9454/9455
Installation and User Guide

Compatible Equipment

9425	Remote Keypad
9040	Internal Sounder
660	Speech Communicator
8440	4-Channel ‘Minicom’

Introduction

The 9454 and 9455 are fully programmable control units designed to meet the requirements of larger domestic and medium commercial installations.

A basic system comprises a main control unit complete with built-in keypad, The control unit houses the system electronics, power supply, battery and remote signalling device (if fitted). A numeric keypad and row of indicators (LEDs) on the outside of the unit allow the user and installer to operate the system.

Remote keypads provide the user with the facility to set and unset the system from strategic locations within the premises and allow the installer to program the system. Up to TWO remote keypads may be connected to a system. The keypads also have an optional key press PA facility.

The 9454 is a five zone system, with three ‘open collector’ type outputs.

The 9455 is a six zone system, with three single pole relay outputs.

In both systems, one output is timed (sounders) one is untimed (strobe) and one is fully programmable. If required the 9455 can incorporate a keyswitch for full setting and unsetting.

Technical Specification

Zones	9454: Five plus entry/exit and PA, all closed circuit. With individual tamper. 9455: Six plus entry/exit and PA, all FSL.
Display	LED.
Keypads	1 built-in plus up to two remote keypads (9425).
Expansion	None.
BS 4737	Full Spec.
Log	9454: 15 events. 9455: 15 events.
Panel Siren	Yes.
Extension Spkr	9040. 1 max.
Battery	6.5 Ah.
12 V Power	9454 Quiescent Panel 50mA. 9455 quiescent panel 65mA. 9425 RKP = 40mA.
12V Aux Output	500mA.
Dimensions	Panel: h x w x d 163 x 257 x 72mm. RKP: h x w x d 115 x 115 x 28mm.
Weight	Panel 1.7Kg approx.
Comms Output	9454: PA, Intruder, Open/Close. 9455: PA, Intruder, Open/Close.

Wiring

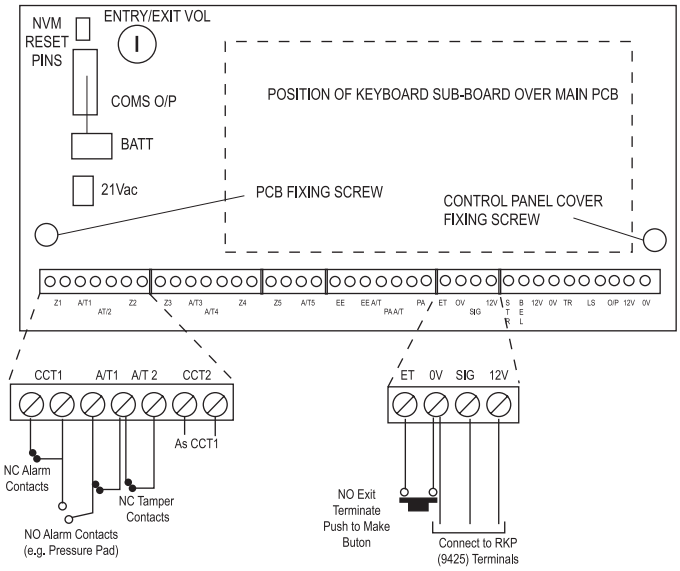


Figure 1. 9454 PCB Layout

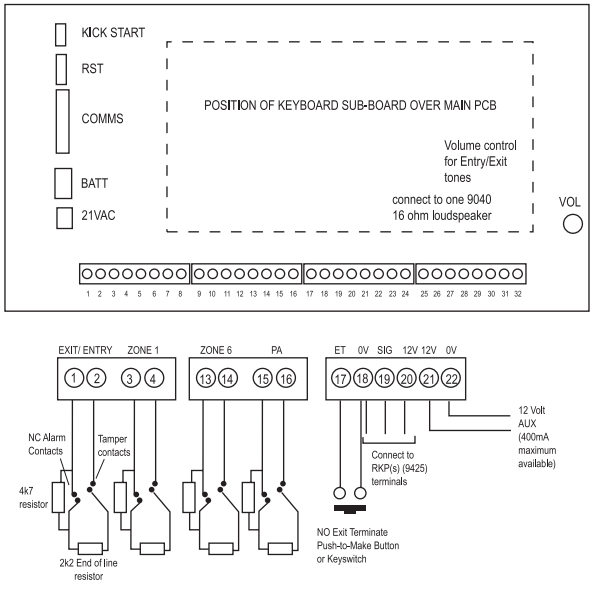


Figure 2. 9455 PCB Layout

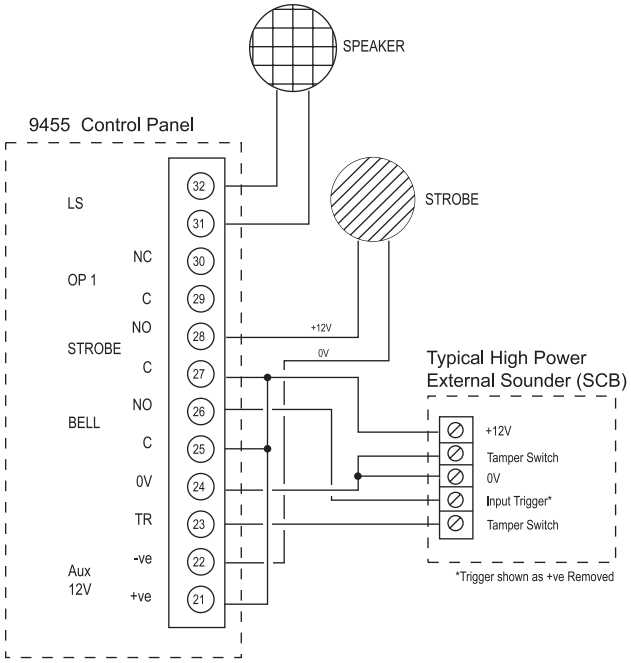


Figure 3. Wiring a Bell to the 9455.

Notes:

1. Bell O/P programmed as normally closed (SCB).

2. Link TR to0V if no external tamper is required.

3. Connect all bell wiring to the control panel with the exception of the +12V Aux supply, until initial power-up is complete, then final connections can be made.

4. You can fit a maximum of two 9040 16Ohm speakers to the 9455 if the internal speaker is disconnected.

5. The SCB module shown is a typical example only. See manufacturers instructions supplied with individual units for further information on wiring diagrams.

Communicator Output Pins

Pin on panel	Function	Colour	Pin on communicator
Pin 1	PA	Red	ST2
Pin2	Line Monitor Input	Blue	O/P
Pin 3	Intruder	Yellow	ST3
Pin 4	Open/Close	Black	ST4
Pin 5	+12V	Brown	12V
Pin 6	0V	Orange	0V

Notes:

1. Pins 3 and 4 are 5V positive removed in alarm to trigger.
2. Pin 2 is a 12V +ve input for Line Fault.
3. If a communicator is fitted and has an output for line fault, connecting a +ve to the Line Monitor Input will reduce any programmed bell delay to zero and give a visual indication on the panel LED (LF).
4. If a communicator is not fitted remove the communicator wiring harness from the main pcb.

Keypad Wiring

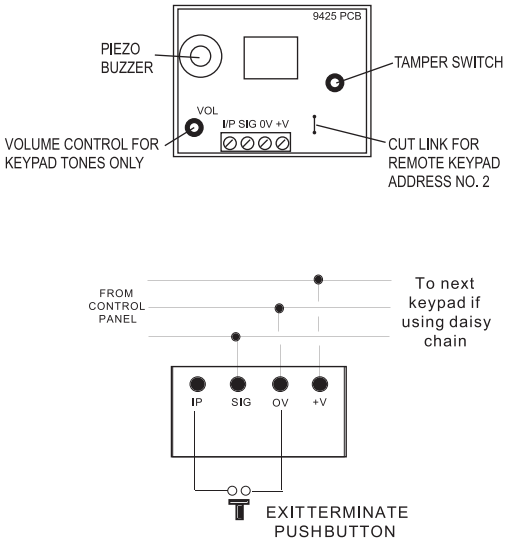


Figure 4. Keypad Connection.

Notes:

1. Maximum cable distance: Daisy chain = 300m, Star Wire = 100m per leg.
2. Do not wire the extension speaker or circuit wiring within the same cable as the remote keypad.

Programming

Initial Start Up

Before applying power to the control panel or end station, ensure that all used circuits are connected. The control panel or end station lid switch should be defeated or closed and NO power connections to detectors, sounders or battery should be made at this stage.

Note: If connections to the bell and AUX power are made when the system is powered up, damage to the main pcb may occur.

1. Apply mains to the control panel or end station. The green “Power” and “Day” LED will illuminate and the internal sounder will sound.
2. Key-in the factory default customer code “1234”. The internal sounder will stop and the “Tamper”, “Service” and “Fault” LEDs will be flashing.
3. Key-in the factory default engineer code, “0” followed by “ENTER” then “7890”. The “Fault” and ”Service” LEDs will flash and the internal sounder will be bleeping.
4. Open the control panel or end station lid. The internal sounder stops bleeping and the “Service” LED will be steady. Make connections to AUX power, stand-by battery and connections to SAB. Proceed to program the system.

Note: If an SAB/SCB module is fitted within the bell, it will continue to ring until the panel supply is connected and until the bell cover lid tamper switch is closed.

Programming Commands

To change the factory default program, use the commands listed in this section as follows:

1. Enter the command number.
2. Enter one or more digits to give the new program.
3. Press ENTER.

   The panel will give a double bleep to show that it has accepted the command. If you enter the command incorrectly the panel gives a single tone.

Default Settings

When delivered from the factory, the panel is programmed as follows:

Zone 1, Entry Route Part Set zone.
Zone 2, Normal alarm, active in Part Set, Omit allowed.
Zone 3, Normal Alarm, active in Part Set, Omit allowed.
Zone 4, Normal Alarm, active in Part Set, Omit allowed.
Zone 5, Normal alarm.
Zone 6, (9455 only) Normal Alarm.
Zone 7(E/E) Part set.
User code 1234.

Engineering Program Commands

To change	Key in:	Followed by + ENTER	Default
Zones 1-5(6)	01-05(6)	0 = Not used 1 = Normal Alarm 2 = 24 Hour Alarm 3 = Entry Route 4 = 9454: Dbl knock: 9455: Fire zone 5 = 9454: Chime. 9455: Dbl knock 6 = 9454: Part set zone. 9455:Chime 7 = 9455: Part set zone OMIT = Omit Allowed	
Entry/exit zone options	07	0 = Reset to none 5 = 9454: Chime 6 = 9454: Part set zone. 9455: Chime 7 = 9455: Part set zone.	
Programmable Output	11	18 = 9454: PIR set latch 29 = 9454: Shock sensor reset 19 = 9455: PIR set latch 28 = 9455: Shock sensor reset 39 = 9455: Tamper alarm function 49 = 9455: System part set	✓ ✓
Engineer Access	20	Any 4 digit code	7890
Bell output type	21	0 = 9454: SAB. 9455: normally open 1 = 9454: SCB. 9455: normally closed	✓(9454) ✓(9455)
Internal sounder	22	1 = Follows strobe 0 = Follows bell	 ✓
PA	30	0 = Audible Alarm 1 = Silent Alarm	✓
System Reset	31	0 = Customer Reset 1 = Engineer Reset	✓
Abort facility	32	0 = Disabled 1 = Enabled	✓
Keypad PA	33	0 = Disabled 1 = Enabled	✓
System status	34	0 = LEDs ON 1 = LEDs OFF	✓(9455) ✓(9454)
Exit Mode	35	0 = Timed or Terminated 1 = Final Door Set	✓
Control panel ET and RKP I/P function (9455 only)	36	0 = Exit terminator 1 = Keyswitch set	✓
Rearm	40	0 = Never 1 = Once 2 = Twice 3 = Three times 4 = Always	✓

To change	Key in:	Followed by + ENTER	Default
External sounder delay	41	0 = Nil	✓
		1 = 1.5 mins	
		2 = 3 mins	
		3 = 5 mins	
		4 = 10 mins	
		5 = 15 mins	
		6 = 20 mins	
		7 = No duration	
Ext. sounder duration	42	0 = Nil	
		1 = 1.5 mins	
		2 = 3 mins	✓
		3 = 5 mins	
		4 = 10 mins	
		5 = 15 mins	
		6 = 20 mins	
		7 = No duration	
Entry Time	43	0 = Continuous	
		1 = 10s	
		2 = 20s	✓
		3 = 30s	
		4 = 60s	
		5 = 90s	
		6 = 120s	
Exit Time	44	0 = Continuous	
		1 = 10s	✓
		2 = 20s	
		3 = 30s	
		4 = 60s	
		5 = 90s	
		6 = 120s	
CSID code	50	nnnn (key in four digit code)	
Part Set Entry/Exit	60	0 = As Final Exit	✓
		1 = Normal Alarm	
Part Set Entry Response	61	0 = As Entry Route	
		1 = Start Entry Timer	✓
Part Set Exit Mode	62	0 = As Full Set	
		1 = 10 Second Set	✓
		2 = Instant Set	
Part Set Alarm Response	63	0 = Local (No comms)	✓
		1 = Full Alarm	
Engineer Log	90	1 see earlier events.	
		3 to see more recent events.	
		ENTER to quit log. (15 events max.)	

To change	Key in:	Followed by + ENTER	Default
External Sounder	91	ENTER to stop test.	
Strobe	92	ENTER to stop test.	
Internal Sounder	93	ENTER to stop test.	
Test keypad LEDs	94	ENTER to stop test	
Programmable output	95	ENTER to stop test.	
Walk Test	97	ENTER to stop test.	
Load Factory Defaults	98		
Leave Engineering Mode	99		

Refresh NVM (System Memory Chip)

The 9454/5 control panels have a Non Volatile Memory chip which retains all programmed information and access codes. If the system suffers a total power failure, the NVM will retain all information and the panel will only require powering up and resetting. However, if the end user forgets the user access code or the installer wants to return the panel to the factory programmed settings, continue as follows:

1. Power down the control panel, mains and battery.
2. Find the RST pins, located to the middle of the control pcb.
3. Place a small screwdriver blade to short between the “RST” pins (on the 9455 also use a short length of wire to short out the Kick Start pins). With the blade still across the pins, power up the control panel battery first, then Mains.

   All the LEDs will flash.
4. Remove the screwdriver blade.

   The control panel loads the factory default codes.
5. Key-in 1234, then press 0 Enter 7890. Momentarily close, then open up control panel lid. Re-program the system.

Engineer Reset

When an engineer requires to reset the system e.g., after an alarm condition, the control panel or end station lid does not require to be opened. Enter the engineer code to reset the system, followed by 99.

To Re-Enter Programming Mode

1. Press 0 then Enter.
2. Key in the Engineer Access Code.
   The “Fault” and “Service” LEDs flash and the internal sounder starts bleeping.
3. Open the control panel lid.
   The internal sounder stops bleeping and the Service LED glows steadily. **The system is now in programming mode.**

To Leave Programming Mode

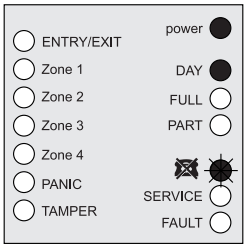
1. Close the panel lid.
2. Key in 99.

Fault Finding

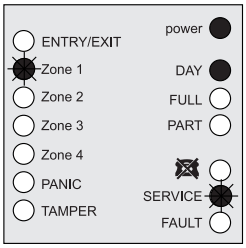
Under normal conditions, the “Fault”, “Service” and “Alarm” LEDs will not be illuminated. Only the “Mains”, “Day” “Full” and “Part Set” LEDs should be illuminated during normal use of the system. Any other LEDs which are illuminated or flashing, signify a fault or alarm condition.

Note: The “Mains” LED will be illuminated permanently.

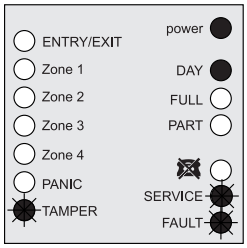
Any condition indicated by a combination of the “Fault”, “Service” or “Alarm” LEDs are to be considered an abnormal condition, as shown on the opposite page:



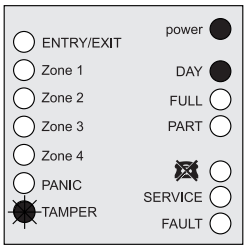
Telephone line fault.



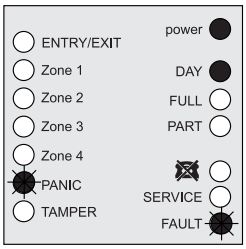
Alarm activated on Zone 1. System requires Engineer reset.



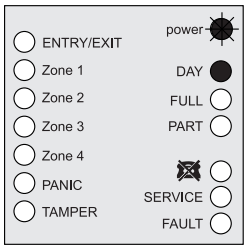
Tamper fault. Battery not charged or missing, remote keypad missing, back tamper normal circuit tamper or bell tamper faults. If there is no SAB fitted, link 0V to TR.



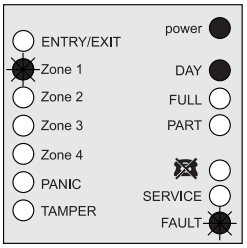
Tamper fault has occurred. Enter user code twice to clear.



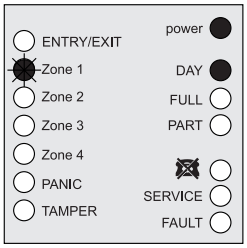
Panic alarm has occured. Reset the panic button. Check the fault LED is extinguished, then enter the user code twice to clear the system.



Mains failure.
The power light flashes.



Zone 1 programmed as 24 hours has activated. Enter the user code to stop the sounder(s). Close the 24 hour door or circuit Check the fault light has extinguished, then enter the user code to clear the system.



Either an exit fault or alarm activation has occurred in zone 1. Enter the user code twice to clear the system.

User Commands

Full Set System	1 + ENTER + User code
Part Set System	2 + ENTER + User code
Unset/Reset System	User code
Omit zone	1 (or 2) + ENTER + User code + OMIT + zone number (repeat OMIT + zone number for other zones as required).
Omit 24 hr zone	OMIT + ENTER + User code + zone number (+ zone number for other zones as required)
Change User code	4 + ENTER + Old code + Old code (the system beeps twice)+ New code (the system beeps twice)
Read Log	5 + ENTER + User code 1 to read earlier events 3 to read later events ENTER to leave the log
Chime On/Off	7 + ENTER + User code
Bell Test	8 + ENTER + User code
Walk Test	9 + ENTER + User code ENTER to end the test