LS5000

Contents

Section 1 – Overview of System

LS5000 high security alarm system is based on cordless radio technology to give exceptional levels of protection and reliability. It has the ability to control up to 32 zones and can use both cordless and wired detectors.

IMPORTANT – please read through Sections 1 - 4 before commencing installation. You will find installation easier if you follow the steps in the sequence shown.

1.1 Kit Contents

The system comprises:

Control Unit
This is the heart of the system. It receives signals from detectors. Accepts inputs from a user and activates warning devices such as siren and strobe lights. The Control Unit must be wired to a mains supply and to the external siren unit.

Wireless Passive Infra-Red Detector
The Passive Infra-Red Detector (PIR) senses the body heat of a moving person. One unit can cover an entire room (wire-free).

Wireless Magnetic Contact
Uses a magnetically operated switch to sense the opening of the door or window.

Wireless Remote Control Key
Used for full arming, part arming or disarming the system. In addition it is used for the panic function.

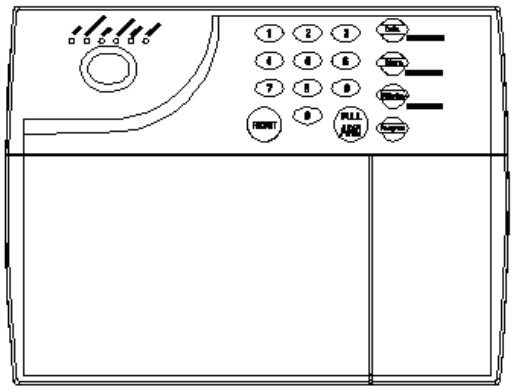
Two-Wire Passive Infra Red Detector
The Passive Infra-Red Detector (PIR) senses the body heat of a moving person. One unit can cover an entire room. This detector only needs 2 non-polarity wires to connect to the two-wire detector zone [=1 to =4]. Wired detector does not rely on RF signal and hence cannot be jammed.

To complete your installation, you will also require: (to be purchased separately)

- 1m flexible mains cable (3 core)
- rechargeable Battery
- fused connection unit (fused spur) plus suitable cable clops and trunking
- external Siren/Strobe Unit
- 6-core cable for connection of the Control Unit to the external siren

1.2 Tools Required

- Large and small flat bladed screwdrivers
- Large and small crosspoint screwdrivers
- Hammer
- Power drill
- 5mm & 8mm masonry drill bits
- Sharp knife
- Pencil & bradawl
- Wire cutters & wire stripper
- Ladder or other safe working platform
- Eye protection



CONTROL UNIT

1.3 System Features

- Detector Learning System – every LS5000 cordless detector contains a unique identification code; during installation the Control Unit will learn which detectors belong within your system by receiving coded radio transmissions from each detector.

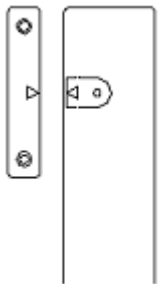
- The system can control up to 24 detectors, 16 of which can be cordless. 4 traditional detectors (6-wire PIR or door/window contact) and 4 two-wire detectors (2-wire PIR).

- To allow you to leave and enter the protected area without setting the alarm off, Zone 1 is set aside as an Entry/Exit zone. When triggered, Zone 1 gives the user 30 seconds (adjustable) to unset (disarm) the system without causing full alarm. In most cases the Zone 1 detector will be a door contact on your main entrance door.

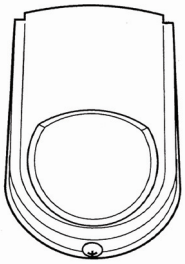
- Every system component contains a tamper detection device. If any attempt is made to interfere with any part of the system, an alarm system will sound immediately even if the system is not armed.

- Each wireless detector transmits a signal to the control unit to warn the user of any problems within the detector, such as a low battery condition.

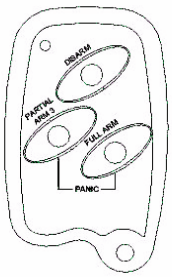
- Optional wired and two-wire detector give alternative protection – they do not rely on radio signals and hence cannot be jammed



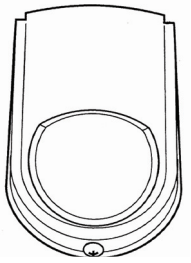
LS-1601
Wireless Door/Window Contact



LS1600 Wireless Passive Infra-Red Detector



LS1606
Remote Control Key



TW402 Two-Wire
Passive Infra-Red Detector

- The Zone Omit (part set) facility allows you to have certain zones disabled when the system is armed; for example, at night the system can be set with any upstairs detectors omitted but the downstairs detectors will still activate the alarm in the event of a break-in.

1.4 Explanation of Terms

Zone - An logical area which is protected by one or two detectors

Standby - The normal state of the system when the house is occupied. The Control Unit will respond only to Tamper signals by sounding the internal siren.

Armed (Set) - In the Armed condition, the Control Unit will sound full alarm (external and internal sirens) when it receives an Alarm or Tamper signals.

Part Setting - Arming the system with certain zones omitted (i.e. not trigger an alarm for the omitted zones).

Exit Zone - The zone through which you pass between arming the system and leaving the house.

Entry Zone - The zone through which you pass between entering the house and disarming the system. (Entry zones are usually the same as Exit zones).

OK Beep - Rapid double tone, indicates correct operation.

Error Beep - Long single tone, indicates incorrect operation.

Section 2 – Planning your Installation

2.1 Location of components

Control Unit – Location

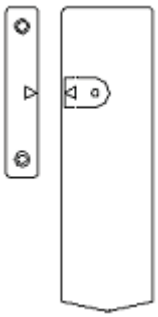
The unit is a comprehensive alarm Control Unit containing a sophisticated radio receiver. In choosing a suitable location you should bear in mind:

- The need to reach the Control Unit easily, within the allocated time, when entering and leaving the premises, ideally passing only one detector.
- The Control Unit should not be visible from the exterior of the protected premises.
- If you connect the external siren, it **must** be wired to the Control Unit.
- Reception of radio signals can be affected by the presence of metal objects within a few feet of the Control Unit, for example mirrors, central heating radiators, garage doors and cars parked in garages on the opposite side of the wall. Avoid choosing any location which is near (within 60cm) to these or any other large metal objects.
- The Control Unit needs to be connected to 220/240V AC mains directly via a 3 amp fused connection unit (fused spur).

WARNING: Connections to the mains should be made in accordance with all national and local wiring regulations, including correct insulation and fusing; if in doubt, consult a suitably skilled and competent person.

Having chosen the location, do not mount at this stage.

Wireless Door/Window Contact Detector – Location



- This product contains an radio transmitter and should not be sited on or near to large metal objects
- The detector consists of two parts. The larger (the actual detector) contains the batteries and the electronics and the smaller part is simply a magnet.
- It is designed to detect a door or window opening so the detector part is usually mounted onto the frame and the magnetic next to it on the door or window. For optimum radio range the detector should be mounted as high on the door as possible.
- In most applications the detector is fitted to the front door and assigned to ZONE 1, which is the Entry/Exit zone. This zone allows 30 second (adjustable) delay to enter and leave your house and should be the only zone activated before reaching the Control Unit on entering the premises.

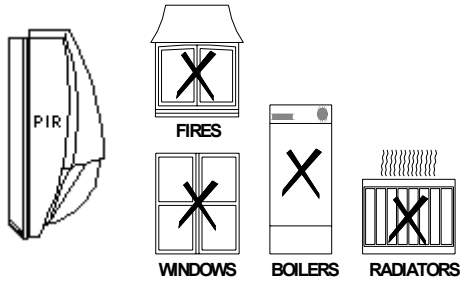
Having chosen the location, do not mount at this stage.

Wireless Movement/Passive Infra Red Detector (PIR) – Location

- The detector should not be mounted near to large metal objects or on metal surfaces. It needs to be mounted on a wall or in corner at a height of approximately 2 – 2.5 meters

for the best general coverage in an average room. The detector has been designed to avoid false alarms, nevertheless, it is best to avoid sitting the unit where it is looking directly at sources of heat such as fires and boilers and always try to avoid looking directly at the window. A PIR can look at a radiator but should not be sited above one.

- Do not site a PIR where its field of view may be obstructed (e.g. by curtains). Also, note that PIRs work best when sensing a movement across rather than along their detection beams.



- Do not locate a PIR in the Exit Zone i.e. between the Control Unit and the final exit door. In this situation, the PIR will activate the alarm, once set, when you attempt to leave the property. However, if this cannot be avoided, an Engineer code can designate "Walk Through" zones to cover the eventuality.

In addition to the 16 radio zones, your system is equipped with 4 wired zones and 4 two-wire zones. These are included to give ultimate protection by allowing a mixture of radio and wired technologies to be used. The wired Zone 1 is an additional Entry/Exit Zone and we recommend that you use this zone with a two-wire PIR to protect the area in which your Control Unit is located.

Having chosen the location, do not mount at this stage.

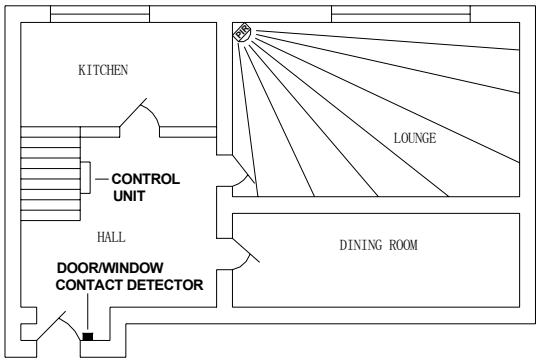
2.2 Planning the location for the system components

Example of a domestic layout

The layout is intended as a guide only but demonstrates one example of how a house can be protected with the system.

The PIR has been placed downstairs to protect valuables in a chosen room – in this case to protect the TV, video and hi-fi in the lounge. The Door/Window Contact Detector has been positioned to protect the front door.

The example follows the guidelines as stated for each individual component, but there are situations where additional accessories may be required to meet your exact needs.



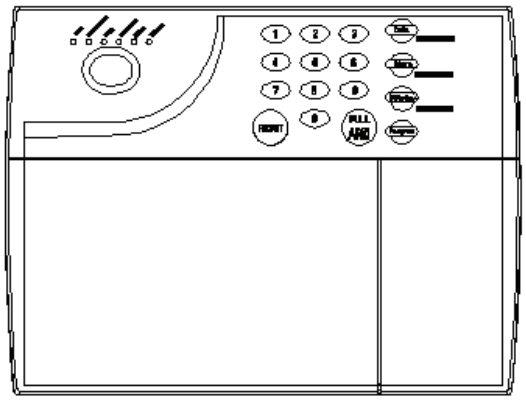
2.3 Allowing for pets

The PIR senses moving body heat. In some cases the movement of pets may also be detected. To overcome this it is recommended that the pets are kept in one specific room out of sight of a PIR when the system is armed. If required, additional Door/Window Contact Detectors (available as accessories) can then be used to protect the doors and windows of the room (see section 8 – Extending the System)

Section 3 – Installing your System

3.1 Control Unit

Illustration 1



a) Connecting to mains power supply

WARNING: Isolate the supply before starting work. All connections to the mains should be made in accordance with all the relevant wiring regulations, including correct fusing and isolation. If you are in any doubt, consult a qualified electrician. This apparatus must be earthed to comply with wiring regulations.

Use an approved 1mm 3 core flexible mains cable wired direct to a fused connection unit (often called a fused spur), which must be fitted with a 3 amp fuse. All wiring should be supported by clips and enclosed in suitable trunking.

b) Fitting

Illustration 2

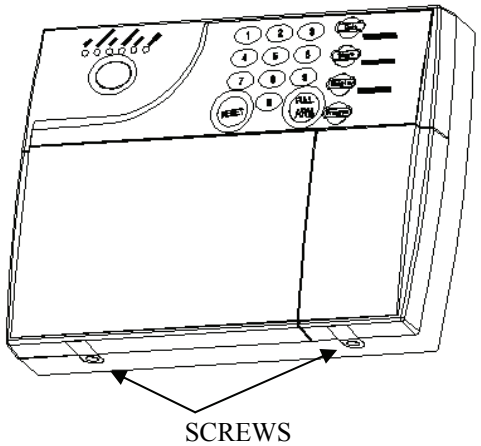
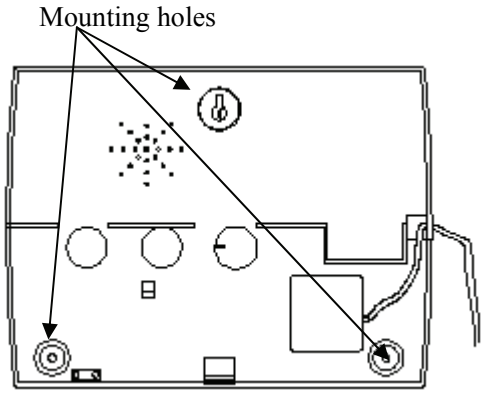


Illustration 3



i. Remove and retain screw from Control Unit. Pull up to open front cover.
ii. Position the Control Unit against the wall. Mark and drill three 8mm mounting holes as shown and use the three 40mm dome head screw and wall plugs to mount the unit in your chosen location.
iii. Unscrew cover over mains terminal block and slacken the two cable clamp screws. Feed the flexible mains cable through the hole in the near of the Control Unit and through the cable clamp.

iv. Make connections to the mains terminal block following the colour code:

TERMINAL MARKING	FLEXIBLE CABLE
L	BROWN
G	GREEN/YELLOW
N	BLUE

Tighten the cable clamp screws so that the clamp holds the outer mains cable sheath, and check that the cable is secure.

v. Replace the mains terminal block cover, ensuring that no wires are trapped or pinched.
vi. Connect the other end of the mains cable to the fused connection unit.

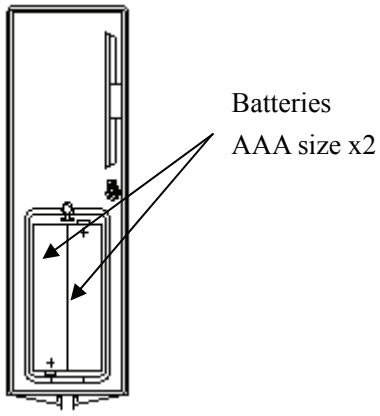
WARNING: The Control Unit must never be operated from the mains with the front cover open.

The user code is factory set to (1) (2) (3) (4) and is the same for every LS5000 system. If the system sounds during the installation pressing the factory set code of (1) (2) (3) (4) will unset the system

3.2 Installing Batteries in the Wireless Detectors

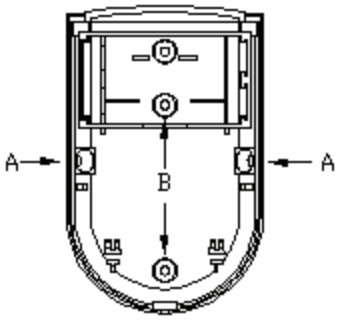
Note: Do not install batteries in the detectors until you reach Step 3.3 in the **"Programming Wireless Detectors into your System"** section. Do not use rechargeable, zinc carbon or zinc chloride batteries in the detectors.

a) Wireless Door/Window Contact Detector
Illustration 4



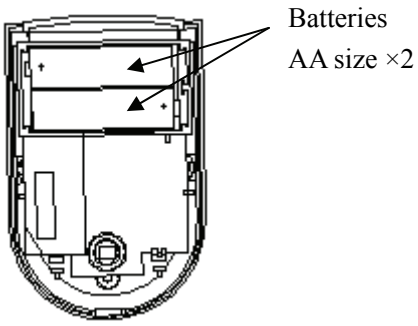
i. Slacken screw on base of detector and lift off cover
ii. Remove screw from battery cover and remove cover.
iii. Insert two "AAA" size alkaline batteries as shown. Taking care to observe correct polarity.
iv. Replace battery compartment cover and screw.

b) Wireless Movement Detector/PIR
Illustration 5



i. Slacken screw on base of detector and lift cover away from PIR base plate (Illustration 5)
ii. Remove screws from batteries cover and remove cover.

Illustration 6



iii. Insert two "AA" size alkaline batteries as shown, taking care to observe correct polarity. (Illustration 6)
iv. Replace batteries compartment cover and screw.

3.3 Programming Wireless Detectors into your System

a) Decide to which zones you want to assign the detectors- remember that Zone 1 must be the first detector triggered when you enter the building. Only one detector can be assigned to each zone.
b) Hold the detector as close as possible to it's final location, (Double-side adhesive tape will make it easier).
c) Press keys as follows:

1. Press (1) (2) (3) (4) and display changes to  flashing.
2. Press (Program) and display changes to  .
3. Press (1) and display changes to  indicating that Control Unit is now in detector programming mode.
4. Press (Display) until the required zone  is displayed. If you press (Display) more than 16 times, other zones will be indicated. These are set aside for other devices such as remote control – press (Display) again until display returns to  ,  etc.
5. Press (Store) and activate the detector you wish to assign to chosen zone by installing batteries as shown above, then waiting for a few seconds until the confirmation  beep sound is heard.
6. Press (RESET) and check that the display shows  .

If the zone number is flashing, this indicates that a detector is already assigned to that one – delete this detector (Section 5.4).

- For wireless Door/Window Contact Detector, after learning, open and close the Contact Detector once for it to go to normal detection mode.
- For wireless PIR, after learning, it will go into test mode for 15 minutes. Then it will go to normal detection mode.
- **Note** that for control unit, you can leave detector programming mode at any time by pressing the (RESET) key.
- To program the next wireless detector, repeat the procedures as above using a different zone number for each detector.

3.4 Checking the Location of the Wireless Detector

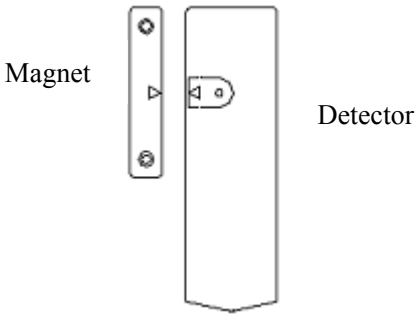
The LS5000 alarm system uses advanced radio technology which under most circumstances will give more than sufficient transmission range. Before fitting the detectors, however, it is recommended that each wireless detector be tested in its final location to ensure that the control unit receives the radio signals transmitted by the detector. To do this, follow the procedure below:
a) Hold the detector as close as possible to its final location.

b) Press (1) (2) (3) (4) on the control unit, now you are in walk-test mode.
c) If the wireless detector is triggered, a signal will be transmitted and the LED goes on. (For the wireless PIR, during the first 15 minutes (approx.), the PIR detector will not trigger the tamper alarm.)
d) Trigger the alarm in the detector, it will sound beep and indicate on the display the zone triggered. If the unit fails to receive the transmission, it will not indicate the zone. Relocate the detector until the test is completed successfully.
e) Repeat this test for all the detectors. When you wish to exit this function, press (RESET) button.

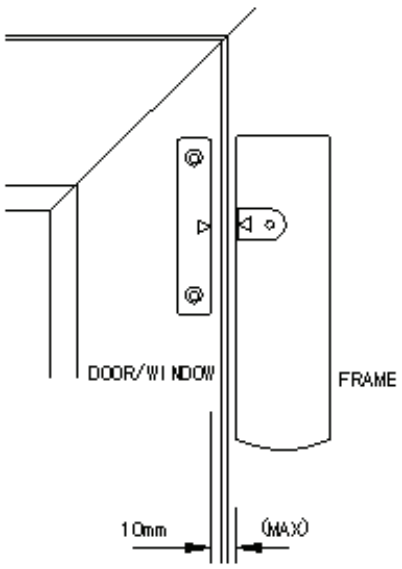
3.5 Installing your Detectors

N.B. Zones d1-d4 can be used with wired detectors only. Zones =1 to =4 can be used with two-wire detectors only.

a) Wireless Door/Window Contact Detector
Illustration 7

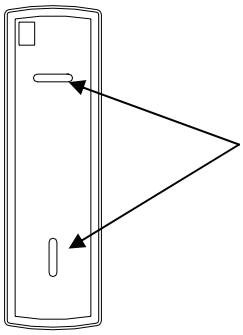


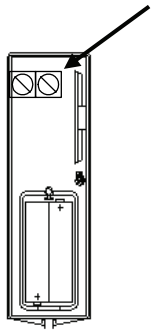
There are two parts to the detector. The larger section is actual detector and contains the batteries and the electronics. The smaller section is simply a magnet.
i. Choose where on the door or window you wish to locate the unit. The transmitter unit is usually mounted on the frame and should be positioned such that the red LED is closest to the door or window edge.
ii. The magnet should be fitted as shown (Illustration 8) with one narrow edge level with the flat top on the detector housing. The gap between the magnet and detector should be no more than 10mm with the arrow on the magnet pointing directly towards the arrow on the detector.
Illustration 8



iii. If there is insufficient room to mount the detector on the frame then it can be fixed to the door or window instead, with the magnet fixed to the frame alongside it. For reliable operation, the front face of the magnet should be no more than 10mm below the front face of the detector – in some cases it may be necessary to place packing behind the magnet or detector to achieve this.

Illustration 9





Note: The LS1601 is able to connect an external sensor.

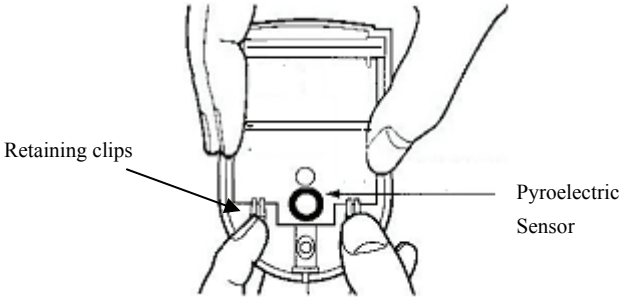
iv. Remove and retain the screw from the bottom of the detector (Illustration 9). Using a small drill or screw driver to make two fixing holes in the backplate as a template, mark and drill two fixing holes. Fix the backplate in position using the screws provided.
v. Locate the detector on the backplate and replace the retaining screw at the base of the unit.
vi. Align the magnet as described above and fix in position with the two screws provided.

Note: If you are fitting the unit to a uPVC door or window, you may wish to use STRONG double sided tape to fix both the detector and magnet in position.

b) **Wireless Movement Detector/PIR**

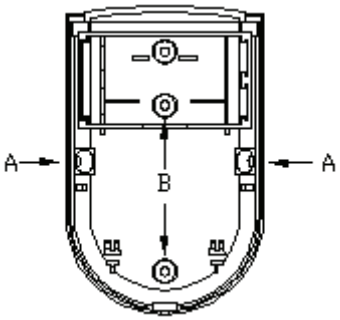
i. Remove and retain the screw from the bottom of the PIR and lift off the cover.

Illustration 10



ii. Remove batteries from PIR. Carefully remove the electronic module from its retaining clips, ensuring that you handle the circuit board by the edge only; in particular do not touch the pyroelectric sensor (Illustration 10).

Illustration 11



iii. If you are fitting the PIR in a corner, use mounting points "**A**", if you are fitting the detector on to a flat surface use mounting points "**B**" – the mounting points are shown by indentations in the plastic molding. Use a small drill to create two fixing holes at the mounting points (Illustration 11).
iv. Hold the base of the PIR in the chosen position, ensuring that the front of PIR will face towards the centre of the protected area, and mark and drill two 5mm fixing holes in the wall. **DO NOT** drill holes with the PIR in position – the resulting dust may damage the unit. Secure the PIR to the wall using two screws (25mm countersink) and the wall plugs.
v. Replace the electronic module into the retaining clips, ensuring that it is correctly positioned and firmly seated. Install the battery into the battery snap. Replace PIR cover and refit retaining screw.

3.6 Installing Battery in the Wireless Remote Control Key

Note: Do not install battery in the remote control key until you reach Step 3.7 in the **"Programming Wireless Remote Control Key into your System"** section. Use only one 3Vdc CR2032 battery.

i. Slacken screw on the back of the remote control and open the cover.
ii. Remove and insert one 3Vdc CR2032 Lithium battery into the battery holder; taking cares to observe correct polarity

3.7 Programming Wireless Remote Control Key into your system

a) The system can operate up to 4 remote controls, and 4 panic zones. In order to program a remote control key to be both regular remote control and panic trigger, you should program it twice; one in a  slot, and the second in a  slot.
b) To learn a regular remote control, press keys as follows:
1. Press (1) (2) (3) (4) and display changes to  flashing.
2. Press (Program) and display changes to  .
3. Press (1) and display changes to  indicating that Control Unit is now in detector programming mode.
4. Press (Display) until the required zone  is displayed. If you press (Display) more than 24 times, the detector zones will be indicated-press (Display) again until display returns to  . (If you are programming the remote control key to be panic trigger, press until the required zone is displayed.).
5. Press (Store) and activate the detector you wish to assign to the chosen zone by removing and inserting one 3Vdc CR2032 Lithium battery into the battery holder; taking cares to observe correct polarity, then waiting for a few seconds until the confirmation beep sound is heard.
6. Press (RESET) and check that the display shows  .

Note that you can leave detector programming mode at any time by pressing the (RESET) key.

To program the next wireless remote control, repeat the procedures as above using a  zone for each remote control. The zone learned before will blink to indicate it to be occupied.

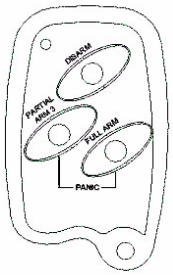
c) To learn a remote control as panic trigger, use the same sequence as the above, only this time program the remote control into the "PA" slots. Note that a remote control can be learned as a panic trigger without being a regular function remote control.

3.8 Testing your Detectors

a. Make sure that there is no movement in the rooms where the PIRs are located and close all doors to which the door/window contact detectors are fitted. Check that the covers of all detectors are fitted and securely fastened.
b. Turn on mains power to Control Unit.
c. Enter (1) (2) (3) (4), the Control Unit gives beep and display changes to  flashing – the Control Unit is now in walk test mode.

d. Open the door or window to which the door/window contact detector is fitted, the LED on the door/window contact should light for two seconds. The Control Unit will give a two-tone beep and the display will change to indicate the door/window contact detector zone number. Close the door.
e. If a wired detector is fitted the display will change to indicate plus the zone number, the " " indicating a wire detector. Close the door.
f. If a two wired detector is fitted the display will change to indicate plus the zone number, the indicating a two wired detector.
g. Walk in front of each of the PIR detectors. The LED inside the PIR will light (visible through the lens at the base of the detector) to indicate the movement has been detected. The Control Unit will give a beep and the display will change to indicate the PIR zone number. Please read the notes below about "**Sleep**" condition.
h. Press RESET on the Control Unit to cancel the test mode. Note that the Control Unit will automatically revert to "**Standby**" mode one minute after the last detector was triggered. Should this happen before you have completed testing, simple go back to Step "c".

3.9 Testing your Wireless Remote Control Key



Remote Control Function Key:

Full Arm -- Press to arm the system

Partial Arm 3 -- Press to partial arm the system with partial arm 3.

Disarm -- Press to disarm the system

Full Arm + **Partial Arm 3** -- Panic

In order to test the correct operation of the remote control, proceed as follows:

Go outside the house to the location you will normally want to use to arm or disarm the system. Press the full button on remote control and note if the system is armed. Disarm the system. If the test is passed with no problem the remote control is OK.

3.10 Movement Detector/PIR – Final Setup

IMPORTANT – To extend the battery life, wireless PIR detectors are designed to detect once only before entering a "**Sleep**" condition for two minutes during which the unit will not trigger. Any movement seen by the PIR during this period causes "**Sleep**" condition to be extended by a further two minutes. Therefore, a cordless PIR which is constantly sensing movement, such as a person walking around a room, may appear to be non-functional; you will find that the PIR will detect normally again following a two minute period with no movement present. THIS "SLEEP" TIME DOES NOT APPLY TO WIRED PIR DETECTORS.

The wireless PIR detector contains one jumper, which activates/deactivates the LED. If required that the LED will be off when the detector is triggered during arm, pull this jumper off, otherwise, leave the jumper on. If you choose to leave the LED on, bear in mind that this will reduce battery life.

If you install optional wire or two-wired PIR detectors, these are factory set to operate satisfactory in nearly all operating environments and should not required any adjustment when sited as recommended. When you have selected the required settings, replace the PIR cover and fixing screws.

3.11 Siren/Strobe Unit (to be purchased separately)

Fit the external siren as detailed in its own installation manual, but wire it as detailed below

CONTROL UNIT **SIREN UNIT**
STB TRIGGER——————————→ - STB
BELL TRIGGER——————————→ - TG
BELL TAMPER (left) ——————→RETURN
+ AUX——————————→ + HOLD
- AUX——————————→ - HOLD
NB Only five of the six coloured wires are used.

3.12 Testing Siren/Strobe

You can now test the operation of the Siren/Strobe Unit. Proceed as follows:

a. Turn on mains power to the Control Unit; the unit will beep twice, the display will show , and the "**Mains**" LED will be on. You may notice that the display flicker slightly, this is not a fault but indicates that the Control Unit is functioning correctly.
b. To test the siren, press keys as follows:

Press 1 2 3 4 ,display changes to flashing.
Press Program ,display changes to .
Press 4 ,display changes to and sirens sound (internal & external).
Press RESET ,sirens stop sounding.

c. To test the siren, press keys as follows:

Press 1 2 3 4 ,display changes to flashing.
Press Program ,display changes to .
Press 5 , display changes to and strobe flashes.
Press RESET ,strobe stop flashing.

3.13 Installing the Rechargeable Battery (To be purchase separately)

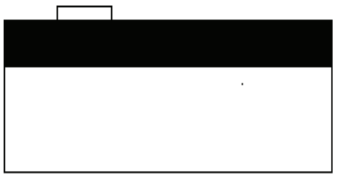


Illustration 12

a. Turn off mains power to the control unit and open the front cover.
b. Locate the red and black flying leads with spade connectors attached.
c. Push the spade connector firmly over the terminals on the battery, fitting the black (negative) connector first. **Warning – Observe Polarity!** When both terminals are connected the internal control unit tamper alarm will sound – ignore this for now. Place the battery into the control unit, close the front cover and replace the fixing screw.
d. To silence the tamper alarm, enter 1 2 3 4 and the display showing (to indicate Control Unit tamper). Press RESET ,the display reverts to with the system in "**Standby**" mode.
e. Turn on mains power to the control unit. Note that if the control unit is operating from the rechargeable battery only for more than a few seconds, the "**Mains**" light will flash.

This complete the basic installation of your system. If required, you may wish to set up some of the system parameters (e.g. siren time) as shown in Section 5.

3.14 Installing Two-wired PIR

(For extension also available to purchase separately as an accessory)

i. Remove and retain the screw from the bottom of the PIR and lift off the cover.

ii. Carefully remove the electronic module from its retaining clips, ensuring **not to touch the pyroelectric sensor** (Illustration 13).

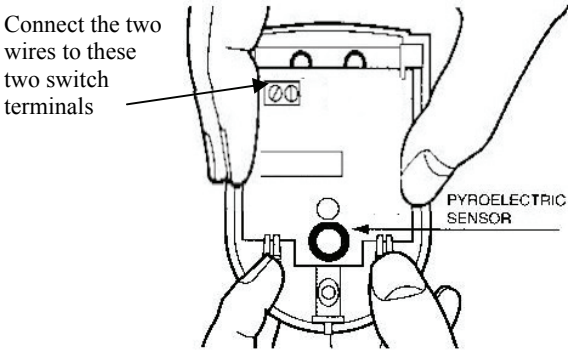


Illustration 13

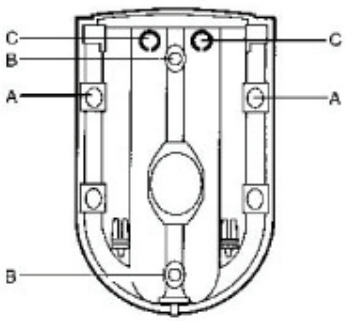


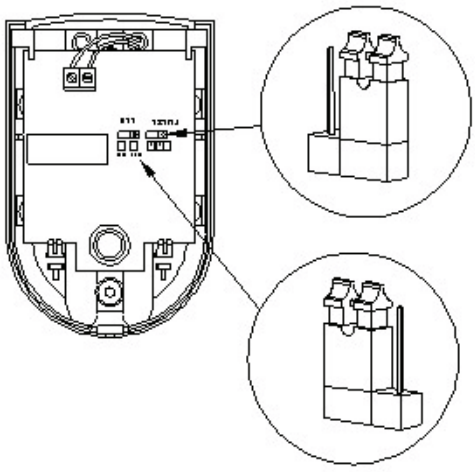
Illustration 14

iii. Use mounting points "A", if you are fitting the detector in a corner. Use mounting points "B", if you are fitting the detector on a flat surface. Use a small drill to create two fixing holes at the mounting points (Illustration 14).

iv. Hold the base of the PIR in the chosen position, ensuring that the front of the PIR will face towards the center of the protected area, mark and drill two fixing holes in the wall. Choose one of the cable entry holes "C" and make a third hole in the detector base. Put one end of the 2-core wire through this hole "C", then secure the PIR to the wall using two screws and wall plugs provided.

v. Replace the electronic module into the retaining clips, ensuring that it is correctly positioned and firmly seated.

vi. If required, select the PIR LED "ON" or "OFF" option and the sensitivity (pulse count) by setting the corresponding jumpers on the electronic module. Note that Pulse 1 option is more sensitive than the pulse 4 option. Pulse 1 option is used when it is necessary to activate an alarm on the first detected pulse, or in high security installations – where fast "catch" performance is of greatest importance. Pulse 2 or 4 settings provides improved protection against false alarms caused by all types of environmental disturbances. (Illustration 15)



Pulse Count	
Pulse 1	1 2 4
Pulse 2	1 2 4
Pulse 4	1 2 4

LED	ON	
LED	OFF	

Illustration 15

vii. Connect the 2 wires to the PIR, polarity is not important.

viii. Run the cable back to the Control Unit, fixing the cable with cable clips and enter the wire into the back of the Control Unit through any convenient cable hole.

ix. Connect to zone =1, =2, =3 or zone =4 terminals in the Control Unit as required, connection polarity is not important. See wiring diagram 1.

x. In the Control Unit, against each of the two PIR connection terminals (zone =1, =2, =3 or zone =4), there is a 3-position (0,1,2) slide switch. These switches are factory pre-set at position "0" when no PIR is connected. When connecting one piece 2-wire PIR to the zone, you need to set the corresponding switch to position "1". When connecting 2 pieces 2-wire PIR to the same zone terminals, put the corresponding switch to position "2". The wiring to connect two pieces 2-wire PIR to one same zone terminals are as page 17.

3.15 Installing Wired Movement Detector/PIR (available separately as an accessory)

i. Remove and retain the screw from the bottom of the PIR and lift off the cover.
ii. Carefully remove the electronic module from its retaining clips, ensuring not to touch the pyroelectric sensor (Illustration16)

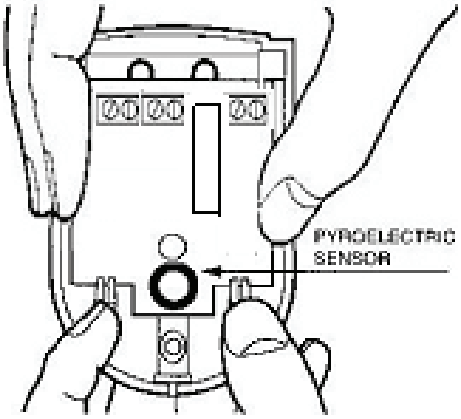
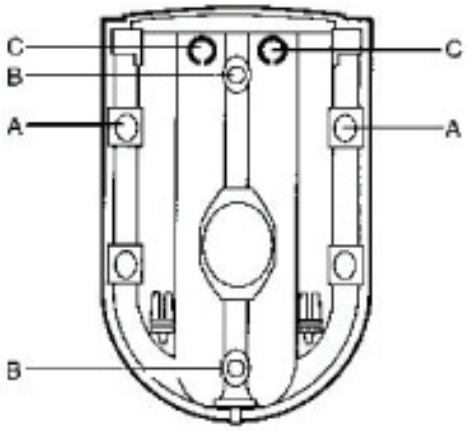
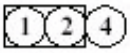


Illustration 16



1llustration 17

iii. Use mounting points "A", if you are fitting the detector in a corner. Use mounting points "B", if you are fitting the detector on a flat surface. Use a small drill to create two fixing holes at the mounting points (Illustration 17).

Pulse Count	
Pulse 1	
Pulse 2	
Pulse 4	

LED	ON	
LED	OFF	

iv. Hold the base of the PIR in the chosen position, ensuring that the front of the PIR will face towards the center of the protected area, mark and drill two fixing holes in the wall. Choose one of the cable entry holes "C" and make a third hole in the detector base. Put one end of the 2-core wire through this hole "C", then secure the PIR to the wall using two screws and wall plugs provided.
v. Replace the electronic module into the retaining clips, ensuring that it is correctly positioned and firmly seated.

vi. If required, select the PIR LED "ON" or "OFF" option and the sensitivity (pulse count) by setting the corresponding jumpers on the electronic module. Note that Pulse 1 option is more sensitive than the pulse 4 option. Pulse 1 option is used when it is necessary to activate an alarm on the first detected pulse, or in high security installations – where fast "catch" performance is of greatest importance. Pulse 2 or 4 settings provides improved protection against false alarms caused by all types of environmental disturbances. (Illustration 18)

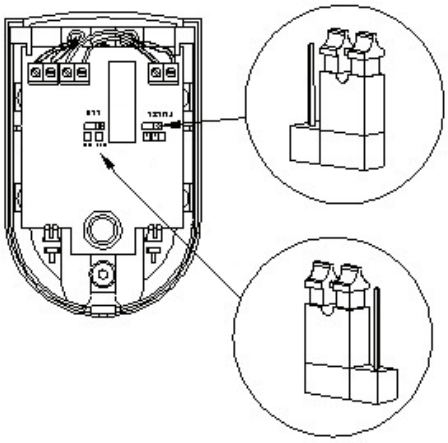


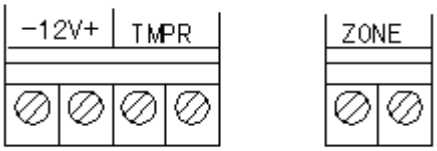
Illustration 18

vii. Run the cable back to the Control Unit, fixing the cable with cable clips and enter the wire into the back of the Control Unit through any convenient cable hole.

viii. Replace the electronic module into the retaining clips, ensuring that is correctly positioned and firmly seated.

ix. Connect the 6-core cable to terminal block of the PIR. Use following wiring sequence:

CONNECTED TO	COLOUR USED
12V+	RED
12V-	BLACK
TAMP	GREEN
TAMP	YELLOW
ZONE	WHITE
ZONE	BLUE



x. Run the cable back to the Control Unit, fixing the cable at the intervals of about 50cm using the clips provided, and enter the wire into the back of the Control Unit through any convenient cable hole.

xi. Select to which zone the PIR is to be connected and remove the jumper wire from the required zone terminals.(Note: wired zone 1(d1) is an entry/exit zone). Make connections to the Control Unit terminals as follows (Wiring diagram 2).

CONTROL UNIT	PIR	COLOUR
AUX 12V+	12V+	RED
AUX 12V-	12V-	BLACK
ZONE	ZONE	WHITE
ZONE	ZONE	BLUE

N.B. Observe polarity on 12V terminals. The PIR ZONE and Control Unit Zone terminals are not polarized.

In order to insert the PIR into the Tamper Circuit, the two wires which have been connected to the Tamper Terminals in the PIR, yellow and green, must be wired to the Terminal Strip (Wiring Diagram 2). Remove one of the wires links from the Terminal Strip and connect the yellow and green wires in its place. The wiring connection is as the wiring diagram on page 18.

xii. Replace cover on PIR and refit the retaining screw.

3.16 Installing Wired Door/Window Contact Detector
(available separately as an accessory)

i. Choose the location for each magnetic contact (remembering the need to wire them back to the Control Unit). Each contact consists of a magnetically operated switch (with screw terminals at the back) and a magnet in an identical housing.
ii. The switch (the part with screw terminals and cable) should be mounted on the frame. The magnet should be mounted on the door or window itself directly opposite the switch, no more than 8mm apart when the door or window is closed (Illustration 19). Mark two mounting holes for the magnet on the door or window and two mounting holes for the switch on the frame.

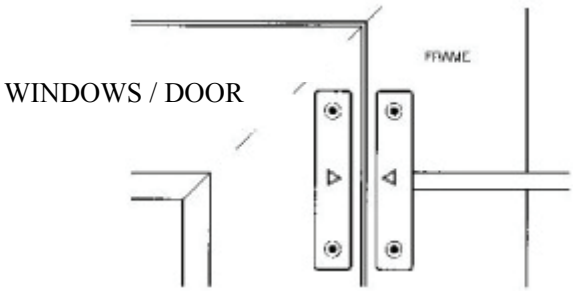


Illustration 19

iii. Choose a convenient entry point for the cable on the switch housing and carefully remove part of the plastic using a sharp knife to create a hole (Illustration 20). Connect the 2 wires to the two screw terminals.

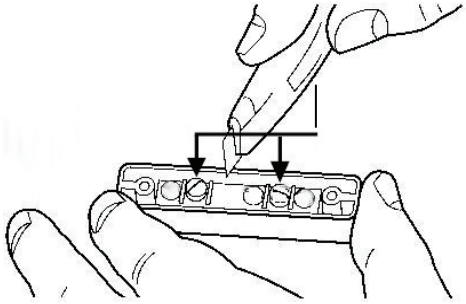
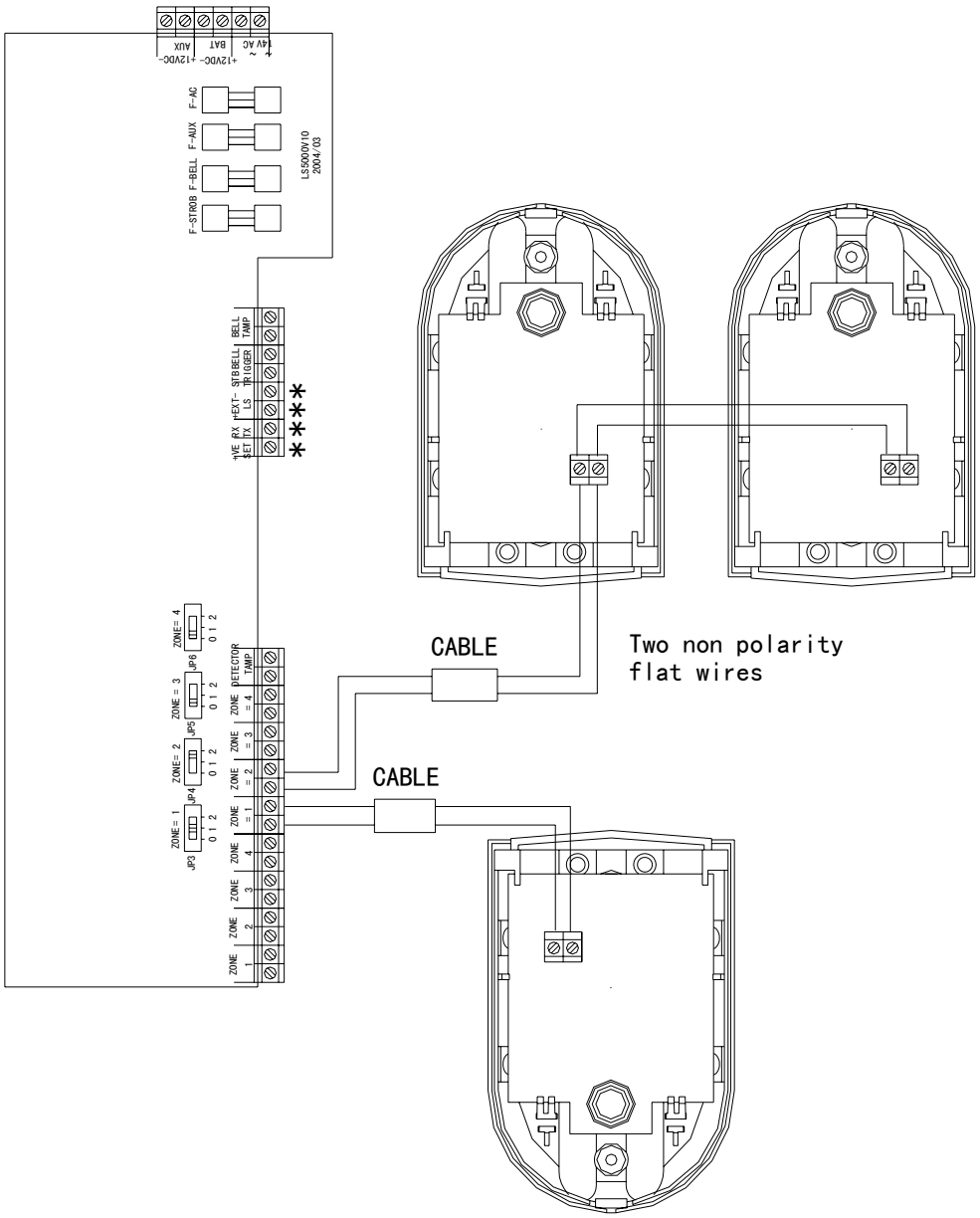


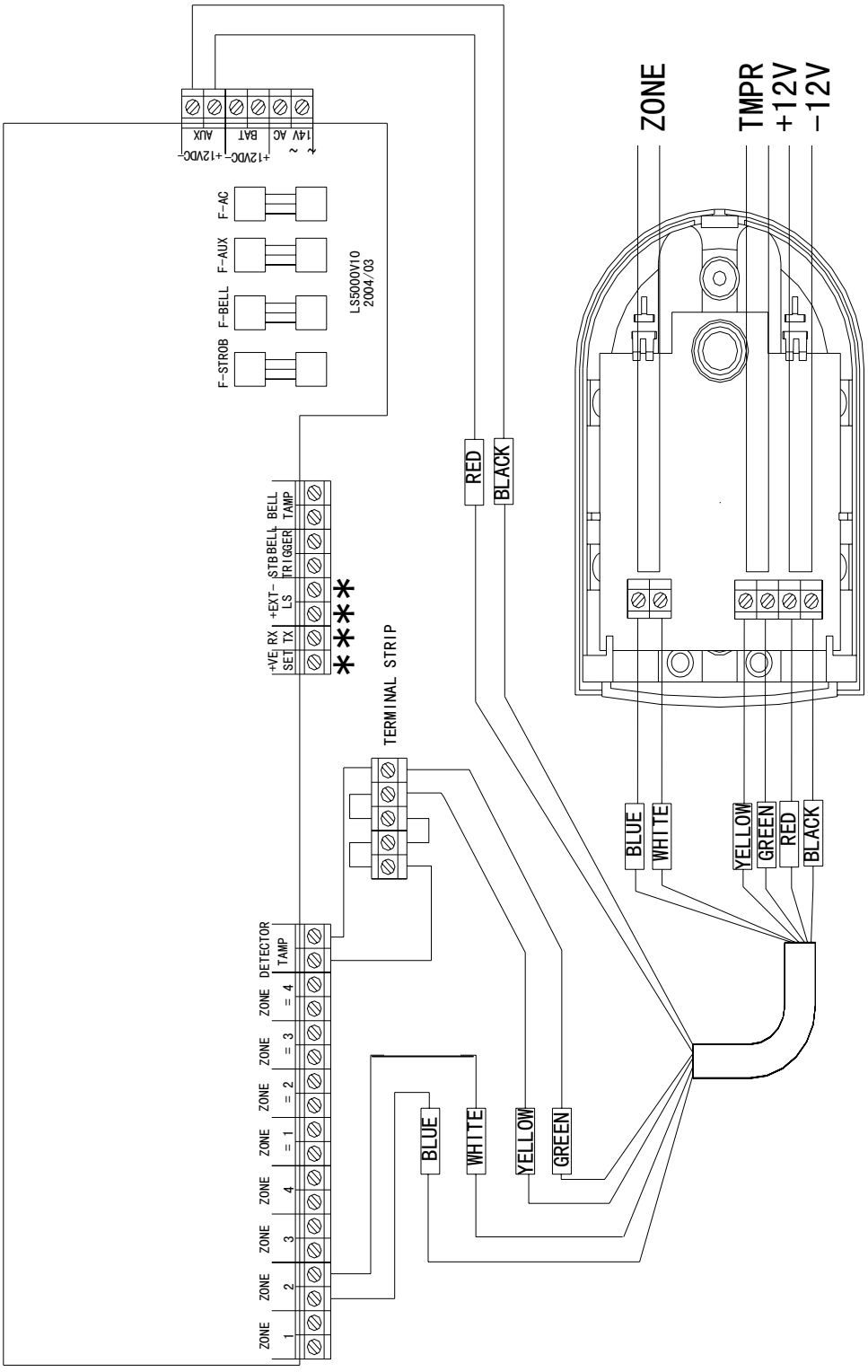
Illustration 20

iv. Fixed the contact and magnet in position using the four mounting screws provided.
v. Run the cable back to the Control Unit.
vi. Connect to zone 1, 2, 3 or zone 4 terminals of the Control Unit as required. Connection polarity is not important.

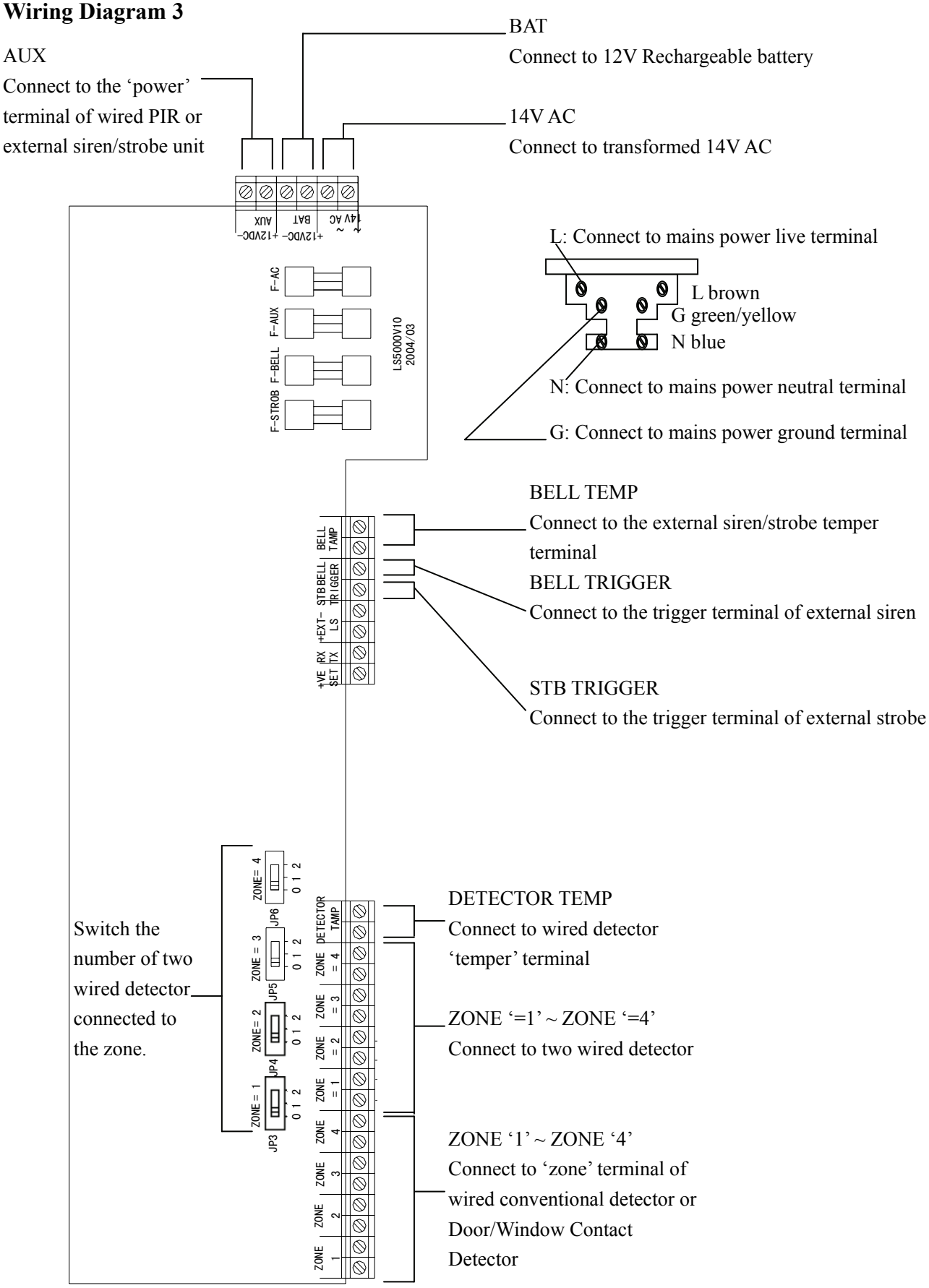
Wiring Diagram 1 – Two-Wire PIR Connection Diagram



Wiring Diagram 2 - Wired Movement Detector (PIR) Wiring Diagram



Wiring Diagram 3



Section 4 – Using the System

4.1 Changing the User Pincode

The user code is factory set to (1) (2) (3) (4) and is the same for every LS5000 system.
It is recommended that the user code be changed immediately after completing the basic installation.

Press the following buttons:

Press (1) (2) (3) (4), display changes to  flashing

Press (Program), display changes to  .

Press (8) ,display changes to  for 2 seconds, then to four-bar pattern  to show that four digits need to be entered.

Enter your desired 4 digit user code: (n) (n) (n) (n)
For each digit you press, one of the lighted bars on the four-bar pattern will go out. After pressing the fourth digit, unit gives OK beep.

Press (Store) ,Control Unit stores the new user code.
or
Press (RESET) **,** this cancels the above procedure and returns the control unit to  .

Note that the old user code will work until the new user code has been entered to certify the code. When certified, the old code is deleted. You can use this procedure whenever you wish to change your user code. Note that the user code cannot be the same pincode as the secondary or engineer code.

4.2 Changing the Secondary Pincode

The secondary pincode is factory disabled. To enable it, refer to the engineer section 6.7.

The user code is factory set to (5) (6) (7) (8) and is the same for every LS5000 system.
It is recommended that the secondary code be changed immediately after completing the basic installation.

Press the following buttons:

Press (1) (2) (3) (4), display changes to  flashing

Press (Program) display changes to  .

Press (9) ,display changes to  for 2 seconds, then to four-bar pattern  to show that four digits need to be entered.

Enter your desired 4 digit secondary code: (n) (n) (n) (n)
Enter your desired 4 digit secondary code. For each digit you press, one of the lighted bars on the four-bar pattern will go out. After pressing the fourth digit, unit gives OK beep.

Press (Store) **,**Control Unit stores the new user code.
or
Press (RESET) **,**This cancels the above procedure and returns the control unit to  .

Note that the old user code will work until the new secondary code has been entered to certify the code. When certified, the old code is deleted. You can use this procedure whenever you wish to change your secondary code. Note that the secondary code cannot be the same pincode as the user or engineer code.
The secondary code is available to people who should not be allowed to program the system, like

children. This code can only arm and disarm the system.

4.3 Arming the System

Before attempting to arm the system, check that all doors and windows (particularly those fitted with a door/window contact detector) are securely closed and that all PIR detectors have an unobstructed view of the areas they cover. If a zone is triggered when attempting to arm the system, the panel will signal an error beep and indicate the zone. The system will not arm.

Press the following buttons:

Press User code (1) (2) (3) (4) **or** **Secondary Code** (5) (6) (7) (8) display changes to  flashing.

Press (FULL ARM) ,Exit control commences and the control unit beeps slowly – this is factory set at 30 seconds. To reduce the exit time to 10 seconds, press Full once more. If you want quick arm (without exit time), press twice more.

During the entry/exit time, the system will come up " beep" sound to count down. The beeping gets faster as a final warning to leave the premises. Once armed, the display on the control unit will go blank. N.B. You are only allowed to pass the Entry/Exit detectors and the walk-through detectors during the exit time. Immediately after arming, the external strobe will activate for 5 seconds, this is to confirm that the system has set after you have left the premises.

4.4 Programming the Zone Omit Memory

The Zone Omit feature is used where your wish to arm the system but leave certain detectors inactive (for example, for night time settings). An omitted detector will still detect and trigger as normal, but it is not able to generate an alarm condition.

This system allows you to program up to 3 different omit zones (part zones)
The first step is to program the control unit with the zones which you wish to omit as follows. Enter:

Press User code (1) (2) (3) (4) ,display changes to  flashing.

Press (Program) display changes to  .

(Omit) Partial Arm 1
(Store) Partial Arm 2
(Display) Partial Arm 3

Display changes to  this allows to choose which zone you wish to program. You can program three different zones omit, for three part arm situations you want. For example – only outdoor, only indoor, only upstairs etc. By pressing one of these buttons, you choose which zone omit you wish to program now.

Press (Program) After selecting the zone omit you wish to program, you need to program the zone you want to omit. Keep pressing the (Display) button until the zone you wish to omit ( ,  , ) is shown on the display. If the zone is already omitted, the display will flash.

Press (Omit) **,**once to omit the zone (zone display flashing),and a second time to make the zone activate again (zone display steady).

To omit further zones or to un-omit previously omitted zones, press (Display) and (Omit) as above.

Press (Store) **,**to retain omitted zones in memory.
Or
Press (RESET) **,t**o return to display  and cancel all recent changes.

N.B. You cannot omit PA or any zone which does not have detector assigned to it.

4.5 Arming the System with zones omitted (part setting)

Proceed as follows. Enter:

Press User code (1)(2)(3)(4) **or** **Secondary Code** (5)(6)(7)(8) display changes to  flashing.

(Omit) Partial Arm 1
(Store) Partial Arm 2
(Display) Partial Arm 3

} Display changes to Partial Arm 1, Partial Arm P2 or Partial Arm P3 accordingly.

This will part arm the system, when omitted zones that are triggered, will not activate the alarm, the part arm will activate the exit timer as in the full arm.

4.6 Disarming the System

There are three possible scenarios for disarming the alarm system.

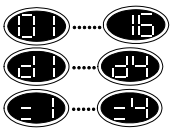
a) Normal disarming

This is the procedure to follow when disarming the system under normal circumstances (i.e. there has been no alarm condition while the system was armed).

i. Enter the premises passing zone 1 only. The control unit will begin to beep slowly indicating that you must disarm the alarm system within 30 seconds (default entry/exit time).
ii. Proceed to the control unit and enter your **User Code** or the **Secondary Code**. Control unit gives OK beep and the display shows  to show that no alarm condition exists – the system is now in "**Standby**" mode.

b) Disarming after an Alarm event

If an alarm has occurred, the siren will stop sounding after 10 minutes (factory setting-programmable). If you return to the system after this period, you will notice the strobe flashing to indicate the alarm event. Instead of the entry timer, the control unit will be beeping every few seconds and the internal siren will sound when zone 1 is triggered. In this event you should proceed as follows. Enter **User Code** or the **Secondary Code:**
OK beep, display shows last alarm condition (see table below). If the display flashes, then more than one alarm event has occurred and you must press "Display" to show the next alarm event. In the unlikely event that several alarm events have taken place since the system was armed, press "(Display)" again to view further events. The last alarm event will not flash when displayed, pressing "(Display)" again returns to the first alarm event.

LEDs Illuminated		Display shows	What happened?
Intruder	Zones no.		Movement was detected in this zone.
Tamper	Zones no.		The tamper switch on this detector was activated.
Tamper			The tamper switch on the control unit was activated.
Tamper			The tamper switch on the external siren box was activated.
Tamper			The tamper switch on one of the wired detectors was activated.
Interference			Jamming of radio transmission was detected.

When you have viewed and noted all alarm events, press:

Press (RESET) **,**display now shows  and system is in "Standby".

Note that if you have purchased some of the accessories available for your system, you may obtain other indications as shown below:

LEDs Illuminated	Display shows	What happened?
None		A personal attack (panic) button was pressed.

c) Silencing the System when the alarm is sounding

If you accidentally trigger a detector when the system is armed, the external and internal siren will sound and the external strobe will flash. If an attempt was made to tamper with any part of the system with the control unit in "**Standby**", then only the internal siren will sound.
To silence the system in such a case, follow procedure in section "b" above.

4.7 Features of the Remote Control Key

Full Arm -- Press to full arm the system

Partial Arm 3 -- Press to partial arm the system with partial arm 3

Disarm -- Press to disarm the system

Full Arm + **Partial Arm 3** -- Panic

4.8 Changing in Cordless Detector Batteries

Every LS5000 cordless detector will detect when its batteries are in need of replacement. When this occurs, a "**low battery**" transmission is sent to the control unit and a low beep will be sounded when the detector is triggered.

With the system in "**Standby**", this will cause the control unit to beep 10 times and then after to beep once every 5 minutes. The control unit display shows the zone number from which the low battery signal originated and the "**low battery**" LED will be on. Press (RESET) to clear the indication.

If the low battery signal is received when the system is armed, no alarm signal is generated but the low battery condition will be indicated in the same way as above when you disarm the system.
A detector will continue to transmit low battery warnings regularly until the batteries are replaced.

If the "**low battery**" LED is on, but no zone number is displayed and only  is displayed. That means the rechargeable battery inside the control unit is run down - this may happen if the mains power has failed and the control unit has been operating from battery power for more than several hours. Press (RESET) to clear the low battery indication. The rechargeable battery may need replacing if it has been installed more than four years.

4.9 Wireless Detector Transmissions

To comply with advance wireless security system standard , the wireless detectors in your LS5000 alarm system must transmit several kinds of signal. In addition to normal Alarm and Tamper transmissions, the detectors also send:
Supervisory signals – these are sent automatically every one hour, allowing the Control Unit to monitor the status of a detector.

If, on attempting to arm the system, any detector has failed to transmit a restore signal, it will be indicated on the Control Unit by the display showing the relevant zone and the system will not arm e.g. if a door or window fitted with a contact detector is left open, the system will not arm.

You must check that all doors and windows fitted with door/window contact detectors are closed and that all areas covered by PIRs are clear.

If the indication remains, you should trigger the detector which shows the fault in order to initiate the transmission of a restore signal.

When supervisory detection is enabled (factory default OFF), any detector which misses four consecutive Supervisory transmissions will cause the "Fault" LED to be displayed together with the relevant zone number.

When any cordless detector is triggered, its LED will flash several times. This is because a number of alarm signals are sent during this time to make the system more secure against radio jamming.

Section 5 – Programming the System

Your LS5000 System incorporates many programmable functions which can be used to make your installation more flexible to your needs. Some of the functions can be activated by the user code while others can be activated by engineer code.

5.1 Chime Zones

Any zone which is set to chime mode will cause the control unit to generate a two-tone sound when the zone is activated with the system in "Standby" – this could be used on a shop front door, for example. To set a zone to chime mode enter:

Press (1) (2) (3) (4), display changes to  flashing.

Press (Program) display changes to  .

Press (6), display shows  .

Press (Display) ,until the required zone is displayed.

Press (1) , to set chime ON, display shows the zone number is flashing.
or
Press (0) ,to set chime OFF, display shows the zone number is steady.

Press (Store) ,to retain chime setting.
Or
Press (RESET), to return display shows  " **Standby**" mode and cancel all recent changes.

5.2 Changing Entry/Exit Time

To change the time, enter:

Press (1) (2) (3) (4), display changes to  flashing.

Press (Program) display changes to  .

.

Press (7) , display shows  .

Enter new Entry/Exit Time, (n) (n)

New entry/exit time in seconds – only times between 10 to 60 are allowed. The time entered will be displayed. If an invalid time is entered, the control unit gives an error beep and the display reverts to for you to enter another value.

Press (Store) ,to confirm the new entry/exit time.
Or
Press (RESET), to return display shows " **Standby**" mode without retaining recent settings.

5.3 Changing Siren Duration

To change siren duration, enter:

Press (1) (2) (3) (4), display changes to  flashing.

Press (Program) display changes to  .

Press (3) , display shows  .

Enter new Siren Duration Time, (n) (n)

New siren duration in minutes – only values between 01 to 20 are allowed. The time entered will be displayed. (N.B. You must always enter two digits). If an invalid time is entered, the control unit gives an error beep and the display reverts to -- for you to enter another value.

Press (Store) ,to confirm the new siren duration.

Or

Press (RESET),to return display shows 00 " **Standby**" mode without retaining recent settings.

5.4 Deleting Cordless Detector

To delete cordless detector, enter:

Press (1) (2) (3) (4),display changes to 00 flashing.

Press (Program) ,display changes to P .

Press (2) **,**display shows P2.

Press (Display) , until the required zone is displayed.

Press (Store) **,**this confirms the deletion – unit gives OK beep to confirm. You can notice the zone flashing when occupied by a detector, or still when empty.

Or

Press (RESET),to return display shows 00 "**Standby**" mode and cancel all recent changes.

To reprogram cordless detectors back into your alarm system, follow the procedure in section 3.4.

5.5 Deleting Wired Detectors

Wired detectors cannot be deleted by using the buttons on the control unit. To deactivate them, the wires must be disconnected from the unit itself. To reactivate wired detectors, reconnect the wires in the control unit.

5.6 Recalling Alarm Events

The control unit stores information on the last 10 alarm events. This may be recalled at any time. To recall alarm events, enter:

Press (1) (2) (3) (4),display changes to 00 flashing.

Press (Program) ,display changes to P .

Press (0) **,** then the cause (first zone triggered) of the most recent alarm – for an explanation of the display codes, see section 4.6.

Press (Display) **,**this causes the indication to change to the next most recent alarm events. When the last entry is displayed, press (Display) again results in an error beep and display shows -- .

Press (RESET) ,to return display shows 00 "**Standby**" mode and cancel all recent changes.

5.7 Testing the Siren/Strobe

You can test the operation of the siren/strobe unit. Proceed as follows:

a) To test the siren, press keys as follows:

Press (1) (2) (3) (4),display changes to 00 flashing.

Press (Program) ,display changes to P .

Press (4) ,display shows  and siren sound (internal and external).

Press (RESET) ,Siren stop sounding (or wait for 30 seconds for automatic stop).

b) To test the strobe, press keys as follows:

Press (1) (2) (3) (4) ,display changes to  flashing.

Press (Program) ,display changes to  .

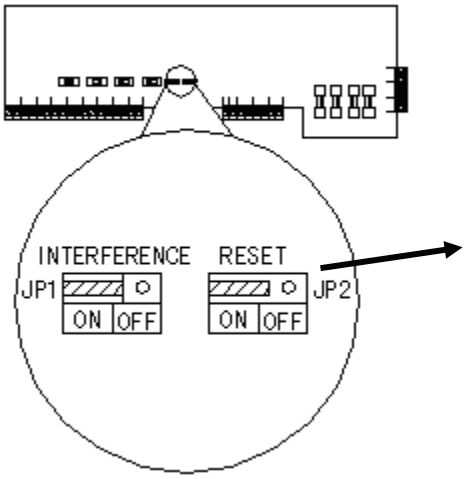
Press (5) ,display shows  and strobe flashes.

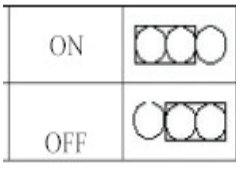
Press (RESET) ,Strobe stop flashing (or wait for 30 seconds for automatic stop).

5.8 Resetting the System

1. On very rare occasions you may wish to completely clear the Control Unit to return the unit to its "**as new**" condition.
   To do this, proceed as follows:

a) Turn off mains power to the control unit, remove the retaining screw and open the front cover – this will cause the internal tamper alarm to sound as normal with the display showing  .
b) If you know the current pin code it can be entered to silence the tamper alarm, but leaving '  ' on the display. If you do not know the codes then proceed with step c) leaving the tamper sounding.
c) Disconnect the rechargeable battery.
d) Move jumper Reset Jumper **"JP2"** from the right (marked as "OFF") most two pins to the left most two pins, the position marked as '**on**'. See diagram below:





Reset the system

Normal status
(Factory Default)

e) Reconnect the rechargeable battery.
f) The display will momentarily display  for five seconds followed by  for control unit tamper. (The tamper alarm will activate requiring the user pin code (1) (2) (3) (4) to be entered to silence it.)
g) Return jumper **JP2** to its original position on the right most two pins.
h) Replace front cover of panel and press (RESET), display now changes to indicate  .
i) Turn on the mains power.

2. If you wish only to restore factory defaults without deleting detectors learned in the system refer to section 6.10.

Section 6 – Engineer Programming

The pin code functions are used for advanced programming of the control unit. This section will explain in detail the purpose of the functions and how to program each one of them.
The factory default engineer code is 1 1 1 1.

6.1 Setting new Engineer Code

The engineer code is factory set to 1 1 1 1 and is the same for every LS5000 system.
It is recommended that the engineer code be changed immediately after completing the basic installation.

Press the following buttons:

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 9 ,display changes to  for 2 seconds, then to four-bar pattern  , to show that four digits need to be entered.

Enter your desired 4 digit engineer code: n n n n
Enter your desired 4 digit engineer code. For each digit you press, one of the lighted bars on the four-bar pattern will go out. After pressing the fourth digit, unit gives beep.

Press Store ,Control Unit stores the new engineer code.
or
Press RESET ,this cancels the above procedure and returns the control unit to display  .

Note that the old engineer code will work until the new engineer code has been entered to certify new code. When certified, the old code is deleted. You can use this procedure whenever you wish to change your engineer code. Note that the engineer code cannot be the same pincode as the user or secondary code.

6.2 Setting Walk-through Zones

The walk-through zones are detectors, which you can trigger during the entry time (after activating the entry zone). You can program each detector to be a walk-through zone, but it is recommended to set the walk-through zones, only on the detectors that are being triggered during the entry or exit time.
Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 1 **,**display shows  .

Press Display until the required zone is displayed.

Press 1 **,**to set walk-through ON, display shows the zone number is flashing.
or
Press 0 ,to set walk-through OFF, display shows the zone number is steady.
Press Display again and proceed as above until all required walk-through zones are programmed.

Press Store **,**to retain walk-through setting.
Or
Press RESET ,to return display shown  "**Standby**" mode and without retaining recent walk-through settings.

6.3 Setting Entry/Exit Zones

As mentioned earlier, zones  and  are factory set to be entry/exit zones. But, in addition to these zones, you can program other zones also to be entry/exit zones. To do so, proceed as follows:

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 2 **,**display shows  .

Press Display until the required zone is displayed.

Press 1 ,to set entry/exit ON, display shows the zone number is flashing.

or

Press 0 **,**to set entry/exit OFF, display shows the zone number is steady.

Press Display again and proceed as above until all required entry/exit zones are programmed.

Press Store **,**to retain entry/exit setting.

Or

Press RESET ,to return display shown  "**Standby**" mode and without retaining recent entry/exit settings.

6.4 Full Alarm for Tamper in Standby Mode

When the control unit is in standby mode and the tamper alarm is triggered, the system will sound only the internal siren, this is the factory setting. If you wish the external siren also to be activated in this event, proceed as follows:

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 3 **,**display shows  .

Press 1 **,**to set full alarm ON, display changes to  flashing. When tamper in standby mode, both internal and external siren will be activated.

or

Press 0 ,to set full alarm OFF, display changes back to  steady.

Press Store **,**to retain this setting.

Or

Press RESET **,**to return display shown  "**Standby**" mode and without retaining recent settings.

6.5 Remote disarm requires Entry Timer

The Control Unit can be disarmed by a remote control from long distance. However, it may seem to you to be useful to be able to disarm the system from outside the premises. By setting this function, the control unit will "make sure" you entered the premises through the usual zone before it will allow you to disarm the control unit.

Remember that the remote control functions are activated without confirmation of personal pincode.

To program this function proceed as follows:

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 4 **,**display shows  .

Press (1) ,display changes to  flashing. Disarm from the remote control without triggering an entry/exit zone first will not be expected by the control unit.

or

Press (0) ,display changes to  steady. Disarm from the remote control is enabled from any position.

Press (Store) ,to retain this setting.

Or

Press (RESET) ,to return display shown  "**Standby**" mode and without retaining recent settings.

6.6 Silent Personal Attack

The factory default for panic trigger is a full alarm. However, if a silent panic is required do the following procedure:

Press (1) (1) (1) (1) ,display changes to  flashing.

Press (Program) ,display changes to  .

Press (9) (5) ,display shows  .

Press (1) ,to set this function ON, display changes to  flashing. Panic from the remote control will not sound the alarm siren, only the strobe will flash.

or

Press (0) ,display changes to  steady. Panic from the remote control will activate full alarm – siren and strobe.

Press (Store) ,to retain this setting.

Or

Press (RESET) ,to return display shown "**Standby**" mode and without retaining recent settings.

6.7 Enable/Disable Secondary Pin Code

As said, the secondary pincode can be used only for arming, part arming or disarming the system and cannot program any function in the system. Because of this pincode is factory default to **5-6-7-8** in every LS5000 system and it is an option to use. You should notify the system of your will to activate it. If you do this, you should immediately change the secondary pincode (refer section 4.2), this ensures that the system does not contain a "**global**" pincode that can disarm your system.

Press (1) (1) (1) (1) ,display changes to  flashing.

Press (Program) ,display changes to  .

Press (9) (6) ,display shows  .

Press (1) ,to set this function ON, display changes to  flashing. Secondary pincode is enabled.

or

Press (0) ,display changes back to  steady. Secondary pincode is disabled.

Press (Store) ,to retain this setting.

Or

Press (RESET) ,to return display shown  "**Standby**" mode and without retaining recent settings.

6.8 Enable/disable supervisory detection

When this function is enabled (factory default OFF), a supervisory signal will automatically send every one hour, allowing the Control Unit to monitor the status of a detector (For more information, please read section 4, 4.9).

To do so, proceed as follows:

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 8 **,**display shows  .

Press 1 ,to set supervisory ON, display shows  is flashing.
or
Press 0 **,**to set supervisory OFF, display shows  is steady.

Press Store **,**to retain this setting.
Or
Press RESET **,**to return display shown  "**Standby**" mode and without retaining recent settings.

6.9 Engineer only reset

When this function is disabled, the user can activated the control unit regularly after an alarm event. If this function is set, after disarming the system from an alarm condition, you must enter the engineer code in order to proceed regularly.

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 7 **,**display shows  .

Press 1 **,**to set this function ON, display changes to  flashing. Only the engineer code can retrieve the system to its normal operation.
or
Press 0 ,display changes back to  steady. User pincode is enough to reset the system from alarm event.
Press Store **,**to retain this setting.
Or
Press RESET **,**to return display shown  "**Standby**" mode and without retaining recent settings.

6.10 Reset all Functions

Like the reset jumper, this function allows you to delete the control unit memory. While the reset jumper retrieves the control unit to its factory defaults, this function does not delete any detector and/or accessory that was already learned by the system.

Press 1 1 1 1 ,display changes to  flashing.

Press Program ,display changes to  .

Press 9 0 **,**display shows  .

Press Store Store Store , wait 2 seconds. Triple click on the store button will generate an OK beep. The system retained its factory default.

Or

Press RESET **,**to return display shown  "**Standby**" mode and without retaining recent settings.

Remember to change both the user and the engineer pincodes and the secondary as well if validated.

Section 7 – Maintenance

Once every 3 months:
Test all detectors.
Test siren and strobe.

Additionally, once every two years:
Replace all batteries in cordless detectors.

Additionally, once every four years:
Replace the rechargeable battery in the control unit.

Section 8 – Extending the System

A number of accessories are available to extend your system to suit your exact requirements.

Wireless Movement Detector/PIR – easy to install, one unit protects a large area.

Two-wire Movement Detector/PIR – easy to install, covers a large area and does not require batteries.

Wired Movement Detector/PIR – covers a large area, does not require batteries.

Wireless Door/Window Contact Detector – easy to fit, detects opening of a door or window, can be extended by the addition of wired magnetic contact.

Wire Door/Window Contact Detector – small, robust and reliable.

Remote Control – can be used to arm, part set or disarm; as well as a personal attack button; up to 4 remote controls can be used on one system.

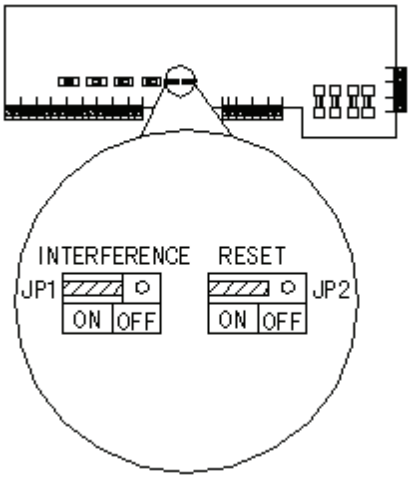
Section 9 – Radio Interference

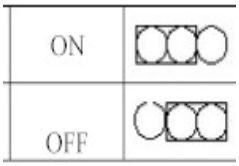
The unit equipped with the latest type of radio receiver and will not normally suffer from problems caused by interference. However, if interference is present nearby, an indicator light on the control unit will illuminate. It will do this even when the alarm is not set.

If the alarm is set, any criminal attempt to prevent (or jam) the detector transmissions, will be picked up as interference and will trigger alarm. If the alarm is frequently triggered by interference, it is likely there are high levels of unusual radio signals in your area. Some electronic equipment (e.g. cordless doorbells, garage door openers, PCs and fax machines) can generate interference. If you have such equipment and experience problem with interference, try moving the equipment as far away from the control unit as possible.

If the problem remains, it is recommended that you:

1) Turn off the mains power to the control unit and disconnect the rechargeable battery.
2) Prevent the control unit from triggering the alarm through interference by opening the front cover (after disconnecting the mains) and moving the push on link marked "INTERFERENCE" on the circuit board from ON to OFF.





Interference ON

Interference OFF (Factory Default)

3) Use wired detectors in this area/zone.

If you require further assistance, contact the installer.

Section 10 – Troubleshooting Guide

Symptoms	Possible causes and cures
1) Control Unit	
Display blank, Mains LED off – unit totally "dead".	No power supply to unit. Check connectors to mains and rechargeable battery. Check control unit fuses F-AC & F-AUX.
Display blank, Mains LED flashing.	Mains supply off, unit operating from rechargeable battery. Check all connections and fuses. Check control Unit fuse F-AC.
When power is applied, internal siren sounds and display shows  .	Siren box tamper fault. Check all connections, ensure that siren tamper switch is fully closed by contact with wall and that siren cover is firmly fastened.
When power is applied, internal siren sounds and display shows  .	Tamper fault on wired detectors. Check all wiring to connector strip.
No responses to cordless detector transmissions.	Are detectors programmed into control unit correctly? Are detectors within radio range of the control unit? Control unit not armed or not in walk test mode.
Unit shows "low battery" and a zone number on the display.	Low battery condition in zone indicated – replace batteries as soon as possible.
Unit will not arm, gives "error" tone and displays a zone number.	Indicated zone is open or still transmitting. Check that all zones are clear (door/windows closed, no movement near PIRs) and try again.
2) Wireless PIR detector	
Does not detect movement (red LED does not flash).	Is PIR's LED turned off? Is the PIR in its "sleep" condition? (Section 3.12)
Walking in front of the PIR causes an internal "Tamper" alarm at the control unit.	PIR tamper switch open. Check that PIR cover is correctly fitted and securely fastened.
PIR causes false "intruder" alarms.	Check that PIR is not pointed at heat sources or moving objects, and is not mounted above a radiator or other heater.
PIR will not trigger alarm when the system is set.	PIR in walk test mode.
3) Wireless Magnetic Contact Detector	
Does not detect opening of door or window (red LED does not flash).	Check that batteries are correctly installed. Check that magnet is correctly positioned
Opening of door/window causes an internal "Tamper" alarm at the control unit.	Detector tamper switch is open. Check that tamper switch spring is pressed firmly against mounting surface and that detector is located securely on backplane.
4) External Siren/Strobe	
Siren does not sound during test or full alarm.	Check all siren wiring and connections Check control unit fuses F-BELL.
Strobe does not flash during test or full alarm.	Check all siren wiring and connections Check control unit fuses F-STROB.

Section 11 – Summary Tables

GENERAL USER-PINCODE FUNCTIONS SUMMARY		
Function	**Press**	**Procedure**
Full Set	User or Secondary Pincode Press **Full**	X-X-X-X **Full**
Part Set	User or Secondary Pincode Press **P1, P2** or **P3**	X-X-X-X **P1, P2** or **P3**
Unset	User or Secondary Pincode	X-X-X-X
Omit zones	User Pincode Press **Program** Press **P1, P2** or **P3** Choose zones Press **Omit** to confirm zone Press **Store**	X-X-X-X **PG** **P1, P2** or **P3** **Display** **Omit** **Store**
Walk Test	User Pincode	X-X-X-X

IN ORDER to activate the user pincode functions, the system must be unset and user pincode must be entered.

USER-PINCODE PROGRAM FUNCTIONS SUMMARY		
Function	**Press**	**Procedure**
Program a cordless detector	PG-1	Press “Display” to select a zone to learn and press “Store”
Delete a cordless detector	PG-2	Press “Display” to select a zone to delete and press “Store”
Program siren duration	PG-3	Enter desired time (01-20) and press “Store”
Siren test	PG-4	Wait for 30 seconds for the siren to stop or press “Reset”
Strobe test	PG-5	Wait for 30 seconds for the strobe to stop or press “Reset”
Program “Chime Zone”	PG-6	Press “Display to select a zone to chime and press “1” to activate or “0” to deactivate. Press “Store” to confirm or “Reset” to deny.
Program Entry/Exit time	PG-7	Enter desired time (10-60) and press “Store”
Program new user pincode	PG-8	Enter desired user pincode and press “Store”
Program new secondary pincode	PG-9	Enter desired secondary pincode and press “Store”
Recall alarm events	PG-0	Page through events by pressing “Display”

IN ORDER to activate the engineer pincode functions, the system must be unset and engineer pincode must be entered.

ENGINEER-PINCODE PROGRAM FUNCTIONS SUMMARY		
Function	**Press**	**Procedure**
Select walk-through zones	PG-91	Press “Display to select a zone and press “1” to activate or “0” to deactivate. Press “Store” to confirm or “Reset” to deny.
Select Entry/Exit zones	PG-92	Press “Display to select a zone and press “1” to activate or “0” to deactivate. Press “Store” to confirm or “Reset” to deny.
Full alarm for tamper in standby mode	PG-93	To set those function on – press 1 To set them off – press 0 Press “Store” to confirm or “Reset” to deny.
Remote disarm requires entry timer	PG-94	
Silent personal attack	PG-95	
Enable/disable secondary pincode	PG-96	
Engineer-only reset	PG-97	
On/Off supervisory	PG-98	
Setting new engineer code	PG-99	Enter desired engineer pincode and press “Store”
Reset all functions	PG-90	Press three times on the “Store” button to erase system memory.

Section 12 – Specifications

Control Unit

Type	Microprocessor based wireless/wired hybrid control panel
Housing	Polycarbonate
Zones	24 alarm zones (16 wireless, 8 wired)
Entry/Exit Delay	10-60 seconds programmable
Siren Duration	1 – 20 minutes programmable
Classification	System conforms to equipment requirements of BS6799 class 3
Radio System	433MHz transmitter. Super-heterodyne type narrow band receiver
Siren/Strobe Outputs	12Vdc, switching negative (fused)
Power Supply	230V ac 50 Hz
Power Consumption	2.4W standby, 4.2W alarm

Wireless Movement Detector/PIR

Type	Dual Element low noise Pyroelectric sensor
Detection Zones	64 detection zones
Housing	ABS
LED	On/off selectable
Mounting Height	2 metres
Coverage Range	110◦ and up to 12 meters
Power Supply	3Vdc (2 x 1.5V AA Alkaline battery)
Battery Life	Approx. 2 years

Wireless Door/Window Contact Detector

Type	Magnetically activated switch with option for external wired contacts
Housing	ABS
LED	Transmission indication
Power Supply	3Vdc (2 x 1.5V AAA Alkaline battery)
Battery Life	Approx. 3 years

Wireless Remote Control Key

Functions	Full Arm, Part Arm, Disarm and Panic
Housing	ABS
LED	Transmission indication
Power Supply	3Vdc (1 x CR2032 Lithium Coin size battery)
Battery Life	Approx. 3 years

Two-Wire Movement Detector/PIR

Type	Dual Pyroelectric element with hemispherical lens and new two-wire technology
Connection	Two-Wire Technology without polarity
Housing	ABS
Adjustments	Pulse Count (1, 2 or 4)
Test LED	Selectable (on/off)
Mounting height	2-2.5m
Detection Range	Up to 15m