

# 9448+/9448ES

## Installation and User Guide



### **Compatible Equipment**

9427	Remote Keypad
9040	Internal Sounder
660	Speech communicator

## INTRODUCTION

The 9448+ and 9448ES Alarm Control Panels are fully programmable 7 zone control panels with Full and Part Set, designed for domestic installations.

The 9448ES is an end station version designed for domestic and small commercial installations.

In the 9448+ the control panel comprises a single printed circuit board, with microprocessor electronics, mounted in a Polycarbonate casing with a hinged lid. On the outside of the lid is a backlit soft rubber keypad and a column of LED (Light Emitting Diode) displays. Up to two optional 9427 Remote Keypads can be connected to the control panel and used in exactly the same way as the keypad on the control panel. Note that the captions on the keys have a different arrangement.

For the 9448ES the control unit comprises a single printed circuit board, with microprocessor electronics, mounted in a steel box with a slide off lid. Up to four 9427 remote keypads can be connected to the control unit.

## Technical Specification

Operating temperature	-10° to +50°C.
Humidity	80% RH.
<b>9448+</b>	
Dimensions	h x w x d 210 x 210 x 65mm.
Weight	Approx 1.1kg (without stand-by battery).
<b>9448ES</b>	
Dimensions	= h x w x d 234 x 243mm x 87mm.
Weight	= Approx 3.0 kg (without stand-by battery).

## Power Supply

System Power Supply	230VAC (Ambient Temp. 20 ° C).
Quiescent Panel Power	50mA nominal.
Active Panel Power	150mA nominal.
9427 Remote Keypad	20mA.
<b>9448+</b>	
Standby Battery	12 Volt, 2.1AH rechargeable lead-acid, Gel Type battery.
Battery Space	h x w x d 55 x 185 x 30mm.
<b>9448ES</b>	
Standby Battery	= 12 Volt, 7AH rechargeable lead-acid, Gel Type battery.

## Outputs

Bell, Strobe, O/P and AUX are open collector transistor outputs.

Bell 500mA, 12VDC. negative applied.

Strobe 500mA, 12VDC. negative applied.

O/P 100mA, 12VDC. negative applied.

### **9448+**

AUX (for detectors) 300mA, 12VDC.

Communicator Outputs PA and Intruder, 12V positive removed.

### **9448ES**

AUX (for detectors) = 500mA, 12VDC.

Communicator Outputs = PA , Alarm and Fire, 12V logic outputs, -ve applied in alarm (+ve removed).

LS = can support two parallel connected externally mounted 16Ohm loudspeakers for internal sounder or EE tones. Controlled by Vol. potentiometer in control panel.

## Fuses

### **9448+**

F1 - Battery 1A Slow Blow

F2 - 12V AUX 1A Fast Blow

F3 - 21 VAC 1A Slow Blow

### **9448ES**

F1 - Battery = 2A Anti Surge

F2 - 12V AUX = 1A Fast

F3 - 21 VAC = 2A Anti Surge

**Caution: When replacing fuses use the ratings quoted above.**

When installed as part of an intruder alarm system this panel is designed to comply with BS4737 Part 1 for a bell only system.

# Wiring

## Keypad Addressing and Backlighting

Each remote keypad must be given a separate "address". Link LK1 sets the keypad address, as shown in Figure 1. Use LK4 to switch the remote keypad backlights on or off.

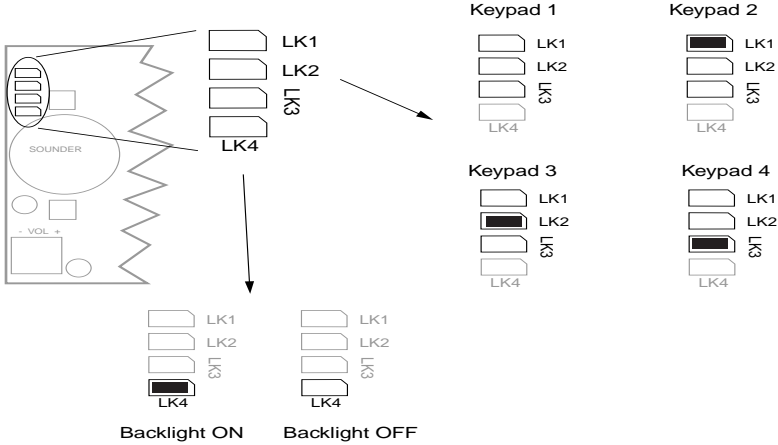


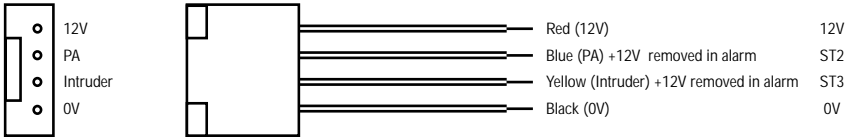
Figure 1. Keypad Addressing and Keypad Backlight

## Connecting a Communicator to 9448+

To wire a communicator use the appropriate cables shown below.

9448+ Com Connector Com Connector Cable, Part No. 485127

Example Connections:  
660 Speech Communicator



9448+ES Com Connector

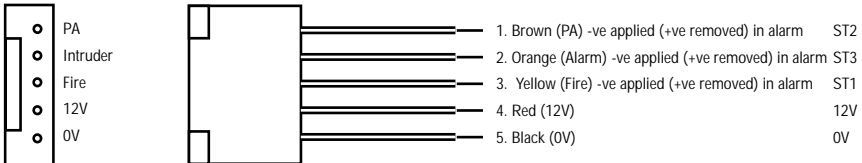


Figure 2. Com Connector Supplied With Product

## Main Connector 9448+

Figure 3 shows an example system wired for a door contact and a detector. Note that mains and battery connections are not shown.

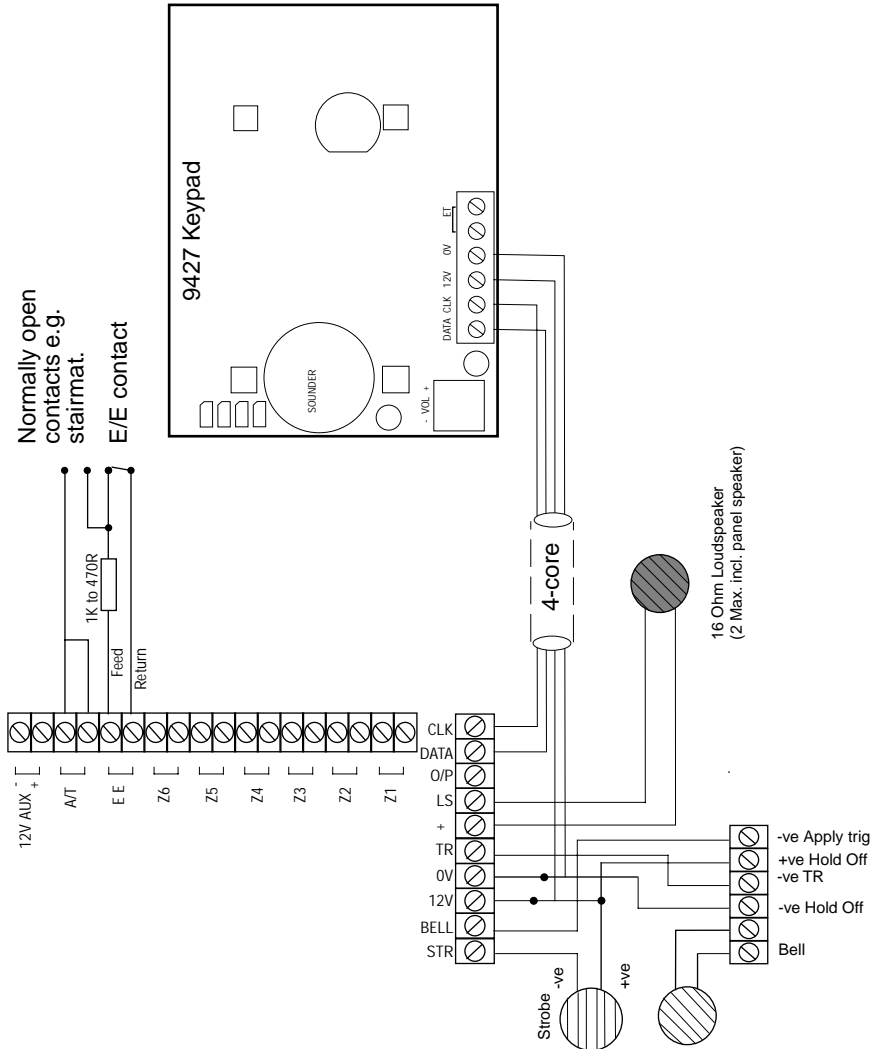


Figure 3. Wiring Example

# Main Connector 9448ES

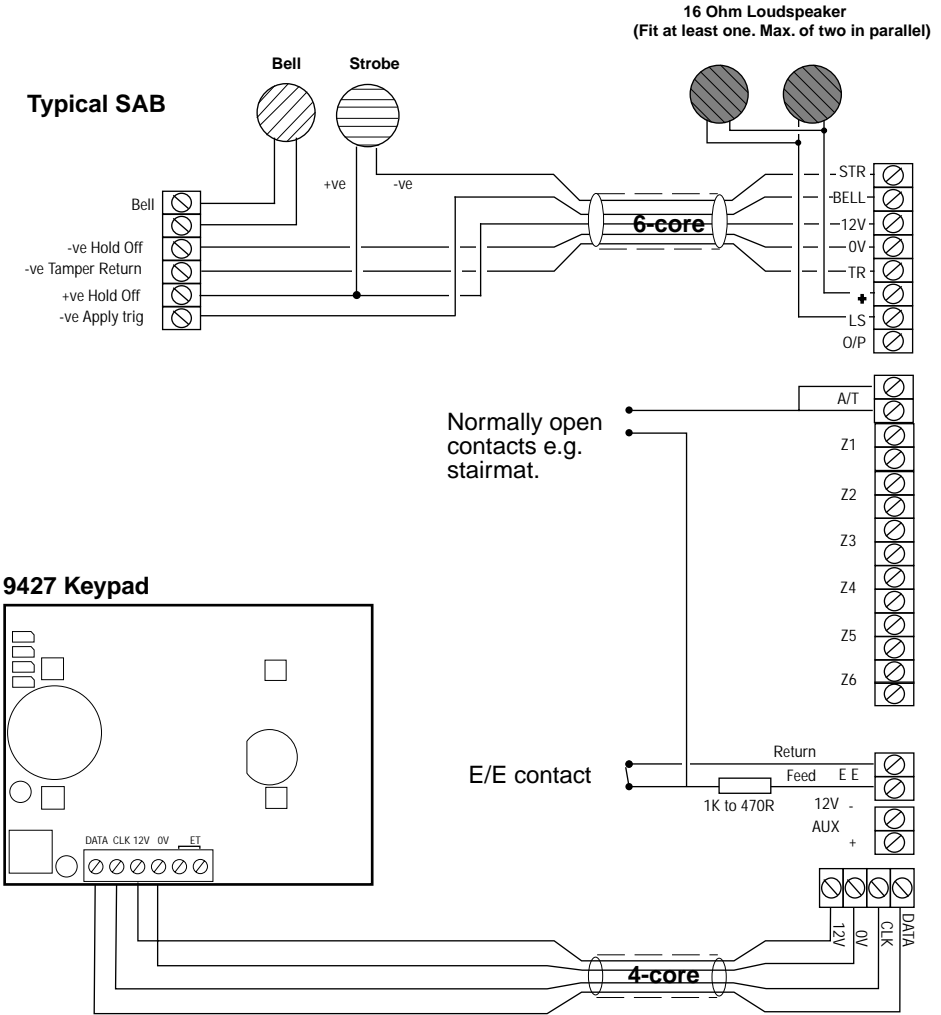


Figure 4. Wiring Example

## Programming

### Initial Start Up 9448+

Before applying power to the control panel, ensure that any remote keypad and all zone circuits are connected. **DO NOT** connect the 12V terminal to the external sounder or 12VAUX terminals to the detectors at this stage.

1. Apply mains to the control panel.  
The green power LED lights and the internal sounder will sound. Ignore any other lights.
2. Key-in the factory default user access code: 1234.  
The internal sounder stops. Ignore any other lights.
3. Key-in 0 then ENTER followed by the factory default engineer access code: 7890.  
All LEDs, except for Power, flash.

**You are now in programming mode.**

4. Open the control panel lid, connect the battery, and complete the connections between the 12V terminal on the lower connector and the external sounder.  
The external sounder should become silent.

**Note:** *The SAB module in the external sounder will continue to ring until the hold off supply is connected, or until the bell cover lid tamper switch is closed.*

5. Close the panel lid once all the connections are made.

### Initial Start Up 9448ES

Before applying power to the control unit, ensure that any remote keypad(s), all zone circuits and sounders are connected.

1. Connect the battery to the control unit PCB.  
The green power LED stays dark and the internal sounder may sound. Ignore any other lights.
2. Key-in the factory default user access code: 1234.  
The internal sounder stops. Ignore any other lights.
3. Fit the case lid. Make sure the green earth wire is connected to the upper left hand support pillar on the case back.
4. Apply mains power.  
The Power LED glows steadily.
5. Key-in 0 then ENTER followed by the factory default engineer access code: 7890.  
All LEDs, except for Power, Fault and Service, flash.

**You are now in programming mode.**

## Changing Default Programming

To change the factory defaults, the panel must be in programming mode.  
Then:

1. Key in a two digit programming command followed by "ENTER". (See "Engineer Program Command List".)  
On commands 35 to 68 a LED will glow to show you the current option used in the command. If the LED is OFF the option is "0".
2. Key in the correct digit for the option you want, and then press ENTER.  
The panel beeps twice to show that it has accepted the command. All the LEDs flash, and the panel is ready for the next command.  
  
The panel gives a single error tone if you enter an incorrect command. Re-enter the correct command.
3. Key in "99 ENTER" to leave programming mode when you have finished. You will then be in user mode.

### Engineer Program Command List

To change:	Key-in:	followed by:	Notes	Defaults
Zones omitted in Part Set*	<b>10</b> ENTER	zone n..n ENTER	LEDs ON for zones omitted (see note 1)	none
Chime	<b>11</b> ENTER	zone n..n ENTER	LEDs ON for chime (EE zone = zone 7)	none
Zones Not Used	<b>15</b> ENTER	zone n..n ENTER	LEDs OFF for zone not used (see note 2)	none
Engineer Code	<b>20</b> ENTER	new code ENTER	4 digits	7890
User Code 1	<b>21</b> ENTER	new code ENTER	4 digits (see note 3)	1234
User Code 2	<b>22</b> ENTER	new code ENTER	4 digits (see notes 3 & 4)	0000
Silent Part set	<b>35</b> ENTER	0 ENTER 1 ENTER	Audible Silent	✓
Zone 2 Entry Route	<b>36</b> ENTER	0 ENTER 1 ENTER	Normal Alarm 1 ENTER	✓ Entry Route
Auto Re-Arm	<b>40</b> ENTER	1 ENTER 2 ENTER 3 ENTER 4 ENTER	Never rearm Rearm once Rearm twice Rearm three times	✓
Bell Time	<b>42</b> ENTER	1 ENTER 2 ENTER 3 ENTER 4 ENTER	90 seconds 3 minutes 10 minutes 20 minutes	✓
To change:	Key-in:	followed by:	Notes	Defaults



Entry time	<b>43</b> ENTER	1 ENTER 2 ENTER 3 ENTER 4 ENTER 5 ENTER	10 seconds 20 seconds 30 seconds 45 seconds 1 minute	✓
Exit time	<b>44</b> ENTER	1 ENTER 2 ENTER 3 ENTER 4 ENTER 5 ENTER	10 seconds 20 seconds 30 seconds 45 seconds 1 minute	✓
Zone 6	<b>50</b> ENTER	0 ENTER 1 ENTER	Normal Alarm PA	y
Prog O/P	<b>51</b> ENTER	0 ENTER 1 ENTER	PIR set latch Shock reset	✓
Zone 1 in Part Set	<b>52</b> ENTER	0 ENTER 1 ENTER	Normal Alarm Entry/Exit	✓
Part Set Alarm Response	<b>53</b> ENTER	0 ENTER 1 ENTER	Full Alarm Internal sounder	✓
Zone 3	<b>54</b> ENTER	0 ENTER 1 ENTER	Normal Alarm Entry/Exit	✓
Zone 5	<b>55</b> ENTER	0 ENTER 1 ENTER	Normal Alarm Fire	✓
30-second Dual Ply	<b>64</b> ENTER	0 ENTER 1 ENTER	Enabled Disabled	✓
Keypad 1 & 3 PA	<b>68</b> ENTER	0 ENTER 1 ENTER	Disabled Enabled	✓
View Log	<b>90</b> ENTER	Press << for earlier events press >> for later events.		
Walk Test	<b>97</b> ENTER	Trigger detectors. Press OMIT to exit test.		
Load Defaults	<b>98</b> ENTER	Does not change access codes		
Leave Program	<b>99</b> ENTER	(See note 5.)		

**Notes:**

1. *n..n = the numbers of the zones. Key the zone number to toggle the zones on or off. Pressing ENTER stores the zones selected. You cannot omit Entry/Exit zone(s) in Full or Part set.*
2. *Program any zones not connected as "Not used".*
3. *The end user may change the user codes (see separate user guide).*
4. *Default user code 2 "0000" is inactive. Changing user code 2 back to "0000" at any time makes the code inactive again.*
5. *If the internal sounder activates when you use this command then check the lid tamper, bell tamper, and the global zone anti tamper.*

## To Re-enter Programming Mode

You can re-enter programming mode at any time when the panel is not set or in alarm:

Key-in 0 then ENTER followed by the engineer access code.

All LEDs, except for Power, flash.

**You are now in programming mode.**

## Restoring Factory Defaults

The control panel can retain all programmed information and access codes if both mains and battery power fail. When power is restored the panel will simply need resetting with either the user's or engineer's access code.

If the end user forgets the user access code then:

1. Power down the control panel, mains and battery.
2. Locate the pair of Molex pins marked 'RST' near the microcontroller.
3. Place a small screwdriver blade to short between the 'RST' pins.
4. With the blade still across the pins, apply battery power then mains.  
The system loads the factory default user and engineer's access codes.
5. Remove the screwdriver blade.
6. Key in 1234.
7. Key in 0 then ENTER followed by 7890.
6. You must now reprogram the access codes.

If you want to return the panel to the factory default settings without changing the access codes:

1. Enter programming mode (if you are not already there).
2. Key in "98 ENTER" at the keypad.

The system loads the factory default command values but does not changes the access codes.

## **Engineer Walk Test**

Allows the engineer to test all devices on the system.

1. Enter programming mode.
2. Key in "97 ENTER".  
The panel gives a continuous tone.
3. Open and close each detector contact in turn.  
When a detector contact is open the panel gives an interrupted tone and flashes the zone LED.
4. Press OMIT to stop the walk test.

Note that the Engineer's walk test allows you to test all zones including PA zones, zone tampers, and panel and bell tampers. The user's walk test does not allow this.

## **User Commands**

Set/Unset System	User code
Part Set	2 + ENTER + User code
Omit zone	Zone number + Omit (repeat for all zones to be omitted) + User code
Keypad PA	1 + 3
Test Bells	4 + ENTER + User code
Walk Test	5 + ENTER User code Omit to end test
Change User code	6 + current user code Current user code again New user code.
Chime On/Off	7 + ENTER + User code
Read Log	8 + ENTER +User code << for earlier events >> for later events

