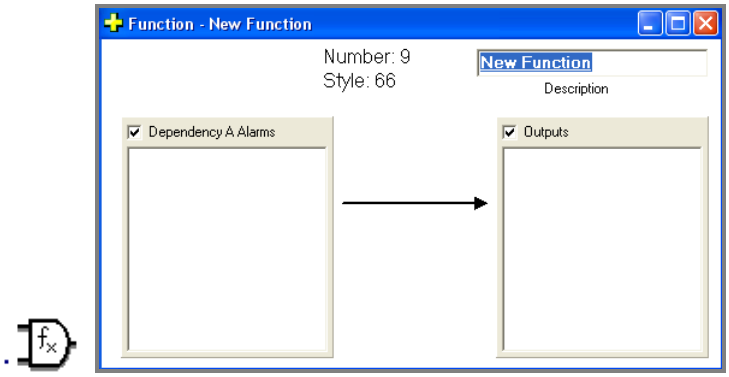
13.26 Function F65 - Dependency A Inhibit Alarm Outputs



Description

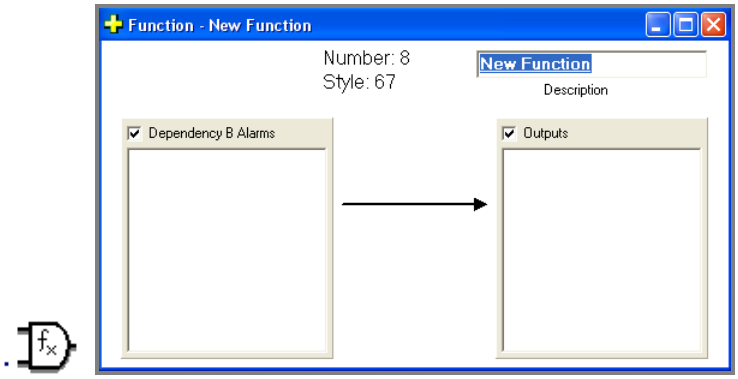
The Outputs are switched ON when there is a Dependency A Inhibit Alarm.

13.27 Function F66 - Dependency A Alarm Outputs



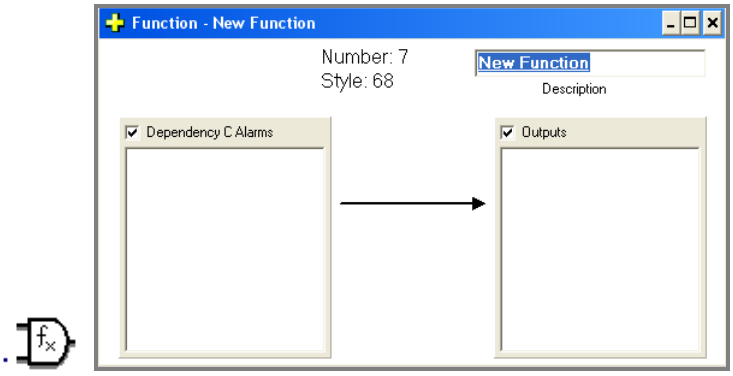
Description
The Outputs are switched ON when there is a Dependency A Alarm.

13.28 Function F67 - Dependency B Alarm Outputs



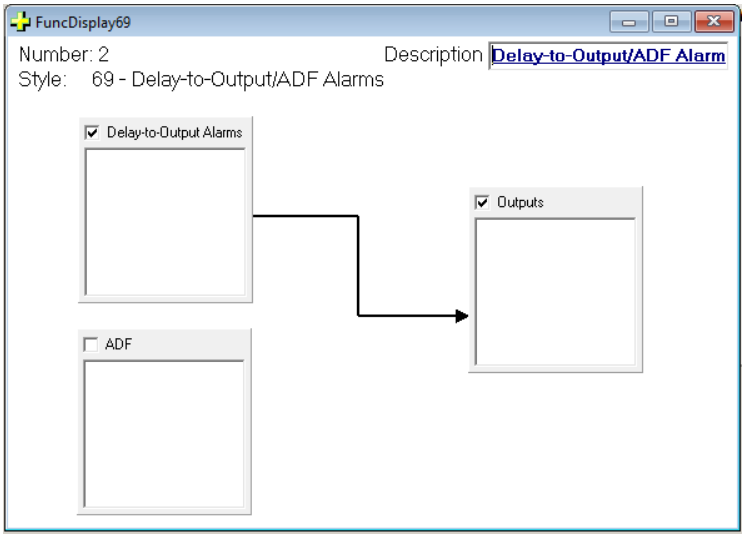
Description
The Outputs are switched ON when there is a Dependency B alarm.

13.29 Function F68 - Dependency C Alarm Outputs



Description
The Outputs are switched ON when there is a Dependency C alarm.

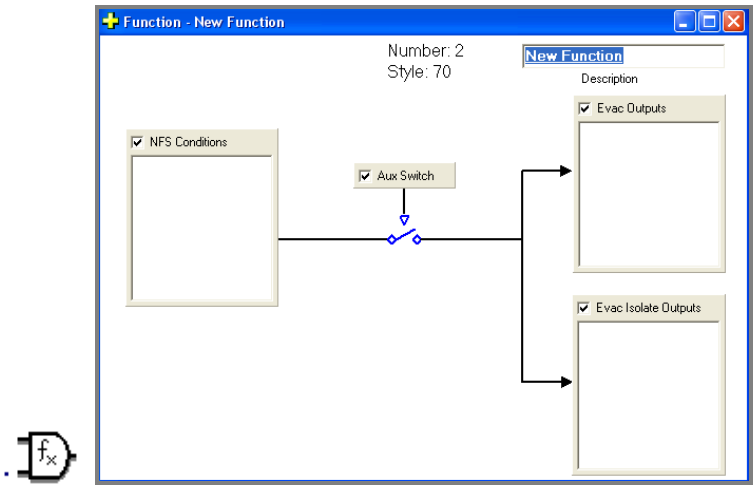
13.30 Function F69 - Delay-To-Output/ADF Alarms



Description

The Outputs are switched ON when there is a Delay-To-Output Alarm configured or ADF groups are configured.

13.31 Function F70 - Nurse Fire Station (NFS)

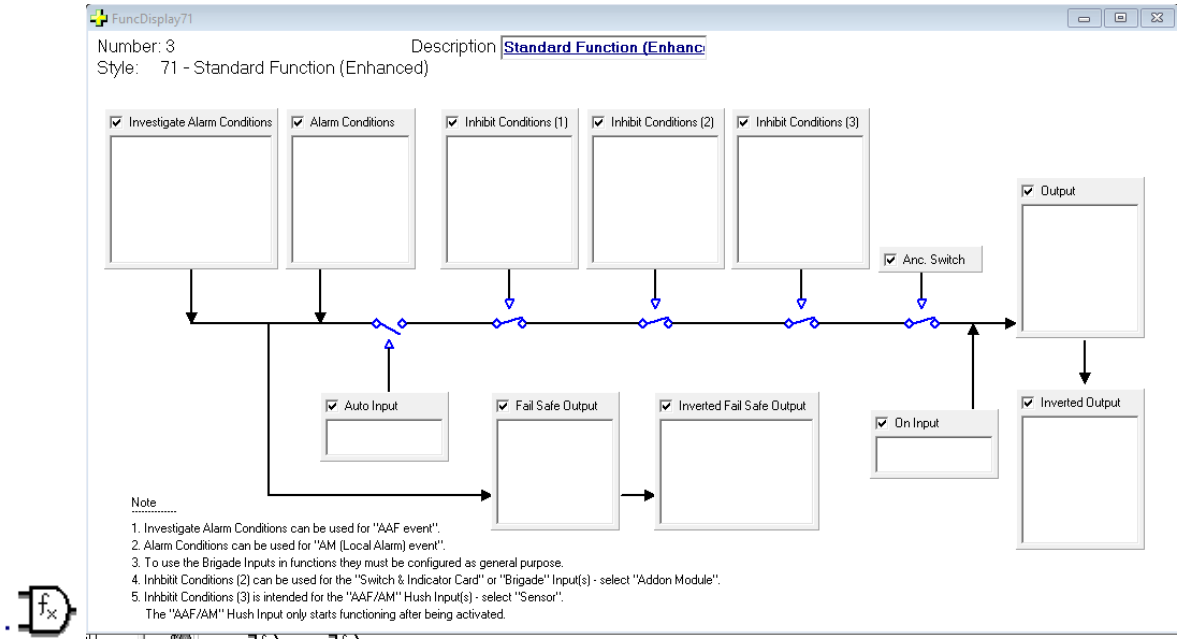


Description

Used in conjunction with the Nurse Fire Station LCDA
The Evac outputs are switched ON when:

1. Any NFS associated with the group is in the evac state
2. Any alarm device is in alarm and not isolated
3. Otherwise the Evac-Isol Outputs are switched ON when Evac outputs are switched OFF and;
4. Any NFS associated with the group is in the evac-isol state

13.32 Function F71 - Standard Function (Enhanced)

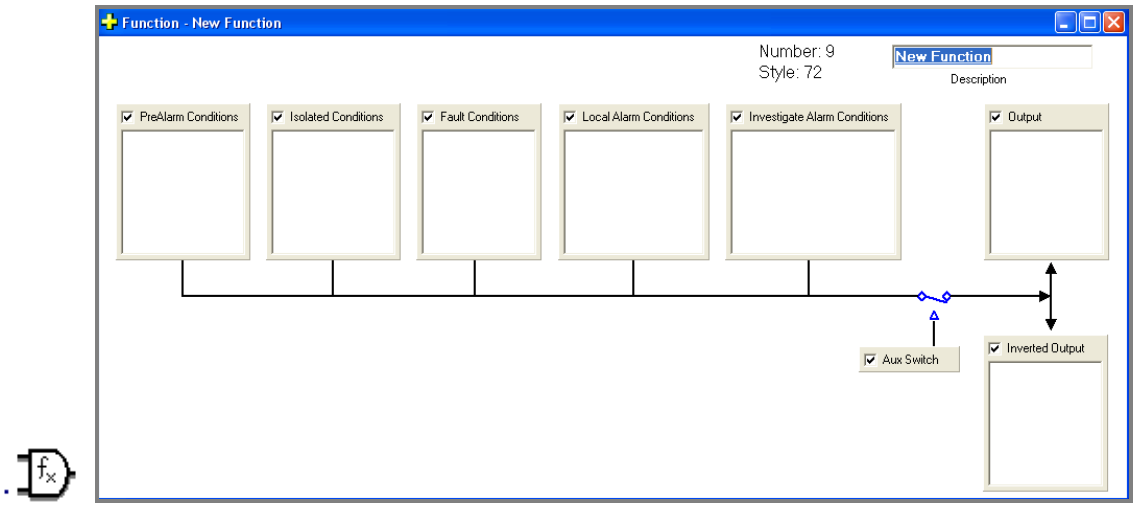


Description

The output is switched ON (and inverted output switched OFF) when:
The On input is ON,

The Auto input is ON, and ((any alarm device (group, zone or sensor) is in investigate alarm) or (any alarm device (group, zone or sensor) is in alarm and not isolated)) and all the inhibit devices (1) are not in alarm, and all the inhibit devices' input (2) are not active, and all the inhibit devices' hush input (3) are not active and providing the plant is normal if the plant enable parameter is active.

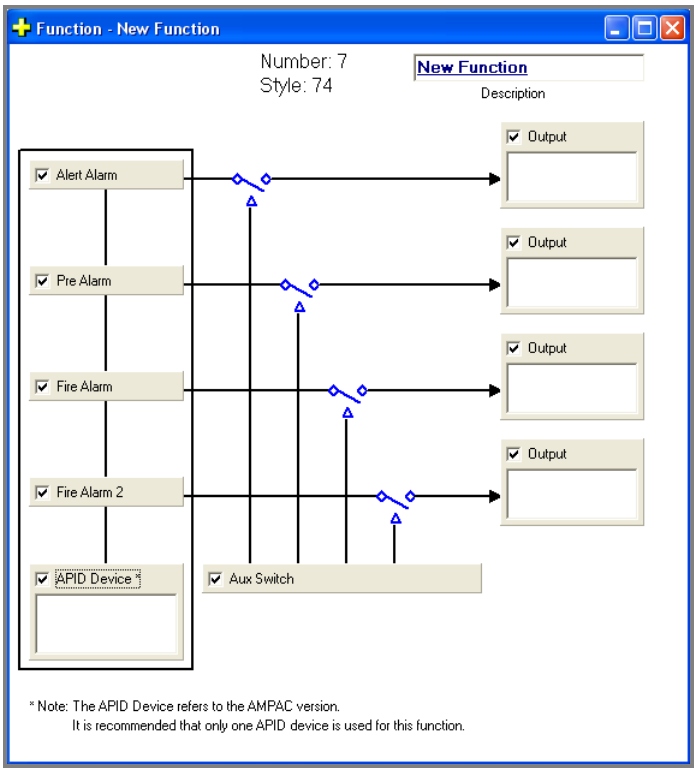
13.33 Function F72 – Pre-alarm, Fault, Isolate, Local Alarm, and Investigate Alarm



Description

The function controls an output (and its complement) based on a device being in the pre-alarm or fault or isolate or local-alarm or investigate alarm condition.

13.34 Function F74 - Wagner Function



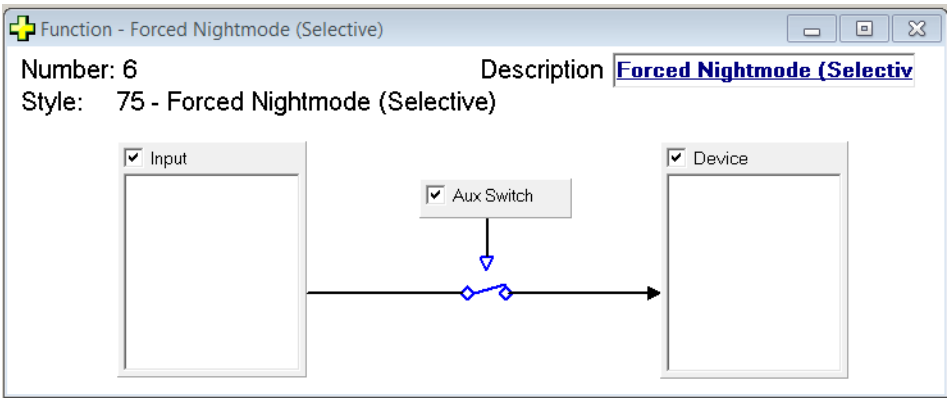
Description

The APID device has four alarm status conditions associated with it:

1. Alert-Alarm
2. Pre-Alarm
3. Fire-Alarm
4. Fire-Alarm 2

This function allows the user to drive loop outputs, panel outputs, and/or logical points according to the individual status conditions of the APID device.

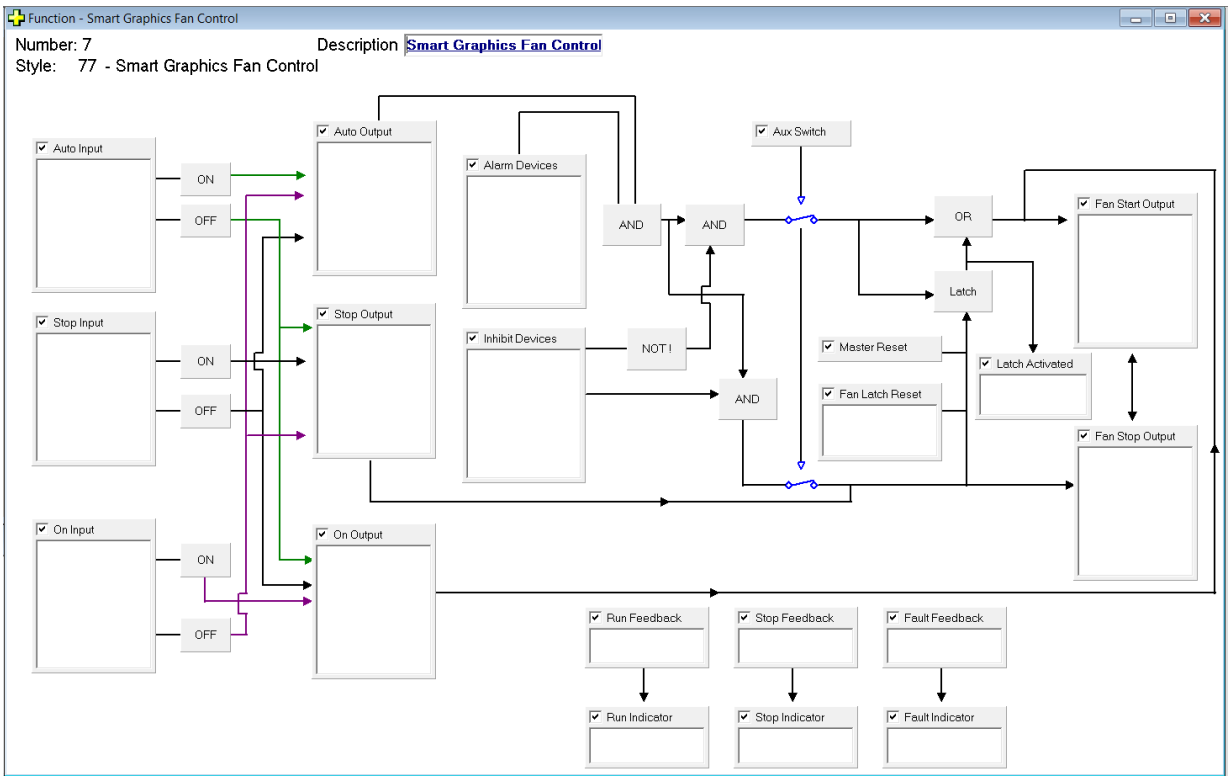
13.35 Function F75 - Forced Night Mode Function



Description

If the Input is ON the chosen devices will be forced into Night Mode setting:

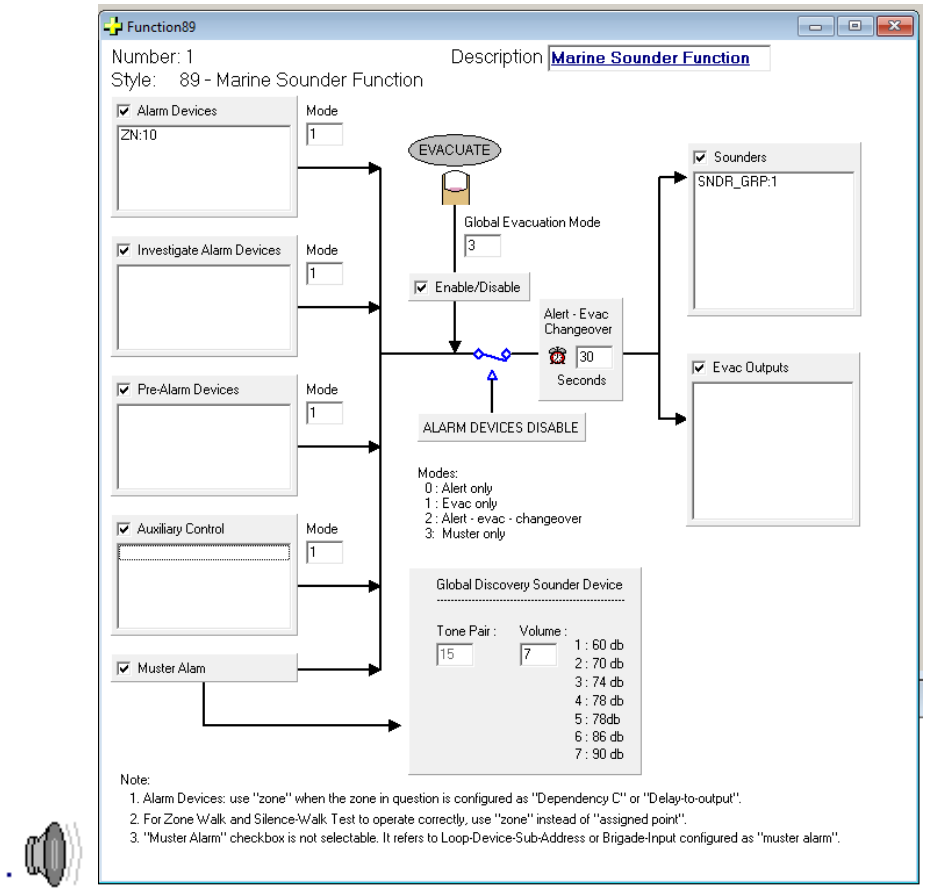
13.36 Function F77 - SmartGraphics Fan Control Function



Description

This Function is used when Fan Controls are graphically controlled using the Smart Graphics Product:

13.37 Function F89 – Marine Sounder Function

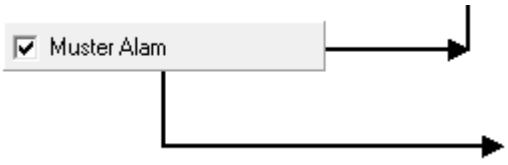


Description

The function controls the turning on of Sounders, Sounder Groups and Evac outputs based on varying input conditions such as the manual Evac button, Alarm devices, Investigate alarm devices, Pre-alarm devices, auxiliary control input, and Muster Alarm inputs.

Modes:
0 : Alert only
1 : Evac only
2 : Alert - evac - changeover
3: Muster only

Mode: This is set according to the following table as shown in the Function screen.



Muster Alarm events can include I/O sub-address (configured as muster input), brigade inputs configured as a muster input, or the Evac button (enabled and configured as mode 3 in function 89).
When a muster condition is “True” (muster input activated) then any Discovery Sounder/Beacon will play the Tone 15 General Alarm tone.

The priority of Muster alarm and Fire alarm is determined by an EEprom setting. The default setting is Muster Alarm as higher priority. This means that if there is a Fire alarm condition and the DSB’s are playing the Evac or Alert tones a trigger muster input would override the DSB tone to play Tone Pair 15.

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UNCONTROLLED DOCUMENT

NOTE: Due to AMPAC's commitment to continuous improvement specifications may change without notice.