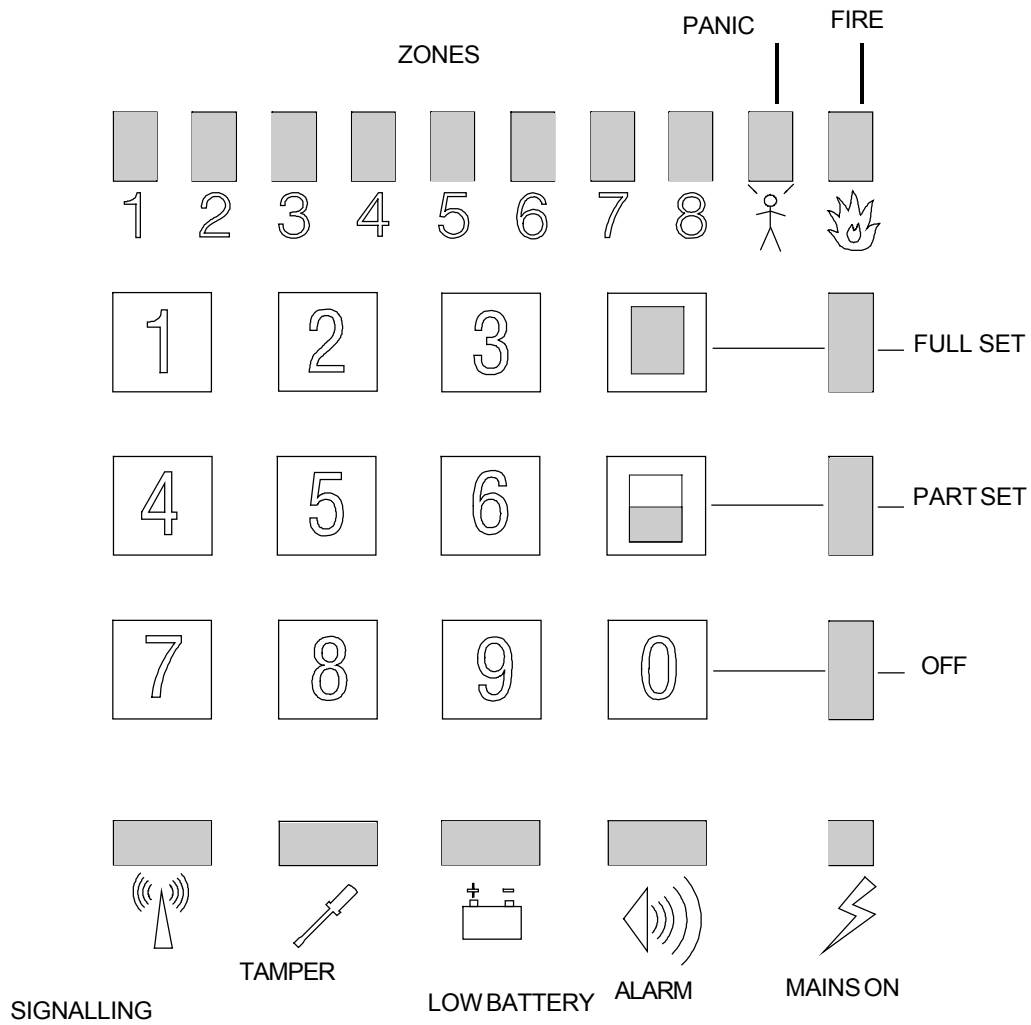


# FM4000 ALARM SYSTEM

## TRAINING MANUAL



FM Electronics Ltd Manufacturer of quality wireless products

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## **PD 6662 / prEN 50131-1: 2004 Compliance Requirements**

### **Security Grades**

**Grade 1** - low risk - The FM4000EN & FM4000X can be programmed to comply with this Grade.

**Grade 2X** - low to medium risk, audible only - The FM4000EN or FM4000X with the FM4001 expansion unit can be programmed to comply with this Grade.

**Grade 2** - low to medium risk with communications - The FM4000X with the FM4001 can be programmed to comply with this Grade.

**Grade 3** - medium to high risk - The FM4000EN & FM4000X cannot be programmed to comply with this Grade.

**Grade 4** - high risk - The FM4000EN & FM4000X cannot be programmed to comply with this Grade.

Note: The grade of the entire system is the grade of the lowest graded component within the system

### **Environmental Grades**

The standard defines the environmental grades for security system components as

**Class 1** - Indoor Heated

**Class 2** - Indoor un-heated

**Class 3** - Outdoor sheltered

**Class 4** - Outdoor exposed

Each individual component must be marked with both the security grade and the environmental grade that it is designed to comply with.

### **System Operation**

The system owner has ultimate control of the system and has to allow the engineer to access the system. To do this on any FM system, the customer has to enter their code followed by zero, the engineer now has 30 seconds to enter their code.

The system can be programmed to hide set/ unset information 30 seconds after the system status has been changed or viewed. The standard requires that an alarm system does not display any system status information until a user enters a valid access code, operates a valid remote control or presents a valid tag to a reader.

The maximum entry time permitted is 45 seconds & if this expires, or there is a deviation from the entry exit route it also provides a 30 second internal warning before any external sounder is operated or intruder communication is sent.

Bell delay: The maximum permitted bell delay is 10 minutes. If a bell delay is programmed and a signalling fault is present, the bell must sound as soon as the alarm is activated or the line fault is detected during the bell delay period.

The Bell Duration must not exceed 15 minutes, a minimum bell duration of 90 seconds is also specified except where a shorter period is demanded by local or national regulations .

System battery back-up, after a mains failure, the system should continue to operate for at least 12

hours on a Grade 1 or 2 system (or 60 hours on a grade 3 or 4 system, this can be reduced to 30 hours if the mains failure is signalled). The 2.1 Ah battery is the panel will support the panel for up to 20 hours in the event of mains failure. To work out the actual standby time for your complete system, measure the current drawn by the entire installed system & use the following formula:-

$2100 \div \text{measured current in mA} = \text{standby time in hours with no alarm conditions.}$

To ensure sufficient reserve for two alarm conditions, subtract 20% from the above figure (or  $\div 5 \times 4$ ). this figure will probably be slightly under the actual standby time achieved.

Line fault audible when system disarmed.

### **Communciations**

Whenever a communicator is fitted (digi, stu or similar), in addition to alarm conditions, the following must also be signalled to the Alarm Receiving Centre (ARC)

#### **Tamper & Fault**

The control unit must be programmed to report tamper conditions to the ARC (for example, an attempt to open a control unit, detector or keypad case) while the alarm system is unset, The tamper communication is also used to report an attempt to interfere with the radio link whilst the system is armed.

#### **Signal Strength**

The installer must ensure sufficient signal strength is available from every detection device at the control panel.

## **BS DD 243:2004 Compliance Requirements**

The system must be configured so that dectectors using the same technology do not cover the same area.

When an entry route is used, a confirmed alarm will only be sent after the entry time warning tones have finished and to detection devices not on the entry route have been activated.

When the user is unsetting the system a single action device is used. A suitable tag reader or remote control could be used for this.

If a confirmed alarm has not been generated within the confirmation time (30 to 60 minutes) the system automatically re-arms. If the system automatically re-arms and a detection device is isolated, because it is in the alarm condition, a re-instatement signal is also sent to the ARC. When the system re-arms the intruder output to the ARC will be restored ready for possible future activation.

The device which caused an unconfirmed intruder alarm must not cause a confirmed alarm condition to be generated.

The system requires a means of completion of setting, FM reccomends that final exit set (contact set) is used to provide this. Alternatively a push to set button could be wired into the system to provide a means of completion of setting.

**prEN50131:2004 - PD6662:2004**  
**Key Points**

- **UNIQUE DETECTOR CODING SYSTEM  
(OVER 1 MILLION DIFFERS)**
  
- **BACK TAMPER ON DETECTORS**
  
- **SUPERVISED DETECTORS**
  
- **SIGNAL STRENGTH MEASUREMENT**
  
- **FAULT & TAMPER OUTPUTS FOR SIGNALLING TO CENTRAL  
STATION**
  
- **TRAINING**
  
- **SYSTEM RECORDS**  
Installers C of C for Police upon request  
Record of signal strength  
Record of false alarms and their causes

## **FM4000EN SYSTEM FEATURES**

- 1. DESIGNED TO COMPLY WITH PD6662:2004\*\*\***
- 2. 8 WIRELESS ZONES + FIRE & PANIC**
- 3. 2 HARD WIRED ZONES**
- 4. PART SET + UPSTAIRS DOWNSTAIRS**
- 5. REMOTE ARMING OPTIONS**
- 6. LOW BATTERY & TAMPER BY ZONE**
- 7. ALL ZONES ARE PROGRAMMABLE**
- 8. ZONE OMIT**
- 9. CHIME**
- 10. AUXILIARY ZONES**
- 11. DOUBLE KNOCK**
- 12. WALK THROUGH**
- 13. 8 DIALLER OUTPUTS**
- 14. NON VOLATILE MEMORY**

**\*\*\* This panel meets Grade 1 when used alone & Grade 2X when used with the FM4001.**

# USER FACILITIES

SIMPLE DISPLAY

4 DIGIT ACCESS CODE

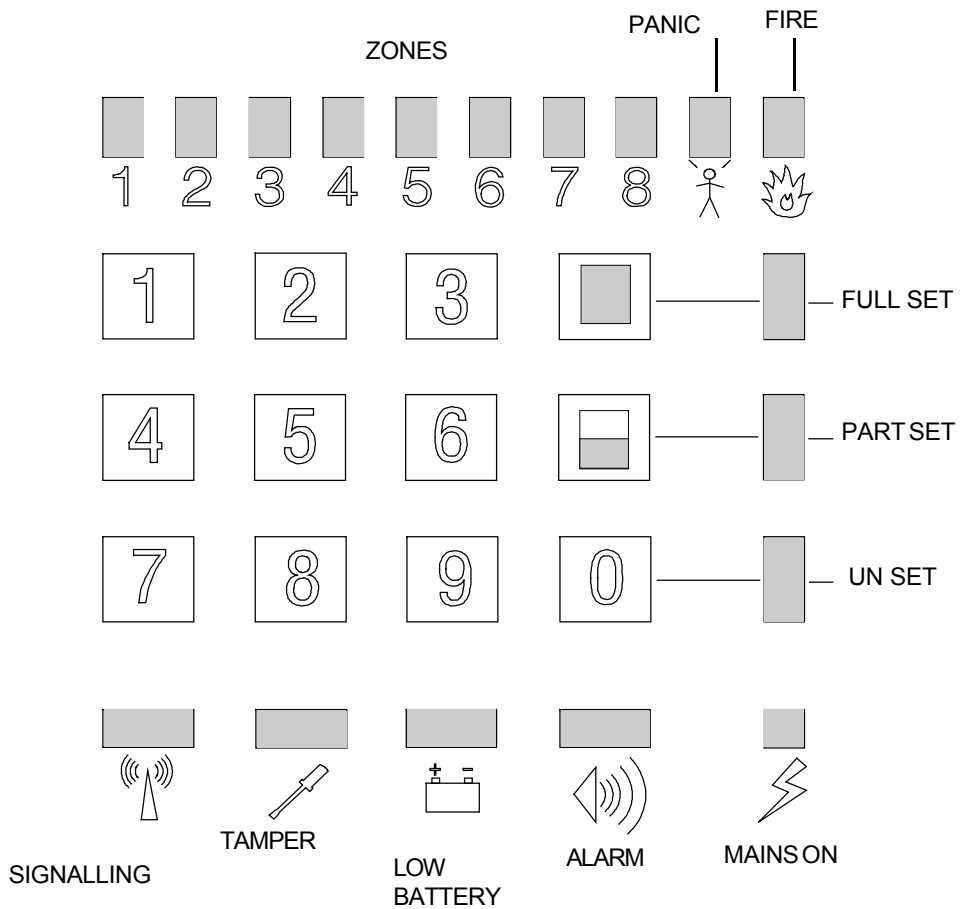
PART SET

ZONE OMIT

CHIME

WALK TEST

ALARM MEMORY RECALL



# ENGINEER OPTIONS

00 INVERTED BELL OUTPUT	0=NORMAL* 1=INVERTED	
12 PANEL FULL SET EXIT TIME	1=2s 2=10s 3=20s* 4=30s 5=45s 6=1min 7=2min 8=infinite	
13 PANEL PART SET EXIT TIME	1=2s 2=5s 3=10s* 4=15s 5=20s 6=30s 7=1min 8=Same as full set	
14 ENTRY TIME	1=1s 2=10s 3=20s 4=30s* 5=45s	
15 BELL DURATION	1=Silent 2=15 Sec 3=90s 4=2m 5=3m 6=10m 7=15mins* 8=Continuous	
16 BELL DELAY	1=0* 2=1m 3=3m 4=4m 5=5m 6=6m 7=7m 8=10mins	
17 FULL SET ZONES <sup>1-8 default</sup>		46 ENGINEERS LOG
18 PART SET ZONES <sup>1-4 default</sup>		47 ENGINEERS ACCESS CODE Default= 4679
19 OMIT PERMIT ZONES <sup>2-8 default</sup>		48 EXIT ENGINEER MODE
20 FINAL EXIT ZONES <sup>1 default</sup>		49 DIALLER OUTPUT FOR PA1=PA output only 0=PA and ALARM output*
21 WALK THROUGH ZONES		50 PA ON ZONE 2 1=Zone 2 is a PA zone 0=Zone 2 is a standard zone*
22 IGNORE ZONE IF FIRST TO ALARM ZONES		51 FINAL EXIT SET 0=No* 1=Yes
23 AUXILIARY ZONES		52 REMOTE CONTROL OR REMOTE KEYPAD FULL SET EXIT TIME 1=2s 2=10s* 3=20s 4=30s 5=45s 6=1min 7=2min 8=infinite
24 24 HOUR ZONES		53 REMOTE CONTROL PART SET EXIT TIME 1=2s 2=5s 3=10s* 4=15s 5=20s 6=30s 7=1min 8=as Full set
25 SOAK TEST ZONES		54 CONFIRMATION 1=Mode1 (No confirm)* 2=Mode2 (1999) 3=Mode3 (2004)
26 CHIME ZONES		55 DETECTOR ISOLATION 0=No* 1 = Yes
27 P.A. SILENT / AUDIBLE 1= Silent 0=Audible*		56 DIALLER TEST 1=Fire 2=PA 3=Intruder 4=Open / Closed 5=Re-Instatement 6=Fault 7=Confirmed 8=Tamper i.e Key in 56 then 3 to trigger Alarm channel, press Full set when test completed.
28 DOUBLE BUTTON P.A. 1= Double 0= Single*		
29 SILENT PART SET 1= Yes 0= No*		
30 UPSTAIRS / DOWNSTAIRS 1=Yes 0= No*		
31 8 SECOND STROBE ON FULL SET / UNSET 1=Yes 0= No*		
32 COURTESY STROBE / LIGHT DURING ENTRY / EXIT IN FULL SET 1=Yes 0= No*		
33 WALK THROUGH ZONES TRIGGER ENTRY TIMER IN PART SET 1=Yes 0= No*		
34 JAMMING 1=Full alarm 0=Indication only*		57 DIALLER OUTPUT POLARITY (1 to 8 as above) Not displayed = +ve removed / -ve applied Displayed = +ve applied / -ve removed Press Full set when selection completed - Polarity changes when full set pressed.
35 MAINS FAILURE or PANEL LOW BATTERY PREVENTS ARMING 1= Yes 0= No*		58 Display software issue.
36 REMOTE CONTROL UNSETS ONLY IN ENTRY 1=Normal 2=Only unset in entry 3=Will not disarm from fullset*		59 DISPLAY STATUS FOR 1=5s 2=15s 3=30s* 4=DURATION OF SET OR UNSET
37 DIALLER DELAY & ENTRY EXTENSION PERIOD		
38 NO EXTERNAL SIREN OR DIALLER IN PART SET 1=Yes 0=No*		60 MAINS DELAY 1=Yes 0=No*
39 LINE FAULT IN DAYTIME AUDIBLE 1=Audible 0= Visual only*		61 REPORT TAMPER 1=Never 2=Always 3=When Set*
40 SUPERVISORY 1=Yes 0=No*		
41 SUPERVISORY FAULT 1=Full alarm 0=Indicator only*		
42 ENGINEER RESET 1=Yes 0=No*		
43 No. OF TIMES THE SYSTEM AUTO REARMS 1=0, 2=1, 3=2, 4=ALWAYS* 1=0, 2=1, 3=2, 4=ALWAYS*		
44 FACTORY DEFAULT SOFTWARE (You need to short the mem link in the panel as well.)		
45 AUDIBLE RECEIVER LISTEN TEST		

\*=FACTORY SETTINGS

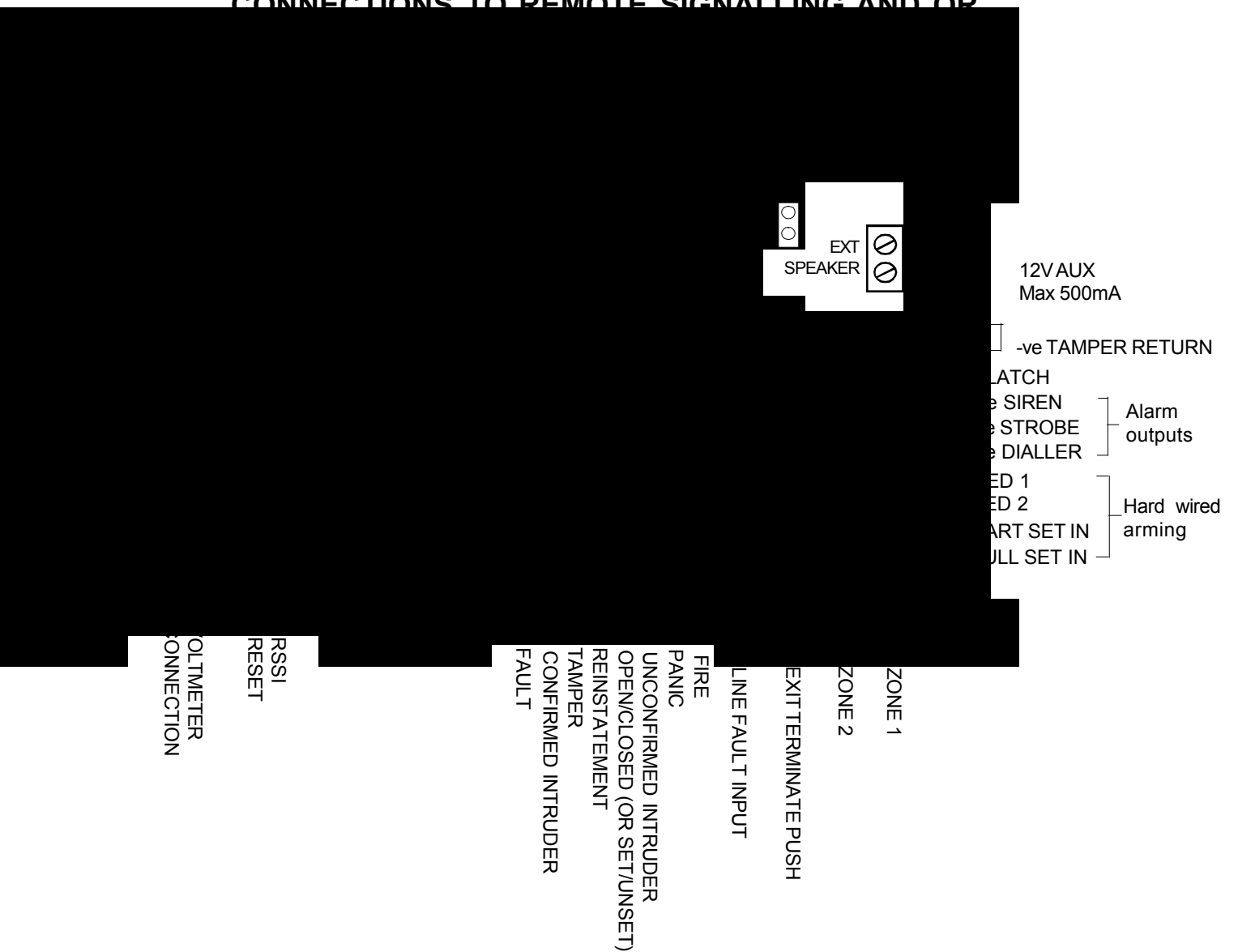


# FM4000X CONNECTIONS

**MAINS SUPPLY**

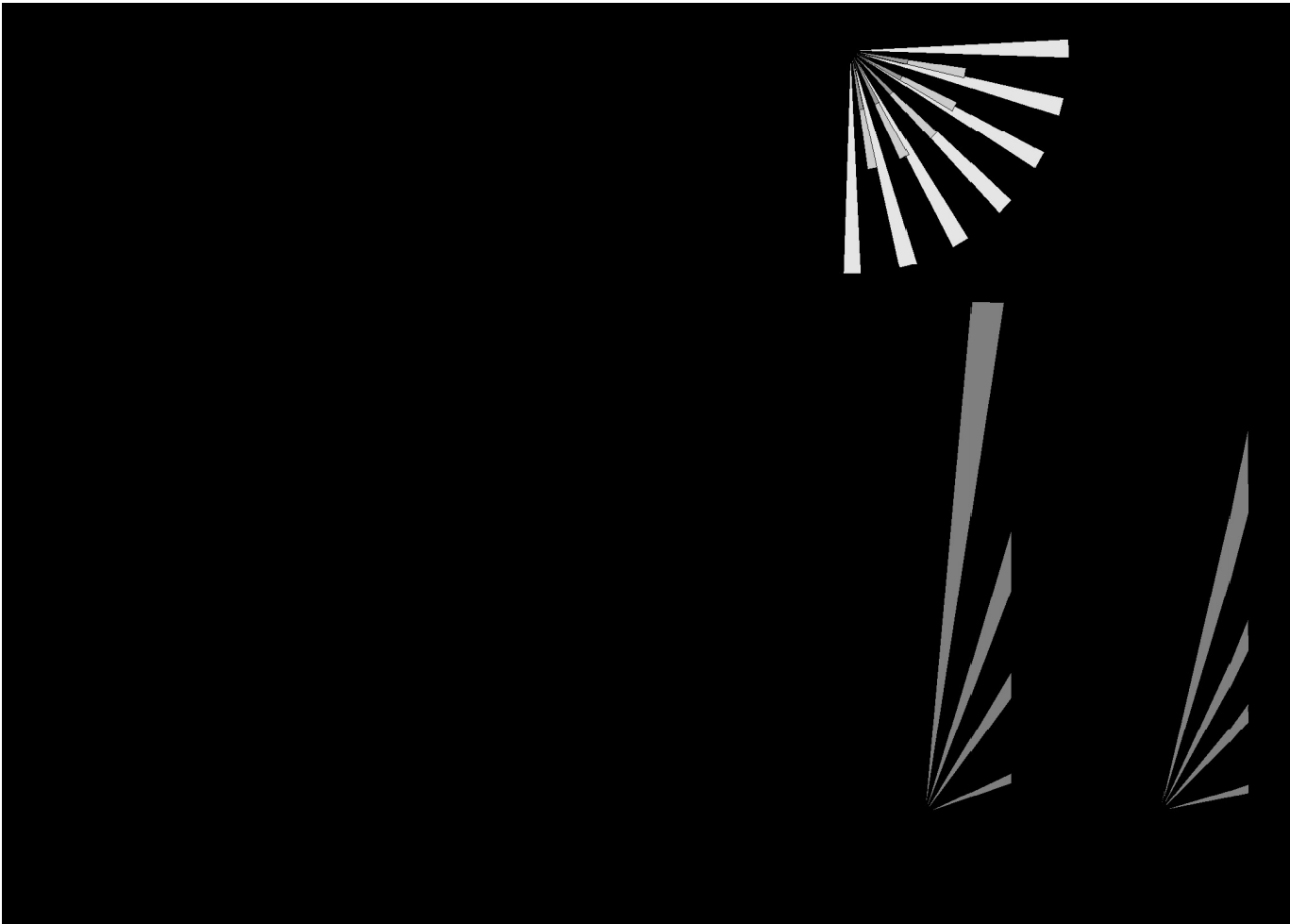
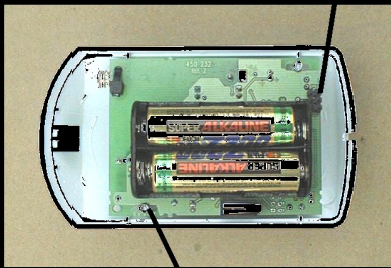
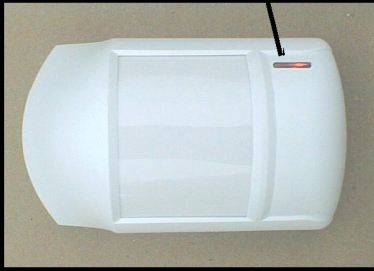
**SAB -VE TAMPER RETURN**

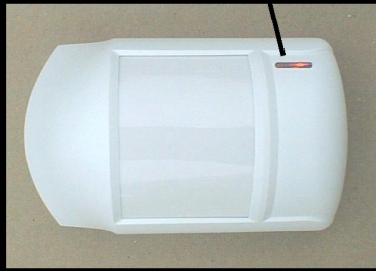
**CONNECTIONS TO REMOTE SIGNALLING AND OR**



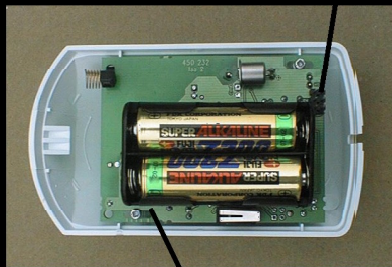
## INSTALLATIONPROCEDURE

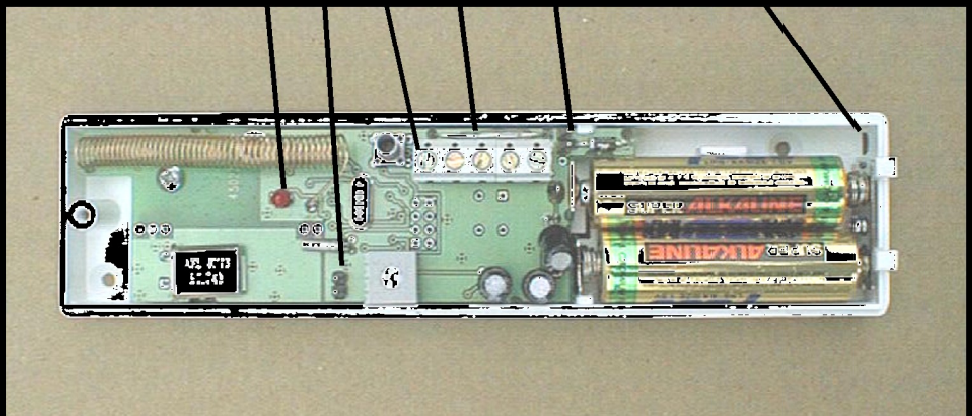
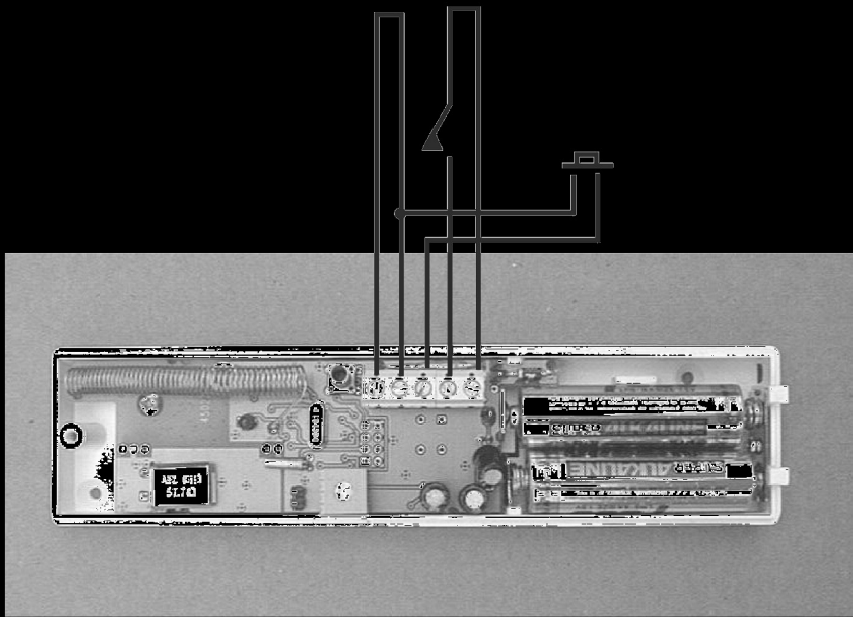
1. LABEL DETECTORS WITH ZONE NUMBER
2. COMPLETE USER RECORD
3. COMPLETE SYSTEM RECORD SHEET
4. LOCATE CONTROL PANEL
5. PROGRAM DETECTORS INTO PANEL
6. RANGE TEST FROM DETECTOR LOCATIONS
7. FIX DETECTORS
8. PROGRAM PANEL
9. MEASURE RECEIVED SIGNAL STRENGTH
10. FULL SYSTEM TEST

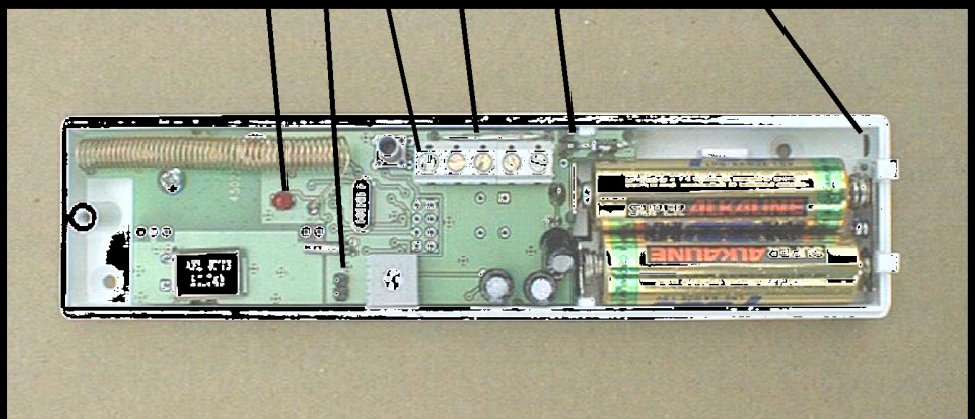
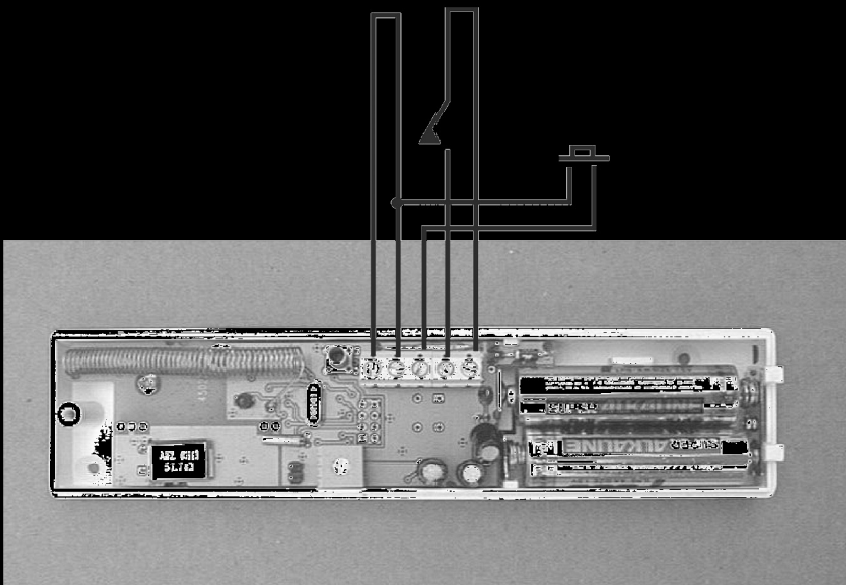




1 2 3  
4 5 6  
7 8 9







# 4160-GB

## WIRELESS SMOKE DETECTOR

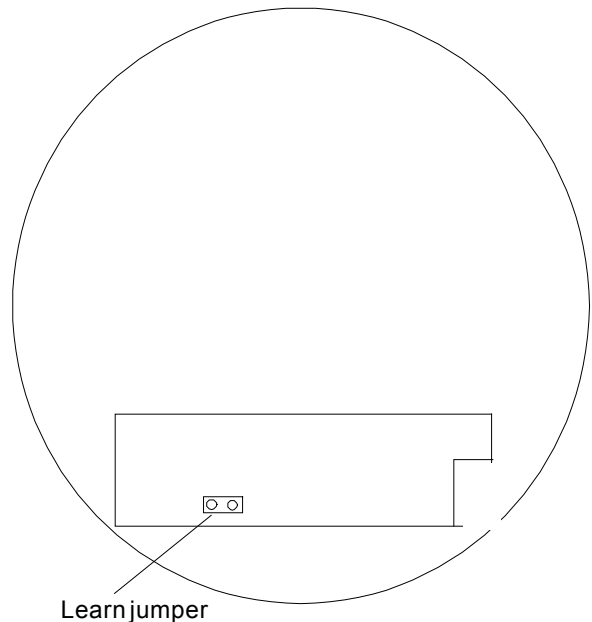
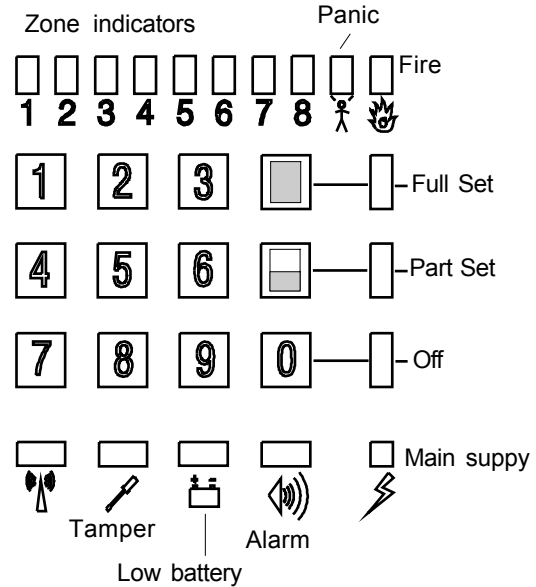
The 4160 is a Class 3 wireless smoke detector for operation with the FM4000 control panel.

**RECOMMENDED BATTERIES** Detector head, Duracell MN1604 or Eveready Energiser, Detector transmitter, 2 x Quality AA cells Duracell or Eveready Energiser preferred.

### ADDING A DETECTOR TO THE FM4000E CONTROL PANEL

Connect the detectors battery.

1. Enter the engineers program mode by key- ing in the engineer code 4679  
(The alarm LED will illuminate to indi cate that you are in the engineer mode)
2. Key in 10.
3. Short out the learn jumper on the detec tor.  
(The panel will bleep twice and zone 1 LED will illuminate to indicate that one detector is programmed onto that zone).  
To remove all detectors from the zone, press both the Off and Part Set key. (All zone LED's will go out).
4. Press the Full Set key to accept.
5. Key in 48 to exit engineer programming.



# 4660-GB WIRELESS SMOKE DETECTOR

The 4660 is a Class 6 wireless smoke detector for operation with the FM4000 control panel.

**RECOMMENDED BATTERIES** Detector head, Duracell MN1604 or Eveready Energiser, Detector transmitter,

### ADDING A DETECTOR TO THE FM4000X CONTROL PANEL

Connect the detectors battery.

1. Enter the engineers program mode by keying in the engineer code 4679 (The alarm LED will illuminate to indicate that you are in the engineer mode)

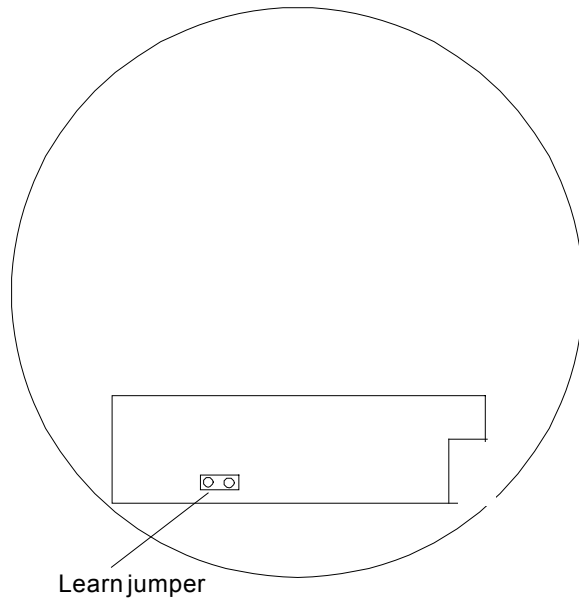
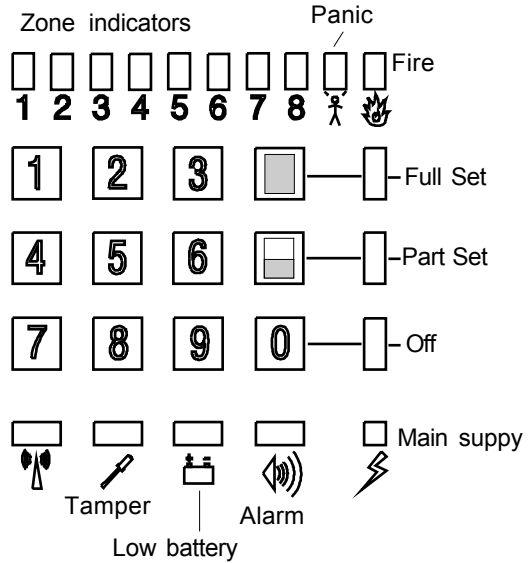
2. Key in 10 then the device number i.e. 1 for the first device 2 for the second etc..

3. Short out the learn jumper on the detector. (The panel will bleep twice and zone 1 LED will illuminate to indicate that one detector is programmed onto that zone).

To remove a detector from the zone, press both the Off and Part Set key. (The appropriate zone LED will go out).

4. Press the Full Set key to accept.

5. Key in 48 to exit engineer programming.





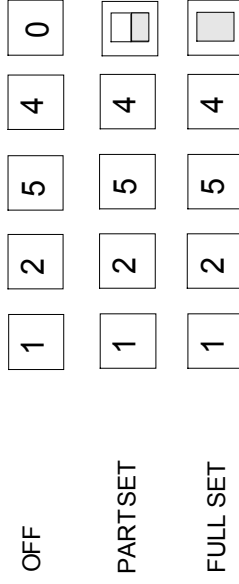


The 4180 is a remote wireless keypad for use in conjunction with the FM4000 control panel. Features include a 4 digit security code (user programmable), and Panic facility.

**INSTALLATION**

1. Avoid siting close to metalwork or large metal objects as this may affect radio range.
2. Before fixing into position, go to the control panel and program the keypad into the system as described on page 3.
3. Once programmed into the panel, check that the radio range at the desired location is satisfactory by arming and disarming using the keypad.
4. Fix the base to the wall with two screws (not provided).  
Note; Now that the keypad is on the system, the tamper alarm will operate when opening up the keypad to fix it. Cancel the alarm by entering the user code on the panel keys.
5. After installation the received signal strength can be measured using the FM4000 control panels normal signal strength facility by sending a panic alarm from the keypad. (refer to the FM4000 instruction manual).

**OPERATING THE ALARM FROM THE KEYPAD**



*The green LED illuminates to confirm valid code, when led is on enter function (Off Part or Full). Wait until the LED goes out before entering the code again.*

NOTE: If a wrong code is entered, wait 5 seconds before entering the code again.

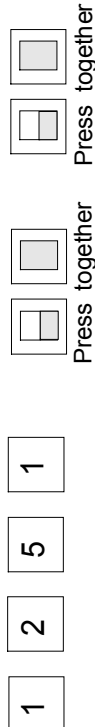
## ADDING A KEYPAD TO THE FM4000 CONTROL PANEL

**PROGRAMMING YOUR OWN SECURITY CODE**  
 1,2,5,4 is the factory set security code. If the battery is removed the keypad will revert to the factory code.

1,2,5,1 is the factory set programming code.

### TO PROGRAM A NEW SECURITY CODE.

- key in 1,2,5,1, followed by pressing the Part and Full set keys together twice.

e.g.  Press together Press together

The green LED will illuminate leave for approx 6 seconds to ensure that you are in programming mode.

- Now enter a 6 digit number.

The first 4 are your new security code.

The first 3 and 5th digits are the new programming code, which must be used next time to change the code.

The 6th digit can be any number and just completes the programming sequence at this stage the led will extinguish.

**EXAMPLE** If you enter 1,2,3,4,5,6 your new security code is 1,2,3,4 and the new programming code is 1,2,3,5. The last digit is ignored.

**PANIC** If two vertically adjacent keys are pressed together simultaneously e.g. 1&4 or 5&8 a panic alarm will be activated.

Note: This facility can be disabled by keying in the programming code 1251. and re enabled by keying in the programming code again.

**LOW BATTERY** If the battery falls to a point close to the end of its useful life a buzzer within the keypad will sound when setting or unsetting from the keypad. The keypad may continue to operate for some time, however call your alarm company to have the battery replaced as soon as possible

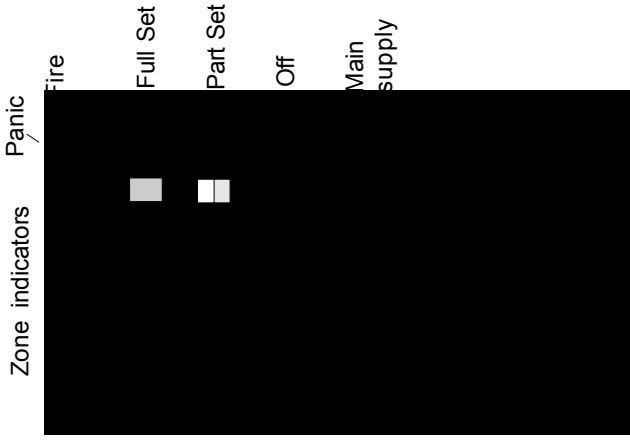
Note: The low battery will not be signalled to the panel.

Connect A 9V Battery to the 4180 (Use only Eveready Energizer or Duracell MN1604).

- Enter the engineers program mode by keying in the engineer code 4679 into the control panel. (The alarm LED will flash to indicate that you are in the engineer mode)
- Key in 11 to select remote control programming.
- Press keys 1 and 4 together (on the 4180) to send a Panic alarm. (The panel will bleep twice and a zone LED will illuminate to indicate that a remote control or keypad is programmed onto the panel). To remove all remote controls or keypads from the panel, press both the O and Part Set key on the 4000. (All zone LED's will go out).

- Press the Full Set key on the panel to accept.
- Key in 48 on the panel to exit engineer programming.

Note: Remote setting devices are not supervised.



00 INVERTED BELL OUTPUT 0=NORMAL\* 1=INVERTED

12 FULL SET EXIT TIME 1=2s 2=10s 3=20s\* 4=30s 5=45s 6=1min 7=2min 8=infinite

13 PART SET EXIT TIME 1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s 7=1min 8=Same as full set

14 ENTRY TIME 1=1s 2=10s 3=20s 4=30s\* 5=45s

15 BELL DURATION 1=Silent 2=15 Sec 3=90s<sup>3</sup> 4=2m<sup>3</sup> 5=3m<sup>3</sup> 6=10m<sup>3</sup> 7=15mins\*<sup>3</sup> 8=Continuous

16 BELL DELAY 1=0\* 2=1m 3=3m 4=4m 5=5m 6=6m 7=7m 8=10mins

17 FULL SET ZONES <sup>1-8 default</sup> \_\_\_\_\_

18 PART SET ZONES <sup>1-4 default</sup> \_\_\_\_\_

19 OMIT PERMIT ZONES <sup>2-8 default</sup> \_\_\_\_\_

20 FINAL EXIT ZONES <sup>1 default</sup> \_\_\_\_\_

21 WALK THROUGH ZONES \_\_\_\_\_

22 IGNORE ZONE IF FIRST TO ALARM ZONES \_\_\_\_\_

23 AUXILIARY ZONES \_\_\_\_\_

24 24 HOUR ZONES \_\_\_\_\_

25 SOAK TEST ZONES \_\_\_\_\_

26 CHIME ZONES \_\_\_\_\_

27 P.A. SILENT / AUDIBLE 1= Silent 0=Audible\*

28 DOUBLE BUTTON P.A. 1= Double 0= Single\*

29 SILENT PART SET 1= Yes 0= No\*

30 UPSTAIRS / DOWNSTAIRS 1=Yes 0= No\*

31 8 SECOND STROBE ON FULL SET / UNSET  
1=Yes 0= No\*

32 COURTESY STROBE / LIGHT DURING ENTRY / EXIT IN FULL SET  
1=Yes 0= No\*

33 WALK THROUGH ZONES TRIGGER ENTRY TIMER IN PART SET  
1=Yes 0= No\*

34 JAMMING 1=Full alarm 0=Indication only\*

35 MAINS FAILURE or PANEL LOW BATTERY PREVENTS ARMING  
1= Yes 0= No\*

36 REMOTE CONTROL UNSETS ONLY IN ENTRY  
1=Normal\* 2=Only unset in entry  
3=Will not disarm from fullset

37 DIALLER & ENTRY DELAY PERIOD  
1=No delay 2=20s 3=30s\*<sup>3</sup> 4=1min 5=2min

38 NO EXTERNAL SIREN OR DIALLER IN PART SET  
1=Yes 0=No\*

39 LINE FAULT IN DAYTIME AUDIBLE  
1=Audible<sup>3</sup> 0= Visual only\*

40 SUPERVISORY 1=Yes<sup>3</sup> 0=No\*

41 SUPERVISORY FAULT 1=Full alarm 0=Indicator only\*

42 ENGINEER RESET 1=Yes<sup>3</sup> 0=No\*

43 No. OF TIMES THE SYSTEM AUTO REARMS  
1=0, 2=1, 3=2, 4=ALWAYS\*

45 AUDIBLE RECEIVER LISTEN TEST

46 ENGINEERS LOG (1 = newest event - 8 = oldest event)

47 ENGINEERS ACCESS CODE (Enter new code, twice)  
Default = 4679

48 EXIT ENGINEER MODE

49 DIALLER OUTPUT FOR PA  
1=PA output only\*<sup>3</sup> 0=PA and ALARM output

50 PA ON ZONE 2  
1=Zone 2 is a PA zone  
0=Zone 2 is a standard zone\*

51 FINAL EXIT SET 0=No\* 1=Yes<sup>3</sup>

52 REMOTE CONTROL FULL SET EXIT TIME  
1=2s 2=10s\* 3=20s 4=30s 5=45s  
6=1min 7=2min 8=infinite

53 REMOTE CONTROL PART SET EXIT TIME  
1=2s 2=5s\* 3=10s 4=15s 5=20s  
6=30s 7=1min 8=as Full set

54 CONFIRMATION<sup>2</sup> 1=Mode1 (No confirm)\*  
2=Mode2 (1999)  
3=Mode3 (2004)<sup>3</sup>

55 DETECTOR ISOLATION<sup>2</sup> 0=No\* 1= Yes<sup>3</sup>

56 DIALLER TEST<sup>2</sup>  
1=Fire  
2=PA  
3=Intruder  
4=Open / Closed  
5=Re-Instatement  
6=Fault  
7=Confirmed  
8=Tamper

Key in 56 then 3 to trigger Intruder Alarm channel,  
press Full set when test completed.

57 DIALLER OUTPUT POLARITY<sup>2</sup> (1 to 8 as above)  
Not displayed = +ve removed / -ve applied  
Displayed = +ve applied / -ve removed  
Press Full set when selection completed

58 Display software issue.

59 DISPLAY STATUS 1=5s\* 2=15s  
3=30s 4=continuous

61 REPORT TAMPER<sup>2</sup> 1=Never 2=Always<sup>3</sup>  
3=When Set\*

\*= FACTORY SETTINGS

<sup>2</sup>= Not applicable to FM4000EN

<sup>3</sup>= Recommended setting(s) for UK systems  
with Police response

**REMEMBER THE FOLLOWING WHEN PROGRAMMING DETECTORS ONTO THE CONTROL PANEL**  
**OZD=Device Prog where Z = Zone No & D = Device No. I.E. 013 = Zone1 Device3. Panic=09D, Fire=10D, Remote=11D.**

**1** zone type: RSSI  
VOLTAGE

011	
012	
013	
014	
015	
016	
017	
018	

**6** zone type: RSSI  
VOLTAGE

061	
062	
063	
064	
065	
066	
067	
068	

**2** zone type:

021	
022	
023	
024	
025	
026	
027	
028	

**7** zone type:

071	
072	
073	
074	
075	
076	
077	
078	

**3** zone type:

031	
032	
033	
034	
035	
036	
037	
038	

**8** zone type:

081	
082	
083	
084	
085	
086	
087	
088	

**4** zone type:

041	
042	
043	
044	
045	
046	
047	
048	

**PANIC**

091
092
093
094
095
096
097
098

**REMOTE**

111
112
113
114
115
116
117
118

**5** zone type:

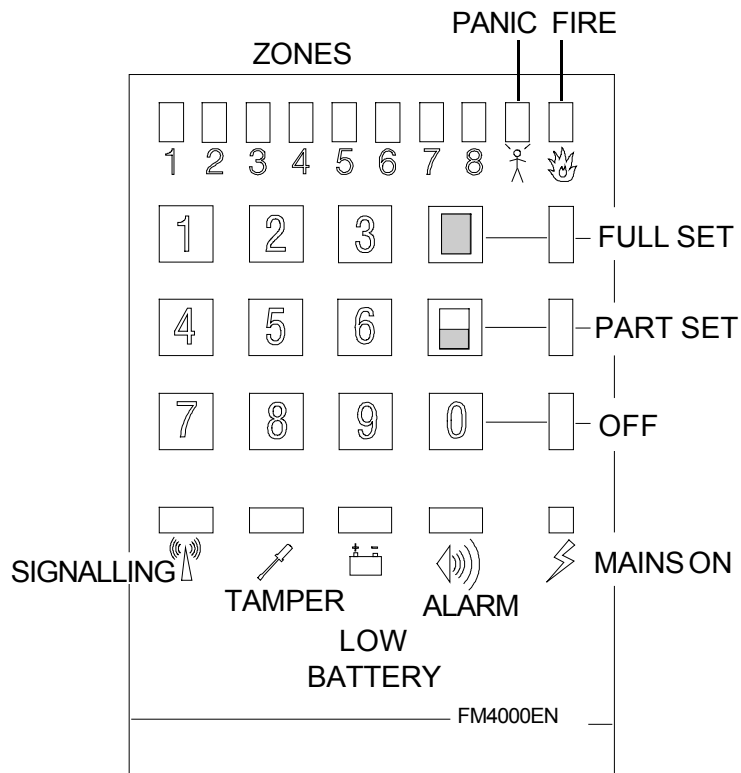
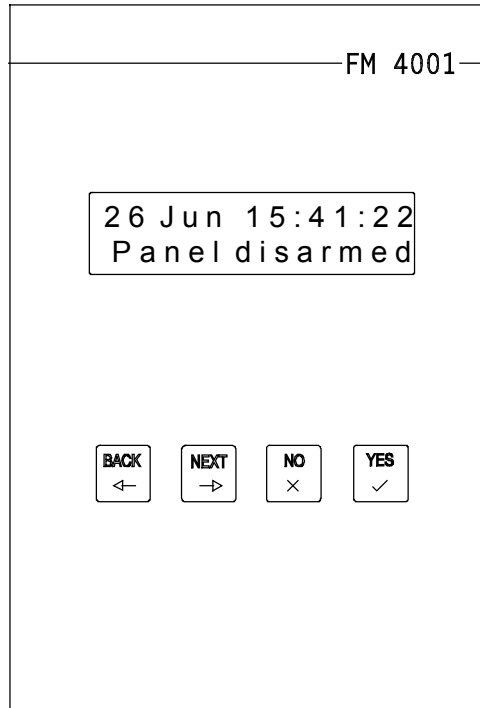
051	
052	
053	
054	
055	
056	
057	
058	

**FIRE**

101	
102	
103	
104	
105	
106	
107	
108	

# FM4000EN and FM4001 CONTROL PANEL

## INSTALLATION INSTRUCTIONS



CI-232 ISS 1

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## EN 50131 & PD6662 Compliance

The FM4000EN & FM4001 control panel operation has changed in the following ways making our products suitable for use in systems designed to comply with PD6662:2004.

1. The panel will only show the mains status at all times, all other status settings may only show on system arm/disarm or for 30 seconds after the user code has been entered, dependant upon programming.

2. To enter engineering mode the user code must first be entered followed by zero, the engineers code must then be entered within the next 30 seconds. Once the engineers code has been entered, the engineer can go in and out of engineering as many times as required, until the next time the system is armed.

3. There is now a 30 seconds delay on entry before the external sounder(s) and communications (unconfirmed intruder) are activated, unless 2 or more detection devices off the entry route have been activated.

4 On grade 1 systems, the FM4000EN may be used alone with installations up to 8 detection devices. On Grade 2X systems the FM4001 must be fitted.

5. The display on the FM4001 is only active when in use, the display will go blank at the end of menu or 15 seconds after the last button press in Manager mode, or when no message needs to be displayed in normal use.

### System Programming for systems designed to comply with PD6662:2004

The following settings (or ranges of settings) should be used on systems

which are designed to comply with the above requirements.

**Option 14** - Entry time, must not exceed 45 seconds, Select options **1,2,3,4 or 5**.

**Option 15** - Bell time must be between 1min 30 secs & 15 minutes, Select options **3,4,5 or 6**.

**Option 37** - Dialler & Entry Delay, Select option **3, 30 seconds**

**Option 40** - Supervisory, checking devices are polling every 20 mins. Select option **1 (NOTE select 0 on Grade 1 panels)**

**Option 42** - Engineer reset, and remote reset enabled. Select option **1**

**Option 59** - Display should be masked, option 1, 2 or 3.

Other requirements for ensuring compliance with the above requirements include:-

1. On systems which need to meet Grade 2X requirements, ensure the FM4001 expansion panel is fitted, If the 4001 is not fitted the panel only meets Security Grade 1 requirements.

For systems which do not need to meet the above requirements, any available setting may be used to meet your operational requirements.

### CONNECTIONS (RIGHT HAND SIDE)

1-4 12VAuxiliary supply output. Maximum load current 500mA

5 Tamper -ve return. If connecting a Self Actuating Bell (SAB) then connect the -ve tamper return to this terminal. If not fitting a SAB this terminal must be connected to -ve Aux..

6. This terminal provides a +ve output on alarm which is reset next time the panel is armed. It is provided for use with hard wired detectors that have a latching LED facility.

7. -ve to trigger Siren. Goes from open circuit to 0v to operate a bell or siren. Max 500mA.

Resets after the bell time set in engineer



program.

8. -ve Strobe. Goes from open circuit to 0v in alarm to operate a strobe. Remains on until the system is disarmed.

9. Dialler trigger output. Is provided for triggering an autodialler. This output goes to 0v on alarm.

Once triggered it remains until the panel is disarmed so as not to trigger any more until the system is turned off.

## **CONNECTIONS ALONG BOTTOM EDGE**

### **RECEIVED SIGNAL STRENGTH INDICATION (RSSI)**

For connection to a digital voltmeter to indicate the Signal Strength of a transmission received from a detector. (Refer to section on using the RSSI output).

### **FM4001 CONNECTIONS (When fitted)**

The FM4000 LCD unit is supplied with a connecting lead which plugs into the FM4000EN expansion port connector.

Mount the LCD display at a suitable level so that the display can be viewed correctly. Mount the FM4000X directly below the LCD unit and plug in the connecting lead.

### **12v SUPPLY TO THE FM4001**

Connect to the 12v aux output of the FM4000X

### **TAMPER OUTPUT.**

Clean contact normally closed output.

Tamper return from the siren can be routed via this contact. If the tamper is operated a tamper alarm will occur.

### **STAND-BY BATTERY**

Connections are provided for an additional stand-by battery inside the FM4001. This needs to be fitted to achieve the required standby time in addition to the one in the FM4000EN

## **INSTALLATION**

The factory defaults for the user and engineer codes are:-

USER CODE = 1 2 3 4

ENG CODE = 4 6 7 9

Note, the customers code and zero must be entered, before the engineers code will be accepted.

The recommended installation procedure is as follows:

### **1. Label detectors.**

Label each detector with its zone number for reference during installation and for later service reference.

### **2. Complete the User Record**

The back pages of the user instruction booklet should be completed and left with the operator for their reference. It gives them information about the zones etc.

### **3. Complete a system record sheet**

System record sheets should be completed before commencing programming. This acts as a reference when programming and can form part of the installation records.

### **4. Locate the control panel**

For maximum radio coverage the control panel should be located at a central point in the building.

The higher it is the better for radio reception. (Do not mount at floor level on a ground floor or below ground floor level, unless ALL devices are at this level.)

Metal objects cause radio reflections which oppose the signal being received from the detector with a resultant reduction in the received signal strength. Metalwork close by can result in complete cancellation, therefore do not site the control panel or detectors near to large metal objects, metal piping, girders, concentrations of mains cabling, fuse boxes etc.

Consider the ease of wiring to the external siren and communications (if required) when making your choice.

The Panel may be temporarily sited whilst a test is carried out to verify the reception from distant detectors. Check the received signal strength unless previously proved using the FM test kit. (See RSSI page 4)

The panels must be fixed using the three fixing points provided. Ensure that the LCD display on the FM4001 is located for ease of viewing and that the FM4000X is mounted directly below it. For larger installations a remote tamper protected antenna is available.

Mains supply to the control panel must be provided by a competent electrician to the current issue of the IEE regulations.

A 12v sealed lead acid standby battery should be connected after all wiring has been completed and tested. 12v 2.3AH is recommended.

#### **5. Program detectors onto the panel**

Each detector has an internal "Learn" jumper or a push switch on the front of the pir.

To add a detector to the system:

Go into the engineer program. Select the zone and device number. Short out the learn jumper on the detector. Remove the learn jumper after programming.

The detector transmits its identity together with a learn bit. The panel stores the detectors identity code and adds it to the chosen zone.

(Refer to engineer programming section)

#### **6. Carry out range test**

If you keep a 4173-GB remote control for testing, you can program this onto the system and then go to each detector location in turn and verify that the control can be armed and disarmed from all detector locations.

#### **7. Mount the detectors**

Refer to the detector instructions for recommended mounting positions.

As reflections from metalwork act to cancel the transmission, avoid siting near to any metalwork.

Reflections like this can often be overcome

by a small movement in position of 15 to 20cm.

#### **8. Making panel program changes.**

Complete a system record sheet before making any changes.

Once programmed the program is stored in non-volatile memory, so data will remain stored even in the event of complete power failure.

#### **9. Radio test using the RSSI output**

To measure the signal strength received from a detector.

i) Connect a Voltmeter to the RSSI output terminals.

ii) Press the reset button next to the RSSI terminals. The voltmeter should now read zero volts.

iii) Go to the detector and operate the learn jumper or press the light guide.

iv) Return to the panel. The voltmeter now displays a voltage representing the strength of the transmission received.

It will ignore any other transmissions and only respond to the learn message or a Panic or Off message from a remote control or panic button.

**The voltage reading should be a minimum of 1.0v.**

The readings for each detector can be recorded on the system record sheet for future reference.

#### **10. Full system test**

A walk test facility is provided in the Operating instructions. This may be used to test all of the devices on the system.

Once the sounders and dialler have been connected and the installation completed a full test with remote signalling should be carried out.

#### **PROGRAMMING**

**1. Enter Users code followed by 0 & then the engineers code 4 6 7 9**

The Alarm led will flash slowly to indicate that you are in the program mode.

**2. Key in the two digit program number.**

(The zone led's indicate which option is set.)

**3. Key in the option required**

(The zone led's indicate your choice)

**4. Press the Full Set key to exit that program step.**

**5. When finished with programming key in 48 to exit engineer mode.**

**ERROR CORRECTION VIA PART SET KEY**

If you accidentally enter an engineer program number and change an option value, you can undo the change by pressing the Part Set key before exiting the program step via the Full Set key.

**EXAMPLE:** To set the Full set exit timer to 1 minute.

Key in 4 6 7 9 The alarm indicator will illuminate to indicate that you are now in engineer program mode

Key in 1 2To select Full set exit time (program No. 12.)

Key in 6 To select the 1 minute option.

Zone 6 LED indicates your choice

Press the Full Set button to exit program step.

**Note:** The Full Set button must be pressed to exit from each program step.

Until the Full Set button is pressed any key press just changes your choice of option.

Key in the next program Number you wish to change.

When all programming is complete Key in 48 to exit engineer mode

**DETECTOR PROGRAMMING**

**LEARNING DEVICES**

When installing the system you may find it easier to label each detector with its zone number and learn them into the panel before

installation. Once programmed into the panel's memory, the information will not be lost even when power is removed from the panel.

**01 PROGRAM DEVICES ONTO ZONE 1**

Select program number 01.

The LCD display will show "LEARN ZONE 1 DEVICE ?

The LEDs 1 to 8 indicate which of the 8 devices are already programmed onto zone 1.

Use keys 1 to 8 to select the device number. Short out the learn jumper on the detector and **ensure that the learn pins are not left permanently shorted.**

The panel will emit 2 short blips to indicate that it has learnt the detector.

The corresponding LED will illuminate and the LCD will display the unique 5 digit identity code of the device with the message LEARN OK.

If the device was already programmed on the system at a different location the message will say MOVED FROM xx (where xx is the old zone and device number).

If a device was already programmed in the location the LCD will show the message ALREADY STORED and the new device will overwrite it automatically deleting the old one.

Press the Full Set key to exit.

**DELETING DEVICES FROM ZONE 1**

Select program number 01.

The LCD display will show "LEARN ZONE 1 DEVICE ?"

The LEDs 1 to 8 indicate which of the 8 devices are already programmed onto zone 1.

Use keys 1 to 8 to select the device number to be deleted.

If a device did exist at that location the LCD will show ALREADY STORED.

To delete the device press PART SET and OFF keys together.

The LCD will show that the device has been deleted.

Press the Full Set key to exit

## **02 PROGRAM DEVICES ONTO ZONE 2**

## **03 PROGRAM DEVICES ONTO ZONE 3**

## **04 PROGRAM DEVICES ONTO ZONE 4**

## **05 PROGRAM DEVICES ONTO ZONE 5**

## **06 PROGRAM DEVICES ONTO ZONE 6**

## **07 PROGRAM DEVICES ONTO ZONE 7**

## **08 PROGRAM DEVICES ONTO ZONE 8**

## **09 RADIO PANIC BUTTONS**

Key in 091 to program the first PA button onto the system. The Panic button is operated and the device will learn onto the control panel.

Up to 8 Panic buttons can be programmed onto the PA zone, i.e. devices 091 to 098. The LCD display will refer to the panic buttons as P1 to P8.

Press the Full Set key to exit.

## **10 FIRE ALARM DEVICES**

Key in 101 to program the first Fire detector onto the system. Short out the learn jumper. (Ensure learn jumper is removed after programming).

Up to 8 Fire detectors can be programmed onto the Fire zone, i.e. devices 101 to 108. The LCD display will refer to the Fire detectors as F1 to F8.

Press the Full Set key to exit.

## **11 REMOTE CONTROLS**

Key in 111 to program the first Remote Control onto the system. The Panic button is operated and the device will learn onto the control panel.

Up to 8 Remote Controls can be programmed onto the system, i.e. devices 111 to 118.

The LCD display will refer to the remote controls as R1 to R8.

Press the Full Set key to exit.

## **EXIT ENTRY**

### **12 FULL SET EXIT TIME**

1= 2 secs 2= 10 secs 3= 20 secs\*  
4= 30 secs 5= 45 secs 6= 1 min.  
7= 2 mins. 8= Infinite

Press Full Set to exit

\* = FACTORY DEFAULT

### **13 PART SET EXIT TIME**

1= 2 secs 2= 5 secs 3= 10 secs\*  
4= 15 secs 5= 20 secs 6= 30 secs  
7= 1 mins. 8= As full set exit time.

Press Full Set to exit

### **14 ENTRY TIME**

1 = 1 sec 2 = 10 secs 3 = 20 secs  
4 = 30 secs\* 5 = 45 secs

Press Full Set to exit

### **00 INVERT SIREN OUTPUT**

Normally -ve applied in alarm. (0v in alarm)

0 = -ve applied in alarm\*

1 = -ve removed in alarm

### **15 BELL DURATION**

1 = Silent 2 = 15 secs 3 = 90 secs.  
4 = 2 mins. 5 = 3 mins. 6 = 10 mins.  
7 = 15 mins.\* 8 = Continuous

Note:- duration must not exceed 15 mins. to meet EN50131-PD6662 requirements.

Press Full Set to exit

### **16 BELL DELAY**

1 = 0 mins.\* 2 = 1 mins. 3 = 3 mins.  
4 = 4 mins. 5 = 5 mins. 6 = 6 mins  
7 = 7 mins 8 = 10 mins

Note: In the event of a line fault, bell delay will become 0 mins.

Press Full Set to exit

## ZONE PROGRAMMING

**IMPORTANT:** Remember that all devices on a particular zone will respond to the zone option selected. So if zone 1 has final exit detectors, all detectors on zone 1 must also be final exit.

### 17 FULL SET ZONES

The factory default is all zones active. The zone LED's indicate which zones are active in full set.

Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.  
Press the full set key to exit.

### 18 PART SET ZONES

The factory default is zones 1 to 4 active. The zone LED's indicate which zones are active in part set.

Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.  
Press the full set key to exit.

### 19 OMIT PERMIT ZONES

(The zones that the user is allowed to omit)

The factory default is all zones allowed to be omitted except zone 1. The zone LED's indicate which zones are allowed to be omitted.  
Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.  
Press the full set key to exit.

### 20 FINAL EXIT ZONES

(Zones that start the entry time)

The factory default is zone 1 only. The zone LED's indicate which zones will start the entry timer.  
Use the keys 1 to 8 to select or deselect zones.  
The 0 key deletes all.  
Press the full set key to exit.

### 21 WALK THROUGH ZONES

The factory default is none. The zone LED's indicate which zones are walk through during entry.

Use the keys 1 to 8 to select or deselect walk through zones.  
The 0 key deletes all.  
Press the full set key to exit.

### 22 IGNORE ZONE IF FIRST TO ALARM (Double Knock)

Alarm only if two zones are triggered. The factory default is none. The zone LED's indicate which zones are double knock.  
Use the keys 1 to 8 to select or deselect double knock zones.  
The 0 key deletes all.  
Press the full set key to exit.

### 23 AUXILIARY ZONES

Technical alarm. i.e.. Freezer giving internal audible on control panel. The factory default is none. The zone LED's indicate which zones are auxiliary zones.  
Use the keys 1 to 8 to select or deselect aux. zones.  
The 0 key deletes all.  
Press the full set key to exit.

### 24 24 HOUR ZONES

The factory default is none. The zone LED's indicate which zones are 24 hour.  
Use the keys 1 to 8 to select or deselect 24 hour zones.  
The 0 key deletes all.  
Press the full set key to exit.

NOTE: If you do not want a 24 hour zone to be omitted, remove the zone from omit permit via program No. 19.

### 25 SOAK TEST ZONES

The factory default is none. The zone LED's indicate which zones are on soak test.

Use the keys 1 to 8 to select or deselect soak test zones.

The 0 key deletes all.  
Press the full set key to exit.

## **26 CHIME ZONES**

The factory default is none.  
The zone LED's indicate which zones are on chime.  
Use the keys 1 to 8 to select or deselect chime zones.

The 0 key deletes all.  
Press the full set key to exit.

## **OTHER PROGRAMS**

### **27 P.A. SILENT / AUDIBLE**

The factory default is audible.  
1= Silent O= Audible \*  
Press the full set key to exit.

### **28 DOUBLE BUTTON P.A.**

On early remote controls both PA & unset buttons need to be pressed to generate a PA  
1= Double O= Single\*  
Press the full set key to exit.

### **29 SILENT PART SET**

1= Silent O= Audible\*  
Press the full set key to exit.

### **30 UPSTAIRS / DOWNSTAIRS**

This option tells the panel to accept part set button as a separate alarm system.) e.g.. The Part Set button becomes the alarm system in the flat & the Full set button is a separate alarm system in the office. In this mode the user can set either one or the other, or both systems by selection when arming.

1 = Select Upstairs/Downstairs mode.  
O= Normal Part / Full set mode.\*  
Press the full set key to exit.

### **31 8 SECOND STROBE WHEN FINAL SET AND UNSET**

If selected the strobe output operates for 8 seconds at the moment the panel is full set. i.e. when the exit timer terminates.

The strobe also operates for 8 seconds when the panel is Unset from Full Set.

1 = 8 sec. Strobe  
0 = No 8 second strobe\*  
Press the full set key to exit.

### **32 COURTESY STROBE IN FULL SET ENTRY / EXIT**

If selected the strobe output terminal 8 operates when Full setting the panel. The strobe output also operates for the entry time when unsetting from Full Set.  
(If a mains relay is connected via this output a mains courtesy light could be switched on by disarming from outside with a remote control.)

1= Courtesy strobe on O=off\*  
Press the full set key to exit.

### **33 WALKTHROUGH ZONES BECOME FINAL EXIT IN PART SET**

To prevent false alarms in part set it is often useful to make walk through zones initiate the entry timer.

1= Yes O= No\*  
Press the full set key to exit.

### **34 JAMMING**

1 = Jamming generates a full alarm when set  
O= indicator only\*  
Press the full set key to exit.  
(Jamming is signalled to the dialler outputs.)

### **35 MAINS FAILURE & PANEL LOW BATTERY PREVENTS ARMING**

1 = Prevents arming.  
O = Does not prevent arming\*  
Press the full set key to exit

### **36 REMOTE CONTROL UNSETS ONLY IN ENTRY**

1 = Full operation. Unset at time.\*  
2 = Unset only during Full set entry time.  
3 = No disarm in Full set. Will disarm in part set.  
Press the full set key to exit.

### **37 DIALLER & ENTRY DELAY PERIOD**

1 = None\* 2 = 20s 3 = 30s

4 = 1 min 5 = 2 min

Press the full set key to exit

### **38 NO EXTERNAL BELL OR DIALLER IN**

#### **PART SET**

**(Internal bells only in Part Set).**

1 = Internal sounder only in Part Set.

0 = Dialler and siren In both full or part set\*

Press the full set key to exit

### **39 LINE FAULT IN DAYTIME AUDIBLE**

1 = Audible and visual 0 = visual only\*

Press the full set key to exit.

### **40 SUPERVISORY**

**Do not select supervisory unless all your detectors are 4600 series.**

**Do not select supervisory if using zoned Panic buttons.**

1 = Supervision 0 = No supervision\*

Press the full set key to exit.

### **41 SUPERVISORY FAULT**

1 = Full alarm 0 = Indication only\*

Press the full set key to exit

### **42 ENGINEER RESET**

1 = Engineer reset 0 = No\*

Press the full set key to exit.

### **43 REARMING**

1 = none 2 = once 3 = twice 4 = always\*

Press the full set key to exit

### **44 RESTORE ENTIRE NV RAM TO FACTORY DEFAULT VALUES**

Short out the MEM link while keying in 44. All zone LED's will come on, the panel will emit a long bleep and will go out of engineering mode into the day state.

**WARNING:** This will delete all detectors from the system.

### **45 AUDIBLE RECEIVE MODE**

The output from the receiver can be heard on the panel loudspeaker.

Press the full set key to exit.

### **46 DISPLAY ENGINEERS LOG**

Press keys 1 to 8 to view the last 8 events.

Most recent is displayed on key 1.

Key 9 shows the last "First to Alarm"

Press the full set key to exit.

### **47 CHANGE ENGINEERS ACCESS CODE**

Key in a 4 digit code twice.

### **48 LEAVE ENGINEER MODE**

If any devices have their tampers open, the display shows which zones are tampered and will generate an error beep. The tampers must be restored before leaving engineer mode by pressing 48 again.

### **49. DIALLER OUTPUT FOR PA**

1 = PA Triggers PA dialler output

0 = PA Triggers PA and ALARM dialler outputs\*

Press the full set key to exit.

### **50. HARD WIRED PA ON ZONE 2**

1 = Zone2 is a PA zone

0 = Zone2 is a standard zone\*

Press the full set key to exit.

This feature enables hardwired PA buttons to be connected to the panel via the zone 2 hardwire input.

CAUTION: Radio devices including PIRS and contacts programmed onto zone 2 will also trigger a PA alarm if this option is selected.

### **51 FINAL EXIT SET**

1 = Yes 0 = No\*

If yes the exit time will terminate when the final exit door is closed.

### **52 REMOTE CONTROL FULL SET EXIT TIME**

1=2s 2=10s\* 3=20s 4=30s 5=45s 6=1min 7=2min 8=infinite

This applies to remote control and remote keypad only.

The exit time when armed from the panel keypad (option 12) is not affected.

### **53 REMOTE CONTROL PART SET EXIT TIME**

Enables the exit time to be set for part set via the remote control / keypad. The exit time set by option 13 still applies when arming from the panel keypad.

1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s  
7=1min 8=as full set

#### **54 CONFIRMATION OPERATION**

1 = No confirmation\*

(If eng reset is prog'd it will be req'd)

2 = Basic confirmation - BS DD 243:1999

(Entry timer expiring counts as one alarm)

3 = Confirmation - BS DD 243:2004

(All activations during entry ignored for confirmation purposes, until end of entry time and 30 seconds delay.)

#### **55 DETECTOR ISOLATION**

0 - No isolation\*

1 - Isolate the zone which caused an unconfirmed alarm and operate the reinstatement output when required.

Press the Full Set key to exit

#### **56 DIALLER TEST**

**(This option is available, but serves no function on the FM4000EN panel)**

Key in 56 followed by a number key to operate a dialler channel. The number selected will be displayed.

1= Fire

2= Panic

3= Intruder Alarm

4= Open / Closed

5= Reinstatement

6= Fault

7= Confirmed Intruder

8= Tamper

Press full set key when test is completed.

#### **57. DIALLER TRIGGER INVERT**

**(This option is available, but serves no function on the FM4000EN panel)**

All the dialler outputs are positive removed as the default setting, but can be inverted to Negative removed if required. To invert an output key in 57 followed by the required output to be inverted, using the same list as used for the dialler test.

Press full set key when outputs have been selected, outputs will change to the selected settings when the full set key is pressed.

#### **58. DISPLAY SOFTWARE ISSUE.**

Displays the software issue of the 4000X panel, press full set to exit.

#### **59. DISPLAY SET STATUS**

1 = 5s                    2 = 15s    3 = 30s\*

4 = continuous

The panel set status is only available for the selected timed period after the customer code has been entered, unless continuous is selected.

Press the Full Set key to exit

#### **61. REPORT TAMPER**

**(This option is available, but serves no function on the FM4000EN panel)**

Select when the tamper should be reported to the Alarm Receiving Centre  
1. Never 2. Always 3. Only when armed.

Press the Full Set key to exit

#### **REMOTE ENGINEER RESET FACILITY**

When an alarm occurs which requires an engineer reset, the user can call the Alarm Receiving Centre and obtain the access code number to key in to the panel.

The panel zone LED's will illuminate randomly.

From the LED's the Central Station operator can refer to a reference table and instruct the user what code to enter to perform an engineer reset.

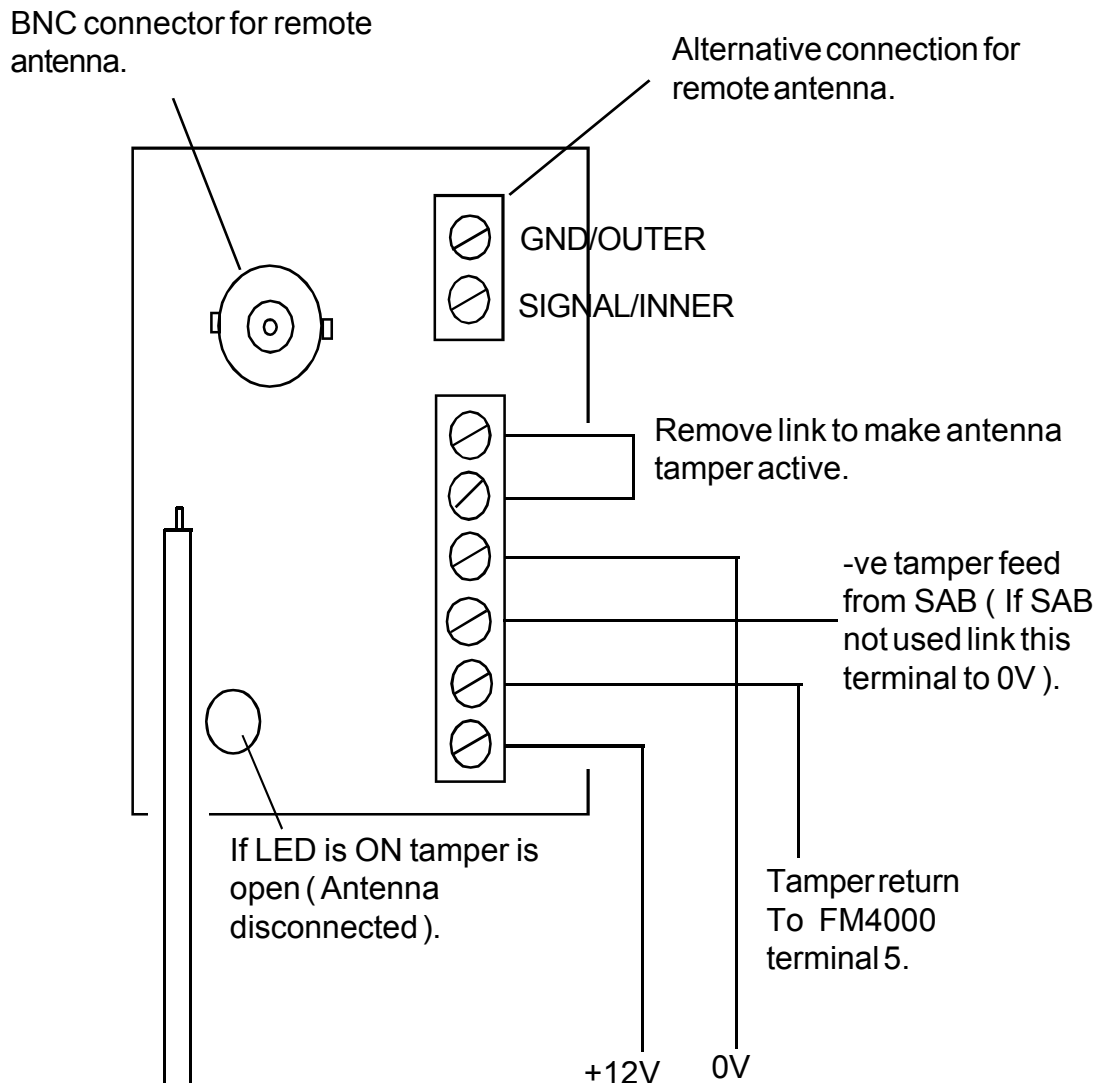
Next time the alarm operates the reset code number will have changed.



# 4005 ANTENNA TAMPER MODULE

The 4005 is for use with tampered remote antennas. When fitted into the FM4000 panel the -ve tamper return from an external siren is connected to this module as shown below.

Mount the module to the right hand side of the transformer in the FM4000 with the single screw supplied.

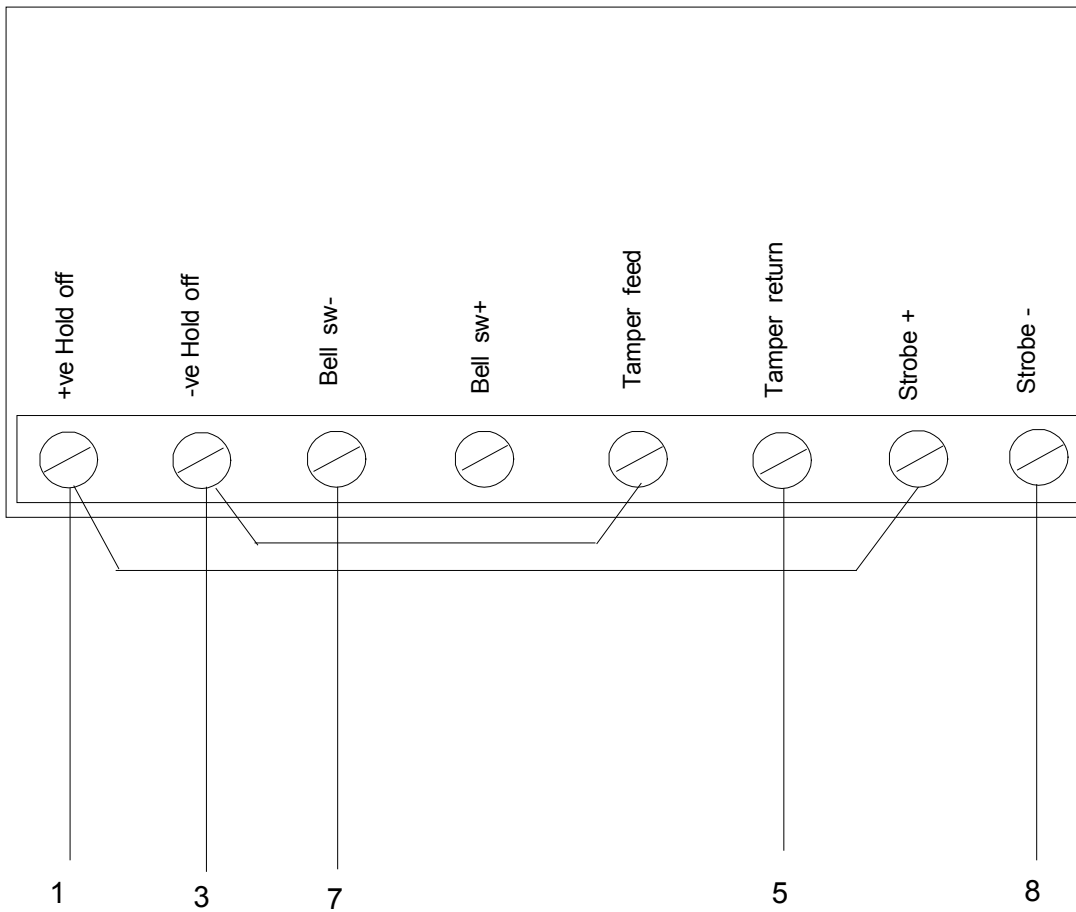


Coax to FM4000 Antenna input terminals ( Inner to top terminal outer to bottom terminal ).

Always mount the remote antenna away from other wiring, any other metal objects and as high as practically possible to obtain the best working range from the 4000X control panel.

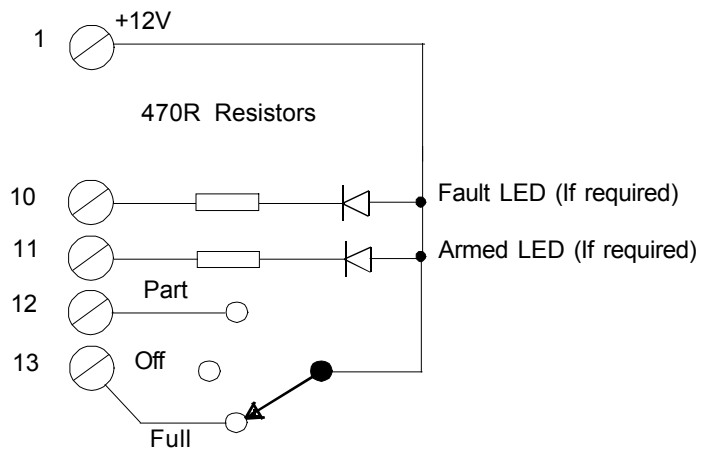
Always bring the antenna cable out away from the aerial whenever possible

## SAB CONNECTION TO THE FM4000

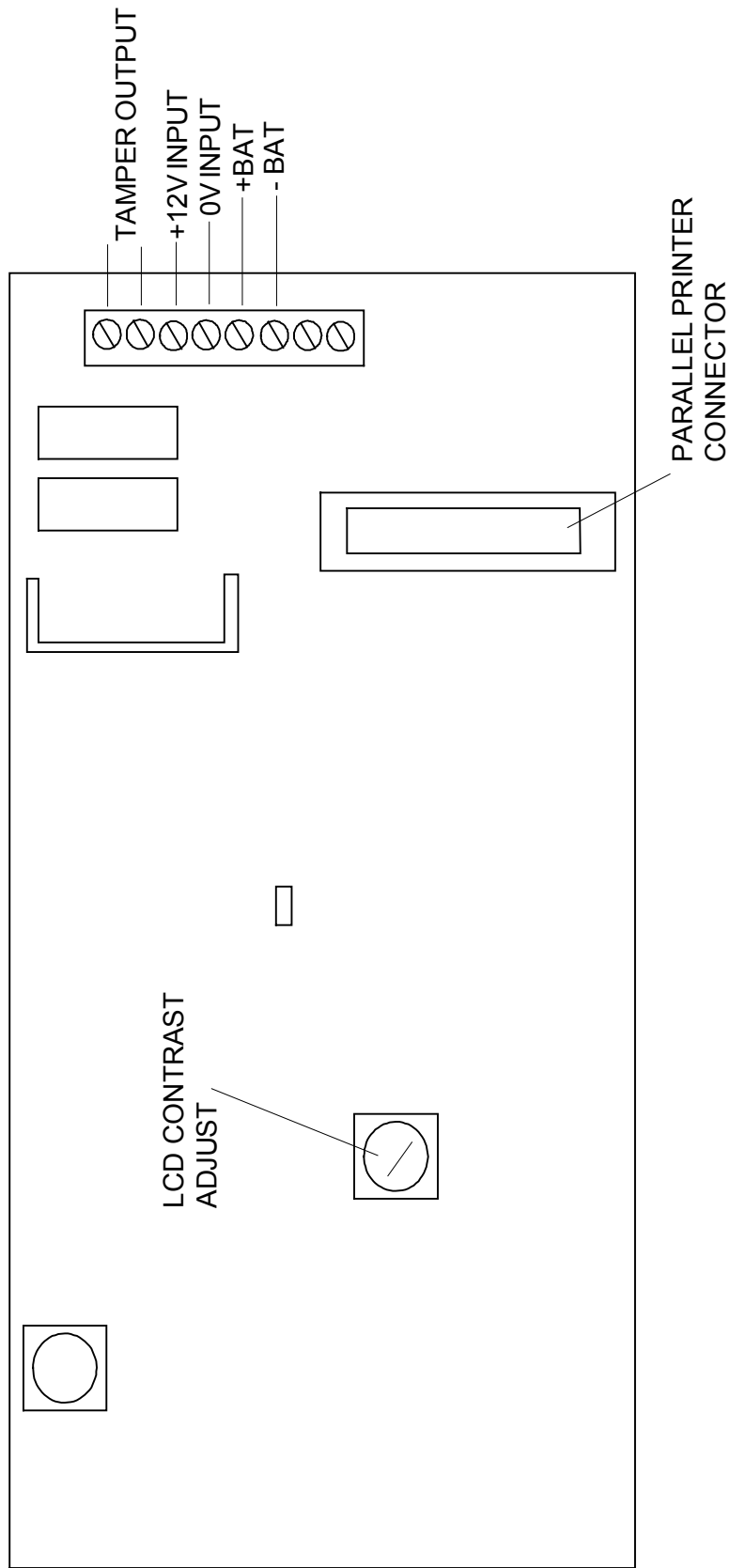


Connections on the FM4000 main board

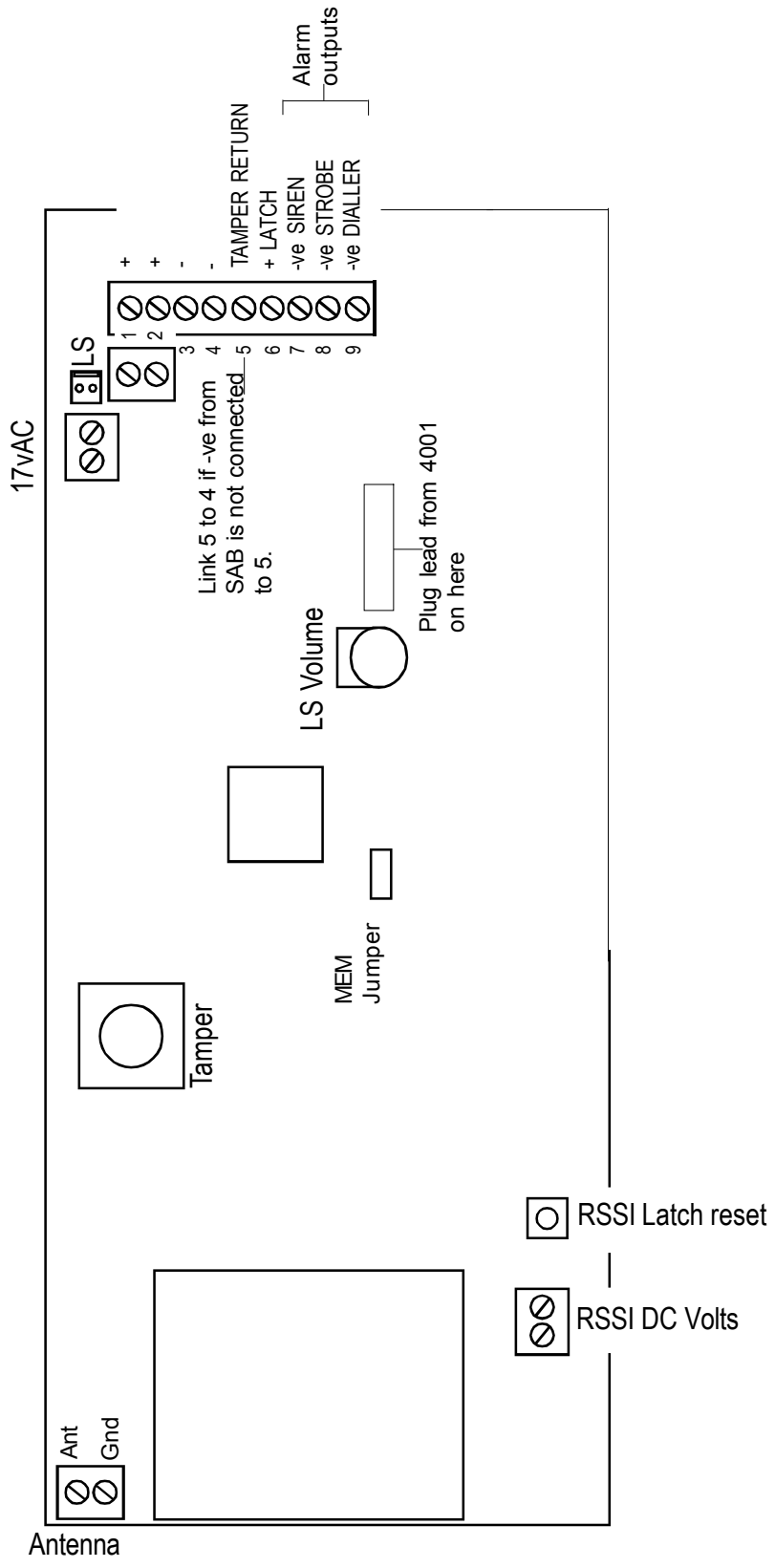
## WIRED KEYPAD ARMING



# FM4001 LCD DISPLAY



# FM4000EN PANEL CONNECTIONS



# FAULT FINDING GUIDE

**CUSTOMER HAD AN ALARM** Ask them to press the Full set button and tell you what indicators are on.  
The LED's indicate the cause of the alarm and also the setting status at the time.

**MAINS LED FLASHING** Mains failure (Restore supply)

**ZONE LED FLASHING (in exit)** Check that doors and windows are closed.  
Flashing with tamper LED. (A detector has an open tamper).  
Flashing with battery LED. (The detectors batteries need replacing).

**ALARM LED ON** Full alarm. The LEDs indicate what caused the alarm.  
If Engineer reset is programmed into the panel an engineer reset will be required before the system can be re-armed.

**FLASHING WITH ZONE LED** A detector on soak test has triggered whilst the system was armed.

**FLASHING WITHOUT A ZONE LED** An engineer reset is required.

**BATTERY LED ON** The control panel's battery is disconnected or needs replacement.

**FLASHING:** Detector has a low battery. The zone LED will flash to indicate which one.

**SIGNALLING LED ON FLASHING** The system is being blocked by a continuous transmission.  
If flashing on its own, an external line monitor has signalled that the telephone line is at fault.

Flashing together with a zone indicator. The system is set as a supervised system and the detector indicated by the flashing zone LED has failed to report in. ( Re-site the detector where there is good radio reception.) Use the RSSI output to check.

**CONTACT TRANSMITTER NOT WORKING** Check the magnetic contact is operating correctly. Open lid and check what zone it should be on. Go into the panel engineer mode and check if it has been programmed onto the correct zone.

Note: the panel will not allow you to program a detector onto two zones. When programmed onto a zone any previous zone allocation will be deleted.

**PIR NOT WORKING** The detector needs 6 minutes to 'settle' on power up or when the batteries are replaced..

Ensure the device is programmed into the control panel.

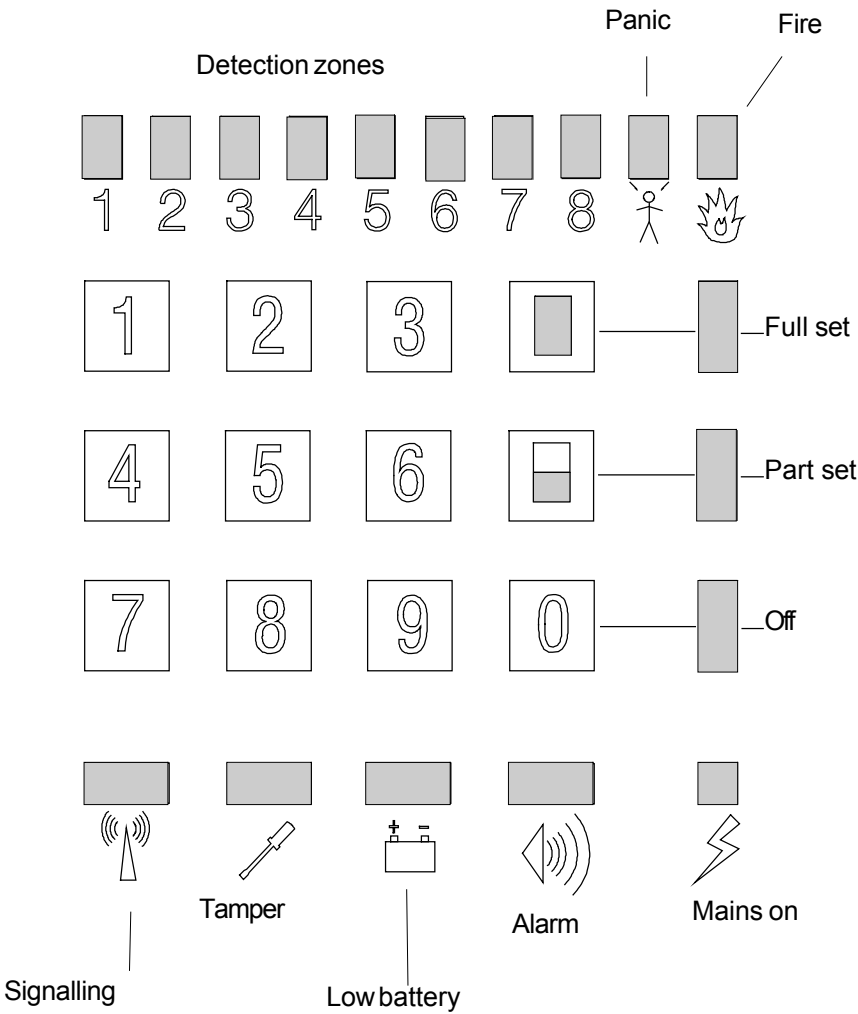
Set the control into operator walk test mode and walk test the detector after pressing 'LED Guide'. Pressing the 'light guide' button overrides the 2 minute inhibit timer.

Opening the cover should trigger a 'Tamper' at the control panel.

**CUSTOMER HAS FORGOTTEN THEIR CODE** Open the panel and short out the MEM jumper. The user and engineer codes will be restored to the factory defaults 1234 & 4679. No other programming is affected.

# FM4000 ALARM SYSTEM

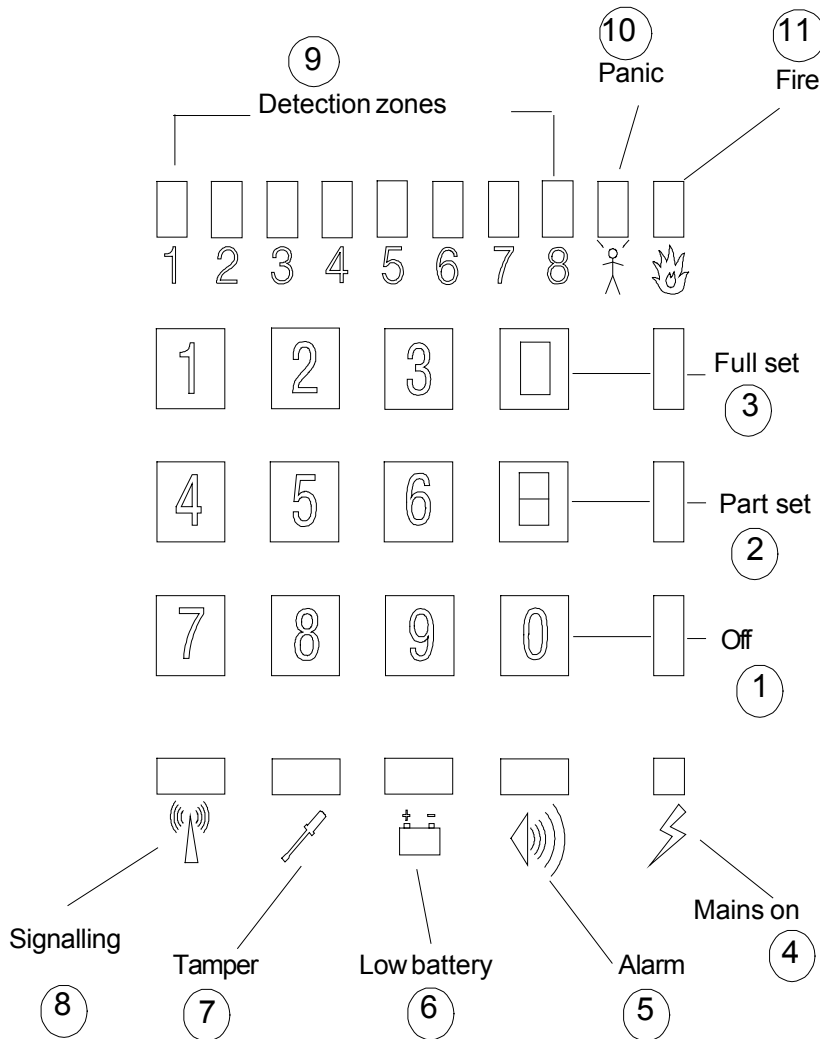
## OPERATING INSTRUCTIONS



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CI-085 iss5

## Explanation of indicators on the control panel



- ① Off Illuminated when the system is disarmed.
- ② Part set Illuminated when the system is Part armed.
- ③ Full set Illuminated when the system is Fully armed.
- ④ Mains on Illuminated - indicates mains supply is present.  
Flashing - is a warning that mains supply is disconnected.
- ⑤ Alarm Illuminated - Indicates an alarm has occurred.  
Flashing - An alarm has occurred and the system needs an engineer reset. (Call your alarm company)

- ⑥ Low battery Illuminated - Control panel battery fault. (Call your alarm company)  
Flashing with a zone indicator - A detector battery needs replacing. Call your alarm company.
- ⑦ Tamper Illuminated - The control panel or external siren has been tampered or incorrect pin numbers have been entered  
Flashing with a zone indicator - A detector has been tampered with.  
(Call your alarm company)
- ⑧ Signalling Illuminated - A radio signal of a similar frequency is present for more than 45 seconds. If it continues call your alarm company.  
Flashing with a zone indicator - A detector has failed to report.  
(Call your alarm company)  
Flashing on its own - The telephone line is not operational.  
(If the line remains faulty call your alarm company)
- ⑨ Zones 1 to 8 - If an alarm has occurred they indicate which detector first triggered the alarm, , or flash when arming to indicate a fault or zone on soak test.
- ⑩ Panic - Indicates that a panic alarm has been operated.
- ⑪ Fire - Indicates that a fire sensor has operated.

## **ARMING THE ALARM SYSTEM WHEN LEAVING THE PREMISES**

1. **Key in your 4 digit pin number. (Factory default is 1 2 3 4)**
2. **Press Full set key**
3. The indicators illuminate to show which zones are being armed.  
To add or remove a zone, press the appropriate number key.  
*A flashing indicator means that a door has been left open.*
4. **Vacate the protected area via your designated exit route.**
5. **Wait for the exit timer bleep to stop.** The system is then armed.  
If the bleep does not stop, return to the panel to identify where the fault is.

*If the detectors are not clear to set, i.e.. A door is still open. The affected zone indicator will flash and will prevent arming until either the door has been closed or that zone is omitted.*

*When armed all zone and fault indicators will be extinguished.*

*Note: If the panel fails to arm due to a fault, you may be able to set the system with the fault present by first unsetting the system, enter your code & zero at the panel, then attempt to arm the system again. If this fails call your alarm company.*



## **ARMING THE ALARM SYSTEM WHILST REMAINING ON THE PREMISES**

1. **Key in your 4 digit pin number.**
2. **Press Part set key**
3. The indicators illuminate to show which zones are being armed.  
To add or remove a zone, press the appropriate number key.  
*A flashing indicator means that a door has been left open.*
4. **Vacate the protected area via your designated exit route.**
5. **Wait for the exit timer bleep to stop.** The system is then armed.  
If the bleep does not stop, return to the panel to identify where the fault is.

*If the detectors are not clear to set, i.e.. A door is still open, the affected zone indicator will flash and will prevent arming until either the door has been closed, or that zone is omitted.*

*When armed all zone and fault indicators will be extinguished.*

*Note: If the panel fails to arm due to a fault, you may be able to set the system with the fault present by first unsetting the system, enter your code & zero at the panel, then attempt to arm the system again. If this fails call your alarm company.*

## **DISARMING THE ALARM SYSTEM**

1. **Enter the protected area by the designated entry route.**
2. **Go straight to the panel.**
3. **Key in your 4 digit pin number.**  
*If you do not disarm the system before the entry time has expired, the alarm will operate.*

*Note: The panel unset indicator may only remain illuminated for a short time after the system has been disarmed, depending on programming.*

## **PROTECTION WHILST YOU ARE AT HOME**

If you have a portable panic button a full alarm will be initiated by pressing the Panic button for one second. Refer to the rear page to see if your panic button has been set for silent or audible operation.

The Part Set facility allows part of the system to be armed whilst you are at home. For example detectors downstairs can be armed whilst you are in bed. Or a part of the building can be armed whilst you are working in another part of the premises.

## **CHANGING YOUR PIN NUMBER.**

You can change your 4 digit PIN number at any time by the following sequence.

1. Enter your 4 digit pin number.
2. Press key 7.  
*The full set indicator on the panel will flash.*
3. Key in your new 4 digit pin number twice.  
*The flashing indicators will now stop.*

If you make a mistake when keying in a number, press the Full Set key to exit and start again. The number will not change until you have keyed in the same 4 digit PIN number twice.

If no key is pressed for 20 seconds the program mode is aborted and the panel will revert to the original pin number.

## **ALARM MEMORY**

Following an alarm the event leading to the alarm is stored in memory. At any time whilst unset, the alarm display can be recalled in order to verify what occurred.

Press the full set button - The detector or fault which initiated the last alarm will be displayed.

Pressing the Part Set button - Recalls the most recent event.

Pressing 0 - Returns the display to normal.

## **CHIME OPTION**

If you require a detector to trigger a chime. i.e. to give an audible indication when someone enters via the front door, you may set the sensor on that door to operate a chime.

To set or remove chime:

1. **Key in your pin number**
2. **Press the 8 key.**  
*The Full set indicator will flash.*
3. **Press the number keys** to select which zones will chime.  
The zones with their indicators illuminated will chime.  
The zones not illuminated will not chime.
4. **Press the Full Set key** when you have set the desired chime zone(s)

## **ENGINEER ACCESS REQUIRED (FM4000EN & FM4000X PANELS ONLY)**

If an engineer calls to service or repair your system, to allow them to access your system you will need to enter your code & press zero, before the engineers code is entered.

## **KEYPAD TAMPER**

If incorrect attempts are made to enter the pin number, a tamper alarm will operate. (Internal only if the system is disarmed. Full alarm when armed).

## **TESTING YOUR ALARM SYSTEM**

If your system incorporates an automatic telephone dialler going through to a neighbour let your neighbour know you are carrying out a test.

If you have Police response via an Alarm Receiving Centre, triggering the alarm will not be acceptable to the Police. (In most areas of the UK, two false activations within 12 months will result in police response being withdrawn.)

Facility exists for you to test the detectors without causing a full alarm.

### **To select walk test:**

1. **Key in your pin number**
2. **Press the 9 key.**
3. **Walk around the building triggering each detector.**

Each time a detector is triggered a chime tone will be generated.

On return to the panel, the zone indicators will be illuminated, indicating which zones have been triggered.

Pressing the Off "0" key will clear the indicators.

PIR movement detectors have a 2 minute battery save timer. This means that once it has sensed movement and transmitted its alarm signal, the detector must see no movement for 2 minutes before it becomes active again.

Before testing PIR detectors ensure that no one has walked past them for at least 3 minutes. A detector with a low battery will operate the internal audible alarm when triggered.

### **To return the zone indicators to normal operation:**

1. **Key in your pin number**
2. **Press the 6 key.**  
In normal operation the zone lights indicate when a door is open and go out again when the door is closed.

ALWAYS RETURN TO NORMAL OPERATION WHEN WALK TESTING IS COMPLETED.

## **TESTING YOUR OUTSIDE BELLS / SIREN**

Facility exists for you to test the outside bells.

To operate the bells for 10 seconds:

1. **Key in your PIN number**
2. **Press the 4 key**
3. **The outside siren will sound for approximately 10 seconds.**

## PREVENTING FALSE ALARM

1. When you are away from home with the alarm system armed, dogs or cats must not be allowed access to rooms protected by PIR movement detectors.
2. Always disarm the system immediately on entry and ensure that children or pets do not deviate from the entry route until the system has been disarmed.
3. When going away do not turn off the electricity supply to the alarm.

## WHAT HAPPENS IF THE ALARM OPERATES WHILST YOU ARE AWAY

The Siren will operate for a pre-determined time and then turn off to avoid noise nuisance.

The strobe will continue to flash until the system is disarmed.

The system will automatically re-arm after the siren has cut out.

To reset the alarm, if the alarm light is flashing, contact your alarm company. If the alarm light is on constantly then enter your 'user code' followed by zero on the control panel. You can now operate the system as normal.

## USING THE 4173-GB REMOTE CONTROL

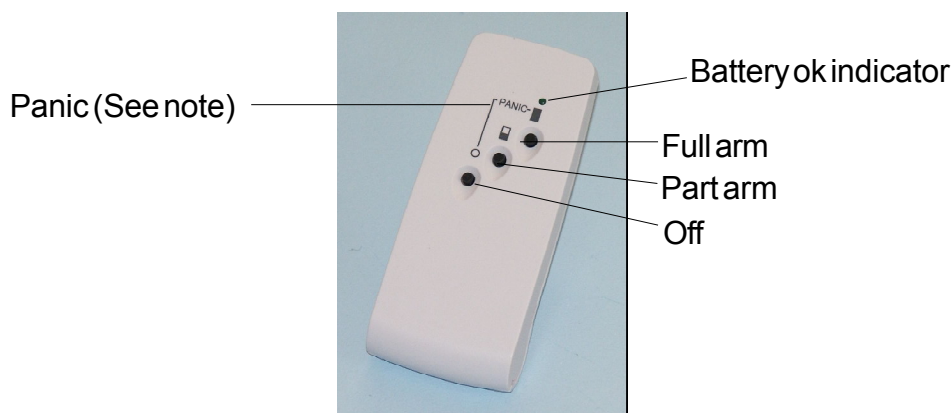
Full arm Press the Full set button for one second.

Part arm Press the Part Set button for one second.

Disarm Press the OFF button for one second.

Panic Alarm Press the two outside (Off and Full) buttons for one second.

Battery low indication - When operating the remote control the green status indicator illuminates. Low batteries in the 4173-GB unit will result in the green battery ok indicator no longer illuminating. Replace the battery as soon as possible or call your alarm company.



**Note: Panic Indication is given when both Full and Off buttons are pressed together and held for 1 second.**

## **FM4000X 4001 SYSTEM FEATURES**

1. TO EN50131 & PD6662 GRADE 2 REQUIREMENTS
2. 64 WIRELESS ZONES + 8 FIRE & PANIC
3. 2 HARD WIRED ZONES
4. PART SET + UPSTAIRS DOWNSTAIRS
5. REMOTE ARMING OPTIONS
6. LOW BATTERY & TAMPER BY ZONE
7. ALL ZONES ARE PROGRAMMABLE
8. ZONE OMIT
9. CHIME
10. AUXILIARY ZONES
11. DOUBLE KNOCK
12. WALK THROUGH
13. 8 DIALLER OUTPUTS
14. NONVOLATILE MEMBORY
15. ZONE DESCRIPTION IDENTIFICATION
16. LCD DISPLAY
17. RS232 PRINTER OUTPUT
18. 500 EVENT TIME AND DATE STAMPED ENGINEERS LOG
19. DIALLER OUTPUT POLARITY CAN BE INVERTED

00 INVERTED BELL OUTPUT 0=NORMAL\* 1=INVERTED

12 FULL SET EXIT TIME 1=2s 2=10s 3=20s\* 4=30s 5=45s 6=1min 7=2min 8=infinite

13 PART SET EXIT TIME 1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s 7=1min 8=Same as full set

14 ENTRY TIME 1=1s 2=10s 3=20s 4=30s\* 5=45s

15 BELL DURATION 1=Silent 2=15 Sec 3=90s<sup>3</sup> 4=2m<sup>3</sup> 5=3m<sup>3</sup> 6=10m<sup>3</sup> 7=15mins<sup>3</sup> 8=Continuous

16 BELL DELAY 1=0\* 2=1m 3=3m 4=4m 5=5m 6=6m 7=7m 8=10mins

17 FULL SET ZONES <sup>1-8 default</sup> \_\_\_\_\_

18 PART SET ZONES <sup>1-4 default</sup> \_\_\_\_\_

19 OMIT PERMIT ZONES <sup>2-8 default</sup> \_\_\_\_\_

20 FINAL EXIT ZONES <sup>1 default</sup> \_\_\_\_\_

21 WALK THROUGH ZONES \_\_\_\_\_

22 IGNORE ZONE IF FIRST TO ALARM ZONES \_\_\_\_\_

23 AUXILIARY ZONES \_\_\_\_\_

24 24 HOUR ZONES \_\_\_\_\_

25 SOAK TEST ZONES \_\_\_\_\_

26 CHIME ZONES \_\_\_\_\_

27 P.A. SILENT / AUDIBLE 1= Silent 0=Audible\*

28 DOUBLE BUTTON P.A. 1= Double 0= Single\*

29 SILENT PART SET 1= Yes 0= No\*

30 UPSTAIRS / DOWNSTAIRS 1=Yes 0= No\*

31 8 SECOND STROBE ON FULL SET / UNSET 1=Yes 0= No\*

32 COURTESY STROBE / LIGHT DURING ENTRY / EXIT IN FULL SET 1=Yes 0= No\*

33 WALK THROUGH ZONES TRIGGER ENTRY TIMER IN PART SET 1=Yes 0= No\*

34 JAMMING 1=Full alarm 0=Indication only\*

35 MAINS FAILURE or PANEL LOW BATTERY PREVENTS ARMING 1= Yes 0= No\*

36 REMOTE CONTROL UNSETS ONLY IN ENTRY 1=Normal\* 2=Only unset in entry 3=Will not disarm from full set

37 DIALLER & ENTRY DELAY PERIOD 1=No delay 2=20s 3=30s<sup>3</sup> 4=1min 5=2min

38 NO EXTERNAL SIREN OR DIALLER IN PART SET 1=Yes 0=No\*

39 LINE FAULT IN DAYTIME AUDIBLE 1=Audible<sup>3</sup> 0= Visual only\*

40 SUPERVISORY 1=Yes<sup>3</sup> 0=No\*

41 SUPERVISORY FAULT 1=Full alarm 0=Indicator only\*

42 ENGINEER RESET 1=Yes<sup>3</sup> 0=No\*

43 No. OF TIMES THE SYSTEM AUTO REARMS 1=0, 2=1, 3=2, 4=ALWAYS\*

45 AUDIBLE RECEIVER LISTEN TEST

46 ENGINEERS LOG (1 = newest event - 8 = oldest event)

47 ENGINEERS ACCESS CODE (Enter new code, twice) Default = 4679

48 EXIT ENGINEER MODE

49 DIALLER OUTPUT FOR PA 1=PA output only<sup>3</sup> 0=PA and ALARM output

50 PA ON ZONE 2 1=Zone 2 is a PA zone 0=Zone 2 is a standard zone\*

51 FINAL EXIT SET 0=No\* 1=Yes<sup>3</sup>

52 REMOTE CONTROL FULL SET EXIT TIME 1=2s 2=10s\* 3=20s 4=30s 5=45s 6=1min 7=2min 8=infinite

53 REMOTE CONTROL PART SET EXIT TIME 1=2s 2=5s\* 3=10s 4=15s 5=20s 6=30s 7=1min 8=as Full set

54 CONFIRMATION<sup>2</sup> 1=Mode1 (No confirm)\* 2=Mode2 (1999) 3=Mode3 (2004)<sup>3</sup>

55 DETECTOR ISOLATION<sup>2</sup> 0=No\* 1= Yes<sup>3</sup>

56 DIALLER TEST<sup>2</sup>  
 1=Fire  
 2=PA  
 3=Intruder  
 4=Open / Closed  
 5=Re-Instatement  
 6=Fault  
 7=Confirmed  
 8=Tamper

Key in 56 then 3 to trigger Intruder Alarm channel, press Full set when test completed.

57 DIALLER OUTPUT POLARITY<sup>2</sup> (1 to 8 as above)  
 Not displayed = +ve removed / -ve applied  
 Displayed = +ve applied / -ve removed  
 Press Full set when selection completed

58 Display software issue.

59 DISPLAY STATUS 1=5s\* 2=15s 3=30s 4=continuous

61 REPORT TAMPER<sup>2</sup> 1=Never 2=Always<sup>3</sup> 3=When Set\*

\*= FACTORY SETTINGS

<sup>2</sup>= Not applicable to FM4000EN

<sup>3</sup>= Recommended setting(s) for UK systems with Police response

**REMEMBER THE FOLLOWING WHEN PROGRAMMING DETECTORS ONTO THE CONTROL PANEL**

**0ZD=Device Prog** where **Z = Zone No** & **D = Device No.** I.E. 013 = Zone1 Device3. **Panic=09D,** **Fire=10D,** **Remote=11D.**

**1** zone type:

	RSSI VOLTAGE
011	
012	
013	
014	
015	
016	
017	
018	

**6** zone type:

	RSSI VOLTAGE
061	
062	
063	
064	
065	
066	
067	
068	

**2** zone type:

021	
022	
023	
024	
025	
026	
027	
028	

**7** zone type:

071	
072	
073	
074	
075	
076	
077	
078	

**3** zone type:

031	
032	
033	
034	
035	
036	
037	
038	

**8** zone type:

081	
082	
083	
084	
085	
086	
087	
088	

**4** zone type:

041	
042	
043	
044	
045	
046	
047	
048	

PANIC	REMOTE
091	111
092	112
093	113
094	114
095	115
096	116
097	117
098	118

**5** zone type:

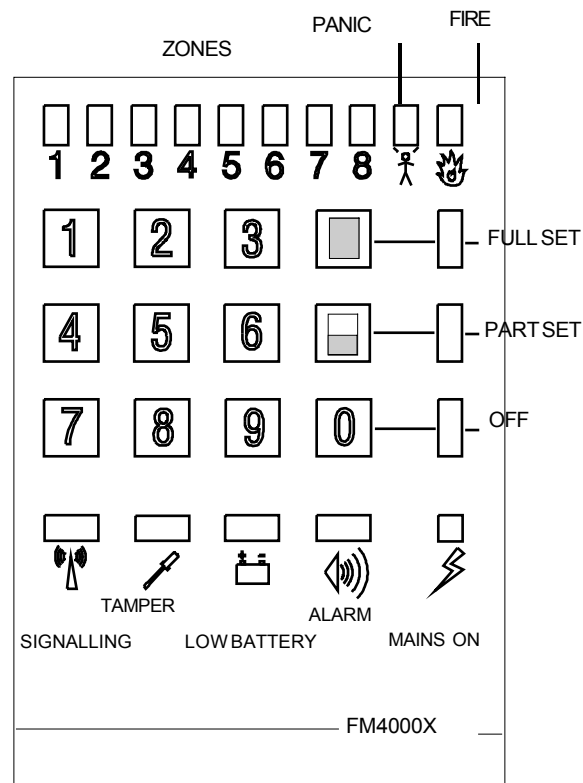
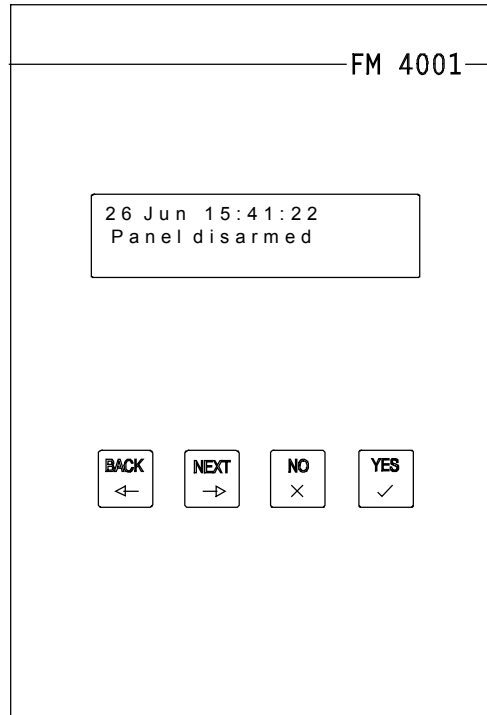
051	
052	
053	
054	
055	
056	
057	
058	

**FIRE**

101	
102	
103	
104	
105	
106	
107	
108	

**FM4000X and FM4001  
CONTROL PANEL**

**INSTALLATION INSTRUCTIONS**





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## EN 50131 & PD6662 Compliance

The FM4000X & FM4001 control panel operation has changed in the following ways making our products suitable for use in systems designed to comply with PD6662:2004.

1. The panel will only show the mains status at all times, all other status settings may only show on system arm/disarm or for 30 seconds after the user code has been entered, dependant upon programming.

2. To enter engineering mode the user code must first be entered followed by zero, the engineers code must then be entered within the next 30 seconds. Once the engineers code has been entered, the engineer can go in and out of engineering as many times as required, until the next time the system is armed.

3. There is now a 30 seconds delay on entry before the external sounder(s) and communications (unconfirmed intruder) are activated, unless 2 or more detection devices off the entry route have been activated.

4.- The communication outputs have been changed as follows:-

- 1 = Fire
- 2 = PA
- 3 = Intruder (Unconfirmed)
- 4 = Open/Close
- 5 = Isolated Zone after Unconfirmed alarm (also known as Reinstatement or Bypass)
- 6 = Fault ( i.e. Low battery, Jamming, Mains failure )
- 7 = Confirmed Alarm
- 8 = Tamper (this now includes additional requirements i.e. Supervisory failure)

5. The display on the FM4001 is only active when in use, the display will go blank at the end of menu or 15 seconds after the last button press in Manager mode, or when no message needs to be displayed in normal use.

## System Programming for systems designed to comply with PD6662:2004 & BSDD 243:2004

The following settings (or ranges of settings) should be used on systems which are designed to comply with the above requirements.

**Option 14** - Entry time, must not exceed 45 seconds, Select options **1,2,3,4 or 5**.

**Option 15** - Bell time must be between 1min 30 secs & 15 minutes, Select options **3,4,5 or 6**.

**Option 37** - Dialler & Entry Delay, Select option **3, 30 seconds**

**Option 39** - Line fault in daytime - make audible. Select option **1**

**Option 40** - Supervisory, checking devices are polling every 20 mins. Select option **1**

**Option 42** - Engineer reset, and remote reset enabled. Select option **1**

**Option 54** - Confirmation, must be set to BSDD243:2004 Select option **3**

**Option 55** - Detector Isolation, must be set isolate the detector 'first to alarm' Select option **1**

**Option 59** - Display must be masked, select option **1, 2 or 3**.

Other requirements for ensuring compliance with the above requirements include:-

1. On systems which need to meet Grade 2 requirements, ensure the FM4001 expansion panel is fitted.

2. Fit a single action card reader to the control panel for setting/unsetting the control panel.

For systems which do not need to meet the above requirements, any available setting may be used to meet your operational requirements.

### CONNECTIONS (RIGHT HAND SIDE)

1-4 12V Auxiliary supply output. Maximum load current 500mA

5 Tamper -ve return. If connecting a Self Actuating Bell (SAB) then connect the -ve tamper return to this terminal. If not fitting a SAB this terminal must be connected to -ve Aux..

6. This terminal provides a +ve output on alarm which is reset next time the panel is armed.

It is provided for use with hard wired detectors that have a latching LED facility.

7. -ve to trigger Siren. Goes from open circuit to 0v to operate a bell or siren. Max 500mA.

Resets after the bell time set in engineer program.

8. -ve Strobe. Goes from open circuit to 0v in alarm to operate a strobe. Remains on until the system is disarmed.

9. Dialler trigger output. Is provided for triggering an autodialler. This output goes to 0v on alarm.

Once triggered it remains until the panel is disarmed so as not to trigger any more until the system is turned off.

10 Fault LED output for remote wired arming. Indicates that a fault is present which will prevent arming.

11. System Off LED output for remote hard wired arming. Indicates when disarmed.

12. Part Set hard wired arming input. Apply +12v to arm. Remove to unset.

13. Full Set hard wired arming input. Apply +12v to arm. Remove to unset.

## **CONNECTIONS ALONG BOTTOM EDGE**

### **HARD WIRED INPUTS 1 & 2**

Must be linked out if not used. These inputs are normally closed, opening in alarm. Zone 2 can be programmed to be a PA zone.

### **EXIT TERMINATE PUSH**

Connection for a normally open push button which sets the alarm when pressed during the exit time.

### **LINE FAULT INPUT**

Normally closed input. Open for line fault. To trigger with applied negative, leave the link in place and apply 0v for line fault.

### **DIALLER OUTPUTS 1-8**

These outputs are for connection to a digital communicator employing +ve removed trigger inputs.

**The outputs go from +5v to 0v in alarm.**

### **RECEIVED SIGNAL STRENGTH INDICATION (RSSI)**

For connection to a digital voltmeter to indicate the Signal Strength of a transmission received from a detector. (Refer to section on using the RSSI output).

### **FM4001 CONNECTIONS**

The FM4000 LCD unit is supplied with a connecting lead which plugs into the FM4000X expansion port connector.

Mount the LCD display at a suitable level so that the display can be viewed correctly.

Mount the FM4000X directly below the LCD unit and plug in the connecting lead.

### **12v SUPPLY TO THE FM4001**

Connect to the 12v aux output of the FM4000X

### **TAMPER OUTPUT.**

Clean contact normally closed output.

Tamper return from the siren can be routed via this contact. If the tamper is operated a tamper alarm will occur.

### **STAND-BY BATTERY**

Connections are provided for an additional stand-by battery inside the FM4001. This needs to be fitted to achieve the required standby time in addition to the one in the FM4000X.

### **LINE FAULT OUTPUT TO FM4000X**

This output is used when employing a plug on dialler. The dialler should be programmed for -ve applied on line fault. This connection can then be connected to the line fault input on the FM4000. (Leave the link fitted in the line fault input).

### **DIALLER OUTPUTS 1 - 8**

The dialler outputs are identical in both the FM4000X and FM4001 panels.

See connection diagrams at back of manual.

## INSTALLATION

The factory defaults for the user and engineer codes are:-

USER CODE = 1 2 3 4

ENG CODE = 4 6 7 9

Note, the customers code and zero must be entered, before the engineers code will be accepted.

The recommended installation procedure is as follows:

### 1. Label detectors.

Label each detector with its zone number for reference during installation and for later service reference.

### 2. Complete the User Record

The back pages of the user instruction booklet should be completed and left with the operator for their reference. It gives them information about the zones etc.

### 3. Complete a system record sheet

System record sheets should be completed before commencing programming. This acts as a reference when programming and can form part of the installation records.

### 4. Locate the control panel

For maximum radio coverage the control panel should be located at a central point in the building. The higher it is the better for radio reception. (Do not mount at floor level on a ground floor or below ground floor level, unless ALL devices are at this level.)

Metal objects cause radio reflections which oppose the signal being received from the detector with a resultant reduction in the received signal strength. Metalwork close by can result in complete cancellation, therefore do not site the control panel or detectors near to large metal objects, metal piping, girders, concentrations of mains cabling, fuse boxes etc.

Consider the ease of wiring to the external siren and communications (if required) when making your choice.

The Panel may be temporarily sited whilst a test is carried out to verify the reception from distant detectors. Check the received signal

strength unless previously proved using the FM test kit. (See RSSI page 4)

The panels must be fixed using the three fixing points provided. Ensure that the LCD display on the FM4001 is located for ease of viewing and that the FM4000X is mounted directly below it. For larger installations a remote tamper protected antenna is available.

Mains supply to the control panel must be provided by a competent electrician to the current issue of the IEE regulations.

A 12v sealed lead acid standby battery should be connected after all wiring has been completed and tested. 12v 2.3AH is recommended.

### 5. Program detectors onto the panel

Each detector has either an internal "Learn" jumper or a push switch on the front of the pir To add a detector to the system:

Go into the engineer program. Select the zone and device number. Short out the learn jumper on the detector. Remove the learn jumper after programming.

The detector transmits its identity together with a learn bit. The panel stores the detectors identity code and adds it to the chosen zone. (Refer to engineer programming section)

### 6. Carry out range test

If you keep a 4173-GB remote control for testing, you can program this onto the system and then go to each detector location in turn and verify that the control can be armed and disarmed from all detector locations.

### 7. Mount the detectors

Refer to the detector instructions for recommended mounting positions.

As reflections from metalwork act to cancel the transmission, avoid siting near to any metalwork.

Reflections like this can often be overcome by a small movement in position of 15 to 20cm.

### 8. Making panel program changes.

Complete a system record sheet before making any changes.

Once programmed the program is stored in

none volatile memory, so data will remain stored even in the event of complete power failure.

### 9. Radio test using the RSSI output

To measure the signal strength received from a detector.

- i) Connect a Voltmeter to the RSSI output terminals.
- ii) Press the reset button next to the RSSI terminals. The voltmeter should now read zero volts.
- iii) Go to the detector and operate the learn jumper or press the light guide.
- iv) Return to the panel. The voltmeter now displays a voltage representing the strength of the transmission received.

It will ignore any other transmissions and only respond to the learn message or a Panic or Off message from a remote control or panic button.

**The voltage reading should be a minimum of 1.0v.**

The readings for each detector can be recorded on the system record sheet for future reference.

### 10. Full system test

A walk test facility is provided in the Operating instructions. This may be used to test all of the devices on the system.

Once the sounders and dialler have been connected and the installation completed a full test with remote signalling should be carried out.

#### PROGRAMMING

1. Enter Users code followed by 0 & then the engineers code 4 6 7 9

The Alarm led will flash slowly to indicate that you are in the program mode.

2. Key in the two digit program number.  
(The zone led's indicate which option is set.)

3. Key in the option required  
(The zone led's indicate your choice)

4. Press the Full Set key to exit that program step.

5. When finished with programming key in 48 to exit engineer mode.

**ERROR CORRECTION VIA PART SET KEY**  
If you accidentally enter an engineer program

number and change an option value, you can undo the change by pressing the Part Set key before exiting the program step via the Full Set key.

**EXAMPLE:** To set the Full set exit timer to 1 minute.

Key in 4 6 7 9 The alarm indicator will illuminate to indicate that you are now in engineer program mode

Key in 1 2 To select Full set exit time (program No. 12.)

Key in 6 To select the 1 minute option.

Zone 6 LED indicates your choice

Press the Full Set button to exit program step.

**Note:** The Full Set button must be pressed to exit from each program step.

Until the Full Set button is pressed any key press just changes your choice of option.

Key in the next program Number you wish to change.

When all programming is complete Key in 48 to exit engineer mode

#### LEARNING DEVICES

When installing the system you may find it easier to label each detector with its zone number and learn them into the panel before installation. Once programmed into the panel's memory, the information will not be lost even when power is removed from the panel.

#### 01 PROGRAM DEVICES ONTO ZONE 1

Select program number 01.

The LCD display will show "LEARN ZONE 1 DEVICE ?"

The LEDs 1 to 8 indicate which of the 8 devices are already programmed onto zone 1.

Use keys 1 to 8 to select the device number. Operate the learn on the detector and **ensure**

**that devices with learn pins are not left permanently shorted.**

The panel will emit 2 short blips to indicate that it has learnt the detector.

The corresponding LED will illuminate and the LCD will display the unique 5 digit identity code of the device with the message LEARNT OK.

If the device was already programmed on the system at a different location the message will say MOVED FROM xx (where xx is the old zone and device number).

If a device was already programmed in the location the LCD will show the message ALREADY STORED

and the new device will overwrite it. automatically deleting the old one.

Press the Full Set key to exit.

**DELETING DEVICES FROM ZONE 1**

Select program number 01.

The LCD display will show LEARN ZONE 1 DEVICE ?

The LEDs 1 to 8 indicate which of the 8 devices are already programmed onto zone 1.

Use keys 1 to 8 to select the device number to be deleted.

If a device did exist at that location the LCD will show ALREADY STORED.

To delete the device press PART SET and OFF keys together.

The LCD will show that the device has been deleted.

Press the Full Set key to exit

**02 PROGRAM DEVICES ONTO ZONE 2**

**03 PROGRAM DEVICES ONTO ZONE 3**

**04 PROGRAM DEVICES ONTO ZONE 4**

**05 PROGRAM DEVICES ONTO ZONE 5**

**06 PROGRAM DEVICES ONTO ZONE 6**

**07 PROGRAM DEVICES ONTO ZONE 7**

**08 PROGRAM DEVICES ONTO ZONE 8**

**09 RADIO PANIC BUTTONS**

Key in 091 to program the first PA button onto the system. The Panic button is operated and the device will learn onto the control panel.

Up to 8 Panic buttons can be programmed onto the PA zone, i.e. devices 091 to 098. The LCD display will refer to the panic buttons as P1 to P8.

Press the Full Set key to exit.

**10 FIRE ALARM DEVICES**

Key in 101 to program the first Fire detector onto the system. Short out the learn jumper. (Ensure learn jumper is removed after programming).

Up to 8 Fire detectors can be programmed onto the Fire zone, i.e. devices 101 to 108. The LCD display will refer to the Fire detectors as F1 to F8.

Press the Full Set key to exit.

**11 REMOTE CONTROLS**

Key in 111 to program the first Remote Control onto the system. The Panic button is operated instead of a learn jumper.

Up to 8 Remote Controls can be programmed onto the system, i.e. devices 111 to 118.

The LCD display will refer to the remote controls as R1 to R8.

Press the Full Set key to exit.

**EXIT ENTRY**

**12 FULL SET EXIT TIME**

1= 2 secs    2= 10 secs    3= 20 secs\*

4= 30 secs    5= 45 secs    6= 1 min.

7= 2 mins.    8= Infinite

Press Full Set to exit

**\* = FACTORY DEFAULT**

### 13 PART SET EXIT TIME

1 = 2 secs    2 = 5 secs    3 = 10 secs\*  
4 = 15 secs    5 = 20 secs    6 = 30 secs  
7 = 1 mins.    8 = As full set exit time.

Press Full Set to exit

### 14 ENTRY TIME

1 = 1 sec    2 = 10 secs    3 = 20 secs  
4 = 30 secs\*    5 = 45 secs

Press Full Set to exit

### 00 INVERT SIREN OUTPUT

Normally -ve applied in alarm. (0v in alarm)

0 = -ve applied in alarm\*

1 = -ve removed in alarm

### 15 BELL DURATION

1 = Silent    2 = 15 secs    3 = 90 secs.  
4 = 2 mins.    5 = 3 mins.    6 = 10 mins.  
7 = 15 mins.\*    8 = Continuous

Note:- duration must not exceed 15 mins. to meet EN50131- PD6662 requirements.

Press Full Set to exit

### 16 BELL DELAY

1 = 0 mins.\*    2 = 1 mins.    3 = 3 mins.  
4 = 4 mins.    5 = 5 mins.    6 = 6 mins  
7 = 7 mins    8 = 10 mins

Note: In the event of a line fault, bell delay will become 0 mins.

Press Full Set to exit

## ZONE PROGRAMMING

**IMPORTANT:** Remember that all devices on a particular zone will respond to the zone option selected. So if zone 1 has final exit detectors, all detectors on zone 1 must also be final exit.

### 17 FULL SET ZONES

The factory default is all zones active.

The zone LED's indicate which zones are active in full set.

Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.

Press the full set key to exit.

### 18 PART SET ZONES

The factory default is zones 1 to 4 active.

The zone LED's indicate which zones are

active in part set.

Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.

Press the full set key to exit.

### 19 OMIT PERMIT ZONES

(The zones that the user is allowed to omit)

The factory default is all zones allowed to be omitted except zone 1.

The zone LED's indicate which zones are allowed to be omitted.

Use the keys 1 to 8 to select or deselect zones. The 0 key deletes all.

Press the full set key to exit.

### 20 FINAL EXIT ZONES

(Zones that start the entry time)

The factory default is zone 1 only.

The zone LED's indicate which zones will start the entry timer.

Use the keys 1 to 8 to select or deselect zones.

The 0 key deletes all.

Press the full set key to exit.

### 21 WALK THROUGH ZONES

The factory default is none.

The zone LED's indicate which zones are walk through during entry.

Use the keys 1 to 8 to select or deselect walk through zones.

The 0 key deletes all.

Press the full set key to exit.

### 22 IGNORE ZONE IF FIRST TO ALARM (Double Knock)

Alarm only if two zones are triggered.

The factory default is none.

The zone LED's indicate which zones are double knock.

Use the keys 1 to 8 to select or deselect double knock zones.

The 0 key deletes all.

Press the full set key to exit.

### 23 AUXILIARY ZONES

Technical alarm. i.e.. Freezer giving internal audible on control panel.

The factory default is none.

The zone LED's indicate which zones

are auxiliary zones.

Use the keys 1 to 8 to select or deselect aux. zones.

The 0 key deletes all.

Press the full set key to exit.

## **24 24 HOUR ZONES**

The factory default is none.

The zone LED's indicate which zones are 24 hour.

Use the keys 1 to 8 to select or deselect 24 hour zones.

The 0 key deletes all.

Press the full set key to exit.

NOTE: If you do not want a 24 hour zone to be omitted, remove the zone from omit permit via program No.19.

## **25 SOAK TEST ZONES**

The factory default is none.

The zone LED's indicate which zones are on soak test.

Use the keys 1 to 8 to select or deselect soak test zones.

The 0 key deletes all.

Press the full set key to exit.

## **26 CHIME ZONES**

The factory default is none.

The zone LED's indicate which zones are on chime.

Use the keys 1 to 8 to select or deselect chime zones.

The 0 key deletes all.

Press the full set key to exit.

## **OTHER PROGRAMS**

### **27 P.A. SILENT / AUDIBLE**

The factory default is audible.

1= Silent O= Audible \*

Press the full set key to exit.

### **28 DOUBLE BUTTON P.A.**

On early remote controls both PA & unset buttons need to be pressed to generate a PA

1= Double O= Single\*

Press the full set key to exit.

### **29 SILENT PART SET**

1= Silent O= Audible\*

Press the full set key to exit.

### **30 UPSTAIRS / DOWNSTAIRS**

This option tells the panel to accept part set button as a separate alarm system.) e.g.. The Part Set button becomes the alarm system in the flat & the Full set button is a separate alarm system in the office. In this mode the user can set either one or the other, or both systems by selection when arming.

1 = Select Upstairs/Downstairs mode.

O= Normal Part / Full set mode.\*

Press the full set key to exit.

### **31 8 SECOND STROBE WHEN FINAL SET AND UNSET**

If selected the strobe output operates for 8 seconds at the moment the panel is full set. i.e. when the exit timer terminates.

The strobe also operates for 8 seconds when the panel is Unset from Full Set.

1 = 8 sec. Strobe

0 = No 8 second strobe\*

Press the full set key to exit.

### **32 COURTESY STROBE IN FULL SET ENTRY / EXIT**

If selected the strobe output terminal 8 operates when Full setting the panel. The strobe output also operates for the entry time when unsetting from Full Set.

(If a mains relay is connected via this output a mains courtesy light could be switched on by disarming from outside with a remote control.)

1= Courtesy strobe on O=off\*

Press the full set key to exit.

### **33 WALK THROUGH ZONES BECOME FINAL EXIT IN PART SET**

To prevent false alarms in part set it is often useful to make walk through zones initiate the entry timer.

1= Yes O= No\*

Press the full set key to exit.



### **34 JAMMING**

1 = Jamming generates a full alarm when set

O= indicator only\*

Press the full set key to exit.

(Jamming is signalled to the dialler outputs.)

### **35 MAINS FAILURE & PANEL LOW BATTERY PREVENTS ARMING**

1 = Prevents arming.

O = Does not prevent arming\*

Press the full set key to exit

### **36 REMOTE CONTROL UNSETS ONLY IN ENTRY**

1 = Full operation. Unset at time.\*

2 = Unset only during Full set entry time.

3 = No disarm in Full set. Will disarm in part set.

Press the full set key to exit.

### **37 DIALLER & ENTRY DELAY PERIOD**

1 = None\* 2 = 20s 3 = 30s

4 = 1 min 5 = 2 min

Press the full set key to exit

### **38 NO EXTERNAL BELL OR DIALLER IN PART SET**

(Internal bells only in Part Set).

1 = Internal sounder only in Part Set.

O = Dialler and siren In both full or part set\*

Press the full set key to exit

### **39 LINE FAULT IN DAYTIME AUDIBLE**

1 = Audible and visual 0 = visual only\*

Press the full set key to exit.

### **40 SUPERVISORY**

Do not select supervisory unless all your detectors are 4600 series.

Do not select supervisory if using zoned Panic buttons.

1= Supervision O = No supervision\*

Press the full set key to exit.

### **41 SUPERVISORY FAULT**

1 = Full alarm O = Indication only\*

Press the full set key to exit

### **42 ENGINEER RESET**

1 = Engineer reset O = No\*

Press the full set key to exit.

### **43 REARMING**

1 = none 2 = once 3 = twice 4 = always\*

Press the full set key to exit

### **44 RESTORE ENTIRE NV RAM TO FACTORY DEFAULT VALUES**

Short out the MEM link while keying in 44.

All zone LED's will come on, the panel will emit a long bleep and will go out of engineering mode into the day state.

**WARNING:** This will delete all detectors from the system.

### **45 AUDIBLE RECEIVE MODE**

The output from the receiver can be heard on the panel loudspeaker.

Press the full set key to exit.

### **46 DISPLAY ENGINEERS LOG**

Press keys 1 to 8 to view the last 8 events.

Most recent is displayed on key 1.

Key 9 shows the last "First to Alarm"

Press the full set key to exit.

### **47 CHANGE ENGINEERS ACCESS CODE**

Key in a 4 digit code twice.

### **48 LEAVE ENGINEER MODE**

If any devices have their tampers open, the display shows which zones are tampered and will generate an error beep. The tampers must be restored before leaving engineer mode by pressing 48 again.

### **49. DIALLER OUTPUT FOR PA**

1 = PA Triggers PA dialler output

0 = PA Triggers PA and ALARM dialler outputs\*

Press the full set key to exit.

### **50. HARD WIRED PA ON ZONE 2**

1 = Zone2 is a PA zone

0 = Zone2 is a standard zone\*

Press the full set key to exit.

This feature enables hardwired PA buttons to be connected to the panel via the zone 2 hardwire input.

CAUTION: Radio devices including PIRS and contacts programmed onto zone 2 will also trigger a PA alarm if this option is selected.

### 51 FINAL EXIT SET

1 = Yes 0 = No\*

If yes the exit time will terminate when the final exit door is closed.

### 52 REMOTE CONTROL FULL SET EXIT TIME

1=2s 2=10s\* 3=20s 4=30s 5=45s 6=1min  
7=2min 8=infinite

This applies to remote control and remote keypad only.

The exit time when armed from the panel keypad (option 12) is not affected.

### 53 REMOTE CONTROL PART SET EXIT TIME

Enables the exit time to be set for part set via the remote control / keypad. The exit time set by option 13 still applies when arming from the panel keypad.

1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s  
7=1min 8=as full set

### 54 CONFIRMATION OPERATION

1 = No confirmation\*

(If eng reset is prog'd it will be req'd)

2 = Basic confirmation - BS DD 243:1999  
(Entry timer expiring counts as one alarm)

3 = Confirmation - BS DD 243:2004  
(All activations during entry ignored for confirmation purposes, until end of entry time and 30 seconds delay.)

To meet BS DD 243:2004 we recommend the following programming:

Option 36 = 3 Option 42 = 1

Option 54 = 3 Option 55 = 1

Set a single action reader for unsetting the system. Contact us for more details.

### 55 DETECTOR ISOLATION

0 - No isolation\*

1 - Isolate the zone which caused an unconfirmed alarm and operate the reinstatement output when required.

### 56 DIALLER TEST

Key in 56 followed by a number key to

operate a dialler channel. The number selected will be displayed.

1= Fire

2= Panic

3= Intruder Alarm

4= Open / Closed

5= Reinstatement

6= Fault

7= Confirmed Intruder

8= Tamper

Press full set key when test is completed.

### 57. DIALLER TRIGGER INVERT

All the dialler outputs are positive removed as the default setting, but can be inverted to Negative removed if required. To invert an output key in 57 followed by the required output to be inverted, using the same list as used for the dialler test.

Press full set key when outputs have been selected, outputs will change to the selected settings when the full set key is pressed.

### 58. DISPLAY SOFTWARE ISSUE.

Displays the software issue of the 4000X panel, press full set to exit.

### 59. DISPLAY SET STATUS

1 = 5s                    2 = 15s    3 = 30s\*    4 = continuous

The panel set status is only available for the selected timed period after the customer code has been entered, unless continuous is selected.

### 61. REPORT TAMPER

Select when the tamper should be reported to the Alarm Receiving Centre

1. Never    2. Always\*    3. Only when armed.

### REMOTE ENGINEER RESET FACILITY

When an alarm occurs which requires an engineer reset, the user can call the Alarm Receiving Centre and obtain the access code number to key in to the panel.

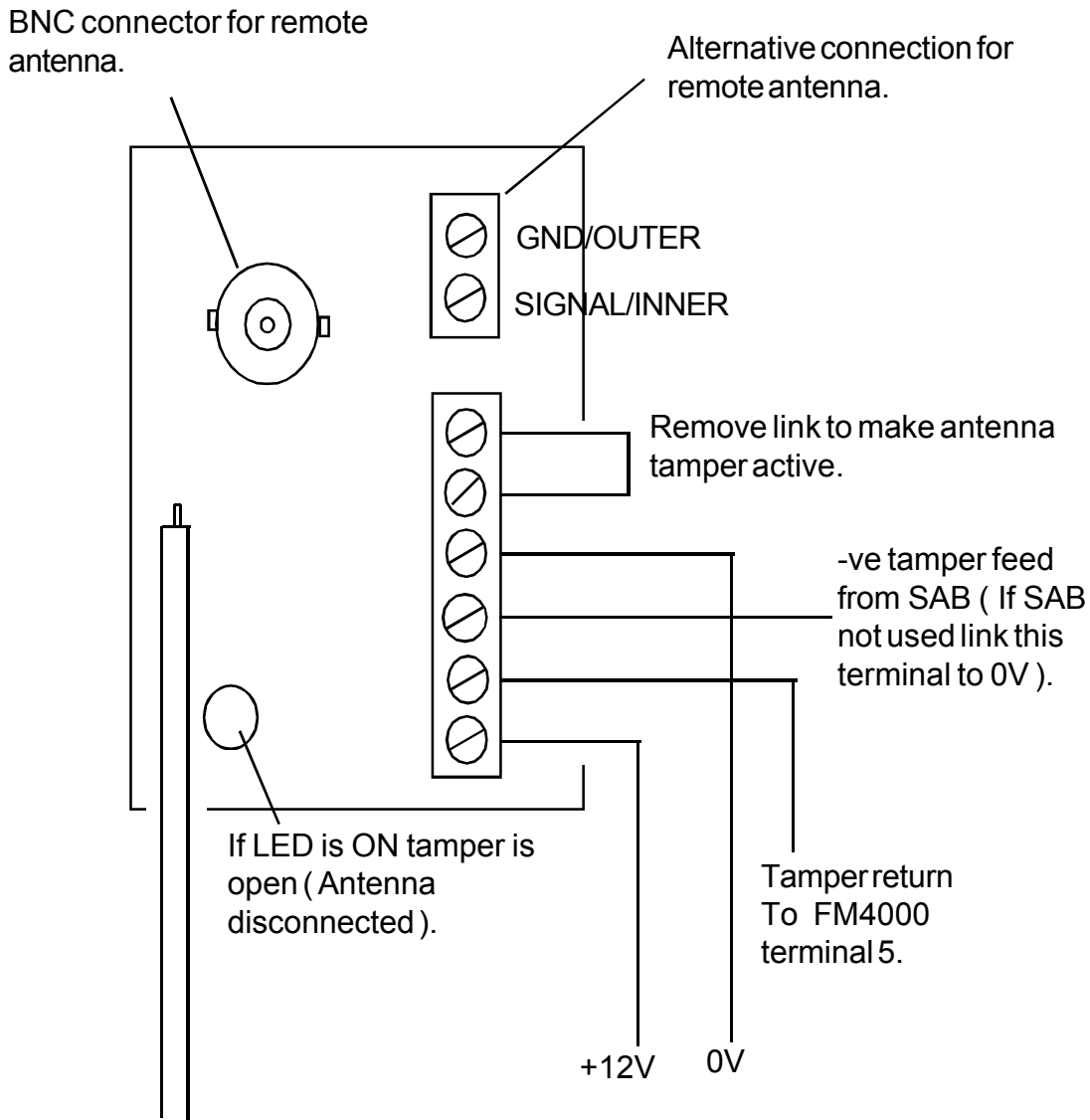
The panel zone LED's will illuminate randomly. From the LED's the Central Station operator can refer to a reference table and instruct the user what code to enter to perform an engineer reset.

Next time the alarm operates the reset code number will have changed.

# 4005 ANTENNA TAMPER MODULE

The 4005 is for use with tampered remote antennas. When fitted into the FM4000 panel the -ve tamper return from an external siren is connected to this module as shown below.

Mount the module to the right hand side of the transformer in the FM4000 with the single screw supplied.

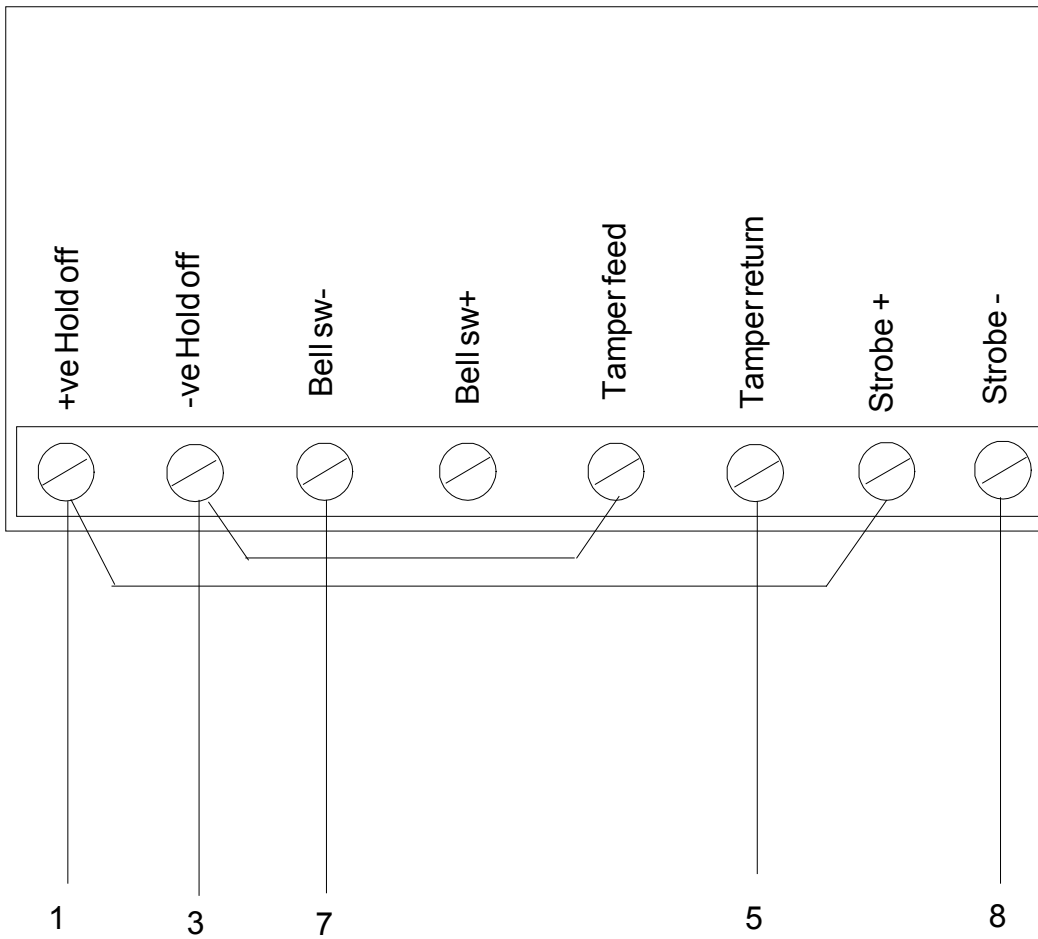


Coax to FM4000 Antenna input terminals ( Inner to top terminal outer to bottom terminal ).

Always mount the remote antenna away from other wiring, any other metal objects and as high as practically possible to obtain the best working range from the 4000X control panel.

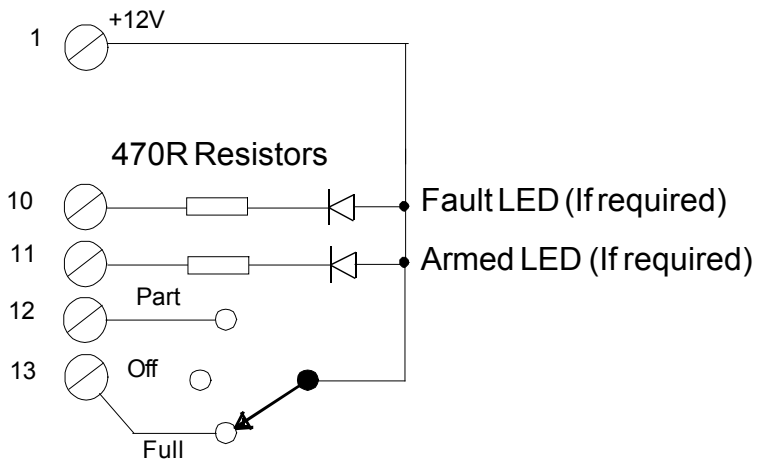
Always bring the antenna cable out away from the aerial whenever possible

## SAB CONNECTION TO THE FM4000

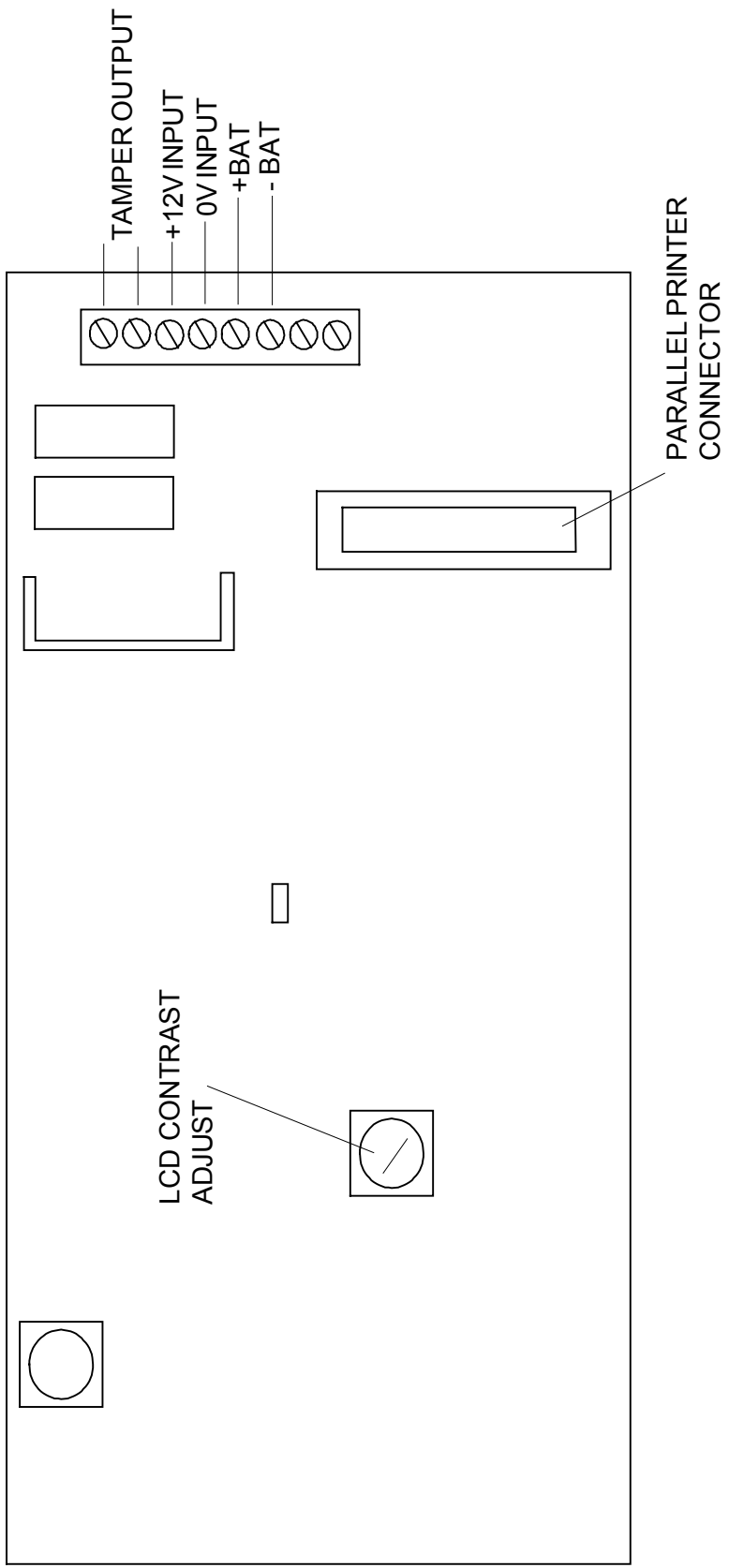


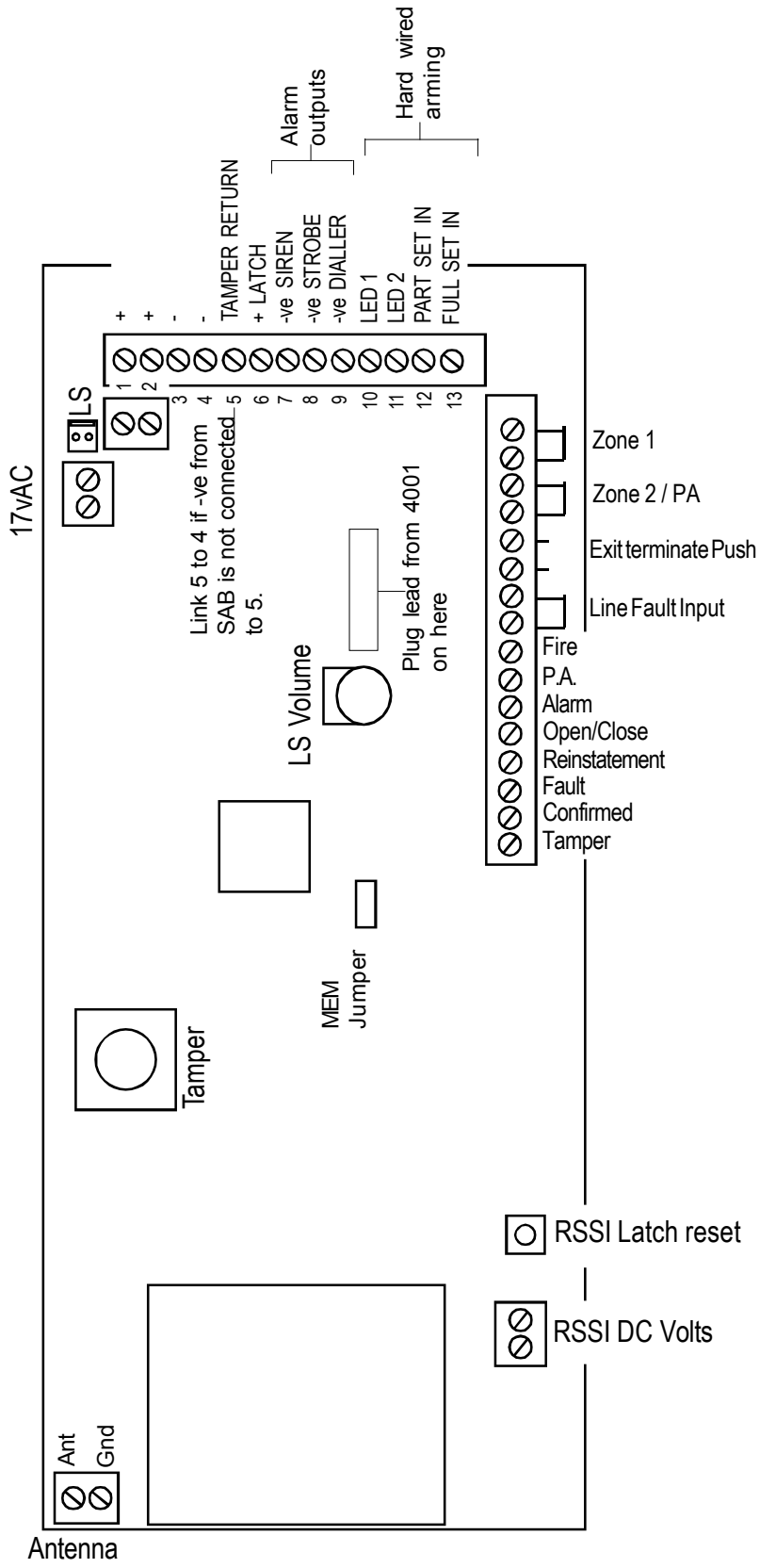
Connections on the FM4000 main board

## WIRED KEYPAD / KEYSWITCH ARMING



# FM4001 LCD DISPLAY





Note: This connection layout is used from Software Issue 7 onwards.

# FAULT FINDING GUIDE

**CUSTOMER HAD AN ALARM** Ask them to press the Full set button and tell you what indicators are on.  
The LED's indicate the cause of the alarm and also the setting status at the time.

**MAINS LED FLASHING** Mains failure (Restore supply)

**ZONE LED FLASHING (in exit)** Check that doors and windows are closed.  
Flashing with tamper LED. (A detector has an open tamper).  
Flashing with battery LED. (The detectors batteries need replacing).

**ALARM LED ON** Full alarm. The LEDs indicate what caused the alarm.  
If Engineer reset is programmed into the panel an engineer reset will be required before the system can be re-armed.

**FLASHING WITH ZONE LED** A detector on soak test has triggered whilst the system was armed.

**FLASHING WITHOUT A ZONE LED** An engineer reset is required.

**BATTERY LED ON** The control panel's battery is disconnected or needs replacement.

**FLASHING:** Detector has a low battery. The zone LED will flash to indicate which one.

**SIGNALLING LED ON FLASHING** The system is being blocked by a continuous transmission. If flashing on its own, an external line monitor has signalled that the telephone line is at fault.

Flashing together with a zone indicator. The system is set as a supervised system and the detector indicated by the flashing zone LED has failed to report in. ( Re-site the detector where there is good radio reception.) Use the RSSI output to check.

**CONTACT TRANSMITTER NOT WORKING** Check the magnetic contact is operating correctly. Open lid and check what zone it should be on. Go into the panel engineer mode and check if it has been programmed onto the correct zone.

Note: the panel will not allow you to program a detector onto two zones. When programmed onto a zone any previous zone allocation will be deleted.

**PIR NOT WORKING** The detector needs at least 6 minutes to 'settle' when the batteries are first fitted or replaced.

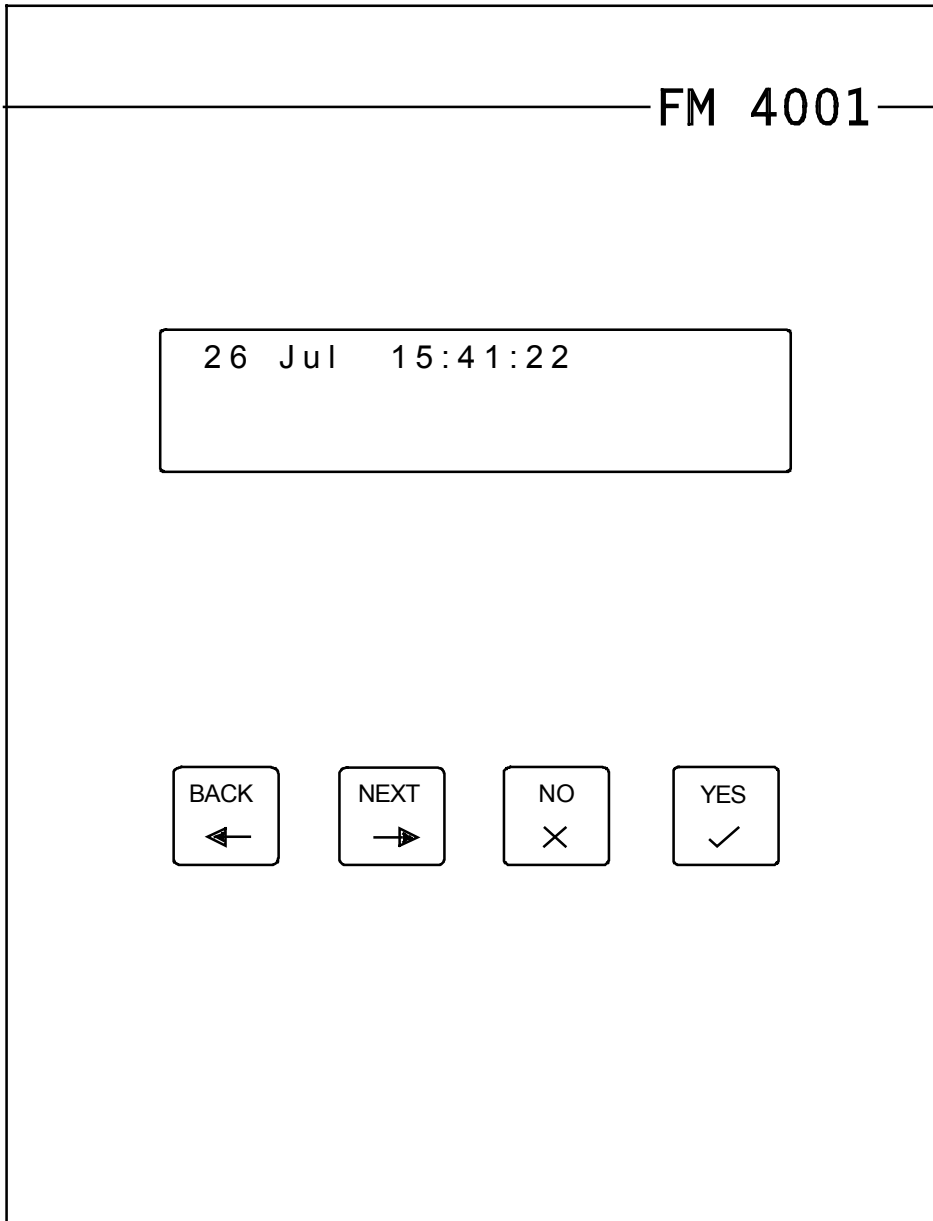
Ensure the device is programmed into the control panel.

Set the control into operator walk test mode and walk test the detector after pressing 'LED Guide'. Pressing the 'light guide' button overrides the 2 minute inhibit timer.

Opening the cover should trigger a 'Tamper' at the control panel.

**CUSTOMER HAS FORGOTTEN THEIR CODE** Open the panel and short out the MEM jumper. The user and engineer codes will be restored to the factory defaults 1234 & 4679. No other programming is affected.

*FM4001*  
*LCD DISPLAY*



FM Electronics Ltd. *Manufacturer of quality wireless products.*

CI-121 iss2



The FM4001 enables you to expand your alarm system up to a maximum of 64 alarm detectors.

### INTERNAL MEMORY

Each operation of the alarm system is stored in an internal memory called the "SYSTEM LOG" which has a capacity of storing the last 511 events together with the time and date that they occurred. The system log can be read out on the LCD display when required.

It is also possible for your engineer to connect a printer to the FM4001 and obtain a full print out of the log.

### DETECTION DEVICE DESCRIPTIONS

A facility is included for you to program descriptions up to 16 characters in length to identify each alarm detector individually.

### DEVICE DATA

A facility used for indicating the number of times a device has transmitted. This count includes all transmissions and is for indication of device operation only.

### CHANGING THE TIME & DATE

The internal clock is used to identify the time of alarm operation.

To set the time

1. Enter your 4 digit pin number.

2. Wait 3 seconds  
Display shows 

Show manager's menu?
-------------------------

 Press the YES button.

3. Display shows 

16 Jun 19:03:46 Set the time?
----------------------------------

 Press YES

4. Display shows 

16 Jun 19:03:46 Set the hour?
----------------------------------

 Press YES to change the hour

Use the arrow keys to set the hour. Hold down the arrow key to scan quickly through the hours. Press YES when the correct hour is displayed.

5. Display shows 

16 Jun 19:03:46 Set minutes?
---------------------------------

 Press Yes to change the minutes.

Use the arrow keys to set the minute. Hold down the arrow key to scan quickly through the minutes. Press YES when the correct minute is displayed

6. Display shows 

16 Jun 19:03:46 Set the date?
----------------------------------

 Press YES to change  
*NO to make no change.*

7. If you answer YES  
display shows

```
1 6 J u n   1 9 : 0 3 : 4 6
Y e a r = 1 9 9 6
```

Use the arrow keys to select the year  
When the correct year is displayed press YES

8. Display shows

```
1 6 J u n   1 9 : 0 3 : 4 6
M o n t h =   J u n
```

Press YES to change

Use the arrow keys to select the month  
When the correct month is displayed press YES

9. Display shows

```
1 6 J u n   1 9 : 0 3 : 4 6
D a y = 1 6
```

Press YES to change

Use the arrow keys to select the day  
When the correct day is displayed press YES

10. The display now asks you if you wish to review any other user information. Press NO to each question until END OF MENU is displayed.

```
-----
E n d   o f   m e n u
```

### CHANGING OR ENTERING DETECTOR DESCRIPTIONS.

If no descriptions have been programmed, each alarm sensor will be identified by its zone and device number.

A 16 character description may be entered if preferred to make identification easier.  
To key in a description.

1. Key in your 4 digit PIN number.

2. Display shows

```
S h o w   m a n a g e r ' s
m e n u ?
```

Press YES.

3. Display shows

```
1 6 J u n   1 9 : 0 3 : 4 6
S e t   t h e   t i m e ?
```

Press NO.

4. Display shows

```
1 6 J u n   1 9 : 0 3 : 4 6
S e t   t h e   d a t e ?
```

Press NO

5. Display shows

```
R e v i e w
d e s c r i p t i o n s ?
```

Press YES

6. Display shows

```
Device number 11
Zone 1 Device 1
```

Use the arrow keys to select the device number you require.

8. Press YES if you want to change the description  
(NO key takes you out of description programming altogether).

9. If you press YES the display will delete the current description and will display a choice of characters.

Use the arrow keys to find the character required and press YES to enter it.

```
F > G < H    5 8
LOUN_
```

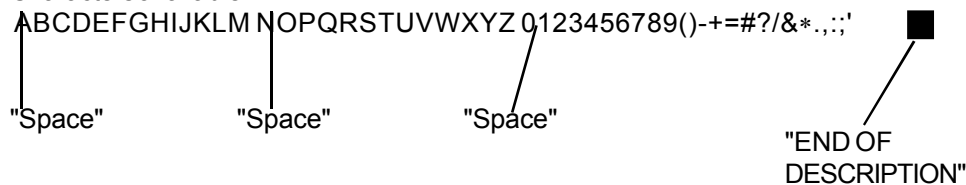
The above diagram shows the letter G selected. Key YES to enter.

To delete the last letter press the NO key.

The number seen in the top right hand corner is the zone and device number.  
Find the next character using the arrow keys and YES to enter it.

Repeat until the word is built up and then finish with the end of description character ■

Characters available:



### DISPLAYING THE SYSTEM LOG

1. Key in your 4 digit pin number.

2. Press the NO key until the LCD displays

```
Show system
log?
```

Press YES

3. The first item in the log is the most recent event

Press the BACK arrow key to move backwards in time.  
The arrow keys can be used to move up and down the log.  
Press NO key to exit from the log.

```
26 Jun 20:02:23
```



ZONE 1

11 \_\_\_\_\_

12 \_\_\_\_\_

13 \_\_\_\_\_

14 \_\_\_\_\_

15 \_\_\_\_\_

16 \_\_\_\_\_

17 \_\_\_\_\_

18 \_\_\_\_\_

ZONE 2

21 \_\_\_\_\_

22 \_\_\_\_\_

23 \_\_\_\_\_

24 \_\_\_\_\_

25 \_\_\_\_\_

26 \_\_\_\_\_

27 \_\_\_\_\_

28 \_\_\_\_\_

ZONE 3

31 \_\_\_\_\_

32 \_\_\_\_\_

33 \_\_\_\_\_

34 \_\_\_\_\_

35 \_\_\_\_\_

36 \_\_\_\_\_

37 \_\_\_\_\_

38 \_\_\_\_\_

ZONE 4

41 \_\_\_\_\_

42 \_\_\_\_\_

43 \_\_\_\_\_

44 \_\_\_\_\_

45 \_\_\_\_\_

46 \_\_\_\_\_

47 \_\_\_\_\_

48 \_\_\_\_\_

ZONE 5

51 \_\_\_\_\_

52 \_\_\_\_\_

53 \_\_\_\_\_

54 \_\_\_\_\_

55 \_\_\_\_\_

56 \_\_\_\_\_

57 \_\_\_\_\_

58 \_\_\_\_\_

ZONE 6

61 \_\_\_\_\_

62 \_\_\_\_\_

63 \_\_\_\_\_

64 \_\_\_\_\_

65 \_\_\_\_\_

66 \_\_\_\_\_

67 \_\_\_\_\_

68 \_\_\_\_\_

## ZONE 7

71 \_\_\_\_\_  
72 \_\_\_\_\_  
73 \_\_\_\_\_  
74 \_\_\_\_\_  
75 \_\_\_\_\_  
76 \_\_\_\_\_  
77 \_\_\_\_\_  
78 \_\_\_\_\_

## FIRE DETECTORS

F1 \_\_\_\_\_  
F2 \_\_\_\_\_  
F3 \_\_\_\_\_  
F4 \_\_\_\_\_  
F5 \_\_\_\_\_  
F6 \_\_\_\_\_  
F7 \_\_\_\_\_  
F8 \_\_\_\_\_

## ZONE 8

81 \_\_\_\_\_  
82 \_\_\_\_\_  
83 \_\_\_\_\_  
84 \_\_\_\_\_  
85 \_\_\_\_\_  
86 \_\_\_\_\_  
87 \_\_\_\_\_  
88 \_\_\_\_\_

## REMOTE CONTROLS

R1 \_\_\_\_\_  
R2 \_\_\_\_\_  
R3 \_\_\_\_\_  
R4 \_\_\_\_\_  
R5 \_\_\_\_\_  
R6 \_\_\_\_\_  
R7 \_\_\_\_\_  
R8 \_\_\_\_\_

## PANIC BUTTONS

P1 \_\_\_\_\_  
P2 \_\_\_\_\_  
P3 \_\_\_\_\_  
P4 \_\_\_\_\_  
P5 \_\_\_\_\_  
P6 \_\_\_\_\_  
P7 \_\_\_\_\_  
P8 \_\_\_\_\_

## DISPLAYS AND WHAT THEY MEAN

The time displayed will be the time that the alarm or fault occurred.  
The display will automatically clear next time you arm the system.  
If you want to clear a display enter your PIN number followed by Off.

26	June	15:41:22
----	------	----------

Normal daytime display (May say panel disarmed in bottom of display, depending on programming).

26	June	15:41:22
	Exit fault	

When arming the system with a door open. The display also shows which door has been left open.

26	June	15:41:22
	Entry alarm	

The alarm was activated by exceeding the entry time when disarming. Have your alarm company extend the entry time.

26	June	15:41:22
	Alarm	

An alarm occurred whilst the system was armed. The detector which triggered the alarm will also be displayed

26	June Low battery	15:41:22
----	---------------------	----------

A detector has reported a low battery. The detector which sent the signal will also be displayed. If it re-occurs have the battery replaced.

26	June Keypad tamper	15:41:22
----	-----------------------	----------

15 incorrect key presses have been recorded at the control panel, or a remote keypad has been tampered with. Cancel by entering your 4 digit PIN number.

26	June Line fault	15:41:22
----	--------------------	----------

The telephone line has developed a fault. Call your alarm company if it does not clear.

26	June Supervisory fault	15:41:22
----	---------------------------	----------

The radio transmission from a detector has not been received correctly. If it persists call your alarm company.

26	June Tamper	15:41:22
----	----------------	----------

A detector has reported a tamper. i.e. a detector cover has been removed.

26	June Mains restored	15:41:22
----	------------------------	----------

The control panel has recorded a mains interruption.

26	June Walk test	15:41:22
----	-------------------	----------

When you have carried out a customer walk test the display will show the last detector triggered. You can examine the log to see all the detectors operated during walk test. When you have completed your walk test, key in your PIN number followed by 6 to come out of test mode.

26	June Panel tamper	15:41:22
----	----------------------	----------

Either the control panel lid has been opened or a fault has developed on the wiring to your external siren. Call your alarm company.

26	June Panic alarm	15:41:22
----	---------------------	----------

A panic alarm has been received from a remote control, a panic button or a remote keypad. Enter your PIN number to cancel the alarm.

26	June 24 hr alarm	15:41:22
----	---------------------	----------

A detector which is set to be active 24Hrs per day has reported an alarm. The detector will be displayed.

26	June Auxiliary alarm	15:41:22
----	-------------------------	----------

A detector such as a temperature or water level alarm has operated. The device will be displayed.

26	June Soak test	15:41:22
----	-------------------	----------

A detector which has been disconnected from the alarm system for tests has alarmed. Inform your alarm company.

## **Software changes on 4000X series control panels**

### **4000 Control Panel & FM4001. Issue 1 to issue 2 changes.**

Additional functions added.

IMPORTANT NOTES:

WHEN FITTING 4000X & 4001 CONTROL PANELS.  
BOTH PANELS MUST EITHER VERSION 1 SOFTWARE OR  
BOTH MUST BE VERSION 2 SOFTWARE  
SOFTWARE VERSIONS MUST NEVER BE MIXED.

### **4000X Control Panel. Issue 2 to issue 3 changes.**

Low battery 'bug' cured.

Note the 4001 software remains unchanged at issue 2.

### **4000X Control Panel. Issue 3 to issue 4 changes.**

Confirmation added to BS DD 243:1999

Note the 4001 software remains unchanged at issue 2

### **4000X Control Panel. Issue 4 to issue 5 changes.**

Confirmation added to BS DD 243:2002

FM4001 software up issued to Ver 2.12

### **4000X Control Panel. Issue 5 to issue 6 changes.**

Confirmation added to BS DD 243:2004

Note the 4001 software remains unchanged at Ver 2.12

### **4000X Control Panel. Issue 6 to issue 3(G) changes.**

Now pr EN 50131-1:2004 & PD6662:2004 standard.

FM4001 software now ver 2.13.

**NOTE:- THE CORRECT VERSION OF FM4000X'S AND FM4001  
SOFTWARE MUST BE USED TOGETHER.**



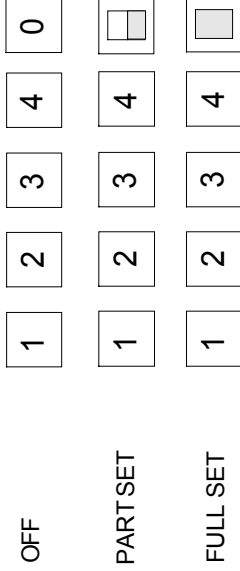
Connect 2 Quality Alkaline Batteries to the remote keypad (Eveready Energizer or Duracell recommended).

The 4180-GB is a remote wireless keypad for use in conjunction with the FM4000 range of control panels. Features include a 4 digit security code (user programmable), and Panic facility.

**INSTALLATION**

1. Avoid siting close to metalwork or large metal objects as this may affect radio range.
2. Before fixing into position, go to the control panel and program the keypad into the system as described on page 4.
3. Once programmed into the panel, check that the radio range at the desired location is satisfactory by arming and disarming using the keypad.
4. Fix the base to the wall with two screws (not provided).  
Note: Now that the keypad is on the system, the tamper alarm will operate when opening up the keypad to fix it. Cancel the alarm by entering the user code on the panel keys.
5. After installation the received signal strength can be measured using the FM4000 control panels normal signal strength facility by sending a panic alarm from the keypad. (refer to the FM4000 instruction manual).

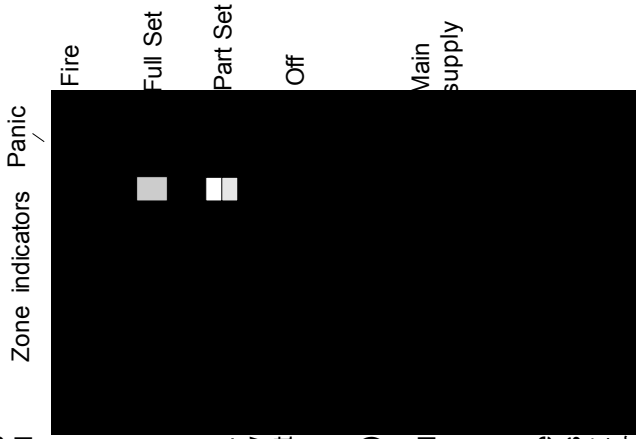
**OPERATING THE ALARM FROM THE KEYPAD**



The green LED illuminates to confirm valid action has been completed. Wait until the LED goes out before entering the code again.

To Abort the Set that has just been activated, press the 0/Off key within 30 seconds of the system being set (Note:- this function can be enabled and disabled via the Engineering mode)

NOTE: If a wrong code is entered, the red LED is illuminated & 15 incorrect key presses will generate a tamper alarm.



1. Put the control panel into engineer mode. (The alarm LED will flash to indicate that you are in the engineer mode)
2. Key in 11 to select remote control programming. (On FM4000EN & FM4000X panels you will now need to select the device number, 1 for the first device, 2 for the 2nd etc.)
3. Press keys 1 and 4 together (on the 4180-GB) to Learn the keypad onto the control Panel. (The panel will beep twice and a zone LED will illuminate to indicate that a remote control or keypad is programmed onto the panel).

(Note if you need to delete a keypad, pressing the part and zero keys together will delete all keypads and remotes from the system on an FM4000E panel or the selected device on an FM4000EN or FM4000X panel.)

4. Press the Full Set key on the panel to accept.
5. Key in 48 on the panel to exit engineer programming.

Note: Remote setting devices are not supervised.

## PROGRAMMING

### Default PIN Codes

Default User Full Set PIN code 1 2 3 4  
Default User Part Set PIN code 1 2 3 4  
Default Engineer PIN code 4 6 7 9  
Default Code Panic PIN 9 9 9 9  
Default Two key Panic Any 2 vertical number keys

### Default Settings

Two Key Panic Alerts Enabled  
Code Panic Alerts Disabled  
Abort Set Enabled

### Entering Engineering Mode

To gain access to the Engineer Mode, enter the Full Set User PIN code and then enter the Engineer PIN code (default 4 6 7 9) within 10 seconds of the last digit of the user PIN being entered. For example with the default codes:

73

1 2 3 4 5 6 7 8 9  
Grid Inc L will t er nfr

They will continue to flash for as long as you are in Engineer Mode and not within a programming submenu. When you are in a programming sub-menu, the Red LED will flash, but the Green LED will turn off.

### Changing The Engineer Pin Code

In engineering mode enter 47, (The red LED only flashes)  
Enter the new 4 digit code, the keypad will beep once, enter the new code again the keypad will beep twice to confirm the code has been successfully changed.  
(If the two codes do not match, the code will not change)

#### Code PANIC

To enable this feature in Engineering, select option 50 then press 1 the green LED illuminates to indicate the option is selected, now press full set. (To de-select this option press 0 in the option, green LED will go out, then press full set.)

### Changing the Code Panic PIN

In engineering mode enter 28, (The red LED only flashes)  
Enter the new 4 digit code, the keypad will beep once, enter the new code again the keypad will beep twice to confirm the code has been successfully changed.  
(If the two codes do not match, the code will not change)

### Two Key Panic

To Enable this feature in Engineering, select option 27 then press 1 the green LED

illuminates to indicate the option is selected, now press full set. (To de-select this option press 0 in the option, green LED will go out, then press full set.)

### Changing The Full Set User PIN

In engineering mode enter 12, (The red LED only flashes)  
Enter the new 4 digit code, the keypad will beep once, enter the new code again the keypad will beep twice to confirm the code has been successfully changed.  
(If the two codes do not match, the code will not change)

### Changing The Part Set User PIN

In engineering mode enter 13, (The red LED only flashes)  
Enter the new 4 digit code, the keypad will beep once, enter the new code again the keypad will beep twice to confirm the code has been successfully changed.  
(If the two codes do not match, the code will not change)

### Abort Set

To disable this feature in Engineering, select option 34 then press 0 the green LED goes out to indicate the option is disabled, now press full set. (To re-select this option press 1 in the option, green LED will illuminate, then press full set.)

### Default Keypad PIN Codes

With keypad in normal operating mode, fit the link to the MEM pins, hold the 4 key for 30 seconds, when keypad beeps 6 times, remove link. The default codes have now been restored.

### Restore All Settings to Default

With the keypad in engineers mode (default keypad PIN codes if required) fit the MEM link and enter 44 within 30 seconds of fitting the link, when the Keypad beeps 5 times remove the link, the keypad is now defaulted. (Press 48 to exit engineering now if required.)

Note:- Keypad will not default if this link is not fitted.

### Keypad Low Battery

If the battery is low in the keypad the keypad will flash the red LED twice and emit a double beep after any unset, part set or full set signal is transmitted to the control panel The battery should be replaced as soon as possible.

Note: The low battery will not be signalled to the panel.

### Exit Engineer Mode

Enter 48 when both LEDs are flashing (you are not in a option), the keypad will beep twice.

**Operating Instructions**

The 4180-GB is a remote wireless keypad for use in conjunction with the FM4000 control panel. Features include a 4 digit security code (user programmable), and Panic facility.

**Operating Your Alarm System From The Keypad**

OFF     

PART SET     

FULL SET     

The green LED illuminates to confirm valid action has been completed. Wait until the LED goes out before entering the code again.

To **Abort the Set** that has just been activated, press the 0/Off key within 30 seconds of the system being set (Note:- this function can be enable or disabled by your alarm company.)

NOTE: If a wrong code is entered, the red LED is illuminated & 15 incorrect key presses will generate a tamper alarm.

**Panic Alarms**

A panic alarm can be sent by this keypad by either pressing 2 vertical number keys, i.e. 1 & 4 together or by entering a 4 digit Panic code. Either of these facilities can be enabled or disabled by your alarm company.

**Keypad Low Battery**

If the battery is low in the keypad the keypad will flash the red LED twice and emit a double beep after any unset, part set or full set signal is transmitted to the control panel

The battery should be replaced as soon as possible. Call your alarm company.  
Note: The low battery will not be signalled to the panel.

**Keypad Settings**

**Two Button Panic**       Enabled     Disabled

**Four Digit Panic**       Enabled     Disabled

**Abort Set**       Enabled     Disabled

For Service Please Contact \_\_\_\_\_

**Operating Instructions**

The 4180-GB is a remote wireless keypad for use in conjunction with the FM4000 control panel. Features include a 4 digit security code (user programmable), and Panic facility.

**Operating Your Alarm System From The Keypad**

OFF     

PART SET     

FULL SET     

The green LED illuminates to confirm valid action has been completed. Wait until the LED goes out before entering the code again.

To **Abort the Set** that has just been activated, press the 0/Off key within 30 seconds of the system being set (Note:- this function can be enable or disabled by your alarm company.)

NOTE: If a wrong code is entered, the red LED is illuminated & 15 incorrect key presses will generate a tamper alarm.

**Panic Alarms**

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**Keypad Low Battery**

If the battery is low in the keypad the keypad will flash the red LED twice and emit a double beep after any unset, part set or full set signal is transmitted to the control panel

The battery should be replaced as soon as possible, Call your alarm company.  
Note: The low battery will not be signalled to the panel.

**Keypad Settings**

**Two Button Panic**       Enabled     Disabled

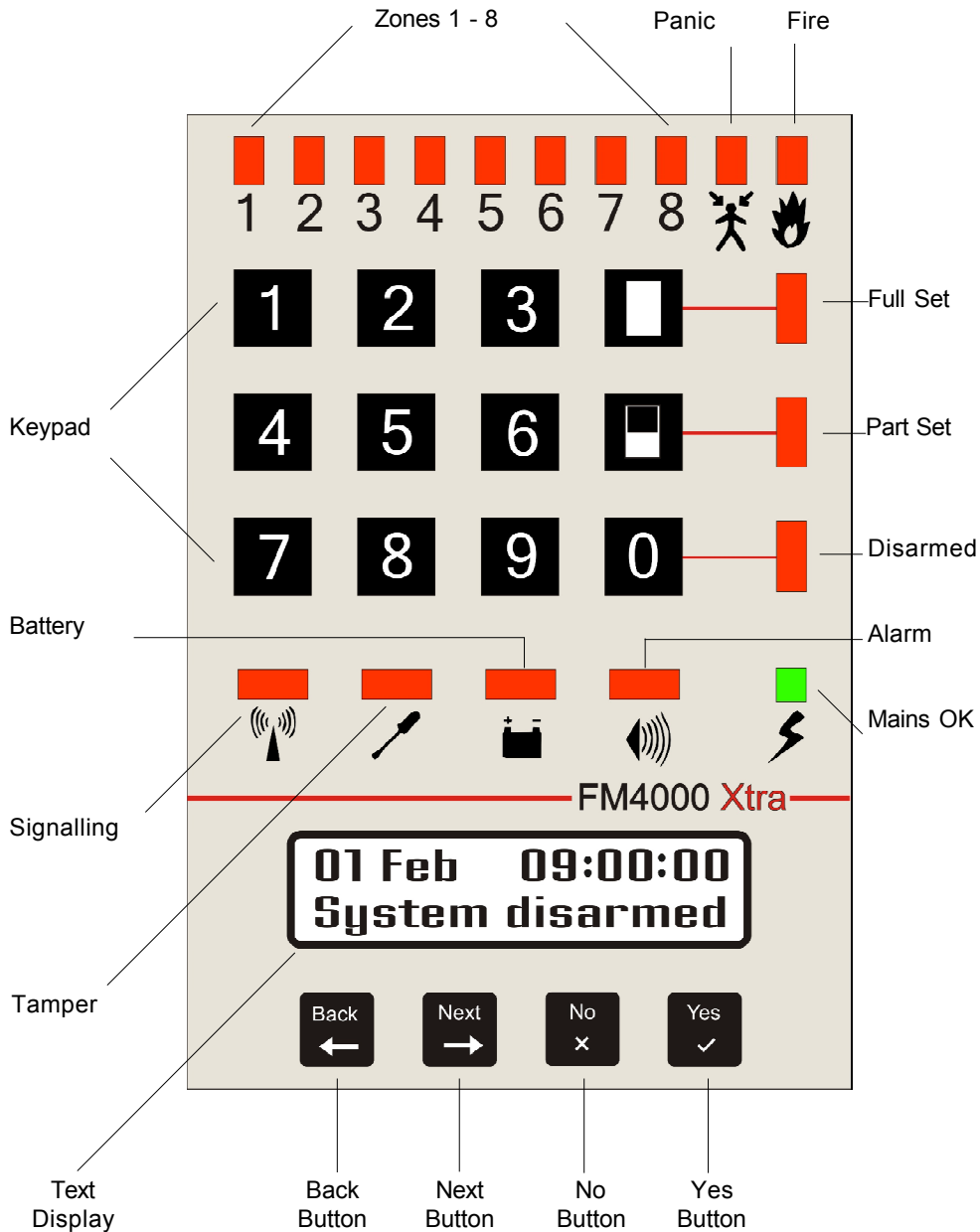
**Four Digit Panic**       Enabled     Disabled

**Abort Set**       Enabled     Disabled

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# FM4000Xtra CONTROL PANEL

## INSTALLATION INSTRUCTIONS



CI-236 ISS 1

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## EN 50131 & PD6662 Compliance

The FM4000Xtra control panel operates in the following ways making our products suitable for use in systems designed to comply with PD6662:2004.

1. The panel will only show the mains status at all times, all other status settings may only show on system (arm/disarm) for 30 seconds after the user code has been entered. (dependant upon programming)

2. To enter engineering mode the user code must first be entered followed by zero, the engineers code must then be entered within the next 30 seconds. Once the engineers code has been entered, the engineer can go in and out of engineering as many times as required, until the next time the system is armed.

3. There is now a 30 second delay on entry before the external sounder(s) and communications (unconfirmed intruder) are activated, unless 2 or more detection devices off the entry route have been activated.

4. The communication outputs have been changed as follows:-

- 1 = Fire
- 2 = PA
- 3 = Intruder (Unconfirmed)
- 4 = Open/Close
- 5 = Isolated Zone after Unconfirmed alarm (also known as

Reinstatement or Bypass)

- 6 = Fault ( i.e. Low battery, Jamming, Mains failure )
- 7 = Confirmed Alarm
- 8 = Tamper (this now includes additional requirements i.e. Supervisory failure)

5. The display is only active when in use, the display will go blank at the end of menu, 15 seconds after the last button press in Manager mode, or when no message needs to be displayed in normal use.

## System Programming for systems designed to comply with PD6662:2004 & BSDD 243:2004

The following settings (or ranges of settings) should be used on systems which are designed to comply with the above requirements.

**Option 14** - Entry time, must not exceed 45 seconds, Select options **1,2,3,4 or 5**.

**Option 15** - Bell time must be between 1min 30 secs & 15 minutes, Select options **3,4,5 or 6**.

**Option 37** - Dialler & Entry Delay, Select option **3, 30 seconds**

**Option 39** - Line fault in daytime - make audible. Select option **1**

**Option 40** - Supervisory, checking devices are polling every 20 mins. Select option **1**

**Option 42** - Engineer reset, and remote reset enabled. Select option **1**

**Option 54** - Confirmation, must be set to BSDD243:2004 Select option **3**

**Option 55** - Detector Isolation, must be set isolate the detector 'first to alarm' Select option **1**

**Option 59** - Display must be masked, select option **1, 2 or 3**.

Other requirements for ensuring compliance with the above requirements include:-

1. On systems which need to meet Grade 2 requirements, when a remote antenna is used, ensure the antenna tamper module is fitted.

2. Fit a single action card reader to the control panel for setting/unsetting the control panel.

For systems which do not need to meet the above requirements, any available setting may be used to meet your operational requirements.

### CONNECTIONS (RIGHT HAND SIDE)

1-4 12V Auxiliary supply output. Maximum load current 500mA

5 Tamper -ve return. If connecting a Self Actuating Bell (SAB) then connect the

-ve tamper return to this terminal. If not fitting a SAB this terminal must be connected to -ve Aux.

6. This terminal provides a +ve output on alarm which is reset next time the panel is armed. It is provided for use with hard wired detectors that have a latching LED facility.

7. -ve to trigger Siren. Goes from open circuit to 0v to operate a bell or siren. Max 500mA.

Resets after the bell time set in engineer program.

8. -ve Strobe. Goes from open circuit to 0v in alarm to operate a strobe. Remains on until the system is disarmed.

9. Dialler trigger output. Is provided for triggering an autodialler. This output goes to 0v on alarm.

Once triggered it remains until the panel is disarmed so as not to trigger any more until the system is turned off.

10 Fault LED output for remote wired arming. Indicates that a fault is present which will prevent arming.

11. System Off LED output for remote hard wired arming. Indicates when disarmed.

12. Part Set hard wired arming input. Apply +12v to arm. Remove to unset.

13. Full Set hard wired arming input. Apply +12v to arm. Remove to unset.

## **CONNECTIONS ALONG BOTTOM EDGE**

### **HARD WIRED INPUTS 1 & 2**

Must be linked out if not used. These inputs are normally closed, opening in

alarm. Zone 2 can be programmed to be a PA zone.

### **EXIT TERMINATE PUSH**

Connection for a normally open push button which sets the alarm when pressed during the exit time.

### **LINE FAULT INPUT**

Normally closed input. Open for line fault. To trigger with applied negative, leave the link in place and apply 0v for line fault.

### **DIALLER OUTPUTS 1-8**

These outputs are for connection to a digital communicator employing +ve removed trigger inputs.

**The outputs go from +5v to 0v in alarm.**

### **RECEIVED SIGNAL STRENGTH INDICATION (RSSI)**

For connection to a digital voltmeter to indicate the Signal Strength of a transmission received from a detector. (Refer to section on using the RSSI output).

### **LINE FAULT OUTPUT TO FM4000Xtra**

This output is used when employing a dialler with a line fault output. The dialler should be programmed for -ve applied on line fault.

This connection can then be connected to the line fault input on the FM4000. (Leave the link fitted in the line fault input). If a normally closed output is available, remove the link and use both connections

### **DIALLER OUTPUTS 1 - 8**

The dialler outputs are identical in both the FM4000X and FM4001 panels.

1 = Fire

2 = PA

3 = Intruder (Unconfirmed)

4 = Open/Close

5 = Isolated Zone after Uncon

firmed alarm (also known as Reinstatement or Bypass)

6 = Fault ( i.e. Low battery, Jamming, Mains failure )

7 = Confirmed Alarm

8 = Tamper (this now includes additional requirements i.e. Supervisory failure)

## INSTALLATION

The factory defaults for the user and engineer codes are:-

USER CODE = 1 2 3 4

ENG CODE = 4 6 7 9

Note, the customers code and zero must be entered, before the engineers code will be accepted.

The recommended installation procedure is as follows:

### 1. Label detectors.

Label each detector with its zone number for reference during installation and for later service reference.

### 2. Complete the User Record

The back pages of the user instruction booklet should be completed and left with the operator for their reference. It gives them information about the zones etc.

### 3. Complete a system record sheet

System record sheets should be completed before commencing programming. This acts as a reference when programming and can form part of the installation records.

### 4. Locate the control panel

For maximum radio coverage the control panel should be located at a central point in the building. The higher it is the better for radio reception. (Do not mount at floor level on a ground floor or below ground floor level, unless ALL devices are at this level.)

Metal objects cause radio reflections which oppose the signal being received from the detector with a resultant reduction in the received signal strength. Metalwork close by can result in complete cancellation, therefore do not site the control panel or detectors near to large metal objects, metal piping, girders, concentrations of mains cabling, fuse boxes etc.

Consider the ease of wiring to the external siren and communications (if required) when making your choice.

The Panel may be temporarily sited whilst a test is carried out to verify the reception from distant detectors. Check the received signal strength unless previously proved using the FM test kit. (See RSSI page 4)

The panels must be fixed using the three fixing points provided. For larger installations a remote tamper protected antenna is available.

Mains supply to the control panel must be provided by a competent electrician to the current issue of the IEE regulations.

A 12v sealed lead acid standby battery should be connected after all wiring has been completed and tested. 12v 2.3AH is recommended.

**5. Program detectors onto the panel**  
Each detector has either an internal "Learn" jumper or a push switch on the front of the pir

To add a detector to the system:

Go into the engineer program. Select the zone and device number. Short out the learn jumper on the detector. Remove the learn jumper after programming.

The detector transmits its identity together with a learn bit. The panel stores the detectors identity code and adds it to the chosen zone.

(Refer to engineer programming section)

### 6. Carry out range test

If you keep a 4173-GB remote control for testing, you can program this onto the system and then go to each detector location in turn and verify that the control can be armed and disarmed from all detector



locations.

### 7. Mount the detectors

Refer to the detector instructions for recommended mounting positions.

As reflections from metalwork act to cancel the transmission, avoid siting near to any metalwork.

Reflections like this can often be overcome by a small movement in position of 15 to 20cm.

### 8. Making panel program changes.

Complete a system record sheet before making any changes.

Once programmed the program is stored in non-volatile memory, so data will remain stored even in the event of complete power failure.

### 9. Radio test using the RSSI output

To measure the signal strength received from a detector.

i) Connect a Voltmeter to the RSSI output terminals.

ii) Press the reset button next to the RSSI terminals. The voltmeter should now read zero volts.

iii) Go to the detector and operate the learn jumper or press the light guide.

iv) Return to the panel. The voltmeter now displays a voltage representing the strength of the transmission received.

It will ignore any other transmissions and only respond to the learn message or a Panic or Off message from a remote control or panic button.

**The voltage reading should be a minimum of 1.0v.**

The readings for each detector can be recorded on the system record sheet for future reference.

### 10. Full system test

A walk test facility is provided in the Operating instructions. This may be used to test all of the devices on the system.

Once the sounders and dialler have been connected and the installation completed a full test with remote signalling should be

carried out.

## PROGRAMMING

1. Enter Users code followed by 0 & then the engineers code 4 6 7 9

The Alarm led will flash slowly to indicate that you are in the program mode.

The text display will show the following message:- DOWNLOADING DATA PLEASE WAIT.

PLEASE WAIT, until this message changes to SHOW ENGINEERS MENU?

2. Key in the two digit program number.

(The zone led's indicate which option is set & the text display will also indicate your selected option.)

3. Key in the option required

(The zone led's and the LCD display, indicate your choice)

4. Press the Full Set key to exit that program step & enter the required programming selection.

5. When finished with programming key in 48 to exit engineer mode.

### ERROR CORRECTION VIA PART SET KEY

If you accidentally enter an engineer program number and change an option value, you can undo the change by pressing the Part Set key before exiting the program step via the Full Set key.

**EXAMPLE:** To set the Full set exit timer to 1 minute.

Key in Customer code (default = 1234) then 0 4 6 7 9 The alarm indicator will illuminate to indicate that you are now in engineer program mode

Key in 12 To select Full set exit time (program No. 12)

**06 PROGRAM DEVICES ONTO ZONE 6**

**07 PROGRAM DEVICES ONTO ZONE 7**

**08 PROGRAM DEVICES ONTO ZONE 8**

**09 RADIO PANIC BUTTONS**

Key in 091 to program the first PA button onto the system. The Panic button is operated and the device will learn onto the control panel.

Up to 8 Panic buttons can be programmed onto the PA zone, i.e. devices 091 to 098.

The LCD display will refer to the panic buttons as P1 to P8.

Press the Full Set key to exit.

**10 FIRE ALARM DEVICES**

Key in 101 to program the first Fire detector onto the system. Short out the learn jumper.

(Ensure learn jumper is removed after programming).

Up to 8 Fire detectors can be programmed onto the Fire zone, i.e. devices 101 to 108.

The LCD display will refer to the Fire detectors as F1 to F8.

Press the Full Set key to exit.

**11 REMOTE CONTROLS & RADIO KEYPADS.**

Key in 111 to program the first Remote Control onto the system. The Panic button is operated instead of a learn jumper.

Up to 8 Remote Controls can be programmed onto the system, i.e. devices 111 to 118.

The LCD display will refer to the remote controls as R1 to R8.

Press the Full Set key to exit.

**EXIT ENTRY**

**12 FULL SET EXIT TIME**

1 = 2 secs 2 = 10 secs 3 = 20 secs\*

4 = 30 secs 5 = 45 secs 6 = 1 min.

7 = 2 mins. 8 = Infinite

Press Full Set to exit

**\*=FACTORY DEFAULT**

**13 PART SET EXIT TIME**

1= 2 secs 2= 5 secs 3= 10 secs\*

4= 15 secs 5= 20 secs 6= 30 secs

7= 1 mins. 8= As full set exit time. Press Full

Set to exit

**14 ENTRY TIME**

1 = 1 sec 2 = 10 secs 3 = 20 secs

4 = 30 secs\* 5 = 45 secs

Press Full Set to exit

**00 INVERT SIREN OUTPUT**

Normally -ve applied in alarm. (0v in alarm)

0 = -ve applied in alarm\*

1 = -ve removed in alarm

**15 BELL DURATION**

1 = Silent 2 = 15 secs 3 = 90 secs.

4 = 2 mins. 5 = 3 mins. 6 = 10 mins.

7 = 15 mins.\*

8 = Continuous

Note:- duration must not exceed 15 mins. to meet EN50131- PD6662 requirements.

Press Full Set to exit

**16 BELL DELAY**

1 = 0 mins.\* 2 = 1 mins. 3 = 3 mins.

4 = 4 mins. 5 = 5 mins. 6 = 6 mins

7 = 7 mins 8 = 10 mins

Note: In the event of a line fault, bell delay will become 0 mins.

Press Full Set to exit

**ZONE PROGRAMMING**

**IMPORTANT:** Remember that all devices on a particular zone will respond to the zone 7

## **06 PROGRAM DEVICES ONTO ZONE 6**

## **07 PROGRAM DEVICES ONTO ZONE 7**

## **08 PROGRAM DEVICES ONTO ZONE 8**

### **09 RADIO PANIC BUTTONS**

Key in 091 to program the first PA button onto the system. The Panic button is operated and the device will learn onto the control panel.

Up to 8 Panic buttons can be programmed onto the PA zone, i.e. devices 091 to 098.

The LCD display will refer to the panic buttons as P1 to P8.

Press the Full Set key to exit.

### **10 FIRE ALARM DEVICES**

Key in 101 to program the first Fire detector onto the system. Short out the learn jumper.

(Ensure learn jumper is removed after programming).

Up to 8 Fire detectors can be programmed onto the Fire zone, i.e. devices 101 to 108.

The LCD display will refer to the Fire detectors as F1 to F8.

Press the Full Set key to exit.

### **11 REMOTE CONTROLS & RADIO KEYPADS.**

Key in 111 to program the first Remote Control onto the system. The Panic button is operated instead of a learn jumper.

Up to 8 Remote Controls can be programmed onto the system, i.e. devices 111 to 118.

The LCD display will refer to the remote controls as R1 to R8.

Press the Full Set key to exit.

### **12 FULL SET EXIT TIME**

1 = 2 secs 2 = 10 secs 3 = 20 secs\*  
4 = 30 secs 5 = 45 secs 6 = 1 min.  
7 = 2 mins. 8 = Infinite

Press Full Set to exit

**\* = FACTORY DEFAULT**

### **13 PART SET EXIT TIME**

1 = 2 secs 2 = 5 secs 3 = 10 secs\*  
4 = 15 secs 5 = 20 secs 6 = 30 secs  
7 = 1 mins. 8 = As full set exit time.

Press Full Set to exit

### **14 ENTRY TIME**

1 = 1 sec 2 = 10 secs 3 = 20 secs  
4 = 30 secs\* 5 = 45 secs

Press Full Set to exit

### **00 INVERT SIREN OUTPUT**

Normally -ve applied in alarm. (0v in alarm)

0 = -ve applied in alarm\*

1 = -ve removed in alarm

### **15 BELL DURATION**

1 = Silent 2 = 15 secs 3 = 90 secs.  
4 = 2 mins. 5 = 3 mins. 6 = 10 mins.  
7 = 15 mins.\* 8 = Continuous

Note:- duration must not exceed 15 mins. to meet EN50131- PD6662 requirements.

Press Full Set to exit

### **16 BELL DELAY**

1 = 0 mins.\* 2 = 1 mins. 3 = 3 mins.  
4 = 4 mins. 5 = 5 mins. 6 = 6 mins  
7 = 7 mins 8 = 10 mins

Note: In the event of a line fault, bell delay will become 0 mins.

Press Full Set to exit

## **ZONE PROGRAMMING**

**IMPORTANT:** Remember that all devices on a particular zone will respond to the zone

## **EXIT ENTRY**

option selected. So if zone 1 has final exit detectors, all detectors on zone 1 must also be final exit.

## **17 FULL SET ZONES**

The factory default is all zones active.

The zone LED's and text display indicate which zones are active in full set.

Use the keys 1 to 8 to select or deselect zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **18 PART SET ZONES**

The factory default is zones 1 to 4 active.  
The zone LED's and text display indicate which zones are active in part set.  
Use the keys 1 to 8 to select or deselect zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **19 OMIT PERMIT ZONES**

(The zones that the user is allowed to omit)  
The factory default is all zones allowed to be omitted except zone 1.  
The zone LED's and text display indicate which zones are allowed to be omitted.  
Use the keys 1 to 8 to select or deselect zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **20 FINAL EXIT ZONES**

(Zones that start the entry time)  
The factory default is zone 1 only.  
The zone LED's and text display indicate which zones will start the entry timer.  
Use the keys 1 to 8 to select or deselect zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **21 WALK THROUGH ZONES**

The factory default is none.  
The zone LED's and text display indicate which zones are walk through during entry.  
Use the keys 1 to 8 to select or deselect walk through zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **22 IGNORE ZONE IF FIRST TO ALARM (Double Knock)**

Alarm only if two zones are triggered.  
The factory default is none.  
The zone LED's and text display indicate which zones are double knock.  
Use the keys 1 to 8 to select or deselect double knock zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **23 AUXILIARY ZONES**

Technical alarm. i.e.. Freezer giving internal audible on control panel.  
The factory default is none.  
The zone LED's and text display indicate which zones are auxiliary zones.  
Use the keys 1 to 8 to select or deselect aux. zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **24 24 HOUR ZONES**

The factory default is none.  
The zone LED's and text display indicate which zones are 24 hour.  
Use the keys 1 to 8 to select or deselect 24 hour zones.  
The 0 key deletes all.  
Press the full set key to exit.

NOTE: If you do not want a 24 hour zone to be omitted, remove the zone from omit permit via program No.19.

## **25 SOAK TEST ZONES**

The factory default is none.  
The zone LED's and text display indicate which zones are on soak test.

Use the keys 1 to 8 to select or deselect soak test zones.  
The 0 key deletes all.  
Press the full set key to exit.

## **26 CHIME ZONES**

The factory default is none.

The zone LED's and text display indicate which zones are on chime.

Use the keys 1 to 8 to select or deselect chime zones.

The 0 key deletes all.

Press the full set key to exit.

## **OTHER PROGRAMS**

### **27 P.A. SILENT / AUDIBLE**

The factory default is audible. The text display indicates the current/selected status.

1= Silent O= Audible \*

Press the full set key to exit.

### **28 DOUBLE BUTTON P.A.**

On early remote controls both PA & unset buttons need to be pressed to generate a PA. The text display indicates the current/selected status.

1= Double O= Single\*

Press the full set key to exit.

### **29 SILENT PART SET**

1= Silent O= Audible\*

Press the full set key to exit.

### **30 UPSTAIRS / DOWNSTAIRS**

This option tells the panel to accept part set button as a separate alarm system.) e.g.. The Part Set button becomes the alarm system in the flat & the Full set button is a separate alarm system in the office. In this mode the user can set either one or the other, or both systems by selection when arming. The text display indicates the current/selected status.

1= Select Upstairs/Downstairs mode.

O= Normal Part / Full set mode.\*

Press the full set key to exit.

### **31 8 SECOND STROBE WHEN FINAL SET AND UNSET**

If selected the strobe output operates for 8 seconds at the moment the panel is full set. i.e. when the exit timer terminates.

The strobe also operates for 8 seconds when the panel is Unset from Full Set. The text display indicates the current/selected status.

1 = 8 sec. Strobe

0 = No 8 second strobe\*

Press the full set key to exit.

### **32 COURTESY STROBE IN FULL SET ENTRY / EXIT**

If selected the strobe output terminal 8 operates when Full setting the panel. The strobe output also operates for the entry time when unsetting from Full Set.

(If a mains relay is connected via this output a mains courtesy light could be switched on by disarming from outside with a remote control.) The text display indicates the current/selected status.

1 = Courtesy strobe on O = off\*

Press the full set key to exit.

### **33 WALK THROUGH ZONES BECOME FINAL EXIT IN PART SET**

To prevent false alarms in part set it is often useful to make walk through zones initiate the entry timer. The text display indicates the current/selected status.

1= Yes O= No\*

Press the full set key to exit.

### **34 JAMMING**

When this option is selected, the text display indicates the current/selected status.

1 = Jamming generates a full alarm when set  
O = indicator only\*

Press the full set key to exit.

(Jamming is signalled to the appropriate dialler outputs.)

### **35 MAINS FAILURE & PANEL LOW BATTERY PREVENTS ARMING**

When this option is selected, the text display indicates the current/selected status.

1 = Prevents arming.

0 = Does not prevent arming\*

Press the full set key to exit

### **36 REMOTE CONTROL UNSETS ONLY IN ENTRY**

When this option is selected, the text display indicates the current/selected status.

1 = Full operation. Unset at time.\*

Text display reads 'normal'.

2 = Unset only during Full set entry time.

Text display reads 'mode1'.

3 = No disarm in Full set. Will disarm in part set. Text display reads 'mode2'.

Press the full set key to exit.

### **37 DIALLER & ENTRY DELAY PERIOD**

When this option is selected, the text display indicates the current/selected status.

1 = None\* 2 = 20s 3 = 30s

4 = 1 min 5 = 2 min

Press the full set key to exit

### **38 NO EXTERNAL BELL OR DIALLER IN PART SET**

**(Internal bells only in Part Set).**

When this option is selected, the text display indicates the current/selected status.

1 = Internal sounder only in Part Set.

0 = Dialler and siren In both full or part set\*

Press the full set key to exit

### **39 LINE FAULT IN DAYTIME AUDIBLE**

When this option is selected, the text display indicates the current/selected status.

1 = Audible and visual

0 = visual only\*

Press the full set key to exit.

The LCD display does not change, during this operation. The output from the receiver can be heard on the panel loudspeaker.

Press the full set key to exit.

### **46 DISPLAY ENGINEERS LOG**

The LCD display does not change, during this operation.

Press keys 1 to 8 to view the last 8 events.

Most recent is displayed on key 1.

Key 9 shows the last "First to Alarm"

Press the full set key to exit.

### **47 CHANGE ENGINEERS ACCESS CODE**

The LCD display does not change, during this operation.

Key in a 4 digit code twice.

### **48 LEAVE ENGINEER MODE**

If any devices have their tampers open, the display silently shows which zones are tampered. You can now enter your engineer code and restore the tampers before leaving engineer mode by pressing 48 again. If a tamper is activated, while the panel is out of engineering, it will be audible.

### **49 DIALLER OUTPUT FOR PA**

When this option is selected, the text display indicates the current/selected status.

1 = PA Triggers PA dialler output

0 = PA Triggers PA and ALARM dialler outputs\*

Press the full set key to exit.

### **50 HARD WIRED PA ON ZONE 2**

When this option is selected, the text display indicates the current/selected status.

1 = Zone2 is a PA zone

0 = Zone2 is a standard zone\*

Press the full set key to exit.

This feature enables hardwired PA buttons to be connected to the panel via the zone 2 hardwire input.

CAUTION: Radio devices including PIRS and contacts programmed onto zone 2 will also trigger a PA alarm if this option is selected.

### **51 FINAL EXIT SET**

When this option is selected, the text display indicates the current/selected status.

1 = Yes 0 = No\*

If yes the exit time will terminate when the final exit door is closed.

### **52 REMOTE CONTROL & REMOTE KEYPAD FULL SET EXIT TIME**

When this option is selected, the text display indicates the current/selected status.

1=2s 2=10s\* 3=20s 4=30s

5=45s 6=1m 7=2min 8=infinite

This applies to remote control and remote keypad only. The exit time when armed from the panel keypad (option 12) is not affected.

### **53 REMOTE CONTROL & REMOTE KEYPAD PART SET EXIT TIME**

When this option is selected, the text display indicates the current/selected status.

Enables the exit time to be set for part set via the remote control / keypad. The exit time set by option 13 still applies when arming from the panel keypad.

1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s 7=1min 8=as

#### **45 AUDIBLE RECEIVE MODE**

The LCD display does not change, during this operation.

The output from the receiver can be heard on the panel loudspeaker.

Press the full set key to exit.

#### **46 DISPLAY ENGINEERS LOG**

The LCD display does not change, during this operation.

Press keys 1 to 8 to view the last 8 events.

Most recent is displayed on key 1.

Key 9 shows the last "First to Alarm"

Press the full set key to exit.

#### **47 CHANGE ENGINEERS ACCESS CODE**

The LCD display does not change, during this operation.

Key in a 4 digit code twice.

#### **48 LEAVE ENGINEER MODE**

If any devices have their tampers open, the display silently shows which zones are tampered. You can now enter your engineer code and restore the tampers before leaving engineer mode by pressing 48 again. If a tamper is activated, while the panel is out of engineering, it will be audible.

#### **49 DIALLER OUTPUT FOR PA**

When this option is selected, the text display indicates the current/selected status.

1 = PA Triggers PA dialler output

0 = PA Triggers PA and ALARM dialler outputs\*

Press the full set key to exit.

#### **50 HARD WIRED PA ON ZONE 2**

When this option is selected, the text display indicates the current/selected status.

1 = Zone2 is a PA zone

0 = Zone2 is a standard zone\*

Press the full set key to exit.

This feature enables hardwired PA buttons to be connected to the panel via the zone 2 hardwire input.

CAUTION: Radio devices including PIRS and contacts programmed onto zone 2 will also trigger a PA alarm if this option is selected.

#### **51 FINAL EXIT SET**

When this option is selected, the text display indicates the current/selected status.

1 = Yes 0 = No\*

If yes the exit time will terminate when the final exit door is closed.

#### **52 REMOTE CONTROL & REMOTE KEYPAD FULL SET EXIT TIME**

When this option is selected, the text display indicates the current/selected status.

1=2s 2=10s\* 3=20s 4=30s

5=45s 6=1m 7=2min

8=infinite

This applies to remote control and remote keypad only.

The exit time when armed from the panel keypad (option 12) is not affected.

#### **53 REMOTE CONTROL & REMOTE KEYPAD PART SET EXIT TIME**

When this option is selected, the text display indicates the current/selected status.

Enables the exit time to be set for part set via the remote control / keypad. The exit time set by option 13 still applies when arming from the panel keypad.

1=2s 2=5s 3=10s\* 4=15s 5=20s 6=30s

7=1min 8=as full set

#### **54 CONFIRMATION OPERATION**

1 = No confirmation\* Display reads Mode 1

(If eng reset is prog'd it will be req'd)

2 = Basic confirmation - BS DD 243:1999 Display reads Mode 2

(Entry timer expiring counts as one alarm)

3 = Confirmation - BS DD 243:2004 Display reads Mode 3

(All activations during entry ignored for confirmation purposes, until end of entry time and 30 seconds delay.)

#### **55 DETECTOR ISOLATION**

When this option is selected, the text display indicates the current/selected status.

0 - No isolation\*

1 - Isolate the zone which caused an unconfirmed alarm and operate the reinstatement output when required.

Option 1 must be selected to comply with BS DD 243 2002 or later.

#### **56 DIALLER TEST**

Key in 56 followed by a number key to operate a dialler channel. The number selected will be displayed.

1 = Fire

2 = Panic

3 = Intruder Alarm

4 = Open / Closed

5 = Reinstatement

6 = Fault

7 = Confirmed Intruder

8 = Tamper

Press full set key when test is completed.

#### **57 DIALLER TRIGGER INVERT**

All the dialler outputs are positive removed as the default setting, but can be inverted to Negative removed if required. To invert an output key in 57 followed by the required output to be inverted, using the same list as used for the dialler test.

Press full set key when outputs have been selected, outputs will change to the selected settings when the full set key is pressed.

#### **58 DISPLAY SOFTWARE ISSUE.**

Displays the software issue of the 4000X panel, press full set to exit.

#### **59 DISPLAY SET STATUS**

1 = 5s                    2 = 15s    3 = 30s\*    4  
= continuous

The panel set status is only available for the selected timed period after the customer code has been entered, unless continuous is selected.

#### **61 REPORT TAMPER**

Select when the tamper should be reported to the Alarm Receiving Centre

1. Never    2. Always\*    3. Only when armed.

#### **REMOTE ENGINEER RESET FACILITY**

When an alarm occurs which requires an engineer reset, the user can call the Alarm Receiving Centre and obtain the access code number to key in to the panel.

The panel zone LED's will illuminate randomly.

From the LED's the Central Station operator can refer to a reference table and instruct the user what code to enter to perform an engineer reset.

Next time the alarm operates the reset code number will have changed.



## SETTING UP THE TEXT DISPLAY.

### INTERNAL MEMORY

Each operation of the alarm system is stored in an internal memory called the "SYSTEMLOG" which has a capacity of storing the last 511 events together with the time and date that they occurred. The system log can be read out on the LCD display when required.

It is also possible for your engineer to connect a printer to the FM4001 and obtain a full print out of the log.

### DETECTION DEVICE DESCRIPTIONS

A facility is included for you to program descriptions up to 16 characters in length to identify each alarm detector individually.

### DEVICE DATA

A facility used for indicating the number of times a device has transmitted. This count includes all transmissions and is for indication of device operation only.

### CHANGING THE TIME & DATE

The internal clock is used to identify the time of alarm operation.

To set the time

1. Enter your 4 digit pin number.

2. Wait 3 seconds  
Display shows

```
Sh ow m anager's  
men u?
```

Press the YES button.

3. Display shows

```
16Jun 19:03:46  
Se t t h e t i m e ?
```

Press YES

4. Display shows

```
16Jun 19:03:46  
Se t t h e h o u r ?
```

Press YES to change the hour

Use the arrow keys to set the hour. Hold down the arrow key to scan quickly through the hours. Press YES when the correct hour is displayed.

5. Display shows

```
16Jun 19:03:46  
Se t m i n u t e s ?
```

Press Yes to change  
the minutes.

Use the arrow keys to set the minute. Hold down the arrow key to scan quickly through the minutes. Press YES when the correct minute is displayed

6. Display shows

```
16Jun 19:03:46  
Se t t h e d a t e ?
```

Press YES to change  
*NO to make no change.*

7. If you answer YES  
display shows

```
16Jun 19:03:46
Year=1996
```

Use the arrow keys to select the year  
When the correct year is displayed press YES

8. Display shows

```
16Jun 19:03:46
Month = Jun
```

Press YES to change

Use the arrow keys to select the month  
When the correct month is displayed press YES

9. Display shows

```
16Jun 19:03:46
Day=16
```

Press YES to change

Use the arrow keys to select the day  
When the correct day is displayed press YES

10. The display now asks you if you wish to review any other user information. Press NO to each question until END OF MENU is displayed.

```
End of menu
```

### CHANGING OR ENTERING DETECTOR DESCRIPTIONS.

If no descriptions have been programmed, each alarm sensor will be identified by its zone and device number.

A 16 character description may be entered if preferred to make identification easier.  
To key in a description.

1. Key in your 4 digit PIN number.

2. Display shows

```
Show manager's
menu?
```

Press YES.

3. Display shows

```
16Jun 19:03:46
Set the time?
```

Press NO.

4. Display shows

```
16Jun 19:03:46
Set the date?
```

Press NO

5. Display shows

```
Review
descriptions?
```

Press YES

6. Display shows

```
Device number 11
Zone 1 Device 1
```

Use the arrow keys to select the device number you require.

7. Press YES if you want to change the description  
(NO key takes you out of description programming altogether).

8. If you press YES the display will delete the current description and will display a choice of characters.

Use the arrow keys to find the character required and press YES to enter it.

```
F>G <H 5 8
L O UN_
```

The above diagram shows the letter G selected. Key YES to enter.

To delete the last letter press the NO key.

The number seen in the top right hand corner is the zone and device number.  
Find the next character using the arrow keys and YES to enter it.

Repeat until the word is built up and then finish with the end of description character

Characters available:

ABCDEFGHIJKLM NOPQRSTUVWXYZ 0123456789()-+=#?/&\*.,;:'

"Space"

"Space"

"END OF  
DESCRIPTION"

## DISPLAYING THE SYSTEM LOG

1. Key in your 4 digit pin number.

2. Press the NO key until the LCD displays

```
Show system
log?
```

Press YES

3. The first item in the log is the most recent event

Press the BACK arrow key to move backwards in time.  
The arrow keys can be used to move up and down the log.  
Press NO key to exit from the log.

```
26Jun 20:02:23
```

## REVIEW DEVICE DATA

1. Key in your 4 digit pin number, wait 3 seconds.

S h o w m a n a g e r ' s  
m e n u ?

Press YES

2. Press the NO key  
until the LCD displays

Review Device Data?

Press YES

3. The display will show

Review Device Data?  
Please Wait.

4. After this the display will show

11                      XX  
FRONT DOOR

5. This display is now showing

11 = Zone One Device One

XX = The Number of transmissions since the panel was last set, up to a maximum of 94 Note this figure will not equal the number of device activations as some conditions will transmit more times than others.

FRONT DOOR is the text description programmed against the relevant device.

6. You can use the arrow keys to look through all the devices on your system or select a particular device.

7. When you have looked at all the required devices press either the Yes or the No key to exit the Menu.

--- End of menu ---

## UNDERSTANDING THE TEXT DISPLAY.

The time displayed will be the time that the alarm or fault occurred.  
The display will automatically clear next time you arm the system.  
If you want to clear a display enter your PIN number followed by Off.

26	June	15:41:22
	Panel disarmed	

Normal daytime display

The panel disarmed or system set messages may only be available for a limited time, your alarm engineer will set this time to meet current regulations, currently 30 seconds max. See engineer option 61 for available settings.

26	June	15:41:22
	Exit fault	

When arming the system with a door open. The display also shows which door has been left open.

26	June	15:41:22
	Entry alarm	

The alarm was activated by exceeding the entry time when disarming. Have your alarm company extend the entry time.

26	June	15:41:22
	Alarm	

An alarm occurred whilst the system was armed. The detector which triggered the alarm will also be displayed

26	June	15:41:22
	Low battery	

A detector has reported a low battery. The detector which sent the signal will also be displayed. If it re-occurs have the battery replaced.

26	June	15:41:22
	Keypad tamper	

15 incorrect key presses have been recorded at the control panel, or a remote keypad has been tampered with. Cancel by entering your 4 digit PIN number.

26	June	15:41:22
	Line fault	

The telephone line has developed a fault. Call your alarm company if it does not clear.

26 June 15:41:22  
Supervisory fault

The radio transmission from a detector has not been received correctly. If it persists call your alarm company.

26 June 15:41:22  
Tamper

A detector has reported a tamper. i.e. a detector cover has been removed.

26 June 15:41:22  
Mains restored

The control panel has recorded a mains interruption.

26 June 15:41:22  
Walk test

When you have carried out a customer walk test the display will show the last detector triggered. You can examine the log to see all the detectors operated during walk test. When you have completed your walk test, key in your PIN number followed by 6 to come out of test mode.

26 June 15:41:22  
Panel tamper

Either the control panel lid has been opened or a fault has developed on the wiring to your external siren. Call your alarm company.

26 June 15:41:22  
Panic alarm

A panic alarm has been received from a remote control, a panic button or a remote keypad. Enter your PIN number to cancel the alarm.

26 June 15:41:22  
24 hr alarm

A detector which is set to be active 24Hrs per day has reported an alarm. The detector will be displayed.

26 June 15:41:22  
Auxiliary alarm

A detector such as a temperature or water level alarm has operated. The device will be displayed.

26 June 15:41:22  
Soak test

A detector which has been disconnected from the alarm system for tests has alarmed. Inform your alarm company.

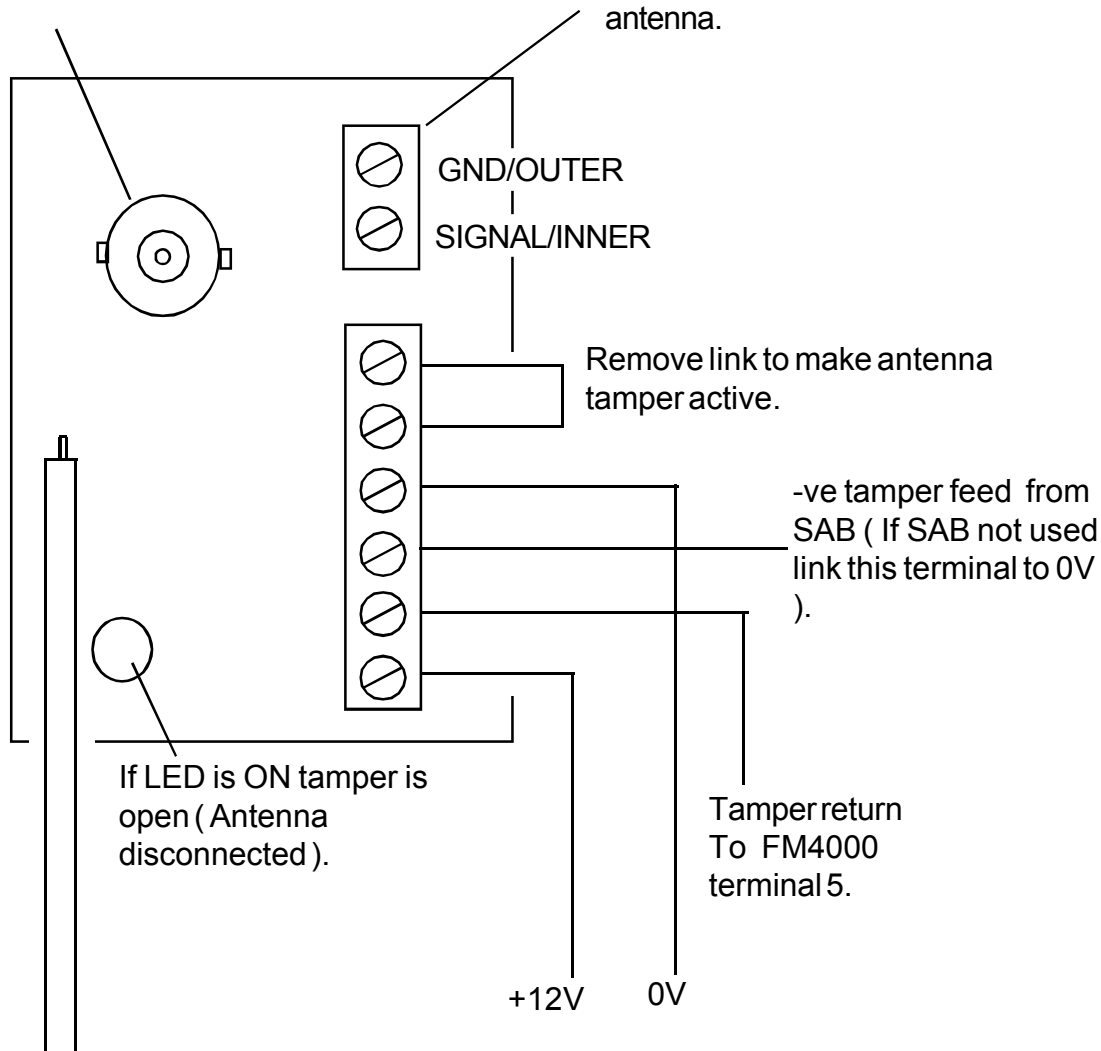
# 4005 ANTENNA TAMPER MODULE

The 4005 is for use with tampered remote antennas.  
When fitted into the FM4000 panel the -ve tamper return from an external siren is connected to this module as shown below.

Mount the module to the right hand side of the transformer in the FM4000 with the single screw supplied.

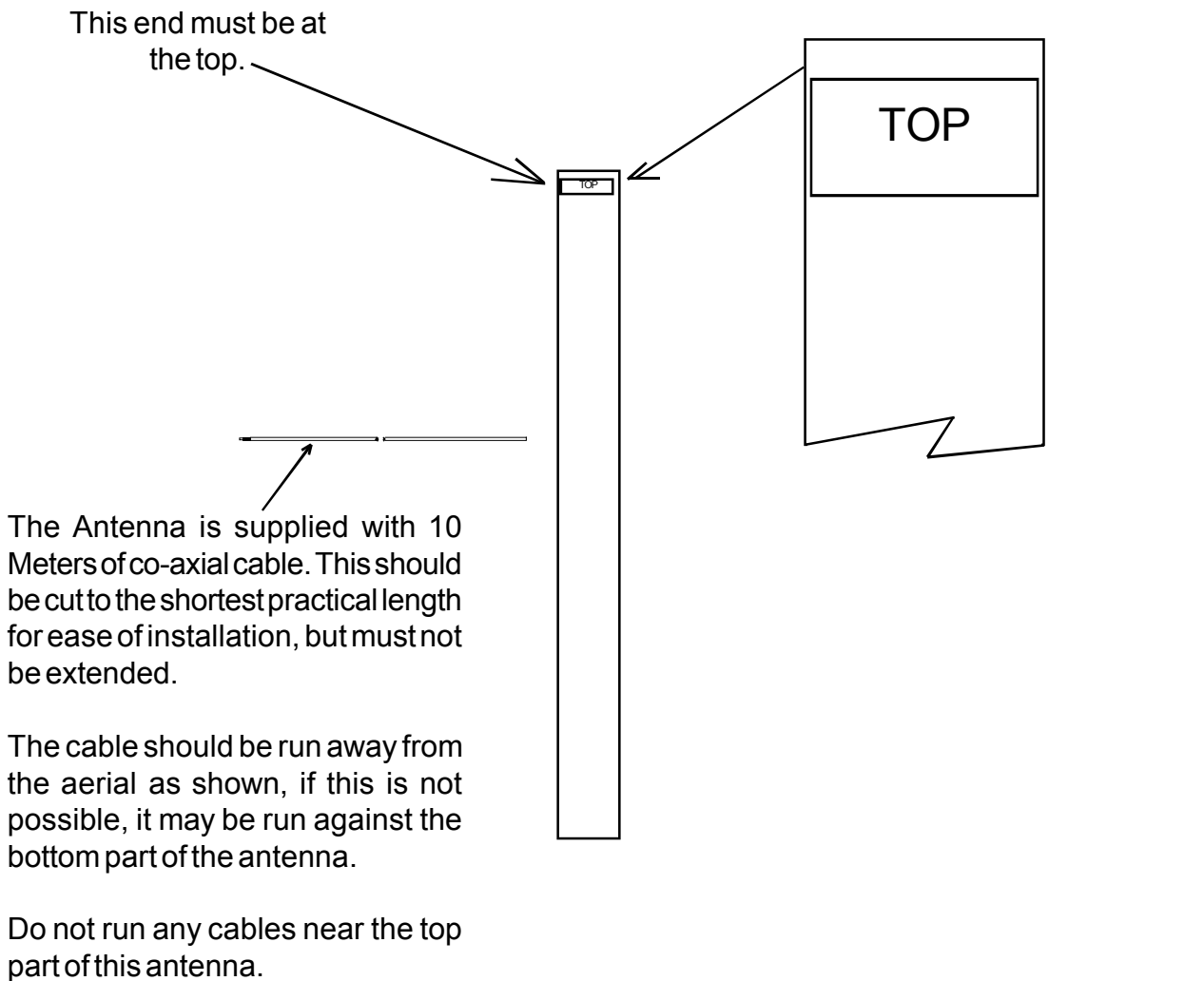
BNC connector for remote antenna.

Alternative connection for remote antenna.



Coax to FM4000 Antenna input terminals  
(Inner to top terminal outer to bottom terminal).

# 4007 REMOTE ANTENNA



Always mount the remote antenna **away from other wiring**, any other **metal objects** and **as high as practically possible** to obtain the best working range from the 4000Xtra control panel.

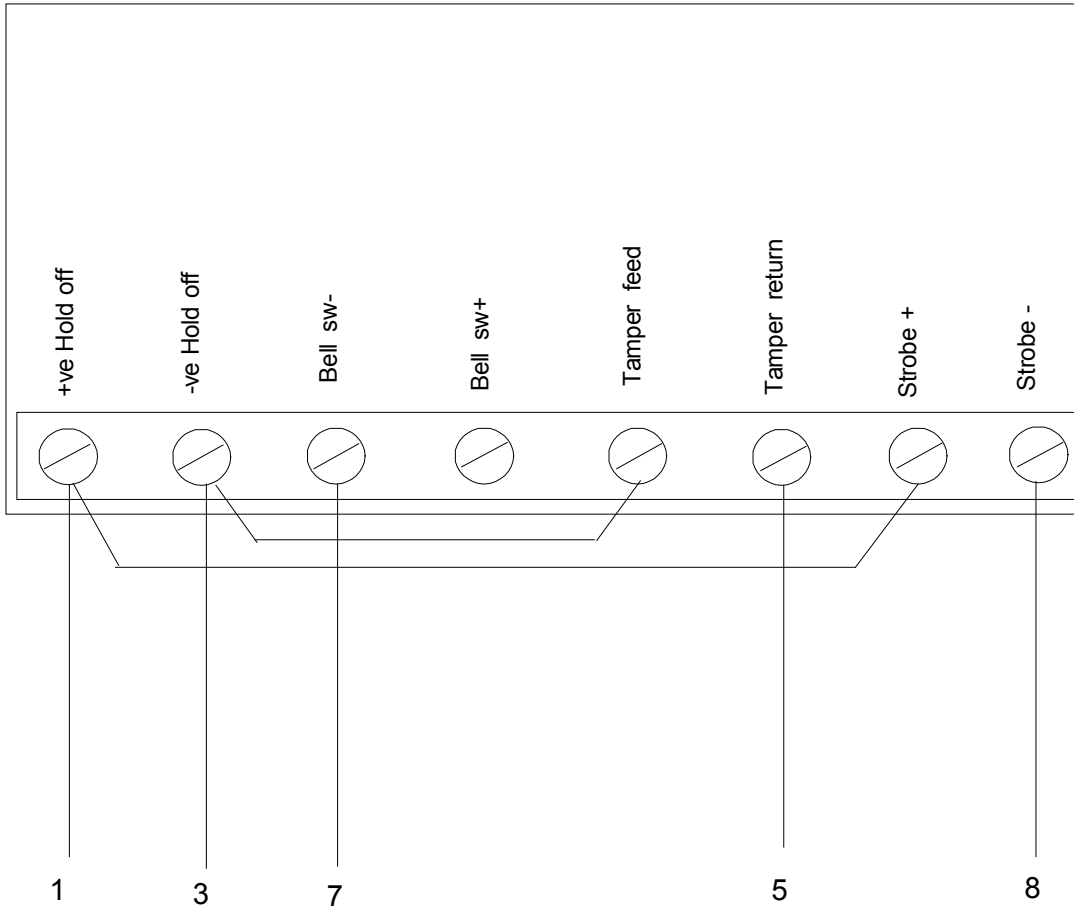
A loft area is often a good location for this aerial as this will typically be high and the aerial is unlikely to be near sources of radio interference. Typical sources of interference include:- PC's TV's and Flourescent Lighting.

When the remote antenna is used, the antenna fitted into the FM4000Xtra control panel **MUST** be disconnected.

When connecting the co-axial cable directly into the control panel without using the tamper module, the centre core should connect to the ant connection in the control panel & the outer screen to the ground connection. Take care to ensure that no stray whiskers can short between these two connection points.

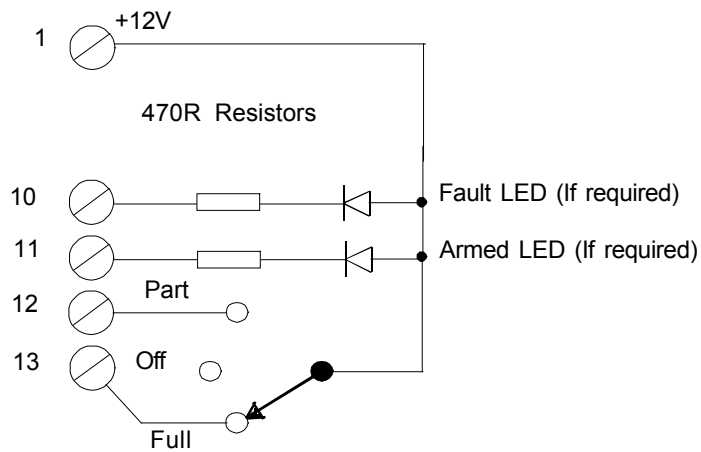


## SAB CONNECTION TO THE FM4000

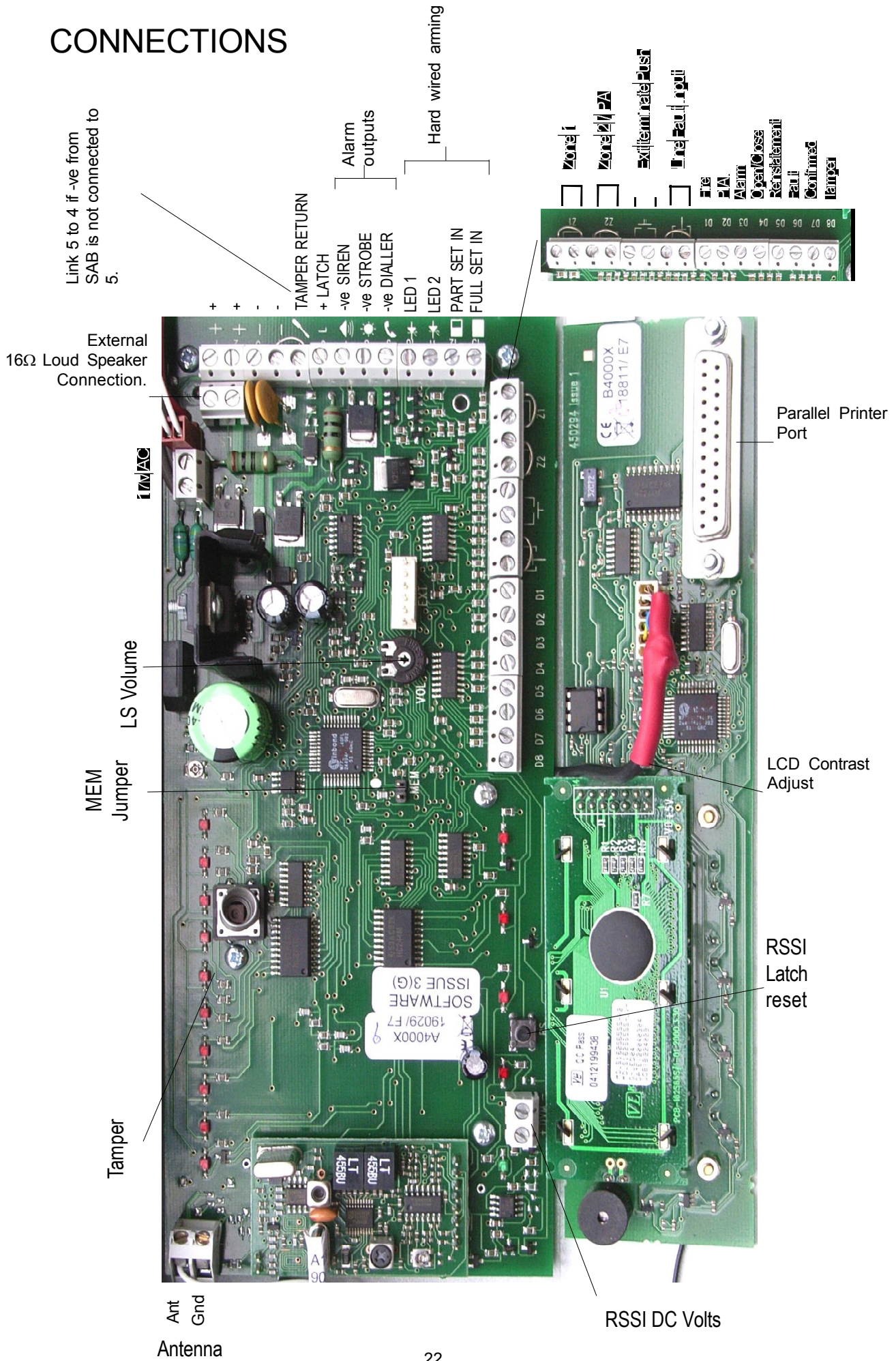


Connections on the FM4000 main board

## WIRED KEYPAD ARMING



# CONNECTIONS



Link 5 to 4 if -ve from SAB is not connected to 5.

External 16Ω Loud Speaker Connection.

MEM Jumper  
LS Volume

170V AC

Tamper

Ant Gnd  
Antenna

RSSI DC Volts

RSSI Latch reset

LCD Contrast Adjust

Parallel Printer Port

Zone 1  
Zone 2/PA  
Exit/terminate Plus  
Line Receiver  
Fire P.A.  
Alarm  
Open/Close  
Re-statement  
Fault  
Confirmed  
Tamper

TAMPER RETURN  
+ LATCH  
-ve SIREN  
-ve STROBE  
-ve DIALLER  
LED 1  
LED 2  
PART SET IN  
FULL SET IN

Alarm outputs

Hard wired arming

Link 5 to 4 if -ve from SAB is not connected to 5.

# FAULT FINDING GUIDE

**CUSTOMER HAD AN ALARM** Ask them to press the Full set button and tell you what indicators are on.

The LED's indicate the cause of the alarm and also the setting status at the time.

**MAINS LED FLASHING** Mains failure (Restore supply)

**ZONE LED FLASHING (in exit)** Check that doors and windows are closed.

**Flashing with tamper LED** A detector has an open tamper.

**Flashing with battery LED** The detectors batteries need replacing.

**ALARM LED ON** - Full alarm. The LEDs indicate what caused the alarm.

If Engineer reset is programmed into the panel an engineer reset will be required before the system can be re-armed.

**FLASHING WITH ZONE LED** A detector on soak test has triggered whilst the system was armed.

**FLASHING WITHOUT A ZONE LED** An engineer reset is required.

**BATTERY LED ON** The control panel's battery is disconnected or needs replacement.

**FLASHING:** Detector has a low battery. The zone LED will flash to indicate which one.

**SIGNALLING LED ON** The system is being blocked by a continuous transmission.

**FLASHING** If flashing on its own, an external line monitor has signalled that the telephone line is at fault.

**Flashing together with a zone indicator.** The system is set as a supervised system and the detector indicated by the flashing zone LED has failed to report in. ( Re-site the detector where there is good radio reception.) Use the RSSI output to check.

**CONTACT TRANSMITTER NOT WORKING** Check the magnetic contact is operating correctly. Open lid and check what zone it should be on. Go into the panel engineer mode and check if it has been programmed onto the correct zone.

Note: the panel will not allow you to program a detector onto two zones. When programmed onto a zone any previous zone allocation will be deleted.

**PIR NOT WORKING** The detector needs at least 6 minutes to 'settle' when the batteries are first fitted or replaced.

Ensure the device is programmed into the control panel.

Set the control into operator walk test mode and walk test the detector after pressing 'LED Guide'.

Pressing the 'light guide' button overrides the 2 minute inhibit timer.

Opening the cover should trigger a 'Tamper' at the control panel.

**CUSTOMER HAS FORGOTTEN THEIR CODE** Open the panel and short out the MEM jumper. The user and engineer codes will be restored to the factory defaults 1234 & 4679. No other programming is affected.

