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1.0

INPUTS:

- All inputs:** Are 10K end of line monitored, with a response time of 300 ms. Alarm triggers SIREN, STROBE, BELL (if fitted) and REPORTING. (depending on setup)
- Inputs 1 to 8:** May be programed to have EXIT and ENTRY or EXIT and HANDOVER delays. Or may be programed for 24 HOUR operation.
- Fir:** Not Used.
- Tamp:** Triggers REPORTING
- 16-18VAC:** These terminals are for connection to a 16 - 18 vac 1.5 amp transformer (plug pack)

2.0

OUTPUTS:

- Aux 12V:** This 12vdc is for detectors, etc. The output is via the INTERNAL fuse. Between 200 and 500mA can be delivered to load depending on other loads, eg. siren, strobe. The on board regulation is rated at 1.5amps and of this, the battery can take upto 200mA depending on the state of charge. One strobe requires 250mA and each speaker 200mA. The panel itself in alarm with one arming station connected draws 150mA approx.
- B+, B- (Battery):** This output is connected to the onboard regulator via a resistor which limits the charge current. Charging voltage is 13.7v.
- Int sir:** Output to drive 1 x 8 ohm speaker rated at 10 watts, fused via INTERNAL fuse.
- Int Bell:** 12vdc output to drive DC Screamer/Siren (timed), fused via INTERNAL fuse.
- Ext stb:** 12vdc output to drive 12vdc strobe, fused via EXTERNAL fuse.
- Ext sir:** Output to drive 1 x 8ohm speaker rated at 10 watts, fused via EXTERNAL fuse.
- Telecom Line socket:** This is where the Telecom lead, which is supplied with the unit is connected. The Telecom lead uses pins 2 & 6 of the Telecom socket for the incoming line in a MODE 40 arrangement. Telecom approval No. C89/26B/187
- High Integrity:** This terminal connects to a dual GAS ARRESTOR. This device is the same as used by Telecom in exchanges and main frames to protect against lightning induced voltages.
- Comms Earth:** If this terminal is connected to an earth rod or cold water pipe, the tolerance to high voltage or lightning induced transients is greatly increased. The Telecom input normally has a high tolerance to transients but with this terminal connected the tolerance is even greater. Use a heavy conductor for this purpose 40/020 or similar.
- Keypad:** These 4 terminals connect to the Keypads.
The terminal marked + connects to the red lead from the keypad
The terminal marked CLK connects to the white lead from the keypad
The terminal marked DATA connects to the green lead from the keypad
The terminal marked connects to the black lead from the keypad

3.0

LEDs on the PCB.

On the pcb there are 3 leds.

Scan: This green led indicates that the micro-processor is operating and must always be flickering.

H3: This red led indicates that sub-audible is on. (The STU has nothing to report)

H5: This yellow led will flash when a poll is received or when someone is talking on the phone.

4.0

Initialization

To initialize the panel to factory defaults enter program mode and use **Function 90** or power the panel up with any button pressed on the keyboard for 3 seconds.

5.0

On Power up

On power up the unit performs an internal self test of EEPROM. If the EEPROM is found to have been corrupted in some way then the factory defaults will be reloaded.

On power up the unit starts off in OFF mode and the sirens operate for half a second.

6.0

Control Panel Functions List

Function Number	Function	Number of Digits	Defaults
01	User code 1 - Master Code	4	1111
02	User code 2	4	Nil
03	User code 3	4	Nil
04	User code 4	4	Nil
05	User code 5	4	Nil
06	User code 6	4	Nil
07	User code 7	4	Nil
08	User code 8	4	Nil
**	etc to User code 30		
40	Exit time	1	60 secs
41	Entry time	1	30 secs
42	Siren time	1	10 min
43	Group Bypass Mode	1	Nil
49	Exit / Entry sections	1	Sects. 1+2
50	Exit / handover sections	1	Nil
51	Exit / Entry sections in Group Bypass Mode	1	Nil
52	24 hour inputs	1	Nil
54	Disable Sirens on First Keypress	1	Not Enabled
55	Silent sections	1	Nil
56	Chimes	1	Nil

7.0

Communications Functions List.

60	Account Number / Hard ID	4	9998
71	Report Isolates (Off/Serial/Parallel)	1	Off
72	Open Close Reports (Serial /Parallel)	1	Serial
74	Duress (Off/Pin 7/Pin 9)	1	Off

8.0

Special Functions.

90	Default to factory (see also Initialization)	0	N/A
00	Technician Code	6	012345

9.1**Function 40 - Exit Time****Default - 60 seconds****Options**

0 - 0 seconds	5 - 50 seconds
1 - 10 seconds	6 - 60 seconds
2 - 20 seconds	7 - 70 seconds
3 - 30 seconds	8 - 80 seconds
4 - 40 seconds	9 - 90 seconds

Key Sequence

0 1 2 3 4 5  0 
 4 0
 5 
 






Operation

Enter valid Technician code and enter program mode
 Select function number 40
 Select & store option number (example shows option 5, i.e. 50 secs being selected).
 Exit Program mode

9.2**Function 41 - Entry Time****Default - 30 seconds****Options**

0 - 0 seconds	5 - 50 seconds
1 - 10 seconds	6 - 60 seconds
2 - 20 seconds	7 - 70 seconds
3 - 30 seconds	8 - 80 seconds
4 - 40 seconds	9 - 90 seconds

Key Sequence

0 1 2 3 4 5  0 
 4 1
 3 
 

Operation

Enter valid Technician code and enter program mode
 Select function number 41
 Select & store option number (example shows option 3, i.e. 30 secs being selected).
 Exit Program mode






9.3**Function 42 - Siren Time****Default - 10 minutes****Options**

0 - 0 seconds	5 - 2 min 40 sec
1 - 10 seconds	6 - 5 min
2 - 20 seconds	7 - 10 min
3 - 40 seconds	8 - 21 min
4 - 80 seconds	9 - 42 min

Notes:

Siren time applies to internal, external and satellite sirens
 Australian Standards AS 2201 limit siren to be triggered only once per section unless manually re-armed.
 Noise pollution regulations in most states limit siren time to 10 minutes

Key Sequence

0 1 2 3 4 5  0 
 4 2
 5 
 

Operation

Enter valid Technician code and enter program mode
 Select function number 42
 Select & store option number (example shows option 5, i.e. 2mins 40 secs being selected).
 Exit Program mode






9.4

Function 43 - Group Bypass Mode

Default - No sections to be isolated.

- Group Bypass Mode sets up a pre - programmed list of sections which are isolated.
- Only Sections 1 - 8 can be entered in Group Bypass Mode

Key Sequence

0 1 2 3 4 5  0 
 4 3
 1
 4
 |
 

Operation






Enter Tech Code and enter program mode
 Select Function 43 (previously selected sections will flash)
 Section 1 entered
 Section 4 entered
 Store entry
 Exit program mode

9.5

Function 49 - Exit/Entry Sections in Full ARM Mode *Default - 1+2*

Display and change which sections will have exit / entry delay.

Key Sequence

0 1 2 3 4 5  0 
 4 9
 1
 7

 

Operation






Enter Tech code and enter program mode
 Select Function 49
 (previously selected sections will flash)
 Section 1 has exit / entry
 Section 7 has exit / entry
 Store this selection
 Exit program mode

9.6

Function 50 - Exit/Handover Sections in Full ARM Mode *Default none*

Display and change which sections will have exit / handover delay.

Key Sequence

0 1 2 3 4 5  0 
 5 0
 2
 8

 

Operation



Enter Tech code and enter program mode
 Select Function 50
 (previously selected sections will flash)
 Section 2 has exit / handover
 Section 8 has exit / handover
 Store this selection
 Exit program mode

9.7

Function 51 - Exit / Entry Sections in Group Bypass mode *Default none*

Display and change which sections will have exit / entry delay in Group Bypass mode.

Key Sequence

0 1 2 3 4 5  0 
 5 1
 1
 2

 






Operation

Enter Tech code and enter program mode
 Select Function 51 (previously selected sections will flash)
 Section 1 has exit / entry
 Section 2 has exit / entry
 Store this selection
 Exit program mode

9.8**Function 52 - Sections to operate in 24 Hour mode** *Default none*

Display and change which sections will operate as 24 hour inputs.

Key Sequence

0 1 2 3 4 5  
 5 2
 6
 7

 

Operation

Enter Tech code and enter program mode
 Select Function 52 (previously selected sections will flash)
 Section 6 is a 24 hour input
 Section 7 is a 24 hour input
 Store this selection
 Exit program mode






9.9**Function 54 - Disable sirens on first keypress** *Default - Do not disable***Option**

1 Disable sirens on first keypress
 0 Do not disable sirens

Note:

- If function enabled, Then if the sirens are operating when the first number in a code is entered, The sirens will be shut off for 10 seconds, After which they will turn on again.
- This only happens once during an Armed or Disarmed period.

Key Sequence

0 1 2 3 4 5  0 
 5 4
 1

 

Operation

Enter Tech code and enter program mode
 Select Function 54 (previously selected sections will flash)
 Disable sirens on first keypress.
 Store this selection
 Exit program mode

9.10**Function 55 - Silent Sections** *Default none*

Display and change which sections will operate as silent sections. i.e. No Siren or Strobe.

Key Sequence

0 1 2 3 4 5  0 
 5 5
 6
 7





Operation

Enter Tech code and enter program mode
 Select Function 55 (previously selected sections will flash)
 Section 6 is a silent input
 Section 7 is a silent input
 Store this selection
 Exit program mode

9.11**Function 56 - Chime Sections** *Default none*

Display and change which sections will operate as chime sections. When the panel is not armed.


Key Sequence

0 1 2 3 4 5  0 
 5 6
 6
 7

 

Operation

Enter Tech code and enter program mode
 Select Function 56 (previously selected sections will flash)
 Section 6 is a chime input
 Section 7 is a chime input
 Store this selection
 Exit program mode

Note: - For functions 43,49,50,51,52,55,56

- When the function number is entered the previously selected sections will flash. If at this point the  button is depressed no changes will be made and the program led will be flashing again.
- To de-select a section re-enter that sections number, The section led will be off.

10.0

Selected option or Program Readback.

Whilst in PROGRAM mode, If an option is entered followed by the BYPASS key then that options setting will be read back using the leds on the programmer as follows.

" LED	" INDICATES DIGIT "
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
Arm	9
Ready	0

e.g. (In this case option 60 is 0199)

If you wish to check Function 60

Enter the Function number 6 0 followed by the BYPASS key.

(whilst in program mode)

READY led will light accompanied by a beep (digit 0)
 then number 1 led accompanied by a beep (digit 1)
 then ARM led accompanied by a beep (digit 9)
 then another beep with ARM led still lit (digit 9)
 Then beep beep and the PROGRAM led flashing again (Test completed ready for next function)






11.1

Function 60 - Account number/Hard ID

Default - 9998

Notes:

- 4 Digits Limits 0001- 9999
- This function is used to enter the account number for transmission to the Central Station.

Key Sequence	Operation
0 1 2 3 4 5  0 	Enter valid Technician code and enter program mode.
6 0	Select function 60
6 6 6 6 	Enter Account number - example shows account number 6666 entered
 	Exit Program mode

11.2 Function 71 - Isolated Sections Reports Off/Serial/Parallel *Default - Off*

The control panel will not normally report isolated sections
If enabled the control panel will report isolated sections.

Option

- 0 Do not report Isolated sections
- 1 Report Isolated sections in serial format
- 2 Report an Isolated section on pin 10

Key sequence

0 1 2 3 4 5  0 

7 1

1



Operation

Enter valid Technician code and enter program mode.

Select function

Report isolated sections in serial format.

Store entry

Exit Program mode


11.3 Function 72- Open Close Reports Serial/Parallel *Default - Serial*

The control panel will normally send open and close reports in a serial format.

Option

- 0 Open or Close reports are sent in serial
- 1 Open or Close reports are sent in parallel on pin 11

Key sequence

0 1 2 3 4 5  0 

7 2

1



Operation

Enter valid Technician code and enter program mode.

Select Function

Open Close reports on pin 11

Store entry

Exit Program mode

11.4 Function 74 - Keyboard Duress Off/Pin 7/Pin 9 *Default - Duress Off*

Note:

Keyboard duress may be disabled to prevent accidental duress alarms from private residences.
Duress is achieved by using user code 7.

Option

- 0 Duress reports disabled
- 7 Duress reports on pin 7 (Note: input 7 will also report on pin 7.)
- 9 Duress reports on pin 9

Key sequence

0 1 2 3 4 5  0 

7 4

9



Operation

Enter valid Technician code and enter program mode.

Select Function

Duress enabled and reports on pin 9

Store entry

Exit Program mode




12.1

Function 90 - Default System Parameters

Notes:

This option is used to default all system setup values and user numbers etc, back to known values. Or power up with a button held for 3 seconds.

Key Sequence

0 1 2 3 4 5  0 
 9 0 

Operation

Enter valid Tech code and enter program mode.
 Select Function 90 to reset all options to default values

12.2






Function 00 - Technician Code

Default - 012345 (six digits only)

Notes:

The Technician code is used to set up all functions of the system. Those setups are stored in non - volatile memory - (the setups not lost during loss of power). Enter Tech code only when system is in OFF mode.

Key Sequence

0 1 2 3 4 5  0 
 0 0
 6 5 6 5 6 5 
 

Operation

Enter existing Tech code and enter program mode
 Select function 00
 Enter new 6 - digit Technician code
 (in this example code being entered is 656565)
 Exit from Program mode

13.1

Function 01 - Master Code

Default - 1111 (Four digits only)

Notes:

The Master code is used to enter and change the user codes only. (no system setups may be changed)
 The Master code may be changed by either the Technician or by the holder of the existing Master code.







Key Sequence

0 1 2 3 4 5  0 
 0 1
 1 2 3 4 
 

Operation

Enter existing Tech code and enter program mode
 Select function 01
 Enter new 4 - digit Master code
 (in this example code being entered is 1234)
 Exit from Program mode

OR

1 1 1 1  0 
 0 1
 1 2 3 4 
 0 1
 1 2 3 4 
 

Enter Master Code and enter Program Mode
 Select Master Code function
 Enter new Master Code
 When using Master Code, the new code has to be entered twice before the code will be changed.
 Exit Program Mode

13.2

Function 02 - User Code 2

Default - not enabled (four digits only)


Notes:

- 29 User codes may be programed into the panel, These user codes are programed using Function numbers 02 to 30, all are programed in exactly the same manner.
- No two User Codes may be the same .
- If **Keyboard Duress** is enabled then user code 7 will cause a Duress to be reported. To restore a Duress enter any other user code.
- The User codes are used to Arm, Disarm, and Isolate Sections.
- The User codes may be changed by either the Technician or by the holder of the existing Master code.

Key Sequence

0 1 2 3 4 5  0 

0 2

1 2 3 4 

Operation

Enter existing Tech code and enter program mode

Select function 02 (User 2)

Enter new 4 - digit User code


(in this example code being entered is 1234)

Exit from Program mode



13.3


Summary of Users Functions



The Default User Code of **1 1 1 1** is used for example and a valid user code must be used.

Arm Panel 1 1 1 1 



Disarm Panel 1 1 1 1 

Arm Panel with Group Bypass 1 1 1 1  4 

Isolate Sections (e.g. Sections 7,8) 1 1 1 1 BYPASS 7 8 
(Deisolation also occurs when panel disarmed)







Clear Alarm Memory  1 

Chime Mode On./Off  5 

Walk Test On 1 1 1 1  6 0 

Walk Test Off 

Siren, Strobe, Bell Test (2 Second Duration) 1 1 1 1  6 3 

Change User Code With Master Code (User 1) (Changing User 02 to 1234) 1 1 1 1  0  (Enter Master Code and enter Program Mode)
0 2 1 2 3 4  (Select User Code 2 and enter new Code)
0 2 1 2 3 4  (Select User Code 2 and enter new Code again to confirm entry)
  Exit Program Mode

- **KEYBOARD DURESS** Keyboard Duress is sent by using user code 7.

- **24 HOUR:** Inputs which are configured for 24 hour operation, when alarmed will send a restoral when that input is **resealed and a valid user code is entered.**

- **MAINS FAIL:** Mains fail is automatically detected and reported by the control STU. When mains fail is detected the power led on the keypad will turn off. After mains has been off for more than **60 minutes** the STU will send a mains fail alarm.

When mains is restored the led will go steady again and the STU will send a mains restoral.

- **LOW BATT:** Low battery is automatically detected and reported by the control STU. When low batt is detected the power led on the keypad will start to flash. After the battery voltage has been low for **30 seconds** the STU will send a low battery report.

When the battery votage is restored to normal the led will go steady again and after 30 seconds the STU will send a low battery restoral.

If low battery occurs during the 5 minute mains fail time, then it takes preceedance over the mains fail.

LONG STATUS report-

- pin 1 Input 1
- pin 2 Input 2
- pin 3 Input 3
- pin 4 Input 4
- pin 5 Input 5
- pin 6 Input 6
- pin 7 Input 7 (and keyboard Duress if enabled for pin 7 reporting)
- pin 8 Input 8
- pin 9 Keyboard Duress (if enabled for pin 9 reporting)
- pin 10 Isolated section (if enabled for parallel reporting)
- pin 11 Open and Close messages (if enabled for parallel reporting)
- pin 12 indicates tamper input condition.
- pin 13 AC Fail.
- pin 14 low battery.
- pin 15 Self Test.

SERIAL REPORTS

Open / Close reports with user codes are sent if enabled for serial reporting
Isolate and De-isolate serial messages are sent for inputs 1-8 if serial reporting enabled.