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Syncro

Multi-loop Analogue Addressable Fire Control Panel

User Manual



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1. Introduction

The **Syncro** is an analogue addressable fire detection and alarm control panel capable of covering a maximum of 96 zones (500 zones on a network) with 2 or 4 detection loops and 126 devices per loop for Apollo protocol and 127 devices per loop for Hochiki protocol.

Syncro also supports loop-powered sounders.

Any number of devices can be allocated to any zone ensuring that any system configuration can be easily accommodated.

Each detection device is allocated a message of up to 40 characters (including spaces) to assist in the location of the devices.

The **Syncro** control panel offers an extensive list of features and options for the control and monitoring of plant, equipment and sounders.

The range of compatible devices includes optical and ionisation smoke sensors, heat sensors, multi-sensors, switch monitors and relay or bell controllers. Interfaces to conventional detection systems can also be catered for using zone-monitoring devices.

2. Safety

Suppliers of articles for use at work are required under section 6 of the Health and Safety at Work act 1974 to ensure as reasonably as is practical that the article will be safe and without risk to health when properly used.

An article is not regarded as properly used if it is used 'without regard to any relevant information or advice' relating to its use made available by the supplier.

This product should be installed, commissioned and maintained by trained service personnel in accordance with the following:

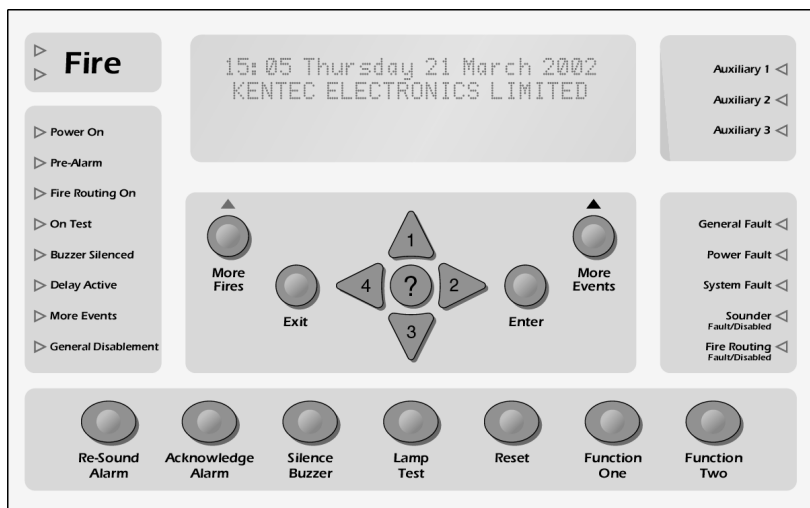
- (i) IEE regulations for electrical equipment in buildings
- (ii) Codes of practice
- (iii) Statutory requirements
- (iv) Any instructions specifically advised by the manufacturer

According to the provisions of the Act you are therefore requested to take such steps as are necessary to ensure that you make any appropriate information about this product available to anyone concerned with its use.

This equipment is designed to be operated from 230V 50Hz mains supplies and is of class 1 construction. As such it **must** be connected to a protective earthing conductor in the fixed wiring of the installation and a readily accessible double pole disconnect device shall be incorporated in the fixed wiring.

Failure to ensure that all conductive accessible parts of this equipment are adequately bonded to the protective earth will render the equipment unsafe.

3. Panel Controls



3.1 Access Level 1

The front panel contains controls for operating the panel.

Lamp Test

Press this button to illuminate all front panel indicators and validate correct operation.

Silence Buzzer

This button will switch the internal buzzer from continuous to intermittent, and will illuminate the Buzzer Silenced panel indicator. No other sounder outputs will be affected by this button operation.

More Fires

This button is used to view suppressed fire events. In the case of multiple fire activations, or when fire activation information has been temporarily suppressed for menu navigation, the fire events can be quickly restored and viewed by pressing this button.

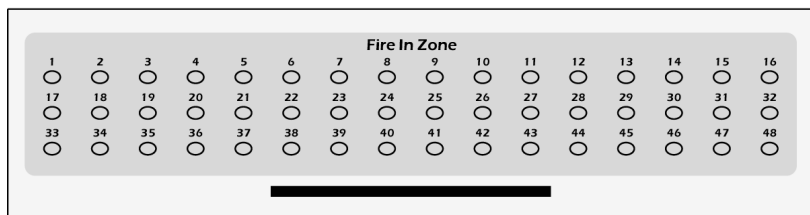


Fig 1 – Syncro Front Panel

More Events

This button is used to view all other suppressed events. In the case of multiple panel events or when any event information has been temporarily suppressed for menu navigation, this button is used to display the view events list.

Menu Navigation (up / down / left / right / enter / exit)

These are used to enter the password for access level 2 and are also used to navigate the Access 2 Facilities Menu.

Help (?)

This button offers additional information relating to the current status of the control panel. e.g. if the panel is in an alarm or fault condition then advice on the recommended action will be displayed or if a menu function is being accessed then help relating to that function will be displayed.

3.2 Access Level 2

Access level 2 can be reached by pressing any of the menu navigation buttons. This will then request the user to enter the correct Access level 2 password (a 4 digit number) followed by the Enter button.

The factory default password for Access level 2 is 2222.

The Access level 2 password can be changed at commissioning to meet customer's requirements. Enter the Access level 2 password in the space below for future reference.

ACCESS 2 PASSWORD

Access level 2 will be required by the end user to acknowledge alarms and reset the system.

Any persons responsible for the fire alarm system should be aware of the access level 2 password to enable the panel controls.

Without this password it will not be possible to acknowledge alarms or reset the system so it is most important that the responsible person knows the password.

Acknowledge Alarm

This button is normally used to mute any fire warning sounders fitted to the Syncro panel. These sounders are installed throughout the protected premises and are used to evacuate the premises.

In some cases, the fire warning sounders may be delayed; to allow a search time before building evacuation commences. In this case, the "Delay Active" panel indicator will be illuminated. If the Acknowledge Alarm button is pressed during the Delay Active period, the sounders may either be permanently muted or the delay may be extended to the second stage delay time. This will depend upon the panel configuration and cannot be amended by the end user.

If there is a second fire activation during an Active Delay, then all delays are cancelled and outputs will operate in accordance with the building fire strategy.

Re-sound Alarm

If any fire warning sounders have been muted using the Acknowledge Alarm button, then pressing the Re-sound Alarm will re-energise all muted sounders.

Reset

This button is used to reset any activation that is defined as a latching input type. These will include fire and pre-alarm events. In general, fault events are non-latching and cannot be cleared by operation of the Reset button. These events will clear when the fault input is cleared.

Function 1 & 2

These two buttons are software programmable inputs that may be used to perform customer-defined actions. The default operation of these buttons is to perform no action (transparent input).

The operation of these buttons should be entered in the box below;

Function 1 button

Function 2 button

4. Panel Operation

4.1 Fire Event

In the event of a fire, the twin red FIRE lamps and the appropriate Fire Zone indicator will flash (if fitted). Details of the fire activation (address and location text) will be given in the LCD Status display.

The fire warning sounders will sound throughout the building and the panel fire contact, alarm contact and fire routing outputs will be energised.

The panel buzzer will be pulsing, but can be silenced by pressing the **Silence Buzzer** button.

To silence the fire warning sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Acknowledge Alarm** button will now silence the sounders. The sounders can be started again if required by pressing the **Re-Sound Alarm** button

The system can be reset by pressing the **Reset** button.

If there are more than two fire events on the system then these may be viewed in the text display by pressing the **More Fires** button.

4.2 Fault Event

If there is a fault on the system, the yellow **General Fault** indicator will be flashing and there may be other fault LED indications which identify the nature of the fault.

The Fault Contact and Fault Routing outputs will be energised and the panel buzzer will be sounding continuously.

Details of the fault will be described in the text display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

If there are more than two fault events on the system then these may be viewed in the text display by pressing the **More Events** button.

4.3 Pre-alarm event

Sensors or inputs can generate a pre-alarm. A pre-alarm is used to warn of a slow change in the analogue level from detection devices, typically due to a smouldering fire. When a pre-alarm is generated, the control panel will illuminate the pre-alarm LED and will sound the internal buzzer continuously. The address and location of the source of the pre-alarm will be indicated in the LCD status display.

The source of the pre-alarm input should be investigated.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

If there are more than two fault events on the system then these may be viewed in the text display by pressing the **More Events** button.

4.4 Evacuate event

An input on the system can be configured to create an Evacuate event. Operation of an evacuation input will cause the twin red FIRE lamps to illuminate and all sounder devices to be operated continuously. The panel buzzer will sound continuously and the source of the evacuation event will be shown in the LCD status display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

To silence the fire warning sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Acknowledge Alarm** button will now silence the sounders

If the source of the event is a latching input, then pressing the **Reset** button will reset the system.

4.5 Alert event

An input on the system can be configured to create an Alert event. Operation of an Alert input will cause all sounder devices to be pulsed on a 1 second cycle.

The panel buzzer will sound continuously and the source of the alert event will be shown in the LCD status display.

The panel buzzer can be silenced at any time by pressing the **Silence Buzzer** button.

To silence the fire warning sounders, press any of the menu navigation buttons and enter the Access 2 password (given in section 3.2) then press the Enter button. The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

Pressing the **Acknowledge Alarm** button will now silence the sounders

If the source of the event is a latching input, then pressing the **Reset** button will reset the system.

5. Access 2 Menu

There are a number of menu options available at access level 2. To view this menu, press the **Right (2)** pointing arrow key and enter the Access 2 password (given in section 3.2) then press the **Enter** button.

The panel controls will now be enabled and will remain enabled for about 1 minute after the last key has been pressed.

When in Access 2, press any of the four navigation buttons to view the Access 2 menu.

To navigate the menu, use the **Up (1)** and **Down (3)** buttons to move the cursor to the required menu option. Use the **Right (2)** button to select the highlighted menu option. Use the **Left (4)** button to exit back to the main menu. Use the **Enter** button to input the required information and the **Exit** button to cancel any data selection. Pressing the **Help (?)** button will display the help screen appropriate to the current menu selection.

ACCESS LEVEL 2
Disablements
View devices
Test Zones
Set system time
Access level 3

Main menu items available at access levels 2:

5.1 Disablements

All disablements have two options, timed or untimed. For disablements up to 24 hours, the timed disablement option should be used. This will prompt for a disablement time to be entered (in 30 minute increments from 30 minutes to 24 hours). Upon commencement of the disablement, the timer will count down the set value. When the timer expires, the disablement is cancelled automatically.

Untimed disablements are used only when it is essential that the disablement time exceed 24 hours. Untimed disablements remain active until the disablement is cleared by manual intervention at the panel.

Disable Loops

This option is used to disable all devices attached to any detection loop. This will disable inputs and outputs for the selected loop. This option should only be used in extreme cases, for example when interference on a loop is affecting all devices on a detection circuit.

WARNING: Loop Disablement does not electrically isolate the panel from the loop wiring.

The loop should be physically disconnected from the panel before any cable testing or wiring amendments are performed.

Disable Zones

All detection devices, including manual call points, are disabled in the selected zone.

NOTE: When a device is disabled, the Syncro panel ignores the analogue value reported by the device. All other faults for the device (missing device, double address, internal fault, type changed, bad data etc.) are still reported by the Syncro panel.

Disable Addresses

Any loop device can be disabled using this menu option. In devices with more than one input or output, then each sub-address may be individually disabled.

NOTE: When a device is disabled, the Syncro panel ignores the analogue value reported by the device. All other faults for the device (missing device, double address, internal fault, type changed, bad data etc.) are still reported by the Syncro panel.

Disable Sounders

This menu option is used to disable all sounder outputs fitted to the control panel. A sounder output is defined as any output that has been set to respond to the Silence and Evacuate panel commands. Sounder outputs may be directly wired to the control panel (Sounder circuit 1 to 4) or loop driven devices.

The Sounder Fault / Disabled LED indicator will be illuminated, as well as the General Disablement Indicator.

Disable Panel I/O

Any input or output connected directly to the Syncro panel may be individually disabled using this menu option. The panel inputs include the two front panel function buttons as well as the internal panel inputs. Panel outputs include three Auxiliary LED indicators on the front of the panel as well as the internal sounder, relay and routing outputs.

View / Restore Disablements

To cancel any disablements, there are two options. The first is to scroll through each individual menu option, then toggle any disablements to the normal condition. The second, preferred option, is to use the View / Restore Disablements option. This menu option will allow the user to scroll through all active disablements and individually enable each disablement by pressing the **Enter** button.

5.2 View Devices

This menu option permits the user to view all addresses connected to each detection circuit. For each address & sub-address, the LCD status display will give the device type, zone and location text. In addition, analogue devices will give an indication of the analogue value of the current device.

For digital input devices (Manual call points, switch monitor units etc) the input state is given, either as Normal or Activated. For output devices, the output state will be shown as either Off, Intermittent or Continuous.

This menu is used by experienced personnel to investigate the current status of the system and may help in fault finding techniques.

5.3 Test Zones

Each zone may be individually put in to a Test Mode condition. When test mode is selected, the devices in the zone may be tested and the Syncro panel will automatically reset after 3 seconds. This is used for one man testing of the fire system.

When a zone is put in to test mode, the user is prompted to select a number of test mode options. These options are retained for each zone, but may be changed at any time.

Sounders On – Off (Default = On)

When set to the ON position, all sounder outputs will sound for the duration of the fire event. The sounders will be muted when the panel automatically resets.

NOTE: On systems with a high number of Loop powered sounders fitted, all sounders may not be able to activate within the 3 second fire period and therefore loop sounder confirmation may be intermittent.

Panel Outputs On – Off (Default = Off)

When selected in the ON position, all panel outputs other than the sounder circuits will operate in accordance with their standard configuration. This includes the Fire and Fire Routing outputs as well as the Alarm relay contact.

Loop Outputs On – Off (Default = Off)

When selected in the ON position, all loop driven outputs other than the loop sounder outputs will operate in accordance with their standard configuration.

Include Call Points Yes – No (Default = No)

When selected to the ON position, all call points will also be included in the Test Mode for the zone. The normal use of this facility is to set the Include Call Points to No and test all smoke detection devices in the zone. At this stage, all call points will still operate and will take the panel out of test mode.

When all devices in the zone have been tested, then the zone is put into test, including call points. All call points can then be tested and will operate the test mode

When a zone (or zones) has been set to test mode, then a 15 minute timer is started. This timer will decrement and after 15 minutes the zone will be automatically taken out of test mode. Whenever a device is activated in the zone in test, the timer will automatically be reset to 15 minutes.

5.4 Set System Time

This menu option is used to set the panel date and time. This is necessary so that any events are accurately logged in the event log and on the panel printer (if fitted). The panel does not automatically compensate for daylight saving time.

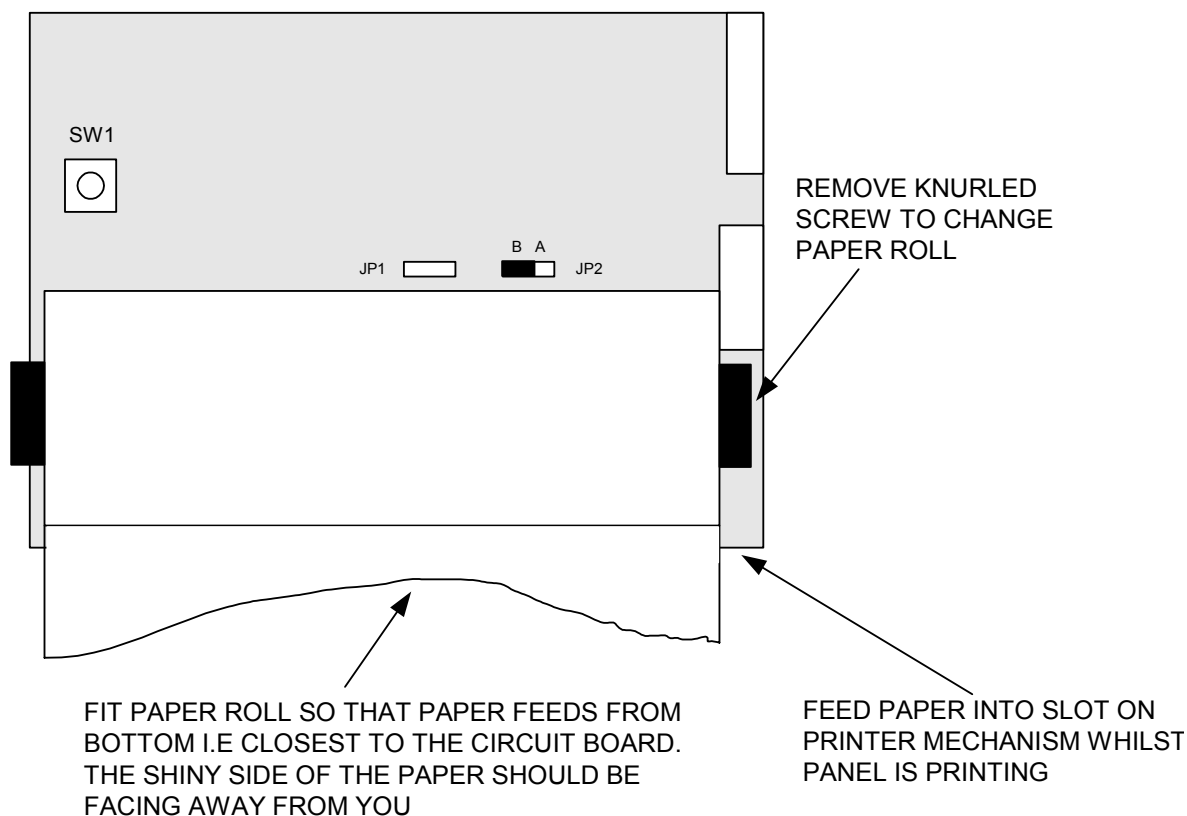
5.5 Access Level 3

This menu option is used to enter the access 3 password for the engineering function menu. Details of the options available at Access level 3 can be found in the Syncro commissioning manual.

6. Panel printer – replacing printer paper

The Syncro panel is available with or without an internal printer.

The printer is of the thermal type and requires heat sensitive paper rolls, which must be fitted the correct way around.



The printer is mounted on a hinge and must be lifted up by removing the nylon thumbscrews in the bottom left and right hand corners to fit a new paper roll.

To save on standby power, the printer is only powered when it has something to print. To feed the paper, start the panel printing the loop configuration or event log by using the panel's menus and feed the paper as shown above.