

**Friedland**

# **SA1, SA2(PF), SAC1**

## **Wirefree Alarm System**



**Installation & Operating Manual**

# FOREWORD

All components in these wirefree Alarm Systems are designed and manufactured to provide a high standard of security protection and long, reliable service. No radio operating licence is required for this equipment.

These systems are designed for ease of installation using only basic DIY tools. However, it is essential that the installer reads and fully understands the advice and procedures contained in this manual and plans the system before proceeding with the installation.

During installation, it is important that the procedures described in this manual are followed in sequence.

**Note:** This manual covers the installation and operation of a number of different kit configurations. Instructions relating to components not included in your kit should be ignored.

**This manual should be retained in a safe place for future reference.**

## IMPORTANT

All components, with the exception of the External Solar Siren are suitable for mounting in dry interior locations only.

## DECLARATION

Novar ED&S hereby declares that these SA1, SA2, SA2PF and SAC1 wirefree alarm systems are in compliance with the essential requirements and other relevant provisions of the Radio and Telecommunications Terminal Equipment (R&TTE) directive, 1999/5/EC.

### Tools and Equipment Required:

- |                            |                    |
|----------------------------|--------------------|
| No.0 Philips Screwdriver   | Drill              |
| No.1 Philips Screwdriver   | Small Spirit Level |
| No.2 Philips Screwdriver   | Bradawl            |
| 5 & 6mm Masonry Drill Bits |                    |

## DEVICE RANGE

The quoted range of the system devices (see component specification on rear cover) is measured in ideal conditions. Any solid object (e.g. walls, ceilings, reinforced PVC doors etc) placed between the transmitter devices and the Chime Unit will reduce the transmission range of the devices.

The amount by which the range will be reduced is dependant upon the nature of the barrier. e.g.

Wall Type	Range Reduction
Dry-lined partition wall:	10-30%
Single layer brick wall:	20-40%
Double layer brick wall:	30-70%
Metal Panel/Radiator:	90-100%

**Note:** The effect on the range of multiple walls is cumulative. i.e. if there are two brick walls in the way, the range will be reduced by up to 40% by each wall.

## SYSTEM SECURITY

This system has been designed to both detect intruders and act as a strong deterrent to would-be intruders when installed correctly.

Please remember that given adequate knowledge and time it is possible to overcome any alarm system and we therefore recommend that an Intruder Alarm is used in conjunction with good physical protection such as security window and door locks.

All units in the system are encoded to operate together using an 8 bit House Code which is configured by the user/installer to provide the identification code for your installation. The system House Code can be changed at any time by the user.

The system is operated from one or more Remote Control units and/or Keypads. Care should be taken to ensure that your Remote Control Unit(s) are not lost or the Keypad User Access Code does not become known to other people as this will compromise the security of your system. In either event the system house code and/or User Access Code should be changed as soon as possible.

**IMPORTANT: All units in your system must be set to the same House Code which must be changed from the factory supplied setting.**

## SAFETY

Always follow the manufacturers advice when using power tools; steps, ladders etc. and wear suitable protective equipment (e.g. safety goggles) when drilling holes etc.

Before drilling holes in walls, check for hidden electricity cables and water pipes, the use of a cable/pipe locator maybe advisable if in doubt

When using ladders, ensure that they are positioned on a firm stable surface at the correct angle and suitably secured before use.

The use of ear defenders is advisable when working in close proximity to the Siren due to the high sound level produced by this device.

# CONTENTS

	Page No.		Page No.
KIT CONTENTS	2	TESTING THE SYSTEM	15
		Initial Testing	15
INTRODUCTION AND OVERVIEW	3	Testing An Installed System	15
System Arming	3	OPERATING INSTRUCTIONS	15
Entry/Exit Delay	3	Arming the System in Instant-Arm Mode	16
Zone Lockout	3	Arming the System in Delay-Arm Mode	16
Tamper Protection	3	Disarming The System	16
Jamming Detection	3	Personal Attack (PA) Alarm	16
Battery Monitoring	3	Siren Service Mode	17
System House Code	3	Siren Operating Mode	17
		Battery Monitoring	17
PLANNING AND EXTENDING YOUR WIREFREE SOLAR ALARM SYSTEM	4	MAINTENANCE	18
EXTERNAL SOLAR SIREN	5	ALARM RECORD	19
Positioning the Solar Siren	5	TROUBLE SHOOTING	19
Installing and Configuring the Solar Siren	5	EXTENDING YOUR ALARM SYSTEM	20
Power-up of the Solar Siren	7	COMPONENT SPECIFICATION	Back Cover
REMOTE CONTROL UNIT	7		
Configuring the Remote Control	7		
Testing the Remote Control and Siren	8		
KEYPAD	8		
Positioning the Keypad	9		
Installing and Configuring the Keypad	9		
Changing the User Access Code	9		
Testing the Keypad	10		
PASSIVE INFRA RED (PIR) MOVEMENT DETECTORS	10		
Positioning the PIR Movement Detectors	11		
Installing and Configuring the PIR Movement Detectors	11		
Testing the PIR Movement Detectors	12		
MAGNETIC CONTACT DETECTORS	13		
Positioning the Magnetic Contact Detectors	13		
Installing and Configuring the Magnetic Contact Detectors	13		
Testing the Magnetic Contact Detectors	14		

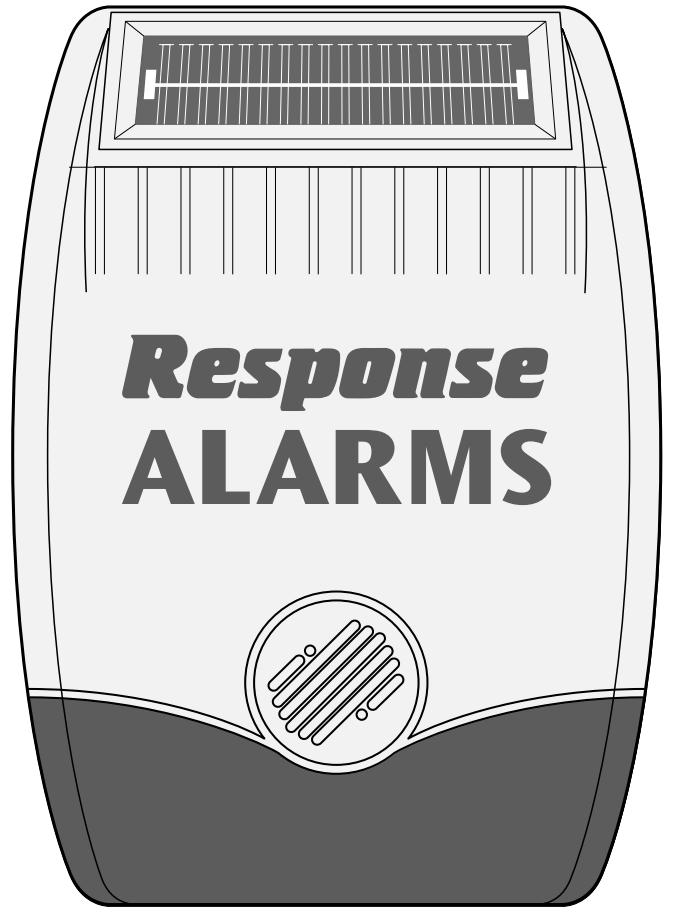
# KIT CONTENTS

The Alarm System should contain the following components.

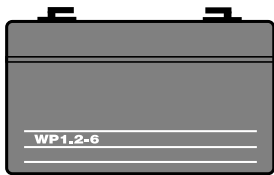
Alarm System	SA1	SA2	SA2PF	SAC1
External Solar Siren	1	1	1	1
Remote Control	1	1	1	1
PIR Movement Detectors	2	2	0	2
Magnetic Contact Detectors	0	2	3	2
Keypad	0	1	1	1

**Also included:**

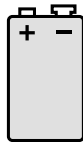
- Installation & Operating Manual
- Fixing pack
- Batteries



**External Solar Siren**



6V/1.2Ah Sealed lead acid battery (supplied fitted in Solar Siren)



9V PP3 Alkaline battery (for Keypad & PIR Detectors)



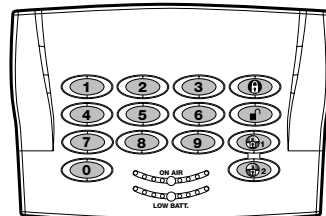
3V CR2032 Lithium Coin Cell (for Remote Control and Magnetic Contact Detectors)

## EXTENDING THE ALARM SYSTEM

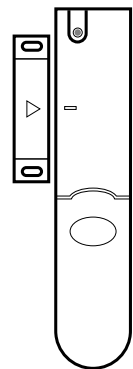
The following additional accessories are available to enhance your system and provide further protection and a higher level of security where required.

Component:	Product Code
Two Magnetic Contact Detectors and one Remote Control	SU1
Two Passive Infra-Red Movement Detectors	SU2
Two Remote Controls	SU3
Two Magnetic Contact Detectors	SU4
Keypad	SU5
External Solar Siren	SU6

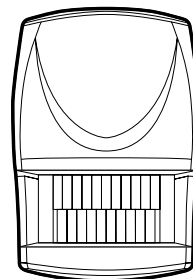
Full details of these accessories are given on page 21 and on the rear cover.



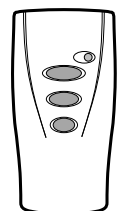
**Keypad**



**Magnetic Contact Detector**



**PIR Movement Detector**



**Remote Control**

# INTRODUCTION AND OVERVIEW

## SYSTEM ARMING

The system has an 'Instant-Arm' and Delay-Arm' mode.

If the system is armed in 'Instant-Arm' mode then all detectors will immediately become fully armed. Any detector triggered while the system is armed will immediately initiate a full alarm condition.

## ENTRY/EXIT DELAY

If the system is armed in 'Delay-Arm' mode this will activate the system with a fixed 15 second entry/exit delay period. This allows a 15 second period for the user to exit the property after setting the system with the Remote Control or at the Keypad. Any detector triggered while the system is armed will not cause an alarm condition until after the 15 second entry/exit delay has expired. This allows time for the system to be Disarmed before an alarm condition is triggered when re-entering the property.

**Note:** To conserve power and maximise battery life the PIR Detector will only detect movement if there has been no movement detected within the previous 2 minutes. Consequently the PIR Detector will not become active until the protected area has been free from movement for more than 2 minutes.

## ZONE LOCKOUT

If a detector is triggered while the system is armed an alarm condition will occur. After the set alarm duration has expired the alarm will stop and the system will automatically reset. Subsequent detectors triggered will again initiate an alarm condition. However, after an alarm condition has been initiated three times the system will be 'Locked Out' and will not reset, any further alarm signals from detectors will be ignored until the system is disarmed.

## TAMPER PROTECTION

All system devices (except any Remote Control Units) incorporate Tamper protection features to protect against unauthorised attempts to interfere with the device. Any attempt to remove the battery cover from any device (except a Remote Control) or to remove the Solar Siren from the wall will initiate an alarm condition (unless the system is in Service Mode), even if the system is Disarmed.

## JAMMING DETECTION

In order to detect any attempts to illegally jam the radio channel used by your alarm system, a special jamming detection function is incorporated into the Solar Siren.

If this feature is enabled, and the radio channel is jammed continuously for 30 seconds, when the system is armed, the Solar Siren will emit a pre-alarm series of rapid beeps for 5 seconds. If the jamming continues for a further 10 seconds or more a full alarm condition will occur. In addition if the system is jammed for more than three periods of 10 seconds in a 5 minute interval, this will also generate a Full Alarm condition.

The Jamming Detection circuit is designed to permanently scan for jamming signals. However, it is possible that it may detect other local radio interference operating legally or illegally on the same frequency. If it is planned to operate the jamming detection feature we recommend that the system is monitored for false jamming alarms for at least 2 weeks prior to leaving the Jamming Detection function permanently enabled.

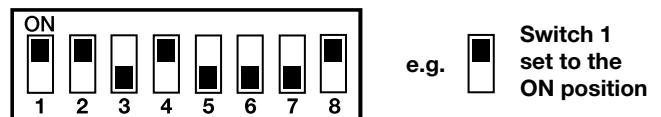
## BATTERY MONITORING

All devices powered by non-rechargeable batteries incorporate a battery level monitoring feature which will warn of a low battery status. The batteries on any device indicating a low battery status should be replaced immediately.

## SYSTEM HOUSE CODE

In order to prevent any unauthorised attempt to operate or disarm your system, you must configure your system to accept radio signals only from your own system devices. This is done by setting a series of eight miniature (DIP) switches in all devices to the same ON/OFF combination (the House Code) selected by the user/installer. All detectors and Remote Control Unit(s) must be configured with the same House Code in order for the system to operate correctly.

Inside the detectors and Remote Control Unit is a series of 8 DIP switches.



The House Code is set up by moving each of the 8 switches in each device to the same randomly selected ON/OFF sequence. When setting the DIP switches, ensure that each switch 'clicks' fully into position. Use the tip of a ballpoint pen or a small screwdriver to move each switch in turn.

**Note: It is recommended that the system House Code is always changed to a code other than the factory.**

# PLANNING AND EXTENDING YOUR WIREFREE ALARM SYSTEM

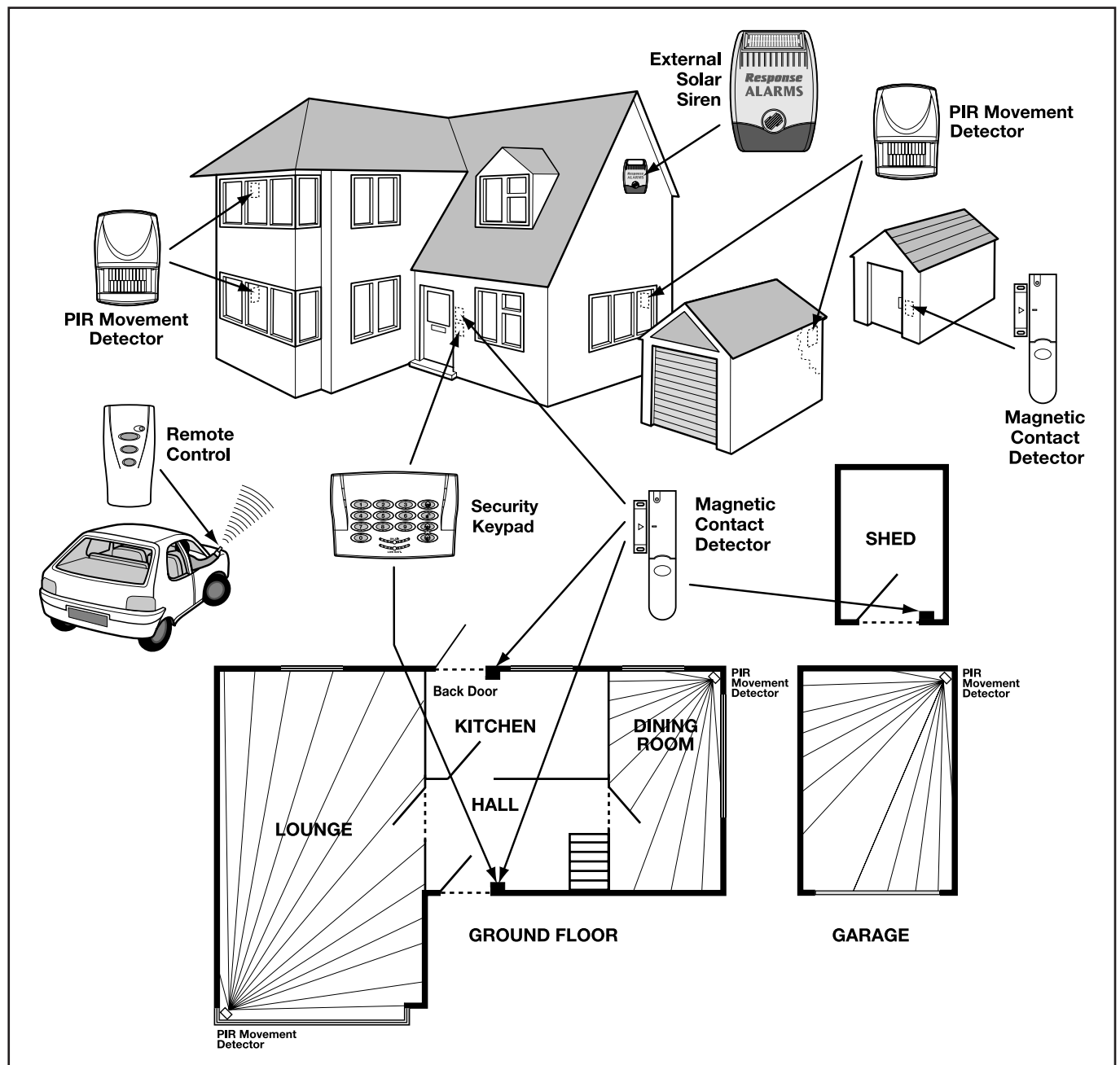
Before attempting to install your Alarm System it is important to study your security requirements and plan your installation.

PIR Movement Detectors are used to protect the main areas of the property, (e.g. lounge, study, hallway and landing). Magnetic Contact Detectors are typically used to protect the main access points to the property, (e.g. front door, back door, patio doors). However, they can also be used to protect other vulnerable doors/windows or access doors to important rooms.

The following example below shows typical property incorporating the suggested positions for the External

Siren, Keypad, PIR and Magnetic Detectors for optimum security. Use this as a guide for your installation in conjunction with the detailed positioning requirements for each device provided in the appropriate installation sections in this manual for planning your intruder alarm system.

The alarm system may be extended to provide greater protection and control by fitting additional PIR Movement Detectors, Magnetic Contact Detectors, Remote Controls and Keypads as required. Any number of accessories may be used with your system, provided that they are all coded with the system House Code.



# EXTERNAL SOLAR SIREN

The Siren and Solar Panel are all encapsulated within a tough polycarbonate housing. This housing provides full protection against adverse weather conditions.

An LED indicator is built into the siren to act as a visible deterrent/indication that the system is active. The indicator LEDs will slowly and alternately flash whether the system is Armed or Disarmed. During an alarm condition the indicator LEDs will flash rapidly.

An integral anti-tamper switch provides additional security protection to the Siren and will immediately generate a full alarm should any unauthorised attempt be made to interfere with and remove the siren cover.

The Siren is powered by a high capacity 6V/1.2Ahr rechargeable sealed lead acid battery. A Solar Panel mounted on the top of the housing charges the battery during daylight hours. During darkness, only a small amount of energy is required to operate the Siren unit.

A 9V Alkaline PP3 battery is supplied in the External Siren to boost the initial power to the unit when the system is first activated until the Solar Panel charges the main battery. (This battery is only designed to last for a short period until the main rechargeable battery has obtained sufficient charge).

The Siren unit incorporates the installations Jamming Detection system which will (if activated) generate an alarm if any attempt is made to continuously jam the radio channel used for the system.

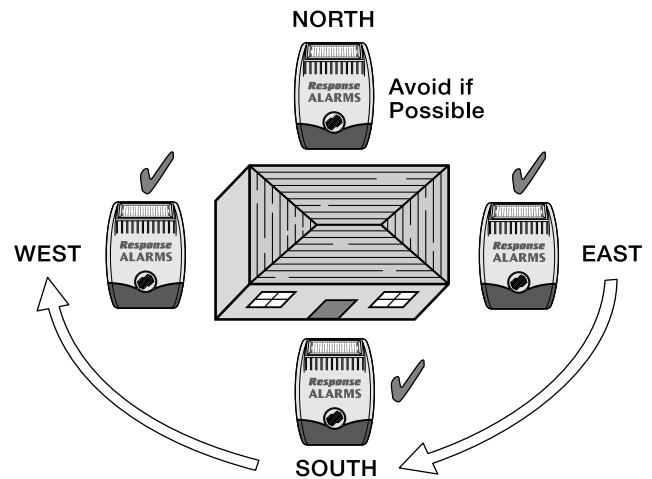
## POSITIONING THE SOLAR SIREN

The Siren should be located as high as possible in a prominent position so that it can be easily seen and heard. The Siren should be mounted on a sound flat surface so that the rear tamper switch is not activated when mounted. Ensure that the tamper switch does not fall into the recess between brick courses as this could prevent the switch from closing and give a permanent tamper signal.

In order to provide the maximum amount of daylight to the Solar Panel, the siren should ideally be mounted on a south facing wall. However, an easterly or westerly position will suffice.

Mounting the device on a north facing wall should be avoided as this could mean that during the short dark days of winter months the solar panel may not receive

sufficient daylight in order to maintain the battery charge at acceptable levels.



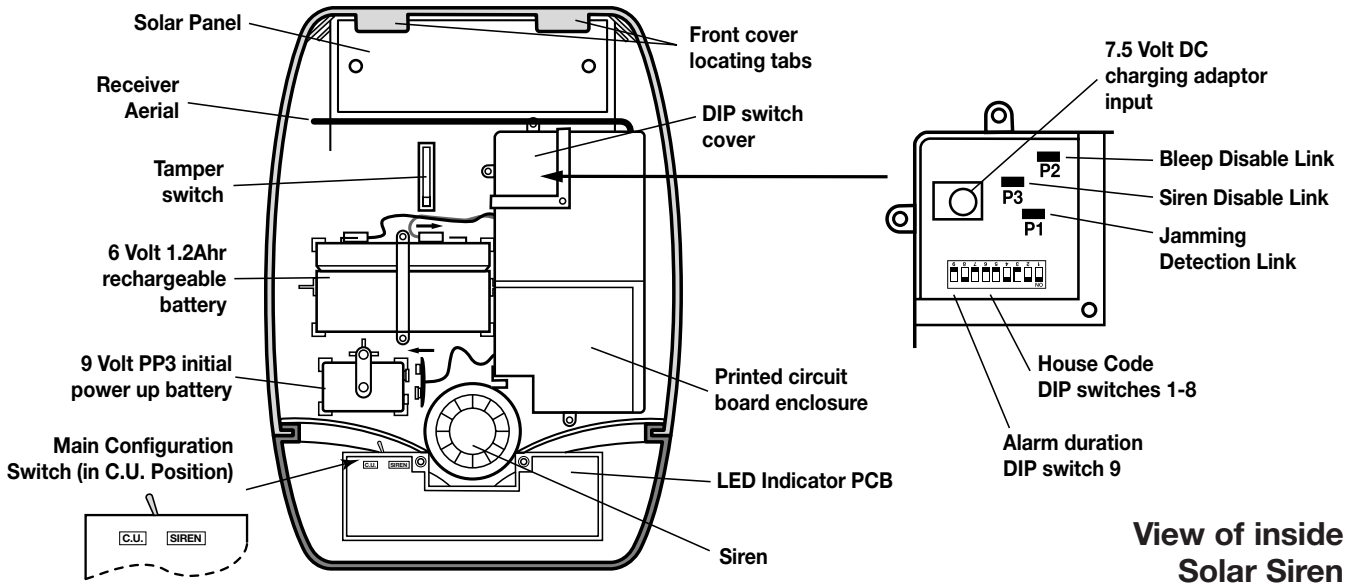
Shadows cast by neighbouring walls, trees and roof overhangs should also be avoided. If the Siren is to be mounted below the eaves, it should be positioned a distance of at least twice the width of the eaves overhang below the eaves. Remember that in winter the sun is lower in the sky and you should avoid winter shadows where possible.

The External Solar Siren contains a sophisticated radio receiver. However, reception of radio signals can be affected by the presence of metallic objects within the vicinity of the Receiver. It is therefore important to mount the Solar Siren a minimum distance of 1m away from any external or internal metalwork, (i.e. drainpipes, gutters, radiators, mirrors etc.).

It is recommended that you check the suitability of your chosen location for the Solar Siren by temporarily fitting it to the external wall. Using the Remote Control, (as described below) power up the Siren and check that you can operate the Siren from in and around the property, and from all locations where you plan to install detectors.

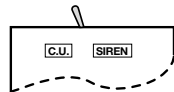
## INSTALLING AND CONFIGURING THE SOLAR SIREN

1. Remove the fixing screw from the bottom edge of the Siren housing and carefully hinge off the front cover. All electronic components are housed within the front cover.
2. Hold the mounting plate in position and mark the positions of the four mounting holes. A spirit level placed on the casing will ensure a perfect level.
3. Fit two 30mm fixing screws in the top holes leaving approximately 10mm of the screw protruding.



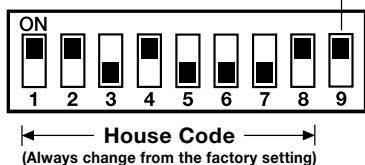
4. Fit the top keyhole slots of the mounting plate over the screw heads. Remove the mounting plate and adjust the screws until they form a neat fit with the mounting plate with minimal movement.
5. Secure the mounting plate in position using two 25mm fixing screws in the bottom fixing holes.
6. Ensure that the Solar Siren main configuration switch on the LED indicator board is set to "C.U." for use with this alarm system.

**Main Configuration Switch (in C.U. Position)**



7. Undo the 3 screws holding the DIP Switch Cover in place and remove the cover.
  8. Under the cover you will find a series of 9 DIP switches.
- Note:** When the Solar Siren is viewed as shown above (Solar panel at top) the DIP switches are 'upside down'.
9. Select and record a random combination of 'ON' and 'OFF' positions for DIP switches 1- 8. This will be the system House Code that will enable all devices on the system to communicate with the Solar Siren.

**Alarm Duration DIP Switch 9**



**IMPORTANT:** The house code for your system should be changed from the factory default settings.

10. Set the alarm duration time using DIP switch 9 as follows:

ON = 3 minutes  
 OFF = 1 minute

11. The Solar Siren will acknowledge signals from the Remote Control and Keypad by beeping. It is possible to disable these acknowledgement beeps if required by removing the jumper link P2 on the circuit board.

P2 fitted = beep enabled  
 P2 removed = beep disabled

12. If for any reason you need to disable the Siren, remove jumper link P3 on the circuit board. This will prevent the Siren from sounding during an alarm condition. However, the Siren will still beep to acknowledge signals from the Remote Control, (provided the beep feature is not disabled).

P3 fitted = Siren enabled  
 P3 removed = Siren disabled

13. To enable the Jamming Detect feature in the Solar Siren fit the jumper link taped to the cover of the Siren control unit across link pins P1 on the circuit board.

P1 fitted = Jamming Detection enabled  
 P1 removed = Jamming Detection disabled

14. Refit the DIP switch cover and replace the three cover fixing screws. Do not over tighten the screw as this could damage the thread.

## POWER-UP OF THE SOLAR SIREN

1. Connect the 9V PP3 initial power battery to the battery clip.

Connect the rechargeable battery to the charging leads. Connect the Red lead to the Red (+ve) terminal and the Black lead to the Black (-ve) terminal. Both indicator LEDs will flash together in a single long flash to indicate that the unit is operational.

**Important:** Once the batteries have been connected, the Siren will be operational (and in Service Mode) and it is important that the solar panel receives sufficient light to maintain the battery charge. The Siren should not be operated repeatedly during installation and testing, as this will rapidly drain the battery. It is recommended that the Siren be left for at least a day in order to charge the battery before the system is Armed.

2. Press the anti tamper switch, both indicator LEDs will flash together four times.
3. Hinge the front cover locating tabs over the top edge of the back plate and carefully push the base of the siren cover into place. Secure the Siren cover in place by refitting the fixing screw in the bottom edge of the cover. Do not over tighten the screw as this could damage the thread.

**Important:** Ensure that the rear tamper switch is closed when you fit the siren cover to the back-plate (i.e. listen for the switch to click). If the switch does not close this will prevent the Solar Siren from operating correctly. If necessary, remove the siren cover again and adjust the screw on the back-plate tamper plunger to ensure the switch closes when the Siren is secured in position.

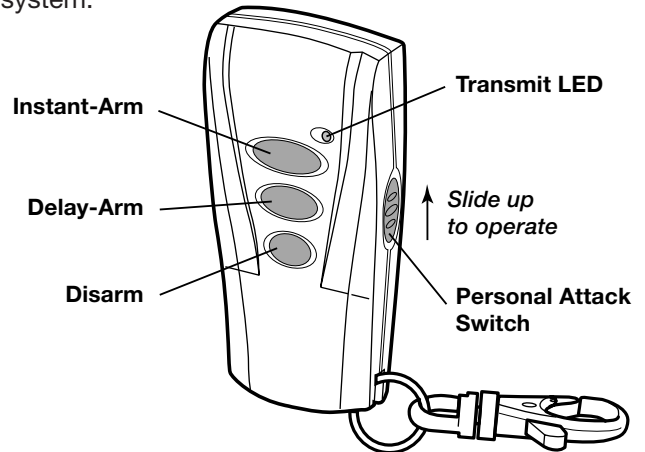
4. If fitted remove the protective film covering the Solar Panel.

The fitting of the Solar Siren is now complete and the unit is automatically in Service Mode.

**Note:** While in Service Mode the Solar Siren will not acknowledge any signals from Detectors, Personal Attack Buttons, Tamper Switches etc. Service Mode is controlled from the Remote Control and Keypad - refer to page 17 for details.

## REMOTE CONTROL UNIT

The Remote Control Unit is used to Arm in either Instant-Arm or Delay-Arm modes and to Disarm the system.



The Remote Control Unit also incorporates a Personal Attack (PA) switch. Activating the PA switch on the side of the Remote Control will immediately initiate a full alarm condition whether the system is Armed or Disarmed. The alarm can be cancelled by pressing the 'DISARM' button on the Remote Control.

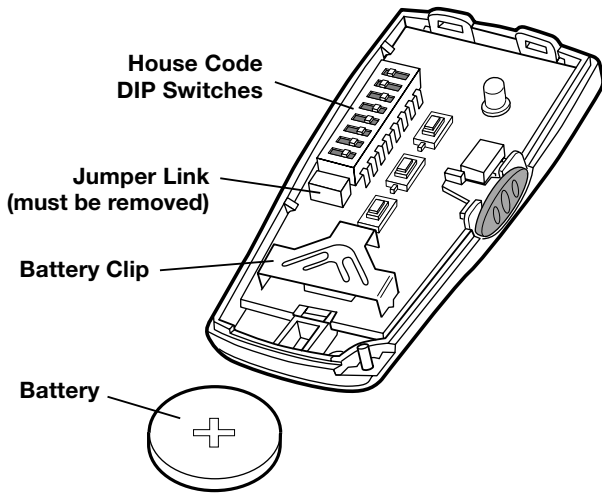
Any number of Remote Control Units can be used with your system, providing they are all coded with the system House Code and are mounted within effective radio range of the Solar Siren.

The Remote Control is powered by a CR2032 type Lithium cell which under normal conditions will have an expected life in excess of 1 year. Under normal battery conditions the LED on the Remote Control will only illuminate when a button is pressed. However, under low-battery conditions this LED will continue to flash after the button has been released. When this occurs the battery should be replaced as soon as possible.


## CONFIGURING THE REMOTE CONTROL


1. Remove the rear cover by undoing the small screw on the rear of the Remote Control.
2. Located above the battery cover is a row of 8 DIP switches. These switches set the House Code for the Remote Control and must be set to the same ON/OFF combination as the House Code DIP switches in all other system devices.
3. Ensure that the jumper link located immediately below the House Code DIP switches is removed for use with this alarm system.


4. Insert the battery under the clip ensuring that the +ve terminal faces upwards away from the PCB.
5. Replace the rear cover and fixing screw. Do not over tighten the screw as this could damage the thread.






## TESTING THE REMOTE CONTROL AND SIREN





1. Switch the system into Operating Mode by pressing and holding the  button on the Remote Control for approximately 6 seconds until the Solar Siren acknowledges the signal by emitting one long Beep (unless Beep Disable has been set). This puts the Solar Siren into Operating Mode (in a Disarmed state).

**Note:** The  button should be released during or immediately after the long beep, otherwise the system will switch into an Armed state.

If the Siren continuously sounds at this point it is likely that the anti tamper switch on the Siren has not been closed. Press the  button on the Remote Control to switch OFF the Siren. Remove the Siren from the mounting plate and adjust the screw on the tamper switch plunger to ensure the switch closes when the Siren is secured in position.

2. Arm the system in Instant mode by pressing the  button.  
The Siren will acknowledge the signal by beeping once.
3. Disarm the system by pressing the  button.  
The Siren will acknowledge the signal by beeping twice.
4. Arm the system in Delay mode by pressing the  button.

The Siren will acknowledge the signal by beeping once and then again after the 15s entry/exit delay has expired.

5. Disarm the system by pressing the  button.  
The Siren will acknowledge the signal by beeping twice
6. To test the range of the Solar Siren and Remote Control, press the  button on the Remote Control from in and around the property and from all locations where you plan to install detectors, check that the Siren acknowledges the signals from the Remote Control by beeping twice each time the  button is pressed.
7. When you have finished testing the Remote Control, return the system to Service Mode by pressing and holding the  button on the Remote Control for approximately 6 seconds until the Solar Siren acknowledges the signal by emitting one long Beep (unless Beep Disable has been set).

**Important:** Ensure that the system is in Service Mode before proceeding with the installation, otherwise a full alarm condition could occur.

## KEYPAD

The Remote Keypad is used to control the Solar Siren and to Arm and Disarm the system by entering a four digit User Access Code. The Keypad can arm the system in either Instant or Delay modes.

The Keypad incorporates an anti tamper protection facility. Any attempt to open the casing of the Keypad will immediately initiate a Full Alarm condition even if the system is disarmed, (unless the system is in Service Mode). In addition if a sequence of more than 16 incorrect key presses is entered the keypad will be disabled for the next 15s, (except the tamper protection function).

The Keypad also incorporates a Personal Attack (PA) facility which will immediately initiate a Full Alarm condition when activated.

The Keypad is powered by a PP3 Alkaline battery which under normal conditions will have an expected life in excess of 1 year. When the battery level drops, and the "LOW BATT" LED on the front of the Keypad will flash. When this occurs the battery should be replaced as soon as possible.

## POSITIONING THE KEYPAD

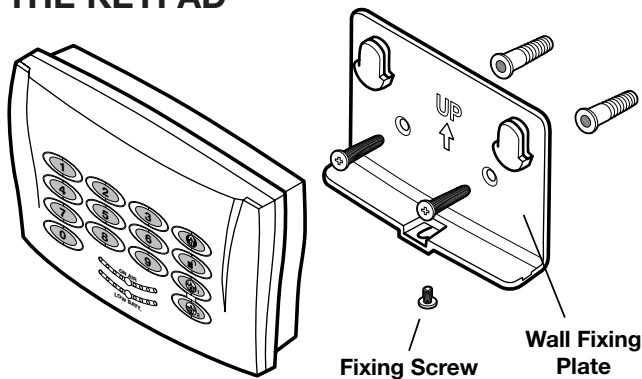
The Keypad is suitable for mounting in dry interior locations only.

The Keypad should be located within a protected area so that an intruder cannot reach the Keypad without opening a protected door or passing through an area protected by a PIR Movement Detector. The Keypad should be mounted in a position close to the main entrance door so that the user access code can be entered and the alarm system shut down within the 15s entry time period.

Ensure that the position selected for the Keypad is within effective range of the Siren, (refer to "Testing of Remote Control").

**Note:** DO NOT fix the Keypad to metalwork or locate the unit within 1m of metalwork (i.e. radiators, water pipes, etc) as this could affect the radio range of the Keypad.

## INSTALLING AND CONFIGURING THE KEYPAD

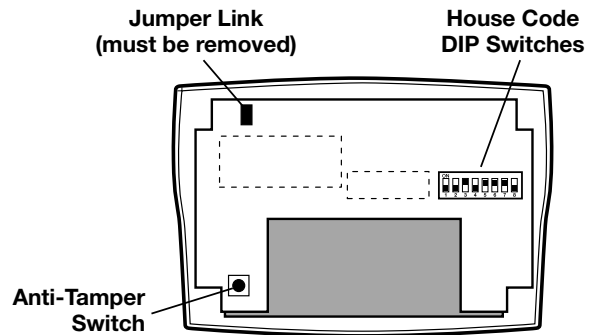


Ensure that the system is in Service Mode, (see page 17).

1. Undo and remove the fixing screw from the bottom edge of the Keypad and remove the wall mounting plate.
2. Using the mounting plate as a template, mark the positions of the two fixing holes on the wall. A small spirit level will ensure a perfect level.
3. Fix the mounting plate to the wall using the two 18mm No.4 screws and 25mm wall plugs as required, (a 5mm hole will be required for the wall plugs). Do not over-tighten the fixing screws as this may distort or damage the mounting plate.

**Note:** The wall plugs supplied with the product are not suitable for plasterboard walls, if mounting the Keypad onto plasterboard use appropriate wall plugs.

4. Undo and remove the four fixing screws in the rear of the Keypad and remove the rear cover.
5. Located on the PCB above the battery clip is a row of 8 DIP switches. These switches set the House Code for the Remote Control and must be set to the same ON/OFF combination as the DIP switches in all other system devices.



6. Ensure that the jumper link located in the top left corner of the PCB is removed for use with this alarm system.
7. Connect the PP3 Alkaline battery to the battery clip.
8. Replace the rear cover and refit fixing screws. Do not over-tighten the fixing screws.
9. Refit and secure the Keypad onto the wall mounting plate. Do not over-tighten the fixing screw.

**Note:** The Keypad is supplied with a default User Access Code of: "1 2 3 4". For security reasons, this code should be changed to another four digit number which only you and other users of the system know.

## CHANGING THE USER ACCESS CODE

When using the Keypad the keys must be pressed firmly and within five seconds of each other. If you make a mistake, wait five seconds and recommence programming from the beginning of the sequence.

To change the User Access Code, press the following keys in sequence:

1. Press
2. Enter default (or current) User Access Code:  

*Current User Access Code*
3. Press - The 'on-air' LED will flash twice
4. Enter new User Access Code:  

*New User Access Code*

- Press - the 'on-air' LED will flash three times to confirm the setting has been accepted. If the light does not flash, wait five seconds and re-enter the programming sequence from the beginning.

## TESTING THE KEYPAD

- Put the system into Operating Mode by pressing and holding the button on the Remote Control for approximately 6 seconds until the Solar Siren acknowledges the signal by emitting one long Beep (unless Beep Disable has been set).
- Arm the system in Instant mode by entering the User Access Code followed by the 'INSTANT-ARM' button on the Keypad.



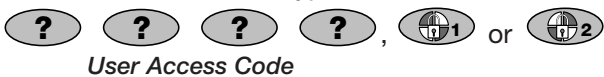
The Siren will acknowledge the signal by beeping once.

- Disarm the system entering the User Access Code followed by the 'DISARM' button on the Keypad.



The Siren will acknowledge the signal by beeping twice.

- Arm the system in Delay mode by entering the User Access Code followed by either 'DELAY-ARM' buttons on the Keypad.



The Siren will acknowledge the signal by beeping once and then again after the 15s entry delay.

- Disarm the system entering the User Access Code followed by the 'DISARM' button on the Keypad.



The Siren will acknowledge the signal by beeping twice.

- Activate the Personal Attack (PA) alarm by pressing and holding both 'Delay-Arm' buttons on the Keypad and .

After approximately 2 seconds a Full Alarm condition will be initiated.

- Immediately Disarm the system entering the User Access Code followed by the 'DISARM' button on the Keypad.



The Siren will stop sounding.

- When you have finished testing the Keypad, return the system to Service Mode by pressing and holding the button on the Remote Control for approximately 6 seconds until the Siren acknowledges the signal by emitting one long beep (unless Beep Disable has been set).

## PASSIVE INFRA RED (PIR) MOVEMENT DETECTORS

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 devices field of vision. If movement is detected an alarm signal will be generated, (if the system is armed). PIR Detectors will also detect animals, so ensure that pets are not permitted access to areas fitted with Passive Infra Red Movement Detectors when the system is armed.

The detector incorporates a tamper protection feature to protect against attempts to interfere with the device. If the battery cover is removed, an alarm will immediately occur at any time.

The detector also incorporates a sensitivity adjustment feature to compensate for situations where the detector may be affected by environmental changes, (e.g. insects, air temperature, etc.).

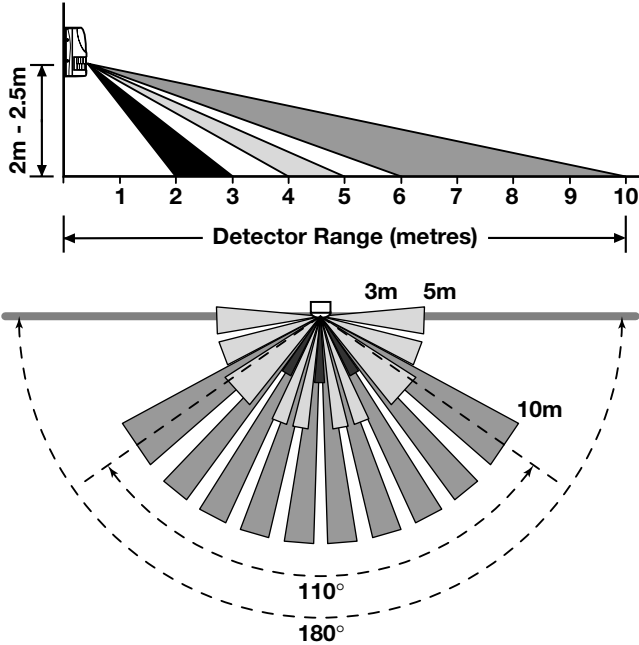
To conserve power and maximise battery life the PIR detector will only detect movement if there has been no movement detected within the previous 2 minutes.

The PIR Detector is powered by a PP3 Alkaline battery which under normal conditions will have an expected life in excess of 1 year. When the battery level drops, with the PIR in normal operation mode and the battery cover fitted, the LED behind the detection window will flash. When this occurs the battery should be replaced as soon as possible. (Note: in normal operation with the LED behind the lens will not flash on detection of movement).

Any number of PIR Movement Detectors can be used with your system, providing they are all coded with the system House Code and are mounted within effective radio range of the Solar Siren.

## POSITIONING THE PIR MOVEMENT DETECTORS

The recommended position for a PIR Movement Detector is in the corner of a room mounted at a height between 2 and 2.5m. At this height, the detector will have a maximum range of up to 12m with a field of view of 110°.



### Detection Zone Pattern for PCB in position 5

The Position of the PCB inside the PIR can be set to 5 different positions to adjust the range and height of the detection pattern created by the PIR. Setting the PCB in position 3 will reduce the range to approximately 9m, with position 1 providing a range of approximately 6m. The recommended position for the PCB is in position 5. (see diagram overpage).

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

1. Do not position the detector facing a window or where it is exposed to or facing direct sunlight. PIR Movement Detectors are not suitable for use in conservatories.
2. Do not position the detector where it is exposed to draughts.
3. Do not position the detector directly above a heat source, (e.g. fire, radiator, boiler, etc.).
4. Where possible, mount the detector in the corner of the room so that the logical path of an intruder would cut across the fan detection pattern. PIR detectors respond more effectively to movement

across the device than to movement directly towards it.

5. Do not position the detector in a position where it is subject to excessive vibration.
6. Ensure that the position selected for the PIR Detector is within effective range of the Siren, (refer to "Testing of Remote Control").

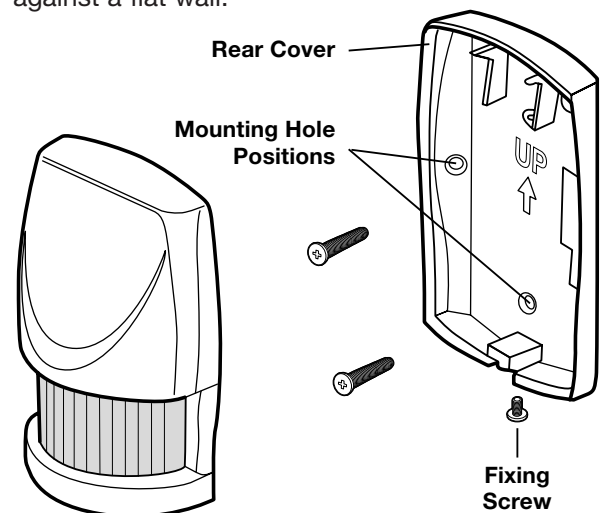
**Note:** When the system is Armed, household pets should not be allowed into an area protected by a PIR Detector as their movement could trigger the PIR and initiate an alarm.

**Note:** DO NOT fix the detector to metalwork or locate the unit within 1m of metalwork (i.e. radiators, water pipes, etc) as this could affect the radio range of the Keypad.

## INSTALLING AND CONFIGURING THE PIR MOVEMENT DETECTORS

Ensure that the system is in Service Mode, (see page 17).

1. Undo and remove the fixing screw from the bottom edge of the PIR. Carefully pull the bottom edge of the detector away from the rear cover and then slide down to release the top clips.
2. Carefully drill out the required mounting holes in the rear cover using 3mm drill according to whether the unit is being mounted in a corner or against a flat wall.



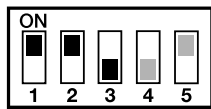
3. Hold the rear cover in position against the wall and mark the positions of the fixing holes.
4. Fix the rear cover to the wall using the two 18mm No.4 screws and 25mm wall plugs, (a 5mm hole will be required for the wall plugs). Do not over-

tighten the fixing screws as this may distort or damage the cover.

**Note:** The wall plugs supplied with the product are not suitable for plasterboard walls, if mounting the Keypad onto plasterboard use appropriate wall plugs.

- Configure the House Code for the PIR Detector by setting DIP switches 1-8 of SW2 to the same ON/OFF combination as the House Code DIP switches in all other system devices.
- DIP Switches 1-3 of SW3 must be set as follows for use with this alarm system:

DIP 1	DIP 2	DIP 3
ON	ON	OFF



- DIP 4 of SW3 is used to configure the PIR Detector for walk test mode, which allows the operation of the detector to be checked during installation without triggering a Full Alarm.

ON	Walk Test mode
OFF	Normal operation

**Note:** On initial installation the detector should be configured into Walk-Test mode ready for testing.

- To select the required sensitivity, set DIP 5 of SW3 as follows:

ON	HIGH sensitivity
OFF	LOW sensitivity

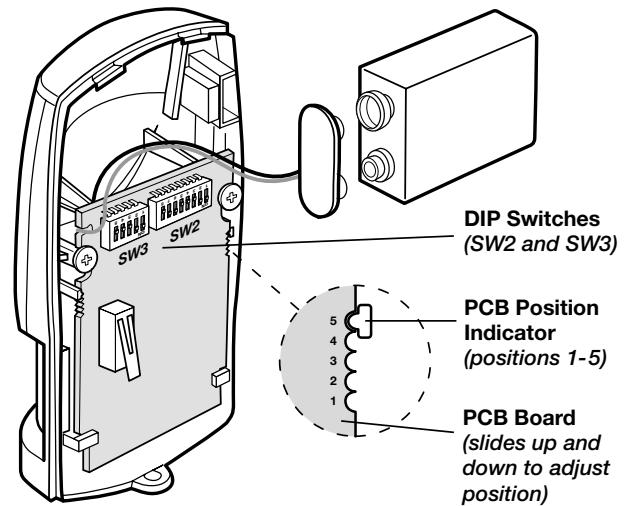
**Note:** The recommended setting is HIGH. However, in cases of extreme environmental problems or if unexplained false alarms are experienced, it may be necessary to set the sensitivity to LOW. Setting the device to LOW sensitivity will require a greater amount of movement in order to trigger the device.

- Connect the PP3 Alkaline battery to the battery clip. The LED behind the lens will rapidly flash for approximately 2-3 minutes until the PIR has stabilised. The LED will then stop flashing and turn OFF.

**Note:** If the device is configured in Walk Test mode (i.e. DIP 4 of SW3 ON) then the LED will flash upon detection of movement after the warm up period has expired.

- Check that the detector PCB is located and set in the correct position to give the detection zone pattern required.

To adjust the PCB position simply slide it up or down ensuring that the location legs are aligned with the required position number marked on the board.



PCB Position	Range
1	6m
3	9m
5	12m

- Refit the PIR Detector to the rear cover by offering the detector up to the rear cover and locate the clips in the top edge into the rear cover. Push the lower edge of the detector into place and refit the fixing screw in the bottom edge of the PIR to secure in position. Do not over-tighten the fixing screws as this may damage the casing.

## TESTING THE PIR MOVEMENT DETECTORS

**Ensure that the system is in Service Mode, (see page 17).**

- Ensure that the PIR is configured in Walk Test mode, (i.e. DIP 4 of SW3 ON) and mounted in position on the wall.

Allow 2-3 minutes for the detector to stabilise before commencing testing.

- Walk into and move slowly around the protected area, each time the detector senses movement the LED behind the lens will flash.

**Note:** In normal operation, with the battery cover on, the detector LED will not flash on movement detection.

If necessary re-adjust the detection pattern by adjusting the mounting position of the PCB within the PIR housing.

3. Reconfigure the PIR Detector into Normal operation mode and refit in position.

**Note:** When the detector is fully installed i.e. battery cover fitted and in operating mode; in order to conserve power and maximise battery life the PIR Detector will only detect movement if there has been no movement detected within the previous 2 minutes.

## MAGNETIC CONTACT DETECTORS

The Magnetic Contact Set comprises two parts; a Detector and a Magnet. They are designed to be fitted to either doors or windows with the magnet screwed to the moving/opening part and the detector screwed to the fixed door or window frame.

When the protected door or window is opened and the magnetic field from the magnet moved away from the detector an alarm signal will be generated, (if the system is armed).

The Magnetic Contact Detector has the facility to connect an additional wired Magnetic Contact. This must be of a normally closed contact type with the contact being opened in order to generate an alarm condition.

The Magnetic Contact Detector is powered by two CR2032 type Lithium cells which under normal conditions will have an expected life in excess of 1 year. Under normal battery conditions the LED on the detector will not illuminate when the detector is triggered, (unless in test mode). However, under low-battery conditions this LED will be illuminated for approx 1s when the detector is triggered. When this occurs the batteries should be replaced as soon as possible.

Any number of Magnetic Contact Detectors can be used with the system, providing they are all coded with the system House Code and are mounted within effective radio range of the Solar Siren.

## POSITIONING THE MAGNETIC CONTACT DETECTORS

The Magnetic Contact Detector is suitable for mounting in dry interior locations only.

Decide which doors and windows are to be protected by fitting Magnetic Contact Detectors, (usually the front and back doors as a minimum will have Magnetic Contact Detectors fitted). However additional detectors may be fitted where required to other more vulnerable doors or windows, (e.g. garage, patio/conservatory doors etc.).

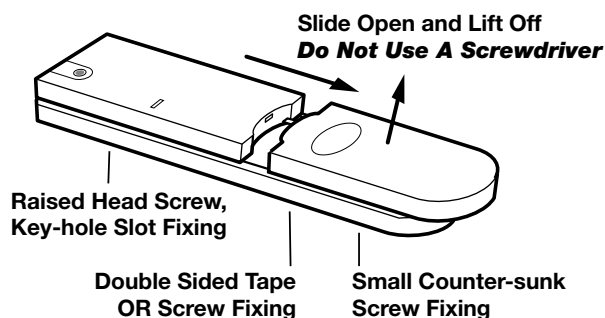
Ensure that the position selected for the Magnetic Contact Detector is within effective range of the Siren, (refer to "Testing of Remote Control").

**Note:** Take care when fixing the detector to a metal frame, or mounting within 1m of metalwork (i.e. radiators, water pipes, etc) as this could affect the radio range of the device. If required, it may be necessary to space the magnet and detector away from the metal surface using a plastic or wooden spacer to achieve the necessary radio range.

## INSTALLING AND CONFIGURING THE MAGNETIC CONTACT DETECTORS

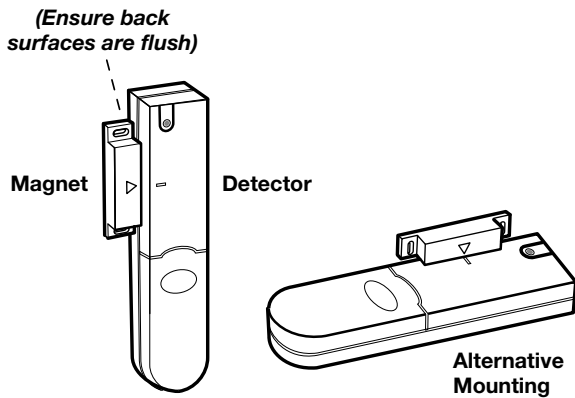
Ensure that the system is in Service Mode, (see page 17).

1. Remove the battery cover by sliding and lifting it off. (DO NOT use a screwdriver to lever it off).



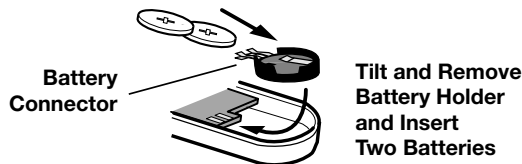
2. The detector and magnet should be mounted together along the opening edge of the Window/Door opposite the hinges. Ensure that the parallel gap between the magnet and detector is less than 10mm and that the arrow on the magnet is aligned with the mark on the detector.

The detector should be mounted on the fixed part of the frame and the magnet on the opening part.



The detector and magnet should be mounted using the double sided adhesive pads or screws provided.

- If fixing the detector with screws first remove the battery holder by carefully tilting up the end and pulling away from the printed circuit board.



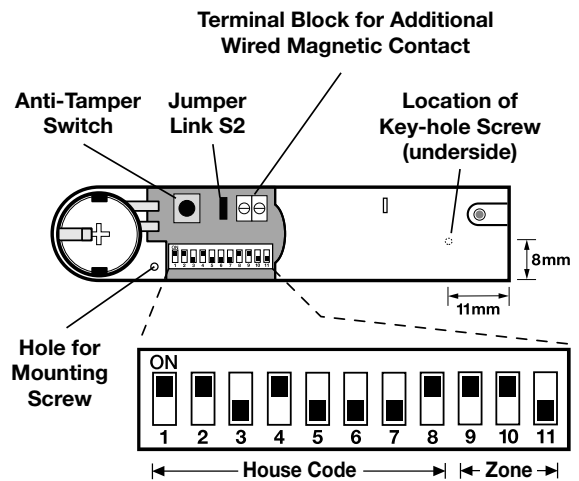
The top of the detector is secured with a keyhole slot over the head of the smaller pan head screw and the bottom of the detector is secured using the 12mm counter-sunk head screw fitted within the battery compartment. Carefully drill out the centre of the fixing screw hole in the battery compartment using a 3mm drill. Fit the magnet using the two 15mm fixing screws. Do not over-tighten the fixing screws as this may distort or damage the casing.

- If an additional wired Magnetic Contact is required, this should be wired to the terminal block provided in the battery compartment. The wired contact should be connected using two core (24AWG) wire of maximum length 1.5m. A cable entry cut-out is provided beside the terminal block in the battery cover.

If an additional wired contact is connected to the detector then jumper link S2 on the PCB must be removed.

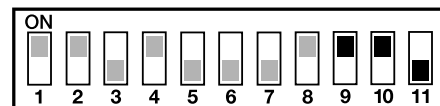
**IMPORTANT:** If an additional wired contact is not connected, then the jumper link S2 must be fitted for the detector to operate correctly.

- Configure the House Code for the Magnetic Contact Detector by setting DIP switches 1-8 to the same ON/OFF combination as the House Code DIP switches in all other system devices.



- DIP Switches 9-11 must be set as follows for use with this alarm system:

DIP 9      DIP 10      DIP 11  
ON            ON            OFF



- Slide the two batteries supplied into the battery holder, ensuring that the positive (+) side is uppermost on each battery as it is installed.
- If necessary, refit the battery holder into the detector ensuring that the spring clip connectors slide onto either side of the circuit board.
- Refit the battery cover.

## TESTING THE MAGNETIC CONTACT DETECTORS

Ensure that the system is in Service Mode, (see page 17).

- Remove the battery cover from the detector.  
The LED on the detector will illuminate for approx 1s as the battery cover is removed to indicate that the tamper switch has been activated.
- Open the door/window to remove the magnet from the detector. As the magnet is moved away from the detector the LED will illuminate for approx. 1s to indicate that the Detector Contact has been triggered.
- If any external Magnetic Contact Sets are connected to the detector, operate these one at a time. Each time a contact is opened the LED on the detector should illuminate for 1s to indicate that it has been triggered.
- Replace the battery cover on the detector.

# TESTING THE SYSTEM


## INITIAL TESTING

As the system is initially installed it is recommended that each device is tested in turn as it is installed, (refer to testing instructions for particular device).

## TESTING AN INSTALLED SYSTEM

1. Before commencing testing please ensure the following conditions apply:


- The system is in Operating Mode and Disarmed
- There is no movement in any PIR protected area.
- All doors/windows protected by Magnetic Contact Detectors are closed.
- All battery covers and housings are correctly fitted.

2. Arm the system in Instant-Arm mode by pressing the  button on the Remote Control.

The Siren will acknowledge the signal by beeping once, (unless Beep Disable has been selected).


3. After 2 minutes walk into an area protected by a PIR Movement Detector and ensure that a Full Alarm condition is initiated, (i.e. the Siren sounds).

**Note:** To conserve power and maximise battery life the PIR Detector will only detect movement if there has been no movement detected within the previous 2 minutes.


4. Disarm the system by pressing the  button on the Remote Control.

The Siren will acknowledge the signal by beeping once, (unless Beep Disable has been selected) and the Siren will stop

5. Continue to test all PIR Movement Detectors in turn as described above, (steps 2 - 4). Remember that the detectors need to settle for at least 40 seconds between each activation.

6. Arm the system in Instant-Arm mode by pressing the  button on the Remote Control.

7. Open a door/window protected by a Magnetic Contact Detector and ensure that a Full Alarm condition is initiated.

8. Disarm the system and stop the Siren by pressing the  button on the Remote Control.

9. Test each Magnetic Contact Detector in turn as described above, (steps 6 - 8).

10. Arm the system at the Keypad by entering the User Access Code followed by the 'INSTANT-ARM' button.



11. Press and hold both 'DELAY-ARM' buttons on the Keypad for approx 2-3 seconds.



A Full Alarm condition will be initiated.

12. Stop the Siren and Disarm the system by entering the User Access Code followed by the DISARM button on the Keypad.



**Note:** It is recommended that the system is tested at regular intervals, (every 3 months), to ensure that all elements of the system are operating correctly.

## OPERATING INSTRUCTIONS

When leaving the premises, the system must be Armed. However, before doing so, check that all windows are closed and locked, all protected doors are closed and PIR Movement Detectors are not obstructed. Ensure that pets are restricted to areas not protected by PIR Movement Detectors.

The system has two armed modes, Instant-Arm and Delay Arm.

Instant-Arm mode will immediately set the system into a fully armed state. Once the system is armed, activating any detector, (i.e. opening a door/windows protected by a Magnetic Contact Detector or moving into a PIR protected area), will immediately generate a Full Alarm condition. On returning to and entering the property the system must be Disarmed before opening any protected door or entering an area protected by a PIR Movement Detector otherwise a Full Alarm condition will occur. For this reason it is usual only to set the system into Instant-Arm mode and to Disarm the system from outside the property.

Delay-Arm mode will arm the system with a 15 second entry/exit delay. On arming the system in Delay mode

the siren will produce a single long beep and another short beep after the 15s exit-delay has expired. This allows time for you to leave the property before the system becomes fully active. On returning to and entering the property by opening a protected door or moving through a PIR protected area the system will be triggered and the Siren will emit a single long beep. However, a Full Alarm will not be initiated until the 15 second entry-delay has expired during which time the system should be Disarmed. If the system is not Disarmed when the entry-delay period expires an alarm condition will occur and the siren will activate.

If an Alarm condition is initiated the Siren will sound continuously until the set alarm duration time expires when the Siren will cease. The system will then automatically reset and re-arm itself. In the event of a further alarm condition being initiated the system will once again activate the Siren for the set alarm duration. This process can be repeated up to three times after which time the "Zone Lockout" feature will operate and prevent the system from re-arming.

- Notes:**
- To conserve power and maximise battery life the PIR Detector will only detect movement if there has been no movement detected within the previous 2 minutes.
  - The system can only be armed if the Siren is in Operating Mode, (see page 17).

## ARMING THE SYSTEM IN INSTANT-ARM MODE

The system can be armed in Instant mode using either the Remote Control or the Keypad as follows:

### Remote Control:

Press the 'INSTANT-ARM' button, 

The Siren will acknowledge the signal by beeping once.

### Keypad:

Enter the User Access code followed by the 'INSTANT-ARM' button



User Access Code

The Siren will acknowledge the signal by beeping once.

## ARMING THE SYSTEM IN DELAY-ARM MODE

The system can be armed in Delay mode using either the Remote Control or the Keypad as follows:

### Remote Control:

Press the 'DELAY-ARM' button, 

The Siren will acknowledge the signal by beeping once and then again after the 15s entry/exit period has expired. The system will not be fully armed and active until after the second beep.

### Keypad:

Enter the User Access code followed by either 'DELAY-ARM' button.



User Access Code

The Siren will acknowledge the signal by beeping once and then again after the 15s entry/exit period has expired. The system will not be fully armed and active until after the second beep.

## DISARMING THE SYSTEM

The system can be Disarmed using either the Remote Control or the Keypad as follows:

### Remote Control:

Press the 'DISARM' button, 

The Siren will acknowledge the signal by beeping twice.

### Keypad:

Enter the User Access code followed by the 'DISARM' button.



User Access Code

The Siren will acknowledge the signal by beeping twice.

**IMPORTANT:** If, when the system is disarmed, the siren emits a series of ten rapid beeps, this indicates that a Full Alarm condition has been triggered whilst the system was armed. Check the security of the property before entering.



## PERSONAL ATTACK (PA) ALARM

A full alarm condition can be immediately initiated by the user at any time (whether the system is armed or disarmed) in the event of threat or danger by activating the Personal Attack (PA) facility using either the Remote Control or the Keypad as follows:

### Remote Control:

Slide the Personal Attack switch upwards.

### Keypad:

Press and hold both the  and  buttons together for 2 seconds.

A Full Alarm condition will be initiated which will continue for the alarm duration time (1 or 3 minutes) when the system will automatically reset or disarmed from the Remote Control or Keypad.

## SIREN SERVICE MODE

In order to remove the Solar Siren from the wall to change the batteries. It is necessary to place the Siren into Service Mode to prevent the Tamper protection switch on the Siren operating and triggering an alarm. When you have completed any alterations to the system remember to switch the siren back into Operating Mode.

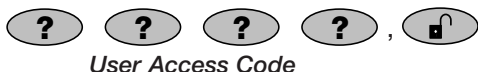
The Siren can be switched into Service Mode using either the Remote Control or the Keypad as follows:

### Remote Control:

Press and hold the  button for approximately 6 seconds.

### Keypad:

Enter the User Access Code, then press and hold the Disarm button for approximately 6 seconds



The Solar Siren will produce two short beeps as the disarm button is pressed followed by a single long beep approximately 6 seconds later to indicate that it has switched into Service Mode.

## SIREN OPERATING MODE

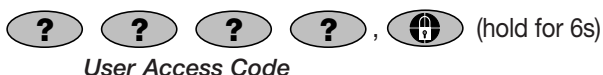
The siren can be switched back into Operating Mode using either the Remote Control or the Keypad as follows:

### Remote Control:

Press and hold the  button for approximately 6 seconds

### Keypad:

Enter the User Access Code and then press and hold the Arm button for approximately 6 seconds



After approximately 6 seconds the Siren will produce a single long beep to indicate that it has switched into Operating Mode in a Disarmed state. The Arm button should be released during or immediately after the long beep, otherwise the system will switch into an Armed state that it has switched into Service Mode.

## BATTERY MONITORING

All system devices continuously monitor their battery condition. When a low battery indicator is activated the device will continue to operate normally for up to 2 weeks (depending upon system use). However, the battery for that device should be replaced as soon as possible.

Before replacing the battery in any device turn the system to Service Mode as previously described. When the batteries have been replaced, the system should be turned back to Operating Mode.

The low battery indication for each system component is as follows:

### Remote Control

When the Remote Control is operated under low-battery conditions the transmit LED will continue to flash after the button has been released.

Under normal battery conditions the LED will extinguish within 2s of the button being released.

### Keypad

Under low-battery conditions the 'low-batt' LED on the keypad will be illuminated.

**Note:** The Keypad will retain the User Access Code setting for approximately 15 seconds whilst the battery is removed and replaced. If the battery is left disconnected for a longer period, or has been allowed to run completely flat the User Access Code will revert to the factory default code of "1 2 3 4" when the new battery is connected. The User Access Code will then need reprogramming as detailed on page 8.

### PIR Movement Detectors

If the voltage level of any PIR battery falls below 7.5 Volts, the LED behind the detector lens will flash when movement is detected to indicate that the battery needs to be replaced.

Under normal battery conditions the LED does not illuminate unless the PIR Detector is in Walk Test mode.

### Magnetic Contact Detectors

When the detector is activated, under low-battery conditions the transmit LED will be illuminated for approximately 1 second as the door/window is opened.

Under normal battery conditions the LED does not illuminate as the detector is operated, (unless the detector is in Test Mode with the battery cover removed).

## MAINTENANCE

Your Alarm System requires very little maintenance. However, a few simple tasks will ensure its continued reliability and operation.

**IMPORTANT:** Should you, for any reason, have to completely power-down the system (e.g. to move the system to a new premises) first put the system into Service Mode before removing the Solar Siren cover and disconnecting the main rechargeable and initial power-up batteries. Ensure that the solar panel is covered with a light proof material to prevent it being energised.

### SOLAR SIREN

1. It is recommended that the Solar Panel on the top of the siren housing should be cleaned at least twice a year, preferably in the Spring and Autumn, using a soft damp cloth. Do not use abrasive, solvent based or aerosol cleaners. Do not attempt to clean inside the unit or allow water to enter the unit.

This will ensure that the Solar Panel does not become affected by the build up of excessive dirt and receives all the available light.

2. The Solar Siren should not be left for long periods with the batteries connected, unless the unit is able to receive sufficient light to maintain the battery charge. Failure to maintain charge to the unit will result in the rechargeable battery running unacceptably low. Should this occur, the unit must be recharged from a 7.5Vdc/100mA supply (e.g. from a mains adaptor power supply). When re-powering the Solar Siren fit a new 9V PP3 leak proof Alkaline power-up battery to ensure that the Unit receives sufficient power until the solar panel can recharge the main battery.

3. The main rechargeable battery has a typical life of 3-4 years and needs no maintenance during this period, provided the battery is kept charged. The battery will be damaged if it is stored in a discharged state for long periods.

**Note:** Before removing the Solar Siren from the wall in order to replace the batteries or for any other reason ensure that the Siren is first switched into Service Mode to prevent the Tamper protection switch operating and triggering an alarm, (see page 17).

**Important:** After changing the batteries and refitting in position, the Solar Siren must be switched back into normal Operating Mode, otherwise the Siren will not sound in the event of an alarm condition.

### DETECTORS, REMOTE CONTROL AND KEYPAD

The detectors require very little maintenance. The batteries should be replaced once a year or when a low battery status is indicated.

### BATTERIES

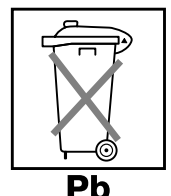
**Note:** Before removing the battery cover on any device to replace the battery ensure that the Siren is switched into Service Mode to avoid initiating a Full Alarm condition.

The specifications for replacement batteries are as follows:

Remote Controls:	1 x 3V CR2032 Lithium Cells (or equivalent)
Magnetic Contact Detectors:	2 x 3V CR2032 Lithium Cells (or equivalent)
PIR Movement Detectors:	1 x 9V PP3 Alkaline
Keypad:	1 x 9V PP3 Alkaline

**Note:** Where applicable only fit PP3 Alkaline type batteries. Rechargeable batteries should NOT be fitted.

At the end of their useful life the batteries should be disposed of via a suitable Recycling Centre. Do not dispose of with your normal household waste. DO NOT BURN.



The Rechargeable Batteries contain Sulphuric Acid – DO NOT ATTEMPT TO OPEN THE CASING.

# ALARM RECORD

You may make a note of your User Access Codes and Installer Access Code below.

## User Access Code

---

## System House Code

ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	6	7	8

Use the above diagram to record your House Code e.g.  = ON

***This information is confidential and should be kept in a safe location.***

## TROUBLE SHOOTING

<b>Symptom / Recommendation</b>	<b>Symptom / Recommendation</b>
<p><b>Siren immediately sounds when system armed.</b></p> <ol style="list-style-type: none"> <li>Siren tamper switch activated - adjust tamper plunger and ensure that switch fully closes when Siren is mounted. If the wall is excessively uneven, the siren may need relocating to a more suitable position.</li> </ol>	<p><b>Siren not responding to Remote Control or Keypad.</b></p> <ol style="list-style-type: none"> <li>Remote Control or Keypad battery low - Replace battery.</li> <li>Ensure 'House Code' is correctly set to the same code as all other system devices.</li> <li>Incorrect User Access Code being entered at Keypad.</li> <li>Siren rechargeable battery discharged:               <ol style="list-style-type: none"> <li>Clean Solar Panel.</li> <li>Check age of rechargeable battery – replace if at end of useful life.</li> <li>Fit new initial power-up battery and re-power up siren.</li> </ol> </li> <li>System locked - Reset system:               <ol style="list-style-type: none"> <li>Disconnect Siren rechargeable and initial power-up batteries.</li> <li>Cover Solar panel with light proof material and leave system for 5 minutes.</li> <li>Reconnect batteries and then remove Solar panel cover and take out of Service Mode.</li> </ol> </li> </ol>
<p><b>Siren sounds when system is disarmed or has not been triggered by an intruder.</b></p> <ol style="list-style-type: none"> <li>Detector tamper switch activated - check that the battery covers of all detectors and Keypads to ensure they are securely and fully fitted.</li> <li>Personal Attack Alarm operated from a Remote Control or Keypad.</li> <li>Jamming detection circuit operation (see page 5).</li> <li>Detector giving false alarm signals, see below.</li> </ol>	<p><b>LED on Remote Control not illuminating, or is dim when unit is operated.</b></p> <ol style="list-style-type: none"> <li>Ensure battery is fitted with correct polarity.</li> <li>Ensure battery holder connections are making good contact with the battery.</li> <li>Battery low - replace battery.</li> </ol>
<p><b>Siren not responding to detector.</b></p> <ol style="list-style-type: none"> <li>Detector battery low - Replace battery.</li> <li>Siren in Service Mode - switch back to Operating Mode using Remote Control or Keypad</li> <li>Ensure 'House Code' is correctly set to the same code as all other system devices.</li> <li>Ensure detector is within effective radio range of Siren and equipment is not mounted close to metal objects.</li> </ol>	

## TROUBLE SHOOTING - continued

<b>Symptom / Recommendation</b>	<b>Symptom / Recommendation</b>
<p><b>Keypad not operating ('On-Air' light does not illuminate).</b></p> <ol style="list-style-type: none"> <li>1. Incorrect Access Code being entered.</li> <li>2. Battery low - replace battery.</li> </ol>	<p><b>Magnetic Contact Detector not working.</b></p> <ol style="list-style-type: none"> <li>1. Ensure that magnet is correctly positioned in relation to detector and that the gap between magnet and detector is not too large.</li> <li>2. Ensure batteries are fitted with correct polarity.</li> <li>3. Ensure battery holder connections are making good contact with the batteries and PCB.</li> <li>4. Ensure 'House Code' is correctly set to the same code as all other system devices.</li> <li>5. Ensure DIP switches 9, 10 and 11 are correctly set, (i.e. 9=ON, 10=ON, and 11=OFF).</li> <li>6. If there is no additional Magnetic Contact Detector connected ensure jumper link is fitted.</li> <li>7. If an additional Magnetic Contact Detector is connected:               <ol style="list-style-type: none"> <li>a. Ensure jumper link is removed.</li> <li>b. Check that both contacts are closed.</li> <li>c. Check that additional contact is correctly wired.</li> </ol> </li> </ol> <p><b>Note:</b> If an additional contact is used then the doors/windows protected by both the main wirefree detector and the additional wired detector must be closed when either is opened. If one of the doors/windows is already open then the opening of the other door/window will not be detected.</p> <ol style="list-style-type: none"> <li>8. Ensure detector is within effective radio range of the Solar Siren and is not mounted close to metal objects which may interfere with RF transmission.</li> </ol>
<p><b>PIR Movement Detector false alarming.</b></p> <ol style="list-style-type: none"> <li>1. Ensure that the detector is not pointing at a source of heat or a moving object.</li> <li>2. Ensure that the detector is not mounted above a radiator or heater.</li> <li>3. Ensure that the detector is not facing a window or in direct sunlight.</li> <li>4. Ensure that the detector is not in a draughty area.</li> <li>5. Pulse count set too low – reset to two pulse detection.</li> </ol>	<p><b>Magnetic Contact Detector false alarming.</b></p> <ol style="list-style-type: none"> <li>1. Ensure that magnet is correctly positioned in relation to detector.</li> <li>2. Ensure that gap between magnet and detector is less than 10mm.</li> <li>3. Tamper switch below battery cover not depressed – check battery cover is fitted correctly and that fixing lugs are not broken.</li> </ol>
<p><b>PIR Movement Detector not detecting a person's movement.</b></p> <ol style="list-style-type: none"> <li>1. Ensure the battery clip is securely connected.</li> <li>2. Ensure 'House Code' is correctly set to the same code as all other system devices.</li> <li>3. Pulse count set too high - reset to one pulse detection</li> <li>4. Ensure DIP switches 1, 2 and 3 of SW2 are correctly set, (i.e. 1=ON, 2=ON, and 3=OFF).</li> <li>5. Ensure that detector is mounted the correct way up, (i.e. with detection window at the bottom).</li> <li>6. Ensure that the detector is mounted at the correct height, (i.e. 2-2.5m).</li> <li>7. Allow up to three minutes for detector to stabilize and become fully operational. Leave the area for this period.</li> <li>8. Ensure detector is within effective radio range of the Solar Siren and is not mounted close to metal objects which may interfere with RF transmission.</li> </ol>	<p><b>LED on Magnetic Contact Detector illuminating when door or window is opened.</b></p> <ol style="list-style-type: none"> <li>1. Low battery - replace batteries.</li> </ol>
<p><b>PIR Movement Detector LED flashes on detection of movement, (device in normal operation mode).</b></p> <ol style="list-style-type: none"> <li>1. Ensure that the detector is configured for normal operation, (i.e. DIP switch 4 of SW2 is OFF).</li> <li>2. Low battery - replace battery.</li> </ol>	

**HELPLINE**

If you have any problems with your alarm, please call the Helpline on:

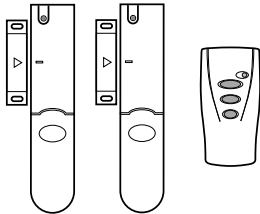
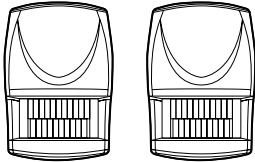
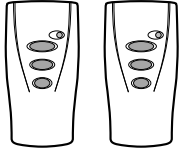
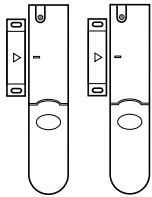
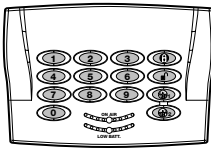

**01268 563273**

(Lines open 9.00am to 5.00pm, Monday to Friday)

# EXTENDING YOUR ALARM SYSTEM

Your system may be extended to provide additional protection by adding additional PIR Movement Detectors, Magnetic Contact Sets and Remote Control Units.

## ACCESSORIES

 <p><b>SU1 - ACCESSORY SET</b> 2 x Magnetic Contact Detectors and 1 x Remote Control Unit.</p>	 <p><b>SU2 - PIR MOVEMENT DETECTORS</b> 2 x PIR Movement Detectors.</p>	 <p><b>SU3 - REMOTE CONTROL UNITS</b> 2 x Remote Control Units.</p>
 <p><b>SU4 - MAGNETIC CONTACT DETECTORS</b> 2 x Magnetic Contact Detectors.</p>	 <p><b>SU5 - REMOTE KEYPAD</b> 1 x Remote Keypad.</p>	 <p><b>SU6 - EXTERNAL SOLAR SIREN</b> 1 x External Solar Siren.</p>

## 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 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:

1. Proof of purchase.
2. A full description of the fault.
3. All relevant batteries (disconnected).

Friedland is a trade mark of Novar ED&S.

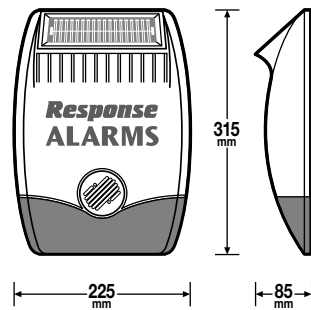
**Note:** If returning a Solar Siren, make sure that both the rechargeable battery and initial power up battery are disconnected and secure.

**Friedland, Novar Electrical Devices and Systems.**

The Arnold Centre, Paycocke Road, Basildon, Essex. SS14 3EA.

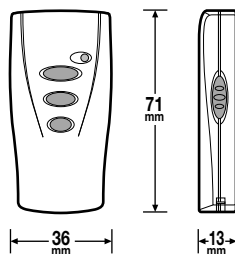
Novar Electrical Devices and Systems are Quality Assurance Registered to BS EN ISO9001 1994, by Asta

## External Solar Siren



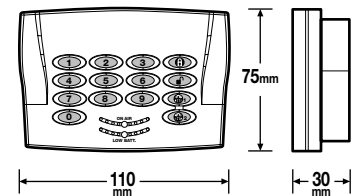
- RF operating frequency: 433MHz
- Sealed lead acid battery 6V/1.2Ahr
- Solar Panel 7.5V - Charge Rate typically 60mA
- Operation time in complete darkness - up to 40 days
- Instant-Arm mode
- Delay-Arm mode - 15s Entry/Exit Delay
- High Power Piezo Siren
- Alarm Duration: 1 or 3 minutes
- Auto reset
- Zone lockout
- Siren Disable (selectable)
- Dual front and rear anti-tamper protection
- Jamming Detection
- Audible confirmation (selectable)

## Remote Control



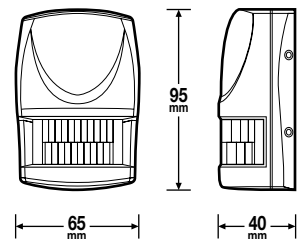
- RF operating frequency: 433MHz
- Range: 50m max.
- Personal Attack (PA) switch
- Operates all ARM, PART-ARM and DISARM functions
- Transmission indicator
- Battery life > 1 year
- Low battery indicator

## Keypad



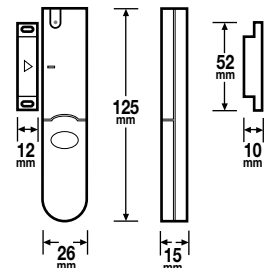
- RF operating frequency: 433MHz
- Range: 50m max.
- Changeable 4 digit User Access code.
- Anti-Tamper protected
- Personal Attack (PA) facility
- Battery Life > 1 year
- Low Battery Indicator

## Passive Infra-Red Movement Detector



- RF operating frequency: 433MHz
- Range: 75m max.
- Detection range: up to 12m at 110° and 6m at 180°
- Walk test facility
- LOW/HIGH Detection Sensitivity
- Anti-Tamper protected
- Corner or surface mount
- Battery Life > 1 year
- Low Battery Indicator

## Magnetic Contact Detector(s)



- RF operating frequency: 433MHz
- Range: 75m max.
- Test Mode
- Anti-Tamper protection
- Facility to add external wired Magnetic Contact Detector
- Battery Life > 1 year
- Low Battery Indicator

### RESEARCH & DEVELOPMENT

Our R & D Department is constantly developing new products.

We practice a policy of continued improvement and reserve the right to change specifications without prior notice.

**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).

