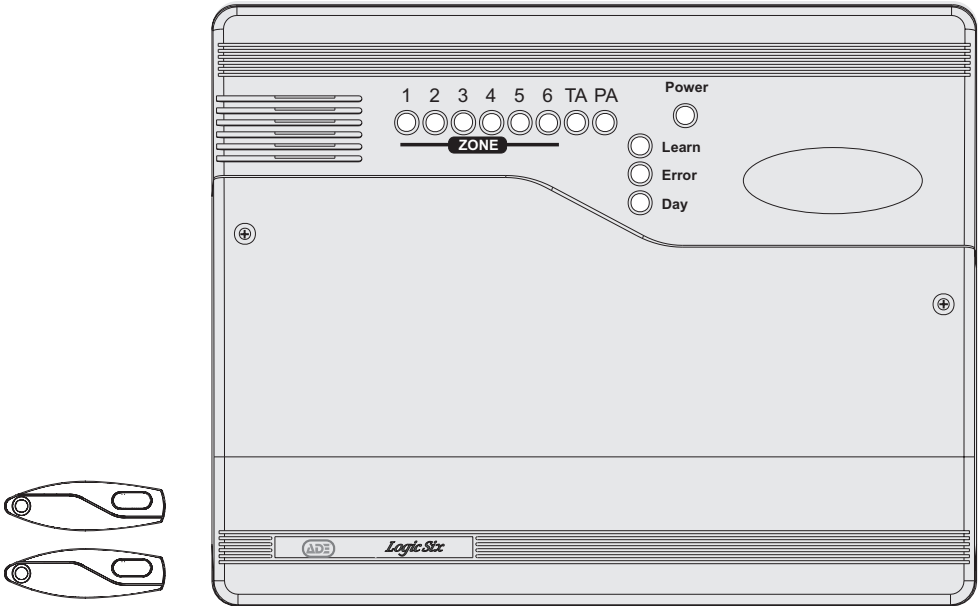


# *Logic Six* Intruder alarm system Engineering Information



**LGSIX/01** *Logic Six* panel with two pre learnt  
Keyfobs

The above intruder system is designed to comply with the installation requirements of BS 4737 1986/87.

## Contents

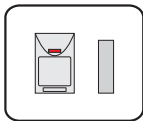
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## Features

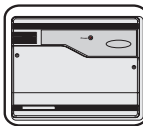
- 6 Security zones
- PA input
- Tamper input
- Outputs for External siren (Bell) and Strobe
- Pre-configured Part set program selectable by DIP switch.
- Entry Time duration selectable by DIP switch
- Entry Deviate
- Alarm Cycle Counter
- Strobe confirmation on Set
- Memorises first and subsequent zone intrusions in one alarm period
- Walk Test facilities by push button control
- Alarm Test facilities by push button control
- Battery capacity of up to 2.1Ah
- Up to 8 keyfobs can be used with the panel (2 Keyfobs supplied pre learnt)
- Learn mode to learn new keyfobs
- Erase mode to disable lost or stolen keyfobs

## Installation Design

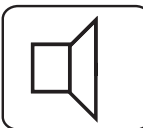
The purchase of this alarm system represents a major step forward in the protection of the property and its occupants. It is important to plan the installation before proceeding following the procedures and advice contained in this manual.



Plan the position of each part of the alarm system and the cable runs. **Detectors** should be sited with particular regard to the degree of coverage required and the function of each of the zones.



All of the system wiring is connected directly to the **panel**. The intruder panel must be installed near an entry/exit point.



One additional internal **sound speaker** is recommended, it will provide high volume alarm tones and low volume entry/exit tones. Speakers

should be positioned to provide good sound distribution throughout the building and so that the exit tone is audible outside the main entry / exit door. This will enable the system operator to check that the system is setting correctly.



Finally note that the **total current** output of this control system (in alarm condition) is 1A when supported by a fully charged battery. Calculate the

total current consumption of every part of the system including the panel, external siren with strobe light (bell box) and detectors to ensure that this rating is not exceeded.



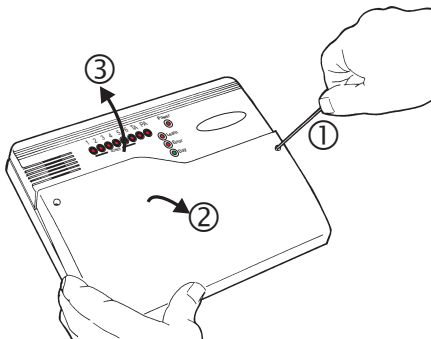
Depending on which area you live, you may be required, by law to notify the **Local Authority** and Police of the new security alarm

installation. The local authority requirements may differ from area to area, therefore it is advisable to contact local environmental officer to obtain full details of your area requirements.

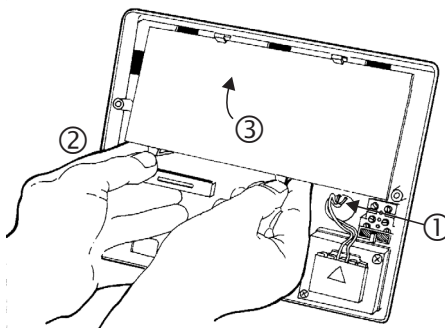
## Fixing the control panel

**Caution:** When positioning the control panel ensure that it is located in a dry place away from damp areas.

- a. Remove the front cover(s) from the base assembly.



Disconnect the transformer wires from the board, these are marked **AC**. Carefully remove the board by gently pushing down the holding clips on the bottom edge of the board and withdraw it from the base.



**Note:** When replacing the board align it on the round support pillars to the bottom and allow it to click down past the clips at the top of the case. Refit the transformer wires into the terminal.

## Engineering information

- b. Fit the panel to the wall with suitable fixings. Ensure the wall surface is flat to prevent base distortion. There are cable entry holes provided in the rear of the base and around the outside edges through the thinned out plastic sections which may be cut away as required.
- c. The hole provided adjacent to the mains transformer is a dedicated mains cable entry point.

There are three fuses mounted on the circuit board, all are 20mm quick blow.

F1 1.6A - to protect the +ve line of 12V battery  
 F3 1A - to protect the Speaker 13V supply  
 F5 1A - to protect the Siren & Strobe supply

As supplied, there are wire links are fitted across the PA and Tamper terminals to represent a closed circuit.

## Wiring the system

**Caution:** Always **power-down** the panel when wiring external circuits, to prevent damage to the panel electronics.

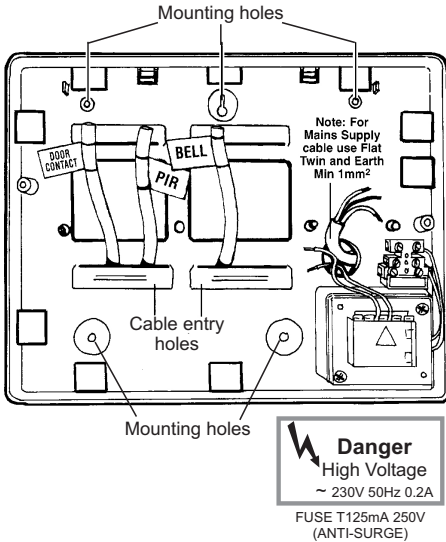
Systematically wire and test each circuit:

- Zones, Tamper and PA circuits
- Finish by wiring any additional extension speaker sounders, external siren (bell) / strobe and the 13V supply.

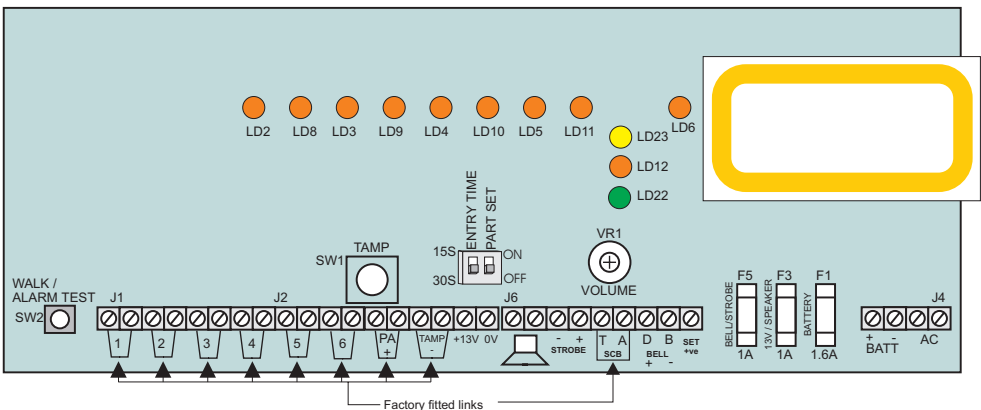
## Tamper network

The Tamper circuit is used to protect all cables and detectors in the system from unauthorised access including the panel cover.

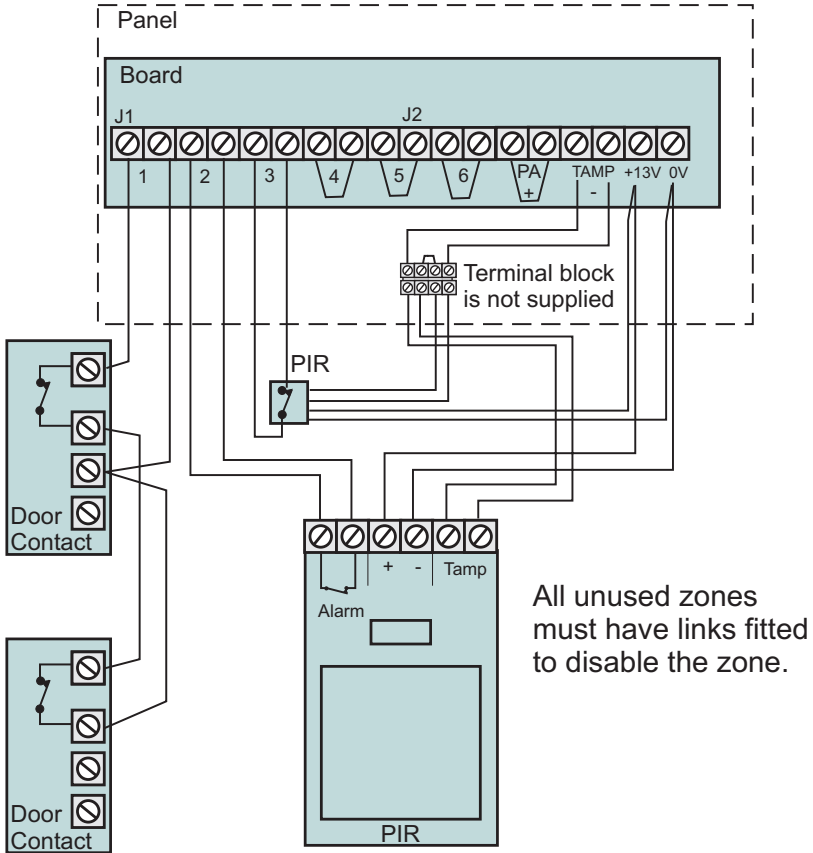
The zone and PA tampers should be series wired and connected to the TAMP terminals. The terminals T & A are for the external siren tamper. Tamper alarms that occur in the Day mode operate internal sounders only. Tamper alarms in Set cause a full alarm condition. Tamper is indicated by the Tamper TA indicator.



## Board



**Security zones**



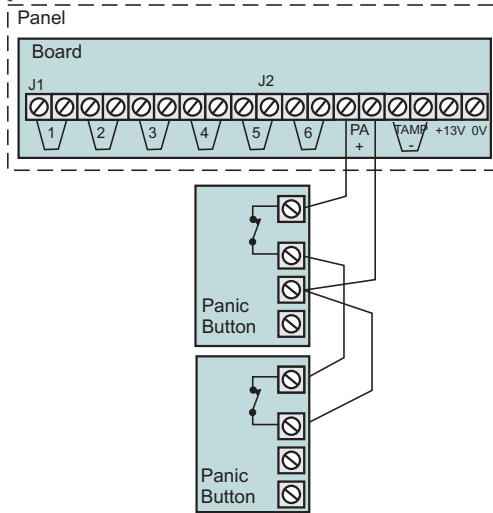
**Note:** The panel is supplied with wire links for unused zones. All unused zones must have links fitted to disable the zone.

It is recommended that no more than 10 magnetic contacts are connected to the same zone.

## PA circuit

Any quantity of normally closed type personal attack button may be wired in series and then connected to the PA circuit.

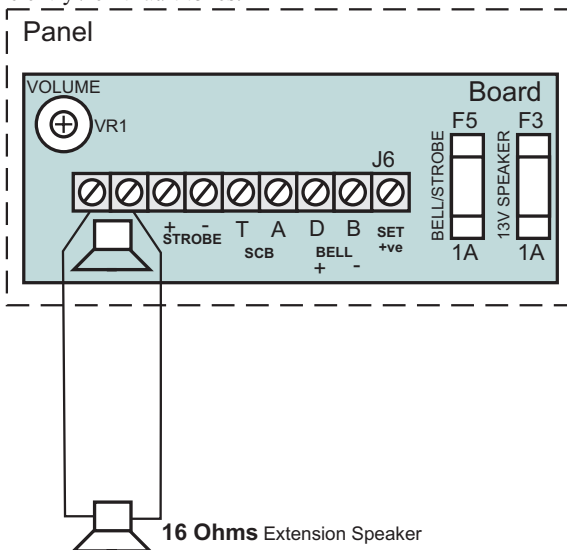
Operational in Day and Set, the PA circuit will cause a full alarm condition when activated. PA is indicated on the control panel as PA.



PA buttons may be fitted near the front door, or in a bedroom.

## Extension speaker

Extension speaker may be connected to the loudspeaker terminals to produce high volume alarm tones and low volume entry / exit fault tones.



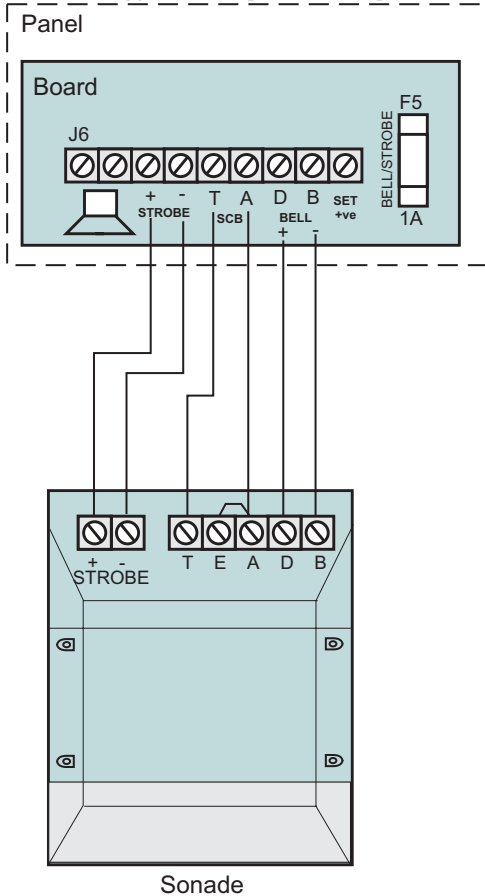
A 16 ohms extension speaker may be wired across the speaker terminals. Mounted in convenient position within the installation the extension speaker will reproduce all of the alarm tones generated by the control panel.

A control marked VOLUME in the centre of the board may be used to adjust the low volume entry/exit tones to suit environmental conditions.

## External siren Output (Bell box)

The external siren (bell box) is usually installed in a high position from where the siren could be seen and heard.

Terminal T A D B are for connecting to the external siren. These terminals provide a power/hold-off supply, sounder trigger and tamper circuit to protect the external siren housing.

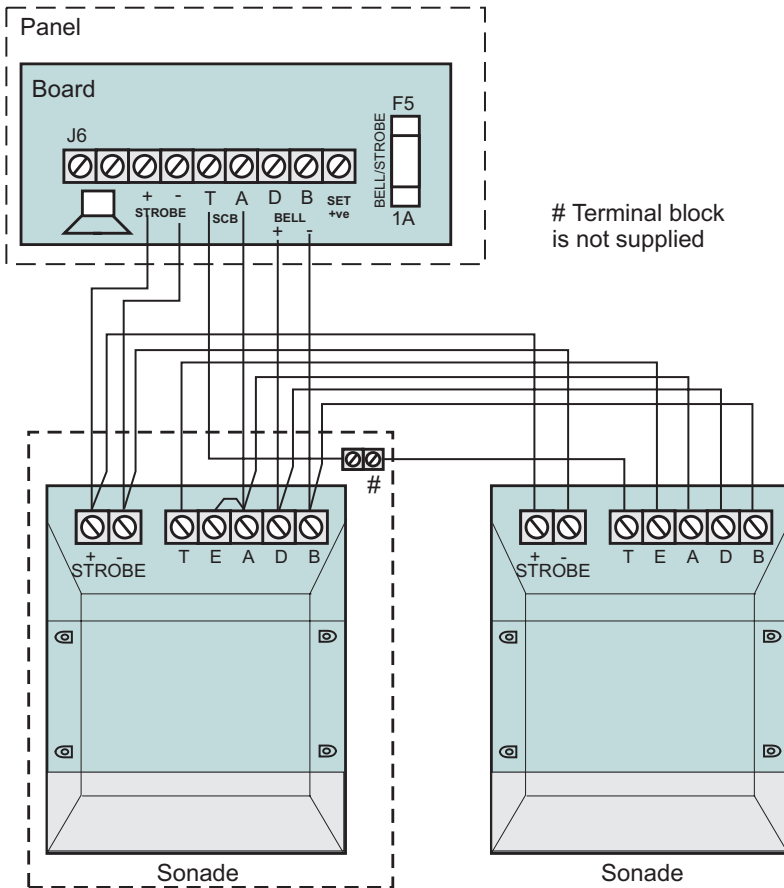


The terminals are summarised as follows:

- T - -Ve tamper return
- A - -Ve supply (0V)
- D - +Ve supply (12V)
- B - -Ve Sounder trigger

For ease of installation, ADE external sirens and modules use the same markings.

Where a discrete external siren is used, it should be connected to terminals D & B. Terminals T & A are then used for tamper protection for the housing.



Where self contained / powered sounders are used, carefully follow the manufacturers instructions, match each of the terminals to those above.

### 13V Supply output

The 13V output is to power detectors which require a voltage supply (PIR detectors etc). The supply is present at all times and may be used to supply a total load of 350mA.

### Set +VE

The output, marked SET +VE is used with latching detectors. The output becomes positive on correct Set of the system and is removed on UNSETTING the system.

**Factory set condition**

Keyfob 1 and 2 (supplied) - Learnt  
Keyfobs 3 to 8 (optional) - - Require learning  
External siren *Bell* Duration 20 minutes  
External siren *Bell* Delay - - No delay

*Full Set*

Zone1 - - - - - Timed  
Zone 2- - - - - Time inhibited  
Zone 3, 4, 5 & 6 - - - - Immediate  
Entry time (timed zone)- 30seconds(default)  
(15 seconds via setting DIP switch)  
Exit mode is timed - - - 30 seconds

*Part set (DIP switch selectable see page 12)*

Zone 1, 2 & 3 - - - - - Timed  
Zone 4- - - - - Immediate zone  
Zone 5 & 6- - - - - Omitted zones  
Entry time (timed zone)- 30seconds(default)  
(15 seconds via setting DIP switch)  
Silent Exit mode is timed 30 seconds

*Applicable for both full and part set:*

Tamper TA 24 hour alarm  
Personal Attack PA 24 hour alarm  
Security Zones - - - - - Zones 1...6  
Zone debounce period - - - 640mS ALL zones

**Zone Function**

The following are definitions of zone functions:

**Timed** : This function would be used to protect the main entry/exit door of the entry route.

**Time inhibited (Walk through)** : This is a zone which, on setting the panel, allows access to the Entry / Exit zone. However, if the panel is set and an time inhibited zone is triggered before an Entry /Exit zone then an alarm will be generated immediately.

**Immediate**: This is a zone which will, when entered, go into alarm when the panel is set.

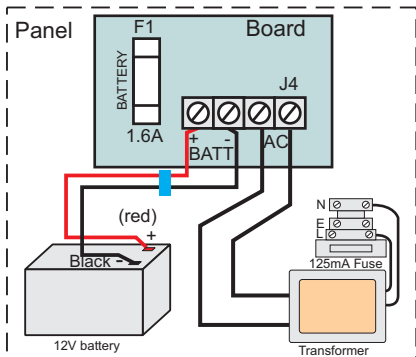
The **Entry deviate** feature permits an immediate zone to be activated during the entry period without causing a full alarm.

**Unused** : An unused zone that has been linked out will be ignored by the panel.

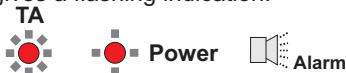
## First Power up

Before power up fit the top cover on to the base and connect the speaker wires. Leave the cover in position throughout the reset of the installation.

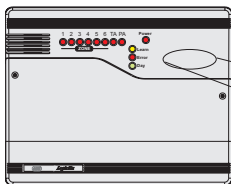
- Check that the factory fitted links are connected to terminals unused Zones, PA, TAMP and T-A.
- Fit the battery wires to the BATT terminals on the Board, Red to + and Black to -.



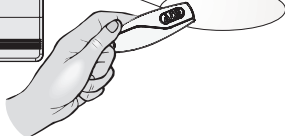
- On connecting the battery the system will now go into alarm condition, the Tamper LED is lit and the Power LED gives a flashing indication:



- Fit the cover to hold down the tamper spring at the bottom centre of the board.
- Offer a keyfob to the centre depression on the panel. Note the **Tamper** LED and **Alarm** switches Off and the **Day** LED is lit.



Offer keyfob to the Panel and withdraw

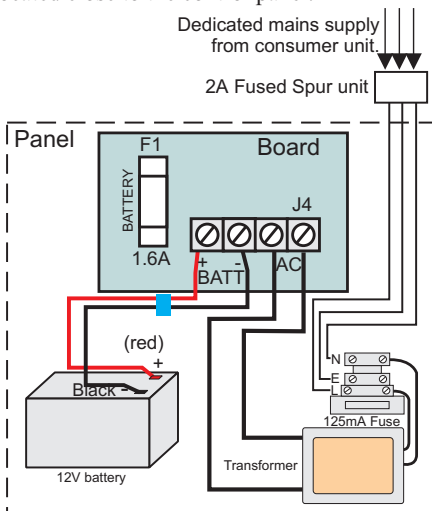


Keyfob recognition beep

**Note:** If you do not withdraw the keyfob after it is recognised by the panel then you run the risk of entering an undesired mode of operation.

## Mains Connection

The mains power should be connected using a 3 core cable of not less than 0.75mm sq. from a fused spur to the mains connector inside the control panel. The 2 A fused spur must be located close to the control panel.



**Note:** The mains supply must be connected by a technically competent person and according to current IEE regulations.

**Caution:** To avoid the risk of electrical shock you must always totally isolate the mains supply before opening the control panel cover(s).

- Mains Input Fuse rating: 125mA, 250V type T (anti surge) and of a type approved to IEC 127 part 2 sheet III.

On connecting the mains supply to the panel the power indicator is lit.



**Power** (Changes from flashing to steady)



## Testing the system


Complete the wiring of the system and then:

- Program the panel.
- Fully test the system and ensure it is fault free
- Fill in the installation log at the back of this manual and retain it for future reference.
- Finally explain the operation of the system to the end user. **The Operating Instructions are attached to the centre of this manual. Detach them and leave them with the user.**


### Key

  LED steady On indication

  LED flashing indication


 LED Off


Internal sound

 Sound description

**NOTE:** In general a flat beep is an indication of not recognised keyfobs.


External devices

 Strobe

 External Siren

## System indications

 Day  Power - Unset system indication

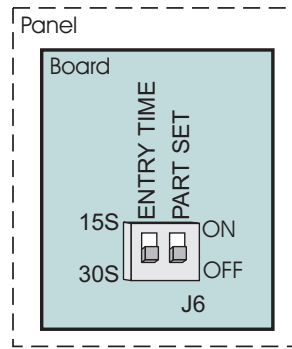
 Power - Set system indication

**Note:** The Power LED will give a flashing indication when there is a mains supply failure to the panel.

## Programs

The panel offers Full Set or selectable Part Set routine and programmable entry time. As default the panel is set for Full Set and an Entry time of 30 seconds.

- Full Set** : Arms all of the zones and become Set as the user leaves the property after the Exit time of 30 seconds.
- Part Set** : To protect the downstairs areas of the house at night the Zones 5 and 6 are omitted from being set as the user goes upstairs after the Exit time of 30 seconds.





**Note:** The Part Set assumes Zone 5 and Zone 6 are upstairs zones.

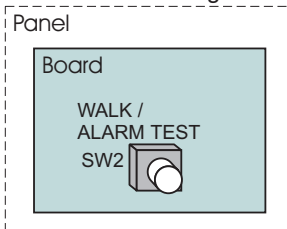
- Entry time 30 seconds** (factory default): Allows the user to enter the premises and unset the system within 30 seconds.
- Entry time 15 seconds** : Allows the user to enter the premises and unset the system within 15 seconds.

## Walk tests



The walk test function allows each detector to be checked in order to verify that they are functioning correctly.

To enter walk test the panel must be in Day mode with the  DAY LED lit:

- a. Open the bottom cover of the panel. Note this will cause a tamper alarm.
- b. Present a recognised keyfob and the alarm sound stops. Tamper  TA LED will flash to give a tamper indication.
- c. Momentarily press the PCB mounted push button. Note do not hold the button down or it will go into Walk test.



The  DAY LED starts to flash.


- d. Upon activation of any zone, the relevant  ZONE led will latch up and a "Zone fault" tone is emitted.
- e. Pressing the push button again at any time will clear the latched LED and walk test is restarted.
- f. On completion of Walk Test, close the panel cover and an "OK" tone is emitted and the panel returns to Day mode with the  Day LED lit.

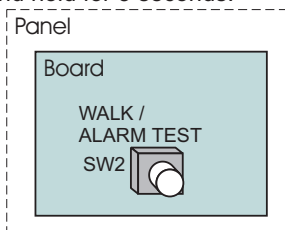
## Alarm tests


The alarm test function allows you to test the Strobe, Siren (*Bell*), Low and High volume sounders of the system, SET+ output.

The Alarm Test mode could also be activated while in Walk Test mode, if you are doing this go straight to step d).

To enter Walk Test mode the panel must be in Day mode with the  DAY LED lit:

- a. Ensure the bottom cover of the panel is open. Note this will cause a tamper alarm.
- b. Present a recognised keyfob and the alarm sound stops. Tamper  TA LED will flash to give a tamper indication.
- d. Press the PCB mounted push button and hold for 3 seconds.



- e. The tests below are performed consecutively. Automatic advance to the next test after 3 seconds.
  - 1) Low Volume Sounders
  - 2) High Volume Sounders and Strobe
  - 3) External Bell and Strobe
  - 4) SET+ output and Strobe
- f. On completion of Alarm Test an "OK" tone is emitted and the panel returns to Day mode with the  DAY LED lit. Close the bottom cover of the panel and the Tamper TA LED switches Off.

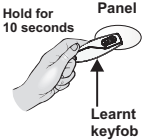
**How to learn new keyfobs**

Using a recognised *learnt keyfob* the *panel* can learn further keyfobs. A total of 8 keyfobs are recognised by a Panel. You may want to do this if you have acquired additional keyfobs. Using these procedures the panel will still memorise previously learnt keyfobs. New keyfobs must be learnt by the *panel*.

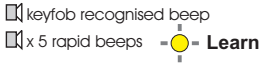


① Ensure the *panel* is in the day mode with the **Day** LED lit. You should have one *learnt keyfob* and the new keyfobs available.

**i** When an unrecognised keyfob is offered to the *panel* it will cause the **Error** LED to be lit and a continuous sound is emitted from the local sounder.



② Hold the recognised '*learnt*' *keyfob* such that it touches the centre depression on the Panel and keep it there without movement for **10 seconds**. You will hear a keyfob recognition beep and **10 seconds** later five rapid beeps from the local sounder.



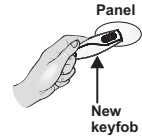
You are now in the **learn mode**. The **Learn** LED will give a flashing indication and the **ZONE** LEDs change from flashing to steady On indication to show recognised or *learnt keyfob*. The *Panel* is now ready to learn *new keyfobs* signalled by the next flashing **ZONE** LED. Withdraw the keyfob.



Indication given assumes 2 keyfobs were previously learnt by the Panel

**i** In the **learn mode** when an already learnt keyfob is offered to the *Panel*, an Error indication will be given.

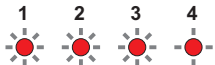
The **learn mode** will timeout after 10 seconds if no action is taken to learn new keyfob



③ Offer a *new keyfob* slightly touch it on the centre depression of the *Panel*. A learnt indication is given of the *new keyfob* when the flashing **ZONE** LED changes to steady On indication and there is a recognition beep given by the local sounder. Shortly after the next numbered **ZONE** LED will start flashing. Withdraw the learnt keyfob.

☐ keyfob recognised beep

You now have up to 10 seconds to learn another new keyfob.



**i** For keyfobs 7 and 8 the indications are TA and PA LEDs respectively.

☐ x 2 beeps

④ Repeat ③ to learn the *new keyfob*.



Once all the keyfobs are recognised '*learnt*' by the *Panel* wait for just over 10 seconds for the Panel to exit the **learn mode**, this is announced by two beeps from the local sounder and return to **Day** mode indication.

## How to re-learn all keyfobs

Using a recognised *learnt keyfob* the *Panel* can re-learn up to 8 keyfobs. You may want to do this after a keyfob is lost or stolen and you want to prevent the use of it to operate the system. Keyfobs must be learnt by each *Panel* installed in a system

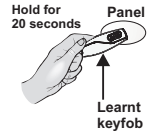


By entering the **learn mode** in this manner you will erase all recognition of previously learnt keyfobs at the *Panel*, except for the one used to enter the **learn mode**.



①

Ensure the *Panel* is in the day mode with the **Day** LED lit. You must have one *learnt keyfob* and up to 7 further keyfobs to be learnt. Have all the keyfobs available.



When an unrecognised keyfob is offered to the *Panel* it will cause the **Error** LED to be lit and continuous sound to be emitted from the local sounder.

☐ keyfob recognised beep

②

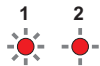
Hold the recognised '*learnt*' keyfob slightly touching the centre depression on the *Panel* and keep it there without movement for **20 seconds**. Initially you will hear a keyfob recognition beep and **10 seconds** later five rapid beeps from the local sounder. After another **10 seconds** you will hear 5 rapid beep tone from the local sounder. You are now in the **learn mode**. The **Learn** LED will give a flashing indication and the **ZONE 1** LED changes from flashing to steady On indication to recognise the *learnt keyfob*. The *Panel* is now ready to learn the *next keyfob*, signalled by the **ZONE 2** LED flashing. Withdraw the learnt keyfob.

● Learn

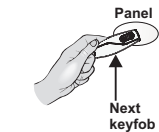


☐ x 5 rapid beeps

● Learn



☐ x 5 rapid beeps



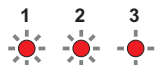
③

Offer the *next keyfob* slightly touch it on the centre depression of the *Panel*. A learnt indication is given of the *next keyfob* when the flashing **ZONE** LED changes to steady On indication and there is a recognition beep given by the local sounder. Shortly after the next numbered **ZONE** indicator will start flashing. Withdraw the learnt keyfob.

☐ keyfob recognised beep

You now have up to 10 seconds to start learning another keyfob.

● Learn



☐ x 2 beeps



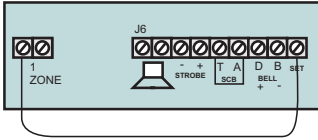
④

Repeat ③ to learn the *next keyfob*.

Once all the keyfobs are recognised '*learnt*' by the *Panel* wait for just over 10 seconds for the *Panel* to exit the **learn mode**, this is announced by two beeps from the local sounder and return to **Day** mode indication.

## How to learn keyfobs if none are recognised

You will only need to learn keyfobs in this manner if no keyfobs are recognised by the *Panel*. A *Panel* can learn up to 8 keyfobs following power up of the intruder system. You must have all the keyfobs to be learnt available. Keyfobs can be learnt by each *Panel* installed in a system



- 1 Ensure the *Panel* is connected to the intruder system and the link is fitted on the *Panel PCB* between *Z1* and *Set*.

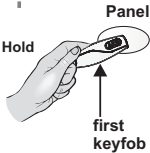
Power up the intruder system you will hear five rapid beeps to acknowledge the *Panel* is in the **Learn mode**.

### POWER UP THE SYSTEM

x 5 rapid beeps

- Learn

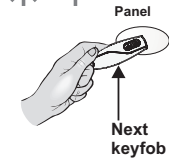
1



keyfob recognised beep

- Learn

1 2



keyfob recognised beep

- Learn

1 2 3

x 2 beeps

Power

Day

- The **learn mode** will NOT timeout until the first keyfob is learnt.

- 2 Hold the *first keyfob* slightly touching it on the centre depression of the *Panel*. Once the *first keyfob* is acknowledged by the *Panel* the **ZONE 1** LED changes from flashing to steady and there is a recognition beep given by the local sounder. Withdraw the learnt keyfob. The *Panel* is now ready to learn the *next keyfob*, signalled by **ZONE 2** LED flashing.

- 3 Offer the *next keyfob* slightly touching it on the centre depression of the *Panel*. A learnt indication is given of the *next keyfob* when the flashing **ZONE** LED changes to steady On indication and there is a recognition beep given by the local sounder. Shortly after the next numbered **ZONE** LED starts flashing. Withdraw the learnt keyfob.

You now have up to **10 seconds** to learn the *next keyfob*.

- 4 Repeat 3 to learn the next keyfob.

Once all the keyfobs are recognised 'learnt' by the *Panel* wait for just over **10 seconds** and the *Panel* will exit the **learn mode**, this is announced by two beeps from the local sounder and return to Day mode indication.

- 5 Now remove the link between Z1 and Set.

## **NVM Error**

A Non Volatile Memory NVM error indication is given by a flashing Error LED. If an NVM error occurs then you will need to re-learn all the keyfobs, see page 16.

## **Re-arm**

After an alarm the panel will automatically reset itself when the external siren (bell box) 20 minute timer has expired.

## **Alarm Cycle Counter**

An alarm cycle is considered as the duration of an alarm from trigger to the end of 20 minutes operation of the external siren. The panel allows three alarm cycles during either set or unset period. When the third alarm cycle expires the panel is shut down, the storobe continues to operate. The panel is unset in the normal way see operating instructions.

## Faults

Fault conditions are often the result of minor installation errors or misinterpretation of the equipment being installed. The following points outline the most common installation and commissioning faults.

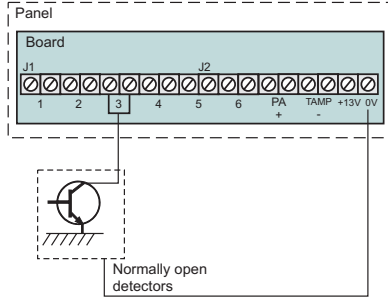
- a. If a tamper TA or Personal Attack PA fault is present on the system, a flashing indication is given of first fault, it will go to a lock out condition (showing the appropriate indication). Rectify the fault and offer the keyfob to the panel to remove the fault.
- b. The most common cause of a zone not responding to detection is incorrect wiring. Normally closed detectors must be wired together in a series loop before connecting into the appropriate ZONE terminals. Tamper are series wired in the same manner.
- c. Where a permanent zone fault is showing and the loop resistance is found to be in order, the most probable cause is a short circuit between the zone wiring and the tamper wiring. When measured with a multimeter the series resistance between the zone and tamper wiring should be infinitely high.
- d. If totally lost as to the cause of a fault, remove ALL wiring from the Board. Refit the 9-links and test the system. Never fit links to any positions other than those marked on the Board.
- e. Before testing or replacing any fuses, ALL power must be removed. Fuses which fail continually are almost certainly the result of a short circuit or low resistance across the 13V supply or external siren (bell box) supply (terminal D).

Whenever working close to the mains supply or connector, you should exercise extreme caution always isolate the mains supply before

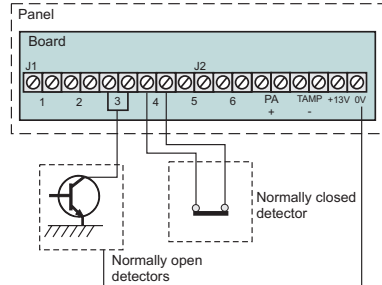
removing the control panel covers.

Where normally open and closed detectors are being used these must be wired to a zone in the manner shown.

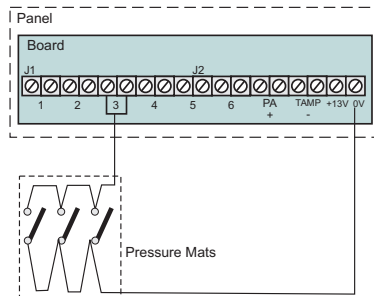
The example below shows how to wire normally open detectors on zones 3.



The example below shows how to wire normally open detector on zones 3 and a normally closed detector on zone 4.



- f. Where **Pressure mats** are being used these must be connected to a zone in the manner shown. The example below shows pressure mats connected to zones 3.



**Specification**

Indicators on Control panel	Zone 1-6 (red), Tamper - TA (amber), Personal Attack-PA, Power, Learn (amber), Error (red) and Day (green)
6 Zones	+ve loop, Security zones
Tamper	-ve loop, always active
PA	+ve loop, always active
User keyfobs	Up to 8 keyfobs can be learnt to operate with the panel
Keyfob operating range	20mm nominal form centre depression
Proximity reader	125KHz inductive
External siren (Bell box) Output	12V, time 20 minutes continuous
Strobe Output	12V latching
Extension Speaker	16 Ohms 260mA
Exit time	30 seconds
Entry time	Programmable by DIP switch 15 seconds or 30 seconds
Full/Part Set	Programmable by DIP switch
Walk and Alarm Tests	Selectable by push button switch
Zone Input Delay	640mS
Set +ve Output	0V in Day (sinking 40mA) 12V in Set (Sourcing 10mA)
Current Consumption Control panel	Standby 80mA Alarm 250mA
Low voltage output	13.8V dc stabilised (+/-5%) up to 350mA
Rechargeable Battery	12V, 1.2 or 2.1Ah
Charge Voltage	13.8V dc (+/-5%)
Board Fuses	1.6A & 1A 20mm quick blow
Mains Input fuse	125mA, 250V type T (anti-surge) type approved to IEC 127, part 2 sheet III

Total Current Output	1A when supported by a fully charged battery
Mains Supply Voltage	230V (+/-10%) 50Hz max load 0.2A
Ambient Operating temperature	0°C to 40°C
Enclosure construction	3mm Polycarbonate
Panel dimension	H 200mm W 253mm D 55mm
Keyfob dimension	L 58.5mm W 18.5mm

# Engineering information

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## Servicing organisation Details

Servicing organisation name:

---

Telephone number:

---

Date of installation:

---

Account Number:

---

## Parts

Below is a list of approved parts and accessories.

LGSEX/01 *Logic Six* panel  
(supplied with 2 learnt keyfobs)  
SS/F Spare Keyfob

	Resistance	Area protection and equipment used (eg PIR, Contacts..)
Zone 1		
Zone 2		
Zone 3		
Zone 4		
Zone 5		
Zone 6		

The *Logic Six* panel conforms to the requirements of the European R&TTE directive 1999/5/EC and carries the CE mark. This product is intended for use in the UK.



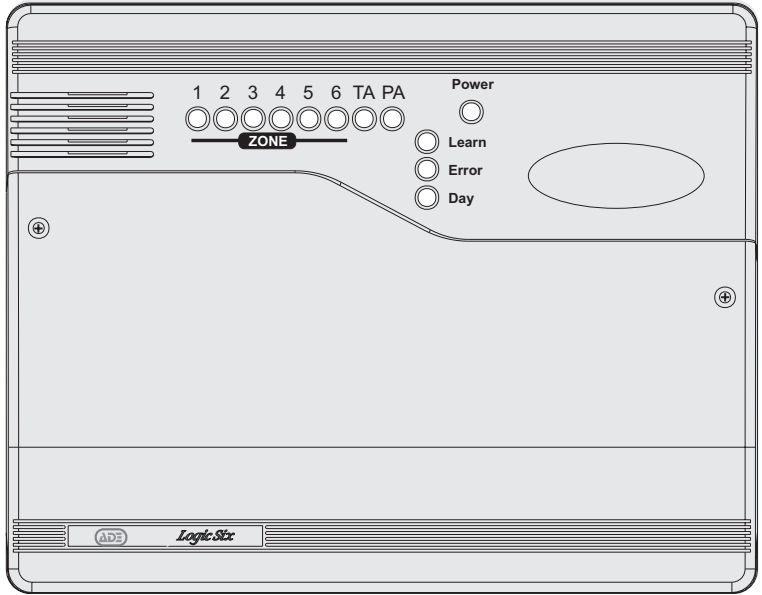
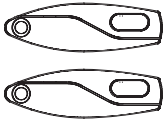
**ED&S**  
**The Arnold Centre**  
**Paycocke Road**  
**Basildon Essex**  
**SW14 3EA**

For Technical Support

 : 01268 563270

# Logic Six

## Intruder alarm system Operating Instructions



Servicing organisation (Installer) name: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Date of installation: \_\_\_\_\_

Account number: \_\_\_\_\_

## System installation

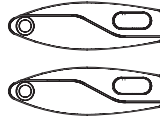
This booklet tells you how to operate your intruder alarm system. To simplify this booklet we have assumed that the alarm system has been installed by a professional intruder alarm system installer (the installer), and that the system is operated in a “typical” way. Aspects of your system that are not “typical” will be described by your installer.

Note: If you have any questions about your intruder system, then consult your installer, see contact details on the front page.

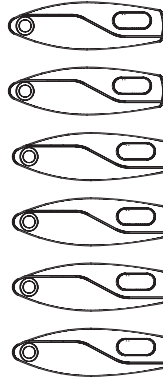
## Keyfobs

To operate the alarm system you will need the keyfobs supplied with the panel. These keyfobs are recognised by the panel and will operate your system. If you should need further keyfobs you should consult your installer, up to 8 maximum keyfobs can operate your system.

Keyfobs  
Supplied  
with the panel



Additional  
keyfobs











## Personal Attack

If you are under threat, or are being attacked, you can activate the alarm by operating the personal attack button in your system. The alarm system will produce a loud alarm sound, and the external siren will be turned on.

## Power Indicator

The **Power** indicator on the control panel will light whenever the mains power supply is present. If mains power fails then the **Power** indicator will flash, but the system will run from its backup battery for several hours. If the **Power** indicator goes out when mains power is present then a fault may have developed on your system and you should contact your installer.

### Key

		LED steady On indication
		LED flashing indication
		LED Off
Internal sound		
		Sound description
NOTE: In general a flat beep is an indication of not recognised keyfobs.		
External devices		
		Strobe On
		External Siren

## How to Set the system

When you leave your premises you will need to set (or turn on) the intruder alarm system. Before setting the system you should ensure that the premises have been completely vacated and that all doors and windows are closed. Ensure that pets do not have access to the protected areas as they can cause a false alarm, unless pet immune detectors have been used, ask your installer for more information.

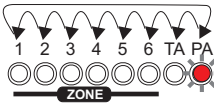
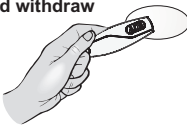
Power



Day

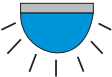
Offer keyfob to the Panel and withdraw

Panel



- Keyfob recognition beep
- Exit beep
- Insistent Exit beeps (for final 10 seconds)

Power



The **Day** indicator should be lit at the Panel. Offer a *keyfob* to the Panel and withdraw it as soon as you hear the *keyfob recognition beep tone* from the local sounder.

Note the panel LEDs will flash consecutively from right to left, PA to Zone1 LED during Set operation. If however there is an open zone then the relevant ZONE LED will be lit and a sound indication is given. If this is the case then investigate the cause and ensure all zones are closed.

The system will produce the exit beep tone and you should leave the premises by the exit route recommended by your installer. The system will set when the exit beep tone stops.

The external strobe will operate for **5 seconds**, which provides a confirmation of SET operation.



Once any operation is performed using the keyfob withdraw it away from the panel, wait for **3 seconds** duration before next use of the keyfob to operate the system.

## How to Unset the system

When you enter your premises you will need to unset (or turn off) the system. If your system had gone into alarm then be aware that intruders may be in the premises. Seek assistance before investigating the cause of the alarm and unset the system.

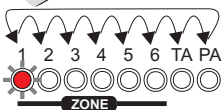
 Entry beep

Power



Offer keyfob to the Panel and withdraw

Panel



 Day

 Keyfob recognition beep

Power



 Day

Enter your premises by the route recommended by your installer. The system will produce an entry beep tone.

Offer a *keyfob* to the Panel and withdraw it as soon as you hear the *keyfob recognition* beep tone from the local sounder.

Note the panel LEDs will flash consecutively from left to right, from **Zone1** to the **PA** LED, during Unset operation.

The system will stop the entry beep tone and light the green **Day** LED.



If any Zone, Tamper or Attack LEDs light up then an alarm has occurred, and an intrusion may have taken place. Seek assistance before investigating further as intruders may still be on the premises. The first alarm indication given by a flashing indicator, with all subsequent alarm indication given as a steady indication. These indications will remain until the next time the system is unset.

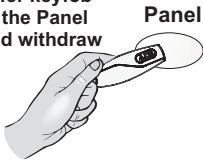
## How to part set the system

If your installer has programmed your system for **part set** operation you will be able to set some zones of the system while others remain unset. Part set operation is often used at night time, and it will permit you to freely walk around the bedrooms while the living area and outside doors are protected.

Before part setting the system at night time you should ensure the downstairs of the premises have been completely vacated and that all doors and windows are closed. Ensure that pets do not have access to the protected areas as they can cause a false alarm.



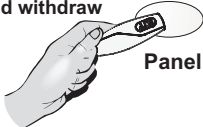
Offer keyfob to the Panel and withdraw



- Keyfob recognition beep
- Exit beep



Within 10 seconds offer keyfob second time to the Panel and withdraw



- 2 x Set beep when panel is set

The **Day** indicator should be lit at the Panel. Offer a *keyfob* to the Panel and withdraw it as soon as you hear the *keyfob recognition beep tone* from the local sounder. Ensure ZONE 1 to ZONE 4 LEDs are Off. If they remain On, investigate the cause and ensure the zones are closed. The system will produce the exit beep tone. Within 10 seconds offer a *keyfob* a second time to the Panel and withdraw it, you hear another *keyfob recognition beep tone* from the local sounder and you should now move to area omitted by part set. The **Day** indicator should be flashing at the Panel. The system will set after 30 seconds when two consecutive beep is emitted.



Once a any operation is performed using the keyfob withdraw it away from the panel, wait for 3 seconds duration before next use of the keyfob to operate the system.

Entry time: \_\_\_\_\_

Area protected	Zone name	Full set	Part Set
Zone 1		T	T
Zone 2		TI	T
Zone 3		I	T
Zone 4		I	I
Zone 5		I	O
Zone 6		I	O

O = Omitted

T = Timed (Entry/Exit - Zone)

TI = Time Inhibited (Access zone to keypad)

I = Immediate (Zone armed to give full alarm)

The *Logic Six* panel conforms to the requirements of the European R&TTE directive 1999/5/EC and carries the CE mark. This product is intended for use in the UK.



# Wired Passive Infra-Red Movement Detectors

## Installation and Operating Instructions

These instructions should be read in conjunction with your System Installation and Operating Manual and be retained for future reference.

### Introduction

These Passive Infra-Red (PIR) Movement Detectors are designed for use with Response wired Intruder Alarm systems.

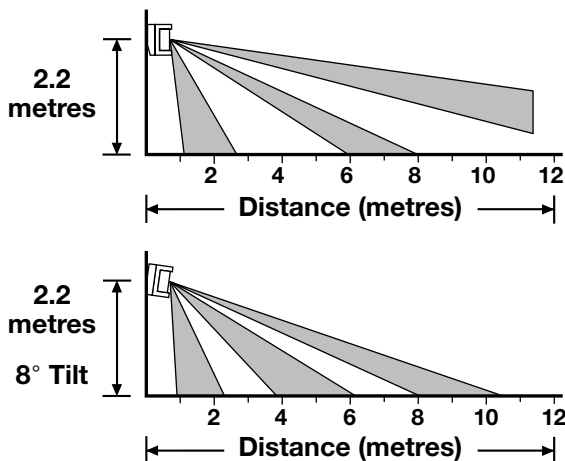
PIR detectors are designed to detect movement in a protected area by detecting changes in infra-red radiation levels caused for example when a person moves within or across the detectors field of vision. If movement is detected, the signal contacts "open" and an alarm signal is generated at the Control Panel (if the system is armed).

**Note:** Do not exceed the maximum number of PIR detectors permissible for the Zone where the PIR is to be installed or for the system in total. These will be stated in the System Installation and Operating Manual.

### Positioning the Detector

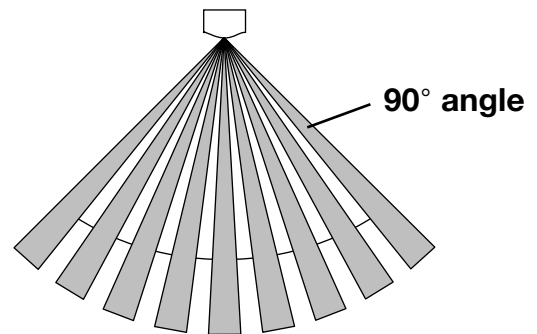
The PIR detector is suitable for mounting in dry interior locations only.

It is recommended that the PIR detector is mounted in the corner of a room at a height of approximately 2.2m. At this height the detector will have a 12m range with a 90° field of vision. If required the detector may be mounted at an 8° angle to tilt downwards and change the detection pattern.



When considering and deciding upon the mounting position for the detector the following points should be considered to ensure trouble free operation:

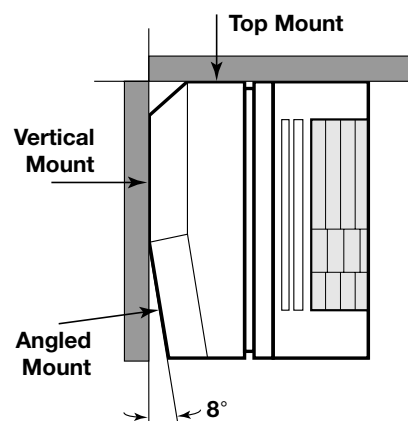
1. Ideally the detector should be positioned where the logical path of an intruder would cut across the fan detection pattern of the PIR. PIR detectors respond more effectively to movement across the device than to movement directly towards it.
2. Do not position the detector facing a window or where it is exposed to direct sunlight. For this reason PIR detectors are not suitable for use in conservatories.



3. Do not position the detector where it is exposed to draughts.
4. Do not position the detector directly above a heat source, (e.g. fire, radiator, boiler, etc).
5. Do not position the detector in a position where it is subject to excessive vibration.

**Note:** When the system is armed, household pets should not be allowed into an area protected by a PIR as their movement would trigger the PIR and activate the alarm. Alternatively a PIR protected Zone may be 'Omitted' to allow for pet movement. This facility may not be available with all Control Panels, (refer to your System Installation and Operating Manual for details).

### Installing the Detector



1. Having chosen a suitable position to locate the PIR detector, run the required length of 6 core alarm cable back to the Control Panel.

**Do not make any connections at this stage.**

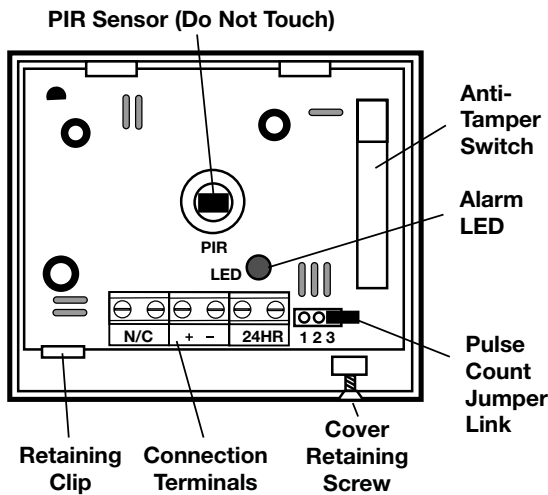
2. Slightly loosen the cover retaining screw on the PIR and remove the cover. Carefully remove the PCB by unclipping the PCB retaining clip at the bottom left of the casing.

**IMPORTANT:** Do not touch the PIR sensor in the middle of the PCB as any marking may impair the unit's performance. If accidentally touched, clean with a dry lint free cloth.

3. The unit can be mounted for the standard 12m range by using the top two side holes, or tilted down by 8° using the bottom

two side holes. Alternatively, the unit can be ceiling mounted using the two holes in the extreme top of the casing.

Cable entry cut outs are provided top and bottom, as required.



- Carefully cut (or drill) out the required mounting holes and cable entry. Only remove the minimum required number of screw or cable entry holes, to avoid insects entering the detector and causing false triggering.

Mount the unit using two 18mm No.4 screws and 25mm wall plugs as required, (a 5mm hole will be required for the wall plugs).

**Note:** Do not over-tighten or use larger headed screws when mounting the unit, as this may distort the casing.

## Wiring the Detector

**IMPORTANT:** Before making any connections, ensure that the existing system is fully shut down and all power, (mains and back-up battery) at the Control Panel is removed, (refer to your System Installation and Operating Manual).

It is important that the 12V power supply wiring is connected in parallel with any existing wiring and that the Zone and Tamper circuit wiring is connected in a SERIES loop with existing wiring to the appropriate terminals on the Control Panel.

PLEASE REFER TO YOUR SYSTEM INSTALLATION & OPERATING INSTRUCTION MANUAL FOR FULL CONNECTION DETAILS.

- Thread the cable through the entry on the base, then strip back 5mm of each core, twist the strand ends then fold over and wire into the appropriate terminals on the PIR.

The terminals on the PIR and the wires in the cable are colour coded. The correct colour coding should be followed throughout the entire system.

**Note:** If your existing system is using a non-standard colour coding system for the wiring, then this must be followed.

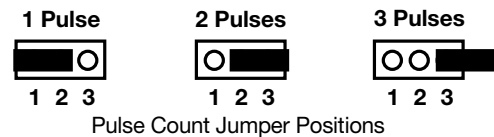
Red	+12V supply to PIR, (connect in parallel).
Black	0V supply to PIR, (connect in parallel).
Blue & Yellow	normally closed detector alarm zone circuit, (connect in series).
Green & White	normally closed tamper zone circuit, (connect in series).

Full and detailed wiring instructions are detailed in your System Installation and Operating Manual.

- Carefully refit the PCB into the casing taking care not to touch the PIR detector lens.
- The PIR detector incorporates an anti false alarm feature designed to compensate for situations where the detector may be affected by environmental changes, (e.g. insects, air temperature, etc). This feature is called "Pulse Count" and may be selected for 1, 2 or 3 pulse detection.

The factory default and recommended setting is for 2 Pulse detection. However, in cases of extreme environmental problems, or if unattributable false alarms are experienced, it may be necessary to set "Pulse Count" 3.

**Note:** The higher the Pulse Count the more movement will be necessary before the PIR detector will trigger the alarm.



- Refit the cover and tighten the retaining screw.
- The PIR is now ready to be connected to the Control Panel or to an existing PIR detector, and tested.

## Testing the Detector

Once the PIR detector has been fully installed, reconnect the power to the alarm system and test the new PIR and the system in accordance with your System Installation & Operating Manual.

**Note:** After reconnecting the power to the system allow at least 4 minutes for any PIR(s) to stabilise before testing.

## Guarantee

Novar ED&S undertakes to replace or repair at its discretion goods (excluding non rechargeable batteries) should they become defective within 1 year solely as a result of faulty materials and workmanship.

Understandably if the product has not been installed, operated or maintained in accordance with the instructions, has not been used appropriately or if any attempt has been made to rectify, dismantle or alter the product in any way the guarantee will be invalidated.

The guarantee states Novar ED&S entire liability. It does not extend to cover consequential loss or damage or installation costs arising from the defective product. This guarantee does not in any way affect the statutory or other rights of a consumer and applies to products installed within the UK and Eire only.

If an item develops a fault, the product must be returned to the point of sale with:

- Proof of purchase.
- A full description of the fault.
- All relevant batteries (disconnected).

Friedland is a trade mark of Novar ED&S.

**HELPLINE**  
If you have a problem with your alarm,  
please call the helpline on: **01268 563273**  
(Lines open 9.00am to 5.00pm, Monday to Friday).



**Friedland, Novar Electrical Devices and Systems.**  
The Arnold Centre, Paycocke Road, Basildon, Essex SS14 3EA.