NOTIFIER®

INERTIA
FIRE SYSTEMS

INSTALLATION AND PROGRAMMING MANUAL

1010

2020

INTELLIGENT FIRE DETECTION AND ALARM SYSTEM

SOFTWARE VERSION 3.0
REVISION AUS 1

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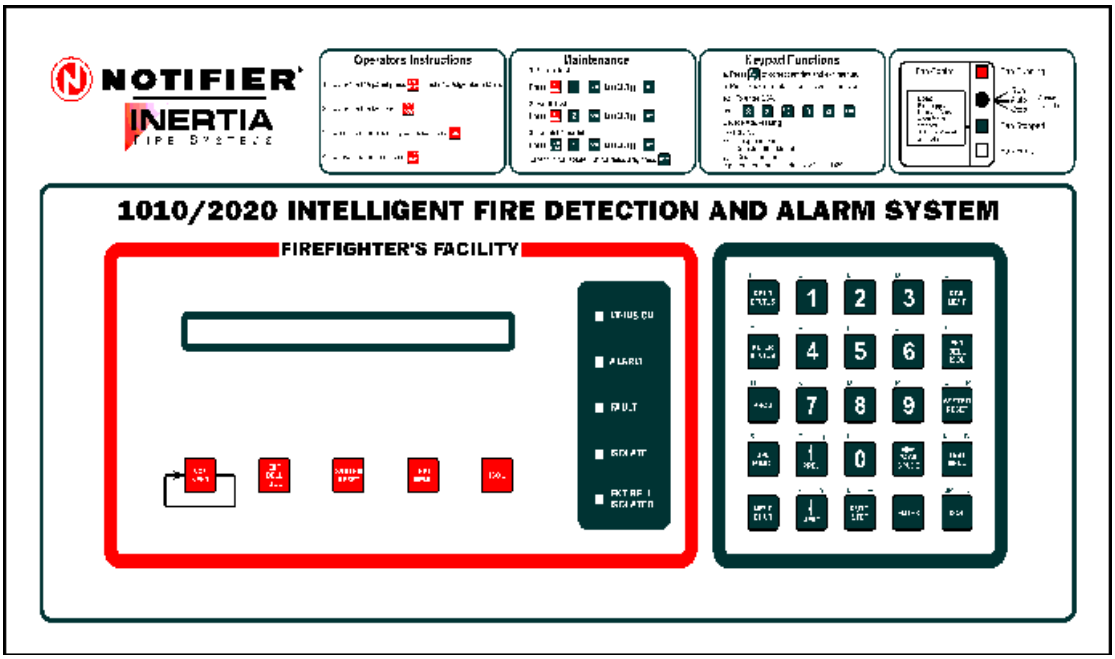
SECTION 1: INSTALLATION

PANEL OVERVIEW.

The following section describes the Keypad functions, the cabinet sizes, the 1010 (4 loop) and the 2020 (10 loop) Analogue Fire Detection System.

USING THE 1010/2020 DISPLAY INTERFACE ASSEMBLY (DIA)

THE KEYPAD



DESCRIPTION

The Keypad on the right has both Alpha and Numeric facilities for each button, in most cases to enter an Alpha character you may need to press the button more than once. In the case of entering Loop 3 Detector 33, you will need to use the Next Char button to advance the cursor on the LCD display between each keystroke, as D and the number 3, share the same button.

THE "ACK NEXT" BUTTON

When pressed allows you to scroll through the list of Alarms, Faults and Isolates on the LCD display, the "ACK NEXT" button is also used to acknowledge any alarms or faults that may appear on the LCD display

THE "EXT BELL ISOL" BUTTON

"EXT BELL ISOL" will isolate all CON and FORC type outputs flagged with "Bell Isolate". This is to prevent the main bells from ringing during routine testing. Also once an alarm has been acknowledged, you can press the "EXT BELL ISOL" button, and the bells will silence and remain silenced. If automatic bell cut-off is set, then once the cut-off is initiated the EXT BELL ISOL will remain isolated until a system reset. If bell cut-off is not set, the EXT BELL ISOL can be toggled on/off by pressing the button.

Please also refer to TDLY setting in programming section for further information on Bell Isolate Inhibit and Automatic Bell Cut-off Times.

THE "SYSTEM RESET' BUTTON

Once all alarms have been acknowledged, the "RESET" button can be pressed, and the panel will return to all systems normal, unless the alarms are still present, in which case the panel will go back into alarm.

THE "TEST MENU" BUTTON

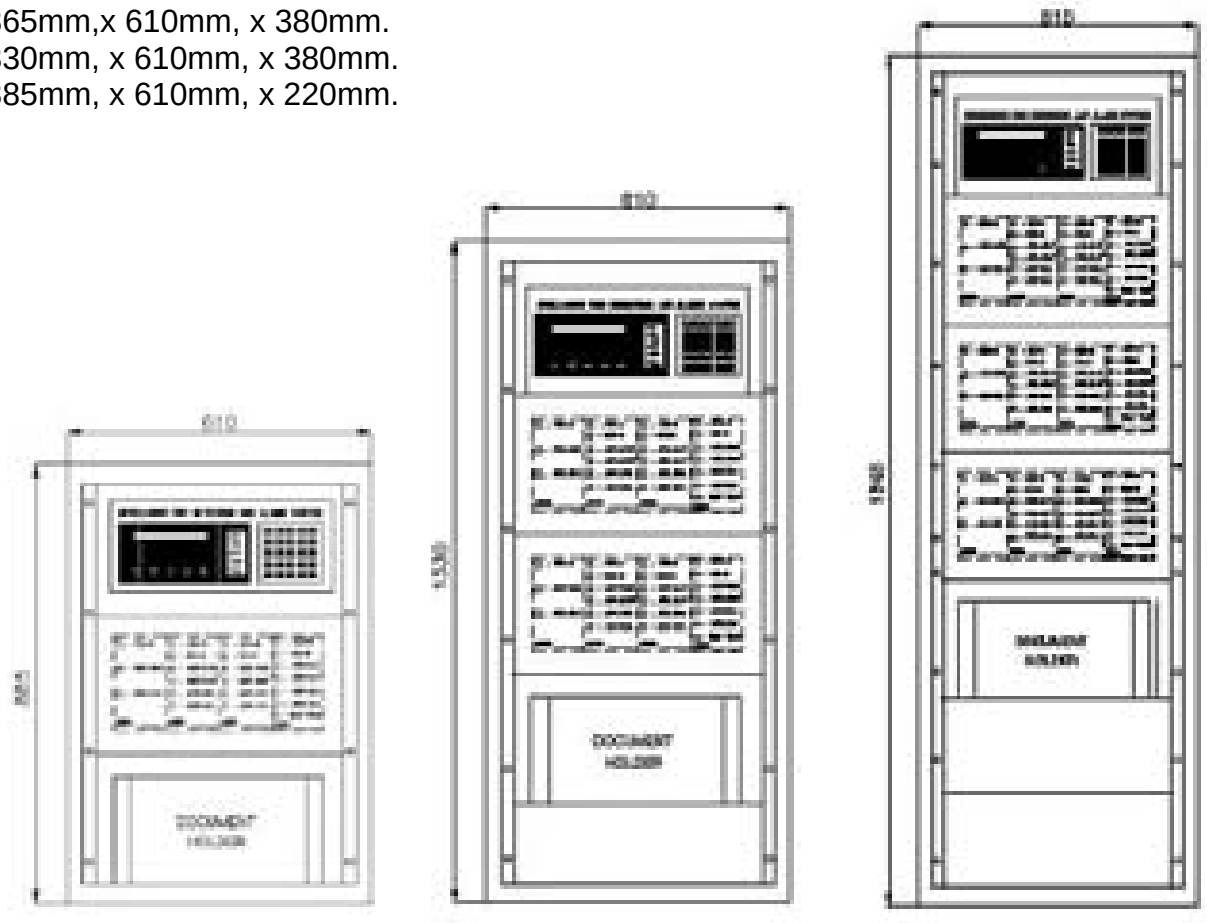
Allows you to enter a detector to place into alarm

THE "ISOL" BUTTON

This facility allows you to isolate the currently displayed device in alarm.

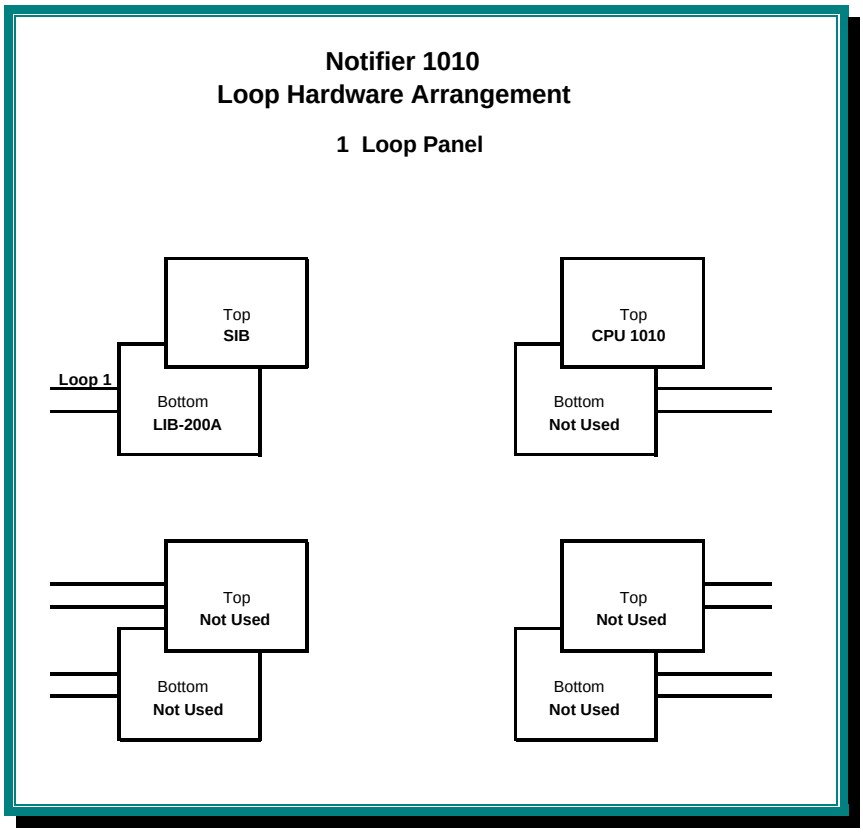
CABINET SIZES

There are three sizes of cabinets:
1/ 1865mm,x 610mm, x 380mm.
2/ 1330mm, x 610mm, x 380mm.
3/ 885mm, x 610mm, x 220mm.

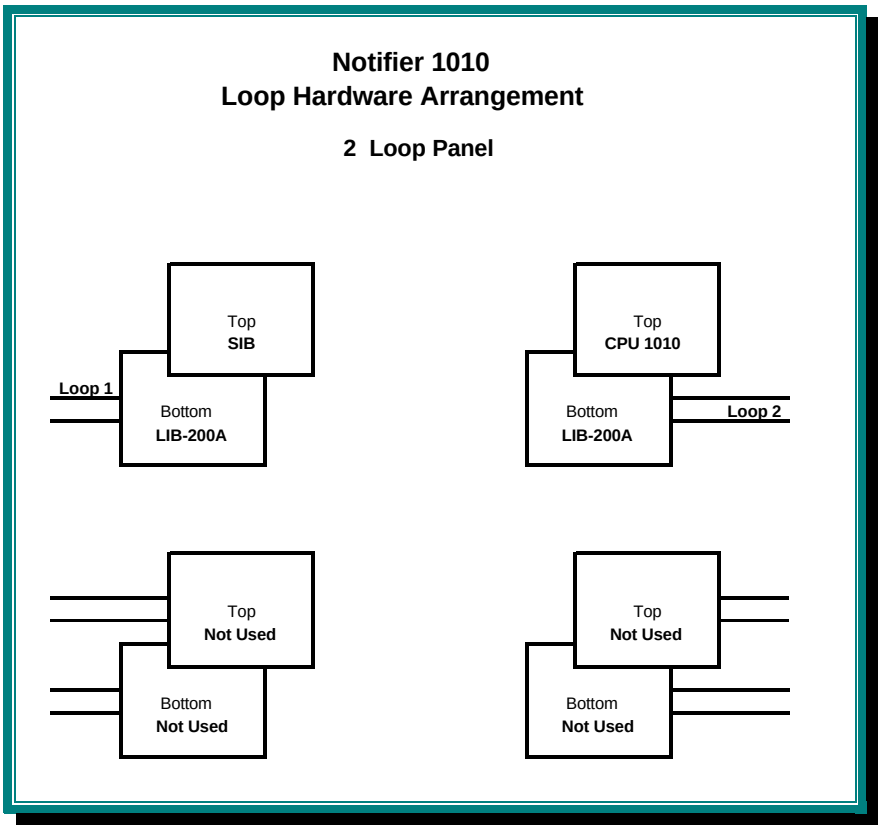


LOOP TERMINATIONS FOR THE 1010 FIRE INDICATOR PANEL

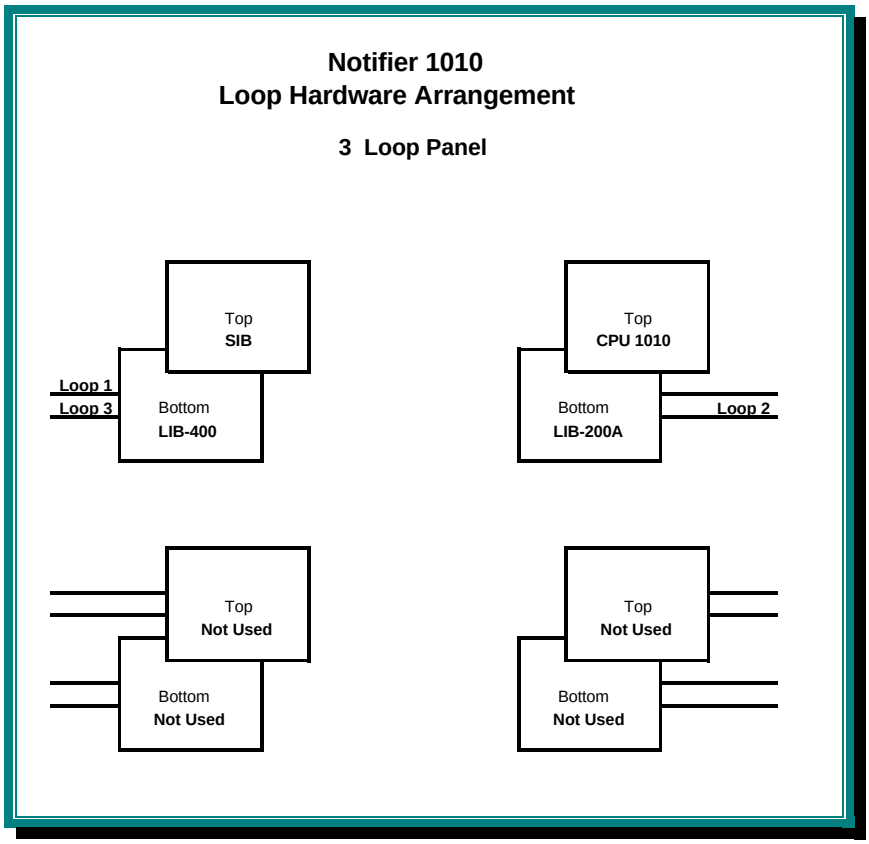
1010 PANEL – 1 LOOP



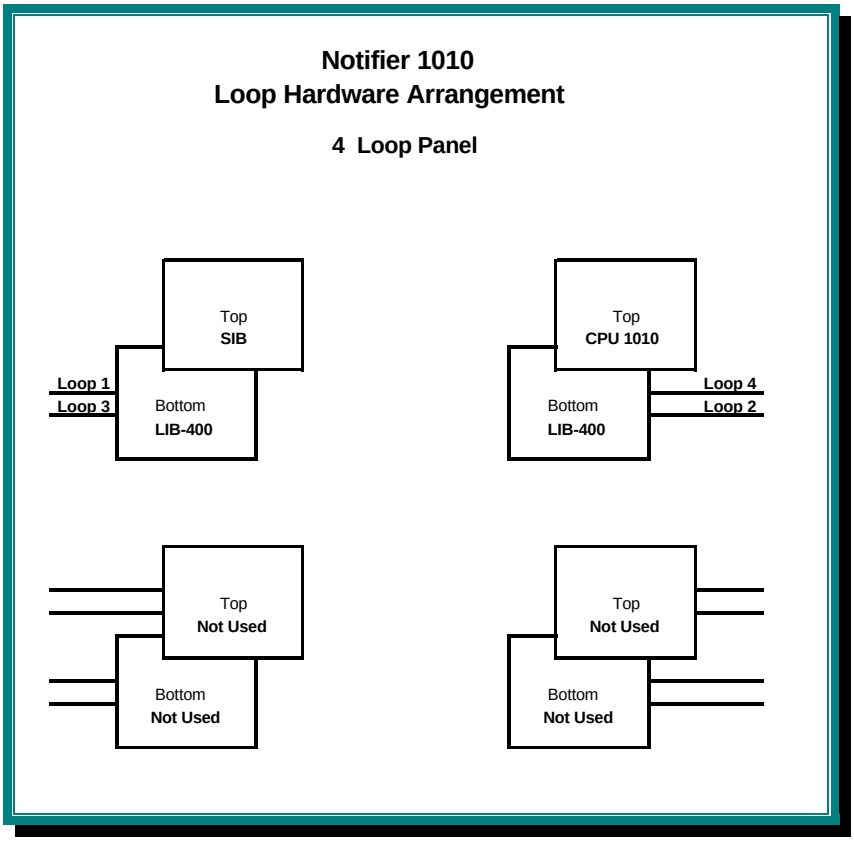
1010 PANEL – 2 LOOPS



1010 PANEL – 3 LOOPS

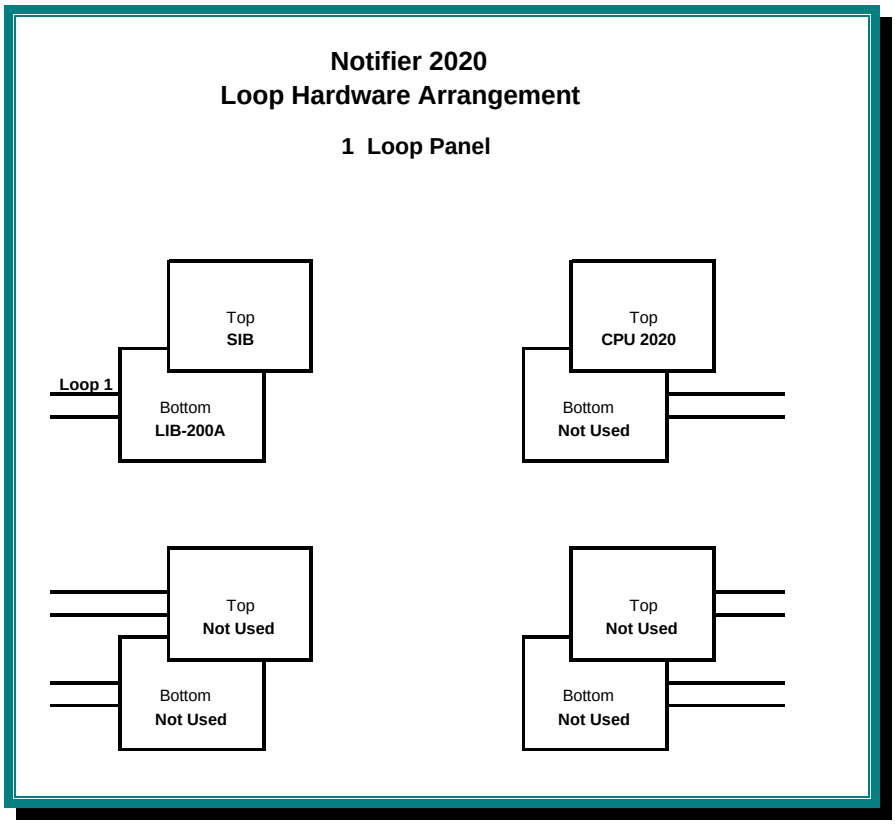


1010 PANEL – 4 LOOPS

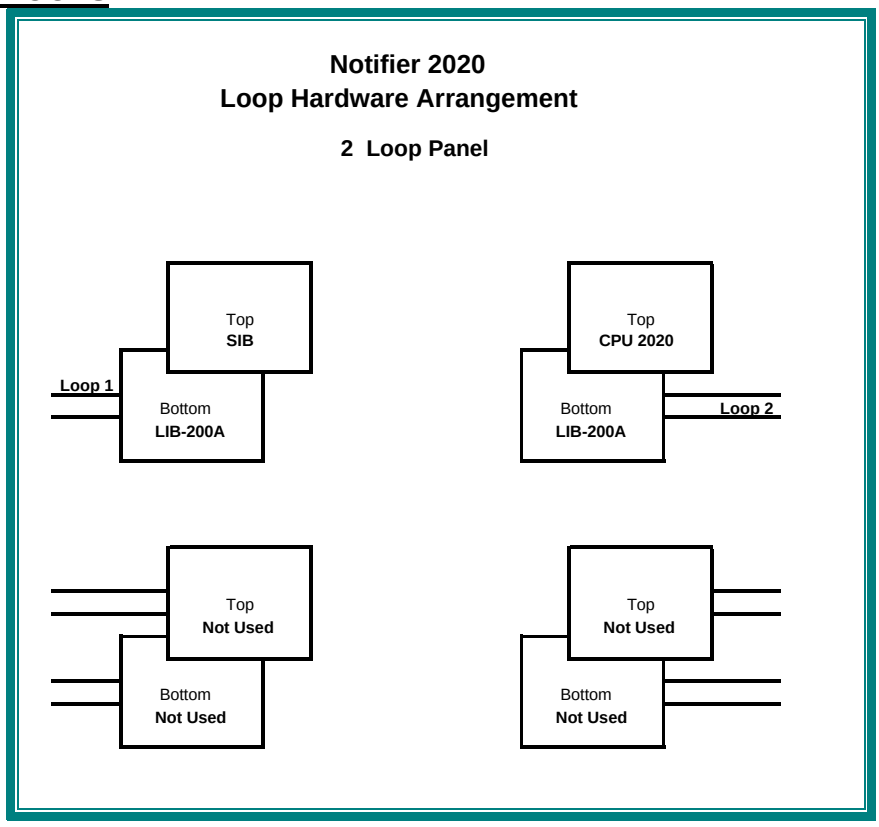


LOOP TERMINATIONS FOR THE 2020 FIRE INDICATOR PANEL

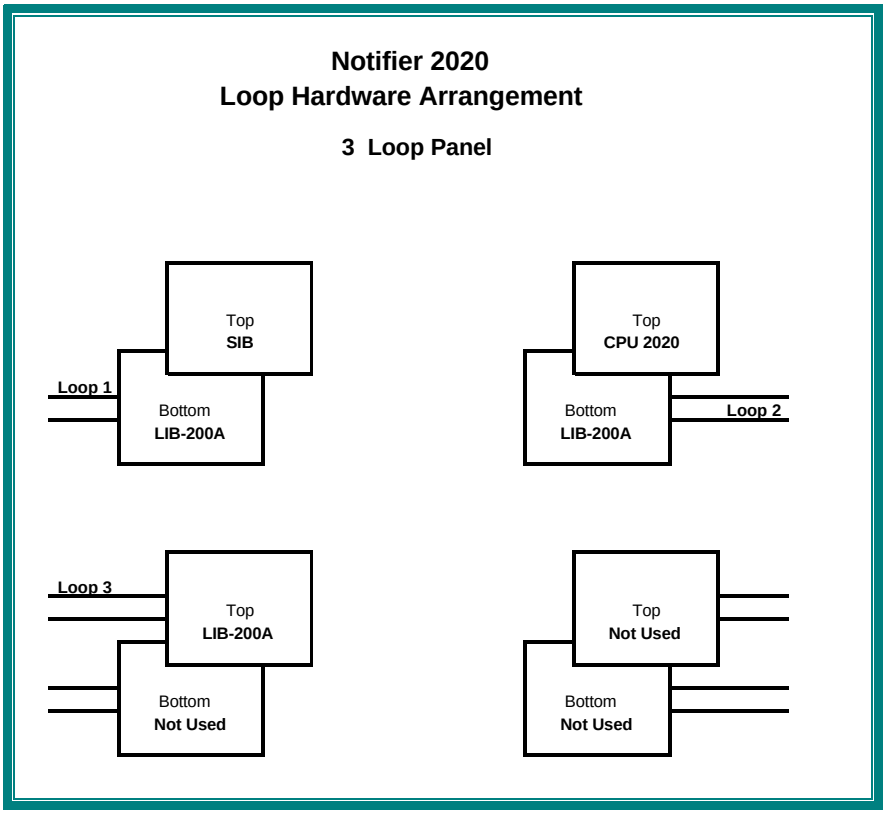
2020 PANEL – 1 LOOP



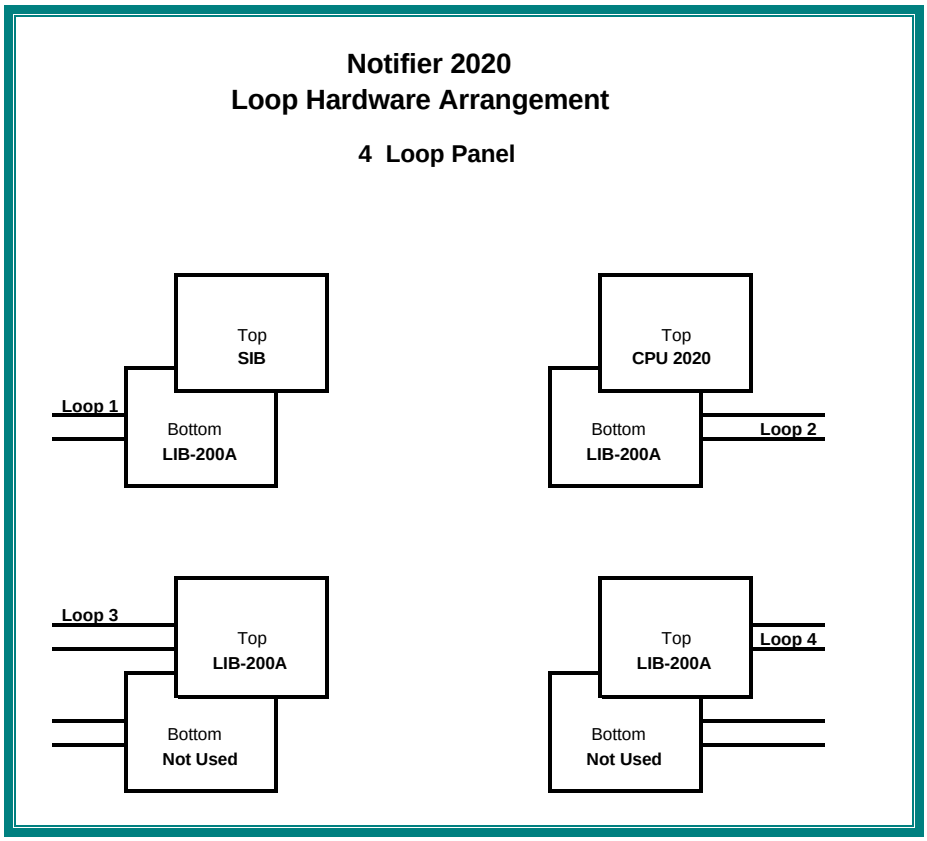
2020 PANEL – 2 LOOPS



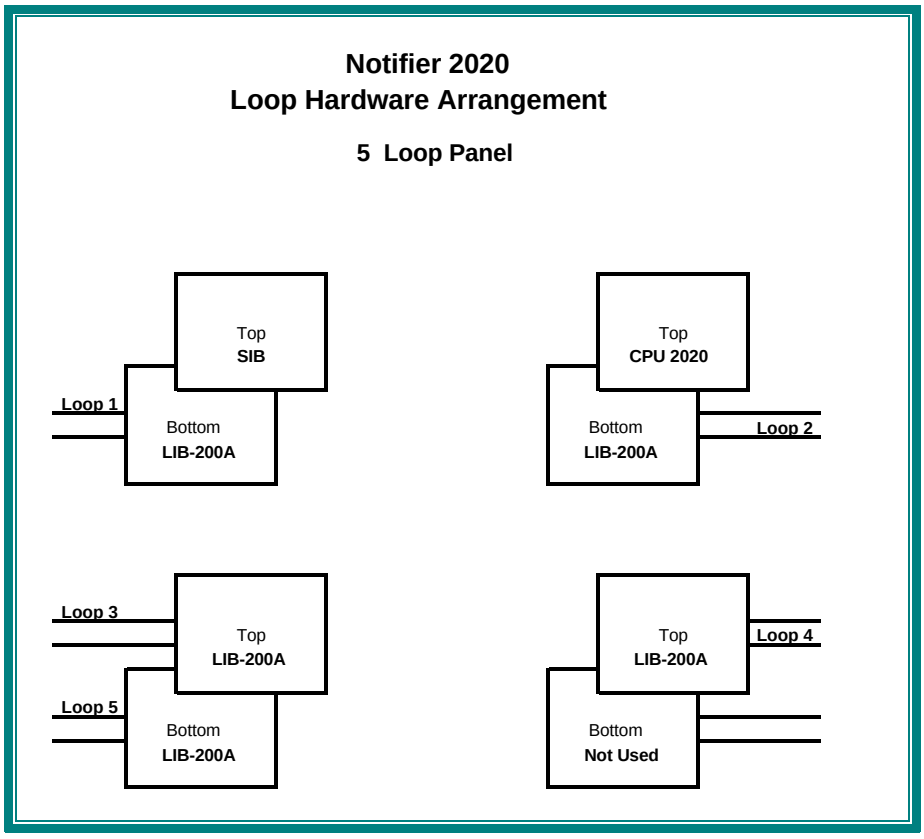
2020 PANEL – 3 LOOPS



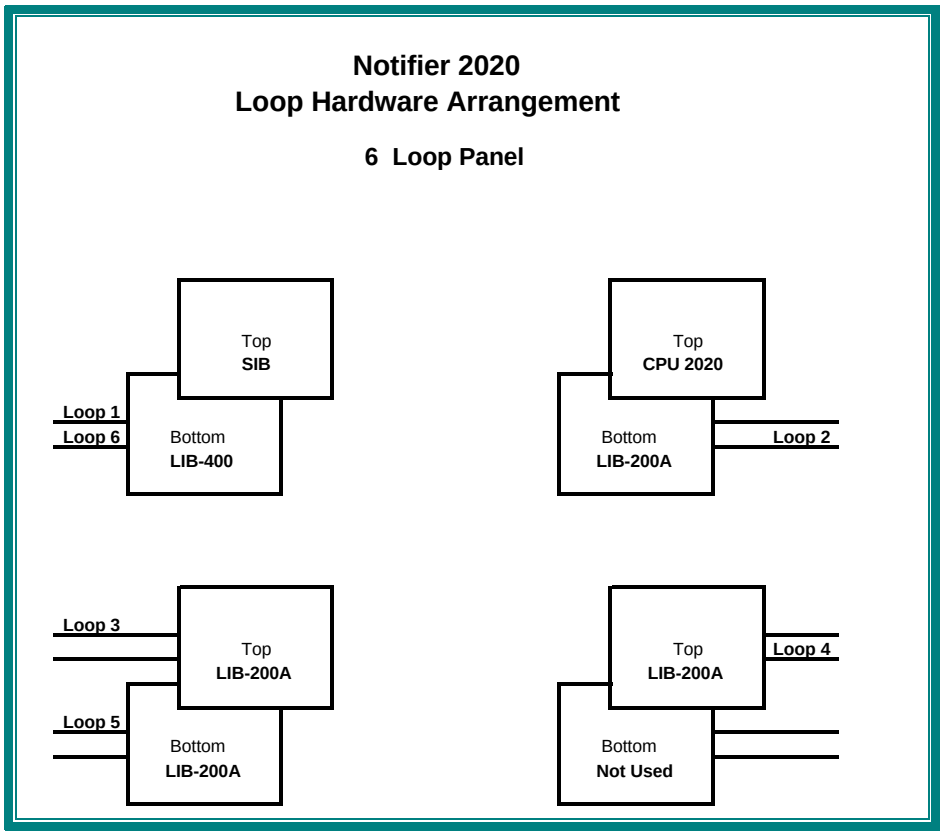
2020 PANEL – 4 LOOPS



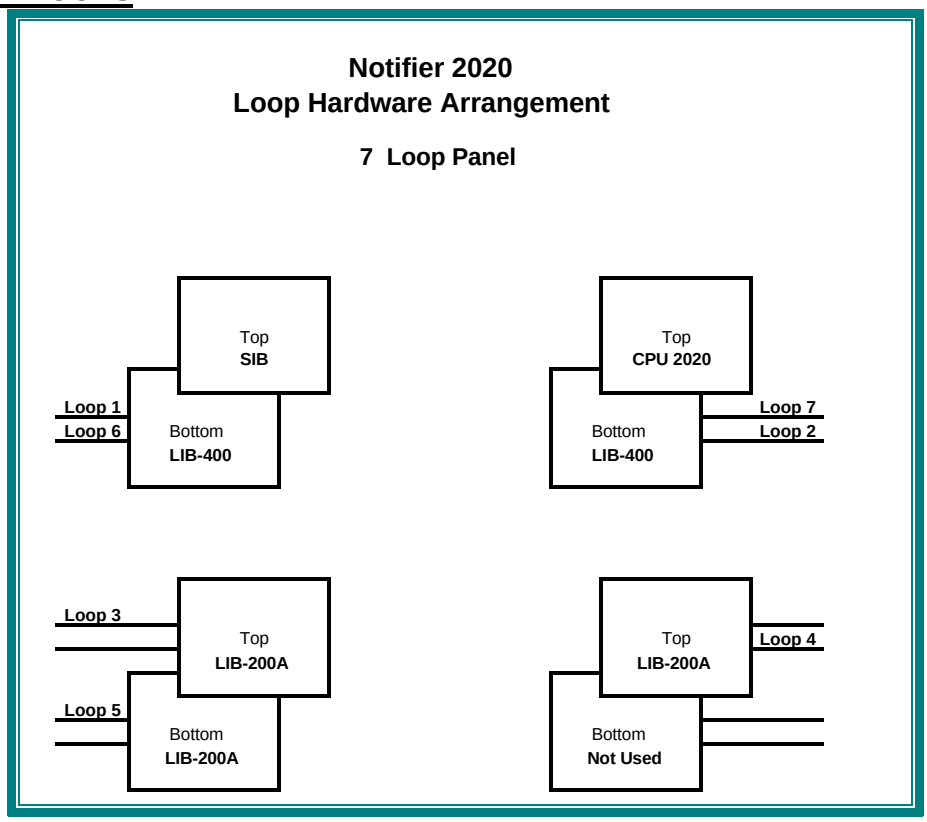
2020 PANEL – 5 LOOPS



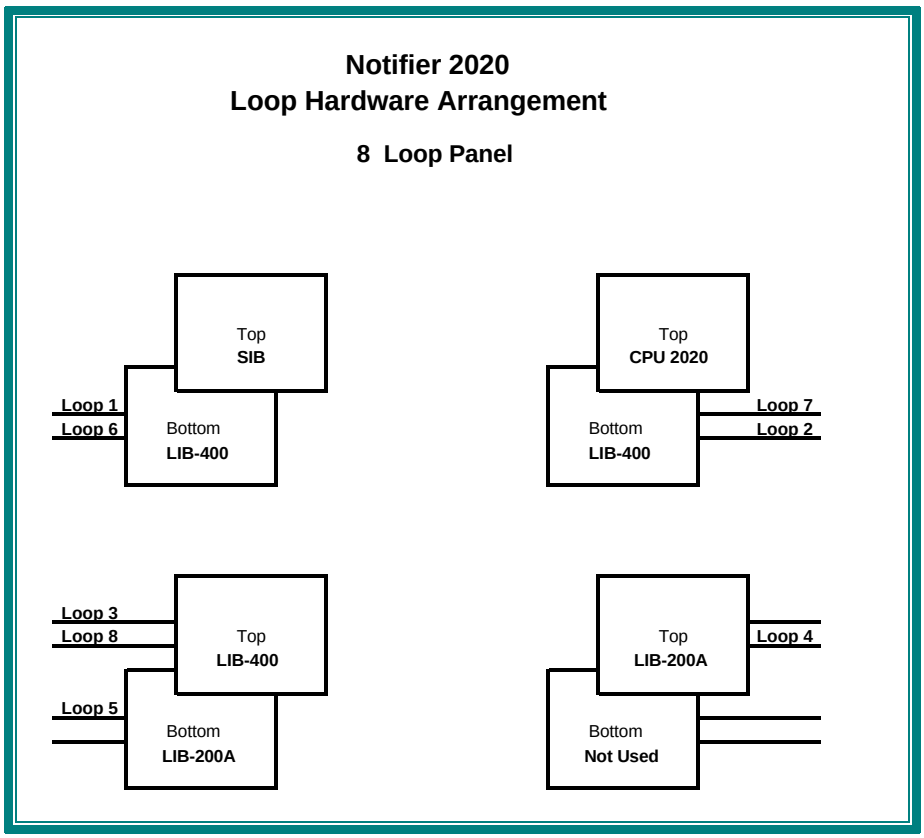
2020 PANEL – 6 LOOPS



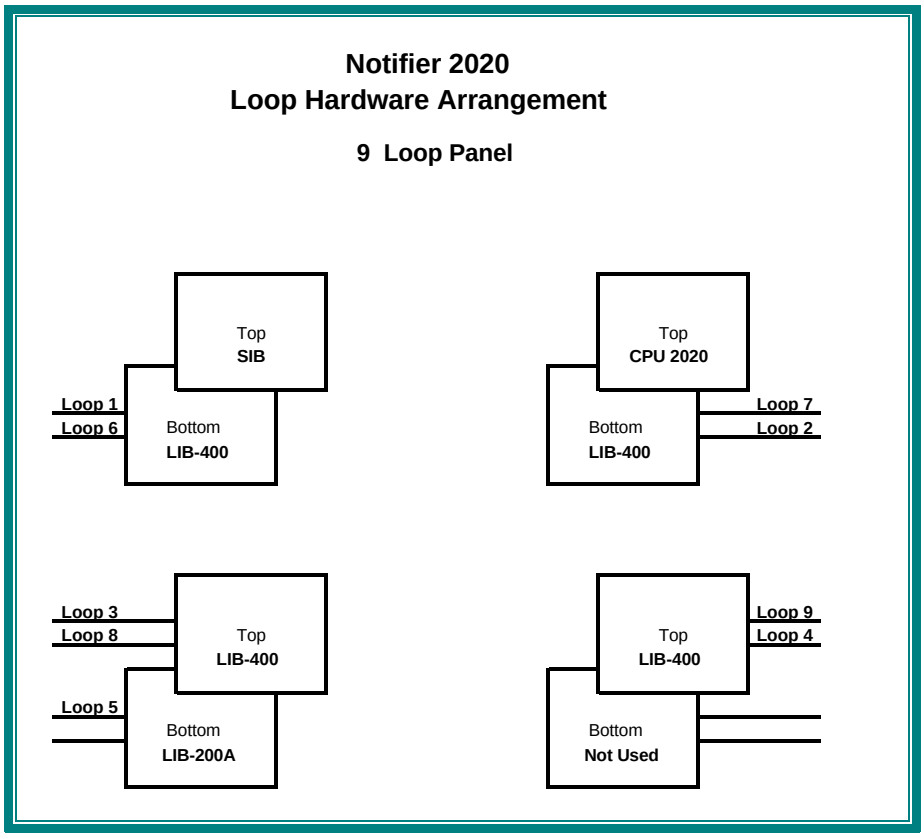
2020 PANEL – 7 LOOPS



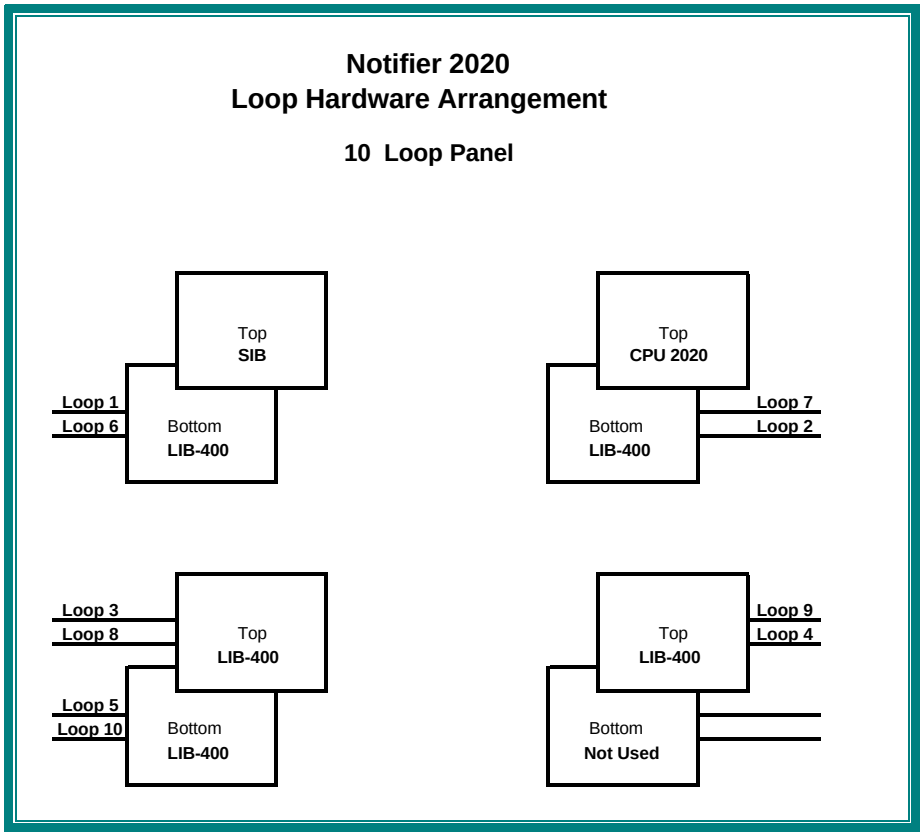
2020 PANEL – 8 LOOPS



2020 PANEL – 9 LOOPS



2020 PANEL – 10 LOOPS



LOOP WIRING SPECIFICATION

EXPLANATION OF LOOP BOARDS.

The LIB-200A is a 1-loop board for the 1010 & 2020 panel and can support 99 detectors and 99 modules. The field wiring is electrically isolated from the rest of the system so that any two-ground faults on separate loops will not cause invalid replies from devices. A short to any other system circuit will not cause communication loss. The LIB-200A has an earth fault detection circuit with selectable high/low sensitivity and isolate. The LIB-200A has two LED's; yellow displays earth fault and red indicates alarm condition.

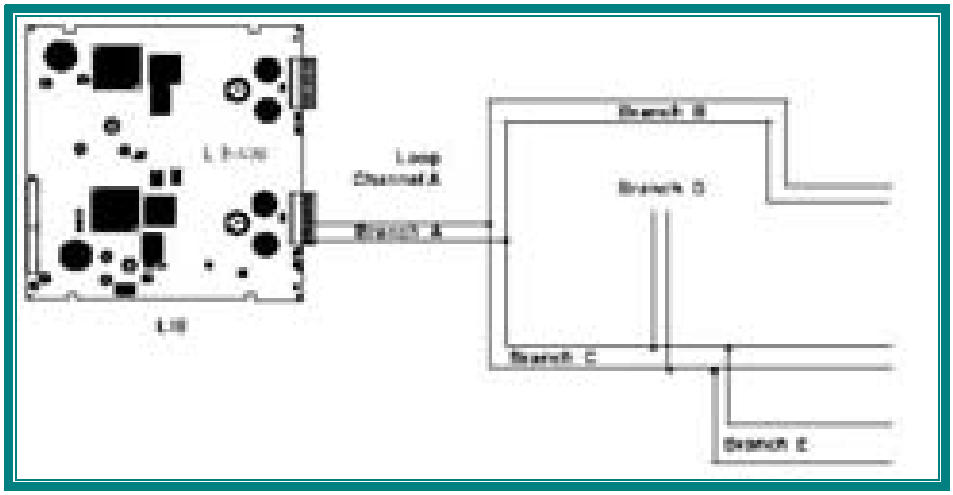
The LIB-400 is a two Loop version, and has the same features as the LIB-200A,

LOOP WIRING SPECIFICATION

The recommended wiring to be used is two core twisted pair, .75mm^2 minimum.

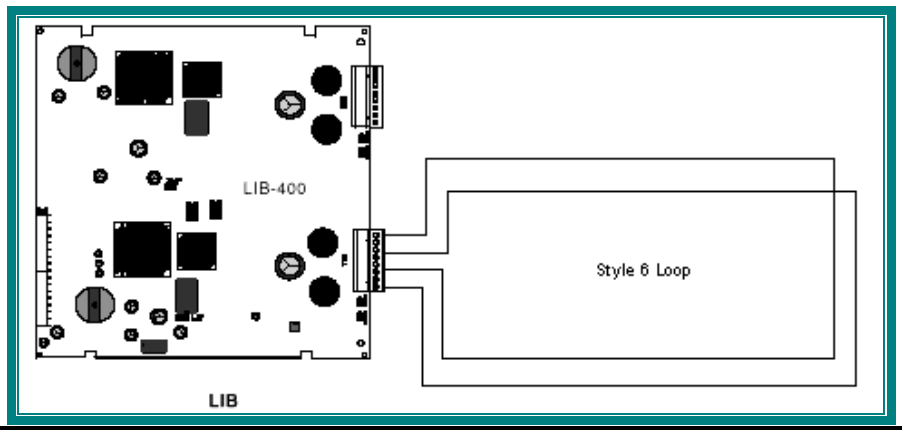
Style 4. (Loop does not return to the panel)

Port A, (Channel A) 3800M maximum, 50 Ohms resistance maximum.
Port B, (Channel B) 3800M maximum, 50 Ohms resistance maximum



Style 6. (Closed loop, returning to panel)

Total Loop, 3800M maximum, 50 Ohms resistance maximum.



COMMON FAULT FINDING TECHNIQUES

If using optional shielded twisted pair cable to minimise radiated emissions of radio frequency energy, do not allow the shield drain wire to enter the cabinet. Connect the drain wire to the outside of the cabinet via an earth type connector. Maintain the continuity of the shield wire throughout the loop but do not connect to any devices, and only earth one end.

Before connecting the loop to the LIB-200A or LIB-400 card, carry out the following tests;

1. Check continuity of loop wiring, by placing a short on one end and reading the short with a multimeter at the other end.

2. Check the loop resistance, same as above (be sure to set the multimeter to ohms), the loop resistance cannot exceed 50 ohms, which is 25 ohms per leg. (See examples above).

3. Check for devices incorrectly wired, set the multimeter to diode Test, and place the leads on the cable, the reading should be approx. .645,- reverse the leads- now the reading should be approx. 1.2 or higher, if both readings read low- this indicates a device incorrectly wired, or a short on the wiring. Note**:** (Each device has a diode installed)

4. Voltage reading, set the multimeter to D.C. volts and read the voltage at the loop card before connecting the loop, the reading should be approx. 24 volts, now connect the loop, the reading should now be 15-16 volts. If the voltage goes down low this could indicate a short on the line, or there is a device incorrectly wired (possible Reverse polarity), find the device and correct the loop connections at that device.

5. Earth Fault test, Select ohms on the multimeter and check between each leg of the loop and earth, if the reading falls below 50,000 ohms, an earth fault will appear on the loop when connected, find the cause of the earth fault and rectify. (Possible causes of an earth fault are moisture, inadequate insulation from surrounding building, equipment or materials).

NOTE:

A note on ‘Loop Resistance Measurement’, when ISO-X devices are present. When power is removed from the Loop, the positive side of the circuit is opened at each ISO-X isolation module. To measure the Loop resistance, temporarily place a jumper between Terminals 2 and 4 on each ISO-X while taking measurements. Remember to remove all the jumpers and test all isolator modules when you have finished taking the readings.

NETWORK WIRING SYSTEMS

The Noti-fire-net network wiring system is to be wired in 1.5mm^2- 2core twisted pair (no shield) The network cable can run up to 1 klm between nodes (Each Fire Panel is a Node). For optimal performance, Noti-fire Net should be run in a closed loop (style 6), however, Noti-fire-Net does have the ability to run in an open-ended format (style 4). The cable is terminated on to a network card (see the Noti-fire-Net manual for termination data).

RS-485 AND RS-232 CIRCUITS

The 1010/2020 has multiple RS-232 and RS-485 circuits, the illustrations below show the positions and where to find them.

RS-485 circuits used for Annunciators wired outside of the Panel, are to be wired in 2 core Twisted Shielded. Total RS485 run should not exceed 1.5 k's in length. A second 2-core twin for 24Vdc is also required for powering the Annunciators. (The last Annunciator must have a 120-ohm resistor fitted across the RS-485 circuit). The shield must be earthed at the panel end, to the nearest earth point immediately inside the Panel.

RS-485 circuits used for Terminal mode operation (LCD-80tm direct from the DIA) wired outside the Panel, are to be wired in 4 core Twisted Shielded, or 2 x 2 core Twisted Shielded, and 2 core twin for power supply requirements if needed. (The last Annunciator must have two 120-ohm resistors fitted across the RS-485 circuits) The shields must be earthed at the Panel end, to the nearest earth point immediately inside the Panel.

RS-232 circuits used for printer's etc, wired outside of the Panel, are to be wired in Twisted Shielded wiring and not to exceed 15 mtrs in length. The shield must be earthed at the Panel end, to the nearest earth point immediately inside the Panel.

The following illustrations indicate the connection points for RS-485 and RS-232 circuits.

PRINTER CONNECTIONS

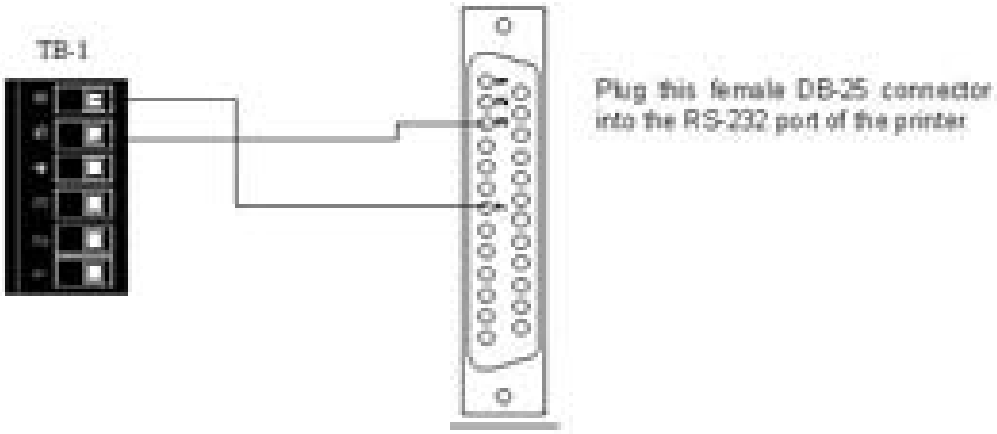
The following section indicates the terminations required, connecting a printer to various points on the 1010/2020 Fire Panel.

When converting to a DB9 or a DB25 pin connector, follow the tables below for connection details.

	DB9	DB25
Conversion from a DB9 to a DB25	Rx pin 2	Rx pin 3
	ref pin 5	ref pin 7
	Tx pin 3	Tx pin 2

CONNECTING A PRINTER DIRECTLY TO THE DISPLAY (DIA)

RS-232 from DIA card to Printer

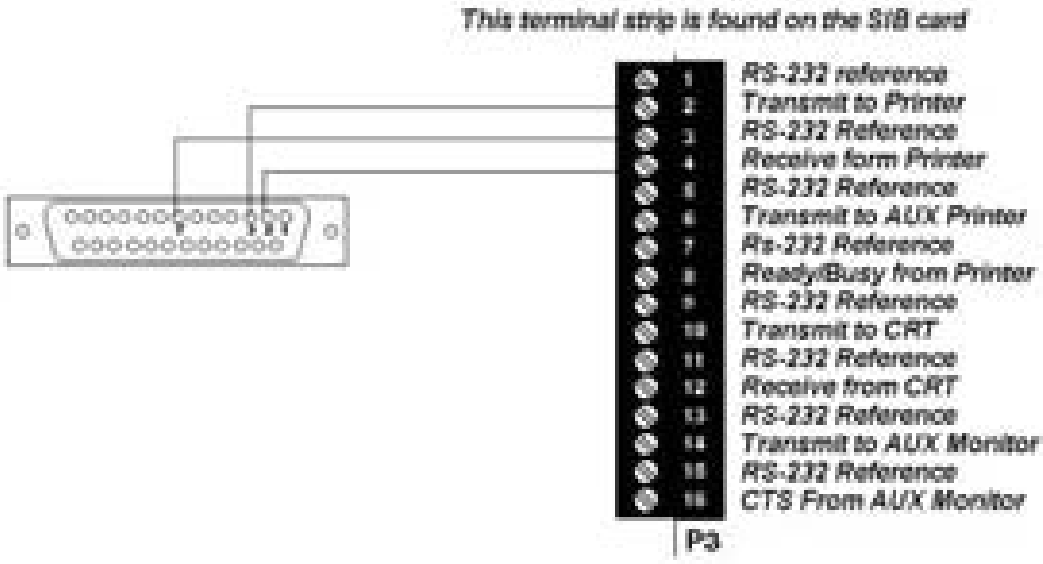


DIA	DB9	DB25
5 Tx	Rx pin 2	Rx pin 3
6 ref	Ref pin 5	ref pin 7

This printer connection is a Non Monitored Non Supervised port, and one directional. The printer will print whatever appears on the LCD.

CONNECTING A PRINTER TO THE SIB BOARD

SIB-NET/SIB-2048A RS-232 “Printer” Terminal Designations



SIB	DB9	DB25
2 Tx	**Rx 2**	**Rx 3**
3 ref	**Ref 5**	**ref 7**
4Rx	**Tx 3**	**Tx 2**

This printer connection will print events and reports from the system as requested, and this connection is monitored.

CONNECTING A LAPTOP IN TERMINAL MODE TO EMULATE A PRINTER

A Laptop computer can be used in lieu of a printer for uploading the history file or capturing reports from the fire panel.

Set the Laptop up in terminal mode, and connect as per the instructions above for connecting a printer to the SIB card. (Terminals 2, 3, & 4).

Place the Laptop in "terminal mode" (Hyperterm or equivalent) and set with the following options for the COM port.

2400 Baud.
7 Data bits.
1 Stop Bit.
Even Parity.
Xon/Xoff handshaking.

Select "Capture text to file" in the Terminal Mode program on the Laptop.

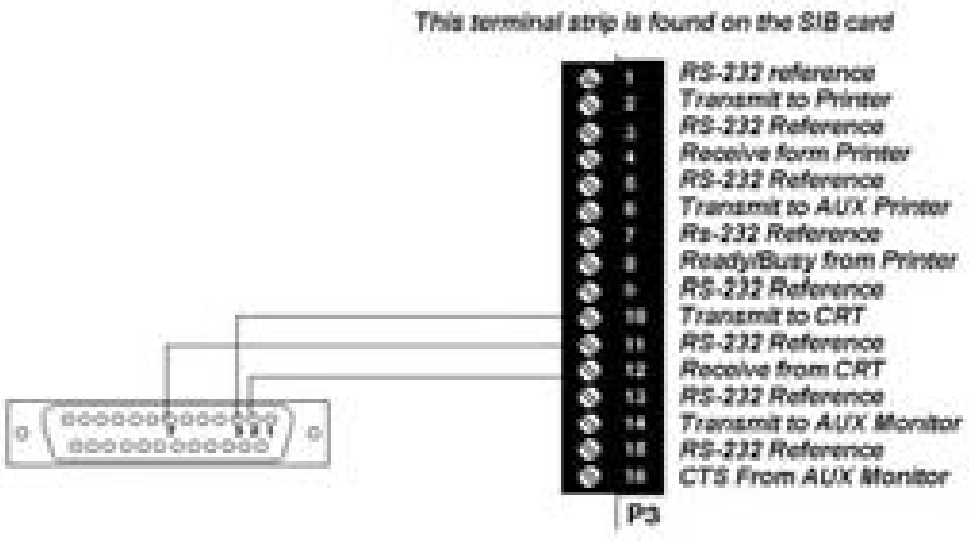
Then Press the Special Function button on the 1010/2020 Panel,
and press "2=HIS", and follow the prompts.
The 1010/2020 panel will now upload the entire history log to the Laptop computer which can then be saved to disk for permanent records.

TERMINAL MODE PROGRAMMING FROM A LAPTOP COMPUTER

A Laptop computer can also be used in Terminal Mode to operate and program the panel in lieu of using the system keypad. This makes for much faster input of device descriptions etc when not using Verifier ™.

Terminal Mode Settings:

2400 Baud.
7 Data bits.
1 Stop Bit.
Even Parity.
Xon/Xoff.

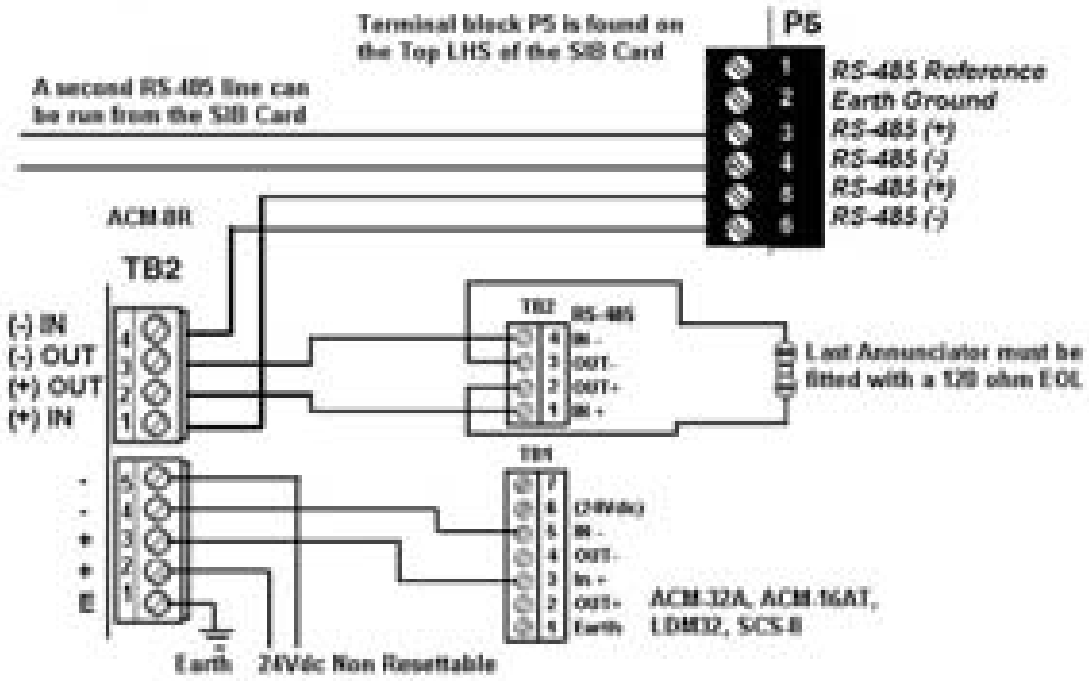


SIB	DB9	DB25
10 Tx	Rx 2	Rx 3
11 ref	Ref 5	ref 7
12 Rx	Tx 3	Tx 2

Contact Notifier Inertia Fire Systems for Function key setting in Terminal Mode.

ANNUNCIATOR TERMINATIONS

RS-485 FROM SIB CARD TO ANNUNCIATORS



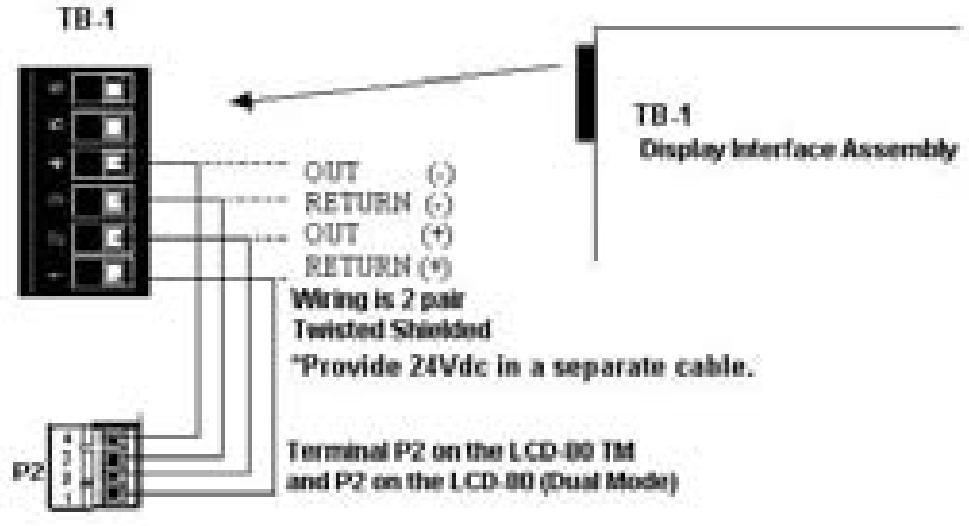
The RS-485 circuit must be wired in 2 core twisted pair, and can be run to a distance of 1.5 klms, The 24Vdc must be from the Non-resettable terminals on the power supply, or a remote 24Vdc-power supply can be used.

A record of any external power supplies used must be placed within the 1010/2020 enclosure, preferably in a place easily recognisable to service personal.

LCD-80TM Connection

The LCD80TM is a terminal mode remote LCD mimic. Ie: It displays whatever is on the main LCD.

RS-485 TO AN LCD-80TM

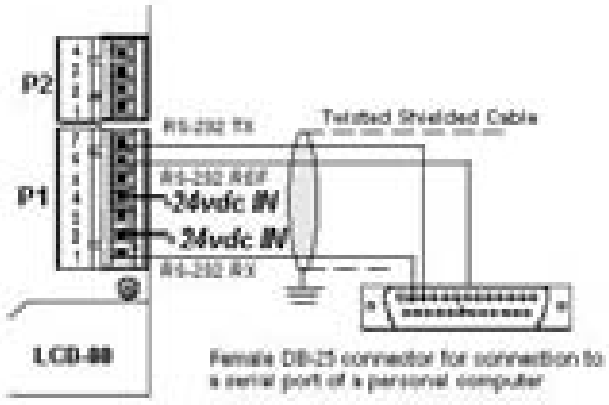


CONNECTING AND PROGRAMMING AN LCD-80 (ACS MODE) FROM A LAPTOP

The following section details the programming procedure for programming LCD-80 (Dual Mode) Mimics. Note the terminations for a DB-9 or DB-25 pin connector.

LAPTOP TO LCD-80 TERMINATIONS

LCD-80	DB-9	Db-25
1 Rx	3 Tx	2 Tx
6 ref	5ref	7 ref
7 Tx	2 Rx	3 Rx



Programming outline:
Remove 24vdc power.
Connect the RS-232 interface to the Laptop as shown above.
Reconnect 24vdc to the LCD-80
Insert the PK-1 Programming Key onto the connector P6.
Program the LCD-80.
Exit Program mode by removing the Programming Key.

The Laptop must be in “terminal mode” and set with the following options:

2400 Baud.
7 Data bits.
1 Stop Bit.
Even Parity.
Xon/Xoff.

The LCD-80 now is ready for programming

PROGRAMMING CUSTOM MESSAGES

Once in Program mode, the LCD-80 ceases all communication on the RS-485 and waits for commands from the RS-232 circuit. The LCD-80 screen will display:

READY FOR PROGRAMMING

Configure the Laptop in Terminal Mode, and it will display:

ENTER 1 to 9 FOR 9 CUSTOM MESSAGES OR 0 FOR CUSTOM POINT LABEL:

Any one of the nine custom messages may be programmed by pressing the respective number followed by ENTER on the keyboard. The LCD-80 screen and the display monitor will display either a default message or whatever message was last stored in the unit. Text cannot be immediately entered since the cursor starts at the end of the message. The LCD-80 programmer must edit the message using the backspace key, then enter a new message.

Once the message has been edited, press the ENTER key to store the message.

The screen will return to the display,

READY FOR PROGRAMMING.

These custom messages have various character widths and are displayed under different conditions present within the fire alarm system.

Message Number	Conditions under which each message will be displayed
1	Standard display banner for the LCD-80.
2	Displayed under Normal conditions
3	Displayed when communications between LCD-80 and the control panel have been interrupted.
4	Displayed under all Alarm conditions.
5	Displayed under all Fault conditions.
6	Messages 6 through 9 are not displayed on the LCD-80. These messages are sent to a printer connected to the LCD-80.
7	
8	
9	

ENTERING CUSTOM POINT LABELS

Custom point labels may be programmed by entering "0" from the initial program prompt.

ENTER 1 to 9 FOR 9 CUSTOM MESSAGES OR 0 FOR CUSTOM POINT LABEL:

Select “0”

A second prompt will be displayed on the computer monitor.

LCD-80 set for 20-character labels:

ENTER 1 to 128 FOR CUSTOM POINT LABEL (20 CHARACTERS):

where 1-128 represent zones in the control panel.

Once a point number has been entered, the LCD-80 screen will display either the custom zone message or the last stored point message. The label may be changed by backspacing over the existing label and typing a new one.

Once the message has been changed or entered satisfactorily, press ENTER to store the message. The LCD-80 screen will retain the previous point label information while the monitor display will return to the 40-character custom label prompt:

ENTER 1 to 128 FOR CUSTOM POINT LABEL (40 CHARACTERS):

Continue to enter point label information or press ESC to return to the initial programming prompt:

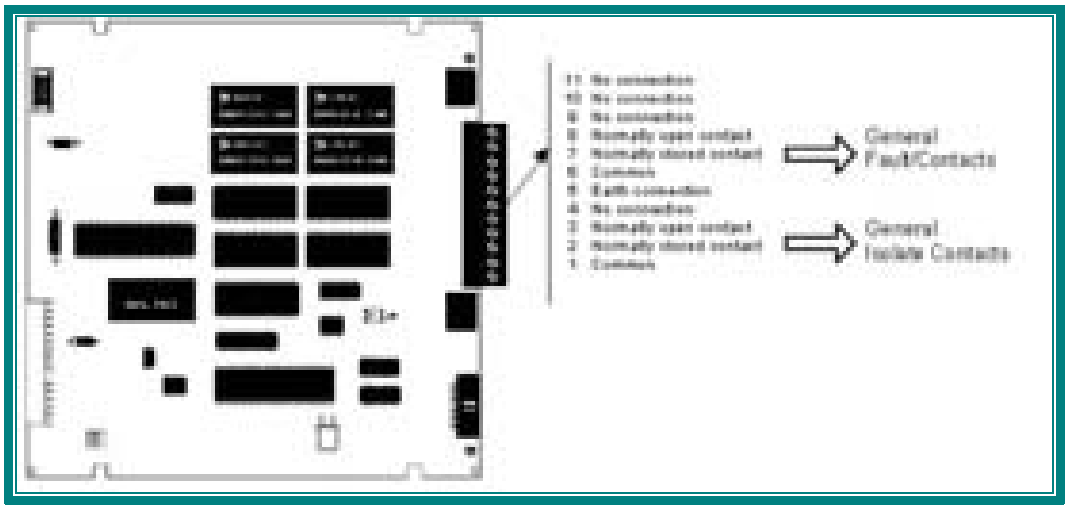
ENTER 1 to 9 FOR 9 CUSTOM MESSAGES OR 0 FOR CUSTOM POINT LABEL:

Once all programming of the LCD-80 has been completed, remove the Programming Key.

See the next section for setting the switches for the LCD-80 in Programming Mode.

CPU TERMINATIONS

CPU 1010/2020 General Isolate and General Fault Relays



POWER SUPPLY TERMINATIONS

Secondary Power
27.6 V DC, supervised and power-limited.
Fast charge = 2 amps,
Trickle charge = 20 mA.

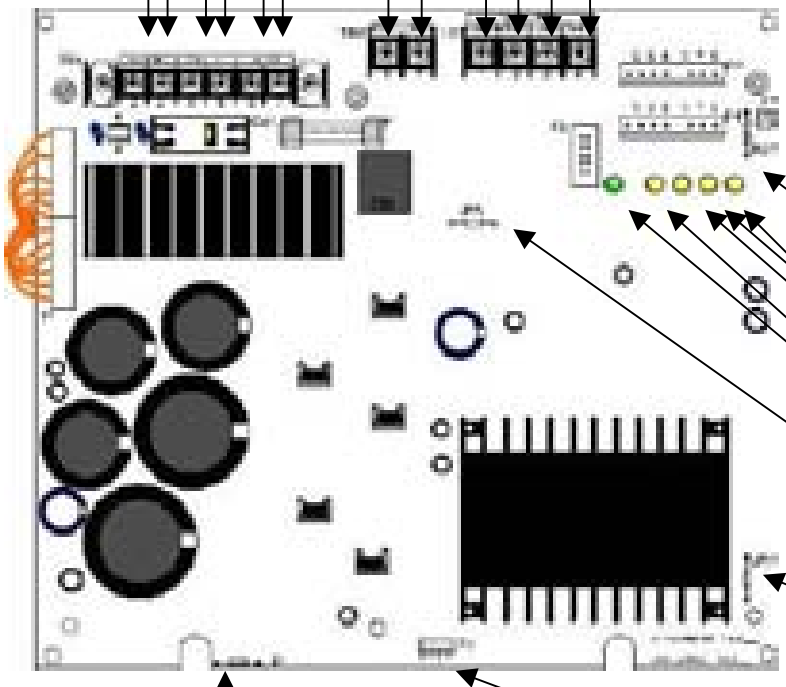
Resettable Power
24V DC (20.4-26.4, 200 mV ripple), 1 amp maximum. Filtered and resettable. Power-limited.

Battery

Non Resettable Power
Power-limited, filtered, non-resettable, 3 amps (in alarm) maximum. JP5 may be cut to convert this power (TB3 Terminals 3 and 4) to a resettable, 2-amp maximum circuit. This output can also be used to power ACS series Annunciators (do not cut JP5).

Active
Neutral
Earth

Circuit Breaker and Fuse are by- passed for use in Australia



Cut R27 to disable Earth Fault Detection.

LED Indicators
Earth Fault
Battery Fail
AC Power Fail
NiCad High Charge Rate

JP5: Cut to make notification appliance power on TB3 Terminals 3 and 4 a resettable 2-amp maximum circuit.

JP2: must be cut otherwise a short on the 24vdc power (Terminals 3 and 4) would register incorrectly as a loss of primary (AC) power.

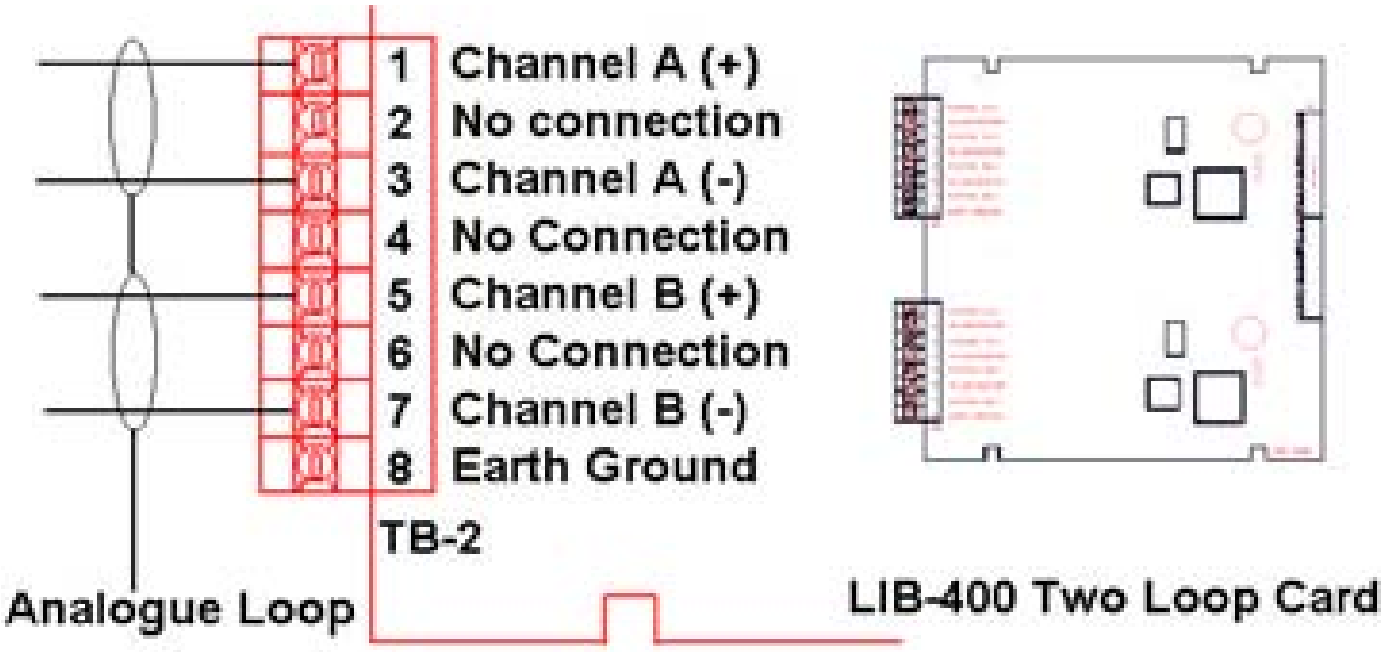
JP1: When employing an NR45-24/E or CHG-120, Remote Battery Charger, JP1 must be cut.

MPM-2 Voltmeter/Ammeter Connector

TERMINATING THE LOOP AND DEVICES ON THE LOOP

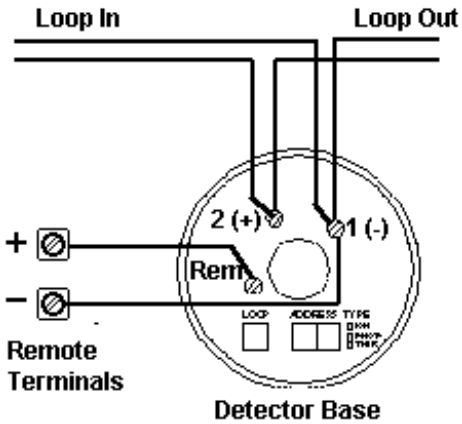
PLEASE NOTE:
The following examples are the actual wiring terminations for the devices, the example for wiring Conventional Circuits (MMX-2's) only applies to Version 3.0 release, and shouldn't be used for previous release software. Please contact support staff for additional information.

TERMINATING THE ANALOGUE LOOP TO THE LIB CARDS



Note:
Terminal 8 should be connected straight to the nearest earth point on the Chassis.
If optional shielding is used, do not terminate to terminal 8, connect the shield straight to the nearest Earth point

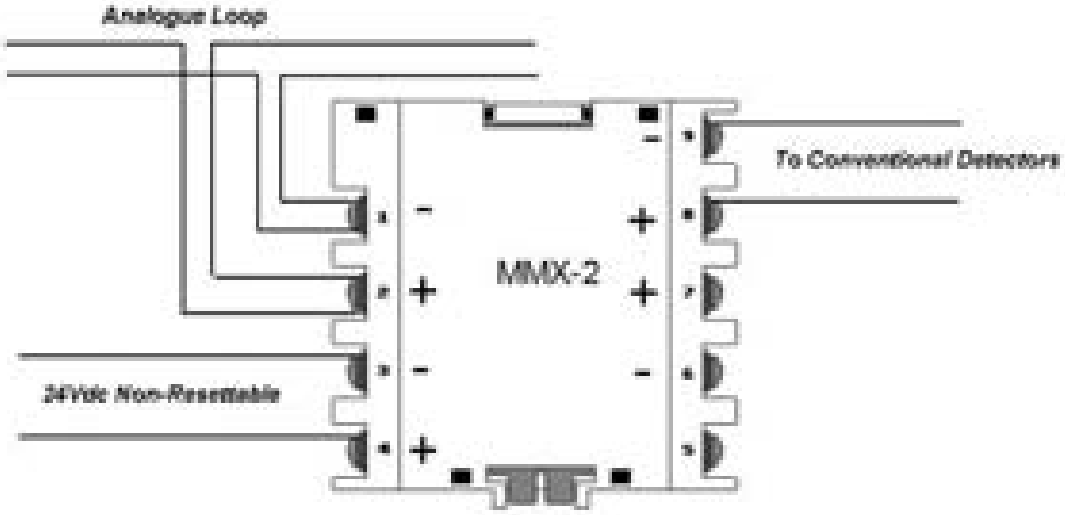
WIRING ANALOGUE ADDRESSABLE DETECTORS



Note:
If optional shield used, do not connect to the spare terminal on the detector base, join the shield and insulate it from the other cables.

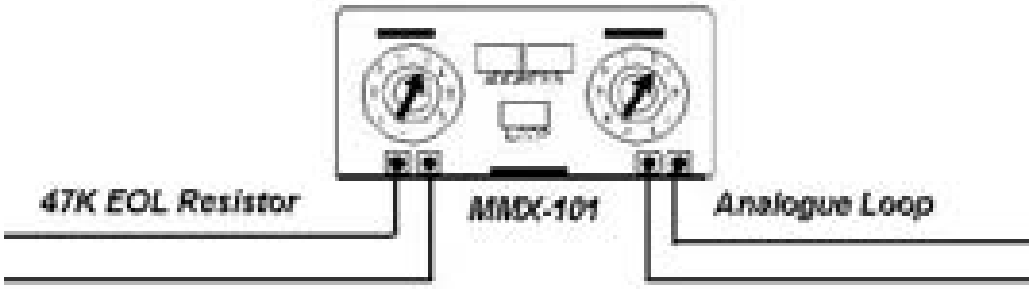
WIRING CONVENTIONAL CIRCUITS (MMX-2)

The MMX-2 when used with Version 3 Release Software, utilises the 24Vdc Non-Resettable power supply, thereby negating the need for Resettable power in the field.



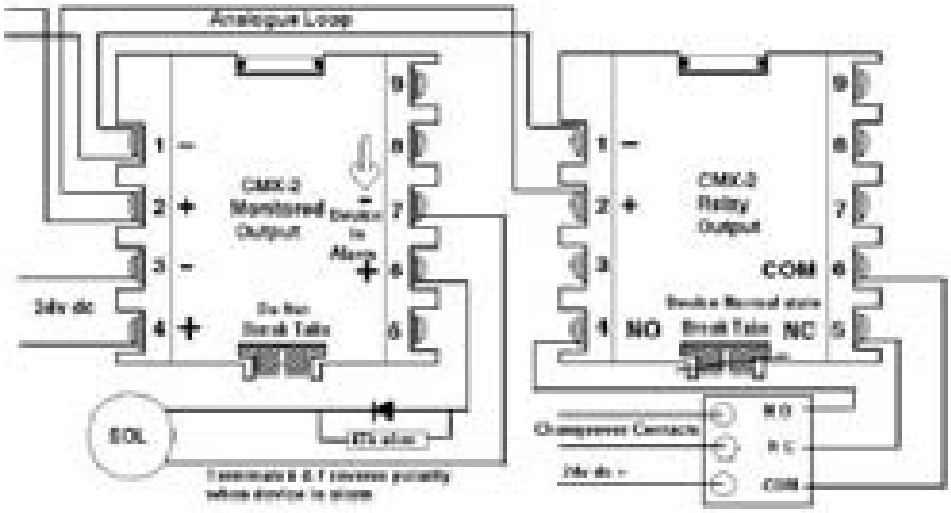
Note:
If optional shield used do not terminate to this device, the shield must be continuous.

WIRING MONITOR MODULES (MMX-101)



This Module is a single input device, and can be used for Flow switch, Tamper Switch, sprinkler pressure switch, and pump run/stop, and Tank Hi/Low monitoring.

WIRING CONTROL MODULES (CMX-2)



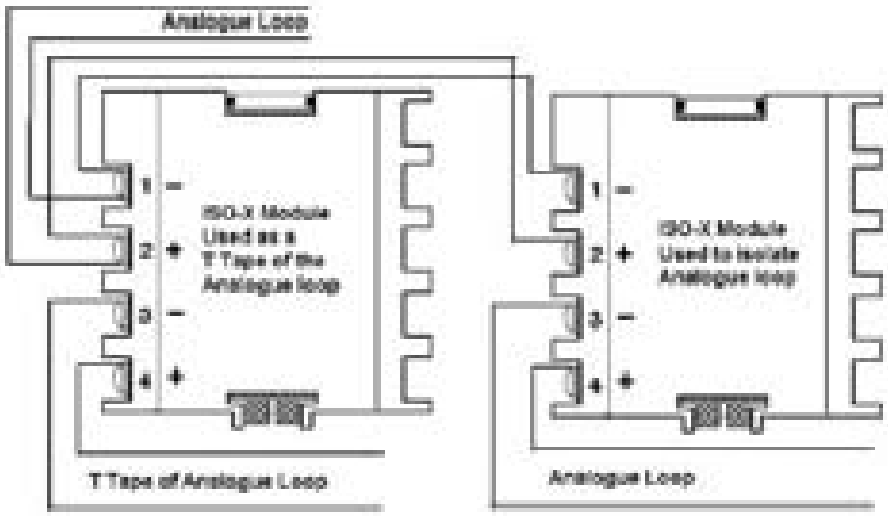
CMX-2's are used for Bells, Solenoids or any general relay application and can be monitored outputs or relay outputs.

WIRING SHORT CIRCUIT ISOLATOR MODULES (ISO-X)

Note: When using the ISO-X module, limit the devices between each ISO-X to 25 devices.

In the case of "T" taping the limit of 25 also applies.

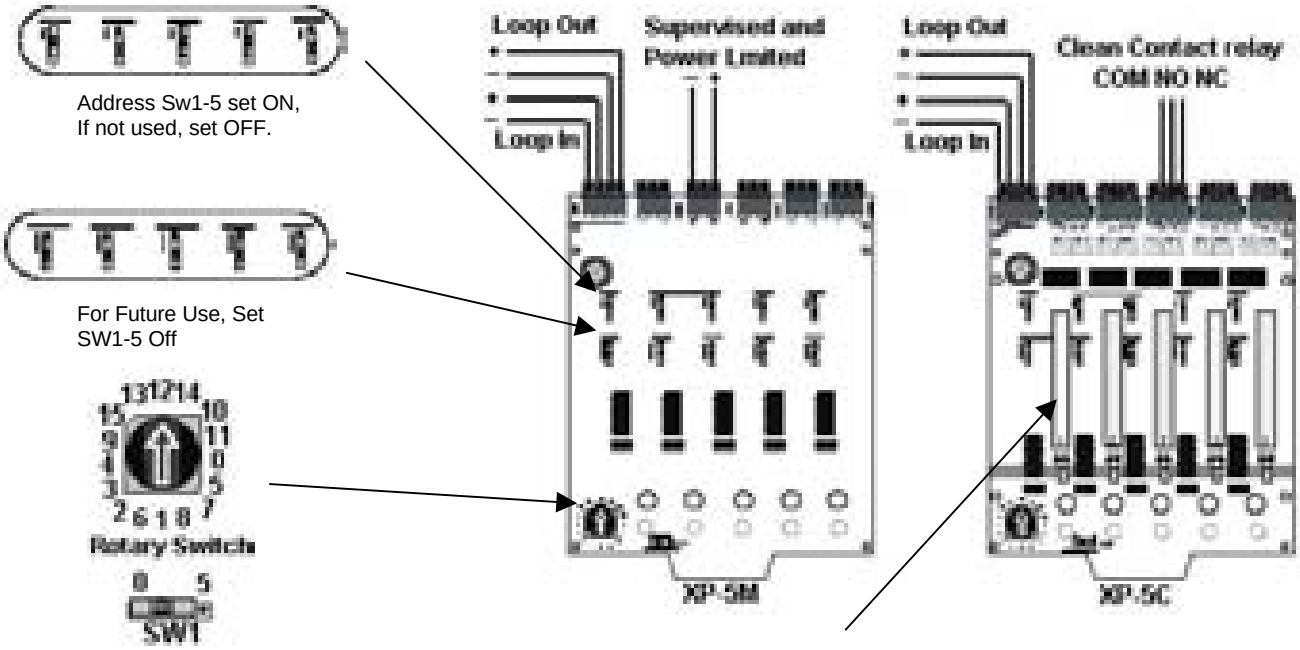
The ISO-X doesn't affect the device count unless the amount of ISO-x's exceeds 100



XP-5M & XP-5C MODULES

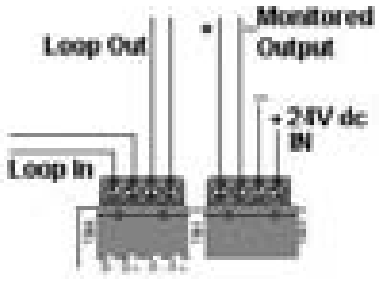
The XP-5 Control and XP-5 Monitor modules are 5 separate modules and addresses mounted on one circuit card, the address is chosen by one rotary switch and one slide switch.
The rotary switch selects the address in increments of ten, and the slide switch selects either 0 or 5.
Eg; address 52- the rotary switch will be 5, and the slide switch will be 0.
Address 52 will be the third point on the XP-5 card.

The wiring of both the XP-5C and XP-5M are wired exactly as the CMX-2 and MMX-101 devices, the only difference being that they share the same loop connection.



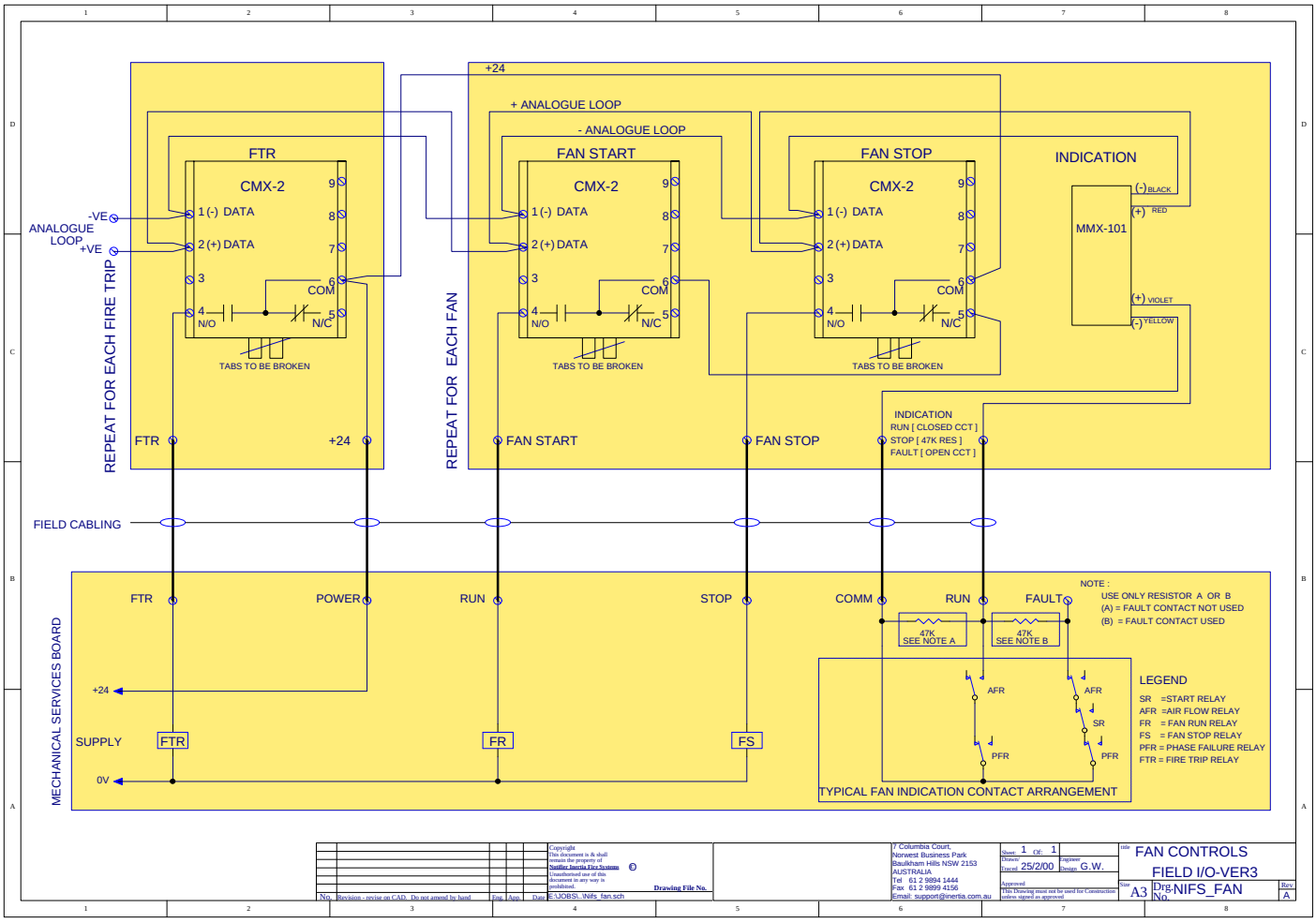
Note: Each output on the XP-5C is selectable via a switch.
Monitored output = Switch Depressed (Above Line)
Relay Output = Switch Not Depressed (Below Line).

Monitored output circuits are to be wired as per a CMX-2 and connected to the XP5-C as shown.



1668 FAN CONTROLS

TERMINATION OF MODULES



APPLICATION OF FAN CONTROL MODULES

It's required that all fan controls utilise Two CMX-2's (with tabs broken) and One MMX-101 per fan.

When installing the modules on the SLC loop, always make the address on the Start CMX-2 lower numerically than the Stop CMX-2.

eg: CMX-2 Start = L1M1
CMX-2 Stop = L1M2
MMX-101 Airflow = L1M3

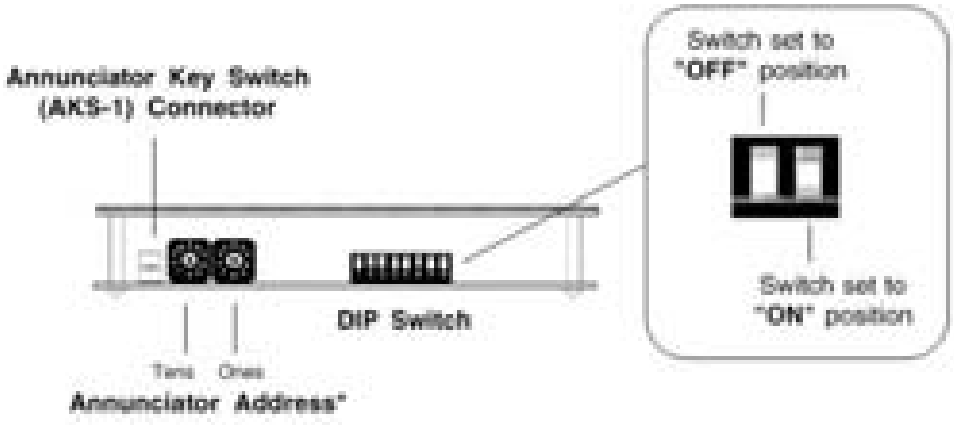
NOTE:
For programming Fan Controls please consult the Programming section of the Manual

DIP-SWITCH SETTINGS

The following section indicates the typical Dip-switch settings for Annunciators (SCS-8, ACM-16AT, ACM-8R, ACM-32A, LDM-32, LDM-32R, LCD-80 and LCD-80TM)

SETTING ANNUNCIATOR BOARD ADDRESSES:

Typical Annunciator address selection method



The first decimal dial on the left-hand side selects the address in unit of ten, the second dial selects the address in units of one.

SCS-8 FAN CONTROL MODULE ANNUNCIATOR

SW	ON	OFF
1	–10sec to duct detector latching time (Standard time = 60 Seconds)	No Change
2	–20sec to duct detector latching time (Standard time = 60 Seconds,)	No Change
3	Instant Fan Faults	Fan Faults Delayed 30 Sec
4	Addresses 33-64 Are ALL additional latching fire trips.	Addresses 33-63 are for SCE-8 Address 64 is the only FTR.
5	Global mode Reset Activated ie: Broadcast latching plant trip reset to all SCS-8's	Global Mode Reset Disabled: Ie: plant trip reset restricted to current SCS-8.
6	Latching A/C Trip	Non-Latching A/C Trip
7*	Fire Mode LED From Z240.	Fire Mode Led, from Common Alarm LED.
8	EOL Resistor for RS485	EOL resistor out of circuit.

* With the SCS-8 there is a choice as to how a Fire Mode trip is activated.
Dip Switch 7 when ON- selects Z240 as the input to the SCS-8 to activate Fire Mode.
Dip Switch 7 when OFF- selects the common alarm LED as the input for the SCS-8 Fire Mode Trip.

ACM-16AT PUSHBUTTON & LED INDICATOR ANNUNCIATOR

SW	ON	OFF
1	Keys Disabled	Keys Enabled
2	1 Or 3 Expanders	None or 2 Expanders
3	2 Or 3 Expanders	None or 1 Expander
4	N/A	Always Use This Setting
5	Receive Only Mode	Normal Mode
6	Piezo Disabled	Piezo Enabled
7	Lamp Test Enabled	Lamp Test Disabled
8	LED's to Come on Steady	LED's to Flash (until Acknowledged)

ACM-32A LED INDICATOR ANNUNCIATOR

SW	ON	OFF
1	N/A	Always Use This Setting
2	Expander Installed	Expander Not Installed
3	N/A	Always Use This Setting
4	N/A	Always Use This Setting
5	Receive Only Mode	Normal Mode
6	Piezo Disabled	Piezo Enabled
7	Lamp Test Enabled	Lamp Test Disabled
8	LED's to Come on Steady	LED's to Flash (until Acknowledged)

ACM-8R RELAY BOARD ANNUNCIATOR

Relay Addresses	On	Off
1-8	1,5	All Others OFF
9-16	2,5	All Others OFF
17-24	3,5	All Others OFF
25-32	4,5	All Others OFF
33-42	1,6	All Others OFF
43-48	2,6	All Others OFF
49-56	3,6	All Others OFF
57-64	4,6	All Others OFF

SW4	ON	OFF
1	Always Use This Setting	N/A
2	Receive Only Mode	Normal Mode

LDM-32 LED DRIVER ANNUNCIATOR

SW3	ON	OFF
1	N/A	Always Use This Setting
2	Expander Installed	Expander Not Installed
3	N/A	Always Use This Setting
4	N/A	Always Use This Setting
5	Receive Only Mode	Normal Mode
6	Piezo Disabled	Piezo Enabled
7	Lamp Test Enabled	Lamp Test Disabled
8	LED's to Come on Steady	LED's to Flash (until Acknowledged)

SW3-8 must be on, when used in conjunction with an LDM32R(Relay Board)

SW4 (Slide Switch On PCB, must always be set to the left)

LCD-80 LCD MIMIC ANNUNCIATOR (DUAL MODE) IN ACS MODE

SW1	ON	OFF
1	Receive Only	Normal Mode
2	Australian Time & Date	USA Time & Date
3	Piezo Disabled	Piezo Enabled
4	Disable Keys	Enable Keys
5	N/A	Always Off
6	Always On	N/A
7	N/A	ACS Mode Enabled
8	N/A	Always Off

Annunciator Tens Addressing - SW3

Tens Digit	SW3-1	SW3-2
0	OFF	OFF
1	ON	OFF
2	OFF	ON
3	ON	ON

Annunciator Units Addressing – SW2

SW2	Use Rotary Dial For Annunciator Units Digit.

EG: Annunciator Address 25 would be

SW3-1 = OFF
SW3-2 = ON
SW2 = 5

Note: In the above configuration the LCD-80 in ACS mode will use its Annunciator address and the NEXT Annunciator address. In this mode, you can have 128 Messages of 40 Characters in length. For other combinations please contact Notifier/Inertia.

LCD-80 LCD MIMIC ANNUNCIATOR (DUAL MODE) IN TERMINAL MODE

SW1	ON	OFF
1	N/A	Always Off
2	N/A	Always Off
3	Piezo Disabled	Piezo Enabled
4	Disable Keys	Enable Keys
5	N/A	Always Off
6	N/A	Always Off
7	Terminal Mode Enabled	N/A
8	N/A	Always Off

SW3	ON	OFF
1	Set if Last LCD-80	Set if not Last LCD-80
2	Terminal Supervision	No Terminal Supervision

SW-2 Not Use in Terminal Mode.
'Operation Mode' the 2 slide switches must be set to Terminal Mode (Down Position)

LCD-80TM LCD MIMIC ANNUNCIATOR (TERMINAL MODE)

SW1	ON	OFF
1	Disable Piezo	Enable Piezo
2	Disable Keys	Enable Keys

SW3	ON	OFF
1	Set if Last LCD-80	Set if not Last LCD-80
2	Terminal Supervision	No Terminal Supervision

APPLYING/REMOVING POWER TO THE FIRE ALARM SYSTEM

After completing the proper installation of all boards, cables and components, apply power in the following manner:

1. Apply AC power
2. Connect the battery/secondary power terminals.
3. Do not connect any releasing devices until the releasing circuits have been tested using simulated loads.
4. Test system as per your requirements.

When servicing the panel, perform the following steps before removing or connecting any power or supervisory cables:

1. Isolate system from the brigade
2. Disconnect any releasing devices
3. Remove all RS-485 connections
4. Remove battery/secondary power
5. Remove AC power

SECTION TWO: PROGRAMMING

PROGRAMMING OVERVIEW

RECOMMENDED PROCEDURE

The 1010/2020 programmablility is extremely versatile. It can be programmed 4 ways.

1. Via the panel keypad on the DIA
2. Via a Laptop in terminal mode
3. Via a Laptop using the Notifier Verifire Program with full Upload & Download facility.
4. Via the NCS graphics system direct connected on the network.

For initial programming of the 2020 or 1010 the following procedure must be followed.

- Locate the Program Configuration work Sheets (Supplied by Notifier/Inertia Fire systems). Use these Work Sheets to record the exact information for every detector, module, Annunciator point and groups in the system.

1. Install all system boards.
2. Apply power to the control panel as described in the section one of Installation manual.
3. Perform a full system program from the DIA telling the system of all boards installed.
4. Re-power the system.
5. Then you may use a Laptop or NCS or the DIA to perform point installation.

Once system programming is complete it is strongly recommended you perform 3 steps.

1. Change the system password from that of the default supplied from the factory. This will prevent unauthorised access to configuration information.
2. Make a hard-copy record of the program on the printer (If fitted).
3. Upload the program to a PC and save to disk.

OVERVIEW

The 1010/2020 programming is menu driven, simply choose which function you want and implement it. This manual describes the basic functionality of the programming, assuming that the operator has received programming training from Notifier Inertia fire Systems.

Programming is separated into two basic functions;
1. Full Programming,- allows you to install new devices, Annunciators and loop cards etc.
2. Partial programming,- allows you to change parameters of devices Annunciators and Loops etc.

Both functions can only be accessed via the Prog button and entering the password.

Important Note: This programming manual refers to the Software Release Version 3 AUS 1. Do not attempt to use any Software Type ID's described in this manual, on any Notifier Inertia Product prior to this Version 3 software release. The software release number can be found on the Eprom label on the CPU card.

MAIN PROGRAMMING MENU

On entering the Programming Mode, (and after entering the password) the display will show the Main Programming menu:

PRESS 1=PSYS, 2=FSYS, 3=PPRG, 4=FPRG, 5=REMV, 6=PSWD, 7=MSG, 8=HIS

The Main Programming menu has eight options, which are:

Option	Description
1=PSYS	**PARTIAL SYSTEM PROGRAMMING** - Selective programming of system-wide functions (number of LIBs, ISIB, Alarm Verification, number of Annunciator modules, etc.).
2=FSYS	**FULL SYSTEM PROGRAMMING** - Complete programming of system-wide functions (number of LIBs, ISIB, Alarm Verification, number of Annunciator modules, etc.).
3=PPRG	**PARTIAL POINT PROGRAMMING** - Selectively altering the operating parameters of Loop devices, software-defined zones and Annunciator points.
4=FPRG	**FULL POINT PROGRAMMING** - Complete programming of Addressable Loop devices, software-defined zones, Annunciator points and their operating parameters.
5=REMV	**REMOVE POINT** - Permits the selective removal (from control panel memory) of any of the system's Addressable Loop devices, software-defined zones or Annunciator points.
6=PSWD	**PASSWORD** - Allows the programmer to assign a custom five-digit password.
7=MSG	**MESSAGE** - Allows the programmer to define the custom 40-Character User Label displayed on the Monitor and the panel's Liquid Crystal Display (LCD).
8=HIS	**HISTORY** – Allows the programmer to Stop or Start storage of events and the clearing of stored events.

PARTIAL SYSTEM PROGRAMMING

Option 1 from the Main Programming menu allows the programmer to change the programming of system-wide functions such as Alarm Verification of detectors, enabling Rapid Polling, and enabling supervision of peripheral equipment in the system, Additional system parameters, such as the number of Loops, Annunciators and ISIB in the system. Loops can also be changed in Partial System Programming.

After selecting option 1 from the Main Programming menu, the display will show the Partial System Programming submenu:

PRESS.1=INST, 2=STY, 3=TDLY, 4=AVPS, 5=ZBND, 6=EXTEQ, 7=LOCP, 8=ISIB, 9=PARM...

The Partial System Programming submenu has nine options, where:

Option	Description
1=INST	Installation – Installation or removal of the Loop Interface Boards from memory.
2=STY	Style - Changing (in memory) loops wiring style 6 or 4.
3=TDLY	Time Delays - Setting the time delays for Alarm Verification, Bell cutout etc.
4=AVPS	Not Used in Australia.
5=ZBND	Zone Boundary - Setting the zone boundary for the software memory map.
6=EXTEQ	External Equipment - Changing the external equipment options, such as electrical supervision of the Graphics Monitor.
7=LOCP	Local Parameters - Setting local parameters, of Loop devices, and Loop local mode.
8=ISIB	Intelligent Serial Interface Board - Installation or removal of the Intelligent Serial Interface Board (SIB-2048A or SIB-NET) or Annunciator modules, Also used for setting ACS port for Upload/Download with Verifire.
9=PARM	Additional System Parameters – Selection of additional system parameters such as the detector day/night sensitivity settings, rapid polling, etc.
0=CONT	Continued ……. Subsequent option is 1=IDO, “International Display Option”

Notes

When removing loop interface boards, all installed points on the affected LIBs are automatically removed upon cycling power to the system. Programming information for installed points can be stored in a Verifire™ database prior to removal of the LIB. Use of the Verifire™ application for the reprogramming of previously removed points is highly recommended.

When removing Annunciator modules, all installed points on the affected Annunciators must be removed first for proper system operation.

LIB INSTALLATION (1=INST)

Option 1 from the Partial System Programming submenu allows the installation or removal of LIB boards from memory. The LIB boards must still be physically installed or removed from the system to prevent a system fault condition.

The 2020 is capable of a maximum of ten LIBs (1,980 devices total in the system)
The 1010 is capable of a maximum of four LIBs (792 devices total in the system)

A LIB200A(1 Loop) or a LIB400 (2 Loop) Card can be used. The following procedure is setting the loops up in memory and has no concern for the hardware used other than ensuring it is correctly installed in the correct location. Please refer to page 7 for LIB board locations/configurations.

The following programming example illustrates the installation of LIB number 3.

From the Partial System programming menu, select 1=INST:

ENTER THE LIB BOARD NUMBER TO CHANGE (1 - 10)	**3**
IS LIB BOARD 03 TO BE INSTALLED IN SYSTEM? (Y=YES, N=NO).	**Y**
ENTER THE STYLE OF SLC LOOP 03 (6 OR 4)	**6**
DO YOU WANT TO CHANGE ANOTHER LIB BOARD? (Y=YES,N=NO)	**N**
PROGRAMMING COMPLETE POWER DOWN TO MAKE APPROPRIATE CHANGES	

LIB LOOP STYLE 4 OR STYLE 6 (2=STY)

Option 2 allows the programmer to change in 1010/2020 memory, the style 6 or 4 for the Loop connected to each LIB. The Loop must be field wired in accordance with the style set in memory.

The following programming example illustrates setting Loop number 5 as a Style 6 circuit. The screen prompts are displayed as follows:

From the Partial System programming menu, select 2=STY:

ENTER THE SLC LOOP NUMBER TO CHANGE (1 - 10)	**5**
ENTER THE STYLE OF SLC LOOP 05 (6 OR 4)	**6**
DO YOU WANT TO CHANGE ANOTHER SLC LOOP? (Y=YES, N=N0)	**N**

Note: When shipped from the factory, each loop will be setup as Style 6.

TIME DELAYS (3=TDLY)

Option 3 allows the programmer to activate or de-activate Alarm Verification of Analog Addressable detectors, as well as setting the appropriate time delays for this function.

Note: MMX-2 modules AVF is hard coded at 20 seconds.

The following programming example illustrates enabling the AVF function:

From the Partial System programming menu, select 3=TDLY:

DO YOU WANT TO CHANGE THE DETECTOR VERIFICATION TIME?.	**Y**
DO YOU WANT THE DETECTOR VERIFICATION TIME ACTIVATED?	**Y**
ENTER THE DETECTOR VERIFICATION TIME.	**20**

This sets the global parameters for the System, eg; 20 second time on AVF. When installing each detector you are required to select if you want AVF or not.

DO YOU WANT TO SET THE BELL-ISOLATE INHIBIT TIME?.	**N**
SELECT TIME	
DO YOU WANT TO SET THE BELL CUTOFF TIME?.	**Y**
SELECT TIME	**600**

Bell Isolate Inhibit time is the period of time after the first alarm that the Bell Isolate key is disabled. We recommend this function not be used, unless there are special circumstances.
Answer NO to disable function. Range = 0-240 seconds.

Bell Cut-Off time is for the automatic isolation of bells X seconds after an alarm.
We recommend this function not be used, unless there are special circumstances.
Answer NO to disable function. Range = 0-2040 seconds.
Please note that if bell cut-off is set, the EXT BELL ISOL state will remain latched on until a system reset is performed, normal toggle on/off will then resume.

Please note, both Bell Cut-Off & Inhibit functions are global and will apply to all devices marked with the “bell-isolate” flag.

Please refer to BCA and Standard requirements for your application.

AUDIO VISUAL POWER SUPPLIES (4=AVPS)

4=AVPS *-Not Used in Australia*.

ZONE BOUNDARY (5=ZBND)

The 1010/2020 can make use of up to 240 software-defined “zones.” These zones can be either forward–activated (FZON) or reverse–activated (RZON), depending upon the particular installation requirements. These forward and reverse zones are grouped separately, with the forward group always preceding the reverse group. The highest forward-activated zone in the system is the Zone Boundary, which can be in the range of Z001 - Z239. (For an explanation of software zones, refer to What is a Software Zone on page 54).

Unless the use of complex Control-By-Event or Cooperative Control-By-Event Equations is required in the system, set the Zone Boundary to Z99.

The following programming example illustrates setting the Zone Boundary for zone 99.

PRESS.1=INST, 2=STY, 3=TDLY, 4=AVPS, 5=ZBND, 6=EXTEQ, 7=LOCP, 8=ISIB, 9=PARM 5

ENTER.ZXXX.OF.HIGHEST.FORWARD.ACTIVATED.ZONE.IN.SYSTEM	**Z99**

EXTERNAL EQUIPMENT (6=EXTEQ

Option 6 allows the changing of any optional features, such as the following:

Terminal Supervision	Monitors the RS 485 port on the DIA
Terminal Status Line	(Not Used)
Auxiliary Printer Monitoring	The 1010/2020 will monitor the auxiliary printer's Ready/Busy line for error conditions. Note: This option should not be de-activated for external 80-column printers.
Control Module Reporting	Control module state changes will be logged in History and sent immediately across the network.
NONA/NOA Module Reporting	Module state changes for modules with the software type ID NONA will be logged in history and sent immediately across the network. (NOA Not Used)
Devices Purchased after 11/91	For Retro fit applications, into older systems. All Devices to Australia were after this Date. Always answer YES.
LED LATCH	De-activates or activates 99-device LED latching. Always answer Yes for Australian Standards and answer Yes to more LED’s when asked.*
Printer Error Continue	Data will be transmitted to the printer under *Printer Error* conditions (*Paper Out* or *Printer Off Line* generates an error condition under which data may be lost).
Bidirectional Copy	*(Not Used)*
Printer Fault Inhibit	The 1010/2020 monitors the primary printer's Rx line for error conditions. This option inhibits the generation of a fault message for *Paper Out* or *Printer Off Line*.
Printer Reports Redirected to	*(Not Used)*

* Default Latching (Not recommended)

- Maximum of six devices can be latched at once (five modules maximum).
- Detectors have priority over modules. After six devices have been latched, detectors that come into alarm will assume LED-latch priority over previously latched module LEDs.
- Under secondary (DC) power, only intelligent detectors (including DHX-501 Duct Detectors) will be latched.
- Software Type I.D SCON will never latch under Default Latching.

* Optional Latching for More Devices (recommended)

- The control panel will latch up to 99 devices, subject to the limitations outlined below.
- Under primary (AC) power, 99 devices can be latched.
- Detectors have priority over modules. After 99 devices have been latched, detectors that come into alarm will assume LED-latch priority over previously latched module LEDs.
- Under secondary (DC) power, only intelligent detectors (including DHX-501 Duct Detectors) will be latched.

LOCAL PARAMETERS (7=LOCP)

Option 7 allows the changing of optional features, as Follows:

Piezo for Programming	Allows you to isolate the piezo whilst programming.
LIB local mode parameters	Allows the Loop to maintain operational status if CPU fails.
Modify NFPA Listing	This Option not used in Australia.
Battery Programming	Change the type of battery used (Lead Acid or Nicad).
Battery Capacity	When Increasing or decreasing the battery capacity.
Battery Standby Time	Change the Duration of Standby time.
24 hr High rate charge	Activate or de-activate charge rate.
Event Reminder	If activated the piezo will sound every 12-14 seconds when an acknowledged fault is present on the display.
Device Blink	If activated, the detectors will blink when polled.
Pre-alarm Function	If active, the detectors will activate a pre-alarm status when the obscuration level exceeds 80% of alarm level.

Note: With pre-alarm activated, the 80% condition must be present for at least a 60 second period and will indicate a "PRE-ALARM ALERT" message on the Panel after that period. With pre-alarm de-activated the 80% condition must be present for at least a 26-hour period and will indicate a "MAINTENANCE REQ" message on the FACP after that period.

ISIB (8=ISIB)

Option 8 allows the changing of any of the following:

Intelligent SIB	Allows you to add or delete the ISIB and set the network address.
ANN	Add or Delete Annunciators Boards.
XINT	When activated allows Upload/Download through Verifire. This will disconnect the Annunciators RS485 stream to be dedicated to UP/DL. Repeat to return too normal once UP/DL complete.
UDACT	Not Used in Australia.

ADDITIONAL SYSTEM PARAMETERS (9=PARM)

This option allows the programmer to de-activate/activate the following:

High Day/Night Zone	Allows you to set detector sensitivity for High see Note below *.
Low Day/night Zone	Allows you to set detector sensitivity for Low see Note below *.
Detector Verification Counter	This option resets the counter that records the number times a detector went into AVF without alarming.
SACM/SAQM Reporting	Not Used In Australia.
Drift Compensation	When selected the Panel automatically adjusts the detectors to the environmental condition of the surroundings, within certain parameters, see Note below **.
Pager Programming	Activate if Pager Interface installed.
Modem Programming	Activate if Modem installed.
NAM Programming	Activate if Network Annunciator Module installed.
Rapid Polling	Sets first 20 modules on each loop to poll at double the rate, providing faster response. (ie: Manual Call Points, Bell Outputs)
ACS Reporting	If activated Any input module with a supervisory type ID, will indicate state changes on an Annunciator as a red LED.

DAY/NIGHT SENSITIVITY

The function Day/Night sensitivity- gives the operator the option of having the detectors high sensitivity during certain times, or set to low sensitivity during other times. In the case of Nursing homes or Apartment buildings when the occupants are asleep, the detectors can be placed into high sensitivity at night. This feature overrides the normal sensitivity selection of the detectors for that period of time, and shows the symbol SH in the read status screen of the particular detector. The Day/Night high and low sensitivity zones may be individually activated by control-by-event (CBE) equations written for this purpose through the use of TIM( ) equations.

The global function can be activated or de-activated in both Full and Partial System Programming. The operator can then enable or disable this function for each individual detector.

The following must be performed when programming Day/Night Detector Sensitivity:

- Enable the Day/Night Sensitivity and set the High and Low zone numbers. This is a global setting.
- Set the timing C.B.E for High and for Low timing activation.
- Select Day/Night Sensitivity for each individual detector.

Example: Set Loop 1 detector 1 (L1D1) for high sensitivity between 11pm and 5am 7 days a week. To do this, follow the next three steps.
(The example assumes that L1D1 is already installed and Day/Night not Activated).

Step 1: Setup High Sensitivity Zone

Programming a Reverse zone for High Sensitivity selection	
Press Program Button and enter password	*********
Enter Full point Programming 4=FPGM	**4**
ENTER LXX(D/M)YY ZXXX OR AXXPYY FOR PT. INSTALL	**Z100**
ENTER TYPE ID	**RZON**
ENTER CONTROL BY EVENT (Enter exactly as shown in the example)	**TIM(SU MO TU WE TR FR SA 23.00 05.00)**
ENTER COPERATIVE CONTROL BY EVENT	**( )**
ENTER 20 CHARACTER CUSTOM LABEL	**HIGH SENSITIVITY**
DO YOU WANT THIS POINT MAPPED TO AN Annunciator (YES/NO)	**NO**
Now press backspace to go back to program mode.	**Backspace**

Step 2: Enable Day/Night Feature

Activating Day/Night Sensitivity on the Panel	
Press Program Button and enter password	*********
Enter Partial System Programming 1=PSYS	**1**
Enter Parameters 9=PARM	**9**
DO YOU WANT TO CHANGE THE HIGH DAY/NIGHT SENSITIVITY ZONE (YES/NO)	**YES**
DO YOU WANT A HIGH SENSITIVITY ZONE	**YES**
ENTER HIGH DAY/NIGHT SENSITIVITY ZONE	**Z100**
DO YOU WANT TO CHANGE THE LOW DAY/NIGHT SENSITIVTY ZONE (YES/NO)	**NO**
The Display will now ask you eight additional questions, relating to other then Day/Night Sensitivity, Answer appropriately.	
Now press backspace to go back to programming mode.	**Backspace**

Step 3: Set detector to use Day/Night feature

Changing the detector to select Day/Night sensitivity	
Now press the Program Button and enter the password	*****
Enter the Option Menu 4=OPTNS	**4**
ENTER LXX(D/M)YY ZXXX OR AXXPYY FOR PT. CHANGE	**L1D1**
DO YOU WANT TO CHANGE THIS DETECTOR VERIFICATION OPTION (YES/NO)	**NO**
DO YOU WANT TO CHANGE DETECTOR SENSITIVITY SETTING (YES/NO)	**NO**
DO YOU WANT TO CHANGE THE TRACKING OPTION FOR THIS DEVICE (YES/NO)	**NO**
DO YOU WANT TO CHANGE DAY/NIGHT CONTROL FOR THIS DEVICE (YES/NO)	**YES**
IS THERE DAY/NIGHT SENSITIVITY CONTROL FOR THIS DEVICE (YES/NO)	**YES**
Press backspace to return to normal screen.	

Repeat step 3 for additional detectors as required,
Same can be done to decrease detector sensitivity at certain times by using the Low zone.

DRIFT COMPENSATION

If set, the Addressable detectors will automatically compensate for environmental contaminants and other factors over time, until the drift tolerance value has been exceeded. When the drift tolerance value has been exceeded, the control panel will signal “maintenance alert” for the appropriate detector.

INTERNATIONAL DISPLAY OPTION (0=CONT, 1=IDO)

International display option will show the alarm sequence number of the current alarm in the total number of alarms in the system. IE: “01 OF 06” indicated alarm 1, of a total of 6 alarms. As alarms are displayed and queued in chronological order, this sequence can be used to track to fire’s progress. We strongly recommend this feature be enabled.

FULL SYSTEM PROGRAMMING

This feature is generally carried out in the Factory, however, should the main CPU or DIA be changed in the panel we strongly recommend a full system program be performed. This will erase the panel and start again.

Select From the main programming menu select 2=FSYS, you will then be asked ALL of the questions listed individually in Partial System Programming above and you will be also asked for which Annunciators are installed in the system. Answer yes or no to ALL questions.

Once you have finished answering ALL the questions and the panel does not proceed to another question, hit backspace twice and then power down, wait 10 seconds and power up.
The panel is now ready to have the points programmed.

Important Note: Even though Verifier has all the system parameters in it’s database it will not automatically install new hardware, it will however download new descriptors, options etc but the base hardware must be told to the panel it exists by a FSYS or PSYS process.

PARTIAL POINT PROGRAMMING

Partial point programming (PPRG) allows the programmer to change the operational parameters of loop devices, software-defined zones, and Annunciator points

After selecting PPRG from the Main Programming menu, the Partial Point Programming submenu will appear:

1=TYPID, 2=CBE, 3=LBL, 4=OPTNS, 5=AMAP, 6=CCBE

The Partial Point Programming submenu has six options;

1=TYPID	Type ID - Changing the software type identification of loop devices, zones and Annunciator points.
2=CBE	Control-By-Event – Redefining the Control-By-Event associated with each detector, module, or zone.
3=LBL	Label - Renaming the custom user label (Descriptor) for any detector, module, or zone.
4=OPTNS	Options - Selecting the optional features associated with any detector or module. Ie: Walk Test Mode, Bell Isolate, Tracking, Alarm Verification…..
5=AMAP	Annunciator Point Mapping - Selecting Annunciator Point Mapping for any detector, module, or zone.
6=CCBE	Cooperative Control-By-Event - Edit the CCBE associated with reverse zones across NOTI•FIRE•NET.

NOTE
Each option under Partial Point Programming prompts the programmer to enter the address of the detector, module, zone, or Annunciator point to be affected. Leading zeros are not required. The address assumes the following format:

L<u>XX</u>(D/M)<u>YY</u> (for devices) or **Z<u>XXX</u>** (for zones) or **A<u>XX</u>P<u>YY</u>** (for Annunciator points)

Example: For the 44th module on Loop 3, enter **L3M44**

TYPE ID (1=TYPID)

Option 1 of the Partial Point Programming Menu allows the programmer to change the Software Type ID of any detector, module, zone or Annunciator point. The following display illustrates the assignment of the Software Type ID SCON to the 14th monitor module on Loop 3.

Select 1 from the Partial Point Programming Sub Menu.

ENTER LXX(D/M)YY,.ZXXX OR AXXPYY FOR PT CHANGE (BCKSPC TO ABORT)	**L3M14**
ENTER TYPE ID	**SCON.**

CONTROL-BY-EVENT (2=CBE)

Option 2 of the Partial Point Programming Sub-Menu allows the programmer to change the Control-By-Event (CBE) for any detector, module or software zone. The panel maintains a CBE for each device and zone installed in the system.

NOTE: A software zone is not a physical zone, but rather software grouping in control panel memory.

When programming a particular device, the control panel prompts the programmer with:

ENTER.CONTROL-BY-EVENT

The following screen display illustrates CBE programming for smoke detector number 23 on Loop 2 to activate software zones 15 and 29.

Select 2 from the Partial Point Programming Sub Menu.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT CHANGE (BACK SPACE TO ABORT)	**L2D23**
ENTER CONTROL-BY-EVENT*	**(Z15 Z29)**

*The open and close bracket and the space between the Z15 & Z19 are critical.

LABEL (3=LBL)

Option 3 of the Partial Point Programming Menu allows the programmer to change the 20-Character Custom Label (Descriptor) associated with each detector, module, or software zone in the system. Acceptable characters for device or zone labels are as follows:

Letters A through Z, digits 0 through 9, periods (.), dashes (-), and spaces.

The following display illustrates renaming control module 21 on Loop 1.

Select 3 from the Partial Point Programming Sub Menu.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT CHANGE (BCKSPC TO ABORT)	**L1M21**
ENTER 20 CHARACTER CUSTOM LABEL	**LEVEL 4 BELL OUTPUT**

Programming Tip:

Creative use of the Label feature on both devices and zones allows the programmer to be extremely specific in naming each device. For instance, for a group of Addressable devices congregated in a particular area (such as a floor or a section of a building), map each device to the same software zone and label the zone to serve as an additional 20 characters of information to the individual device labels.

Make this software zone the first zone in the CBE of those detectors and it will appear on the display whenever any of those detectors go into alarm. (You can also then use the ‘Global Zone Isolate’ function to isolate that group of detectors)

Ie: Make the detector descriptor “ROOM 212 BATHROOM”
And make the zone “LEVEL 2 APARTMENTS”

OPTIONAL FEATURES (4=OPTNS)

Option 4 of the Partial Point Programming Menu allows the programmer to isolate/de-isolate a device, set Bell Isolate Flag or Walk Test Flag (for control modules), Alarm Verification, Detector Sensitivity and the Tracking (non-latching) option per device.

The following example shows how to set Tracking (Non-Latching) for detector L2D23

Select 4 from the Partial Point Programming Sub-Menu.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT CHANGE (BCKSPC TO ABORT)	**L2D23**
DO YOU WANT TO CHANGE DETECTOR VERIFICATION SELECTION (YES/NO)	**NO**
DO YOU WANT TO CHANGE DETECTOR SENSITIVITY SELECTION (YES/NO)	**NO**
DO YOU WANT TO CHANGE THE TRACKING OPTION FOR THIS DEVICE (YES/NO)	**YES**
IS THE TRACKING OPTION TO BE ENABLED FOR THIS DEVICE	**YES**
DO YOU WANT TO CHANGE DETECTOR VERIFICATION SELECTION (YES/NO)	**NO**

Now press backspace, the screen will return back to normal.

ANNUNCIATOR MAPPING (5=AMAP)

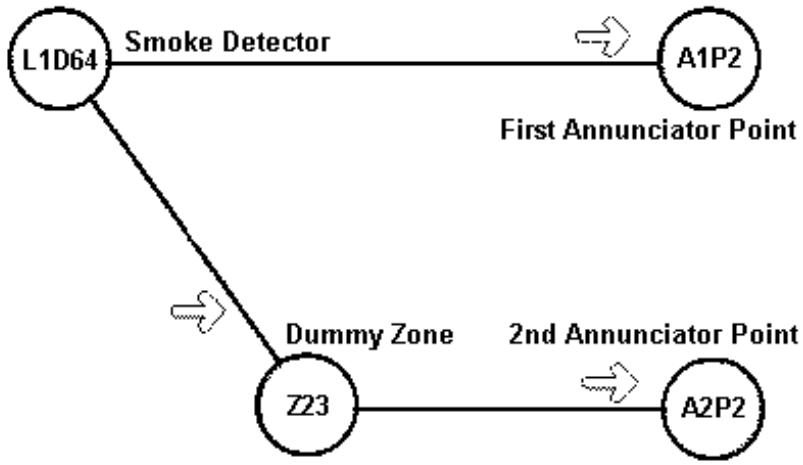
Option 5 of the Partial Point Programming Sub-Menu allows the programmer to individually map devices or zones to Annunciator points for remote annunciation.

Select 5 from the Partial Point Programming Sub-Menu.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT CHANGE (BCKSPC TO ABORT)	**L2D23**
DO YOU WANT TO CHANGE THE ANNUNCIATOR MAPPING FOR THIS POINT (YES/NO)	**YES**
DO YOU WANT THE POINT MAPPED TO AN ANNUNCIATOR (YES/NO)	**YES**
ENTER AXXPXX FOR ANNUNCIATOR POINT MAPPING	**A01P01**

Now press backspace, the screen will return to normal.

NOTE:
Each detector, module or zone may only be mapped to one Annunciator point. Therefore, if it is desired to map one detector to more than one Annunciator point or to map a group of detectors, modules or zones, to more than one Annunciator point; then this can be achieved by mapping them to a dummy zone and the dummy zone can then be mapped to an Annunciator point. This is for annunciation purposes only.



If control is desired from both Annunciators, then the shadow Annunciator Function must be used. For Annunciator point mapping information on a 1010/2020 with NOTI•FIRE•NET, Contact: Notifier/Inertia Fire systems for further information.

COOPERATIVE CONTROL-BY-EVENT (6=CCBE)

Option 6 of the Partial Point Programming Menu allows the programmer to change the Cooperative Control-By-Event (CCBE) for any reverse activated zone when using the 1010/2020 with the NOTI•FIRE•NET. (Contact Factory for NOTI•FIRE•NET Manual)

Full Point Programming (4=FPRG)

Option 4 from the Programming Menu allows the programmer to completely program all the Addressable detectors, modules, software-defined zones and Annunciator points in the 1010/2020 system. The programming examples illustrate the screen prompts displayed during Full Point Programming.

A full point program performs all the functions of partial point above sequentially.

Full point programming must be used when changing a type-id due to a hardware change. IE: Control module becomes an input module, Photo-optical becomes a Thermal etc.

NOTE: The control panel continuously loops back through the Full Point Programming routine, allowing the programmer to enter devices, software zones or Annunciator points one after the other. Use the Backspace key to exit Full Point Programming.

Example: Full point program on an analog Photo-optical detector at L2D23.

The Photo-optical Smoke Detector on Loop 2 will be programmed to activate two software zones (Z13, Z29) and a control module (L2M19), and also be mapped to Annunciator address "02" Point "02".

Select 4 from the Main Programming Menu for Full Point Program.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**L2D23**
ENTER TYPE ID	**PHOT**
ENTER CONTROL-BY-EVENT	**(Z13 Z29 L2M19)**
ENTER 20 CHARACTER CUSTOM LABEL.	**MAIN LOBBY DETECTOR**
IS THE DETECTOR VERIFICATION OPTN TO BE ENABLED FOR THIS DEVICE?(Y=YES,N=NO)	**Y**
ENTER THE DETECTOR SENSITIVITY SELECTION FOR THIS DEVICE (L=LOW,M=MED,H=HIGH)	**H**
IS THE TRACKING OPTION TO BE ENABLED FOR THIS DEVICE? (Y=YES,N=NO)	**Y**
IS THERE DAY/NIGHT SENSITIVITY CONTROL FOR THIS DEVICE? (Y=YES,N=NO)	**Y**
DO YOU WANT THIS POINT MAPPED TO AN ANNUNCIATOR? (Y=YES,N=NO)	**Y**
ENTER AXXPYY FOR Annunciator POINT MAPPING	**A2P2**

Example: Programming Annunciator Points
Installation of individual Annunciator points.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**A2P2**
ENTER TYPE ID	**AINP**

Example: Programming Monitor Modules

Monitor Module 15 on Loop 3 is an MMX-2 and is to be programmed to monitor a full zone of conventional smoke detectors, activate software zone (Z13), and is also mapped to Annunciator address "02" point "03".

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**L3M15**
ENTER TYPE ID	**SCON**
ENTER CONTROL-BY-EVENT	**(Z13)**
ENTER 20 CHARACTER CUSTOM LABEL	**BASEMENT DETECTORS**
IS THE TRACKING OPTION TO BE DE-ISOLATED FOR THIS DEVICE? (Y=YES, N=NO).	**N**
DO YOU WANT THIS POINT MAPPED TO AN ANNUNCIATOR? (Y=YES,N=NO)	**Y**
ENTER AXXPYY FOR ANNUNCIATOR POINT MAPPING	**A2P3**

Example: Programming Control Modules

Control Module 19 on Loop 2 is to be programmed to be a relay output and turn on in response to an alarm condition on either of two software zones (Z13 or Z29), and also mapped to Annunciator address "02" point "04". Also as this output is a bell we want to set the bell isolate and walk test flags.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**L2M19**
ENTER TYPE ID	**FORC**
ENTER.CONTROL-BY-EVENT	**OR(Z13 Z29)**
ENTER 20 CHARACTER CUSTOM LABEL	**MAIN LOBBY BELL**
IS THE BELL ISOLATE OPTION TO BE ENABLED FOR THIS DEVICE? (Y=YES,N=NO)	**Y**
IS THE WALK TEST OPTION TO BE ENABLED FOR THIS DEVICE? (Y=YES,N=NO)	**Y**
DO YOU WANT THIS POINT MAPPED TO AN ANNUNCIATOR? (Y=YES,N=NO)	**Y**
ENTER AXXPYY FOR ANNUNCIATOR POINT MAPPING	**A2P4**

Example: Programming Software Zones

Software Zone 13 programmed as a forward zone to activate two other software zones (Z15 and Z29), and also mapped to Annunciator module address "02" point "05".

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**Z13**
ENTER TYPE ID	**FZON**
ENTER CONTROL-BY-EVENT	**(Z15 Z29)**
ENTER 20 CHARACTER CUSTOM LABEL	**FIRST FLOOR**
DO YOU WANT THIS POINT MAPPED TO AN ANNUNCIATOR? (Y=YES,N=NO)	**Y**
ENTER AXXPYY FOR ANNUNCIATOR POINT MAPPING	**A2P5**

Reverse zones on a 1010/2020 system with NOTI•FIRE•NET can be programmed with both CBE and CCBE *equations. Below is an example of Zone 220 programmed as a reverse zone to activate once N8 Z1 goes into alarm.

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT INSTALL (BCKSPC TO ABORT)	**Z220**
ENTER TYPE ID	**RZON**
ENTER CONTROL-BY-EVENT	**()**
ENTER COOPERATIVE CONTROL-BY-EVENT	**OR(N8Z1)**
ENTER 20 CHARACTER CUSTOM LABEL	**LIBRARY**
DO YOU WANT THIS POINT MAPPED TO AN ANNUNCIATOR? (Y=YES, N=NO).	**N**

REMOVING A DEVICE (5=REMV)

Option 5 from the Programming Menu allows the programmer to remove (from control panel memory) Loop devices, software-defined zones or Annunciator points. The devices can still be installed in the system, but the 1010/2020 will stop looking for these devices by not POLLING them.

- Devices that are removed will not function until reinstalled under Full Point Programming. CAUTION - devices that have had their LEDs latched ON must be returned to their normal state before removal (execute System Reset for detectors or control OFF for modules).
- Unacknowledged points must be acknowledged prior to removal.

The programming example below illustrates the screen prompts during removal of a Loop device (smoke detector 34 on Loop 10).

ENTER LXX(D/M)YY, ZXXX OR AXXPYY FOR PT REMOVAL (BCKSPC TO ABORT)	**L10D34**

CHANGING THE PASSWORD (6=PSWD)

Option 6 from the Programming Menu allows the programmer to change the password for the 1010/2020.

Select option 6 from the main programming menu, the following screen will appear.

ENTER.PASSWORD	*****

Enter your new 5-digit password.

You are only required to enter the new password once and it then becomes effective immediately. You must ensure you do not make any errors during entry, you can use the backspace key during entry if you have made a mistake.

A FORGOTTEN PASSWORD?

If an incorrect password is typed in to enter programming mode, the panel will respond by displaying a special code word and prompt the programmer to re-enter the password. If the password has been forgotten, record this code word and contact Notifier/Inertia. After proper authentication and a fee, the password can be deciphered from the code word. Passwords will only ever be supplied to the owners of the system.

CHANGING THE "ALL SYSTEMS NORMAL" MESSAGE (7=MSG)

Option 7 from the Programming Menu allows the programmer to change the 40-Character Custom User Label for the system. Acceptable characters for the label include Letters A though Z, digits 0 through 9, periods (.), dashes (-), and spaces.

ENTER 40 CHARACTER CUSTOM USER LABEL	**NOTIFIER DEMO ROOM**

ACCESSING THE HISTORY LOG (8=HIS)

Option 8 from the Main Programming Menu allows the programmer to change the parameters associated with History Mode. Once the History option is activated, the 1010/2020 has the capability to store the most recent 400 system events.

After selecting option 8 from the Main Programming menu, the display will show the History Mode Programming submenu:

1=START, 2=STOP, 3=CLEAR

The History Mode Programming submenu has three options as described below:

START

This option allows the programmer to start storing events into the panel's history mode buffer. The following example activates history mode:

1=START,2=STOP,3=CLEAR	**1**

STOP

This option allows the programmer to stop storing events into the panel's history mode buffer. The following example de-activates history storage:

1=START,2=STOP,3=CLEAR	**2**

CLEAR

This option allows the programmer to clear out of history buffer memory a selected number (1-N, where N represents the number of stored events) of the oldest history events recorded. The following example illustrates this by clearing out the 200 oldest entries in the history buffer.

PRESS 1=START, 2=STOP, 3=CLEAR	**3**
ENTER NUMBER ENTRIES TO CLEAR (1-400)	**200**

NOTE:
After totally clearing the history log, you must re-start the history log.

PROGRAMMING GUIDELINES:

WHAT IS A SOFTWARE ZONE

The 1010/2020 contains 240 software zones to be used in CBE programming. These software zones are broken into two types, Forward-Activating Zones (FZON) and Reverse-Activating Zones (RZON). These forward and reverse zones must be grouped separately, with the forward group always preceding the reverse group. This is accomplished by setting the Zone Boundary (see *Zone Boundary*, for more information on setting the zone boundary). Once the boundary is set, all software zone numbers above the Zone Boundary are RZONs and all software zones below and including the Zone Boundary are FZONs.

FORWARD-ACTIVATING ZONES

FZONs are triggered from devices and are used to activate output devices and/or other software zones. FZONs can only trigger other zones with a higher zone number.

REVERSE-ACTIVATING ZONES

RZONs are activated from input devices and/or other software zones. The software zones that can be used to activate a reverse zone must have a lower zone number than the RZON being activated.

Note:
To assist in the understanding of Forward and Reverse Zones, view them as inputs and outputs,
Forward Zones, (Generally mapped directly to detectors or input modules)
Reverse Zones, (Generally used for controlling outputs)

CONTROL BY EVENT -LISTS AND EQUATIONS

Control-By-Event Programming can be accomplished in two ways, via the *List* and the *Equation.* Lists are used for initiating devices (detectors and monitor modules) and forward activating zones, where as, Equations are used for output devices (control modules) and reverse activating zones.

When an initiating device or forward-activating zone is programmed with a List, the 1010/2020 activates all the items in the list when activation of the device or zone occurs. The operand's listed for an initiating device can be output modules and/or software zones (forward or reverse activating). For a forward activating zone, the items can be forward zones that are higher than its address, reverse activating zones and/or control modules.

Example:

A photoelectric detector has a List of (L1M1 L2M2), where L1M1 and L2M2 are control modules. When the detector is in alarm, all the items in the Control-By-Event List are activated so both control modules are activated.

The real power of the CBE Programming comes from the equation, which is evaluated by the control panel to determine a variety of alarm initiating conditions. The equation provides the real decision-making ability through the use of an operator acting on a set of operands. The operand's for an output module can be initiating devices, software zones (forward or reverse activating), or control modules assigned an address lower than its own. For a reverse-activating zone, the operand's can be initiating devices, forward zones, or reverse zones that are lower than its address.

The format for an equation is shown below, where the operators are OR, AND, NOT, XZONE, DEL, SDEL, and TIM; and the operand's are groupings of initiating devices and/or software zones, as well as information specific to the format of individual operators.

Examples:

Operator	(- - - - Operand's - - - -)
OR	(Z9 Z15 Z23)
AND	(L1D1 Z3 L1D35 L1D72)
NOT	(Z23)
XZONE	(Z23)
DEL	(HH.MM.SS HH.MM.SS (L1M1))
SDEL	(HH.MM.SS (Z1))
TIM	(SU MO TU WE TR FR SA HH.MM HH.MM)

All of the operator formats above are explained in detail on the following pages.

Control-By-Event Programming Constraints

- There can only be one DEL or SDEL operator in a control-by-event equation, not both.
- If there is no duration time field in a DEL or SDEL, the equation will always be activated.
- The maximum value of DELAY TIME + DURATION TIME is 255:59:59.
- If either the day, month or year field is omitted, that field is assumed to be all allowable values of the field omitted. Example: 12--00 is equivalent to any day in December 2000.
- The HH.MM field for START TIME and STOP TIME uses military time.
- The HH.MM field for STOP TIME must be greater than the START TIME.
- The maximum value of START TIME or STOP TIME is 24:00.

C.B.E EQUATIONS: OPERATORS

OR

Operator: The first (and most useful) operator is OR.

Equation: OR(Z9 Z15 Z23)

If ANY one of the three operand's in the equation
are in alarm, then the control module will be activated.

IF Software Zone 9 is in alarm OR
IF Software Zone 15 is in alarm OR
IF Software Zone 23 is in alarm,
THEN this control module will be activated.

AND

Operator: The AND operator requires that each operand be in alarm.

Equation: AND(Z9 Z15 Z23)

ALL three operand's in the equation MUST be
in alarm for the control module to be activated.

IF Software Zone 9 is in alarm AND
IF Software Zone 15 is in alarm AND
IF Software Zone 23 is in alarm,
THEN this control module will be activated.

NOT

Operator: The NOT operator inverts the state of the operand (activated to deactivated OR deactivated to activated).

Equation: NOT(Z2)

The control module will remain activated UNTIL
the operand comes into alarm.

IF Software Zone 2 is in alarm,
THEN this control module will be deactivated.

XZONE

Operator: For *Cross Zone* operation, the XZONE counting operator may be used.

Equation: XZONE(Z23)

IF ANY combination of two or more initiating
devices (L1D1, L1D2, L1D3, L1D4)
that have been programmed (Control-By-Event)
to this software zone (Z23) come into alarm,
THEN this control module will be activated.

DEL

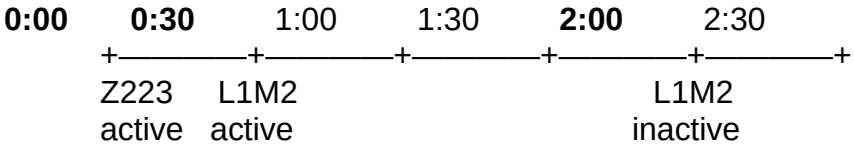
Operator: For delayed operation, the DEL operator is used.

Equation: DEL(HH.MM.SS HH.MM.SS (Z1))

Example: L1M3 activates Forward Activating Zone 223 (Z223).
L1M2 CBE is: DEL(00.00.30 00.01.30 (Z223))

IF Z223 has been active for 30 seconds
THEN L1M2 will become active. L1M2 will stay active
for 1 minute and 30 seconds provided that Zone Z223
remains active.

Time line



NOTES

The entire DEL equation consumes at least 11 bytes (including a 3-byte internal equation). The internal equation can be a complex equation many bytes in size.

If a delay of zero is entered (00.00.00), the equation will evaluate true as soon as the internal equation evaluates true and will remain that way for the specified duration, unless the internal equation becomes false.

If no duration is specified, then the device will not be deactivated until a reset occurs or the internal equation evaluates false.

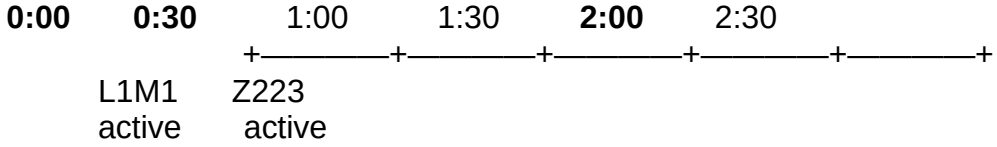
SDEL

Operator: The SDEL operator is also used for delayed operation. This is a latched version of the DEL operator. Once the equation evaluates True, it remains activated until a reset, even if the internal equation becomes false.

Equation: **SDEL(HH.MM.SS (Z1))**

Example: **If Z223 CBE is: SDEL(00.00.30 (L1M1))**
IF L1M1 has been active for 30 seconds
THEN Z223 will become active.

Time line



NOTES
The entire SDEL equation consumes at least 11 bytes (including a 3-byte Internal Equation). The Internal Equation can be a complex equation many bytes in size.
If a delay of zero is entered (00.00.00), the equation will evaluate true as soon as the Internal Equation evaluates True and will remain that way until reset.

TIM

Operator: The TIM operator is used to specify activation on specific days of the week or year.

Equation: TIM(SU MO TU WE TR FR SA HH.MM HH.MM)
(Type 1)

Example: If Z221 CBE is: TIM(SA SU 7.30 13.59)
Zone Z221 will be active on Saturdays and Sundays from 7:30AM to 1:59PM.

Equation: TIM(MM-DD-YY HH.MM HH.MM)
(Type 2)

Examples: If Z222 CBE is: TIM(7-4-)
Zone Z222 will be active on July 4th for every year.
If Z222 CBE is: TIM(12-25- 9.00 17.00)
Zone Z222 will be active on December 25th for every year from 9:00AM to 5:00PM.

C.B.E SIZE LIMITATIONS

Each Control-By-Event has a physical size limitation of 14 bytes in control panel memory.

For initiating devices, the Control-By-Event size can be calculated by the following formula:

Size in bytes = 1 + (Number of Zones) + (Number of Control Modules X 3) +1

Example: The following Control-By-Event takes up 11 bytes in memory.

(Z1 Z6 Z12 L2M4 L7M15)

Size in bytes 1 + (3) + (2 X 3) +(1) = 11

For output devices, the Control-By-Event size can be calculated by adding the components involved using the following values:

(=	**1 byte**
) =	**1 byte**
OR(=	**1 byte**
AND(=	**1 byte**
NOT(=	**1 byte**
XZONE(=	**1 byte**
DEL(=	**1 byte**
TIM(=	**1 byte**
SDEL(=	**1 byte**

Zones =	**1 byte each**
Initiating devices =	**3 bytes each**
The time specifications for the DEL, TIM, and SDEL operators =	**6 bytes**

Examples:

1) The following Control-By-Event takes up 13 bytes in memory:

OR(Z1 Z4 Z9 Z16 Z23 LID3 L2M7)

Size in bytes 1 + 1 + 1 + 1 + 1 + 1 + 3 + 3+ 1 = 13

2) The following CBE takes up 11 bytes in memory:

DEL(00.00.30 00.01.30 or (Z1))

Size in bytes 1 + 6 + 1+1+1+1 = 11

Due to the 14-byte size limitation, it may be necessary to use more than one equation or list to accomplish a desired result. Through the use of reverse activating zones, an equation, which normally would contain too many bytes, can be broken up into several smaller equations.

COOPERATIVE CONTROL-BY-EVENT

The Null Control-By-Event

The simplest type of Control-By-Event is the Null, which means empty. For initiating devices, the Null is denoted by entering ( ) as the Control-By-Event. In response to an alarm on a device programmed with a Null Control-By-Event, the 1010/2020 will do the following:

- Initiate a System Alarm condition (Alarm LED flashes and the piezo sounds).
- Activate no control modules or software zones (no output appliances will sound and no output relays will be activated due to the fact that there are no entries in the Control-By-Event for this initiating device).

For Output Devices, the Null is denoted by entering OR( ) or ( ).

*Note: Entering just an open bracket **"("** is equivalent to entering **"OR ("***. A control module programmed with a Null Control-By-Event will not be activated unless it is included in the Control-By-Event of a software zone or initiating device.

C.B.E PROGRAMMING EXAMPLES

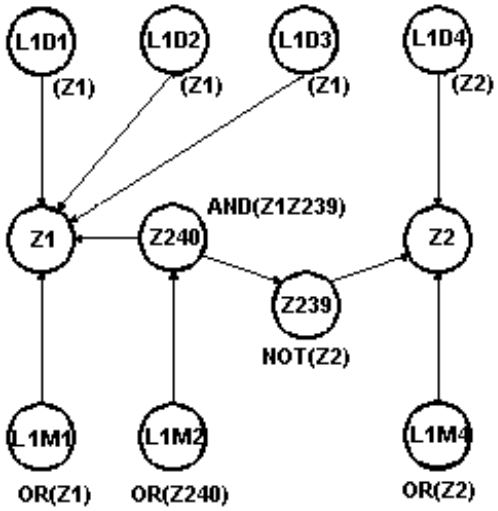
C.B.E Equations

The examples below illustrate the effective use of Control by Event Equations, and the flexibility to carry out any function.

Combinational Logic

Example # 1:

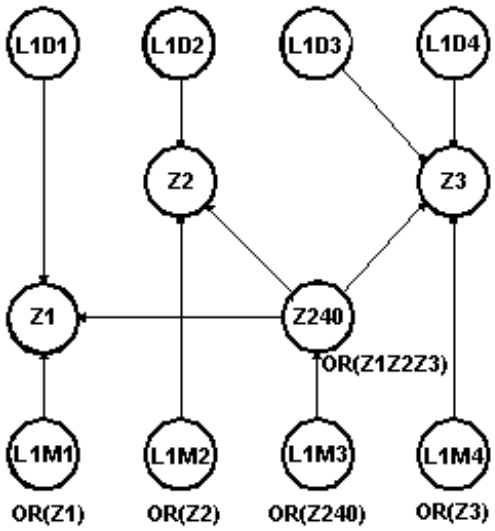
L1D1, L1D2, and L1D3 activate Z1.
L1D4 activates Z2.
If Z1 activates,
L1M1 will activate.
If Z2 activates
L1M4 will activate.
The equation AND(Z1 Z239) requires both to be active for an output.
Because reverse zone 239 has a NOT operand, it is active as long as L1D4 is NOT active.



General Alarm
Example # 2:

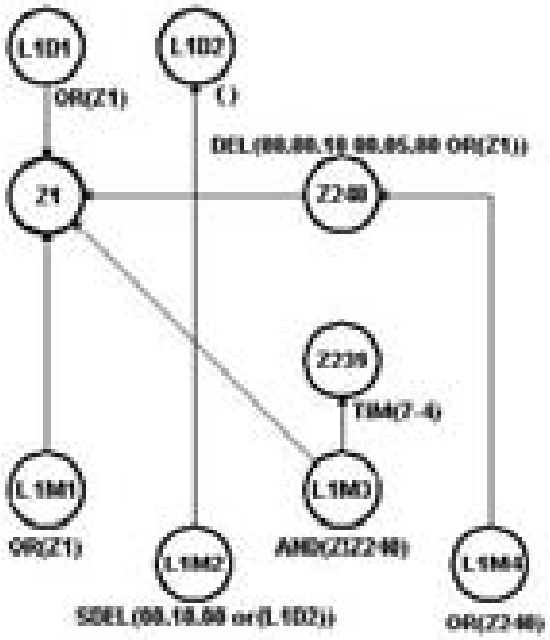
L1D1 activates L1M1 through Z1.
L1D2 activates L1M2 through Z2.
L1D3 and L1D4 activate L1M4 through Z3.
L1M3 will activate when reverse
zone 240 is activated.
Z240 will activate when Z1, Z2 or Z3 are activated.

Output Module L1M3 serves as the General Alarm device. It will be activated whenever an alarm occurs on any initiating device in the system, due to the fact that all initiating devices activate a Software Zone, and activation of any zone activates software zone Z240.

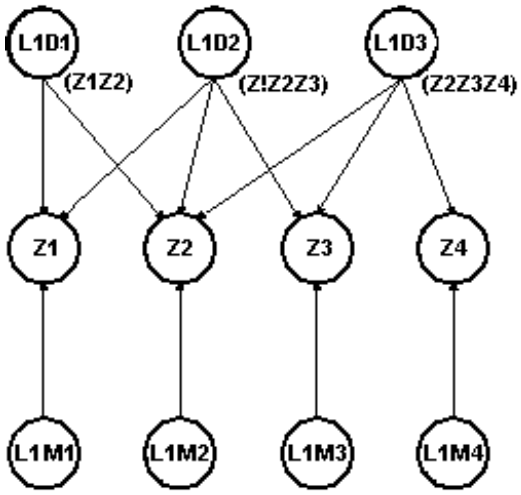


Delay and Time
Example # 3:

L1D1 activates Z1. L1M1 turns on when Z1 is active. L1D2 is a null equation.
L1M2 activates with L1D2 after a ten minute delay. Z239 is active
July 4th of every year. L1M3 will activate when Z1 and Z239 are active. Z240 is active when Z1 is on after a one minute delay and will stay on for 5 minutes.
L1M4 turns on when Z240 is active.



Fire Floor, Floor Above, Floor Below
Example # 4:



L1D1 activates **Z1** and **Z2**.
L1D2 activates **Z1**, **Z2** and **Z3.**
L1D3 activates **Z2**, **Z3** and **Z4**.

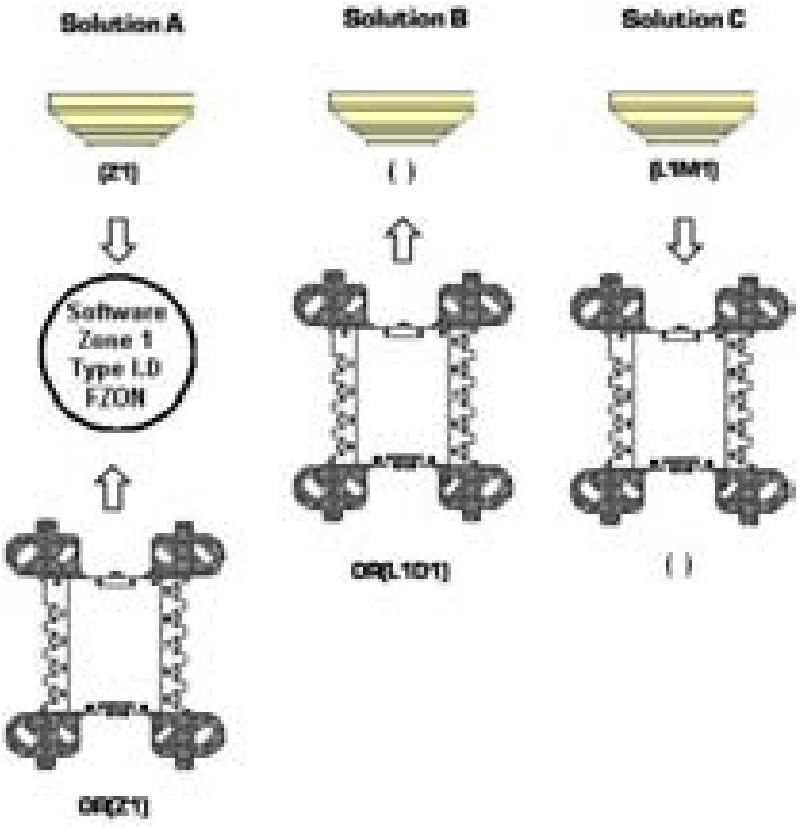
L1M1 will activate when **Z1** is active.
L1M2 will activate when **Z2** is active.
L1M3 will activate when **Z3** is active.
L1M4 will activate when **Z4** is active.

Different C.B.E same result

The following example shows the flexibility of C.B.E mapping from a detector to a CMX-2 Control module:

Solution A shows the use of a Zone to communicate from the detector to the Module.
Solution B shows the module looking at the detector.
Solution C shows the detector controlling the module.

Note the C.B.E equations.



Note: Monitor modules could be used in place of detectors.

SOFTWARE TYPE-ID'S - AN OVERVIEW

All devices, software zones, and Annunciator points must be programmed with appropriate software type identification. Software type I.D.s allow the 1010/2020 to identify the type and determine functionality of points in the system.

Note: The control panel will not permit the changing of a Software Type I.D. in one group to a Software Type I.D. in another group. To accomplish this, the device must be reinstalled by using the Full Point Programming option of the Main Programming Menu.

RECOMMENDED TYPE ID'S FOR COMMON APPLICATIONS

INPUT DEVICES	Type ID	Tracking (Non-Latching)
Analog Photo Optical Detector	PHOT	
Analog Duct Probe Detector	PHOD	Yes
Ionisation Detector	ION	
Combination Detector (OMNI)	CMBO	
Analog Thermal	THER	
Conventional AZF Circuit	SCON	
Break Glass	MON	
Pressure Switch	MON	
Flow Switch	SPSU	Yes
Tamper Switch	SUPR	Yes
Door Switch	NONA	Yes
Airflow Switch (AS1668)	NONA	Yes

OUTPUT DEVICES	Type ID	Notes
Bell Output (Monitored)	**CON**	Select as Silenceable
General Alarm Output	**CMXC**	Map to software zone as required
General Fault	**N/A**	Take direct from CPU terminals 6=C, 7=NC, 8=N0
General Isolate	**N/A**	Take direct from CPU terminals 1=C, 2=NC, 3=N0
A/C Trip – Latching	**FRCM**	When used with SCS-8 Module
A/C Trip – Non-Latching	**FORC**	
Fan Start Relay	**FRCM**	
Fan Stop Relay	**FRCM**	
Relay Output	**FORC**	Map to software zone as required
Monitored Output	**CMXS**	Map to software zone as required
Mains Fail Relay Output	**ACFC**	

ADDRESSABLE DETECTORS

Type I.D.	Display Label	Type of Device
ION	**SMOKE (ION)**	CPX-/751 Intelligent Ionisation Smoke Detector.
CMBO	**SMOKE(COMBO)**	IPX/751 Intelligent Combination Ion/Photo/Thermal Smoke Detector (Omni)
PHOT	**SMOKE(PHOTO)**	SDX-551/751 Intelligent Photoelectric Smoke Detector.
THER	**HEAT(ANALOG)**	FDX-551 or FDX-551R Intelligent Thermal Sensor.
PHOD	**PHOT(DUCT)**	SDX-551/751 Intelligent Photoelectric Smoke Detector. When being used as a DUCT PROBE in AS1668 fan applications. The PHOD type ID behaves as a security type input, displays on the LCD but does not trip a general alarm condition.

ALARM INITIATION MODULES

Type I.D.	Display Label	Type of Device
MON	**MONITOR**	MMX Monitor Module or an XP5-M used to monitor *normally open* contacts, (ie. break Glass Alarms,).
NONA	**NON ALM MON**	MMX Monitor Module or an XP5-M used to monitor Pump indications or tamper switches, and display them on an ACM32-A, This Type does not indicate on the LCD display and will not initiate a fire alarm condition:
SCON	**SMOKE (CONV)**	MMX-2 Monitor Module used to monitor conventional 2-wire smoke detectors. This module has a longer reset period than modules programmed as MON. (Also allows AVF)
SPSU	**SPRINKLER MNTR**	MMX 101 Monitor module used to monitor Flow switches, This type indicates on the display and has CBE but does not activate an alarm condition. (Tracking is active for this device)
SUPR	**SUPERVISORY MNTR**	MMX 101 Monitor Module used to monitor any Tamper Input that is required to display on the DIA, without operating an Alarm condition (Tracking is an option for this device)

SYSTEM COMMON OUTPUT MODULES

- These software types **cannot** be programmed for Bell Isolate.
- These software types **do not** have any control-by-event programming.

Type I.D.		Type of Device	Break tabs
GAC	**GN ALARM FORC**	CMX control module or an XP5-C used as a **Form-C Relay**, for **Common Alarm**.	**Yes**
GAS	**GN ALARM SUP**	CMX control module or an XP-5-C used as a **Monitored Output** for **Common Alarm**.	**No**
GTC	**GN TRBL FORC**	CMX control module or an XP5-C used as a **Form-C Relay**, for **Common Fault**.	**Yes**
ISOC	**GN ISOL FORC**	CMX control module or an XP5-C used as a **Form-C Relay**, for **Common Isolate**.	**Yes**
ISOS	**GN ISOL SUP**	CMX control module or an XP-5-C used as a **Monitored Output** for **Common Isolate**	**No**
ACFC	**AC FAIL FORC**	CMX control module or an XP5-C used as a **Form-C Relay** for **Mains Fail**.	**Yes**
ACFS	**AC FAIL SUP**	CMX control module or an XP-5-C used as a **Monitored Output** for **Mains Fail**	**No**

OUTPUT MODULES

- These software types **do** have control-by-event programming capability.

Type ID		Application	Bell Isolate	Break Tabs
CMXC	**CMX FORM C**	CMX Control Module or an XP5-C used as a **Relay Output**	**No**	**Yes**
CMXS	**CMX CONTROL**	CMX Control Module or an XP5-C used as a **Monitored Output**	**No**	**No**
CON*	**CONTROL**	CMX Control Module or an XP5-C used as a **Monitored Output** (Bell) or a **Sounder Base**	**Yes**	**No**
FORC*	**FORM C RELAY**	CMX Control Module or an XP5-C used as a **FORM-C Relay**.	**Yes**	**Yes**
FRCM	**FORMC MANUAL**	CMX Control Module or an XP5-C used as a **FORM-C Relay**. **This device does not deactivate when a system reset occurs**. This module can be used for fan control applications where a latching plant trip is required and can be mapped only to an AFCM Annunciator point.	**No**	**Yes**

Note: Although each type ID listed above is prompted for Signal Silence during programming only those CON and FORC will isolate by using the "**EXT BELL ISOLATE**" button.

SOFTWARE ZONES

Type I.D.	Display Label	Type of Device
FZON	**FORWARD ZONE**	A software-defined zone that is **forward-activating**.
RZON	**REVERSE ZONE**	A software-defined zone that is **reverse-activating.**

- A Forward-Activating Zone is a software zone, which once activated by an input device or other forward zone may in turn activate other zones and/or output devices directly. Zones and output devices activated by a forward zone have that forward zone contained in their CBE List.

- A Reverse-Activating Zone is a software zone, which if not activated directly by an input device or forward zone may be activated through an associated CBE equation. A Reverse Zone may be referenced in other CBE Equations.

ANNUNCIATOR ZONE

Type I.D.	Display Label	Type of Device
AZON	**ANN ZONE**	**Annunciator Point,** In the case of an ACM-16at, AZON acts as a **Zone Isolate** Facility, or can be used to isolate a module, and will display an alarm state if the point isolated is in alarm.
AACT	**ALM ACTIVATE**	**Annunciator Point**, when using an ACM 16AT, AACT is used to **activate a zone.**
AGZN	**ANN GLOBAL ZON**	**Annunciator Point,** when using an ACM16AT, AGZN is used to **isolate all inputs** to any Forward Zone associated with this Type ID. The zone needs to be the First zone in the CBE for an input device.

ANNUNCIATOR INPUT

Type I.D.	Display Label	Type of Device
AINP	**ANN INPUT**	**Annunciator Point** that indicates the state of any input mapped to it. (Zone Module or Detector) It does not display an alarm, if the device is isolated.

ANNUNCIATOR OUTPUT

Type I.D.	Display Label	Type of Device
ACON	**ANN CONTROL**	**Annunciator Point** that can be used for manual control of relays to activate **solenoids** on sprinkler installations, it also indicates the state of any CMX Control Module, or XP5-C relay mapped to it.
AFCM	**ANN FORC MAN**	**Annunciator Point** Used for **fan controls** Start/Stop, that is not deactivated upon system reset, and similar applications only with an FRCM control device.

1668 (SCS-8) PROGRAMMING

Up to 16 fans (per Annunciator address, 8 with master, then further 8 with expander fitted)
Each individual fan may be programmed to either start or stop automatically in fire mode.
If a duct probe is triggered the fan will be forced to stop until a configurable time period (30-60 seconds) after the probe clears. If there is manual intervention the fan will assume the state presented on the switches.

There is also support for up to 32 individual latching plant trips per SCS-8.

Configuration

The examples assume an SCS-8 is installed at address 1
The addresses used are for example only. It is acceptable to use completely different addresses. However it is important that when using different device addresses the numerical ordering is not changed, ie: the STOP module is numerically after the START module.
The examples assume a general zone at Z200.
The examples assume floor zones from Z1-Z10.
The examples assume all necessary Annunciator points are installed. When Annunciator points mapped to CMX's, the type ID will be AFCM and when Annunciator Points are mapped to detectors or MMX-101's the type ID will be AINP.

It is necessary that for each bank of 4 Annunciator points (1 fan) that the first two Annunciator points to be AFCM and the last two to be AINP for a fan to be registered as installed.

Ie: A1P1=AFCM (Start)
A1P2=AFCM (Stop)
A1P3=AINP (Fan Status)
A1P4=AINP (Duct Probe)*

*(Except for the last fan where it is OK to use the last point, ie: point 64 as AFCM for an Fire trip relay. If the point if AINP, it will behave as all other fans ie: Duct probe at this point.)

A FAN THAT STARTS IN FIREMODE WITH ASSOCIATED DUCT DETECTOR:

Address	Type	Label	Annunciator Map	C.B.E
L1M1	FRCM	FAN START	A1P1	OR (Z200)
L1M2	FRCM	FAN STOP	A1P2	( )
L1M3	NONA	FAN STATUS	A1P3	( )
L1D4	PHOD	DUCT PROBE	A1P4	( )

A FAN THAT STOPS IN FIREMODE, WITH ASSOCIATED DUCT DETECTOR.

Address	Type	Label	Annunciator Map
L1M1	FRCM	FAN START	A1P1
L1M2	FRCM	FAN STOP	A1P2
L1M3	NONA	FAN STATUS	A1P3
L1D4	PHOD	DUCT PROBE	A1P4

FIRE TRIP RELAY

A fire trip relay is configured as follows

Address	Type	Label	Annunciator Map*	CBE
L1M1	FRCM	FTR	A1P64	OR (Z200)

* If the dip-switch on the SCS-8 is set for extra latching fire trips, then addresses A1P33-A1P64 can also be used.

Upgrading A Notifier 1010/2020 Version 2.8 to Version 3 AUS 1

1 Upload the config from the FIP to the Laptop using Verifire 2.8 Upload.
NOTE: After the Upload is completed, check & confirm configuration for accuracy.

2 Once the database is checked, open it in Verifire 3. The database will be converted from 2.8 to Version 3.

NOTE: This means the actual database that is opened will be converted. if you wish to be safe in the event the upgrade needs to be aborted, make a copy of the database before converting it to 3, so that you can still use the uploaded database with 2.8 Verifire.

3 Replace all the firmware in the entire panel from the 2.8 chips to the V3.0 AUS 1 firmware.

4 Swap the two bottom non-volatile (DSRAM) chips on the CPU Card with each other to completely erase the systems memory. (CPU card Located top, RHS, front position in back of FIP)

5 Replace Keypad with New Notifier/Inertia keypad.

6 Power up the Panel.

7 Perform a full System Program. Ensure that all the hardware is installed as it does not Download through Verifire.

8 Download the new Version 3.0 AUS 1database to the panel.

9 Reset the panel

10 Perform a full test on the system.