4 ZONE PROGRAMMING STATUS LABEL

ROOM	ZONE 1	ZONE 2	ZONE 3	ZONE 4
0 FULL SET				
1 PART SET				
2 PART SET				

STATUS KEY:
E = ENTRY / EXIT A = ACCESS I = IMMEDIATE O = OMITTED

ENTRY / EXIT TIME ___ SECS

BELL OUTPUT SAB ___ SCB ___

BELL TIME ___ MINS

PIR LEDs ENABLED ___ DISABLED ___

Pyronix LIMITED

INSTALLATION COMPANY:

TEL:

ADDRESS:

CONTACT:

ENGINEER NAME

No.

INSTALLATION DATE

SERVICE DATE ACTION

SERVICE DATE ACTION

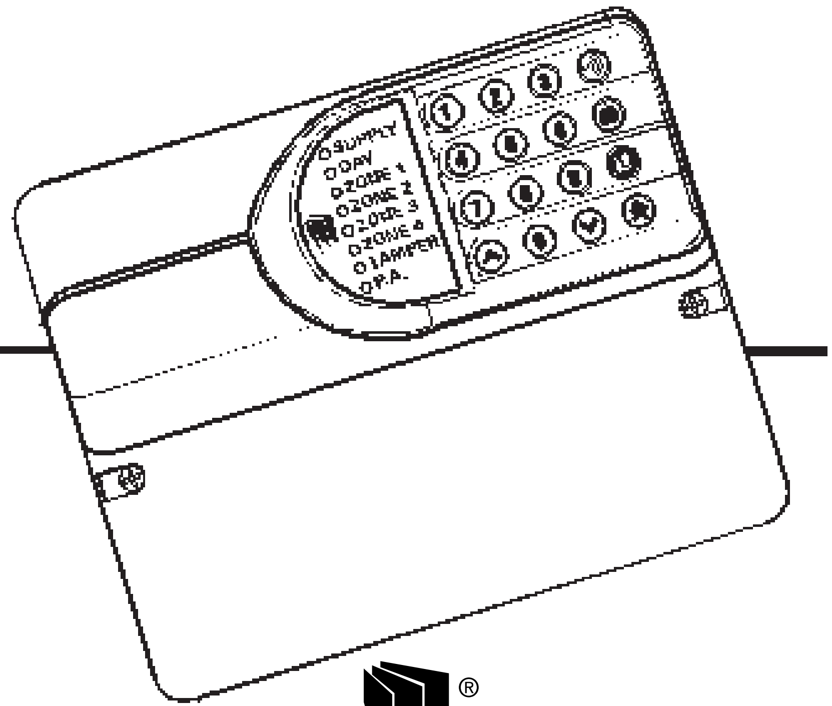
SERVICE DATE ACTION

RLBL098 issue 3.

Pyronix® LIMITED

CONQUEROR

INSTALLATION INSTRUCTIONS



PYRONIX LIMITED

FEB 1996

This product is approved for use in the Residential, Commercial and Light Industrial Environment. CE

RDOC260A issue 6

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WARRANTY

This product is sold subject to our standard warranty conditions and is warranted against defects in workmanship for a period of 2 years. In the interest of continuing improvement of quality, customer care and design, Pyronix reserve the right to amend specifications without giving prior notice.

A copy of our warranty can be obtained from the above address.

14 ENGINEER QUICK REFERENCE PROGRAMMING SECTION

The information on this page is intended as a quick reference for installation engineers who are totally conversant with the programming of the Paragon E.

If unsure, consult the main programming section of this manual

The Engineer has access to all the User functions but must prefix all functions by: (0) Except when setting and unsetting.

i.e. (*) (0) = (1) to (7) (7)

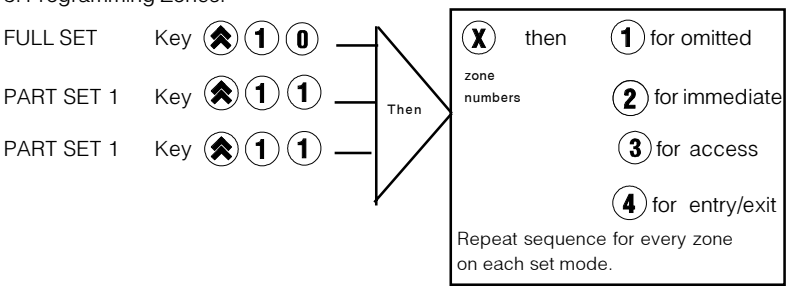
1. Entering Engineer mode.

   Enter (*) (0) = (X) (X) (X) (X) (Engineer Code)

2. Exiting Engineer mode.

   Enter (*) (0) (0) = (X) (X) (X) (X) (Engineer Code)

3. Programming Zones.



4. Changing Bell Time.

   Enter (*) 1 4 = 2 to 2 0 = (*) 2 0
   (New Bell Time 2-20 mins)

5. Changing Entry / Exit Time.

   Enter (*) 1 5 = 2 to 5 5 = (*) 2 2 5 5 (*)
   (New Entry/Exit Time 2-255 secs)

6. Changing Engineer Code.

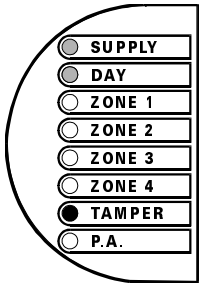
   Enter (*) 1 6 = X X X X = X X X X = X X X X
   Old Engineer Code New Engineer Code New Engineer Code

5. Tamper Alarm activated.
Check Tamper circuits:

1. S - shorted to BT (Bell Tamper)
2. TT (Global Tamper circuit)
3. Control Panel Lid Tamper.

Locate open Tamper circuit.
Close circuit.
Try resetting control panel.
If still unable to locate fault:

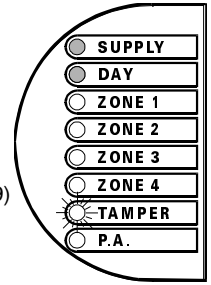
1. Remove cables from (S-BT) (TT)
2. Replace with links i.e Closed circuits
3. Replace Panel lid and reset system.
4. Reconnect the tamper circuits, one at a time, until the fault is identified.



6. Engineer Mode.

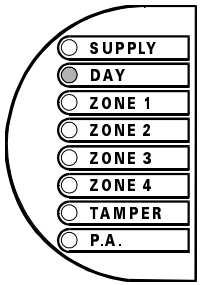
To exit Engineer Mode:

Enter ⌃ 0 0 X X X X (Factory set 9999)
Engineer Code



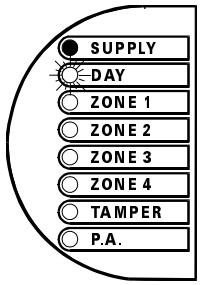
7. Mains Failure

1. Check spare fuse
2. Check mains fuse on power supply unit (Top Left Hand corner).



8. Panel Waiting for Further Commands.
Day LED will flash if you have started a function but not finished the sequence.

Enter ⌃ to terminate.



CONTENTS

13. TROUBLESHOOTING

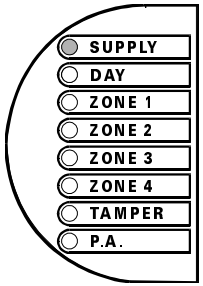
KEY:

○ = LED OFF

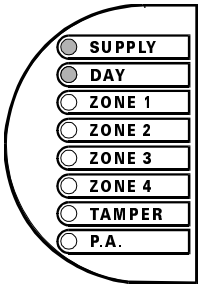
● =LED ON

☼ =LED FLASHING

1. Panel set / on



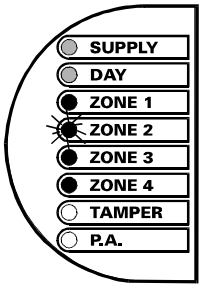
2. Panel unset / off



3. Panel unset . Zone1, Zone 2, Zone 3 ,

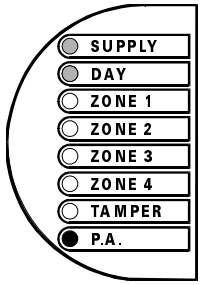
Zone 4 LEDs on.
This shows that zone 1 - 4 have been triggered. Zone 2 first.
To clear alarm lights enter User code.
Check cables and detectors for

broken circuits or wiring faults.



4. Personal attack activated.

If no device on system - Link out circuit
Enter User code to clear P.A light.
Reset Personal Attack buttons if necessary.



11 LED FUNCTIONS

Supply light on	:	Indicates there is mains on the system
Day light on	:	Indicates the system is unset. (Day mode)
Zone light on	:	Indicates an Alarm activation
Tamper light on	:	Indicates a Tamper alarm
P.A light on	:	Indicates a Personal Attack activation
Tamper light flashing	:	Engineer mode

12 TECHNICAL SPECIFICATION

12.1 POWER SUPPLY

Power input	:	230V ac +/- 10%, 50Hz/60Hz
Power input fuse	:	250mA quick blow.
Low voltage output	:	13.2 Vdc fused 0.35A Continuous 0.7A peak (20 min).
Low Voltage Output Fuse	:	1 Amp Quick blow.
Battery charge voltage	:	13.8 Vdc.
Rechargable battery capacity	:	12V sealed lead acid, 2.1AH.

12.2 CONTROL PCB

Current consumption (day mode)	:	45mA (quiescent)
(13.8V Reg.) (set mode)	:	38mA
(test)	:	58mA (all LEDs on)
(alarm)	:	197mA
Auxiliary DC output supply	:	Regulated 13.2 Vdc for use with PIR, microwave, and shock sensors.
Extension Speaker load	:	16 to 32 Ohms
Alarm Bell current	:	0.5 Amps (maximum)
Alarm Bell timer	:	2 to 20 minutes (software programmable)
Strobe current	:	0.5 Amps (maximum)
Zone type	:	Normally closed loops which activate when opened or connected to 0 volts from dc power supply.
Zone loop current	:	1.2 to 1.5mA
Zone activation resistance	:	2k Ohms (minimum)
Zone loop activation time	:	0.35 seconds
Entry / Exit timer	:	2 to 255 seconds (software programmable)

12.3 MECHANICAL

Dimensions	:	200 x 161 x 62 mm (7.87 x 6.34 x 2.44 inches)
Case Material	:	3mm thick Polycarbonate with screw fixing front cover
Colour	:	White
Weight (excluding battery)	:	1.05 kg

12.4 ENVIRONMENTAL

Operating temperature	:	0 to +40 deg C	(+14 to +104 deg F)
Storage temperature	:	-20 to +60 deg C	(-4 to +140 deg F)

12.5 CLEANING

DO NOT use strong detergents to clean this control panel. To remove any dirt or grime, wipe clean with a damp cloth ONLY.

1 INTRODUCTION

The Conqueror is a full featured intruder alarm control panel, based around a micro-processor with 4 fully programmable zones and 2 dedicated '24-hour' zones (Personal Attack alarm and a System-Tamper alarm.). It is operated via a 16-key onboard keypad and has an arrangement of 8 LEDs to show the status of the system.

All features are fully programmable and there are two levels of access to the system. These are:

User (1 2 3 4) & Engineer (9 9 9 9)

The User level gives access to all setting and unsetting facilities, and also allows the changing of code numbers and testing of the system.

The Engineer level gives total access to the system including the ability to reconfigure the system . The Engineer cannot, however, unset the system.

2 SAFETY

Mains: The mains supply to the control panel is connected via a 3 way terminal block, located under the printed circuit board.
This equipment is not suitable for location in bathrooms or damp conditions
** Always remove / isolate mains before carrying out work on the panel**
****The mains installation should be carried out in accordance with current IEE regulations by a technically competent person****

3 ACCESS LEVELS

3.1 **User** level enables:
1. Panel setting and unsetting with a unique pass code.
2. Setting and unsetting of the door chime facility.
3. Alteration of User code.
4. Walk test facility.
5. LED / Strobe / Bell / Internal Speaker test facility.
6. Interogating the Event Log.

3.2 **Engineer** level enables:
1. All User facilities except unsetting the panel.
2. Zone programming for all three set modes
3. Bell timer setting
4. Entry / Exit timer setting
5. Alteration of Engineer code

4 FEATURES

- 2 Access-Level Codes, both programmable
- Easy-set facility
- 4 Programmable alarm zones
- 3 Set / Part Set modes
- Configurable fire zone with unique alarm sound.
- Personal Attack alarm zone
- Tamper zone
- 16 key backlit keypad
- Dedicated Personal Attack key on keypad
- Dedicated Fire alarm key on keypad
- 8 LEDs for immediate indication of panel status
- Walk Test facility
- System Test Function
- Built in sounder with volume control and software override
- Separate Bell and Strobe lamp outputs
- Zone omit facility on exit
- Silent part set
- 4 Alarm Event Memory.

10.8 Clearing the Event Log.

The Conqueror is factory set, to allow only the Engineer to clear the event log. (See section 9.9 Selecting User or Engineer Log Clear).

The User if allowed by the Engineer can clear the log. This is achieved by pressing,

(⌃⌃)(3)

10.9 Clearing the display after an activation

After an alarm condition enter the User code : (X)(X)(X)(X)
This unsets the panel.The LEDs will display any activated zones.

Enter User code again : (X)(X)(X)(X)
This clears the display.

10.10 Changing User Code

Enter (⌃⌃)(5)

then (X)(X)(X)(X) User code (Factory set 1234) - 3 Bleeps

then (X)(X)(X)(X) New user code - 3 Bleeps

then (X)(X)(X)(X) New user code again - 3 Bleeps

The 'day' led will flash when this function is entered and an acknowledge tone will be sounded after each code has been entered. If an incorrect key is entered an error tone will be given and the function ended.

10.11 System Test Mode

Enter (⌃⌃)(6)

This function performs a number of tests which are listed below.
The next test is selected by pressing any numeric key.

To exit system test mode press the (⌃⌃) key again.

Test 1) All LED's are switched on
2) The strobe is switched on.
3) The bell is switched on
4) The internal sounder is switched on

10.12 Walk Test Mode

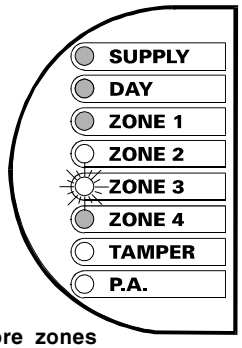
Enter (⌃⌃)(7)

When the walk test mode is enabled any activated zone will cause a chime and the LED display to indicate.

To exit walk test mode press the (⌃⌃) Key again

10.6 Recalling the Event Log (cont..).

The Conqueror event log distinguishes between the first zone to be triggered from subsequent zone triggers. When the event log is displayed, the first zone to be triggered is indicated by flashing its zone led. Zones triggered subsequent to this, are indicated with their leds permanently on. For example, if zone three is triggered first, then zones one and four are triggered during a set period, the log will display the following.



10.7 Omitting one or more zones

If one or more zones are triggered whilst in exit mode a low pitched error tone will be produced. If any zones remain triggered at the end of the exit timer, the error tone will continue. Key in the User code. The display will show the zone(s) which remained triggered. Make a note of any triggered zones. Key in the User code which will clear the display.

Check for any obvious reason for these zones to have been activated. This may simply be due to a monitored door or window being left open or a pet being left in a protected area. If the fault cannot be rectified it is possible to omit faulty zones, but this should only be used as a last resort if the building is to be left unoccupied.

Example

Set panel (error tone will be heard).
Wait for the end of the exit timer.
Error tone is still being produced.
Key in the User code.
Triggered zones will be displayed.
Note triggered zones.
Key in User code to clear display then investigate fault(s) if possible.
Set panel again.

then: Check the display if the zone(s) are not being triggered exit via normal route.

or: If displays shows zones are as still being triggered:

then enter: (⌃⌃)(0)

now enter: the number of the zone to be omitted (1 to 4)

then: (⌃⌃) - Entry / Exit timer will start again.

then: exit building by normal route.

5 FUNCTIONAL DESCRIPTION

5.1 Operating Modes

Day Mode This is the state of the panel when unset (not armed). Fire, Personal Attack and Tamper inputs, however remain active 24hours day.(These are referred to as 24 hour zones). Day mode is identified by the green day LED on the front of the panel.

Set Modes When the panel is set (armed) an activation of any Access, Immediate or 24 hour zone will cause an alarm condition. When an alarm is generated the internal and external sounders will operate for the length of time programmed and the tone of the internal sounder will be two notes repeated rapidly. The strobe lamp will also be activated and will continue to operate until the panel is reset.

Fullset / Partset

At the time of setting the control panel, any one of three set modes can be selected. i.e.

Full set : Whole system armed; nobody on premises.
Part set 1: Upstairs off, Downstairs armed.
Part set 2: Upstairs armed, Downstairs off.

The above are purely examples. The Engineer has the ability at the programming stage to configure all the circuits to the customer's exact requirements.

5.2 Entry / Exit Mode

Entry When the panel is set and an Entry / Exit zone is triggered the Entry / Exit timer will begin to count down. During this period an Entry / Exit tone (single repeated bleep) will be produced by the internal sounder and any zones which are programmed as Access zones will be ignored. If the user code is entered before the end of the count down period the panel will return to 'day' mode. If the timer is allowed to elapse before the user code is entered the panel will go into an alarm state. In this case the system needs to be 'Unset'.

Exit With the panel in 'day' mode, if either the user code or an Easy-set key sequence is entered the Entry / Exit timer will begin. If all the Immediate zones are clear, then the Entry / Exit tone will be heard. Leave the protected area by the predetermined Entry / Exit route. As you trigger Access zones the tone will change temporarily to a repeated low tone. When all the zones are clear, the Entry / Exit tone will continue again until the end of the time-out period. The panel will then be set.

6 ZONES

6.1 Engineer Programmable Zones

Entry / Exit — This is a zone which allows limited-time access to the premises in order to set or unset the system.

Access — This is a zone which, on setting the panel, allows access to the Entry / Exit zone. However, if the panel is set and an Access zone is triggered before an Entry / Exit zone then an alarm will be generated immediately.

Immediate — This is a zone which will, when entered create an alarm when the panel is set.

Omitted — If a zone is programmed as an Omitted zone by the Engineer, then it is ignored by the panel. Primarily used for Part set options. It also allows the user to continue to use the alarm system even if a fault has been discovered on one or more zones.

6.2 24 hour zones

Personal Attack — Triggering of the Personal Attack (P.A) zone will always cause a full alarm activation regardless of whether or not the panel is set.

Tamper — A tamper zone activation will only generate an internal alarm, if the panel is in Day mode. If a tamper fault is present and the panel is then set, the system will give a second internal alarm. Triggering of a tamper zone when the panel is set will always give an external as well as internal alarm

Fire — Triggering the fire zone will only operate the internal sounder. A fire alarm is identified by a three note rising sound which is easily distinguished from all other tones. Zone 4 may be configured as a fire zone.

The Fire Zone is intended as an extra feature to the Intruder Alarm system and must not be regarded as a total fire protection system

10 USING THE CONQUEROR AFTER PROGRAMMING

A. USER FACILITIES

10.1 Full Setting the panel

Enter either of the following:


User Code (Factory set to 1234)

By using this method, maximum volume of the entry / exit tone will be heard.

or 

By using this method, no sounds will be emitted except for an acknowledge tone at the beginning and the end of the entry / exit time.

10.2 Part setting the panel

Part set 1 (eg downstairs only armed):


or 
both will give a silent setting

Part set 2 (eg upstairs only armed):

Enter 
or 
both will give a silent setting

10.3 Unsetting the panel

The panel can be unset by entering the building via the entry / exit route and then keying the user code.

10.4 Turning Chime On and Off (Panel must be in 'day' mode)

Enter 

When the chime mode is selected a three note chime will be produced by the internal sounder and any extension speakers when an Entry / Exit zone is activated. The same key sequence can be used to turn off the chime facility.

10.5 Recalling the Event Log.

The event log can now be displayed at any time, when the Conqueror is unset. The event log is displayed by pressing,

The 'Day' led will flash and event information from the latest alarm activation is displayed. Pressing any key will then show the previous event information. When all the four have been displayed the day led will stop flashing and another function can be selected.

9.8 Changing the Engineer Code

Enter ⌃ 1 6

then X X X X the old Engineer Code (Factory Set at 9999)

- gives an audible acceptance tone

then X X X X the new Engineer Code

- gives an audible acceptance tone

then X X X X the new Engineer Code again

- gives an audible acceptance tone

If an incorrect key is entered an error tone will be given and the function ended.

9.9 Selecting User or Engineer Log Clear.

The Engineer can allow the User to clear the log. This is achieved from Engineers mode by pressing,

⌃ 1 7

The Engineer can revert back to Engineer only log clear. This is achieved from Engineer mode by pressing,

⌃ 1 7

9.10 Exiting Engineer Mode

Enter ⌃ 0 0

then X X X X

Engineer Code

9.11 User Facilities

The engineer has access to all the User facilities but must prefix the function numbers by 0

Key sequences are as follows:

⌃ 0 1 Chime on/off

⌃ 0 2 Read Event Log.

⌃ 0 3 Clear Event Log.

⌃ 0 5 Change User code

⌃ 0 6 Enter System Test Mode

⌃ 0 7 Enter Walk Test Mode

These functions are described in the next section.

7 CONTROLS AND FUNCTIONS

Volume Control

This is only accessible when the front cover has been removed and will only affect the volume of the internal sounder together with any extension speakers. The volume control is overridden when the panel is in an alarm state, and also if the panel has been set by the User code.

Chime

Chime function applies to 'day' mode only and if selected will cause the panel to generate a three-note sound when an entry/exit zone is triggered. This feature is to inform the occupants of the building that someone has entered.

Latch

The latch facility is designed to be used with intruder detectors fitted with a latch memory. This feature is very useful when more than one detector has to be wired to a particular
zone as it will show which detectors were triggered if an alarm occurred. If there has been
an alarm and latch memory was used, then when the panel is reset an LED indication will be given at the relevant detector(s). Resetting of latch memory requires the panel to be set again for not less than 5 seconds, and then unset.

Auto Rearm

After an alarm the panel will automatically reset itself when the bell timer has expired. Any zones which still remain triggered at that time will be omitted automatically.

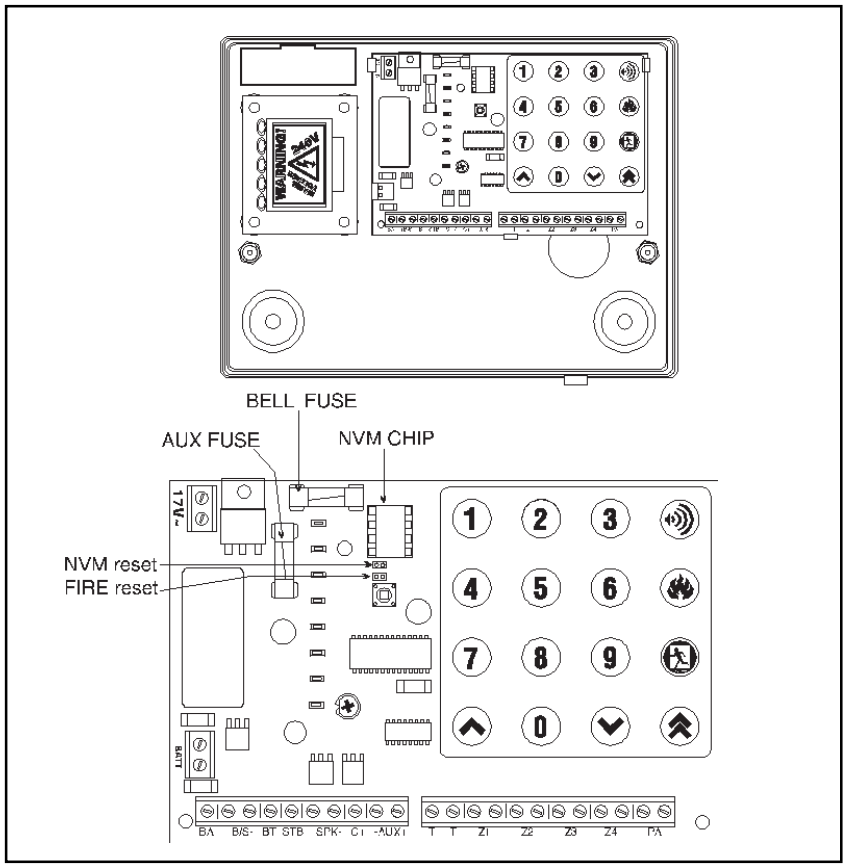
Walk test

The walk test function verifies that all the intruder detectors on the alarm system are functioning correctly. When the walk test mode is enabled any activated zone will cause a chime and the LED display to indicate.

8 INSTALLATION AND WIRING

Before beginning any installation work read through this section carefully. Plan out the various areas and degrees of protection required from each zone. It is important to decide which type each zone should be if partsets are to be used. Work out the cable routes avoiding mains cabling and consider the chosen position for the control panel and its main supply.

8.1 PLAN VIEW WITH COVER REMOVED

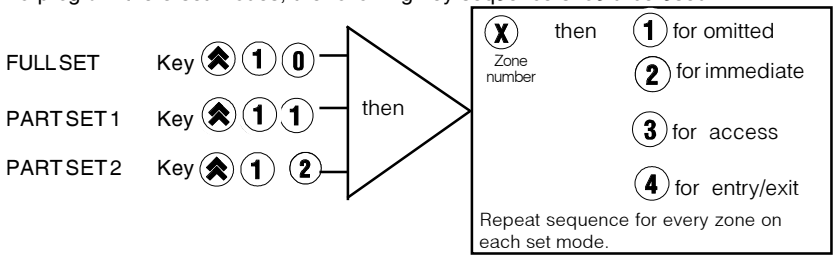


BA	External Sounder / Bell Trigger (negative trigger)
+B/S (+ terminal)	Bell 12v DC supply
B/S- (- terminal)	Bell 0v
BT	Bell Tamper (negative return)
STB	Strobe lamp (negative trigger)
+SPK (+ terminal)	Internal speaker positive supply
SPK- (- terminal)	Internal speaker negative supply
C+	Latch line
AUX+ (+ terminal)	Positive Auxiliary supply
-AUX (- terminal)	Negative Auxiliary supply
TT	Global Tamper lower case zone
Z1 to Z4	Alarm zones
PA	Personal Attack zone
BAT	Backup battery

9.4 Programming Set Modes.

Any zone may be programmed to be any one of the following ;
Entry/Exit, Access, Immediate or Omitted.

To program the 3 set modes, the following key sequence should be used.



9.5 Selecting Zone 4 as a Fire Zone

Zone 4 can also be configured as a 24 hour fire zone by inserting the jumper on the lower of the two header links. This will override the above programming.

9.6 Setting the Alarm Bell Time

To adjust the alarm bell cut off time press ⌃ 1 4

followed by the required time in minutes (2 to 2 0 minutes)

followed by ⌃.

Incorrect entry gives an audible error tone and correct entry gives three bleeps.
The alarm bell cut off time for the Conqueror is factory set to 20 minutes.

9.7 Setting Entry / Exit Time

To set the required time for Entry / Exit time, press ⌃ 1 5

followed by the time required in seconds (2 to 2 5 5 seconds)

followed by ⌃.

Incorrect entry gives an audible error tone and correct entry gives three bleeps.
The Entry / Exit time is factory set to 30 seconds.

The following key applies to the table below:
E =Entry/exit Zone
i =Immediate zone

	Zone number			
	1	2	3	4
Full set	E	i	i	i
Part set 1 (⌄)	E	i	i	i
Part set 2 (⌃)	E	i	i	i

9 PROGRAMMING

9.1 Entering Engineer Mode

Key (⌃⌃) (0) (9) (9) (9) (9)

The tamper LED will flash when the Conqueror is in Engineer mode.
The day LED will flash during programming of any of the functions.

Whilst in Engineer mode, you are able to remove any covers without creating a tamper alarm.

9.2 Setting Volume Control

This control will affect the volume produced by the panel in Day mode.
Adjust the volume as follows.

1. Remove lid.
2. Set volume pot to desired volume.
3. Depress a number key to check desired volume has been reached.
4. Replace cover.

To silent set the panel, the system has to be armed using the Easy Set feature.The volume control will be overridden to give full volume when the panel is set using the 4 digit User code.

9.3 Resetting the Non Volatile Memory (NVM) to Factory Settings

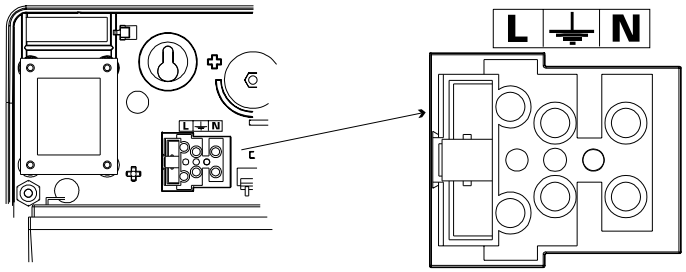
The NVM will reset itself to the factory settings if the reset pins on the PCB (immediately below and to the right of the fuses) are shorted together on power up. This also requires the backup battery to be disconnected. For normal operation the jumper should be removed from the two pins.

8.2 MOUNTING

1 Remove front cover.
2 Disconnect the transformer connections from the printed circuit board(PCB).
3 Take out the PCB by pulling back the central retaining clip and removing the PCB from underneath the guide rails.
4 Hang the control panel base onto the wall with the central mounting hole using one of the screws and plugs provided.
5 If possible use a spirit level or some other means to position the control panel squarely then drill two more holes into the wall to locate the other two screws and plugs.

8.3 MAINS CONNECTION.

1 The mains supply connector should be carefully wired to an ac mains supply using a suitably rated 3 core cable with a current carrying capacity of not less than 5 Amps. It should be connected to a fused spur with a fuse rating of not more than 2 Amps.
2 The mains connections at the power supply input are coded as follows:
L : LIVE N:NEUTRAL ⏚: EARTH



8.3 BATTERY CAPACITY

It is recommended that the rechargeable battery used with the Conqueror control panel should be capable of powering the alarm system for a minimum of 8 hours, and that this time period include 20 minutes of bell/strobe operation. The minimum battery capacity should be calculated from the current consumption of the individual system components.

A typical example is shown below:

Non alarm current for control panel (7hrs 40min)	:	38mA (0.038A)
Steady state current for detectors	:	60mA (0.06 A)
(e.g. 4 x 15mA for 8 hours - Pyronix Pirs)		
Typical stand-by current for external sounder	:	30mA (0.030A)
(eg Self Actuating Bell for 8 hours)		
Typical on state current for external sounder(20 mins)	:	350mA (0.35 A)
Alarm state current for control panel (20 mins)	:	197mA (0.197A)
Typical current for external strobe (8 hours)	:	130mA (0.130A)

Total battery capacity = (Panel stand-by current x 7hrs 40min)
+ (Detector, SAB and strobe current x 8hrs)
+ (Panel in alarm with external sounder x 20mins)
i.e. 0.038 X 7.67HRS
+ (0.045 + 0.03 + 0.13) X 8HRS
+ (0.197 + 0.35) X 0.33HRS
- 2.1 Amp Hours

For example it is recommended that you use a battery of 2.1 AH.

LOW VOLTAGE CONNECTIONS

Extension loudspeaker (-SPK+)
Minimum 16Ohm Load.

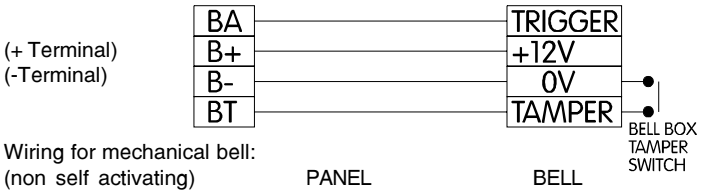
-SPK (- terminal)	:	0 volts
SPK+ (+terminal)	:	speaker supply

Strobe Lamp (STB) : negative trigger

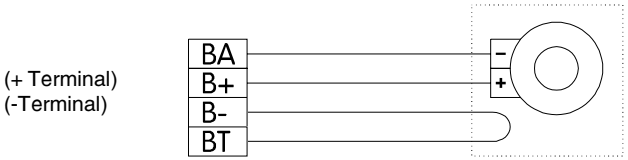
External Sounder/Bell

BA	:	negative trigger
+B (+terminal)	:	12 volts dc supply
S- (- terminal)	:	0 volts
BT	:	Tamper

Wiring for external sounder

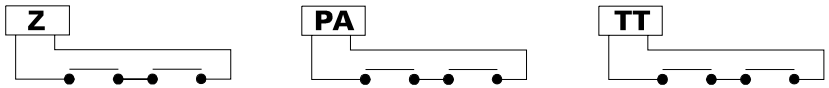


Wiring for mechanical bell:
(non self activating) PANEL BELL

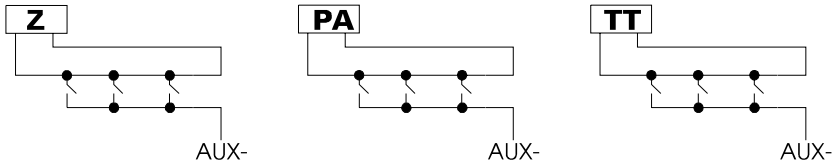


Intruder, Personal Attack and Tamper zones.

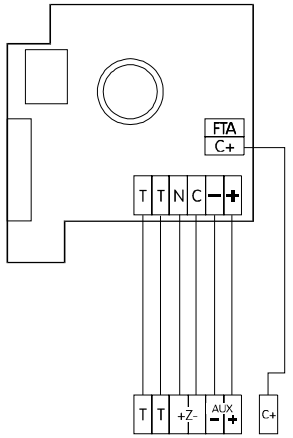
Wiring for normally closed contacts.



Wiring for normally open contacts.



Wiring to PIRs



FTA : First to Alarm
C+ : Latch Memory

NOTE: C+, and FTA connections are all optional. FTA connects to all other PIRs in the same alarm zone. FTA should NOT be connected to the control panel.

Any unused zones should NOT be left open circuit

8.6 POWERING UP YOUR PANEL

1 Insert the battery and secure it with the cable tie provided.

2 Connect the battery. An alarm will now occur.
Replace the front cover and enter the User code twice:
(X)(X)(X)(X) (Factory Set 1234)
The audible alarm will now stop. Day LED will illuminate.

3 Switch on the mains supply. The supply LED will illuminate.

4 The panel is now programmed to its factory settings as shown below.

8.7 FACTORY DEFAULTS

User code	:	1234 (0000-9999)
Engineer code	:	9999 (0000-9999)
Bell timer	:	20 minutes (programmable 2 to 20 mins)
Entry/exit time	:	30 seconds (programmable 2 to 255 secs)