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*Operational notes for 4 Zone Alarmsense Panel*

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NOTE

ALARMSENSE FIRE PANELS CAN ONLY BE USED WITH APOLLO ALARMSENSE PRODUCTS.( CALLPOINTS, DETECTORS, BASES ETC.)

Operation of fire panel.

Normal operation: The green LED is illuminated indicating system healthy. All other LED's are off.

Fire condition: Triggered off by a smoke detector or a break glass operation and is indicated by a red LED showing common fire and a red LED showing the zone in fire, which will pulse for detector operation and be constant for callpoint operation, accompanied by a constant tone from the panel and the operation of zonal sounders and sounder circuits.

Evacuate.

Operation of the evacuate or remote evacuate will trigger all sounders. The remote evacuate is a none latching input.

Silence.

To silence the sounders, press the silence button having first enabled the controls with the keyswitch. The sounders will cease to operate and the panel buzzer will pulse to indicate that the silence has been pressed. Auxiliary relay ( reset on silence ) will be reset.

Reset/ Lamp test.

The reset button will perform a lamp test of all LED's which should illuminate in sequence. It also resets the processor, resets the detectors, resets any fire condition that may be latched, resets buzzer if in operation, resets all auxiliary relays and resets sounders. If a fire condition or fault persists after reset, the circuit will redisplay the condition. If a fire condition exists the sounders will come on even if they were silenced previously. When a fire condition is indicated, the source of the detection should be investigated before reset is pressed in order to locate the smoke detector triggering the system. (the smoke detector operating will have an LED illuminated on it.)

If there is a residue of smoke in the area, the smoke detectors may reactivate after reset, In this case try again after a short time.

One man test

In this mode the unit will reset every 10 seconds. This will enable the detectors to be tested without the need to return to the unit to reset the detectors. Whilst in this mode, the fault lamp will come on and the buzzer will pulse. The silence function will not operate.

The zones, sounders, relays and remote input can all be isolated from the front controls by pressing the mode button and selecting or clearing the operation by pressing the mode or reset key. A constant indicator shows that function has been selected. (A flashing indicator shows it has been cleared).

To isolate a zone first select the zone isolate function, further presses of the mode key enable isolation of the individual zone in the same manner as before.

When the appropriate isolation has been selected, if no keys are pressed for 25 seconds the panel will automatically reset.

One man test may be selected also by pressing the mode button and selecting or clearing by pressing the mode button, followed by pressing reset.

See the Mode selecting/ clearing instruction sheet for further detail.

The zones are monitored for short circuit, shown by a constant LED on zone fault.

Open circuit gives flashing LED on zone fault, flashing in time with the zone indicator LED.

Head removal zone fault gives flashing LED in time with zone indicator LED but reverse flash rate to open circuit.

Sounder circuits are also monitored for open /short circuit in the same manner.

Sounder fuse fault gives flashing zone indicator and constant fuse indicator.

Failure of the fuse does not effect zone monitoring.

The sounder circuits are monitored for short circuit, constant LED on sounder fault and flashing LED for open circuit.

Internally there is a set of five switches to alter the functions of the panel.

#### Pos. 1

##### Zonal sounding

In this mode the sounders on the zone that is in fire will sound constantly. On all the other zones the sounders will pulse.

The two normal sounder circuits on the panel will sound constantly.

#### Pos. 2

##### Call points not isolatable

In this mode when a zone is isolated, only the detectors will be isolated. The callpoints will operate as normal.

#### Pos. 3

##### Zone only sounding

In this mode only the zone in fire will sound, all other zones are silent.

Callpoints on any zone will override this option and sound all sounders.

The two normal sounder circuits on the panel will sound constantly.

#### Pos. 4

##### Sounder delay

In this mode if fire condition triggered by detectors, operation of all zone sounders are delayed for two minutes. The two normal sounder circuits on the panel will sound instantly.

If fire condition is triggered by a callpoint, all sounders will operate instantly.

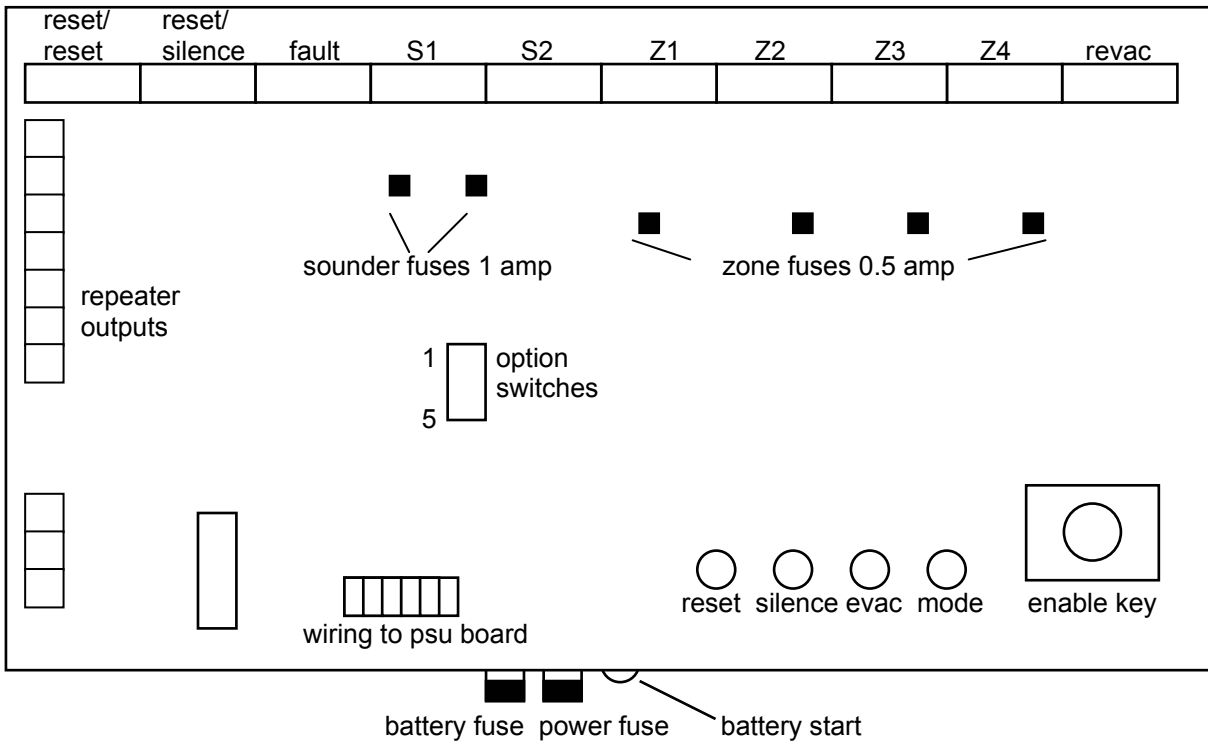
#### Pos. 5

##### Detectors – pulse, Callpoints - constant

In this mode if detectors trigger fire condition the zone sounders will pulse.

If fire condition is triggered by callpoints the zone sounders will be constant.

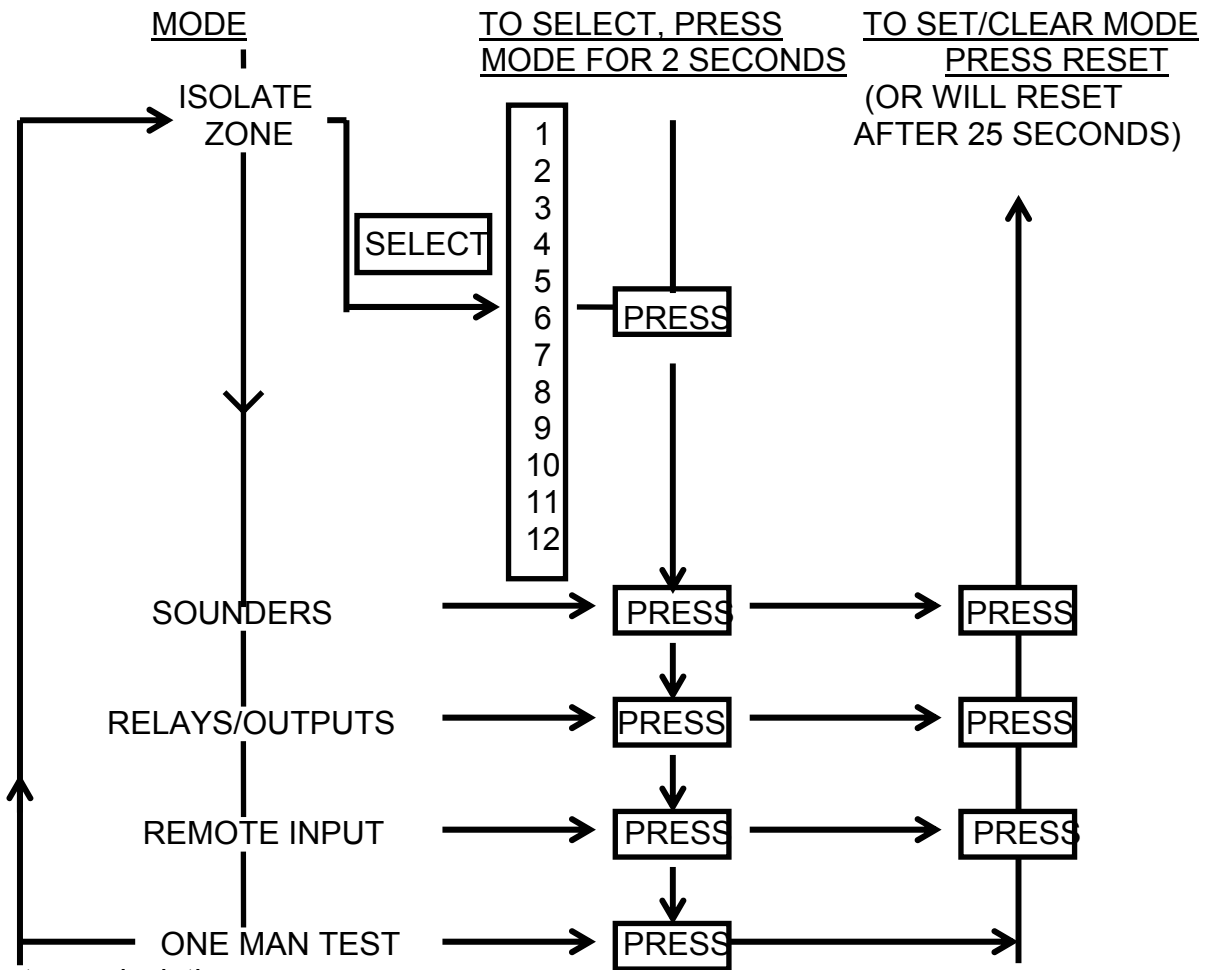
The two normal sounder circuits on the panel will sound constantly under both conditions.



Technical specifications.

- Detector zones and sounder circuits - 3K end of line resistor.
- Up to 12 zones. 20 detectors per zone, 20 two-wire sounders per zone with a maximum of 80 two-wire sounders across all zones.
- 2 Sounder circuits - normally reverse polarity, in alarm 24v fused at 1 amp per sounder circuit.
- Power supply rated at 2 amps.
- Battery charging voltage 27.6 volts, capable of charging 2 x 12v 7AH batteries. Batteries are protected from full discharge by battery protect relay. This relay prevents the panel being powered up on batteries only at commissioning. To override this there is a push button on the back board to start the panel on batteries only. The battery and power supply fuses are also situated on this rear board.
- Controls panel consumption 110 ma max.
- 2 Auxiliary relays, with 3 sets of volt free changeover contacts rated at 2-amp max. two operate on fire, reset on reset. One operates on fire, reset on silence.
- 1 Fault relay, with one set of volt free changeover contacts.
- Class change / remote evacuate input, non latching, fully monitored and with separate indication for fire and fault.
- Repeater output connections.
- Alarmsense zones normal condition 13volts, rising to 24 -28volts in alarm condition.

MODE SELECTING / CLEARING.



To select zone isolation

1. First press mode, Note, the zone isolation light will be flashing.
2. Press mode for 2 seconds, the light will become constant.
3. The zone 1 light will now be flashing.
4. Continue pressing the mode button until you get to the zone required.
5. Press mode for 2 seconds, the zone light will become constant.
6. Continue pressing mode, continuing through the options until the panel cycles through a reset sequence, or press reset. The zone is now isolated.

To select other modes.

1. First press mode, the zone isolation light will be flashing.
2. Then continue pressing it, rotating through the options, until the one wanted.
3. Press mode for 2 seconds, the light will become constant.
4. Continue pressing mode, continuing through the options until the panel cycles through a reset sequence, or press reset. The mode is now selected

To clear zone isolation.

1. First press mode, Note, the zone isolation light will be flashing.
2. Press mode for 2 seconds, the light will become constant.
3. The zone light will now be flashing.
4. Press reset, the mode is now cleared.



CONNECT WIRES FROM THE SOUNDER, TO L1 IN AND L2 ON THE DETECTOR BASE AS SHOWN ON THE WIRING DRG.  
 UP TO 20 ALARMSENSE SOUNDERS CAN BE WIRED TO EACH ZONE WITH A MAXIMUM OF 80 TWO-WIRE SOUNDERS ACROSS ALL ZONES.  
 AN END OF LINE 3K RESISTOR MUST BE FITTED ON LAST SOUNDER OR DETECTOR.

## Installation and Commissioning

### General

This section should be read fully before commencing wiring and installation of the fire panel. The FireSense range of fire panels has been designed to comply with BS 5839: Part 4: 1988. Fire detection installations should be designed in accordance with BS 5839: Part 1: 1988. The choice of cables used is dependent on the installation and should comply with BS 5839: Part 1: 1988. Cables should be installed in accordance with the current edition of the IEE Wiring regulations (Regulations for electrical installations, published by the Institute of electrical engineers) (BS 7671: 1993).

### Normal Sounder Wiring (Not 2 wire zone sounder)

Mineral insulated copper cable or similar fire proof can mechanically resilient cable should be used for alarm sounder circuits, as indicated in BS 5839: Part 1 : 1998. Section Two 17. A minimum of two sounder circuits should be used in each installation to comply with BS 5839: Part 1: 1988. Sounder output circuits should be wired as continuous pairs with no spurs or tees. An end of line device should be fitted to each sounder circuit as shown in Fig. 1.1. Below.

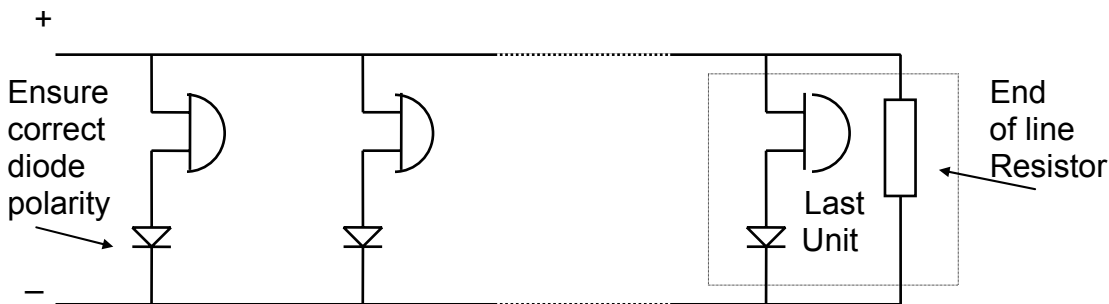
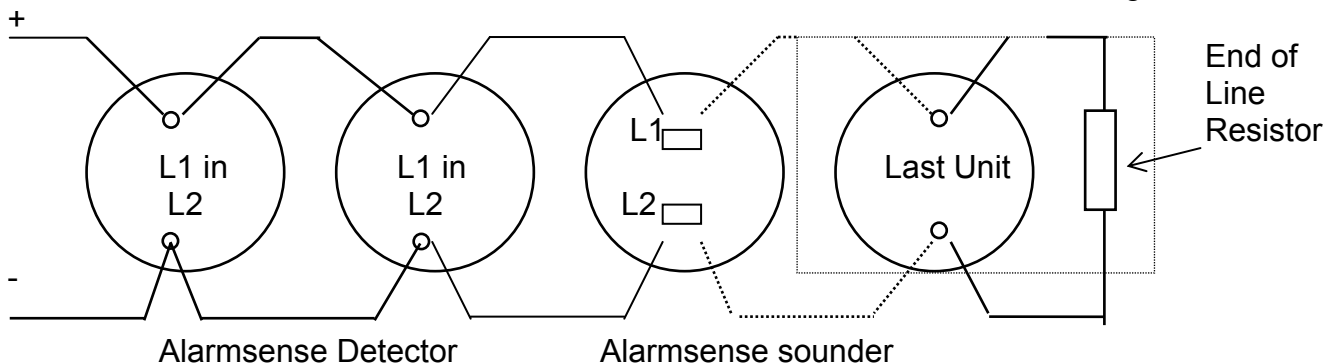


Fig. 1.1 Typical normal sounder circuit

### Detector and 2 wire zone sounder wiring

The cable used is dependant on the installation, as indicated in BS 5839: Part 1: 1988 Section Two 17. An end of line device should be fitted to the end of each zone circuit. Unused zones require an end of line device connecting across the zone input terminals to prevent an open circuit fault from being indicated on the control panel. Refer to individual manufacturer data for details on detector terminals and wiring.



## ALARMSENSE RELAY UNIT

An alarmsense relay unit is available for driving beacons or conventional sounders from the zones.

No additional power supply is required as the power is drawn from the zone voltage.

Typical examples are given below.

TYPICAL APPLICATIONS OF ALARMSENSE RELAY UNIT.

