Contents

1 Introduction

This control panel is a zone fire control panel developed with a SCM. It can monitor 8 zones at most, and each zone can be connected with up to 20 conventional fire detectors. It has 6 output points to control audible warning devices, such as sounder-beacons, alarm bells etc with the most load including 4 sounders outputs and a status output. This panel is self-contained with internal standby power supply and space provision for the two sealed lead-acid batteries. Its functions are microprocessor controlled, including test and isolate functions, day and night mode working. It has the functions of normal indication, fault indication, alarming indication and warning of short circuit and open circuit. It can also mark the position of the detection zone. The panel remains a port for a fire repeater panel for multi-zone fire indication. And it is easy to install and operate. By a keyswitch, it can enable the control function; by a keyswitch and an internal switch, it can enable the programming function.

2 Technical Specifications

Operating Voltage: DC24±15%V or AC230±15%V 50HZ/60HZ

Batteries: 8Ah 24H

Parameters of detecting loops:

Output voltage: 20—28V DC,

Standby current: 2.4mA

Alarming fire resistor: 150Ω—1K5Ω（470Ω in normal state）

End resistor: 4K7 or AEOL。

Sounder output:

Output voltage: 20—28V DC

Output current: 1A

Terminal resistor: 4K7

Fire output：0.5A 24V DC

Fault output: Passive contact output　　Capacity: 1A 24V DC

Repeater panel output：10mA

Auxiliary power supply output：0.5A 20—28V DC.

Physical dimensions：380mm×320mm×95mm

3 Structure

The appearance of the control panel is shown in Fig.3-1

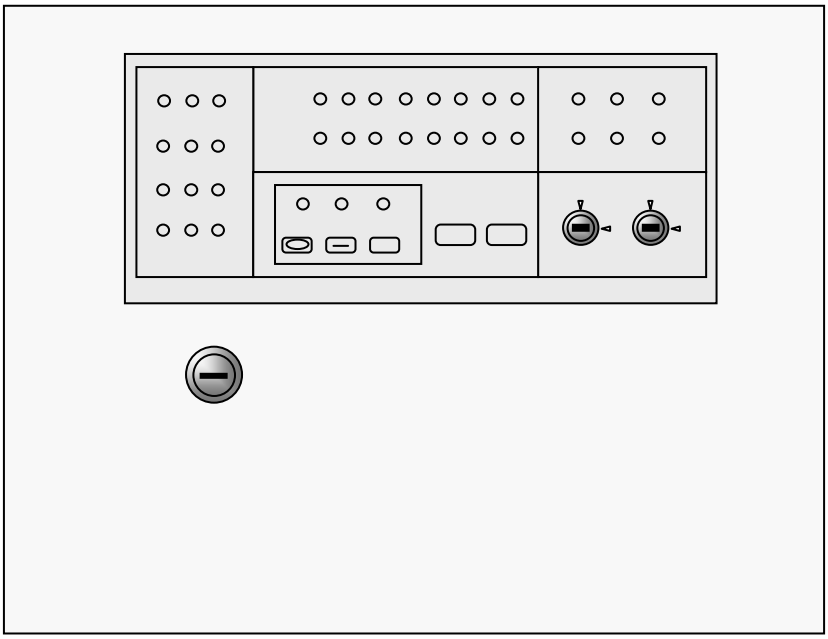


Fig.3.1 Outline sketch

4 Operating Instruction

4.1 Instruction of indicators

4.1.1 Instruction of common state indicators

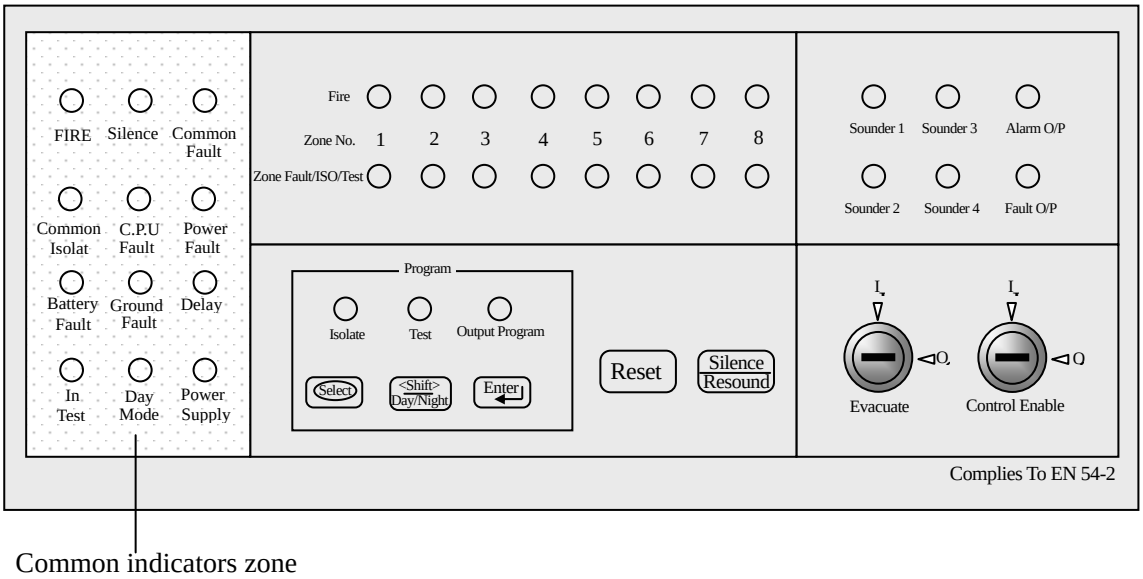


Fig.4.1.1 Common indicators

FIRE—Red common fire indicator. This indicator is illuminated steadily when an alarm condition is detected and remains ON until the fire is cleared.

Silence—Yellow common silencing indicator. This indicator is illuminated when the internal buzzer or external sounders are in silencable condition.

Common Fault—Yellow common indicator. This indicator flashes when there is any fault and is illuminated after pressing the **Silence** pushbutton.

Common Isolate—Yellow common isolate indicator. This indicator is illuminated when one or more zones

are isolated.

C.P.U Fault —Yellow indicator. This indicator flashes when the CPU is in fault condition. It is illuminated when the memory verifies errors.

Power Fault—Yellow fault indictor. This indicator is illuminated in the event of failure on the main power supply.

Battery Fault—Yellow indicator. This indicator is illuminated in the event of failure on the batteries.

Ground Fault—Yellow indicator. This indicator is illuminated when there is an earth fault.

Delay— Yellow indicator. This indicator is illuminated if an output is in delay condition.

In Test—Yellow indicator. This indicator is illuminated when one or more detection zones are in test condition.

Day Mode—Yellow indicator. This indicator is illuminated when the panel is operating in accordance with the requirements of the DAY time operation.

Power Supply—Green indicator. This indicator is illuminated when the power supply operates normally.

4.1.2 Zone state indicators

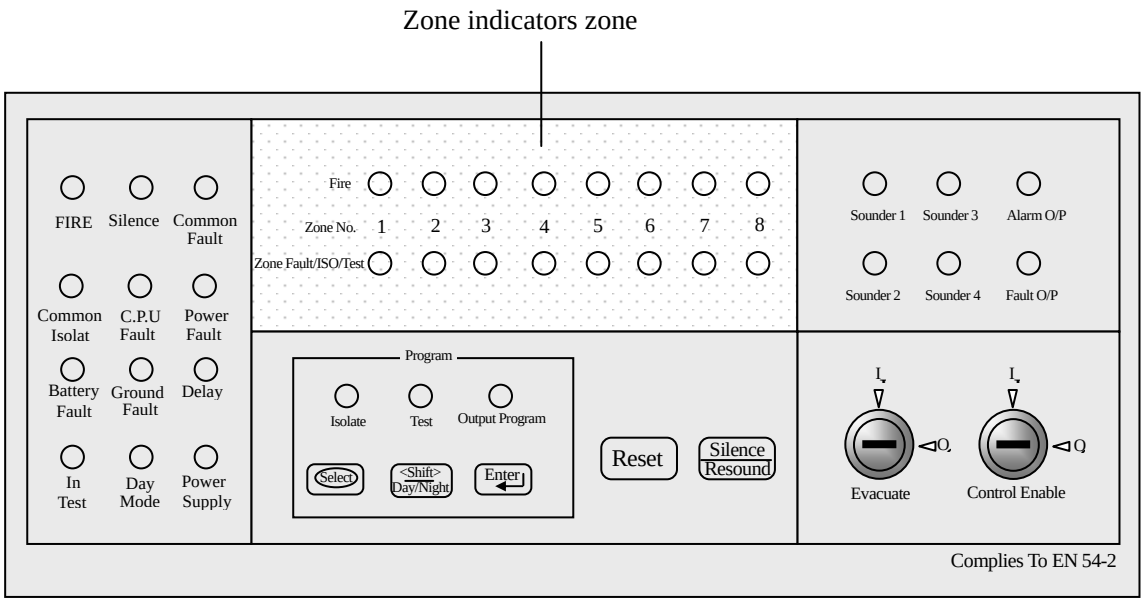
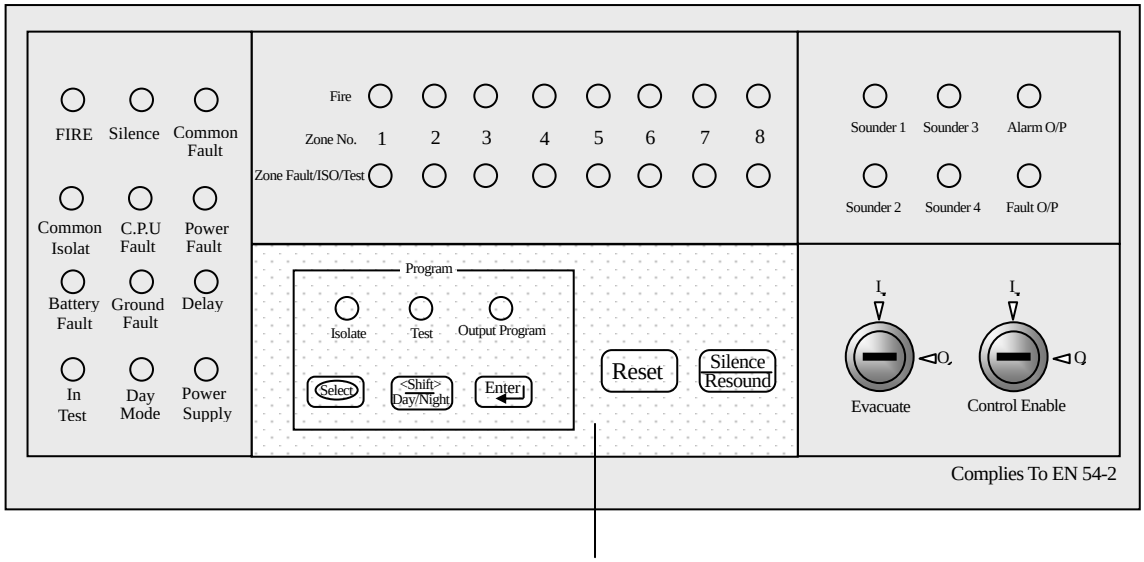


Fig.4.1.2 Zone indicators

Fire— Red indicator per zone. This indicator flashes at 0.5s ON, 0.5s OFF when the relevant zone is in alarm condition. It is illuminated after pressing the **Silence** pushbutton.

Zone Fault/ISO/Test—Yellow indicator per zone. This indicator flashes when the relevant zone is in fault or test condition. It is illuminated when the relevant zone is isolated.

4.1.3 Operation state indicators and pushbuttons



Operation indicators and pushbuttons zone

Fig.4.1.3 Operation indicators and pushbuttons

Isolate Indicator— Green indicator. This indicator is illuminated when setting isolate mode.

Test Indicator—Green indicator. This indicator is illuminated when setting test mode.

Output Program Indicator—Green indicator. This indicator is illuminated when setting output program.

Select Pushbutton—This pushbutton is used to make the panel enter in programming state and selecting state.

Shift Pushbutton—This pushbutton is used to change states.

Enter Pushbutton—This pushbutton is used to confirm.

Reset Pushbutton —This pushbutton is used to cancel or clear the operations.

Silence Pushbutton –This pushbutton is used to change the silenceable state of internal buzzer.

4.1.4 Output status indicators

Output indicators zone

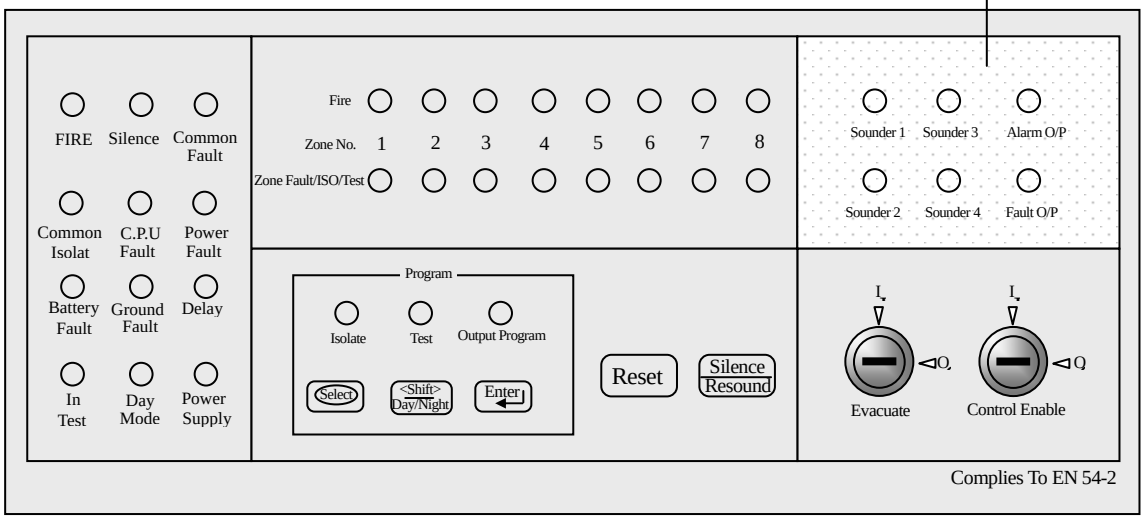


Fig.4.1.4 Output indicators

Sounder 1 indicator—This indicator is illuminated when there is an output to sounder 1 circuit. It flashes when sounder 1 circuit is in fault condition.

Sounder 2 indicator -- This indicator is illuminated when there is an output to sounder 2 circuit. It flashes when sounder 2 circuit is in fault condition.

Sounder 3 indicator -- This indicator is illuminated when there is an output to sounder 3 circuit. It flashes when sounder 3 circuit is in fault condition.

Sounder 4 indicator -- This indicator is illuminated when there is an output to sounder 4 circuit. It flashes when sounder 4 circuit is in fault condition.

Alarm Output indicator—This indicator is illuminated when the panel has an alarm output. It flashes when the panel has a fault output or isolate output.

Fault O/P indicator—This indicator is illuminated when the panel has a fault output. It flashes when the panel has an isolate output

4.1.5 Setting keyswitches and operation levels

4.1.5.1 There are two keyswitches on the panel. See Fig.4.1.5a. If you insert the key into **Evacuate** keyswitch and turn it to **I** position, the external four sounders are started.

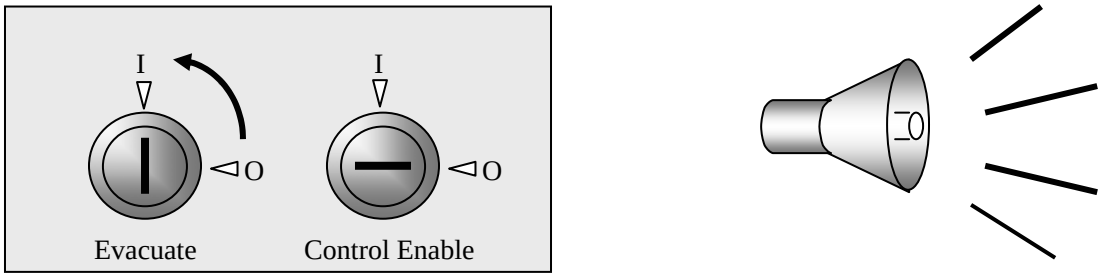


Fig.4.1.5a Start the sounders

4.1.5.2 Turn the key in the **Evacuate** keyswitch to **O** position, then the sounders are closed. See Fig.4.1.5b.

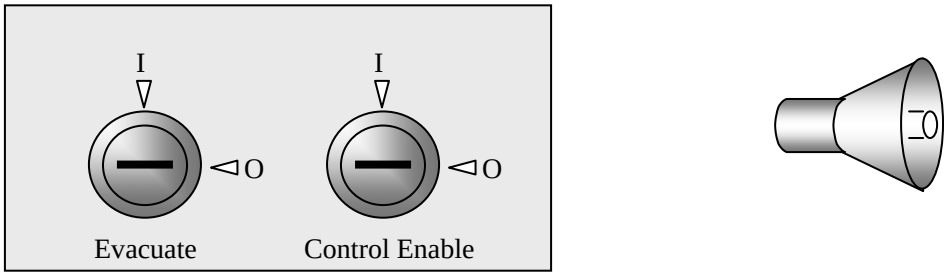


Fig.4.1.5b Silence the sounders

4.1.5.3 Insert the key in the Control Enable keyswitch and turn it to **O** position, the panel is enabled at the operation level 1 with the internal switch SW1.1 in the OFF position. See Fig.4.1.5c. Under this condition, the external sounders are in the non-silenceable state supposed that they have been started automatically.

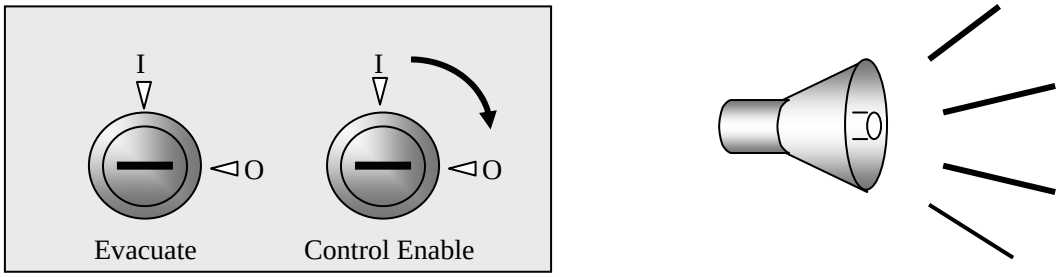


Fig.4.1.5c Operation level 1

4.1.5.4 Turn the key in the **Control Enable** keyswitch to **I** position, the panel is enabled at the operation

level 2 with the internal switch SW1.1 in the OFF position. If the external sounders have been started automatically, turning the key from **O** position to **I** position will silence the sounders. See Fig.4.1.5d.

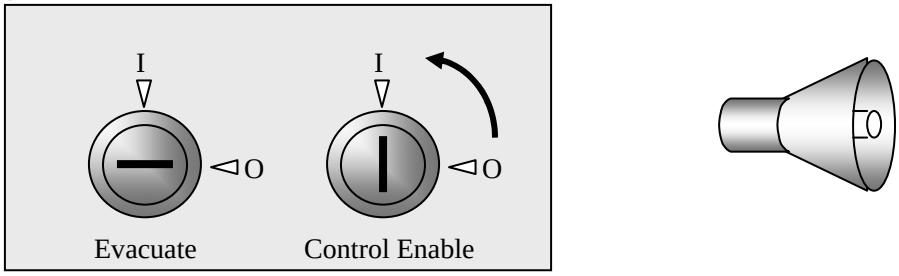


Fig.4.1.5d Operation level 2

4.1.5.5 When the internal switch is in the ON position, the panel is enabled at the operation level 3.

4.2 Operation Instruction

4.2.1 Basic operation

4.2.1.1 Operation of silencing fault and fire alarm (not limited by operation levels)

4.2.5.3.1 In the fault condition, press the Silence pushbutton, the internal buzzer will be muted and the **Silence** indicator will be illuminated. Press the **Silence** pushbutton again, the internal buzzer will be in non-silenceable state and the **Silence** indicator goes out**.**

4.2.5.3.2 In the alarm condition, pressing the **Silence** pushbutton will confirm the fire signal at first. If the fire information is confirmed in one zone, the **Fire** indicator will be illuminated instead of flashing. After all the fire information is confirmed, press the **Silence** pushbutton will change the silenceable state of the panel.

4.2.1.2 Day/Night Mode

The Day/Night mode is enabled by delay output and can be changed in one of two ways as follows:

4.2.5.3.1 Shorting out the Day mode input terminals will switch the panel into Day mode.

4.2.5.3.2 In the operation level 2, pressing the **Shift** pushbutton for 1 second will change the Day/Night mode. When Day mode has been selected, the **Day Mode** indicator is illuminated.

4.2.5.3.3 After 18 hours constantly being in Day mode, the panel will switch into Night mode automatically and pulse the **Day Mode** indicator, and enter in the common fault condition. In the operation level 2, pressing the **Silence** pushbutton will clear the fault.

4.2.1.3 Operation of self testing and clearing fire (operation level 2)

Pressing the **Reset** pushbutton for 1 second will clear the alarm in an alarm condition, and check the sound and indicators in other conditions.

4.2.2 Setting isolate and zone test

4.2.2.1 Set isolate

4.2.5.3.1 Turn the key in the Control Enable keyswitch to **I** position and press the **Select** pushbutton for 1 second, the **Isolate** indicator flashes. Press the **Enter** pushbutton, the **Isolate** indicator is illuminated and the panel enters in the isolate setting state.

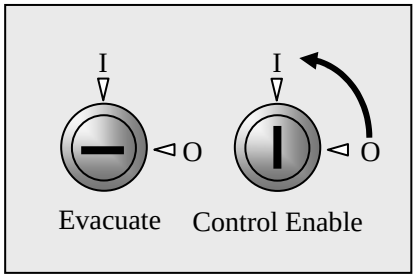
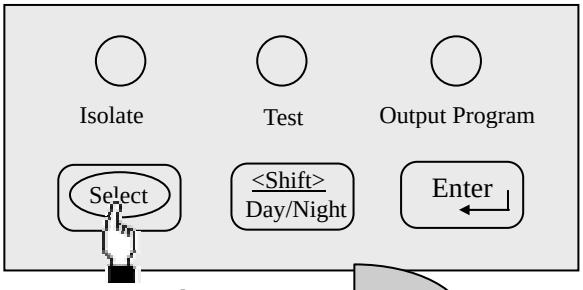


Fig.4.2.2a



Press 1 second

Fig.4.2.2b

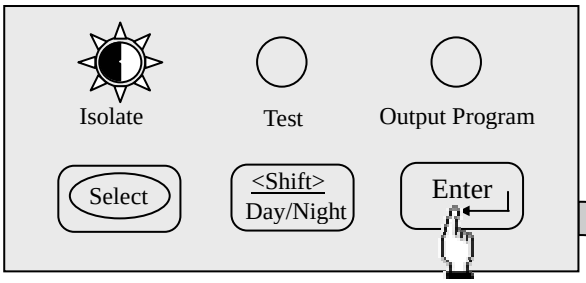


Fig.4.2.2c

Press **Enter**

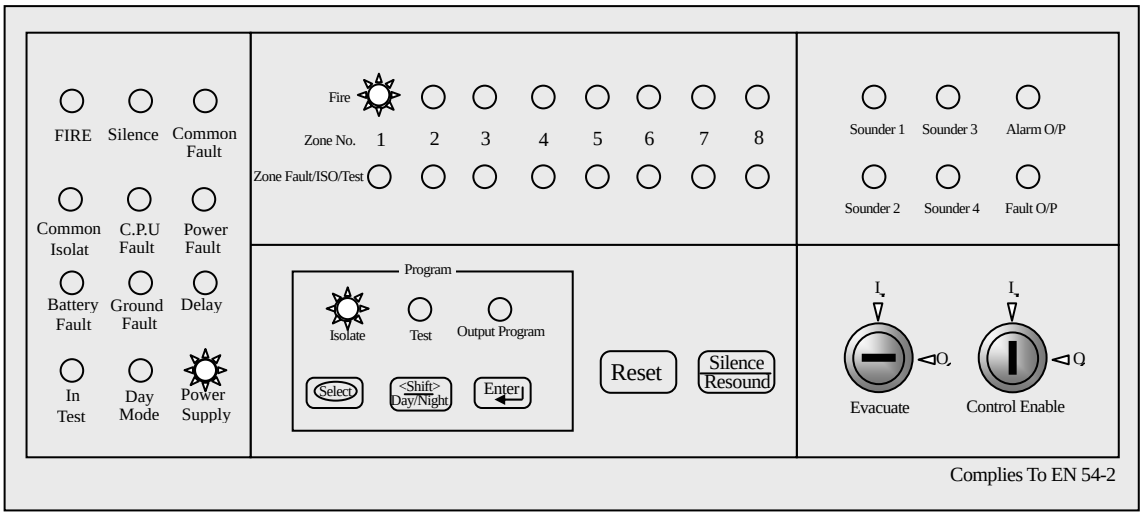


Fig.4.2.2d

4.2.5.3.2 Press the **Select** pushbutton to select a zone or an output (alarm output or fault output), then press the **Shift** pushbutton to change the isolate state of the selected zone (see Fig.4.2.2g). The **Zone Fault /ISO/Test** indicator in the selected zone is illuminated to indicate the isolating state and the **Fire** indicator in the corresponding zone is illuminated to indicate the selecting state. E.g., the following operation is for selecting zone 6. See Fig.4.2.2f.

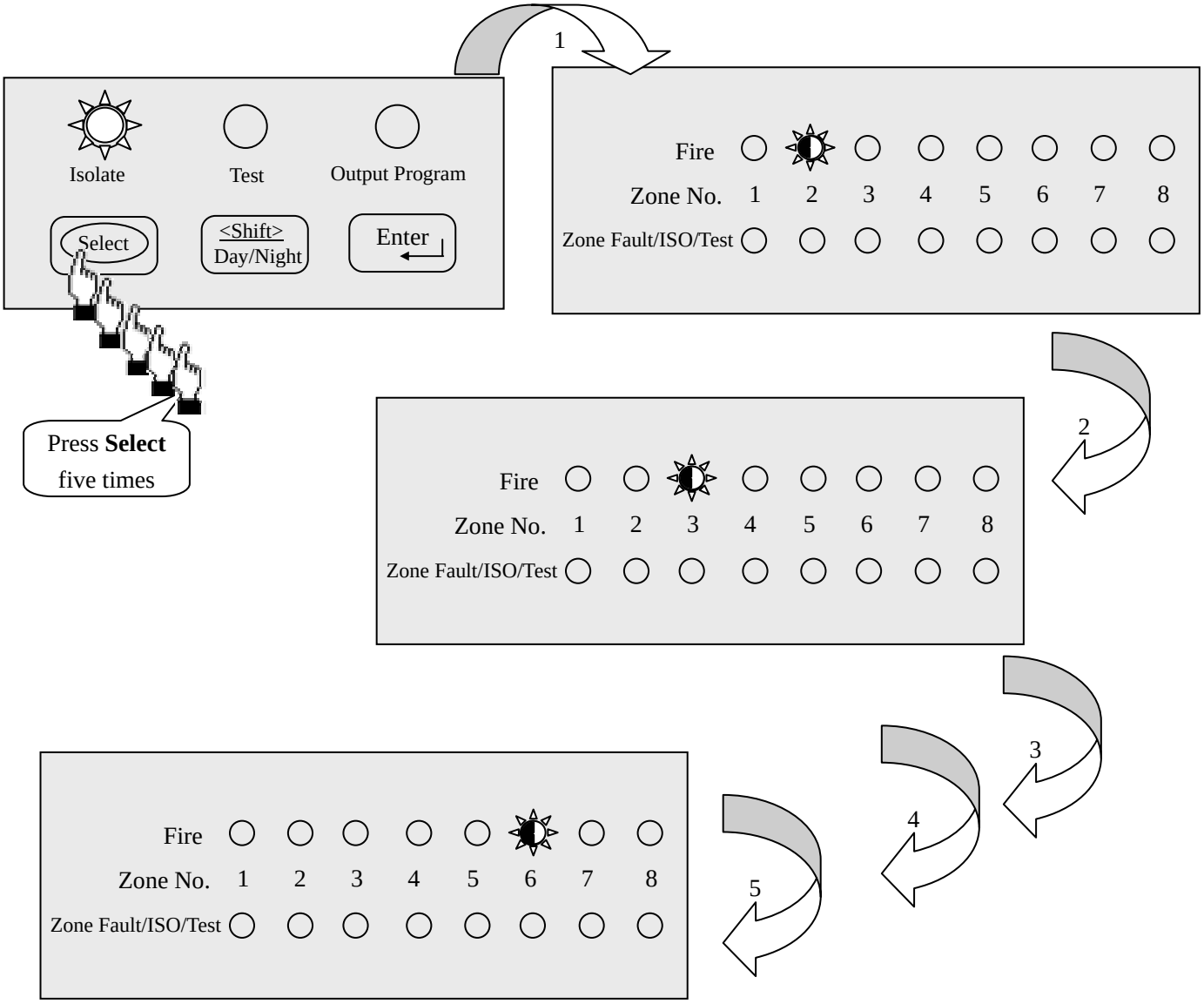

1
Isolate
Test
Output Program
Select
<Shift>
Day/Night
Enter
Press **Select** five times
Fire
Zone No. 1 2 3 4 5 6 7 8
Zone Fault/ISO/Test
2
3
4
5

Fig.4.2.2f

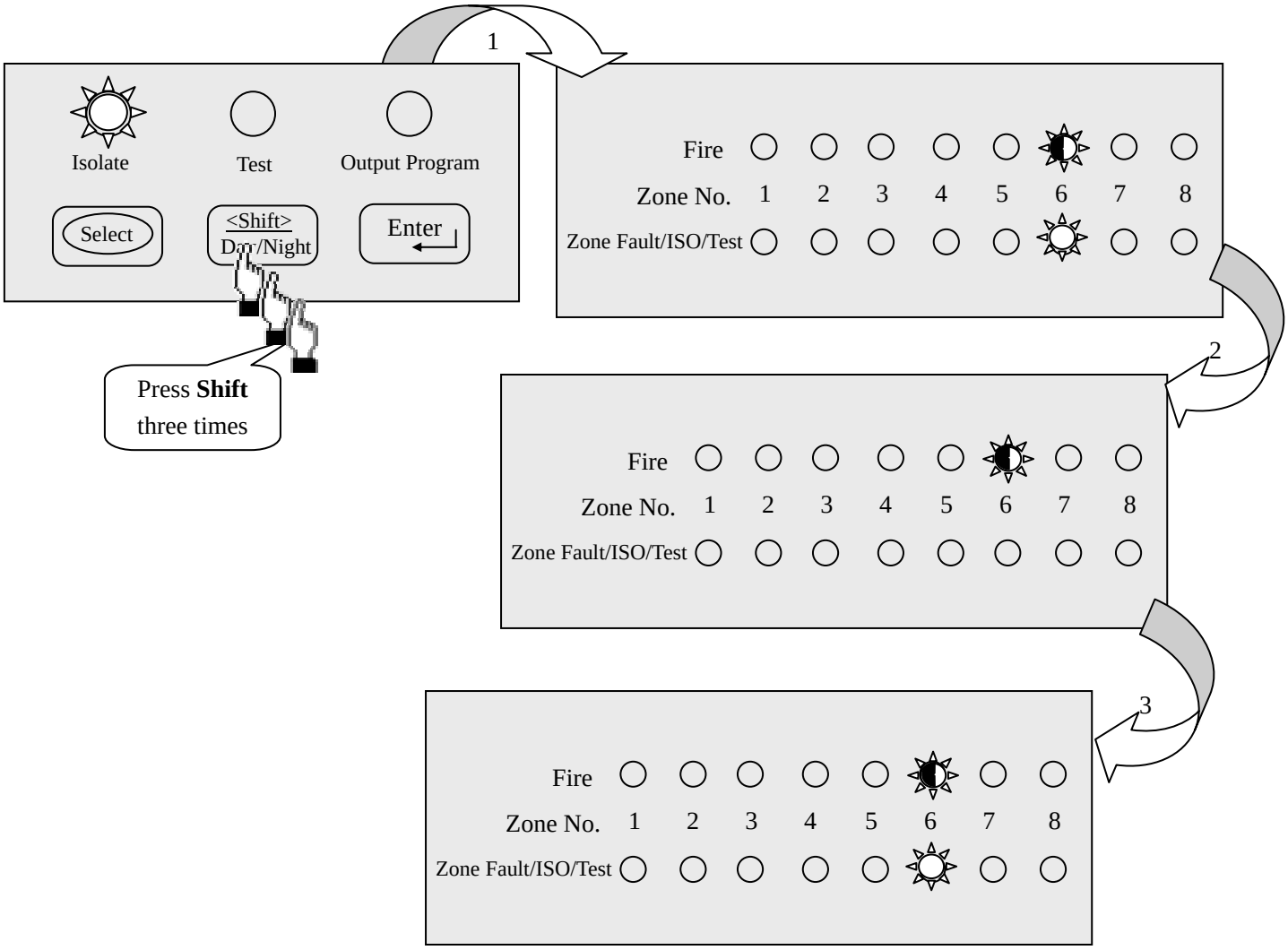
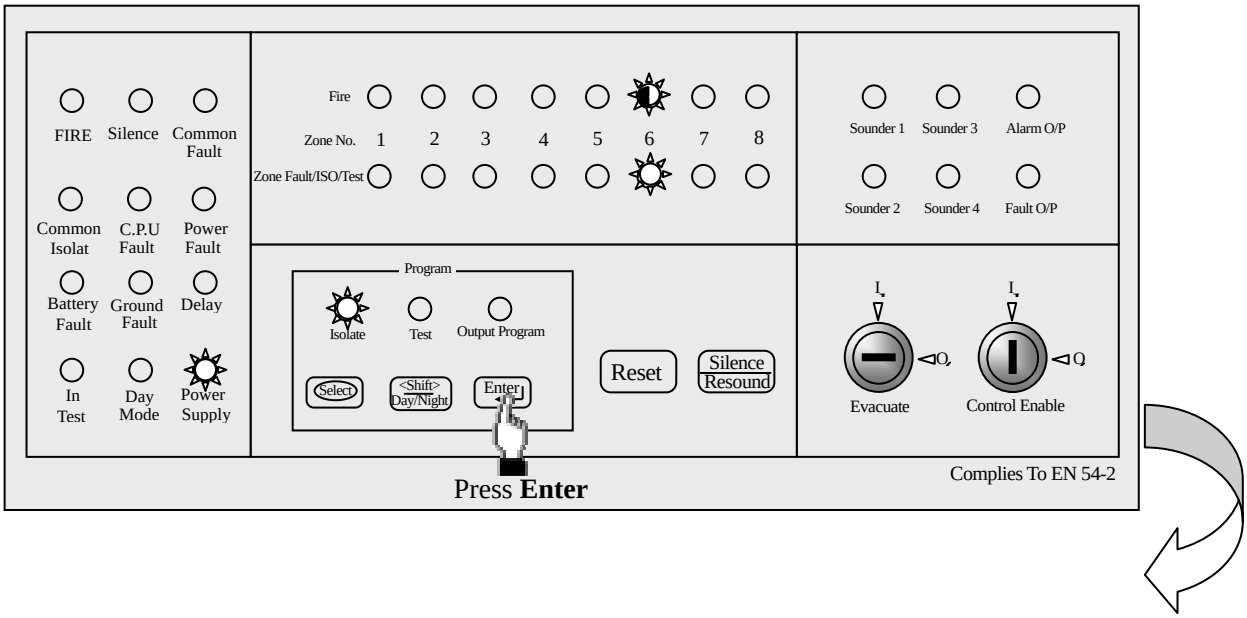


Fig.4.2.2g

图 4.2.2g

4.2.2.1.3 Press the **Enter** pushbutton to exit with saving the setting result.



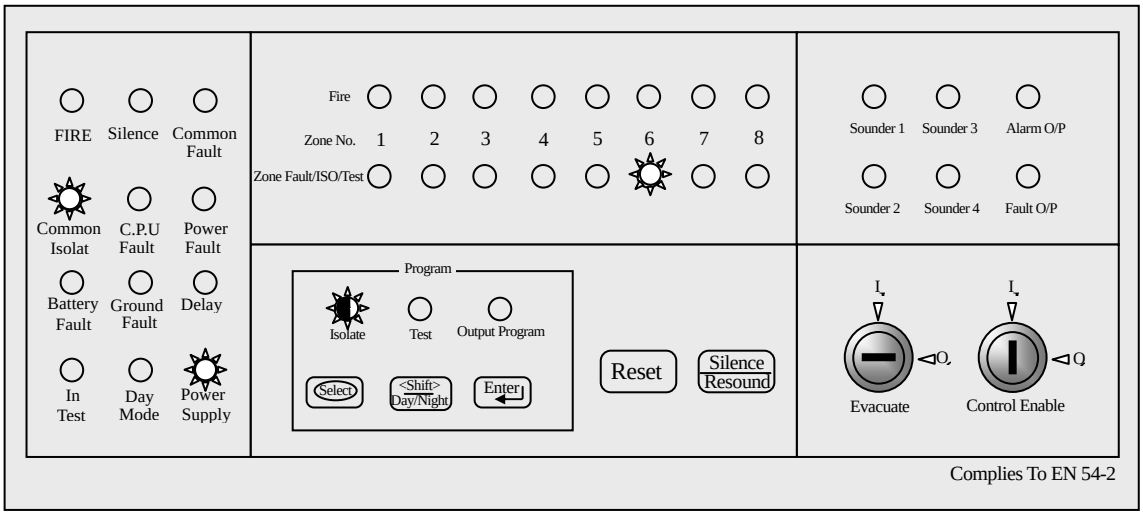


Fig.4.2.2h

Press the **Reset** pushbutton to exit without saving the setting result.

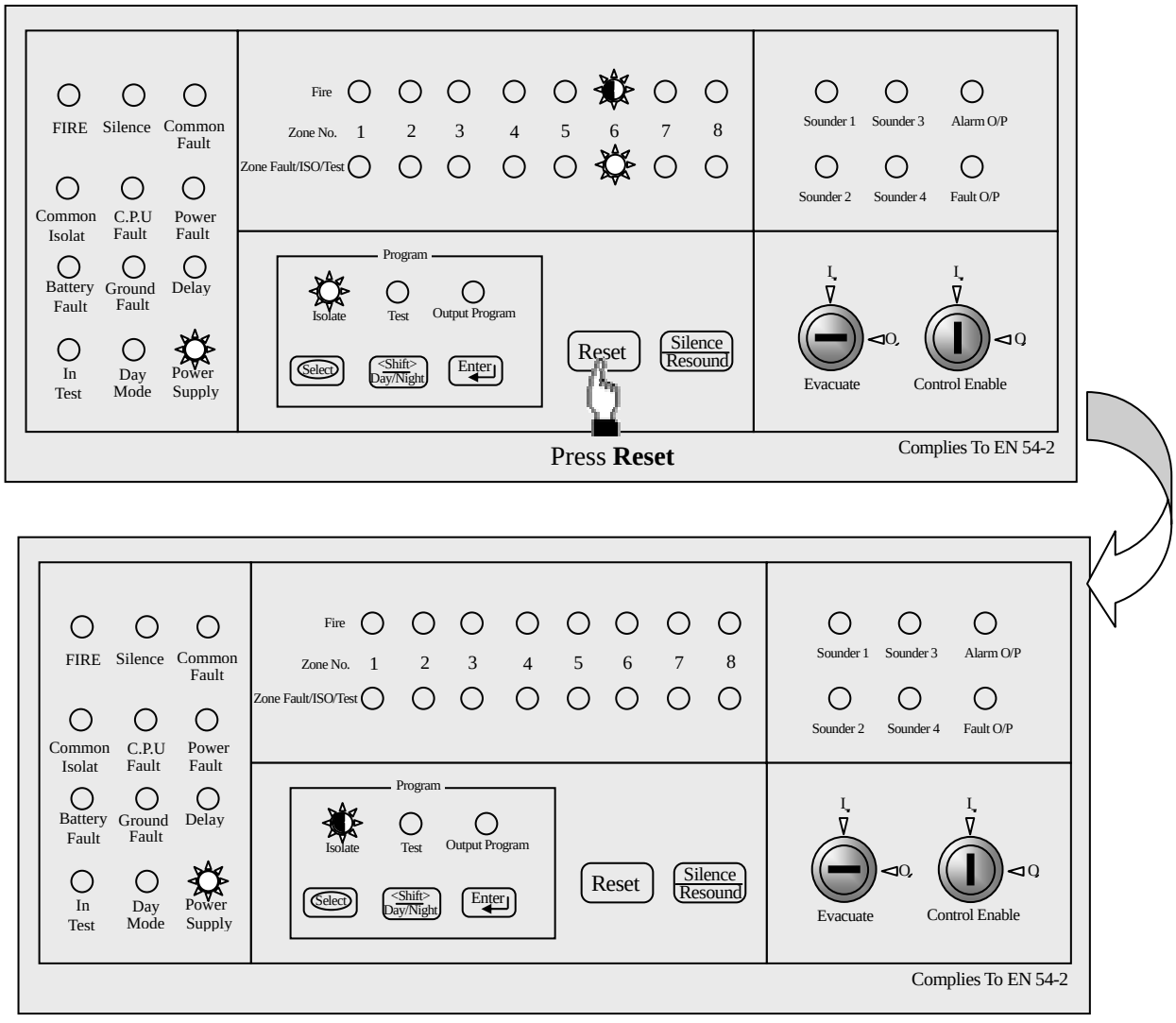


Fig.4.2.2i

4.2.2.2 Set zone test

4.2.5.3.1 Press the **Select** pushbutton for 1 second, the **Isolate** indicator flashes. See Fig.4.2.2a-Fig.4.2.2b.

4.2.5.3.2 Press the **Shif**t pushbutton once, the **Test** indicator flashes. Then press the **Enter** pushbutton, the **Test** indicator is illuminated and the panel enters in zone test setting state. See Fig.4.2.2j.

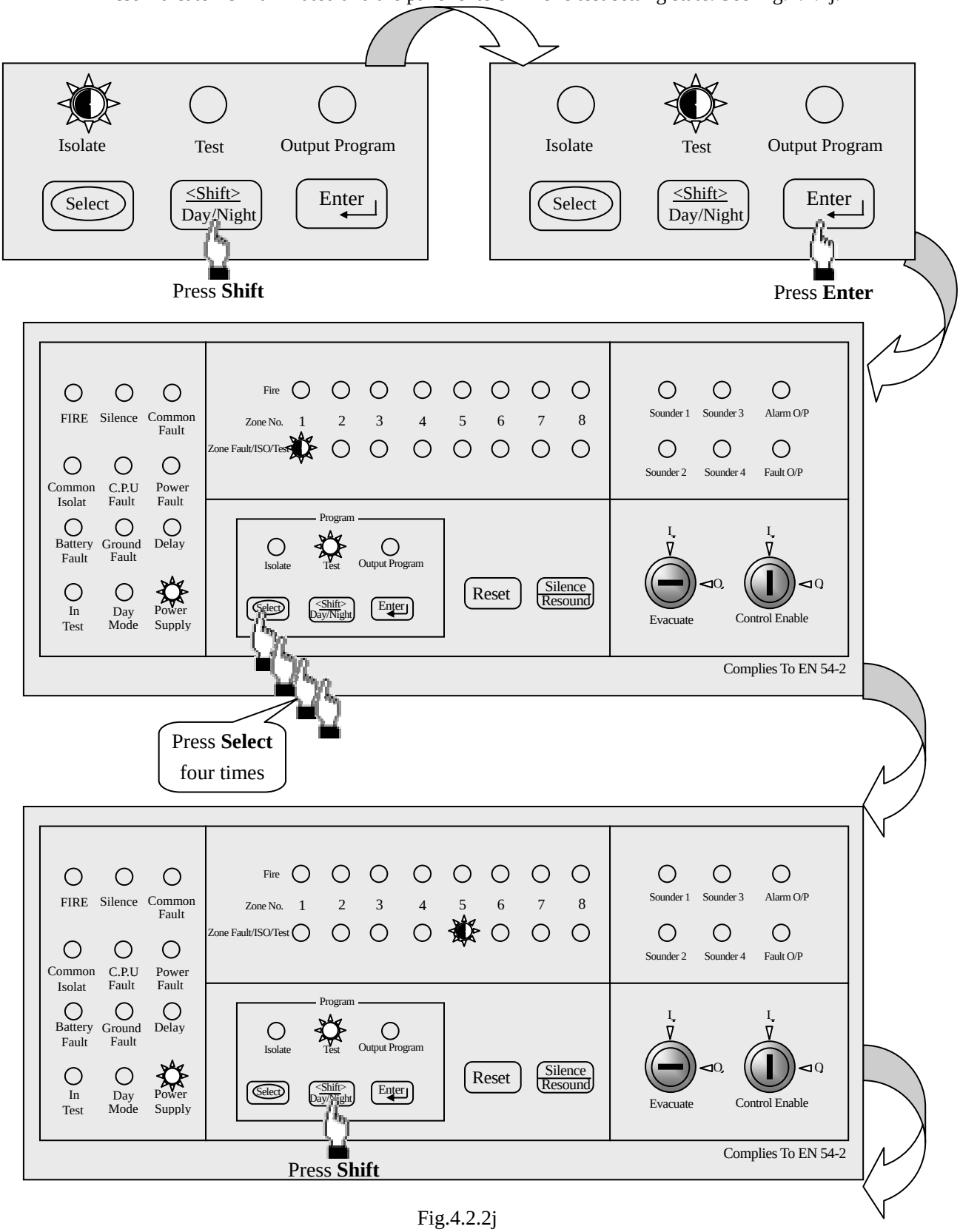


Fig.4.2.2j

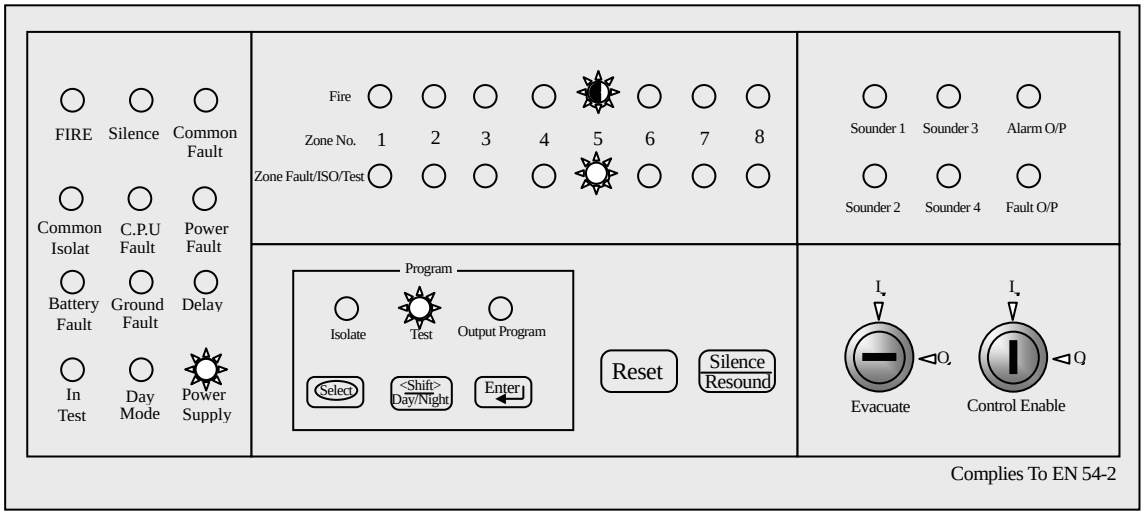


Fig.4.2.2k

4.2.5.3.3 Press the **Select** pushbutton to select the zone being tested (e.g. select zone 5 in Fig.4.2.2j and Fig.4.2.2k). Press the **Shift** pushbutton, the testing state of the selected zone will be changed and indicated by the **Fire** indicator of the corresponding zone, and the selecting state will be indicated by the **Zone Fault/ISO/Test** indicator of the corresponding zone. The operations of confirming and canceling are the same with setting isolate.

4.2.3 Set output programming

4.2.3.1 The following operations are enabled at the operation level 3.

4.2.3.2 Press the **Select** pushbutton for 1 second, the **Isolate** indicator flashes. Press the **Shift** pushbutton twice, the **Output Program** indicator flashes. Then press the **Enter** pushbutton, the **Output Program** indicator is illuminated steadily and the system enters in the output programming state.

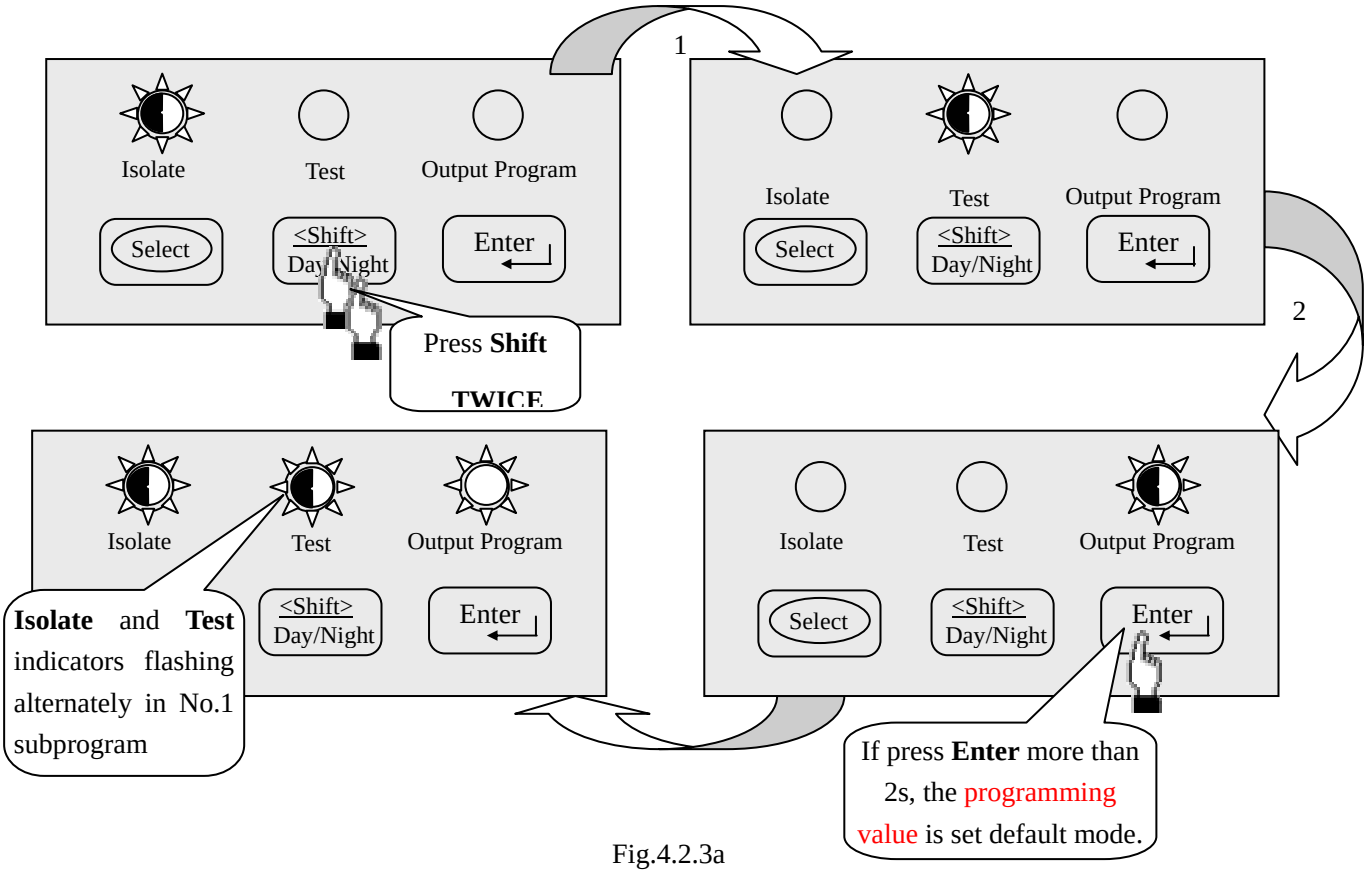


Fig.4.2.3a

4.2.4 Configuring MCP:

4.2.4.1 In the output programming state (see Fig.4.2.3a), the **Isolate** and **Test** indicators flash alternately. Press the **Enter** pushbutton at this time, the system will enter in MCP configuring state. See Fig.4.2.4a.

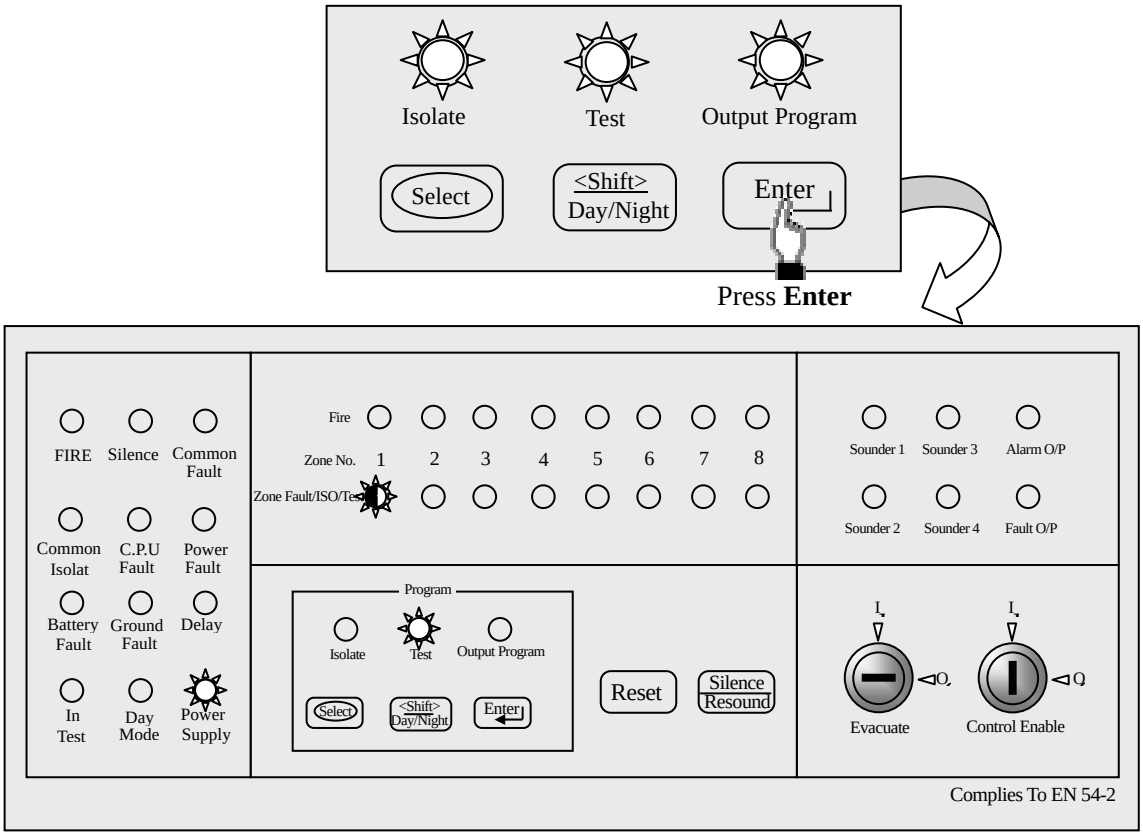


Fig.4.2.4a

4.2.4.2 Press the **Shift** pushbutton to change the state of the selected zone (whether there is a MCP in this zone), the **Fire** indicator of the corresponding zone will be illuminated, and the **Zone Fault/ISO/Test** indicator will be illuminated to indicate the selecting state. Please refer to 4.2.2.2 for detail operation.

4.2.4.3 Press the **Select** pushbutton to select zone, then press the **Reset** pushbutton to exit without saving the configuring result or press the **Enter** pushbutton to exit with saving the configuring result.

4.2.5 Configuring the sounder output mode

4.2.5.1 In the output programming state, the **Isolate** and **Test** indicators flash alternately. Press the **Shift** pushbutton at this time to select the state shown in Fig.4.3.5b and press the **Enter** pushbutton to confirm, the system will enter in the sounder output configuring state. See Fig.4.2.5c.

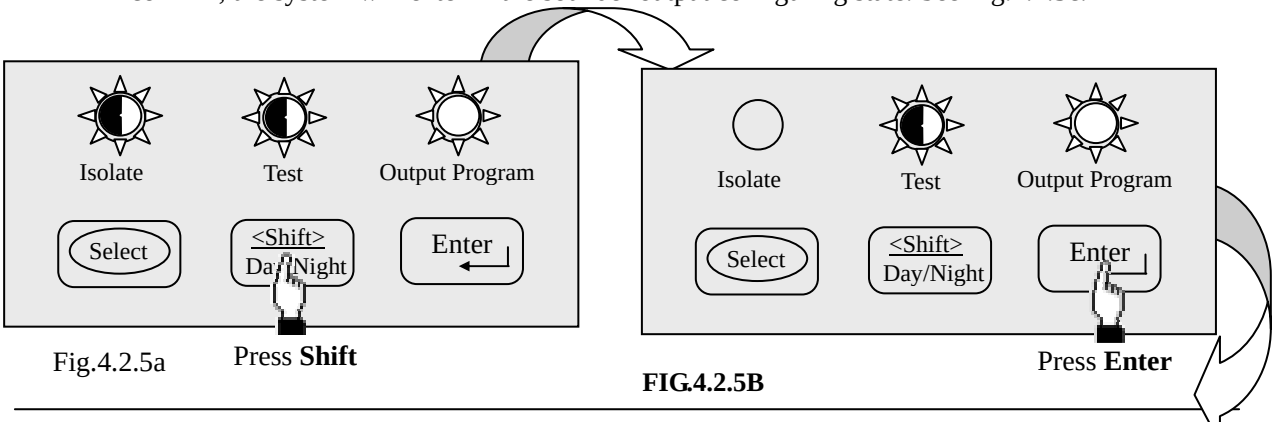


Fig.4.2.5a

FIG.4.2.5B

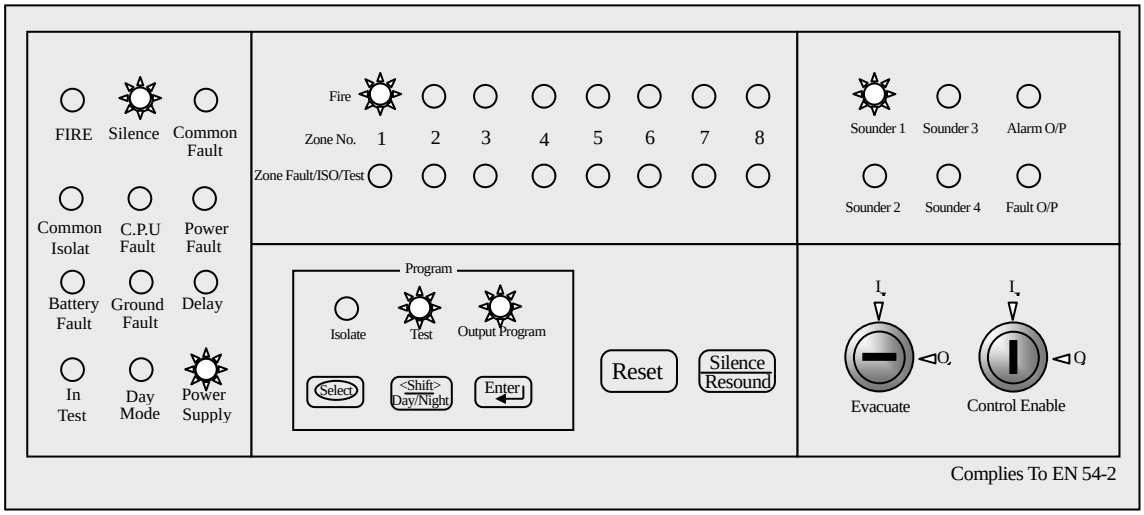


Fig.4.2.5c

4.2.5.2 As shown in Fig.4.2.5c, the **Fire** indicator of zone 1 and **Sounder 1** indicator are illuminated, the Silence indicator and internal buzzer denote the former sound mode. If you don't want to change the sound mode, press the **Select** pushbutton (see Fig.4.2.5d) to select next sounder directly or press the **Enter** pushbutton (see Fig.4.2.5e) to enter in next zone configuring with the **Fire** indicator of next zone lighting. Pressing the **Reset** pushbutton in any position will exit configuring.

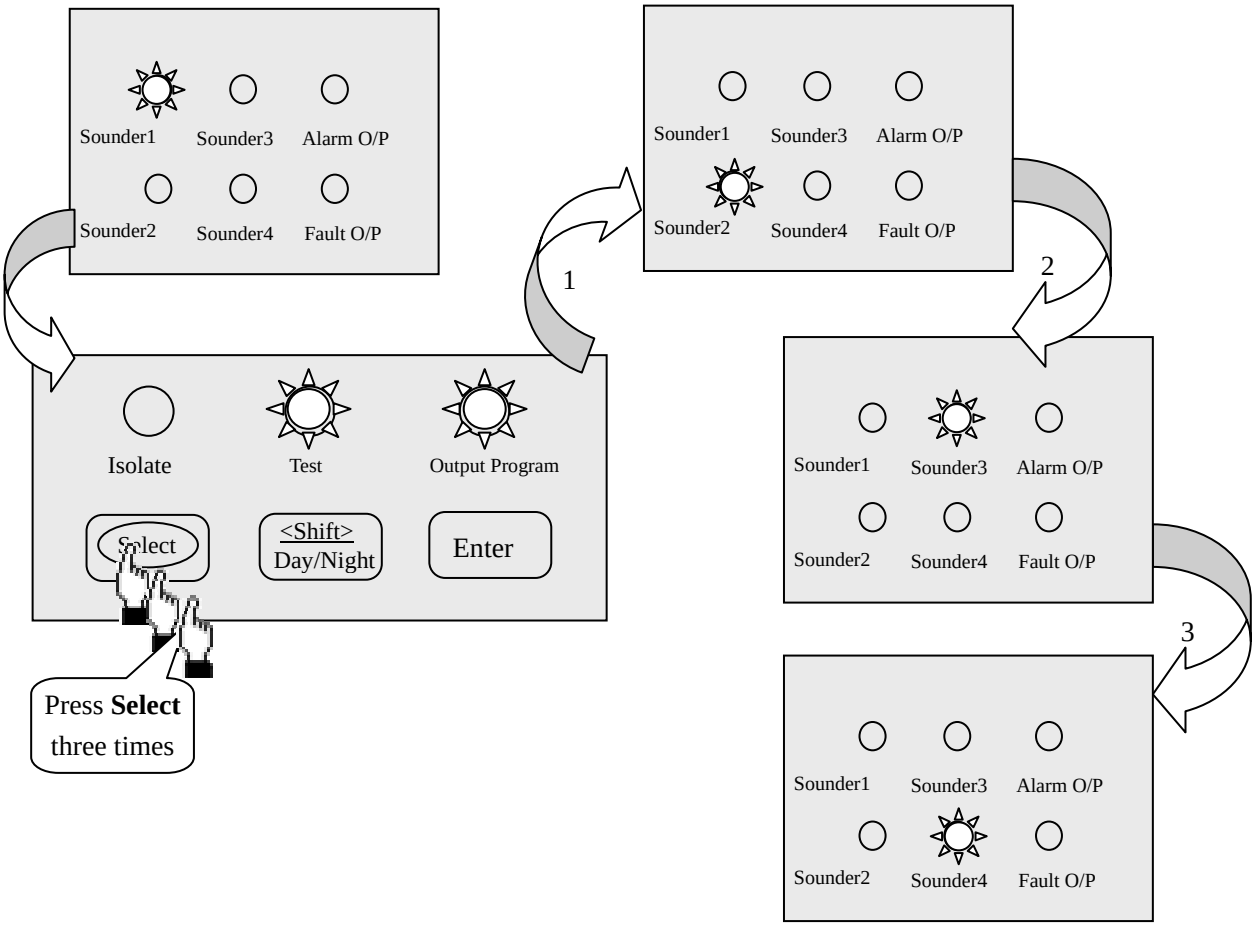


Fig.4.2.5d

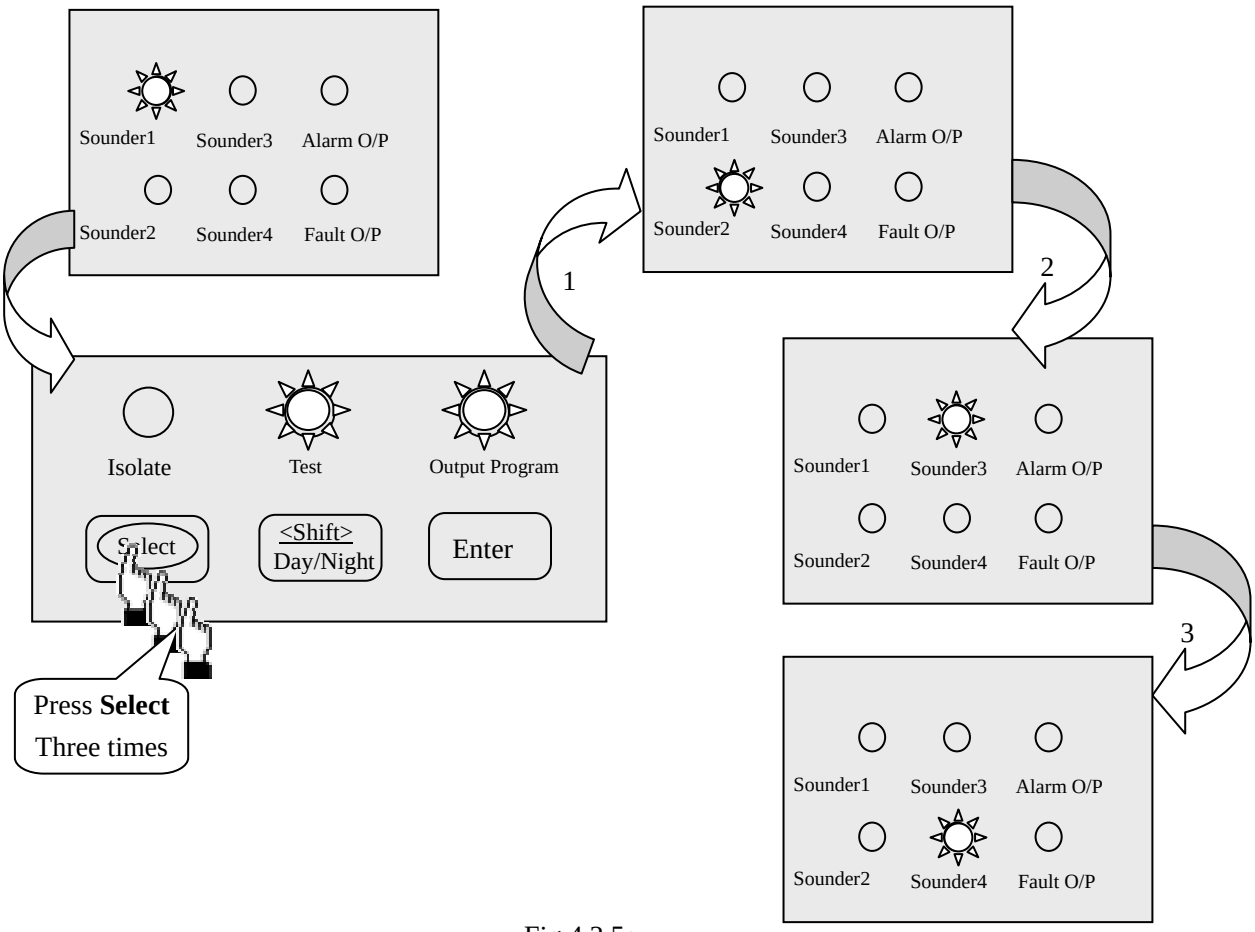


Fig.4.2.5e

4.2.5.3 Indicating mode instruction of the **Silence** indicator and the buzzer

4.2.5.3.1 Indicating mode 1: the buzzer is silenceable and the **Silence** indicator is extinguished.

4.2.5.3.2 Indicating mode 2: the buzzer sounds at 0.25s ON and 0.25s OFF and the **Silence** indicator flashes at 0.25s ON and 0.25s OFF.

4.2.5.3.3 Indicating mode 3: the buzzer sounds at 0.25s ON and 0.75s OFF and the **Silence** indicator flashes at 0.25s ON and 0.75s OFF.

4.2.5.3.4 Indicating mode 4: the buzzer sounds steadily; the **Isolate** indicator is illuminated steadily.

Above instructions adapt to configure the sound modes of the sounders and the output delay mode of the sounders.

4.2.5.4 Instruction 2: Four kinds of sound modes of the sounders

1） Mode 1: no output

2） Mode 2: pulse output

3） Mode 3: constant output

4） Mode 4: constant output, non-mutable tone

4.2.6 Configuring the sounder delay mode

4.2.6.1 In the output programming state, press the **Shift** pushbutton twice (see Fig.4.2.6a-Fig.4.2.6c) and press the **Enter** pushbutton to confirm, the system will enter in the operation of configuring sounder delay mode. See Fig.4.2.6d.

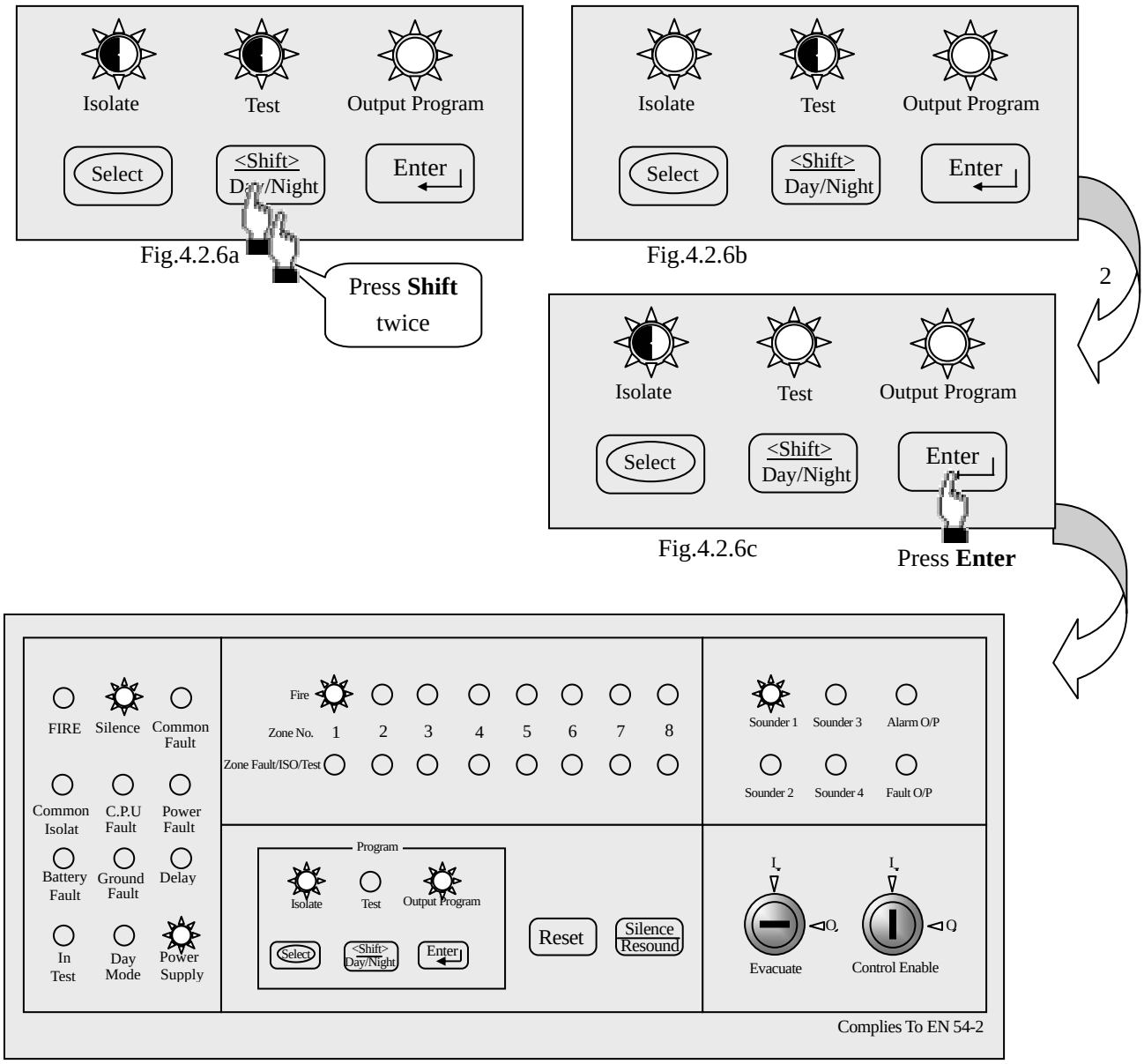


Fig.4.2.6a Fig.4.2.6b Fig.4.2.6c

Fig.4.2.6d

4.2.6.2 The configuring operation is the same as 4.2.5.2. The difference is that the four kinds of indicating modes of the **Silence** indicator and internal buzzer stand for four kinds of delay modes here, while stand for four kinds of sound modes in 4.2.5.

4.2.6.3 Instruction for the four kinds of delay modes of the sounders

1） Mode 1: no output

2） Mode 2: connected to the alarm output

3） Mode 3: delay output

4） Mode 4: no delay

4.2.7 Configuring sounder delay time, alarm and power fault outputs

4.2.7.1 Instruction: when the panel is in delay configuring state, the delay time can be calculated according to the indicating state of **Zone Fault/ISO/Test** indicator of the alarming zone. The method is:

Supposing Td is delay time, Cn (n=1,2,3,4,5,6,7,8) is a weighting coefficient (Cn=1 when the **Zone**

Fault/ISO/Test indicator of zone n is illuminated, otherwise Cn=0), Xn is a weighting value (Xn=n), then the delay time is:

Td=0.5×Σ(Cn×Xn)　　(The unit of Tn is minute, n=1，2，3，4，5，6，7，8)

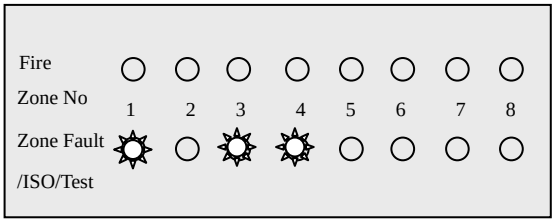


Fig.4.2.7a

For example, to Fig. 4-2-7a, Td=(1×1+0×2+1×3+1×4+0×5+0×6+0×7+0×8) ×0.5= 4（minutes）

4.2.7.2 In the output programming state, press the **Shift** pushbutton three times, then press the **Enter** pushbutton to confirm, the panel will enter in output delay configuring mode. See Fig.4.2.7b-Fig.4.2.7c.

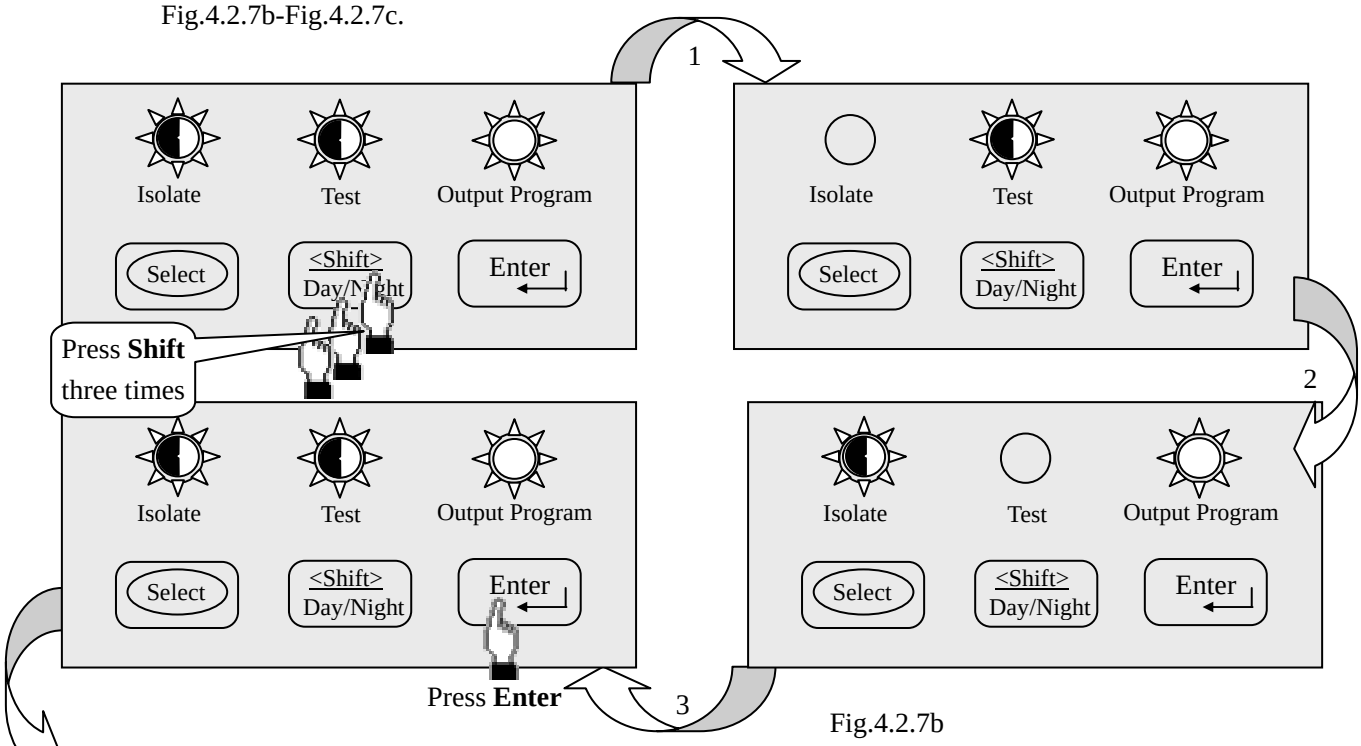


Fig.4.2.7b

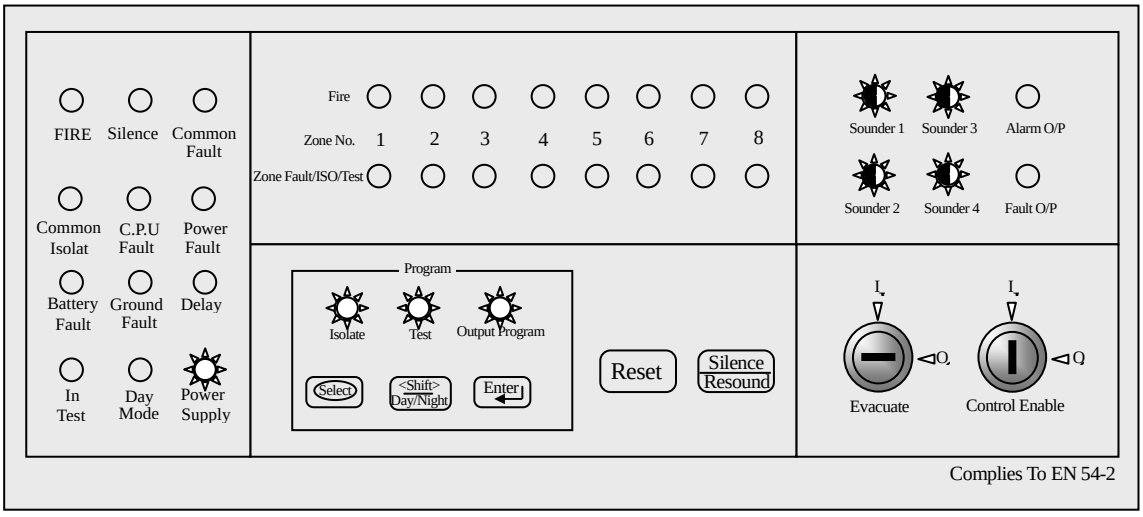


Fig.4.2.7c

4.2.7.3 In Fig.4.2.7c, the **Sounder1** to **Sounder4** indicators flash. Press the **Shift** pushbutton to select alarm C&E output (the **Alarm Output** indicator flashes) or fault output (the **Fault Output** indicator flashes). See Fig.4.2.7d.

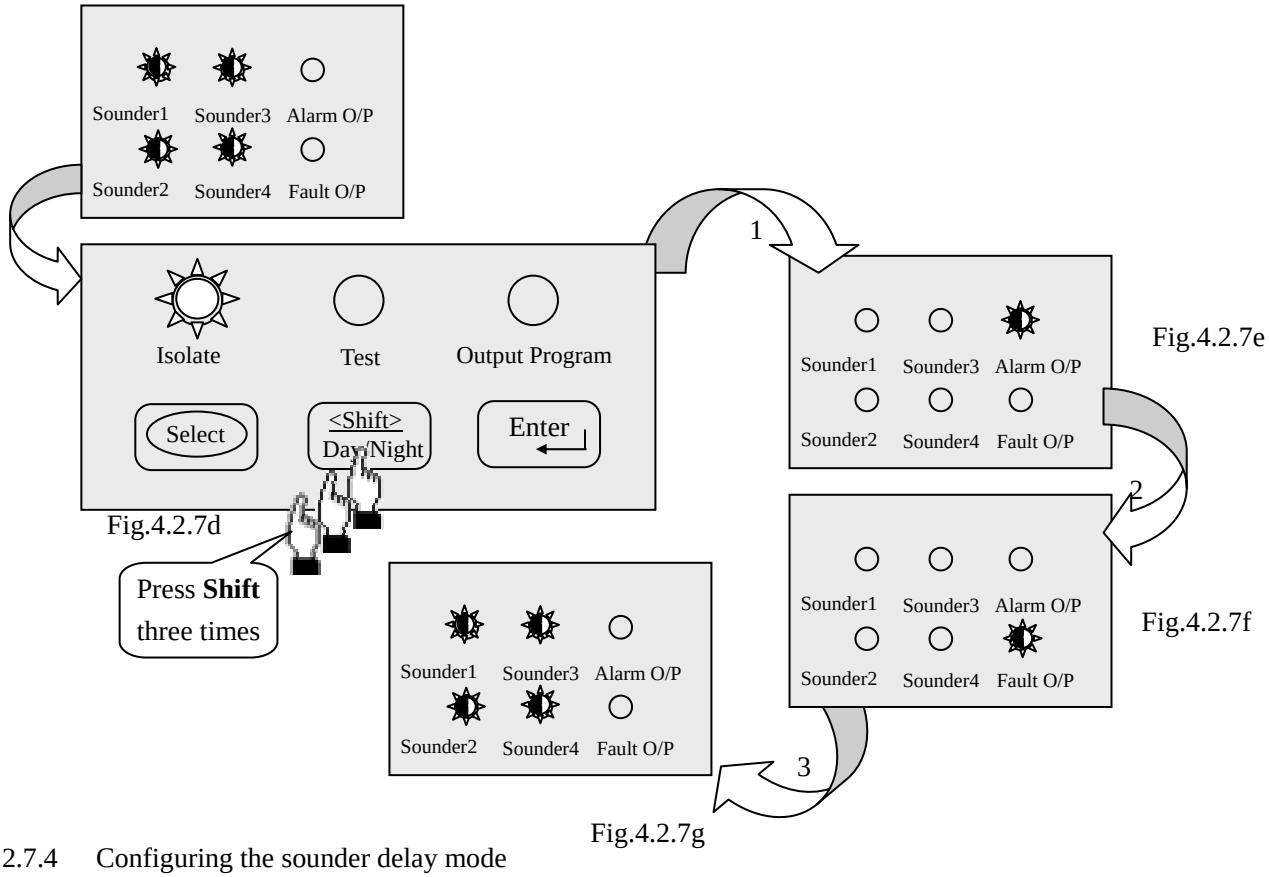


Fig.4.2.7d

Fig.4.2.7e

Fig.4.2.7f

Fig.4.2.7g

4.2.7.4 Configuring the sounder delay mode

4.2.7.4.1 Enter in configuring delay time mode (see Fig.4.2.7c). Press the **Enter** pushbutton to enter in sounder delay mode, the indicators from **Sounder 1** to **Sounder 2** become lighting from flashing state and the **Fire** indicator of zone 1 flashes. See Fig.4.2.7h. The indicating state of the **Zone Fault/ISO/Test** indicator in the alarm zone gives the sounder delay time. For example, in Fig.4.2.7h, the delay time is 0.

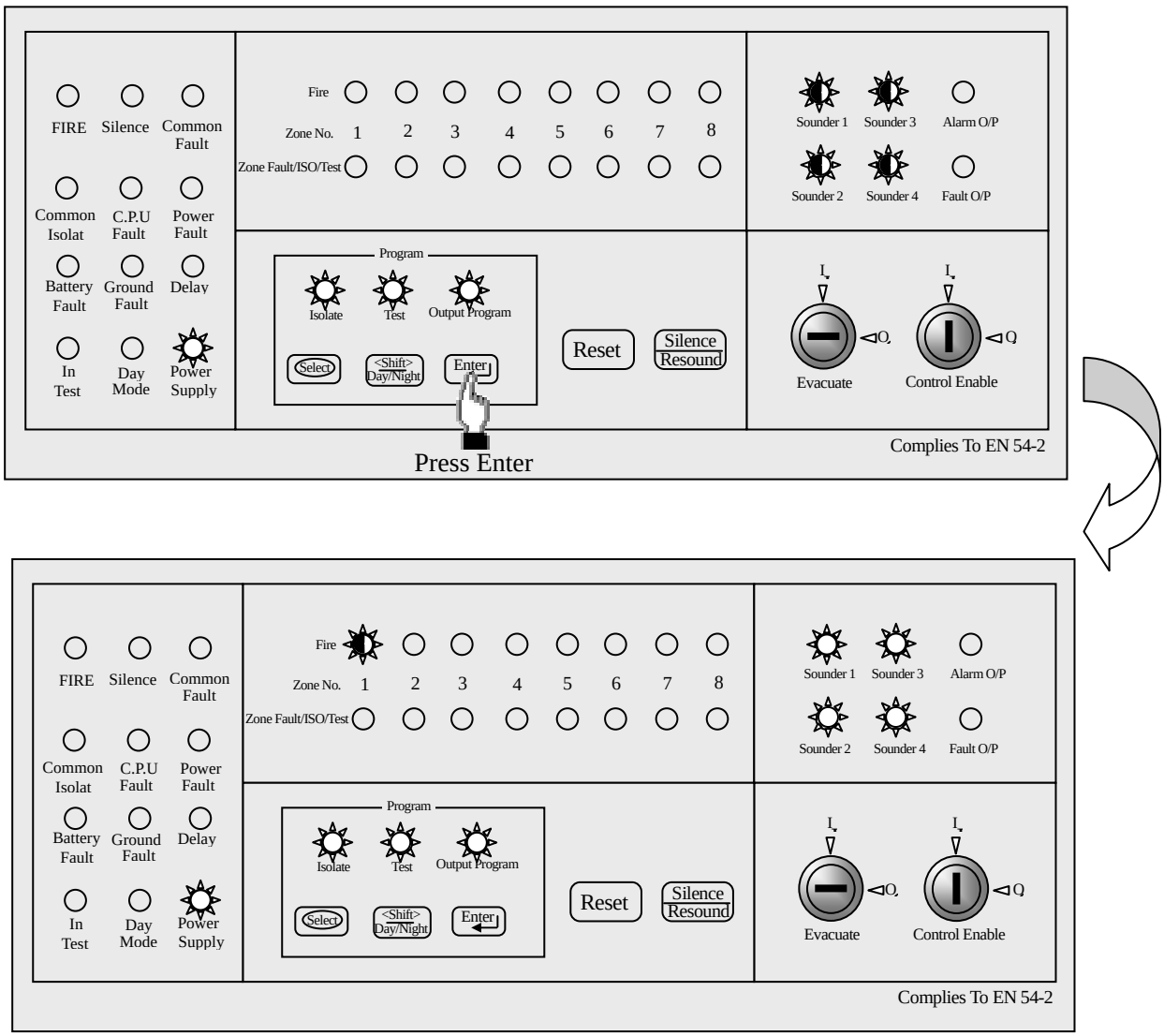


Fig.4.2.7h

4.2.7.4.2 Press the **Select** pushbutton to select zone number and press the **Shift** pushbutton to change the **Zone Fault/ISO/Test** indicator's state After above operation finished, press the **Enter** pushbutton to exit with saving the configuring result or press the **Reset** pushbutton to exit without saving. The detail operating process is the same as configuring isolate.。

4.2.7.5 Configuring alarm output delay mode

4.2.7.5.1 Enter in configuring delay time mode (see Fig.4.2.7d). Press the **Shift** pushbutton once, the panel state is shown in Fig.4.2.7e. Press the **Enter** pushbutton to enter in configuring sounder output delay mode (see Fig.4.2.7i), the **Alarm Output** indicator becomes lighting from flashing state and the **Fire** indicator of zone 1 flashes. The indicating state of the **Zone Fault/ISO/Test** indicator in the alarm zone gives the alarm output delay time.

4.2.7.5.2 The configuring mode is the same as sounder output delay mode.

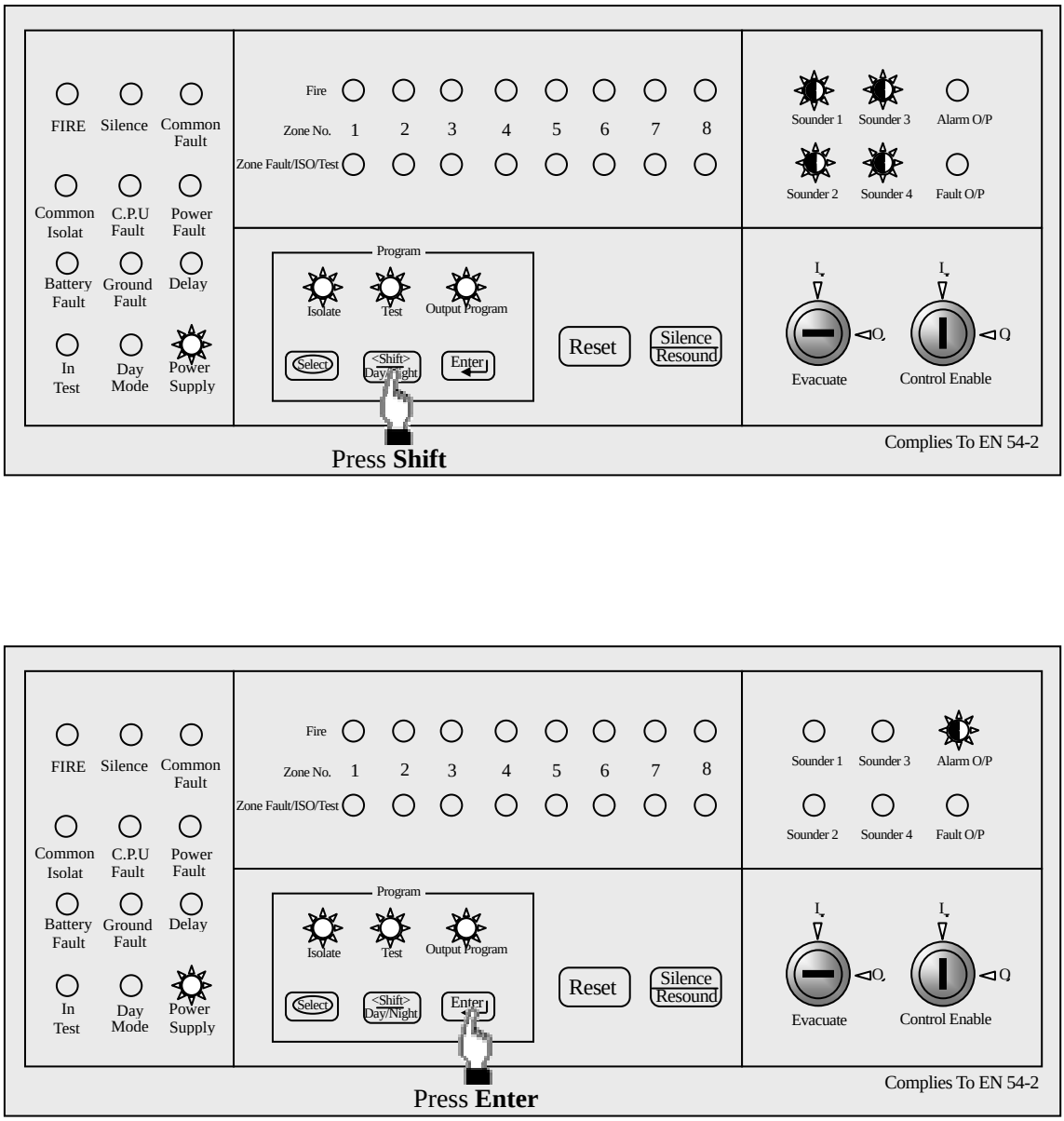


Fig.4.2.7i

FIG.4.2.7J

4.2.7.6 Configuring alarm output delay

4.2.7.6.1 Enter in configuring delay time mode, the panel will show the state as Fig.4.2.7c. Press the **Shift** pushbutton twice, the panel will show the state as Fig.4.2.7k. Press the **Enter** pushbutton, the panel will enter in configuring fault output delay mode. See Fig.4.2.7l.

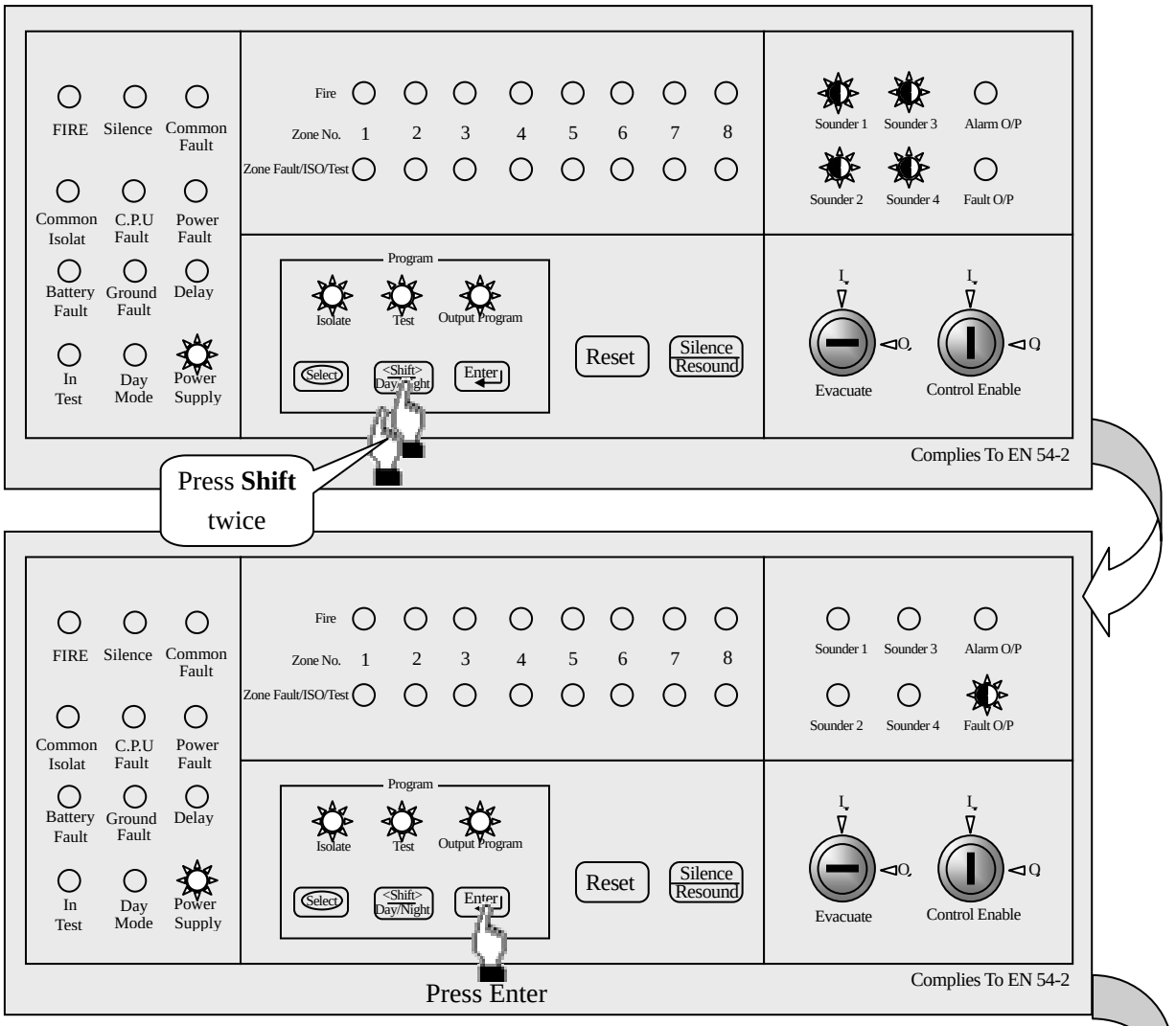


Fig.4.2.7k

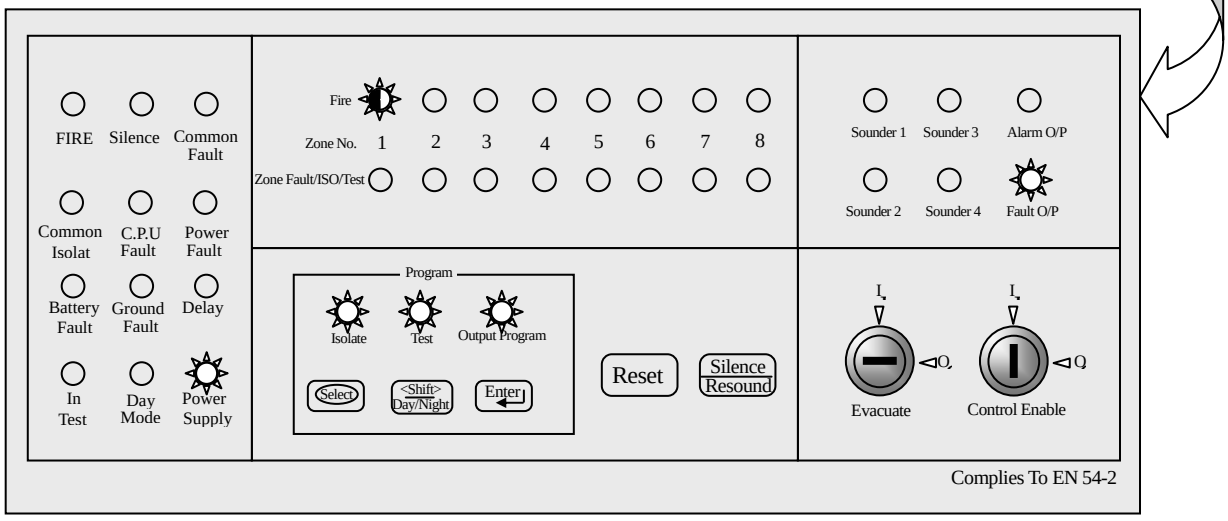


FIG.4.2.7L

The **Fault O/P** indicator is illuminated steadily instead of flashing and the **Fire** indicator of zone 1 flashes. The Zone Fault/ISO/Test indicator of the alarm zone indicates the delay time of fault output.

4.2.7.6.2 The configuring mode is the same as sounder output delay mode.

4.2.8 Configuring Default Mode

See 4.2.3.2 for the detail operation. All the programming terms are configured default values, which are described as follows:

1) There are manual call points in each zone.
2) The sound and delay modes of all the sounders are mode 4.
3) All the delay time is zero.

4.3 Instruction of Operating States

4.3.1 Zone mode

4.3.1.1 Alarm: The **Fire** indicator of the corresponding zone flashes (0.25s ON and 0.25s OFF) and the **FIRE** indicator is illuminated steadily.

4.3.1.2 Fault: The **Zone Fault/ISO/Test** indicator in the corresponding zone and the **Common Fault** indicator flash and are illuminated after pressing the **Reset** pushbutton.

4.3.1.3 Isolate: The **Zone Fault/ISO/Test** indicator of the isolated zone and the **Common Isolate** indicator are illuminated steadily.

4.3.1.4 Normal: All the **Fire** and **Zone Fault/ISO/Test** indicators go out.

4.3.2 Output mode

4.3.2.1 **Action**: The corresponding output indicators are illuminated steadily.

4.3.2.2 **Fault**: The corresponding output indicators and the **Common Fault** indicator flash. The **Common Fault** indicator is illuminated after pressing the **Reset** pushbutton.

4.3.2.3 Isolate: If there is an alarm output or a fault output isolated, the corresponding output indicator flashes (0.25s ON and 0.75s OFF), the **Common Isolate** indicator is illuminated steadily.

4.3.2.4 Normal: All the output indicators are extinguished.

4.4 Internal Buzzer

4.4.1 The internal buzzer sounds according to the priorities. The priorities from the highest to lowest are as follows: Alarm 0 (highest), fault 1, isolate and test 2, normal 3 (lowest).

4.4.2 In the condition of alarming or starting sounders, the buzzer sounds at 0.25s ON and 0.25s OFF.

4.4.3 In the condition of fault or isolating, the buzzer sounds at 0.5s ON and 4.5s OFF.

4.4.4 In the condition of silencing, isolating and testing, the buzzer sounds at 0.5s ON and 9.5s OFF.

4.5 Description

4.5.1 To configure output delay, the delay time of the four sounders is same while the modes may be different.

4.5.2 If an operation is enabled in the low operation level, it is still enabled in the high operation level.

4.5.3 In the keyboard operating condition, if the operation level is changed or no pushbutton has been pressed after 4 minutes, all the keyboard operations are canceled automatically and the system returns to normal monitoring state.

4.5.4 The condition of delay output of a zone

4.5.4.1 This zone is configured delay output mode by programming.

4.5.4.2 The panel is in Day mode.

4.5.4.3 There is no MCP in this zone.

4.5.4.4 There is no fire alarm in other zones.

4.5.4.5 If this zone is in delay condition while other zone(s) is (are) in alarm condition, this zone will exit the delay condition and sends out an output.

4.5.5 Dispose the fault of the memory. When the memory is in fault condition, all the programming contents should be configured again. First, configure all the parameters as default, then configure them again. After configuring, the memory fault is cleared automatically.

4.6 Sounders and Transfer Volt-free Option (Configuring Relay Output)

4.7.1 Four sounders outputs and alarm output relays can be configured to provide an active output contact, a normally open output contact and a normally closed output contact.

4.7.2 Case 1: Configure sounder 1 as active output, plug in the fuse F2, link the fifth and sixth, the second and third pins of jumper X1 with a short circuit ring respectively.

4.7.3 Case 2: Configure sounder 1 as normally open contact, remove the fuse F2, link the first and second, the fourth and fifth pins of jumper X1 with a short circuit ring respectively.

4.7.4 Case 3: Configure sounder 1 as normally closed contact, remove the fuse F2, link the first and second, the third and fourth pins of jumper X1 with a short circuit ring respectively.

4.7.5 The following table gives the details mentioned above.

Output	For Normally Closed		For Normally Open		For Active Output	
	Removed Fuse Number	Fit Jumper Links	Removed Fuse Number	Fit Jumper Links	Removed Fuse Number	Fit Jumper Links
Sounder 1	F2	X1/ 3&4,1&2	F2	X1/ 5&4,1&2		X1/ 5&6,2&3
Sounder 2	F3	X2/ 3&4,1&2	F3	X2/ 5&4,1&2		X2/ 5&6,2&3
Sounder 3	F4	X3/ 3&4,1&2	F4	X3/ 5&4,1&2		X3/ 5&6,2&3
Sounder 4	F5	X4/ 3&4,1&2	F5	X4/ 5&4,1&2		X4/ 5&6,2&3
Alarm Output	F6	X5/ 3&4,1&2	F6	X5/ 5&4,1&2		X5/ 5&6,2&3

4.2Link Setting for Auxiliary Output and Earth Fault Monitoring

4.7.1 Link jumper X8-Eeath fault monitoring is enabled with link in place and disabled with the link removed。

4.7.2 Link X9 -+24V auxiliary output. If link the first and second pins, the output is permanent. While link the second and third pins, the output is interrupted for 3 seconds when the **Reset** pushbutton is operated.

4.7 Cable

4.7.1 Cables should be in accordance with the requirements of local regulations and terminals accept one 0.5 to 2. 5mm^2 stranded or solid conductor.

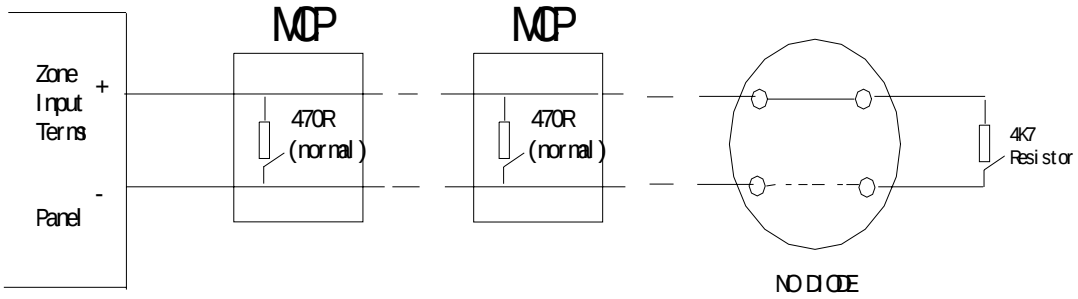
4.7.2 To meet the requirements of the EMC Directive, it is necessary to ensure that screened or metal-sheathed cables are used and must be fitted to the metal of the back box to ensure a 360° bond.

4.8 Connection Method of Detectors and Manual Call Points

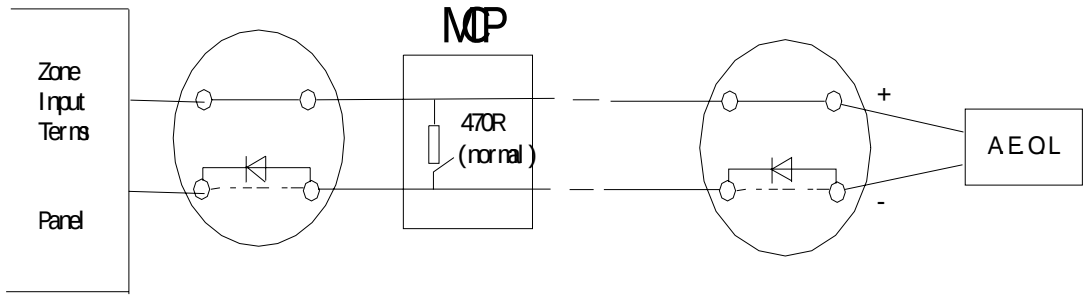
4.8.1 Each zone circuit can connect with 20 detectors and unlimited number of manual call points. There are two methods of connection.

4.8.2 Method 1: In a zone circuit, connect all the manual call points before the detectors and a 4.7K

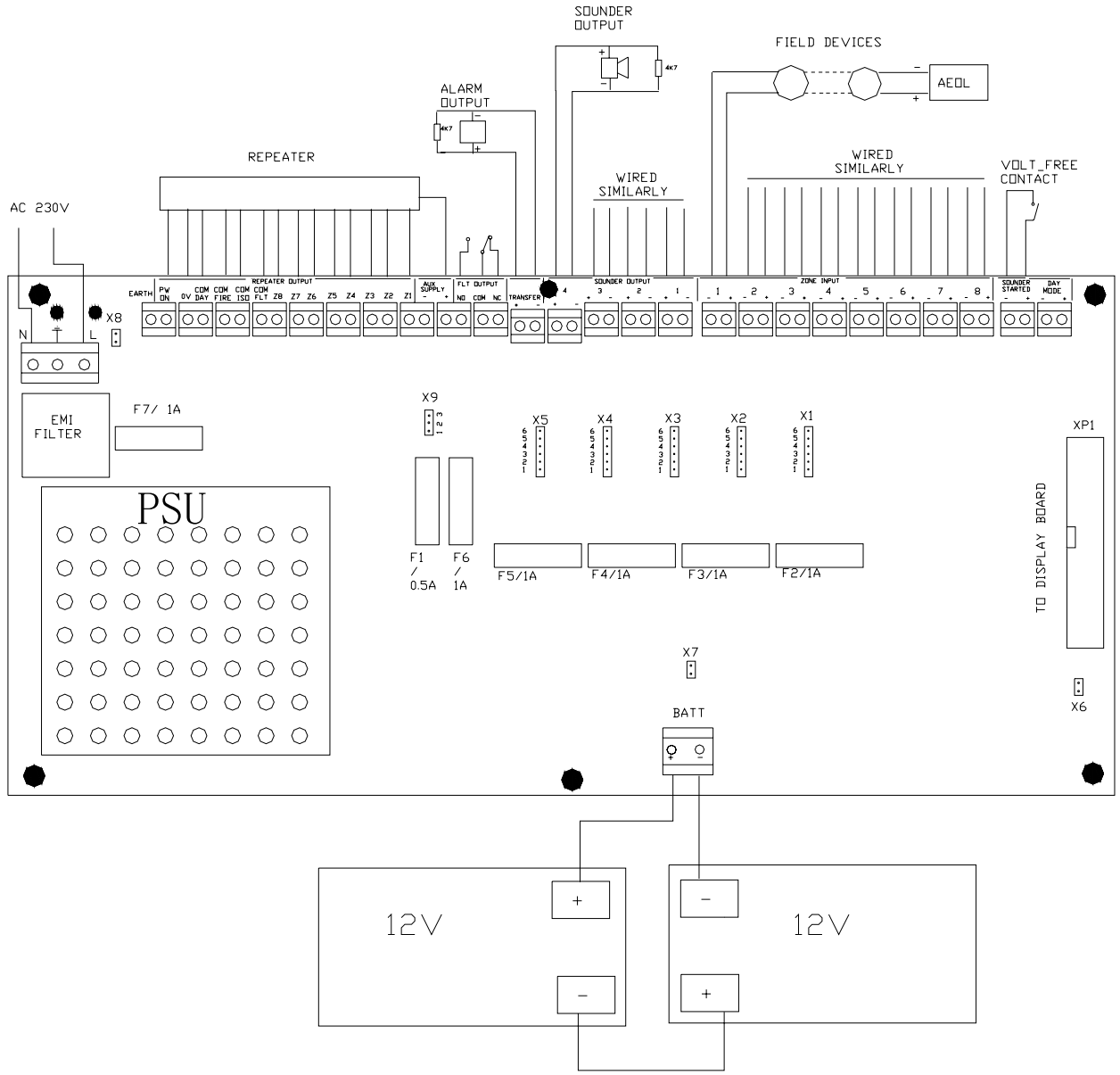
resistor to the last device of the zone circuit. This arrangement is shown below:



4.8.3 Method 2: In a zone circuit, connect the manual call points anywhere, connect an Active End of Line (AEOL) to the last device of this zone circuit and a diodes in all detector bases. This arrangement is shown below:



4.9 Typical Wiring Schematic



4.10 Battery Calculation

4.8.4 Battery voltage: 24V

4.8.5 General Data

PSU size	Maximum current of output circuits	Internal Battery Size
2.0A	1.5A	

Standby Load (I1)

Standby Load in Amps(A)	No.	Current	Total
Basic 8 zone panel with all detectors fitted	1	0.13	0.13
Auxiliary equipment			

Total Alarm Load (I2)

Standby Load in Amps(A)	No.	Current	Total
8 zones in alarm	1	0.50	0.50
Fire (Transfer output)			
Sounder outputs			
Auxiliary equipment output			

If C denotes minimum capacity of the batteries, T denotes standby time in hours, the battery capacity can be calculated as follow:

$$C=1.25[(I1\times T)+I2]\ Ah$$

5 Problem Maintenance and Disposal

Indication	Possible Cause	Action
No indicators indicating on the panel after starting the panel	1. There is +24V output and no +5V output. 2. There is no +24V output and no +5V output.	1. Check the integrated circuit N7-3M03 and its peripheral circuit. 2. Check whether the fuse F7 on the main board has been blown; check the relay K7 on the main board and its peripheral circuit.
Not indicating power fault and battery fault		Check the integrated circuit N6 on the main board and its peripheral circuit.
Misjudging the conditions of detection zone and output circuit checking state	1. False alarming fire of more than one detection zones	1. Measure whether the voltage of the test point VREF.H on the main board is normal. Calculate this voltage according to the +24V power voltage (practical measurement) and the resistors R67 and R60. Generally, when the power voltage is 27V, the point voltage is 3.6V.
	2. False warning fault of more than one detection zones	2. Measure whether the voltage of the test point VREF.L on the main board is normal. Calculate this voltage according to the +24V power voltage (practical measurement) and the resistors R68 and R61. Generally, when the power voltage is 27V, the point voltage is 1.0V. Measure whether the voltage of the test point VREF.S on the main board is normal. Calculate this voltage according to the +24V power voltage (practical measurement) and the resistors R58 and R6. Generally, when the power voltage is 27V, the point voltage is 24.7V.
	3. False warning fault of more than one output circuits	3. Measure whether the voltage of the test point VREF.H on the main board is normal. Check whether the jumpers of X1 to X5 are configured and the fuses of F2 to F6 are inserted as intended.
Unable to save the configuring result	The integrated circuit D9 (24LC02) on the display board is damaged.	Remove the damaged IC and replace a good one.
Manual lock or some pushbutton disabled	The integrated circuit D1 on the display board is not well connected with the socket.	Plug the IC D1 in the socket well.

6 Appendix－AEOL P-9907 Operating Instruction

1．Technical Characteristics

1.1 Technical Specifications

Operating voltage: DC24$^{+4}_{-9}$V

Nominal voltage: DC24V

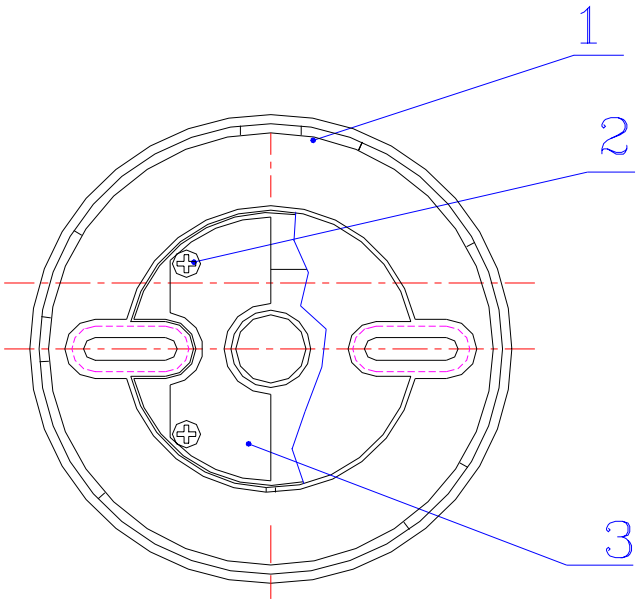
Equivalent resistor: 4.7kΩ

1.2 OPERATING ENVIRONMENT

Temperature: -10℃—+50℃

Relative humidity: <95%（40℃±2℃）

2. Structure Features



1：Enclosure
2：Fixing bolt
3：Circuit board

Fig.1 Bottom view

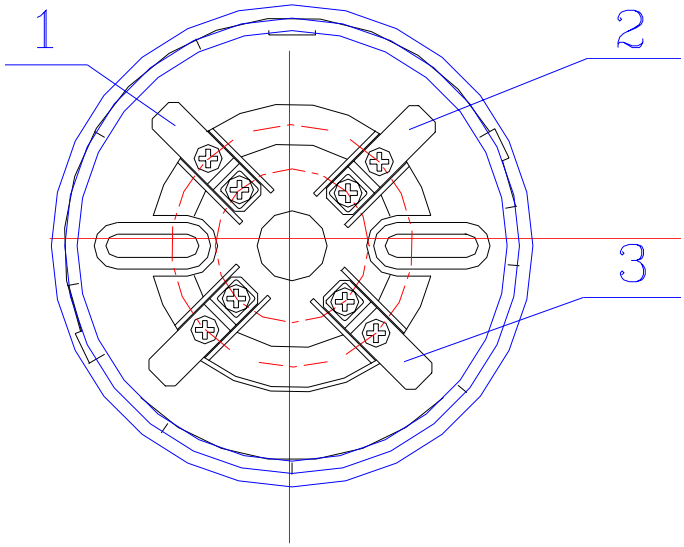


Fig.2 Top view (without top cover)

Connecting terminal 1：VD＋
Connecting terminal 2：VD－
Connecting terminal 3：－
VD+, VD—：connecting to a diode
VD+, —： connecting to zone loop

3. Installation and Wiring

3.1 ZONE WIRING

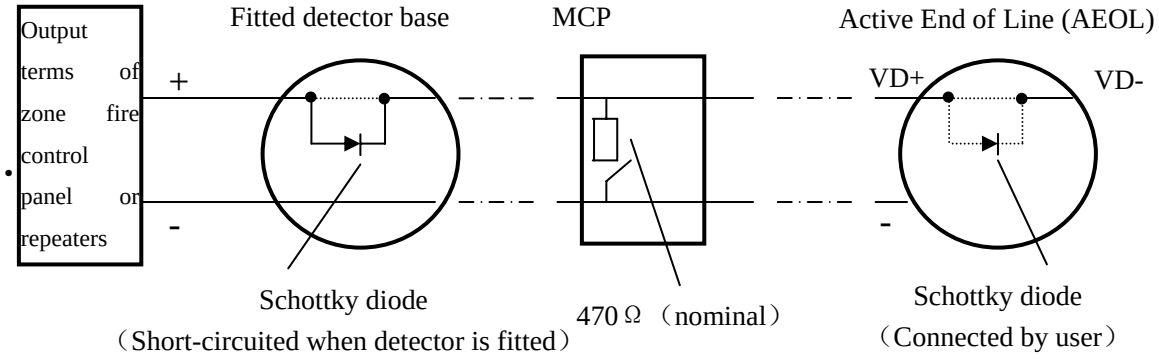


Fig.3 Wiring sketch

3.2 Installation and connection

The installation method of an Active End of Line is the same as the detector base, and the AEOL can be used as a base with a conventional detector fitted. By this method, connect the positive poles of both zone loop and a diode to the 'VD+' terminal, connect the negative pole of the diode to 'VD-' terminal, and the negative pole of zone loop to the '-' terminal.

Note: Diodes shouldn't be connected if there is no detector fitted on the AEOL. In this condition, connect the positive pole of the zone loop to the 'VD-' terminal and the negative pole to the '-' terminal.

International contact details

GST UNITED KINGDOM
Victoria House
28-38 Desborough Street
High Wycombe Bucks HP11 2NF
United Kingdom
Tel: +44 (0)1494 601107
Fax: +44 (0)1494 601108

GST Fire (UK Systems)
60 Westcliffe Road
Ruskington,
Sleaford
NG34 9AY
Tel: 01526 833999
Fax: 01526 833011

GST DUBAI
Unit ZA04 Jebel Ali Free Zone
P O Box 17998 Dubai UAE
Tel: +971 (0)4 88 33 050
Fax: +971 (0)4 88 33 053

GST TURKEY
Kordonboyu Mahhallesi
Ankara Cadessi
No. 148/2
Kartal, Istanbul, Turkey
Tel: +90 216 353 7344
Fax: +90 216 353 7345

GST EGYPT
53m Yussef Abbs. St, App.63 EL Tawfiek Building
Nasr City Cairo Egypt
Tel: +202 4030381
Fax: +202 4047949

GST ASIA
80 Changjiang east Road,
QETDZ
Qinhuangdao,
Hebbei,
P.R. China.066004
Tel: 00 86 335 8502523
Fax: 00 86 335 8051342

Email Tech.support@gstplc.com **Web: www.gstplc.com**