INSTALLATION MANUAL

CE

CONTENTS

WARNINGS

Prolonged short circuit of any supply can cause damage to the unit.
Take the necessary precautions in not allowing liquids to spill on or into the unit.

STANDARDS

This unit conforms to ECD 89/336/EEC & LVD 73/23/EEC. This unit has been tested and has proven to meet all current emission and immunity regulations as set out by the EEC. This unit complies with BS4737 part 1 1988 which relates to security control equipment.

WARRANTY STATEMENT

For this product, C&K Systems offers a two and a half year warranty from the date of manufacture. If for some reason the unit fails in the first six months C&K will replace the unit free of charge. If the unit fails in the remaining two years, return the pcb (unless other parts have failed) to C&K systems and we will test the unit. If the unit is found "customer damaged" a charge will incur otherwise the unit will be repaired and returned free of charge.

PRODUCT DESCRIPTION

The Securit 800L (hereafter known as "the Control Panel") is an 8 zone programmable microprocessor control panel using state of the art technology and manufacturing techniques. The panel has many advanced features that can only be found in more expensive control panels such as two user codes, Chime, Fire, and Keypad PA. There are many options in the programming functions to allow the control panel to be versatile and user friendly this allows the panel to be the ideal choice for residential or light commercial installations.

AVAILABLE PARTS

A selection of spares and extras are available. These are:-

Remote Keypad - giving full control over the control panel.
Spare PCB - for replacement in the event of failure.
Keyswitch - giving simple set / unset operation.

These can be obtained from your original place of purchase.

INTENDED USE

This panel is designed to be used in residential and light commercial applications such as homes, small shops etc.

SPECIFICATIONS

There now follows the specifications of the panel. These include power consumption, panel dimensions etc.

SPECIFICATION FOR SOFTWARE REVISION NUMBER   V1.0

The software revision number is located on the top of the main processor

SPECIFICATION

Power Supply

Mains Supply Voltage	230 V AC Nominal
PSU output voltage	13.6 V Nominal
Maximum output current	1 A (total)
Aux. current	500 mA Max.
Battery Fuse	1 A (20 mm)
Panel Quiescent	40 mA

Keypads

Supply Voltage	12 V
Quiescent Current	20 mA
Active	45 mA
Maximum number allowed	6

General

Normal operating temperature	0°C to 40°C
Humidity	10 to 90% R.H. non condensing
Dimensions	263 mm (W) 223 mm (H) 82 mm (D)
Control Panel Weight	2.7 kg Excluding Battery
Stand by Battery	1.2 Ah 12 V Rechargeable Lead Acid 2.1 Ah max.
Maximum Cable Run	100 Metres per run.
Use	For internal use only

Factory Defaults

User/customer Code 1	1234
User/customer Code 2	Disabled (0000)
Engineer Code	7890
Circuit 1	Entry Circuit. (Fixed)
Circuit 2	Alarm Circuit isolated in Night set.
Circuit 3	Alarm Circuit.
Circuit 4	Alarm Circuit.
Circuit 5	Alarm Circuit.
Circuit 6	Alarm Circuit.
Circuit 7	Alarm Circuit.
Circuit 8	P.A (Personal Attack)
Full Set Exit Time	30 Seconds
Night set Exit Time	15 Seconds
Entry time	30 Seconds
Sounder Ring Time	15 Minutes
Chimes	Disabled

INSTALLATION

When fitting the panel, make sure to site it somewhere that is not visible from an outside location (Window or Door) and also make sure that the panel is going to be accessible. An ideal location would be a cupboard in a hall or under stairs located close to the main entrance. Ensure there is adequate light so the user can operate the keypad/s.

Mounting

1)   Remove the lid screws and remove lid.
2)   Remove the PCB or keypad packaging.
3)   Place the panel in the selected position and mark the three fixing holes.
4)   Mount the Panel securely using all three mounting hole positions.
5)   Attach the tamper spring and mount the PCB onto the support pillars.

WIRING THE CONTROL PANEL

WARNING - MAINS CONNECTION

The panel must be permanently connected to the mains supply in accordance with current IEE wiring regulation. An unswitched fused spur, fitted with a fuse no greater than the rating of the cable connected from the spur to the panel, should be used.

Any fault which could be mains related must be diagnosed and corrected by a qualified electrician to ensure continued safe operation.

CAUTION: Under certain circumstances the transformer metalwork can reach 70°C. this is normal and well within prescribed limits.

Battery connection.

Maximum battery size 12V 2.1Ah max.

This panel requires a standby battery to be fitted to provide power in the event of mains failure. A valve regulated lead acid battery must be used.

Detector circuits

Connections are provided for up to eight detector circuits of which normally closed detection devices must be used. A common tamper loop is provided for all detection devices marked as **24 HR Tamper**. One or more devices may be connected to each alarm circuit. These should be connected in a series configuration. These circuit connections are located to the bottom right of the PCB (see diagram B).

PIR Latch Line (L+)

In the event of two or more detectors (motion sensors or glassbreak detectors) being fitted to any single zone, latching detectors should be used. The '**L+**' connection provides this function. It is low (0 V) when unset and high (12 V) when set. It should be connected to the appropriate SET or LATCH terminal in your detector. See glossary for explanation.

DETECTOR
RESET

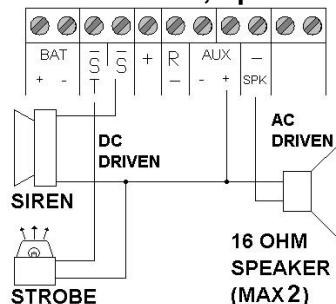INTERNAL
DEVICES

EXTERNAL
DEVICES

AUXILIARY
POWER

BASIC BOARD
LAYOUT

## Detector reset (L+ when programmed for ID)

Some detectors require the removal of power to reset (e.g. Viper Plus® or Smoke detectors). The **L+** terminal can be programmed to be used as an 'ID' output using option 7-4. The **L+** terminal should then be used as the negative supply for these devices. The positive supply should be taken from the **AUX +**.

Internal Sounders, Speakers, Strobe and Keyswitch Wiring.

** DIAGRAM A **

Keyswitch Connections

Open = ON
Closed = OFF
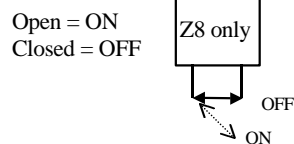
A maximum of two 16 ohm speakers may be fitted in parallel.

External Sounder & Strobe.

Connection for external sounder and strobe are shown in diagram A. Please note sounder trigger is applied negative. (Negative ring).

- ST-   Strobe switched negative trigger.
- S -   Sounder switched negative trigger
- +   Sounder hold off/strobe positive supply.
- -   Sounder hold off supply & sounder tamper feed (negative)
- -R   Sounder tamper return. (negative)

AUX DC - Detector power.

The auxiliary power is provided from connections marked '**AUX**'. This is to provide the 12 V supply for detectors e.g. movement or glassbreak detectors. The auxiliary power output is rated at 500 mA max. (12 VCD nominal). See diagram B

** DIAGRAM B **

5
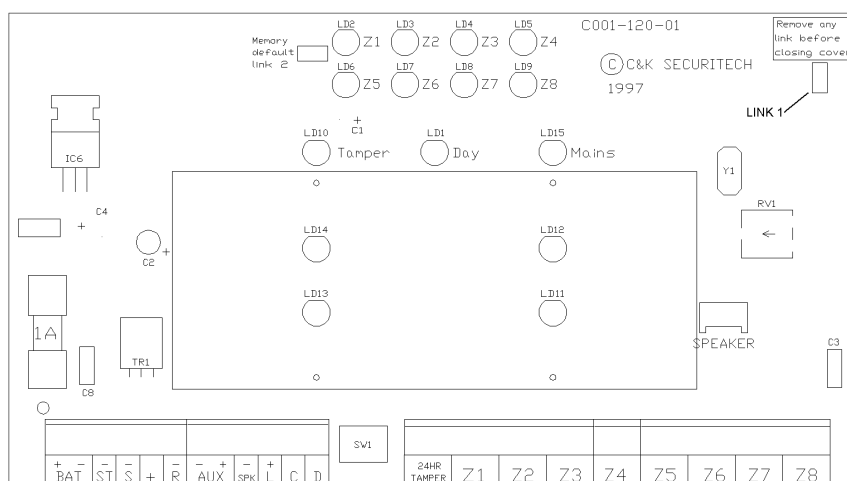
MOUNTING A REMOTE KEYPAD

1) Locate the position for your keypad then mark the holes for mounting.
2) Make sure the cable is run through the backbox.
3) Screw the backbox in the agreed position making sure it is not twisted.

WIRING A REMOTE KEYPAD

1) All remote keypads require 6 core cable for their connection.
2) Connect the cable into the terminals shown below in diagram C making sure each wire goes to a like named terminal in the panel. **C** goes to **C**, **D** goes to **D**, **+** goes to **+** and **-** goes to **-**. The tamper wires are wired in series with your existing tamper loop. Refer to series & parallel examples in glossary for details.

Individual keypads do not need to be identified to the system. If more than one remote keypad is in use it can be either wired back to the control panel or daisy-chained from another keypad. All connections are in parallel with the exception of the tamper circuit which **MUST** be wired in series.(see glossary of terms for series and parallel examples).

** DIAGRAM C **

TAMPER SWITCH   BUZZER

TAMPER | + 12V | - | C | D

CONNECTIONS
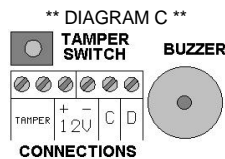
POWERING UP

INITIAL POWER UP

NOTE The lid should remain off the main control panel so that engineer mode may be used. Alternatively, entering 7890 # can also be used to enter engineer mode. If the engineers code is entered and the panel is then left, it will set.

1) Switch the mains supply on, the internal sounder will start.
   This denotes a tamper alarm.

2) Enter 1 2 3 4 followed by the # (hash) button - this will silence the sounder and the TAMPER LED will flash. Fit the link onto LINK 1
   This has now acknowledged and cancelled the alarm. By inserting LINK 1, you have disabled the onboard tamper.

3) Connect your battery and walk test the control panel.
   This will make sure all the zones are clear.

4) Power Down and complete the wiring of the control panel. Remove LINK 1
   NEVER wire the control panel live. You have also re-enabled the onboard tamper loop.

5) Power back up, cancel the alarm and enter engineering mode by entering 7, 8, 9, 0. Close Lid when all the wiring is completed
   The panel is now ready for programming.

If programming is not required simply close any lids that are open and press the # key. This will exit engineering mode. Now refer to the users manual for customer options.

If at any time you wish to exit engineering mode, confirm any options you have selected with the * (STAR) key, then close ALL tamper circuits and wait for approximately 60 seconds after which the panel will automatically exit engineering mode or pressing the # (HASH) key will manually exit engineering

If at any time you wish to re-enter engineering mode, enter the engineering code and then press the # (HASH) key. This will now force the panel into engineering mode Note: If left unattended for approximately 60 seconds it will revert to day mode.

If you need to stay in engineering for longer unattended periods, once in engineering mode open a tamper circuit. The easiest way to do this is to remove the lid of the panel or keypad.

PROGRAMMING

Once in engineering mode, the day LED will flash. You now have the following options available.

EXIT TIME 3 0 (Range 10-90 Seconds.)

Enter 3-0. This has been preset to a factory default of 30 seconds. A new time may be programmed by entering one key from the following table.

Once the desired option is chosen press * to confirm. The accept tone will sound.

Enter 1	10 Seconds. Led 1 on.
Enter 2	15 Seconds. Led 2 on.
Enter 3	30 Seconds. Led 3 on. (default)
Enter 4	45 Seconds. Led 4 on.
Enter 5	60 Seconds. Led 5 on.
Enter 6	90 Seconds. Led 6 on.

ENTRY TIME   3-1 (Range 10-90 seconds)

Enter 3-1. Again this has been preset to a factory default of 30 seconds. To reprogram the entry time follow exactly the same directions as for the EXIT time (3-0). Again press * to confirm option. The accept tone will sound.

Enter 1	10 Seconds. Led 1 on.
Enter 2	15 Seconds. Led 2 on.
Enter 3	30 Seconds. Led 3 on. (default)
Enter 4	45 Seconds. Led 4 on.
Enter 5	60 Seconds. Led 5 on.
Enter 6	90 Seconds. Led 6 on.

SOUNDER DURATION (sounder ring time)   3-2 (Range 3-20 minutes)

Enter 3-2. This has been preset to a factory default of 15 minutes. A new time may be programmed by entering one key from the following table. Press * to confirm the selection. The accept tone will sound.

Enter 1	3 minutes. Led 1 on.
Enter 2	4 minutes. Led 2 on.
Enter 3	5 minutes. Led 3 on.
Enter 4	10 minutes. Led 4 on.
Enter 5	15 minutes. Led 5 on. (default)
Enter 6	20 minutes. Led 6 on.

NIGHT SET / HOME SET EXIT TIME   3-3 (Range 0-90 seconds)

Enter 3-3. This has been preset to a factory default of 15 seconds. A new time may be programmed by entering one key from the following table. Press * to confirm the selection. The accept tone will sound.

Enter 0	0 Seconds. All LED's off (Instant).
Enter 1	10 Seconds. Led 1 on.
Enter 2	15 Seconds. Led 2 on. (default)
Enter 3	30 Seconds. Led 3 on.
Enter 4	45 Seconds. Led 4 on.
Enter 5	60 Seconds. Led 5 on.
Enter 6	90 Seconds. Led 6 on.

NOTE: The exit sounder volume can be altered by the control on the PCB marked **VOLUME or RV1**. Please note, this will not apply to keypad bleepers.

Option Code	Option Description	Results from choosing option no.						
		0	1	2	3	4	5	6
3-0	Exit Time (secs)		10	15	30	45	60	90
3-1	Entry Time (secs)		10	15	30	45	60	90
3-2	Sounder Duration (mins)		3	4	5	10	15	20
3-3	Night / Home Exit (secs)	0	10	15	30	45	60	90

Examples

Change the FULL set exit time to 60 seconds

ENTER THIS	3-0	5	*
Description	Choose full set	Select 60 seconds	Confirm selection

Change the Sounder duration to 3 minutes

ENTER THIS	3-2	1	*
Description	Choose sounder	Select 3 minutes	Confirm selection

Change the ENTRY time to 45 seconds

ENTER THIS	3-1	4	*
Description	Choose entry	Select 45 seconds	Confirm selection

CIRCUIT PROGRAMMING   4 (Range 2-7)

Circuits 2 - 7 can be reprogrammed to suit your requirements. Circuit 1 is fixed as a Final exit circuit. Circuit 8 has limited options.

ENTER	PROGRAM ZONE
4 - 2	2
4 - 3	3
4 - 4	4
4 - 5	5

ENTER	PROGRAM ZONE
4 - 6	6
4 - 7	7
4 - 8	8

Select the circuit you wish to alter. That circuit may then be programmed by entering one key from the following table. Once the option is selected press * to confirm. The accept tone will sound.

N/S = Night Set

Option no.	Zones 2-7	Zone 8
1	Alarm	Alarm
2	Alarm with walk through	Fire
3	Alarm & Isolate in Night Set	PA
4	Alarm, Walk through & Isolate in N/S	Full set keyswitch
5	Alarm, Walk through & N/S Entry	
6	Fire	
7	Entry Route	
8	P.A	

SEE GLOSSARY OF TERMS (p.11) FOR DESCRIPTIONS OF ZONE TYPES etc.

To program zone 3 as an "Entry Route" enter - 4 3 7 *
To program zone 8 as a "Keyswitch" enter - 4 8 4 *

EXTENDED PROGRAMMING OPTIONS   7 (Range 1-8)

Further options are available to increase the versatility of the control panel.

Enter 7 - 1   Disables sounder & strobe in night set.
Enter 7 - 2   Chime Enable (See user manual for zone allocation).
Enter 7 - 3   Full set door sense setting.
Enter 7 - 4   Convert L+ to ID- output.
Enter 7 - 5   Allow Manual Isolation of Zone 1 (Entry/Exit) In night set.
Enter 7 - 6   Remote Keypad PA Enable (Operated by * & #).
Enter 7 - 7   L+ will latch only the first detector to alarm.
Enter 7 - 8   Inhibit strobe testing. (For speech dialler connection)
Press * to confirm. The accept tone will sound

HOME SET ZONE SELECTION   8 (Range 1-8 N/A if Fire or PA)

This Control Panel can enable parts of the premises to be alarm protected while other parts are occupied and in use .. This can be achieved by using the *Home Set* feature. This is similar to *Night Set* except that an Exit/Entry route is not required as part of the Setting or Unsetting procedure.

In programming mode press 8 to select *Home Set* zone selection mode.

By pressing the keys 1-8 on the keypad you will select which zones you want ISOLATED during home set.

As a key is pressed, its relevant LED on the display will toggle on or off. Any LED's that are ON will be ISOLATED during home set and any that are off will remain ACTIVE.

ENGINEER ACCESS CODE   1-1

The engineer access code is programmed to 7890 by default. To change this code (while in engineering mode):

Enter 1-1. LEDs 1, 2, 3 and 4 will illuminate.
Enter the new 4 digit code. *After each keypress one LED will go out.*

The speaker will emit an accept tone if the new code is accepted.
If the speaker emits an error tone, then your new chosen code is invalid. This could be due to a conflict with another code. At this time your old access code is still valid. Repeat the procedure using a different code.

ENGINEER EVENT LOG REVIEW   5 (Choices of set & unset)

The Panel stores the last alarm condition in both set and unset conditions

Select *Engineering Mode* and press 5 to gain *log* access.

You will hear a continual tone which denotes you are viewing the last set condition. There may be no lights illuminated as there may not have been an alarm during that time. Pressing the # key will turn off the sounder and show the last unset period. By pressing 0 you will show the last ALARM condition that was caused in an UNSET period (no matter how long ago that alarm was). Pressing # will bring the sounder back on and will show the last ALARM condition in a SET state. Press * to finish.

Pressing * will exit the log displays and return you to main engineering mode.

ENGINEER TEST OPTIONS   6 (Range 0-5)

The engineer has some test facilities available to him so he can test sounders etc. without having to come out of engineering. These new options are accessed by pressing 6 from within engineering mode and then selecting another option below.

    Enter 0   Internal buzzer (entry exit sound etc.)
    Enter 1   Internal Sounder (Alarm sounds from speaker / keypad)
    Enter 2   External Sounder
    Enter 3   External Strobe
    Enter 4   L+ Terminal(even if programmed as ID-)
    Enter 5   FULL LOAD (Everything enabled)

Press * to finish and return to main engineering mode.

FACTORY
DEFAULTS

RESTORE
DEFAULT
PROGRAMMING

RESTORE
DEFAULT
CODES

GLOSSARY OF
TERMS

FACTORY PROGRAMMING DEFAULTS 9-9

Factory defaults have been split into two sections, programming and codes.

To return to factory programming defaults first enter *Engineering Mode* then proceed as follows:-

1)   Enter 9-9
    Any extension sounders will give a rapid pipping sound. The internal keypad sounder will emit a steady tone.

2)   Enter the engineer code.
    If entered correctly an accept tone will sound and the factory programming defaults will be restored. If any error is made an error tone will sound and the programming will not be altered. The user and engineer codes have not changed.

If at any stage you want to default the customer codes, follow this procedure while in engineering mode.

1)   Place the small link supplied with the spare fuses, on the memory link. Then remove the mains and battery power.
    The link is positioned left of the LEDS near the top of the pcb and is labelled "Memory   Default".(at which point zone 1 light will illuminate)

2)   Wait a few seconds then re-connect the battery and then the mains and then refer to page 6 regarding initial power up.
    The speaker will omit the accept tone and the factory user code defaults will be restored.

3)   **Remove the link.** (at which point zone 1 light will go out).

GLOSSARY OF TERMS

FULL SET
This is a setting method normally used when leaving the premises. Full system armed.

NIGHT SET
This is a setting method normally used when going to bed

HOME SET
This is a setting method normally used for high security protection whilst still inside the premises. For example an antiques cabinet etc.

ALARM
This is a zone that will trigger the panel when activated, providing the panel is set.

WALK THROUGH
This zone will be disabled during an entry period.

ISOLATE IN NIGHT SET
This simply means the zone will be disabled when the panel is NIGHT SET. For example downstairs may be armed but upstairs may be disabled.

NIGHT SET ENTRY
This means when the panel is NIGHT SET the zone, when activated, will start the entry timer but if the panel is FULL SET then this zone will simply act as an ALARM zone

ENTRY CIRCUIT
This will start the entry timer when activated providing the panel is set.

FIRE (for use with smoke detectors etc.)
This is a zone that when activated will emit an ascending sound from any internal speakers. If the panel is set, external sirens and strobes will also sound but in an unset state the external sounders will pulse every two seconds.

TAMPER
This is a loop that should run through every device on your system. If broken, it will trigger the internal speakers. If the panel is set, external sounders and strobes will also trigger. The tamper LED is shown on the keypad as **TPR**

CHIME
Chime is similar to a doorbell. This can be used to alert a user to a certain zone being triggered during the day.

DOOR SENSE SETTING
This allows you to have a variable FULL SET EXIT TIME. You can program the EXIT time to maximum and when you full set the system, the exit time will drop to 8 seconds as soon as the EXIT door has closed thus avoiding the preset exit time.

FULL SET KEYSWITCH
This allows the panel to be set, unset and reset via zone 8. This is performed by using a 2 position keyswitch (make / break) across the zone. To set, open the zone. To unset, close the zone. To Reset you must open and close the zone after an alarm condition.

THE * KEY (STAR)
This is commonly used as an ACCEPT or STORE button

THE # KEY (HASH)
This is commonly used as RESET, CANCEL or EXIT

THE ACCEPT TONE
This is heard when an action is accepted. The sound made is "diddly dee"

THE ERROR TONE
This is heard when an action is not accepted. The sound made is "dee dah"

SERIES AND PARALLEL

Series   Parallel
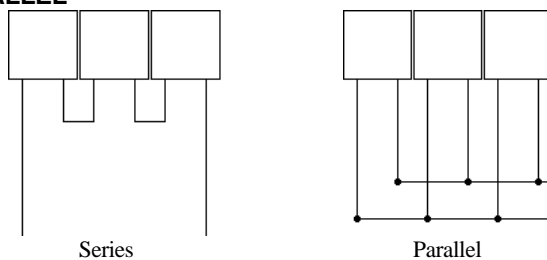
LATCHING DETECTORS
These detectors, when triggered during a set period, latch on to aid the process of alarm event origin checking. These detectors are only normally used if many detectors are to be used on a single zone but are to cover a large area of space.

ZONE	ZONE USE / LOCATION	RESISTANCE		KEYS ENTERED
1			Ω	
2			Ω	
3			Ω	
4			Ω	
5			Ω	
6			Ω	
7			Ω	
8			Ω	

TIMER	VALUE								KEYS ENTERED	
FULL	SECONDS									
NIGHT	SECONDS									
EXT SOUNDER	MINUTES									
TICK BOX	1	2	3	4	5	6	7	8	CHECKED	
EXTENDED OPTIONS										
BATTERY VOLTAGE	V									
AUX. VOLTAGE	V									
INSTALLED BY										

THIS INFORMATION SHOULD BE KEPT EITHER INSIDE THE CONTROL PANEL OR WITH THE INSTALLER. IT CAN BE USED TO REFER TO PROGRAMMING DETAILS WHEN NEEDED.

CONTROL PANEL	ST-	S-	+	AUX -	-R
SONADE 2000	STROBE-	B	D	A	T
FLASHGUARD XL+	STROBE-	SIREN-	SUPPLY+	SUPPLY-	TAMPER OUT
STARLIGHT 2000	ST	-R	+H	-H	RTN
ACTIVEGUARD	STB-	-S	+12V	-12V	RIGHT HAND TAMPER
ACTIVE GUARD 3	ST-	-SW	V+	V-	RET
SECURIGUARD	STROBE-	S-	SUPPLY+	SUPPLY-	LEFT HAND TAMPER
NOVA GUARD 2+T	STROBE-	S-	12V+	12V-	R
SPIRIT AU1000	STB-	TRG-	HOLD OFF +	HOLD OFF -	RTN-
GENERAL TERMINALS	STROBE TRIG -	SIREN TRIG -	SUPPLY+	SUPPLY-	TAMPER RETURN
AG6 / AG8	ST-	-SW	V+	V-	RET

FAULT FINDING

A selection of common known problems and solutions are listed below.

Problem	Cause	Answer
Programmed 7-5 but zone 1 wont isolate in night set.	Have not MANUALLY isolated zone when setting panel.	When night setting enter code * 0 * 1.
Zone 1 is permanently lit	Memory default link is on.	Remove link.
Tamper wont clear with lid on.	Tamper loop open	Check 24hr tamper, sounder tamper and all devices for an open tamper loop.
PA will not work on the keypad	Not holding * & # long enough or option not enabled	Be sure to HOLD * & # until the alarm activates. Enable option 7-2.
Mains light not on.	No mains	Check fuse & mains supply
Battery not taking over after mains fail	Battery fuse blown or battery not connected or flat battery.	Connect battery and check 1A battery fuse. Fit new battery.
Remote keypad not responding	Incorrect wiring	Check wiring. C to C & D to D.
Zones failing to activate.	Incorrect wiring	Make sure the devices are wired in series NOT parallel.
Zone activates during entry	Seeing an alarm zone on entry or deviating from entry route.	Make sure all zones on entry route are programmed with walkthrough. Don't deviate.
Zone activates even in day mode	Programmed to PA or FIRE.	Reprogram the zone to be an alarm zone or similar.

If you are still experiencing problems then contact our technical helpline with information at hand regarding your situation. If your problem stems from wiring, you may be required to write down wiring instructions so have a pen and paper at hand.

General questions & Answers

Question	Answer
Can two bellboxes be used on the system	Yes, make sure tampers are in series and dont break current limit
Can a "sound bomb" be installed	Yes, connect between AUX+ and S-. Be sure not to exceed maximum current rating.
Can the engineer set the panel without the need of the user code.	Yes, if the engineering code is entered, the panel with start the set.
How many PIRS can be connected to a zone	As many as current supply will allow. Zone resistance should not exceed 50 ohms.

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5-051-519-01

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