Honeywell

Galaxy Flex

Installer Manual

Contents

Introduction

The Flex alarm system control panel, back-up battery and power supply unit are housed in an ABS plastic housing with swing down lid that is designed for wall mounting. The housing can accommodate the following optional modules:

- GSM/GPRS module (If using GPRS do not fit an Ethernet module)

- RF Portal for use with RF detectors and devices

- ISDN or Ethernet module in place of the GSM module
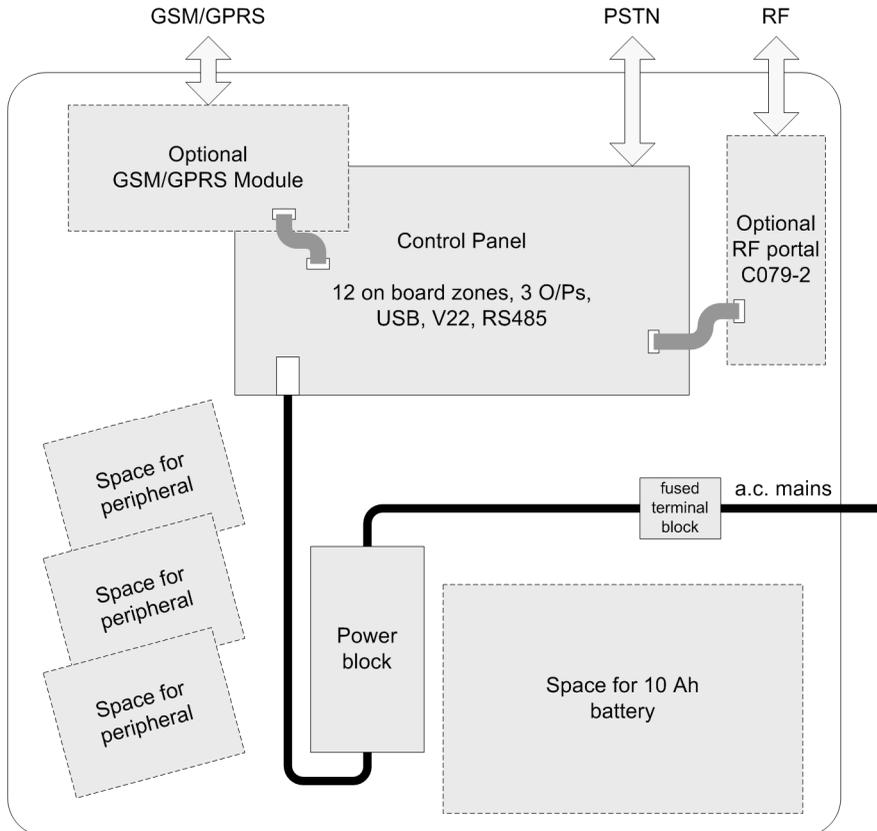
Figure 1 Flex panel internal layout

System architecture

Figure 2 shows the full range of peripheral devices that can be connected to the system via the RS485 data bus or to other specific connection points on the control panel PCB (see page 10).
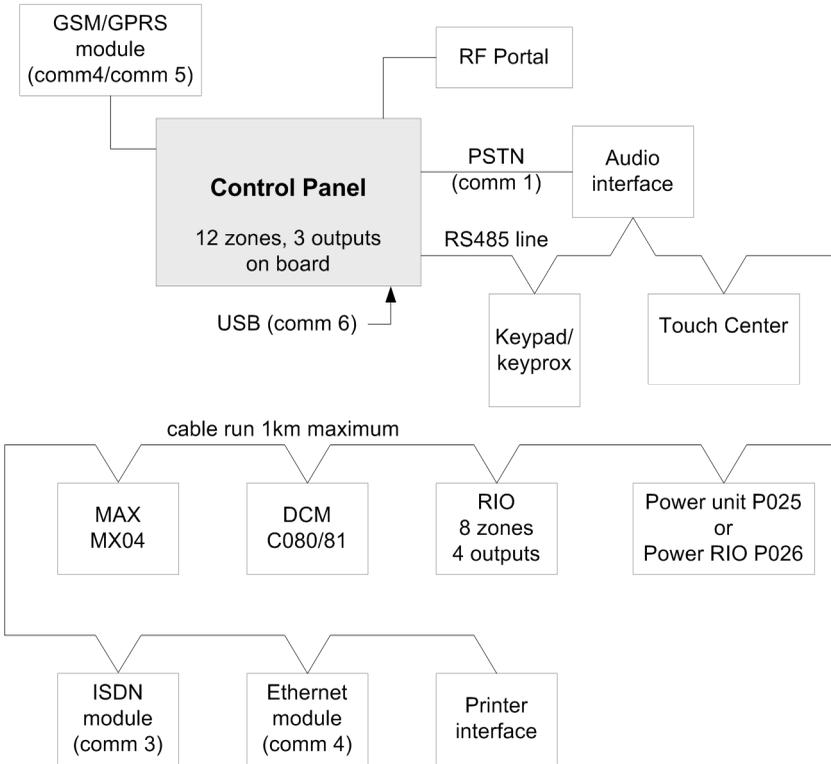
Figure 2 System configuration

There are three models in the Galaxy Flex range. Flex can support the type and number of modules shown in Figure 2 above and the following table:

Panel model	Quantity		
	Flex 20	Flex 50	Flex 100
RS485 Lines	1	1	1
Zones (onboard)	12	12	12
Zones (maximum)	20	52	100
Outputs (onboard)	3	3	3
Outputs (maximum)	7	23	47
PSU (overall)	1A	1A	1A
PSTN onboard	Yes	Yes	Yes
USB port onboard	Yes	Yes	Yes
User Codes	23	48	98
Groups	3	4	8
Event Log	500	500	1000
Access Log	500	500	1000
Schedules (Timers)	2	4	4
GSM/GPRS module	Optional	Optional	Optional
Ethernet module	Optional	Optional	Optional
ISDN module	Optional	Optional	Optional
Keypads	4	4	8
Keyprox	4	4	8
Audio interface	Optional	Optional	Optional
TouchCenter	1	1	1
RIO / Power RIO	1	5	11
RF Portals (C079-2)	8	8	8
Door Control (DCM)	2	4	4
Max4	4	8	8
Printer I/F	Optional	Optional	Optional

Table 1 Flex specifications

The information in the rest of the manual will refer to the Flex 100. The limitations of the Flex 20 and Flex 50 shown in the table above must be considered where appropriate.

PCB layout and connections

Figure 3 shows the control panel PCB layout and detailed connection information.
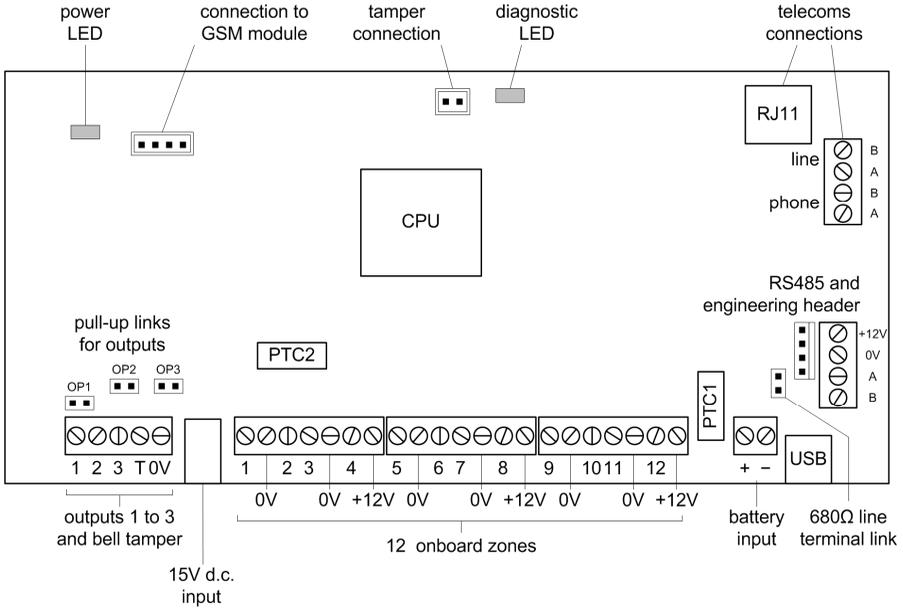
Figure 3 PCB layout and connections

Section 1: Installation procedure

Planning

- Site the panel near to a source of a.c. power.

- If GSM/GPRS is fitted, check that the panel location will provide acceptable radio reception.

- If you intend to use wireless detectors and an RF Portal is fitted to the panel, check that the panel location will provide acceptable radio reception. If radio reception to the panel is not possible, consider installing one or more external RF Portals on the data bus.

- If required, plan groups. Groups are completely independent sub-systems, and are also known as wards, partitions or areas. The system can be split into a maximum of 8 groups that can be programmed to operate independently from each other.

Install the panel and a keypad
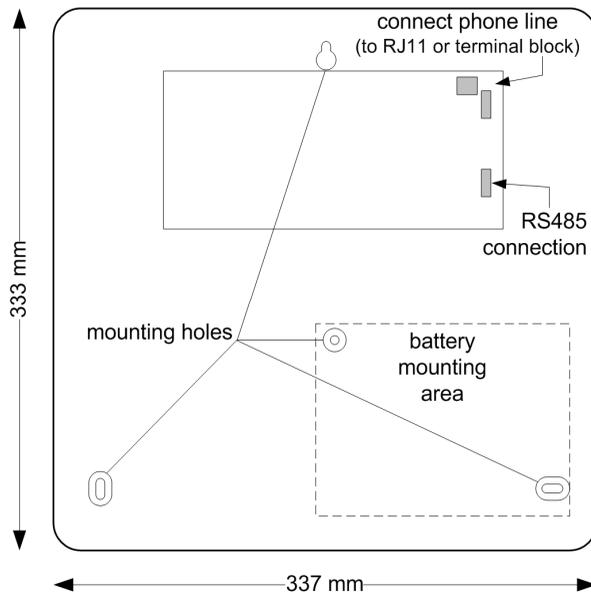
1. Mount the panel to the wall using the mounting holes shown, allowing 340 mm of free space away from the panel for the lid to swing down.

2. Connect at least one keypad onto the RS485 data cable (for help refer to *Install peripheral devices* on page 15). This is required to set up and program the alarm system.

3. Connect the phone line to the RJ11 socket or terminal block connector.

4. Install the battery, but DO NOT connect. If possible, use a fully charged battery.

Install the power supply

Safety instructions

Fixed wiring and connection to the electricity supply of this product must be carried out and inspected in accordance with the territorial wiring regulations by a competent person. In the UK the IEE Wiring Regulations in accordance with BS7671 apply.

A power cord with a fitted plug is supplied. You can, as an alternative, discard the plug and wire directly to the mains supply via a switched 3 A fused connection. If you do this, read *General Safety* below.

You can also connect to the mains supply via a non-time-delayed fuse, or a type B MCB at the distribution board, not exceeding 6 A. If this method is used, fit an isolation switch near to the unit to allow disconnection when necessary.

General Safety

The power supply is supplied with a standard plug. In the UK, if you need to change the fuse in this plug, use a 3 A fuse to BS1362. Always refit the plastic fuse carrier when replacing the fuse. (Units supplied with a European plug do not have a fuse internal to the plug).

If replacing the plug, follow any instructions that are supplied with the new plug. Connect the brown wire to the line connector (L) terminal, and the blue wire to the neutral (N) terminal. Do not connect brown or blue to the earth (E) terminal. This appliance does not require an earth connection. Dispose of the old plug promptly and safely to avoid the danger of it being plugged into a live socket.

Parts supplied:

- Switched mode PSU with figure-8 a.c. input socket and jack plug output cable
- A.C. power cord with 2-pin plug and figure-8 plug
- Fused mains terminal block and mounting plate

Connect the power supply using one of the following options:

Plugged-in (option 1)
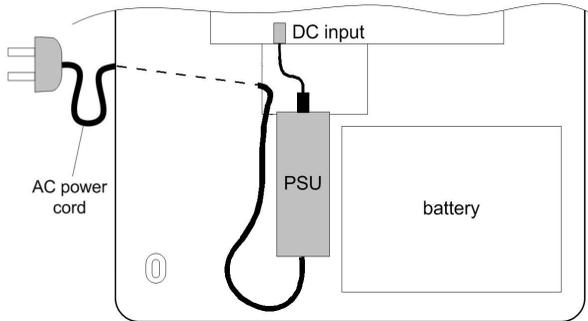
1. Connect the a.c. power cord to the sealed PSU, and secure the cord to the panel with a cable tie.

2. DO NOT apply mains power.

Hard-wired (option 2)
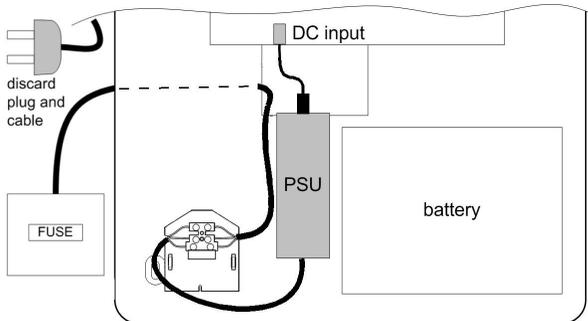
1. Cut the a.c. power cord 15 cm from the figure-8 connector, and discard the part of the cord with the mains plug.

2. Connect the remaining cord to the mains terminal block.

3. Connect the terminal block to a fused mains outlet, and secure the cable to the panel with a cable tie.

4. DO NOT apply mains power.

Connect the battery and mains power

The control panel can accommodate one 10 Ah battery. Ensure that the battery connector leads on the control panel are connected to the correct terminals on the battery.

WARNING: There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

1.   Connect the battery as shown:

Control panel	Battery
−BAT	−ve terminal
+BAT	+ve terminal
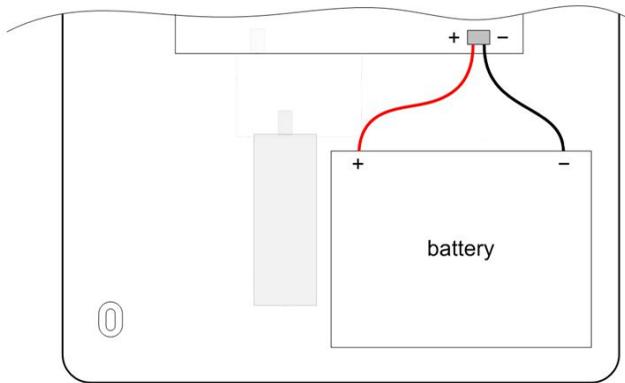
2.   Connect mains power to the panel.

Initial programming

For instructions on how to use the keypad see *Keypad/KeyProx operation* on page 214.

After power is applied, wait 1 minute and the keypad displays the message:

```
Configuring
Please Wait
```

This is followed by the message:

```
PRESS ANY KEY
TO SET UP
```

Using the keypad:

1. Press any key. The following is displayed:

```
Language
1=English
```

2. Select your language, and then press **ent**. The following is displayed:

```
Defaults
1=UK
```

3. Select the default set to load, and then press **ent**. There are country defaults from which to choose.

4. Enter Engineer mode (for instructions see *Engineer Mode* on page 29). Any outstanding faults or alarm conditions will be displayed if present. Press **ent** to accept these.

5. Set the time and date (**41 ent**).

6. If you are splitting your system into groups, enable groups now, before performing any other programming (**63 ent 1 ent 1 ent**).

7. Select Auto Detect (**72 ent**).

   In this mode the system automatically recognises any additional peripheral devices you add to the system.

Install peripheral devices

1. Before applying power, select a valid and unique address on each device. The address on most devices is set by either jumpers or a rotary switch.

Peripheral	Valid addresses		
	FX100	**FX050**	**FX020**
Mk8 Keypad	0-7	03	03
Mk8 Keyprox	0-7	03	03
TouchCenter	0-2	02	02
RIO/PSU	2-12	2-6	2
DCM Reader	0-3	0-3	0-1
MAX	0-7	0-7	0-3
RF Portal	0-15	0-15	0-15

2. Connect an RS485 data cable between the panel and each device in a daisy-chain configuration, using the information in the tables below.

Note: Do not use spur and star configurations.

We strongly recommend you use a twisted-pair screened cable (Belden 8723 equivalent, Cat 5/5e). However, for cable runs of less than 100 m in normal environments, standard 4-core cable can be used.

Panel	Keypad/ Keyprox	TouchCenter	RIO/DCM	PSU	Audio Interface	Telecom	Ethernet	RF Portal
+12 V	+	+	Vin	X*	+12 V	+12 V	+	+
GND	–	–	–	0 V	GND	-	-	-
A	A	G	A	A	A	A	A	A
B	B	Y	B	B	B	B	B	B

* Do not connect power supplies in parallel. Do not connect +12 V terminals between the control panel and remote power supplies. However, connect the 0 V (negatives) of all power supplies at a common reference point.

Wire detectors to zones

Note: Learning wireless detectors is covered on page 20.

Zones are the individual input circuits that are fully programmable using the **Zones** menu (**52 ent**). This section describes how to change zone default settings, how to terminate unused zones, and how to connect detectors.

Zone addressing

The zone address format is:

bus line — 1 01 5 — zone number
RIO address

The RIO address range is 00 to 12, and each RIO can handle up to 8 zones.

Note: 00 and 01 are the fixed onboard RIO addresses.

Address onboard zones as follows:

Zone	Address
1	1001
2	1002
3	1003
4	1004
5	1011
6	1012

Zone	Address
7	1013
8	1014
9	1015
10	1016
11	1017
12	1018

If required, use the Descriptor menu (**52 ent 2 ent**) to name your zones.

Zone configuration

Note: The circuit debounce time (the period the zone must remain in a state to register a change in condition) is 300 ms.

The default zone configuration is 1 kΩ double-balanced with fault monitoring via a 3 kΩ resistor (preset 11). In the following configuration a mask condition is generated if an alarm and fault are signalled at the same time.
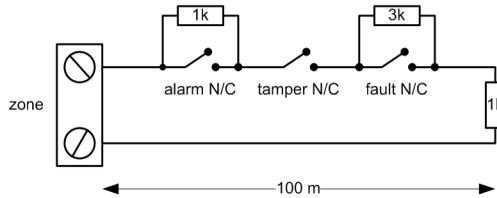
1. Terminate any unused zones inputs with a 1 kΩ resistor and program them as SPARE (18).

2. If required, reprogram zone configurations and the resistance preset values using the Zone Resistance menu (**51 ent 46 ent**).

3. If required, customise each zone to a specific preset using the Resistance Select menu (**52 ent 9 ent**).

4. Limit the cable run on each zone to no more than 500 m. For presets 11 and 12, limit the cable run to no more than 100 m.

Detector connection

▪ Wire detectors to zone terminals according to the following diagram:
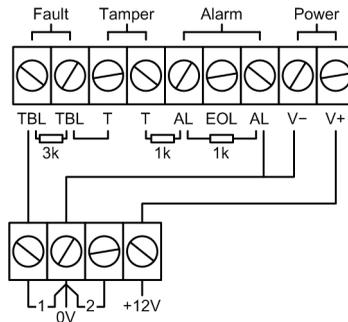
Additional zone configuration information

Zones can be programmed with different resistance ranges for zone status activation (see **Zone Resistance [51.46]**).

If a detector has separate fault and mask indications use the wiring shown in Figure 4.
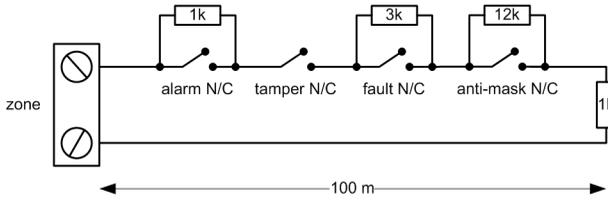
Figure 4 Option 12 - Double balanced 1k fault/mask monitoring wiring

When this wiring mode is used, ensure only one detector is set to report fault conditions, and limit the number of detectors or contacts of any type to a maximum of 2.

Note:　The recommended maximum cable run from a zone to a detector is 500 metres in all other configurations.

In end-of-line mode use the wiring shown in Figure 5.
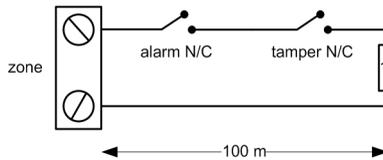
Figure 5 Option 10 - End of Line Zone/Detector wiring

Multiple detector wiring

Multiple detectors can be wired into a single zone when using preset 1 as shown in Figure 6. The maximum number of detectors that can be connected to a single zone is ten.
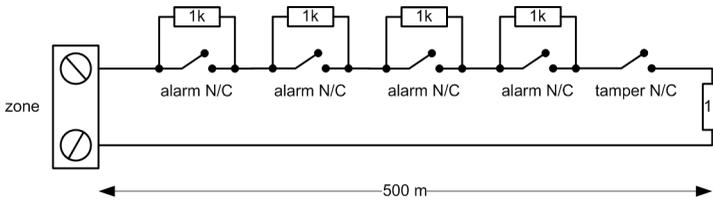
Figure 6 Zone to multiple detector wiring

Wire keyswitches

Latching or spring loaded keyswitches can be used to set and unset the panel. To program keyswitches, refer to **Program Zones [52]**.

If the keyswitch latches, the transition from 1 kΩ to 2 kΩ initiates the setting procedure of an unset system, the transition from 2 kΩ to 1 kΩ instantly unsets a set system. If the system is already set, then the transition from 1 kΩ to 2 kΩ has no effect. If the system is unset, the transition from 2 kΩ to 1 kΩ has no effect. This is programmed as a ✴ Keyswitch in the **Program Zones [52]** option.

If the keyswitch is spring-loaded (returns to its normal position), the transition from 1 kΩ to 2 kΩ initiates the setting procedure of an unset system and instantly unsets a set system, the transition from 2 kΩ to 1 kΩ – the return to the normal position - has no effect. This is programmed as a Keyswitch in the **Program Zones [52]** option.

Wire terminator buttons

Zones programmed as Push-Set (terminator) buttons can be open going closed (2 kΩ to 1 kΩ) or closed going open (1 kΩ to 2 kΩ). The first activation of the terminator button initialises its status to the system.

Note: The first activation of a terminator may not set the system as this can be the initialisation routine. If the system continues setting, push the button again. The system will set on the second push. This initialisation only occurs on the first setting. All subsequent setting routines set on the first push of the terminator.

The wiring of the terminator and keyswitch zone type is shown in the following figure:
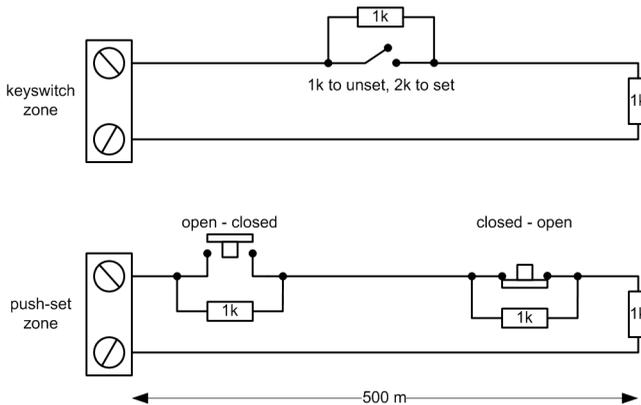
Figure 7 Terminator and keyswitch zone wiring

Connect outputs

Outputs are addressed in the same way as the zones. If using onboard outputs, connect and address as follows:

O/P	Address	Function	O/P type	Connection
1	1001	Bells	Open-collector, switched negative	Connect load between OP1 and +12 V
2	1002	Strobe	Open-collector, switched negative	Connect load between OP2 and +12 V
3	99	Exit/Entry (E/E) horn	AC audio to drive an internal loudspeaker	Connect load (8–32 Ω) between OP3 and +12 V

If required, use the Program Outputs menu (**53 ent**) to modify the default settings.

Secure tampers

1. If an external siren/bell/warning device is fitted, connect the tamper return line from the device to the T terminal.

2. If an external siren/bell/warning device is not fitted, connect the T terminal directly to the 0 V terminal.

3. Replace and secure the panel cover.

Learn wireless detectors

Learn new wireless detectors as follows:

1. On the keypad select RF Zones (**52 ent 2 ent**).

2. Scroll to an empty zone, and then press **ent**.

3. Press **11 ent 1 ent**.

4. Press ✱ to enter Self-Learn mode.

5. Insert the battery in the detector and activate the tamper switch. The serial number of the detector is recorded and displayed for 2 seconds.

    ▪ If the signal strength is less than 3/10, the message 'signal strength too low' is displayed for 2 seconds.

    ▪ If there is already an identical serial number on the system, the message 'zone already allocated' is displayed followed by the zone details. Either accept the situation and learn the next wireless device from step 5, or delete the serial number from this zone and repeat the learn procedure.

    ▪ If the detector is a multi-loop device, select the **2=Loop** No menu option, and then enter a loop number (1 – 6, or 0 for a single input device).

6. If the RF device does not learn, remove the battery, short circuit the battery terminals, replace the battery and repeat the above procedure.

7. Repeat the procedure from step 2 for each wireless device.

Additional programming

Use this section as a quick reference to some of the functions you may wish to program or modify.

Parameters (51 ent)

▪ Entry Time (**05 ent**) – defines the user unsetting time

▪ Exit Time (**04 ent**) – defines user exit time before system set

▪ Bell Time (**01 ent**) – bell sounding time (default = 15 mins)

▪ Bell Delay (**02 ent**) – delay bell activation for up to 20 mins

- Reset Levels (**65 ent**) – defines which user type can reset specific faults

- Confirm (**55 ent**) – controls how confirmed alarms are generated

- Keypad Access (**54 ent**) – disable unset on entry

- RF Parameters (**60 ent**) – access these options:

    - RF Address (**1 ent**) – enable and disable wireless virtual RIO addresses

    - RF Fob PA (**2 ent**) – enable to allow users to program the Panic Alert function of wireless keyfobs

Program zones (52 ent + Zone Address)

- Function (**01 ent**) – assign zone function

- Descriptor (**02 ent**) – name a zone (up to 16 characters)

- Part (**05 ent**) – zone included in a part setting option

- Omit (**04 ent**) – zone omitted when using an omit function

- Chime (**03 ent**) – opened zones cause momentary chime when system unset

- Group (**10 ent**) – assign zone to a group, if enabled

- Resistance Select (**09 ent**) – change pre-defined resistance for the selected zone

- Activity Monitor (**08 ent**) – check zone activity

- RF Options (**11 ent**) – access these options:

    - Serial No. (**1 ent**) – manual or self-learn entry of wireless device serial number

    - Loop No. (**2 ent**) – loop number of multiple input wireless devices

    - Supervision (**3 ent**) – enable for periodic device supervision

    - Auto Reset (**4 ent**) – enable to force zone to automatically close after five seconds

    - Signal Level (**5 ent**) – display device signal level

Program outputs (53 ent + Output Address)

- Output Function (**1 ent**) – assign an output type

- Descriptor (**5 ent**) – name an output (up to 12 characters)

- Output Mode (**2 ent**) – access these options:

    - Latch (**1 ent**) – output active unlit a valid code entered

    - Reflex (**2 ent**) – output follows activity of trigger event

    - Pulse (**3 ent**) – output remains active for a programmed pulse time

- Output Groups (**7 ent**) – assign groups to the output

- Control via TouchCenter (**6 ent 1 ent**) – set which outputs are controllable from the TouchCenter

- Output Polarity (**3 ent**) – switch polarity (the default is positive, switches from +12 V to 0 V when activated)

Communication (56 ent)

Where applicable, for each module type (**1** to **7 ent**):

- Select format

- Select trigger events or channels to enable

- Set account number

- Set phone number/IP addresses

- Set up autotest frequency

- Perform an engineer test

Timers (65 ent)

- Weekly Schedule (**1 ent**) – assign schedules to required functions

- Autoset (groups) (**3 ent**) – select a schedule for each group

- Timer Outputs (**2 ent**) – enable timers and assign weekly schedules.

Users and access templates

If full time-controlled access control is required, allocate an access template to every user. An access template is a list of groups and time schedules that provides access to multiple areas and at many set times with only one programming step. This reduces programming time and complexity.

The Access Template to be used for each user is chosen within each user's options in the Template menu (**42 ent 1 ent 9 ent**).

Access Templates are programmed in the Access Templates menu (**45 ent 6 ent**), and are fully customisable. In each Access Template, each group must be allocated a time schedule. If no schedule is allocated to a particular group (default) in the list then users will have full access through any doors leading to that group. When a schedule is allocated, access will be granted during the OFF periods of the schedule and denied during the ON periods.

Additional services

Connection to a local computer via USB

Follow this procedure if you wish to programme the system via a PC and a USB cable

8. Ensure the PC is installed with Remote Servicing Suite Software

9. Ensure the USB Comm port is set up according to the instructions with the software

10. Crveate a new Site in the RSS softare database.

11. In the set-up for the site, select Direct connection and select the USB comm. Port.

12. Select the Dial option and the Software will connect to the control panel

No Settings need to be altered on the control panel

Connection to a remote service computer

Follow this procedure if you need to connect to a remote service centre:

1. Select Remote Access (**47 ent**).

2. Select Call back (**1 ent 0 ent 1 ent**).

3. Enter the phone number of the remote service centre.

4. Press **ent**.

The panel dials the remote service centre.

Section 2: Commissioning and handover

View zone information

Display zones (**21 ent**). View information about any selected zone.

Walk test

1. Select Test All Zones (**31 ent 2 ent 2 ent 1**) to perform an audible test. Alternatively, to perform a silent test, press **31 ent 2 ent 1 ent 1**.

    It is possible to walk test selected zones only. Refer to **Walk Test [31]**.

2. Activate each zone in turn.

    Note: If you do not activate any zone for 20 minutes the test will stop automatically.

3. To end the test, press **esc**.

Walk test results

To view the results of your walk test, select Display Log (**22 ent**).

Test outputs

Outputs are tested by function, for example Bells or Strobe.

1. Select Outputs (**32 ent**). **01=Bells** is displayed on the keypad.

2. Press **A** or **B** to move to the output you wish to test, or type its number.

3. Press **ent** to test the selected output device.

4. Press **ent** to stop the test.

5. Repeat steps 2 to 4 to select and test other outputs.

6. Press **esc** to exit the Test Output function.

Diagnostic test (optional)

Check the Latest (**61 ent 1 ent**) and Historical (**61 ent 2 ent**) status of:

▪ Modules

▪ PSU

▪ baseline record

Full Test

Use this menu option to select and test up to two zones under full set conditions, including remote signalling. All remaining zones, except for permanently active zones such as PA and Fire, are inactive during the test.

To perform a full test:

1.   Select Full Test (**62 ent**).

2.   Press **A** or **B** to move to the zone you wish to test, or type its number, and then press **ent**. An option to select a second zone is displayed.

3.   Do one of the following:

   ▪   To test a single zone only, press **B** (No). The system starts the full setting procedure and no further action is required.

   ▪   To add a second zone to the test, press **A** (Yes), and then follow any further prompts to start the test.

To end the test:

▪   Unset the system.

Program codes

▪   Modify PIN (**42 ent 1 ent 1 ent**) – change user PIN codes

▪   Modify level (**42 ent 1 ent 2 ent**) – control the options a user can access

▪   Modify name (**42 ent 1 ent 3 ent**) – name the user

▪   Modify groups (**42 ent 1 ent 5 ent**) – control which groups the user can access

▪   Card number (**42 ent 1 ent 6 ent**) – enter the unique card number

▪   MAX function (**42 ent 1 ent 7 ent**) – assign a single menu option to a card/fob/tag/button

▪   Learn fob (**42 ent 1 ent 10 ent 1 ent**) – assign a keyfob to a user

   ▪   Enable PA function if required

▪   Add Batch (**42 ent 2 ent 1 ent**) – program a number of tags or cards

Instruct the end user

Show the end user how to set and unset the system with reference to the Flex Quick User Guide.

Section 3: Menu structure

You can control and setup the Flex system via these two menu structures:

▪ **Full menu** – accessible only by authorized users including the master manager and the engineer. The full menu has a hierarchy of five levels that allow users with the right authority to perform increasingly advanced setup procedures.

▪ **Quick menu** – provides up to ten options from the full menu. The quick menu is the default menu for all user codes (type 3 and above), except master manager and engineer.

Menu access

Only valid codes (type 3 and above) can access the menus. Access to the user options is assigned by the engineer (refer to options **Codes [42]** and **Menu Access [68]**). Users cannot view or access options for which they are not authorized. This includes options in the Quick Menu.

Note: Menu options 51 to 72 (Engineer 1, Engineer 2 and Engineer 3) can be assigned additional access to user type 3 to 6, by the engineer.

To access the menus:

1. On a keypad, enter your user code.

2. Press **ent**.

You will now have access to one of the menu structures outlined below. If you are using an engineer code see *Engineer Mode* on page 29.

Quick menu

The default quick menu options are shown on the right.

You can modify the options available on the quick menu using the **59=QUICK MENU** option.

On entering the menu the first option in the list is displayed on the keypad:

```
0=OMIT ZONES
[ent] to Select
```

0 = Omit Zones
1 = Chime
2 = Display Zones
3 = Display Log
4 = Print
5 = Walk Test
6 = Time/Date
7 = Codes
8 = Summer
9 = Eng. Access

Press **A** or **B** to scroll to another option, or press the number key of the option you want.

To select an option, press **ent**.

Full Menu

On entering the menu the following option is displayed on the keypad:

```
10=SETTING
[ent] to Select
```

If you scroll from this point you will access the menu items shown in the row, highlighted in grey, in the table below.

If you select a menu option from this row you can then scroll to the items below it.

Alternatively you can enter any two-digit number shown, to access a particular option directly. Once you are familiar with the menu structure and you know which option you want, this is a quicker access method.

The table also shows the user type (access level) required to access each column of options.

User (Type 3)	User (Type 4)	User (Type 5)	Manager (Type 6)	Engineer (Type 7)	Engineer (Type 7)	Engineer (Type 7)
10=Setting	20=Display	30=Test	40=Modify	50=Engineer 1	60=Engineer 2	70=Engineer 3
11=Omit Zones	21=Display Zones	31=Walk Test	41=Time/Date	51=Parameters	61=Diagnostics	71=Program Key
12=Timed Set	22=Display Log	32=Outputs	42=Codes	52=Program Zones	62=Full Test	72=Auto Detect
13=Part Set	23=System		43=Summer	53=Program Outputs	63=Options	
14=Forced Set	24=Print		44=Trace	54=Links	64=Assemble Zone	
15=Chime	25=Access Doors		45=Timer Control	55=Soak	65=Timers	
16=Instant Set			46=Group Omit	56=Communication	66=Pre-Check	
17=Silent Part			47=Remote Access	57=System Print	67=Remote Reset	
18=Home Set			48=Eng Access	58=Keypad	68=Menu Access	
19=All Set				59=Quick Menu	69=Access Control	

Menu navigation

Once you have gained access to a menu you can navigate to options in one of these ways:

▪ **Directly:** Type a valid menu option number. The desired option is displayed, for example **52=PROGRAM ZONES**. Press **ent** to select the option.

▪ **By scrolling:** Press the **A** and **B** keys to navigate through the options. You can press and hold the **A** or **B** keys to scroll forwards and backwards. When you find the required option, press **ent** to enter the option.

To return to a previous menu item, press **esc**.

Default codes

The system provides three default codes: Manager, Engineer and Remote User.

Total No. of Codes	Manager		Engineer		Remote User	
	Default PIN	User No.	Default PIN	User No.	Default PIN	User No.
100	1234	98	112233	99	543210	100

Keypad menu timeout

If you do not use the keypad for 5 minutes the system reverts to displaying the banner text. This does not apply if you are logged in as Engineer (type 7).

Note: In the Walk Test option the timeout is 20 minutes if no zones are tested or no keys are pressed. In **66=PRE-CHECK** the timeout is 20 minute after the last zone has been activated.

Engineer Mode

To program the control panel, the system must be in engineering mode, allowing access to menu options **50=ENGINEER 1**, **60=ENGINEER 2** and **70=ENGINEER 3**.

If you are setting up and programming a control panel prior to handover, use the following procedure to access engineering mode.

To enter Engineer Mode:

1. Enter the default manager code, and then press **ent**.

2. Press **48 ent 1 ent 1 ent 1 ent** to enable Engineer Mode. You have 5 minutes to carry out the next step.

3. Enter the default engineer code, and then press **ent**.

After handover the codes should have been changed and you will need to get a manager or other type 6 user to carry out steps 1 and 2. See **Engineer Access [48]** for more details.

On accessing engineering mode, any group that is set becomes inaccessible. Set groups cannot be assigned to zones, outputs and any other functions permitting group allocation. When the engineer code is entered three things happen:

▪ All system tampers become isolated.

▪ You gain access to the full menu.

▪ The banner message is changed to indicate engineer mode.

To exit from Engineer Mode:

1. Return to the engineer banner.

2. Enter your engineer code.

3. Press **esc**.

   Note: If **esc** is pressed during the following system checks, the exit is aborted and the system remains in engineering mode.

Before the normal banner is displayed the system performs these checks:

▪ That there are no open zones or tampers. If there are tampers, they are displayed to allow investigation. Open zones are not displayed.

- That it is communicating with all of the attached modules. If any modules are missing, the system prompts the engineer to press ✱ to remove them. If the engineer does not remove the missing modules, the escape procedure is aborted.

- That there are no power failures on the system, such as a failure of the a.c. or battery.

Multi-user access

The system allows a maximum of 4 users to carry out tasks at the same time via separate user interfaces.

Section 4: System programming

Setting Options

Set using a PIN

To Full Set:

1. Type your user code.

2. Press **A**.

    If groups are enabled and your user code has been assigned group choice, the keypad displays the set status of the available groups as follows:

    R = Ready
    F = Fault (group is unset and at least 1 zone is open)
    S (flashing) = selected for setting
    S (steady) = already set
    – = Group is not available to the user

    ```
    SET    A12345678
    Groups  RRSRSSSS
    ```

    Pressing a group number toggles the **R** (ready) to an **S** (set flashing).

    ```
    SET    A12345678
    Groups  SSSRR---
    ```

    If groups are not enabled or your user code does not have group choice, the setting procedure starts immediately.

    ```
    TIMED       060
    ■■■■■■■■□□□□□□□□
    ```

The exit time countdown is displayed. At the end of the exit time or when the setting procedure is terminated by a final or push-set zone closing, the entry/exit horn and keypad buzzers become silent for four seconds, then emit two long tones to confirm that the system is set. The message **SYSTEM SET** appears briefly before the keypad display changes back to the normal day banner.

To Part Set:

1. Type your code.

2. Press **B**.

```
PART SET      060
■■■■■■■□□□□□□□□
```

This is identical to the full setting procedure, except only the zones that have the Part attribute enabled are included (refer to the **Program Zones [52]** option).

Cancel setting

To cancel setting (during the setting procedure):

▪ Press **esc**.

Unset using a PIN

To unset the system using a PIN:

1. Type your code.

2. Press **ent**.

    ▪ If you don't have group choice, all of the groups assigned to your code are instantly unset.

    ▪ If you have group choice only the group that the final or entry zone is assigned to is unset; all of the other groups remain set. The system displays the set status of the remaining groups and prompts for the required groups to be unset. To unset the required groups press the relevant number keys – the **S** or **P** (Set or Part Set) changes to flashing **U**, and then press **ent**.

When the system/group is unset three short beeps are emitted to advise you that the system/group is unset.

Engineer unsetting

An engineer can only unset a system that was set using the engineer code. An engineer code cannot be used to unset a system that was set by a user code.

Keyswitch setting options

Zones programmed as **KEYSWITCH** can be used to full set, part set and unset the system. Refer to the **Program Zones [52]** option.

Set with a keyswitch

A keyswitch starts the setting procedure of each of the groups assigned to the keyswitch zone. At the end of the exit time or when the setting procedure is terminated by a final or

push-set zone closing, the entry/exit horn and keypad buzzers become silent for four seconds, then emit two long tones to confirm that the system is set.

Note: If the keyswitch has its Part attribute enabled (Refer to the **Program Zones [52]** option) then the keyswitch part sets the system.

Unset with a keyswitch

Activating a keyswitch, when the group that it is assigned to is set, instantly unsets the group. All other groups that have been 'starred' to the keyswitch are also unset.

Set with cards/tags/fobs

Proximity cards can be used to set and unset the system. You do this by assigning one of the setting options (refer to **MAX Function [42.1.7]**) to a user.

When a card is held against a MAX module or KeyProx for 3 seconds, the card held function programmed to the card user is activated. For access control readers, a function button or triple swipe is required to activate the card function.

If the card user has a keypad assigned, the function is shown at the assigned keypad.

If the card user has no keypad assigned then all keypads in the group assigned to the card user display **Press any Key**.

- If a key is pressed the keypad containing the key to be pressed shows the card held function.
- If no keys are pressed all keypads in the group(s) allocated to the card show the held menu function.

If the card user has group choice all groups available to the user are displayed on the keypad. The user must select the groups to be set/unset/part set using the appropriate number keys, as per normal PIN users.

If the card user has no group choice then the card held setting function starts automatically.

Unset with Proximity Cards

The system or groups can be unset using proximity cards with MAX, KeyProx modules and access control readers.

If the unsetting procedure has been started by activating a final or entry zone, then swiping the card unsets the system.

If the card user has group choice, then only the group assigned to the final or entry zone is unset. All other groups available to the user are displayed on the programmed/selected keypad or KeyProx.

Note: The reader module and the proximity card user must have common groups to allow the card held function to be activated.

Cancel and reset alarms and alerts

Following an alarm in the set state, sounders and strobes are activated. When a fault occurs in the unset state, the keypad emits an intermittent beep and/or displays a visual alert.

To cancel an alarm and reset the system:

- Do one of the following:

  - Type any valid user code (type 2 and above) assigned to the group that has alarmed.

  - Present a valid proximity card to a reader.

Alarm sounders, bells and strobe outputs are silenced and the keypad displays information on the zones or faults that have been activated. On entry of a valid PIN the alarm and tamper indications are displayed with equal priority in order of occurrence followed by faults. On the keypad, use **A** or **B** to scroll through multiple activations.

If the user code entered is not a high enough level to reset the system, the keypad displays the message **CALL MANAGER RESET REQUIRED** or **CALL ENGINEER RESET REQUIRED** if **Banner Alerts [51.63]** is enabled, depending on the type of alarm and level of reset required.

To reset the panel:

- Enter a valid user code assigned to the group that has alarmed.

Reset levels can be programmed using: **System [51.6]**; **Tamper Reset [51.7]**; **PA Reset [51.22]**; **Reset Levels [51.65]**.

Note: If a tamper alarm has activated (zone or module) the system cannot be reset until the tamper condition is restored.

The next time you attempt to set the system, if any of the zones that were opened during the previous alarm have not closed since the alarm activation, the system is prevented from setting. The addresses of the open zones are displayed on the keypad, and there is no warning sound. Closing the zones permits the setting procedure to start.

Note: This is not the same as open zones being indicated on the keypad. These are accompanied by rapid tones on the entry/exit horn.

Note: Fire alarms can not be reset with a proximity tag

Event recording

During any given set period, there is no limit to the number of signals sent from individual activations. However, no more than three events from any single source are recorded in the event log.

Reset using alarm cause code

An alarm cause code must be entered to reset the system when **option 51.72** is enabled.

If there are multiple alarm causes and/or multiple groups require to be reset, then the alarm cause code only has to be entered once. The user enters the most appropriate code as

determined on site. The cause code values should be determined in conjunction with the Alarm Receiving Centre (ARC).

Override faults and tampers

Whenever a user logs in, the display shows any unrestored faults and tampers. If the condition cannot be cleared and restored, the user may be able to override the condition.

When a user tries to set the system, any conditions that are present are displayed. The user can scroll through multiple conditions. If the user has the authority to override the condition, the following display accompanies the condition:

```
ALERT-BATT LOW
ent=CONTINUE SET
```

If the user cannot override the condition, **ENT to Continue** will not be displayed.

The user can override each authorized condition by pressing **ent** while the condition is displayed on the keypad. Each condition is individually displayed and overridden.

Pressing **ent** omits the condition for one set period only.

Pressing **esc** returns to the previous banner.

When setting the system with an overridden fault or tamper condition, the display indicates the overridden function in place of the set mode by showing the omit message as detailed in the omit menu function. The Override condition is logged, and will last for one set period only. When all the groups that are affected by the override condition become unset, the override status is cleared. An override restore is logged at unset.

If, during a setting attempt, there are conditions that haven't restored and cannot be overridden, then the system will not set. The display shows the **CALL MANAGER RESET REQUIRED** banner with a short beep every 30 seconds.

Setting features

The control panel provides a range of features to help the user to set and unset the system.

Show set status

Ensure that Show Status is enabled (refer to **Show Status [58.6]**). Press ✶ and **#** simultaneously to show the group set status.

F = Fault
R = Ready
S = Set
P = Part Set
L = Locked Out
– = Group not assigned to keypad

```
STATUS   12345678
Groups   RRSRLPFP
```

group block

Note: The Show Status indicates the set conditions of groups when the system is set (keypad blank) or unset (normal banner). Show Status does not operate while engineer mode is accessed.

Press ✱ and **#** again to toggle the display to show the status of the groups individually. To move between each group, press ✱ and **A,** or ✱ and **B** simultaneously.

```
08:58 TUE 22 NOV
A1U Group A1
```

group A1 is unset
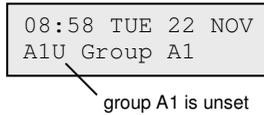
Press ✱ and **#** again to return the keypad to the banner display.

Exit time

Once the setting routine starts, outputs programmed as **Entry/Exit Horn** emit a continuous tone. The keypad used to set the system indicates the time remaining in seconds before the system sets.

Exit time reset

Zones opened when setting starts or zones opened during the setting routine, cause the sounder to pulse rapidly.

The number of open zones is displayed on the setting keypad. These zone types are not listed: Final, Exit, Entry or Push-Set (and Secure Final or Part Final when acting as a Final). Close open zones to reset and restart the exit time.

Omitted zones

Omitted zones are displayed on the keypad during setting. The keypad displays how many zones are omitted.

Expiry warning

Outputs programmed as **Entry/Exit Horn** begin to pulse rapidly during the last 25% of the programmed exit time.

System set indication

At the end of the exit time the entry/exit horns become silent for four seconds. This allows the door to be locked and secured and gives the detectors time to settle before the system finally sets. Two long tones are emitted to confirm that the system has set. If all groups are set the keypad briefly displays the message **SYSTEM IS SET** before returning to the normal banner.

Group logic setting restriction

If Setting Logic has been assigned to a group (refer to **Setting Logic [63.1.2]**), the set status of the groups must satisfy the conditions defined in the option to permit the group to set. If the Setting Logic conditions are not satisfied, then the group cannot set. If multiple groups are being set simultaneously, but one group is restricted due to the programmed Setting Logic, the remainder of the groups set. The restricted group does not set and no warning or indication is given. A warning message is only given if none of the selected groups are allowed to set.

```
2 Groups not set
[<],[>] to view
```

Entry time

The system begins the unsetting routine whenever a final or entry zone activates. The entry/exit horns pulse slowly indicating that the entry time countdown has started. The user must go directly to the keypad, using the agreed entry route, and unset the system before the entry time expires. When 75% of the entry time has elapsed the entry/exit horns pulse rapidly, indicating that time is running short.

Timeout (slow entry)

If the entry time expires before a valid code is entered to unset the group, a full alarm occurs. This is recorded in the event log as a Timeout against the group that was in the process of being unset.

Straying from the entry route

If, during the entry routine, the user strays from the agreed entry route and activates a zone in a protected area, a full alarm occurs.

Abort time

If a user exceeds the entry time or strays from the entry route a full alarm occurs. However the activation of the intruder output can be delayed to allow time for the user to abort the remote signalling.

The Abort Time parameter can also be programmed so that an Intruder alarm is activated when the entry time expires or a zone is activated, but entry of any valid code cancels the alarm and deactivates the Intruder outputs without the need for a system reset.

Abort setting message

Zones that are open or opened during the exit period are indicated to the user by a rapid audible tone from the entry/exit horns. The keypad displays the open zones and then prompts the user to abort the setting by pressing **esc**. This message is designed to prevent users from re-entering the building, closing the open zones, allowing the system to set and trapping the user in the building.

Fail to set

Option **Program Outputs [53]**, output function 40, Fail Set can be set to activate if a full set has not occurred after a programmed period of time from the start of the setting procedure, determined by option **Fail to Set [51.35]**.

Power failure while system is set

When power is restored to the system, following a mains (a.c.) and standby battery (d.c.) power failure, the system to returns instantly to the set status – full or part – prior to the power failure.

Menu Options 11-19

Omit Zones [11, Quick Menu 0]

Use this option to remove (omit) zones from the system temporarily. Once a zone has been omitted it does not generate an alarm condition (including tamper). Omitted zones are reinstated automatically when the system is unset or reinstated manually when the zone omit option is disabled.

On selecting the Omit Zones option, the first zone that has the omit attribute enabled is displayed (refer to **Program Zones [52]**). If there are no omittable zones, then the message **NO ENTRIES** is displayed.

Scroll to the zone you want to omit, and then press **#** to toggle the omit status. The display indicates the new omit status.

Note: A zone is omitted from the system as soon as it is selected.

Repeat this process to omit more zones if required, and then do one of the following:

▪ press **ent** to start the timed setting routine. The number of zones omitted from the system is displayed during the exit time countdown;

▪ press **esc** to return to **11=OMIT ZONES** without starting the setting routine.

On returning to the banner (normal or engineer) the keypad displays the message **ZONES OMITTED**.

Outputs programmed as Zone Omit (mode programmed as reflex) are activated as soon as the zone is omitted and remain active until the zone is reinstated.

Manually reintroduce omitted zones

Select the OMIT ZONES option.

Select the omitted zone to be reinstated, and then press **#** to toggle the omit status of the required zone. The display indicates the new omit status.

Normal Setting with omitted zones

Initiate the full or part setting routine. The system starts to set, and the display indicates that zones have been omitted. The zone remains omitted until the system is unset.

Timed Set [12]

This option starts the setting routine. The entry/exit horns emit the expiry warning using the programmed exit time (0-300 seconds). The system sets at the end of the exit time or earlier if a final zone is opened and closed, key 0 is pressed if programmed as an exit terminator, or if a push-set terminator is operated. The option displays the time remaining until the system sets or the number of open zones preventing the system from setting. Opening a zone during the exit routine resets the exit timer. Pressing **esc** prior to the system setting aborts the setting routine.

Note: The factory default setting allows the timed setting routine to be initiated by entering a valid type 1 user code (or above) and then pressing **A**. By default the **A** key is assigned to the Timed Set function. The **A** key can be reprogrammed by the engineer to perform another function, or to start the setting routine without a code being entered.

Part Set [13]

This option operates exactly as the Timed Set option with the exception that only those zones that have the part attribute enabled are set (refer to **Program Zones [52]**). All zones have the part attribute enabled by default. Therefore selecting Part Set from the factory will set all zones. To exclude zones from the part set, disable the Part attribute.

Note: The factory default setting allows the part setting routine to be initiated by entering a valid type 1 (or above) user code and pressing **B**. By default the **B** key is assigned to the Part Set function. The **B** key can be reprogrammed by the engineer to perform another function, or to start the part setting routine without a code being entered.

Forced Set [14]

Option not available.

Chime [15, Quick Menu 1]

The Chime option allows the user to switch the chime facility on and off. Any zones that have the chime attribute enabled (refer to **Program Zones [52]**) momentarily operate entry/exit horns when opened, and two long tones are emitted.

Instant Set [16]

Selecting this option immediately sets all zones. There is no sounder or exit time.

Note: Zones must be closed to allow the system to set. If any zones are open the exit time reset feature (detailed previously) is activated.

Silent Part [17]

Selecting this option sets all zones that have the part attribute enabled. It starts a normal timed exit procedure but exit sounders are not activated. In the event of an alarm occurring during a Silent Part set (e.g. fire alarm), normal operation will be re-instated.

When group mode is enabled (option **[63.1]**), no other group setting options are affected.

Note: Zones must be closed to allow the system to silent set. If any zones are open, then the Exit Time Reset feature (detailed previously) is activated.

Unsetting results in a double beep.

Home Set [18]

The Home Set option either fully sets or part sets the system. The system is:

▪ fully set if the exit time is manually terminated via a Final or Push-Set zone operation.

▪ part set if the exit time is allowed to expire.

All Set [19]

All Set allows a timed set of groups assigned to the user code without offering the choice of which groups are to be set. No group choice is offered. The groups that are set when this option is selected are set by the keypad group restriction (refer to **Keypad Groups [58.7]**):

▪ If there is no keypad group restriction then all of the groups assigned to the user are set – as long as there is at least one common group assigned to the keypad.

▪ If there is a group restriction on the setting keypad, then only the groups that are common to both the user and the keypad on which the menu option is selected are set. For example, a user assigned to groups 1, 2, 3, and 4 who selects the All Set option on a keypad assigned to groups 2 and 3 will set groups 2 and 3 only.

Display options

Display Zones [21, Quick Menu 2]

When you select Display Zones the first zone in the system is displayed. Press **A** or **B** to display other zones, or enter a zone number directly.

The top line displays:

- the address.

- the group assigned, if the group mode is enabled. Only the zones assigned to the user's group are displayed.

- the zone function alternating with the status: open, closed, high resistance, low resistance, tamper short or tamper open circuit or masked.

The bottom line displays the zone descriptor (if used).

Press **#** to toggle the bottom line information:

- If the zone is a hardwired RIO, the circuit resistance in ohms and the RIO (not zone) voltage is displayed. Press **#** twice to display the maximum (**+**) and minimum (**−**) zone resistance for a particular day. Use **A** or **B** to scroll through stored values for the past 14 days.

- If the zone is an RF zone, the highest and lowest signal strength, and the address of the RF Portal with which it is communicating is displayed.

Press **✶** to get a printout of all the zones. Press **esc** to abort the printout.

Note: A printer must be connected to the panel via a printer interface module.

Display Log [22, Quick Menu 3]

Use this option to view the event log. Flex panels can store 1000 events.

The alarm log uses a FIFO (First In, First Out) method to log and store alarms. The control panel differentiates between mandatory and non-mandatory events. All events are logged, however, when the log becomes full, non-mandatory events are dropped first. The log will always contain at least 500 mandatory events (assuming 500 or more mandatory events have been generated). A full list of EN50131-1 mandatory events and non-mandatory events logged by the panel is given in *Appendix B: SIA and contact ID event codes*.

Note: The number of events logged from any one source during any set/unset period is controlled by the **Alarm Limits [51.48]** parameter.

If group mode is enabled (refer to **Options [63]**) and the user code has group choice (refer to **Codes [42]**), the available groups are displayed for selection. Press the number of the groups to be displayed, the **N** below the selected group changes to a flashing **Y**. When all the required groups are selected press **ent** to access the log. Only the events in the selected groups are displayed.

When you access the event log, the most recent event is displayed. Use **A** or **B** to scroll through the events. Hold down either key to scroll quickly through the dates.

The event log is wrapped round from beginning to end. The message **START** or **END** is briefly displayed when the wrap-around is passed through.

The following information is detailed in the event log:

- Time of event.

- Date the event occurred.

- Event - information about the type of event that occurred. Certain events are displayed with a **+** (indicating that the event started or was activated) or **–** (indicating that the event ended or was terminated) symbol.

- User - alternates between the name and number of the user who initiated the event. If the event is not associated with a user code, for example, an alarm activation or a final zone closing, then no user information is displayed.

Press **#** while viewing the log to see additional information about certain event types:

- User events reveal the keypad, user type and user group involved in the event.

- Alarm events reveal the zone descriptor, if programmed.

- Walk tested RF zones reveal the measured signal strength of each RF device.

- REM CALL event displays the Remote Station ID for the Remote Servicing Software which has made the connection with the panel.
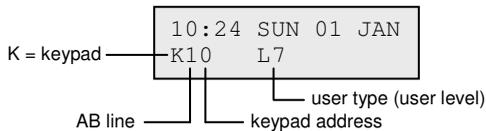
Notes:

1. Where two identical events occur within 1 second, only one is logged.

2. Only the first occurrences of high resistance and low resistance events on each day are logged. Subsequent activations are ignored until midnight of the same day. This is to prevent the log from being filled with high and low resistance activations from a faulty zone.

You can print the event log while accessing the Display Log option. Press ✱ while displaying an event to start the printout. All events from the displayed event to the most recent event are printed. If required, press **esc** to abort a print out.

Note: A printer must be connected to the panel via a printer interface module.

System [23]

Use this option to display an overview of the system configuration. You can scroll through the items shown below, which are displayed using both lines on the keypad screen.

- Group status U = Unset, S = Set, P = Part Set, and L = Locked-out for each of the groups displayed.

    Note: Enabling the Show Status option (refer to **Keypad [58]**) allows the group set status to be displayed from the normal banner (when the system is set or unset) by pressing ✱ and # simultaneously.

- Version of software in panel.

- RIOs fitted includes the onboard RIOs.

- Codes used include the manager, engineer and remote codes.

- Comms 1 to 7 (Int Telecom, ISDN, Ethernet or GPRS, GSM, USB, Audio Module). Comm 2 is not used.

- Printer 0–1 (Printer Interface Module).

- The number of MAX Modules on the system.

- The number of DCM Modules on the system.

- Panel location up to 16 characters of text entered in System Text parameter (option 51.15.2).

- Default Set gives the default settings set up in option 51.17.

- The number or RF Portals on the system.

- The number of MUX Modules on the system.

- The number of keypads on the system.

Print [24, Quick Menu 4]

Note: A serial printer must be connected to the panel via a printer interface module.

Only information corresponding to the groups assigned to the user is printed.

Print Codes [24.1.1]

Prints user number and name, type and groups assigned.

Print Zones [24.1.2]

Prints address, function, group (if group mode is enabled), status, descriptor (if assigned), status of the chime, omit and part attributes, the RIO voltage and the zone resistance in ohms;

Print Log [24.1.3]

Prints all events in the log, starting with the most recent and working backwards.

Print All [24.1.4]

Prints codes, zones and log details respectively.

The required option is selected by pressing the appropriate key 1-4. The printing begins immediately and can be aborted by pressing **esc**.

Access Doors [25]

Use this option to display the event log information relating to access control events. The access event log can be filtered using the following options.

View All [25.1]

Use this option to display all events in the access log.

Note: If Access Mode has not been enabled (refer to **Access Mode [69.1]**) the message **No Entries** is displayed on entering this option.

User [25.2]

Use this option to show all events for the selected user. Managers can see all the users. Individual users can see their own events only.

Reader [25.3]

Use this option to show all events for a particular Access Reader. If there are no MAX/DCM modules connected to the system the message **None Detected** is displayed. If there is more than one device on the system press **A** or **B** to view the details of each device.

Additional function for MAX reader address display

MAX modules, unlike other peripherals, do no have rotary switches to set their addresses. Pressing **#** in this option displays the address on each module in binary format using LEDs. To help you identify each of the MAX modules, the keypad displays a graphic representation of each address. By matching the □ (LED off) and ■ (LED on) on the keyboard to the LEDs on the MAX, you can identify each device on the system.

The line number and address combinations are shown in Figure 8. On a module ignore the top LED. Read the remaining LEDs from top-to-bottom, transpose to left-to-right, and then read off the 2-digit decimal address in the table.

Line No.	Module address
1 □■	0 □□□□
	1 □□□■
	2 ■□□□
	3 ■□□■
	4 □□■□
	5 □□■■
	6 ■□■□
	7 ■□■■

Figure 8 Line number / module address

Date [25.4]

Use this option to display the events on a specific date. Enter a date using the DD/MM/YY format.

Access Log

Access events are transmitted using Contact ID, SIA and Alarm Monitoring formats. Transmitted access events are listed in the table:

Event	Description	SIA Code	CID Code	Trigger	Mod No	User ID
Access Granted	Valid card presented and validated	DG	421	MAX TAGS	Yes	Yes
Invalid Card	Card presented has not been programmed onto system	DD	422	MAX TAGS	Yes	No
Card Rejected	Valid card presented, but rejected for some reason	DK	422	MAX TAGS	Yes	Yes

Access log information

The access log contains one of these reasons for the door not operating:

- Not Grp Match
- Reject Grp Set
- Illegal Time

The access log also shows user information:

```
01:00 THU 26 APR
USER   001 Rejct
```

Press **#** to view the reason for rejection:


```
1021      Grp A1
Reject Grp Set
```

Note: MAX or prox readers' addresses are different to DCM addresses. For example, 0013, where:

00 = not required
1 = line number 1
3 = address number 3

Access Log print and store option

The Access Doors (MAX Log) is printed online and stored in the event memory.

The Access Door Log print displays in the format of the Event Log and allows information to be accessed. The format is as follows:

HH:MM_XXXXXXXXXX_USR_NNN_UUUUUU_MYY_–_ (39 character display)

Key:

HH:MM = time in hour:minutes (5 characters). The date will be printed only at the beginning of every day, starting at midnight.

XXXXXXXXXX = access message (up to 10 characters) Valid, Invalid Card, Reject Card

USR = User

NNN = User number to which MAX card is assigned

UUUUUU = User descriptor (up to 6 characters)

M = MAX reader address

YY = MAX physical address

– = unused character slot

_ (underscore) = this represents a space and is not printed or displayed in the access log.

For example: A valid card read at MAX[4] 30 from the card held by user 020, name Albert, at 13:48 would be:

13:48 Valid USR 020 Albert M30 –

MAX Log

The Flex 100 system has a 1000-event log for recording MAX activations. This log is shared by all readers on the system and operates on a FIFO (First In, First Out) basis when full.

To display the events in the MAX log, select **Access Doors [25]**, select the required MAX address, and then press **ent**.

The first event that occurred on the selected MAX is displayed along with details of the time, date and MAX number. Press **A** or **B** to scroll through the events.

```
time and date ──── 02:25 SUN 26 OCT
of event           USR032 Valid

MAX user number ───┘        └── event type
```
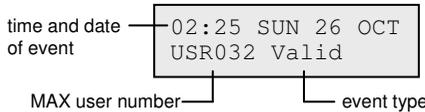
Press **#** for additional information:

```
READER01  Grp A1
Reject Grp Set
```
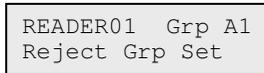
Note: See *Appendix B* for MAX Event Log Messages.

MAX events print out

To print MAX events as they occur, enable the **Online Print [51.28]** option, and ensure a printer, which remains online at all times, is connected to the panel.

Use the **Online Level [51.29]** option to select the level of detail to print.

Test options

Walk Test [31, Quick Menu 5]

Walk Test menu

```
31 = Walk Test
       ├── 1 = View – not used
       └── 2 = Activate
                  ├── 1 = Silent
                  │          ├── 1 = Test all Zones
                  │          └── 2 = Selected Zones
                  └── 2 = Audible
                             ├── 1 = Test All Zones
                             └── 2 = Selected Zones
```
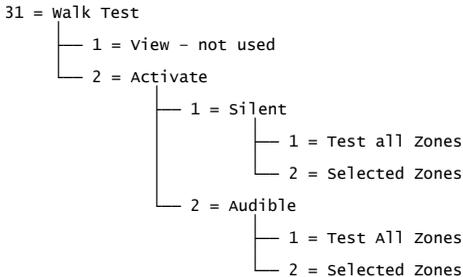
View [31.1] Not used

Activate silent test on all zones [31.2.1.1] & Activate audible test on all zones [31.2.2.1]

Use these options to starts an immediate walk test on all zones that have the omit attribute enabled (refer to **Program Zones [52]**). Non-omittable zones are not included and remain active throughout the test. If all zones are non-omittable **NO ENTRIES** is displayed.

Activate silent test on selected zones [31.2.1.2] & Activate audible test on selected zones [31.2.2.2]

Use these options to select specific zones to test.

1.   Navigate to a zone you want to test (use **A** or **B** or type a zone number).

2.   Press **#** to toggle the test status to TEST.

3.   Repeat the steps above until you have selected all the zones you wish to test.

4.   Press **ent** to start the test.

Alternatively:

1.   Press **✳** to include all zones.

2.   Navigate to any zones you wish to exclude (press **#** to exclude a zone).

3.   Press **ent** to start the test.

Note: PA, PA Silent, PA Delay, PA Silent Delay and Fire are not included in the test when
✱ is used to include all zones. The response time of the zone circuits is reduced to
20 ms (40 ms for RF RIOs) for the duration of the walk test to detect loose
connections or damaged wiring.

Once the walk test has started, opening a zone (or a zone that is open at the start of the test)
activates outputs programmed as entry/exit horn. If a single zone is open, the keypad
displays the address and function of the zone. If multiple zones are open, the keypad
displays how many zones are open. Use **A** or **B** to view the open zones.

Note: The Walk Test option does not display the status of the zones. If an open zone is
included in the walk test, the entry/exit horn activates as soon as the test is started
and remains active until the zone is closed.

While the walk test is active the message **WALK TEST ACTIVE / ESC to abort** is
displayed.

Press **#** to view all zones that have been walk tested so far.

To return to the walk test, press **#** again.

Note: RF zones also record the signal strength in reduced gain mode.

End the walk test

To end the walk test, press **esc**.

The test ends automatically if no zones are activated for 20 minutes.

To view the results of the test, access the event log (refer to **Display Log [22]**). The start of
the walk test is indicated by the **WALK TEST +** message. Each tested zone is recorded (the
activation of each zone is recorded only once during the test, even if it was opened several
times). The end of the test is indicated by **WALK TEST –**.

Outputs [32]

Outputs are tested by function: for example, when you select **01=BELLS**, all outputs
programmed as Bells are activated. Refer to **Program Outputs [53]** for a full description of
each output function.

When you enter the Outputs option, output function type **01=BELLS** is offered for
selection.

Press **A** or **B** to move to the required output function type, or enter the function type number
directly. For example enter **13** to select **SECURITY**.

To test the selected output function press **ent**. Press **ent** to toggle the function ON and OFF
as required.

Users

User types 5 and 6 have access to **01=BELLS** and **02=STROBE** only in the Output option.
Only the engineer has access to all the output types.

Modify Options

Time/Date [41, Quick Menu 6]

The Time/Date option can be accessed and modified by type 6 codes, the engineer and the remote code. If any groups are locked, then the time and date cannot be modified.

Modifying the time and date

Use this option to modify the system time and date. On accessing the option the **A=TIME B=DATE** prompt is displayed. Press the letter of the function you want to edit.

The time must be a valid four digit number in 24 hour format (hh:mm). Your entry, if valid, is accepted immediately and the selection screen is displayed.

The date must be a valid 6 digit number in day, month and year format (dd/mm/yy). Your entry, if valid, is accepted immediately and the selection screen is displayed.

Note: The time and date can be modified when groups are set.

Adjusting the clock speed

You can vary the clock speed by pressing **#** while **A=TIME B=DATE** is displayed. The keypad prompts for the Adjustment/Week to be entered; the range is 0 – 120 seconds. To gain time, enter the required number of seconds. To lose time, enter the required number of seconds, and then press ✱.

Codes [42, Quick Menu 7]

Codes menu

```
42 = Codes
        ── 1 = User Codes (enter a user code)
                ── 1 = Modify PIN (4, 5, 6 digit PIN)
                ── 2 = Modify Level (0 to 6)
                ── 3 = Modify Name (6 alpha-numeric characters)
                ── 4 = Schedule (00 = None)
                ── 5 = Modify Groups
                ── 6 = Card Number (access control card or fob 10-digit number)
                ── 7 = MAX Function (required menu option number)
                ── 8 = MAX Keypad (the keypad address that displays the MAX function)
                ── 9 = Template
                ── 10 = Radio Fob
        ── 2 = Card Users
                ── 1 = Add Batch
                ── 2 = Test Batch
                ── 3 = Delete Batch
                ── 4 = Batch Start
                ── 5 = Batch End
                ── 6 = Batch DCM Rdr
                ── 7 = Template User
```

Use the Codes option to assign, modify and delete the codes that allow users to operate and access the system. The Codes option is divided into two sub-menus:

▪ User Codes - sub-divided into 10 menus that determine all of the access information for users who require PINs (depending on panel used and whether the group (**Option [63]**)and Acess mode (**Options [69]**)options are enabled. This option also assigns MAX details to user numbers.

▪ Card Users - determines the tags/cards on the system for various users.

Default Codes

The system has three default codes: Manager, Engineer and Remote User.

No. of Codes	Manager		Engineer		Remote User	
	Default PIN	User No.	Default PIN	User No.	Default PIN	User No.
100	1234	98	112233	99	543210	100

Manager Code

The manager is authorized to modify the manager PIN, which cannot be deleted, and assign MAX features to the code.

Note: The manager PIN can be reset to the default code (1234) by the engineer and remote code using the Reset Mgr (Manager) parameter (refer to **Reset MGR [51.21]**). The manager code defaults to group choice when groups are enabled. The manager is able to toggle the group choice option on and off using the ✶ key.

The manager code defaults to accessing the full menu. To access the quick menu, remove the ✶ assigned to the manager in the Modify Level option.

Programming Codes

Users can modify their own PINs only.

User Codes [42.1]

Details of the first user (User 001) are displayed. The following typical information is displayed on the keypad.
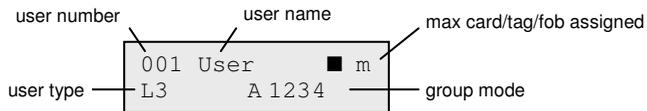
■ = no pin assigned
□ = pin assigned

You can scroll to the specific user or enter a user's number, for example 023 or 069.

When the required code is displayed, press **ent** to select the modification options; **1=Modify PIN** is displayed first.

Scroll to the required option or type an option number, and then press **ent**. The options are described below.

Standard user access

Modify PIN [42.1.User code.1]

PINs identify each user to the panel and permit users to operate the system.

Use this option to assign a PIN to a selected user, or modify an existing PIN. The PIN must be a four, five or six digit number, and unique to the system.

Note: PIN size is dependent on the **Min Pin Size [51.66]** parameter.

To assign or modify a PIN:

1. Do one of the following:

    ▪   **Assign a PIN:** Type a new PIN number of the correct length.

        If you attempt to assign a PIN that already exists, the message **DUPLICATE ENTRY** is displayed and the PIN is not assigned to the user.

    ▪   **Modify a PIN:** Press ✱ to erase the existing PIN, and then type the new or modified PIN.

2. When the correct PIN has been entered, press **ent**.

If a MAX No. has been previously assigned the display will prompt: delete MAX No. A=YES, B=NO and return to the previous menu level.

Authorized manager access

To delete a PIN:

1. Press ✱.

2. Press **ent**. A hollow box (□) is displayed on the top line of the screen.

To assign a dual code:

▪   Press **#** while the Modify PIN option is selected. The # symbol is displayed at the start of the assigned user PIN, for example #1314.

When a PIN has been assigned as a dual code two solid boxes (■■) are displayed on the top line of the user number details screen.

Note: You can't assign the Master manager code as dual.

Dual codes operation

If you enter a single dual code the message **NO ACCESS – ADDITIONAL CODE** is displayed. A second dual code must be entered within 60 seconds of the first dual code to access the menu, and set or unset the system.

Dual codes can be different types. The level of acces granted is determined by the second code entered.

A single entry of a dual code, without a second dual code entry within 60 seconds, is recorded in the event log as an **Illegal Code**; all outputs programmed as **Illegal Code** are activated.

Dual Focus

If a MAX number for the same user has a # assigned the dual function only works between the PIN and the MAX card of the same user.

Dual Access Cards

If a user's card number is assigned a # the card becomes dual access and requires a second PIN or card to open the door (see *To assign a dual code* in **Modify PIN [42.1.User code.1]**).

Dual Focus (card held)

If a card has a # assigned to the number, then any card-held function will only work in conjunction with the PIN from the same user, provided that the PIN has a # assigned also. The Dual function works in either order, but if you enter the PIN first, you have setting access only and not menu access. If you present the card first, you have setting access and menu access (see **Codes [42]** for programming).

Modify Level [42.1.User code.2]

Each user is assigned an access level that controls which menu options can be accessed. The programmable levels are from 0 to 6.

6 is assigned to the manager.

7 is assigned to the engineer – this is fixed and cannot be assigned to user codes.

8 is assigned to the remote code. This is fixed and cannot be assigned to the engineer or user codes. The remote code can only be used via keypads addressed as E.

To assign a level to a user:

1. Type the level to be assigned.

2. Press **ent**.

EN50131-1 Level		Level	Access Availability
1	$0^{\dagger}$	Guard	Entered into event memory – no other option
2	$1^{\dagger}$	Guard	Can only set the system and change own PIN
2	$2^{\dagger}$	Caretaker	Can only set and unset the system and change own PIN
2	3	Users	Menu options 11 to 19
2	4	Users	Menu options 11 to 25
2	5	Users	Menu options 11 to 32
2	$6^{\ddagger}$	Manager	Menu options 11 to 48
3	$7^{\ddagger}$	Engineer	Menu options 11 to 72
3	$8^{\ddagger}$	Remote	Menu options 11 to 72

† No access to menu functions

‡ The manager, engineer and remote codes (the last three codes on the system) have fixed types which cannot be reprogrammed.

Note: All levels except Guard 0 can change their own PIN.

Duress Code

Entry of a Duress Code sends a signal to the monitoring station to indicate a user has been forced to operate the system under duress. Any user on the system can be designated as a Duress Code. There is no limit to the number of users that can be assigned as Duress Codes.

To assign a Duress Code:

▪ In the **Modify Level** option, press **#**. The current user code is assigned as a Duress Code.

To assign a User Code as duress:

▪ Enable the **Duress User [51.77]** option.

Quick Menu

All user codes default to the quick menu. This menu is made up of a selection of ten options (0 – 9) from the full menu. Access to the quick menu is controlled by the user type. Any user can be upgraded from the quick menu to the full menu by assigning a ✱ to the user while the Modify Type option is accessed. Therefore a user with type 5 would have access to the full menu from options 11 – 32. It is not possible to access both menus at the same time.

To reprogram the options contained in the quick menu refer to **Quick Menu [59]**.

Note: The master manager code defaults to the full menu.

To control the menu options available to each user level refer to **Menu Access [68]**. You can allow users to access menu options that their code types are not, by default, authorized to access.

Modify Name [42.1.User code.3]

Use this option to assign a name to a user with a maximum of 6 alpha-numeric characters. The default user name is USER. The engineer (ENG) and manager (MGR) are fixed and cannot be reprogrammed.

To add or modify a user name:

1. Press ✱ to erase the characters of the default or previous name.

2. Using **A** or **B**, navigate to the first character of the name, and then press **ent**. The selected character appears on the top line.

   Press **#** to move between upper and lower case characters, and the system library. Enter a character, or word reference number, to access alpha-numeric characters and library words (see *Appendix A: Library*).

3. Continue this process until the name is completed.

4. Press **esc** to store the name and return to the previous menu level.

Schedule [42.1.User code.4]

Use this option to enable a user to access the menu options for setting and unsetting. The PIN code only operates during the OFF period of an assigned weekly schedule that is created in **option 65.1**.

If a user attempts to use his PIN code during the ON periods of his assigned schedule, then an illegal code event is logged and any outputs programmed as illegal code are activated.

Setting this option to **00=None** means that PIN codes are always operational.

Note: This option does not control card access through doors. This is controlled by templates and is allocated to a user in **Template [42.1.User code.9]**.

Modify Group [42.1.User code.5]

Use this option to select the system groups that the user has access to and operational control over. The Modify Groups option is only available when group mode is enabled (refer to **Groups [63.1]**). The system defaults to groups disabled.

When you select the Modify Groups option, the groups currently allocated to the user are displayed. All users default to group 1.

Pressing the group number toggles the group assigned to the user. Pressing 2 and 3 assigns groups 2 and 3 to the user. Pressing 1 (when group 1 is already assigned) removes group 1 from the user code.

To assign group choice to the user, press ✱. When the required groups have been assigned to the user, press **ent** to accept the programming and return to the previous menu level.

Group options

Single Group	A user can be assigned to any single group. In this case type 2 and above users can access, set and unset the single group only.
Multiple Groups	Users can be allocated to more than one group in which case access and operation is collective; the user cannot choose to operate on a single or combination of the assigned groups.
Group Choice	Users can be allocated more than one group but also have the choice of which of the allocated groups to view, set or unset. Pressing ✱ while assigning groups to the user assigns the group choice feature.

Notes:

1. The manager, engineer and remote codes have fixed access to all system groups; this cannot be reprogrammed.

2. The manager, engineer and remote codes are assigned group choice by default. The manager can have the group choice feature removed; the engineer and remote codes have fixed group choice.

3. Users authorized to access **Codes [42]**, can only assign the groups that have been assigned to their user code. A user who does not have access to group 4, cannot assign group 4 to another user code.

Card Number [42.1.User code.6]

Card Number contains one of the following numbers:

- the serial number from an access control card.

- the 10 digit number etched onto the card/fob/tag.

- the decrypted code of cards/tags self learned into the system for use with the KeyProx.

These numbers identify the card/tag/fob to the system and reference it to the user it has been assigned to.

By default card number is empty.

To enter the required number:

1. Do one of the following:

    - Enter the unique 10 digit number laser etched onto the card/fob/ tag.

    - Press **A** and **1** simultaneously on the KeyProx, and then present the card/fob to the KeyProx reader within five seconds. The decrypted number in the card is self-learned by the system and displayed on the KeyProx.

2. Press **ent** to save the programming and return to the previous menu level.

Notes:

1. A card number can be assigned to a user code that does not have a PIN allocated to it. All other options assigned to this user are valid for the card/fob/tag button programmed.

2. For access control cards, when the serial number is not printed on the card, the card number can be learned using the **Add Batch [42.2.1]** option.

MAX Function [42.1.User code.7]

The card/fob/tag/button can be assigned a single menu option. The user must be authorized to access the menu option assigned to the MAX, either by the user level assigned or the **Menu Access [68]** option. The default option is NOT USED.

To assign a new option:

1. Do one of the following:

    - Press **A** or **B** until the required option is displayed.

    - Enter the option number directly.

2. Press **ent** to accept the selection.

MAX Keypad [42.1.User code.8]

The menu option assigned to the MAX card can be limited to operate on a single keypad.

When you select this option, ✱✱ is displayed indicating that a keypad has not been specified.

To specify a keypad:

1. Press **#**. The address of the first keypad on the system is displayed.

2. Use **A** or **B** to select the required keypad.

3. Press **ent** to accept the selection.

Note: The address of the keypad that is currently being used is indicated by a black square flashing over the first digit of the keypad address.

'Card-Held' Operation

The programmed MAX function is activated when the card/fob /tag is held continuously in front of the MAX/MicroMAX/KeyProx reader for 3 seconds.

If using a MAX/MicroMAX or KeyProx the reader or KeyProx must be assigned a common group to the user. The keypad specified in option **7=MAX function** displays the assigned MAX function.

Assigning Dual Functions to MAX Numbers

If a card has a **#** assigned to the number, then any card-held function will only work in conjunction with the user's PIN, provided that the PIN has a **#** assigned also.

The Dual Focus function will work in either order, but if the card is presented first, the user has PIN controlled access to the normal menu (see **Codes [42]** for programming).

If a user's card number is assigned a **∗**, then the card becomes Dual access. This means that it will not open the door without another PIN or card (see **Codes [42]** for programming).

Template [42.1.User code.9]

An Access Template controls the areas to which a user has access, and also the access times. Once a template is created in **Access Template [45.6]** it can be assigned to multiple users. This eliminates repetitive programming of common door access rights for multiple users.

If no access template is allocated to a user, access rights for that user are defined by the Groups to which the user is allocated. This means the user has access through any door configured to a Group that is common to the user's group allocation.

Note: By assigning a template only the groups assigned in the template will control the groups the card has access to. The groups assigned to the User Code will no longer control access for the card.

Radio Fob [42.1.User code.10]

Use this option to register a keyfob on the system. Keyfobs can be assigned to a maximum of 100 users (depending on the system model), and can be programmed to set/unset or activate panic alarms, or both. These options may be limited by certain regional restrictions.

To register a keyfob:

1. Select **1=Learn Fob**, and then press **ent**.

   The serial number is shown if a fob has been programmed.

2. If you enter the serial number manually, select the device type: **1=Alpha** or **2=V2**.

3. Press ✱ to start the self-learn process. The message **User Awaiting Fob** is displayed.

4. On the keyfob, press both SOS buttons (buttons 1 and 3) together.

    ▪   If successful, the message **Fob learned** is displayed for 3 seconds.

    ▪   If no device is detected within 30 seconds, the message **Self Learn Timed Out** is displayed.

5. If required, and if the feature is available, select **1=Enabled** to enable the Panic function on the keyfob.

    Note: In some regions this feature may be disabled.

If the keyfob does not learn:

1. Remove the battery.

2. Short circuit the battery terminals.

3. Replace the battery and repeat the above procedure.

To enable the panic function on an existing keyfob:

Note: Enable **[51.60.2]** before selecting this option.

1. Select **2=Fob PA**, and then press **ent**.

2. Select **1=Enabled**.

Card Users [42.2]

This option determines the tags/cards on the system for various users. There are seven options:

Add Batch [42.2.1]

Use this option to start enrolment and display the user/tag for each presentation. When batch enrolling (auto assigning of tags to users), the panel increments the user number starting from Batch Start. It does this for every new tag presented at the DCM assigned in Batch DCM.

Test Batch [42.2.2]

Use this option to check the stored tag number with the tag presented at the Batch DCM. It can also be used to go directly to the user programming details that are assigned to the tag presented.

Delete Batch [42.2.3]

Use this option to remove card numbers from enrolment. A warning is given before deletion.

Batch Start [42.2.4]

Use this option to determine the user number at which enrolment starts.

Batch End [42.2.5]

Use this option to determine the user number at which enrolment ends.

Batch DCM Rdr [42.2.6]

Use this option to select the DCM reader for enrolment. Press **#** to return to the default setting which is any reader.

Template User [42.2.7]

Use this option to turn a user's access authority and non-unique attributes into a template.

Summer [43, Quick Menu 8]

European Daylight Savings Time (DST) is used, and is described as follows:

On the first day of each year, British Summer Time (BST) start date is set as the last Sunday in March, and the end date is set as the last Sunday in October.

The operation of the Summer option is as follows: at 01:00 hours (GMT) on the start date, the system clock advances to 02:00 hours (DST); at 02:00 hours (DST) on the end date, the system clock goes back to 01:00 hours (GMT).

Note: The time always changes with reference to GMT. For example, Italy, which is +1 hour would be:
Last Sunday in March: 02.00 to 03.00
Last Sunday in October: 03.00 to 02.00

The start and end dates can be reprogrammed by authorized user codes. Press **A** to modify the start date, or press the **B** key to modify the end date.

The new date must be a valid four-digit number, in the day/month (dd/mm) format.

Trace [44]

This option records:

- the most recent alarm activation.

- details of system setting and unsetting immediately before and after the alarm activation.

- the first five events occurring during the alarm activation.

This information is maintained in the trace until the next alarm activation.

Press **#** while viewing the Trace option to display additional information about certain events. User events reveal the keypad, user level and current group; alarm events reveal the zone descriptor if programmed.

To print the currently displayed trace, press *. To abort the printout, press **esc**.

Note: A printer must be connected to the panel via a printer interface module.

Group Mode

If group mode is enabled (refer to **Group Mode [63.1]**), there is a separate trace for the most recent alarm activation in each of the groups. On selecting the Trace option, a user with group choice (refer to **Codes [42]**) can view the trace of the assigning groups.

Press the number of the group to be displayed. The N below the selected group changes to a Y, and then press **ent**.

If more than one group is selected, or the user does not have group choice, then the trace for the group with the most recent alarm activation is displayed.

Timer Control [45]

Timer control menu

```
45 = Timer Control
        ─── 1 = View
                    ─── 1 = Weekly Sched.
                    ─── 2 = Timer Outputs
                    ─── 3 = Autoset
        ─── 2 = Holidays
                    ─── 1 = Modify Dates
                    ─── 2 = Assign Groups
        ─── 3 = Timers - Status 0 = Off, 1 = On  (if Timer Access [51.43] is disabled)
                    ─── 1 = Name                (if Timer Access [51.43] is enabled)
                    ─── 2 = Status 0 = Off, 1 = On
                    ─── 3 = Events
                    ─── 4 = Hol. Period
                    ─── 5 = Hol. Sched
                    ─── 6 = Pattern Day
        ─── 4 = Late Work
        ─── 5 = Weekend Work
        ─── 6 = Acc. Template
```
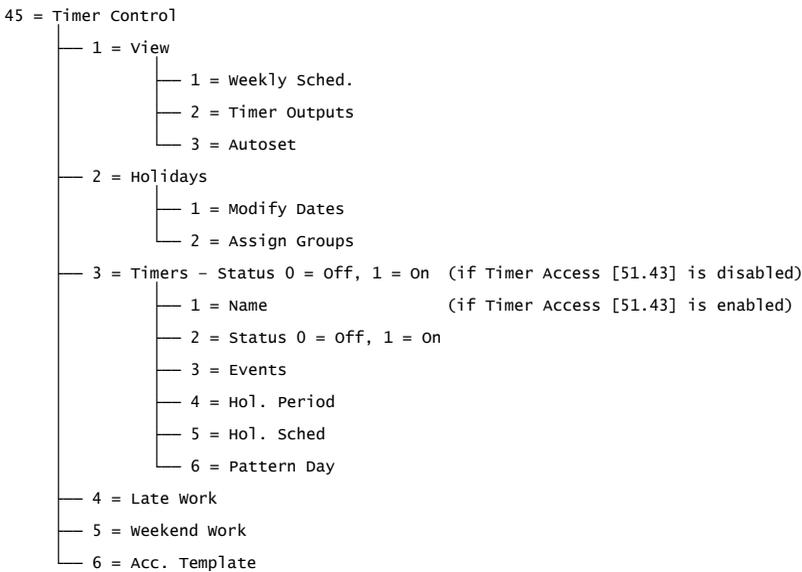
View Weekly Schedule [45.1.1]

Use this option to view the weekly schedules programmed in the **Weekly Schedule [65.1]** option.

View Timer Outputs [45.1.2]

Use this option to view the Timer-A and Timer-B outputs with on/off times allocated in the **Timer Outputs [65.2]** option.

View Autoset [45.1.3]

Use **A** and **B** to scroll through the groups to select one (optional) and also to view the time schedule allocated per group.

Use the **System Print Timers [57.11]** option to print all of the programmed timers; Weekly Schedule, Timer Outputs, and Autoset.

Holidays [45.2]

Use this function to allocate up to 4 holiday calendars.

Timers [45.3]

If **Timer Access [51.43]** is enabled these sub-options are available:

1=Name

2=Status

3=Events

4=Hol. Period

5=Hol. Sched

6=Pattern Day

For information on how to use these options refer to **Weekly Schedule [65.1]**.

If **Timer Access [51.43]** is disabled, you can only change the programmed weekly timer schedules status (either Off or On). All timer schedules default to Off.

Late Work [45.4]

Use this option to authorize an Autoset Extension in advance of the pre-warning period (refer to **Autoset [65.3]**).

Note: Additional extensions can be authorized by entry of a valid code during the subsequent autoset pre-warning periods.

Weekend Work [45.5]

The Weekend Work option allows a valid user code to authorize the system to unset at the weekend.

Access Template [45.6]

An access template defines when and where a user is allowed access. For each access template, a schedule is given to each group (area) to define when access to each group is possible. Up to 20 templates are available per system. If no schedule is given to a group, the user will have full access to the group.

Group Omit [46]

Use this option to block omit all the omittable zones that are open at the end of the confirm time in a group or multiple groups. All zones in the required groups that have the omit attribute enabled (refer to **Omit [52.4]**) are omitted when this option is selected. Groups can be omitted and reinstated without setting and unsetting the system. You need type 6 status to use this option.

When you select the option the groups assigned to the user code and keypad are displayed as well as the omit status of each group (Y below the group indicates that it is omitted, N indicates that it is not omitted).

To omit a group, press the required key. The letter beneath the group number changes from N to Y. To reinstate the group press the key to toggle from Y to N.

Notes:

1.   The type 6 user must have group choice to enter Group Omit.

2.   The zones in the selected groups are omitted from the system as soon as the group is selected and **ZONES OMITTED** is displayed.

Omitted zones remain omitted for one set period only or until they are manually reinstated to the system.

Outputs programmed as Zone Omit (mode programmed as reflex) are activated as soon as the zone is omitted and remains active until the zone is reinstated. If the output mode is programmed as latch, then the Zone Omit outputs activate when the system is set and remain active until the system is unset, reinstating the omitted zones.

Remote Access [47]

Use this option to control all site initiated remote connectors.

Remote Access menu

```
47 = Remote Access
     ├─ 1 = Service
     │        ├─ 0 = Int Telecoms
     │        │         ├─ 0 = Direct Access
     │        │         └─ 1 = Call back-1 to 5 = Call back-5
     │        ├─ 1 = ISDN
     │        │         ├─ 0 = Direct Access
     │        │         └─ 1 = Call back-1 to 5 = Call back-5
     │        ├─ 2 = Ethernet/GPRS
     │        │         ├─ 0 = Direct Access
     │        │         └─ 1 = Call back-1 to 5 = Call back-5
     │        └─ 3 = GSM
     │                  ├─ 0 = Direct Access
     │                  └─ 1 = Call back-1 to 5 = Call back-5
     ├─ 4 = Auto service
     │        ├─ 1 = Mode
     │        │         ├─ 0 = Off
     │        │         ├─ 1 = Timed
     │        │         ├─ 2 = Instant
     │        │         └─ 3 = Confirm
     │        ├─ 2 = Timers
     │        │         ├─ 1 = Start Time
     │        │         ├─ 2 = End Time
     │        │         ├─ 3 = Sync Schedule 000 (0-365) days
     │        │         └─ 4 = Schedule Reset
     │        │                   ├─ 0 = Off
     │        │                   ├─ 1 = Auto Reset
     │        │                   └─ 2 = Manual Reset
     │        ├─ 3 = Terminate Idle - Idle Time 10 (0-60 mins)
     │        └─ 4 = Conn Retry
     │                  ├─ 1 = Retry Interval 30 (0-60) mins
     │                  ├─ 2 = Retry Duration 06 (0-24) hours
     │                  └─ 3 = Redial Mode
     │                            ├─ 0 = Off
     │                            ├─ 1 = Retry
     │                            └─ 2 = Direct
```

```
── 4 = Auto service (continued)
            ── 5 = Control Upload
                         ── 1 = Eng Prog
                         ── 2 = User Prog
                         ── 3 = Either
            ── 6 = Remote Maint
                         ── 1 = Schedule 000 (0-365) days
                         ── 2 = Advice
                                      ── 1 = Code Only
                                      ── 2 = Code + Notice
                                      ── 3 = No Code/Notice
            ── 7 = Service PIN
            ── 8 = Send Panel ID
                         ── 1 = Name
                         ── 2 = Schedules
            ── 9 = Delay Time 10 (3-10) secs
── 5 = SMS Paging
            ── 1 = Int Telecoms
                         ── 1 = Mobile No.1
                         ── 2 = Mobile No.2
                         ── 3 = Mobile No.3
            ── 2 = GSM
                         ── 1 = Mobile No.1
                         ── 2 = Mobile No.2
                         ── 3 = Mobile No.3
```

Service [47.1]

Use this option to control the access mode of the remote servicing package. You need type 6 status to use this option.

INT Telecoms [47.1.0]

Use this option to select the onboard telecoms as the communication device.

INT Telecoms Direct Access [47.1.0.0]
ISDN Direct Access [47.1.1.0]
Ethernet Direct Access [47.1.2.0]
GSM Direct Access [47.1.3.0]

When you select one of these options, a 40 minute remote access period is enabled on the panel. Once access to the panel has been gained, it can be maintained indefinitely.

When the remote servicing connection is terminated, the access period remains valid for an additional 15 minutes.

INT Telecoms Call Back 1 to 5 [47.1.0.1 to 5]
ISDN Call Back 1 to 5 [47.1.1.1 to 5]
Ethernet Call Back 1 to 5 [47.1.2.1 to 5]
GSM Call Back 1 to 5 [47.1.3.1 to 5]

Use this option to pre-program up to five numbers (refer to **Remote Access [56.1.12]**).
When you select one of the numbers (1 to 5) and then press **ent**, the panel dials out to the
pre-programmed telephone number associated with the Call Back number.

If the number selected does not have a pre-programmed telephone number, the system
prompts for a number to be entered. Enter the required telephone number and press **ent**. The
panel then dials out to the telephone number entered.

Note: The remote computer, to which the panel is dialling, must have remote servicing
software installed and the Communication Server must be running..

Auto Service [47.4]

You can program panels to communicate with remote servicing software automatically,
under three circumstances:

▪   If site programming changes send the new programming to the downloader.

▪   On a predetermined schedule, activate an automatic periodic upload.

▪   On a predetermined schedule, activate an automatic remote routine inspection.

Note: The Auto Service function works for both the Internal Telecoms and the Ethernet
module.

Use the following sub-options to select the mode of the automatic communication in each of
the three situations.

Auto Service Mode Off [47.4.1.0]

In this mode the panel will not automatically initiate a remote servicing call even if the panel
programming has changed. This is the default setting.

Auto Service Mode Timed [47.4.1.1]

In this mode, following modification to panel programming, a remote servicing call is
initiated automatically between a programmed start time (option 47.4.2.1) and end time
(option 47.4.2.2). To avoid traffic congestion the panel selects a random time between the
start and end times to initiate the call. Once the connection is made, the new panel
programming is uploaded to the remote servicing package.

Auto Service Mode Instant [47.4.1.2]

In this mode, following modification to panel programming, the connection to the remote
servicing package is initiated immediately, using call back number 1, after you exit
engineering mode. Once the connection is made, the new programming is uploaded to the
remote servicing package.

Auto Service Mode Confirm [47.4.1.3]

In this mode, when you exit from engineering mode following a change to the panel programming, you are prompted to initiate a remote connection. This must be authorized by an appropriate user type before the call is made.

Once authorized, a two minute delay period is initiated. During this period, you can initiate or cancel the call.

When a connection is initiated the panel uploads the new panel programming to the remote servicing package.

Auto Service Timers Start Time [47.4.2.1]

Set the start time of the off-peak window during which the panel can initiate an automated remote servicing call. The default is 01:00.

Auto Service Timers End Time [47.4.2.2]

Set the end time of the automated remote servicing call during the off-peak window. The default is 06:00.

Auto Service Timers Sync Schedule [47.4.2.3]

Use this option to program the panel to automatically connect to the remote servicing application and upload the latest panel programming during the off-peak window. The period of time between connections can be set from 0 to 365 days. The default setting is 0, which disables the option.

The off-peak time window is programmed in menus **47.4.2.1** and **47.4.2.2**.

Auto Service Timers Schedule Reset Off [47.4.2.4.0]

The panel never initiates a remote servicing connection. This is the default setting.

Auto Service Timers Schedule Reset Auto [47.4.2.4.1]

Use this option to reset the Sync Schedule timer after an automated connection.

Auto Service Timers Schedule Reset Manual [47.4.2.4.2]

Use this option to reset the Sync Schedule timer, after a copy of site data whether done automatically or manually.

Auto Service Terminate Idle [47.4.3]

Use this option to program a timeout period that terminates a remote connection after the programmed period of activity. The range is 0 to 60 minutes, and the default timeout period is 10 minutes. After termination the panel records in the event log the message **REM ABORT** to indicate that the connection was unexpectedly terminated.

Conn. Retry Interval [47.4.4.1]

Use this option to program the dial attempts from 0 to 60 minutes. The default setting is 30 minutes, and 0 disables the feature.

Conn. Retry Duration [47.4.4.2]

Use this option to set the time the panel tries to make a remote servicing call. The range is 0 to 24 hours. The default setting is 6 hours, and 0 disables the feature.

Conn. Retry Redial Mode Off [47.4.4.3.0]

Use this option to disable the panel from trying to re-establish a connection.

Conn. Retry Redial Mode Retry [47.4.4.3.1]

The panel initiates a remote servicing call to re-establish a connection. The retry is controlled by option **Retry Interval [47.4.4.1]** and **Retry Duration [47.4.4.2]**.

Conn. Retry Redial Mode Direct [47.4.4.3.2]

The panel access mode changes to allow direct access for 30 minutes. This mode operates when Direct Access is selected in the **Service [47.1]** option.

Control Upload Eng Prog [47.4.5.1]

Initiates a connection when engineer programming has been modified.

Control Upload User Prog [47.4.5.2]

Initiates a connection when user programming has been modified.

Control Upload Either [47.4.5.3]

Initiates a connection when engineer or user programming has been modified.

Remote Maint [47.4.6]

Use this option to control the mode for automatically initiating communications for remote routine inspection and maintenance. The panel uploads only the most recent information available from **Diagnostics [61]**. No other panel programming is uploaded. There are two sub-options that control this.

Remote Maintenance Schedule [47.4.6.1]

Use this option to control the schedule for the initiation of communication for remote routine inspection. The schedule can be set from 0 to 365 days. The default is 0 days, which disables the function.

Remote Maintenance Advice [47.4.6.2]

Use this option to control the communication initiation method. It can be initiated automatically by the schedule programmed above or manually by user entry of the Service PIN code, with or without a notification message. There are three options. The default value for each is disabled.

1=Code Only   Entry of a Service PIN code automatically initiates a remote servicing connection to call back number 1. The Service PIN code can only be modified by remote users. When the Service PIN code is entered, it resets any scheduled connection timers.

2=Code + Notice   Enables the remote servicing notification timer and display of remote servicing notification. The remote service notification message is not displayed if the system is set. It only becomes active when the panel is unset. The message **REMOTE CALL INIT, A=SP PIN ENTER** is displayed after entry of a valid manager type user code.

3=No Code/Notice Enables a remote servicing session without the need for a Service PIN code and the panel's remote servicing notification message. This option uses the start and end times programmed in option 47.4.2.1 and 47.4.2.2.

Service Pin [47.4.7]

This is a 6-digit numeric code (default 987654), which initiates an automated call to the Remote Servicing application. The Service PIN code can only be changed from Remote Servicing. It is sent to the panel via the Send Remote Access Start Code. The Service PIN code cannot be the same as any other user codes in the system. This option is only available when the **Schedule [47.4.6.1]** option is greater than 0 and when the **Code Only [47.4.6.2.1]** option is enabled.

Delay Time [47.4.9]

This is the time that the panel delays for incoming information from the remote servicing package. The delay time can be set from 3 to 10 seconds. The default is 10 seconds.

SMS Paging [47.5]

Use this option to send all trigger enabled events to a maximum of three different mobile numbers using the Internal Telecoms module and/or three different numbers using the GSM module. Options **47.5.1** and **47.5.2** can also be accessed and configured using options **56.1.17.1** and **56.5.17.1** respectively.

The numbers you program are dialled via a single centre number. Failure to communicate with this number results in a failure to communication with all your programmed numbers.

Dialling is attempted for a maximum time period set in **Fail to Comm [56.1.11]**.

Engineer Access [48, Quick Menu 9]

This option enables a manager to authorize an engineer to access the system.

Engineer System Access [48.1.1]

By default the assigned engineer code is programmed as dual. This prevents the engineer from accessing engineering mode unless authorized to do so by a type 6 user, normally a manager with a valid code.

To authorize an engineer to access the system:

1.   Enter your code.

2.   Press **48 ent 1 ent 1 ent**.

3.   Press **1 ent** to enable engineer access.

4.   Press and hold **esc** to return to the banner.

This provides a five minute period during which the engineer can access engineering mode without causing a tamper alarm. Once in engineering mode there is no time limit on the access period.

User authorization is limited to one visit only. When you return the system to user mode, the authorization is still valid for five minutes. After this time it must be granted again by the manager.

Limited SIA Access [48.2.0]

Use this option to allow a SIA level 4 user to send commands to the control panel, but exclude resetting of the panel after an alarm signal.

Full SIA access [48.2.1]

Use this option to allow a SIA level 4 user to send commands to the control panel. The user can reset the panel after an alarm signal.

Engineer 1 options

Parameters [51]

Use this option to modify the system functions.

Use **A** or **B** to select an option, or enter the two digit parameter number and press **ent**.

Use **A** to increase, or **B** to decrease, the values assigned to the parameter.

Press **ent** to accept a new value and return to the previous menu level. Any parameters that differ from this procedure are indicated in the following paragraphs.

Assigning Parameters to Groups

Some parameters allow separate values to be assigned to system groups. If groups have been enabled, the relevant parameters prompt for a group to be selected. When selected, the value is assigned to the group parameter.

Parameter list

Parameter	Groups	SC01
01 = Bell Time	✓	✓
02 = Bell Delay	✓	✓
03 = Abort Time	✓	✓
04 = Exit Time	✓	✓
05 = Entry Time	✓	✓
06 = System Reset	✓	✓
07 = Tamper Reset	✓	✓
08 = No. Re-arms	✓	✓
09 = Omit All	✓	✓
10 = Key '0'	not available	✓
11 = Local Part	✓	✓
12 = Banner	not available	✓
13 = PA Delay	✓	✓
14 = KEY/SW Level	not available	✓
15 = System Text	not available	✓
16 = Soak Time	not available	✓
17 = Restart	not available	✓
18 = Stop Set	not available	✓
19 = Part Alarm	✓	✓
20 = Power Delay	✓	✓
21 = Reset Mgr.	not available	✓
22 = PA reset	✓	✓
24 = Exit Alarm	✓	✓
27 = cct Debounce	not available	✓
28 = Online print	not available	✓
29 = Online level	not available	✓
30 = Video	✓	✓
32 = Show Alarms	not available	✓
33 = Secure Code	not available	✓

Parameter	Groups	SC01
35 = Fail To Set	✓	✓
41 = Weekend Work	not available	✓
43 = Timer Access	not available	✓
46 = Res. Select	not available	✓
47 = Set Confirm	not available	✓
48 = Alarm Limits	not available	✓
49 = Confirm Time	not available	✓
54 = Keypad Access	not available	✓
55 = Confirm	not available	✓
56 = Force Restore	not available	✓
58 = Power Alarm	not available	✓
59 = Part Tone	not available	✓
60 = RF Parameters	not available	✓
61 = Activity Mon	not available	✓
62 = Lockout	not available	✓
63 = Banner alerts	not available	✓
64 = Set Override	not available	✓
65 = Reset Levels	not available	✓
66 = Min Pin Size	not available	✓
68 = Line Fail	not available	✓
69 = Alert Inds	not available	✓
70 = SWDC Set Dly	not available	✓
71 = MF BL Enable	not available	✓
72 = Max Alm Cause	not available	✓
73 = Guard Unset	not available	✓
74 = Back-up Link	not available	✓
75 = Back-up Timer	not available	✓
76 = MAX LEDs Off	not available	✓
77 = Duress User	not available	✓

Bell Time [51.01]

Use this option to set the bell time on activation.

The default is 15 minutes and the range is 0 to 30 minutes. Use 00 minutes to set the bell time to infinity.

You can assign a different value to each group.

The entry/exit horn is subject to the Bell Time parameter in both the set and unset conditions.

Bell Delay [51.02]

Use this option to delay bell activation after an alarm.

The default is 0 minutes and the range is 0 to 20 minutes.

Bell Delay is overridden by a comms failure (either a Comms Fail on the Communication Module or by the activation of a Line Fail zone used to monitor a digicom).

You can assign a different value to each group.

Abort Time [51.03]

The abort function delays the activation of a full intruder alarm condition following an entry alarm. This parameter has 2 sub-options:

Abort Time [51.03.1]

Range 0 to 300 seconds. You can assign a different value to each group.

The abort time is initiated:

- Whenever a zone that is not on the entry route (Final, Entry and Exit zones) is activated, for example when a user strays from the entry route.
- A valid code is not entered before the entry time expires.

The standard abort operation is as follows:

- For entry route deviation, the signalling of an intruder alarm is delayed.
- If a valid code is entered before the entry time expires:
    - The intruder is not signalled.
    - The system does not require a system reset.
- If a valid code is not entered before the entry time expires or an entry timeout condition occurs:
    - The intruder is signalled at the end of the entry time.
    - The Abort timer starts on expiry of the entry time.

- If a valid code is entered within the programmed abort time:

  - If an abort output/channel is allocated to the alarmed group:

    – The Abort signal is sent.

    – The intruder condition is not restored.

    – Intruder restore is not signalled.

  - If there is no abort output allocated to the alarmed group:

    – The intruder condition is restored.

    – Intruder restore is signalled.

- If the programmed abort time is allowed to expire without a valid code being entered, then the system requires a system reset. The panel cannot be set until this occurs.

Note: If **Reduced Resets [51.55.3]** is enabled, the alarm is reset by the user code when the alarm is unconfirmed.

Modified Abort Operation

The abort operation can be modified by adding a ✱ or **#** to the programmed time.

- Adding **#** alters the standard operation so that the signalling of the intruder condition is delayed until the end of the abort time. If the system is unset during the entry time or abort time, no alarm condition is signalled.

- Adding ✱ alters the standard operation so that if a user strays from the entry route within the entry time, the intruder is signalled as soon as the entry deviation occurs.

Notes:

1. To comply with PD6662 2010, the ✱ abort operation must be used with Abort Time set to 30 seconds.

2. To comply with EN50131:2004 and DD243:2004, the # abort operation must be used with Abort Time set to 30 seconds or longer.

Bell Delay [51.03.2]

Use this option to hold off the start of any bell delay time programmed in parameter **51.02** until the end of the abort time programmed above.

Exit Time [51.04]

Use this option to program the time allowed to leave the premises via the exit route before the system sets. The default is 120 seconds and the range is 0 to 300 seconds.

Infinite Exit Time

Assign a value of 000 seconds to set the Exit Time to infinity. An Exit terminator activation (Final or Push-set zone) is required to complete the setting of the system. The infinite Exit Time is normally used with a Push-set zone to terminate the setting and an Entry zone to start the unsetting procedure.

Note: If the system is programmed to Autoset and the Exit Time is programmed to 000, the Exit Time is set to 60 seconds for the Autoset. There is no requirement for a Push-Set zone to be activated.

Setting Multiple Groups

You can assign a different value to each group. If more than one is group is being set, the longest exit time is adopted for all groups.

Entry Time [51.05]

This parameter determines the entry time allowed to users when unsetting the system.

The default time is 45 seconds and the range is 0 to 300 seconds. Use 000 seconds to set the Entry Time to infinity.

You can assign a different value to each group.

Note: A ✶ assigned to a Final zone doubles the programmed Entry Time of the group to which it is allocated.

System Reset [51.06]

Use this option to select the user type that can reset the system following an intruder alarm. A remote code can also change this option. The default type is 3 and the range is:

- 3 to 5 for the user.
- 6 for the manager.
- 7 for the engineer.

You can assign a different value to each group.

Note: This option is affected by **Reduced Resets** [**51.55.3**].

The panel only requests Engineer Level Reset if alarms have been signalled via the Communication Module and appropriate type reset is set to 7. If no signal is transmitted, the reset is automatically reduced to type 6. This feature is only active when the DTMF signalling format is selected.

Note: This option can also be programmed using **Reset Levels [51.65]**.

Tamper Reset [51.07]

Use this option to select the user type that can reset the system following a tamper. A remote code can also change this option. The default type is 3 and the range is:

- 3 to 5 for the user.
- 6 for the manager.
- 7 for the engineer.

You can assign a different value to each group.

Note: This option is affected by **Reduced Resets** [**51.55.3**].

The panel only requests Engineer Level Reset if alarms have been signalled via the Communication Module and the appropriate level reset is set to 7. If no signal is transmitted, the reset is automatically reduced to type 6. This feature is only active when the DTMF signalling format is selected.

No. Re-Arms [51.08]

Use this option to set the number of times that an armed system can re-arm the bells following an alarm activation. The default setting is 9 (infinite) and the range is 0 to 9.

When the option is enabled the system re-arms at the end of the programmed confirm time, if all zones are closed or are open and can be omitted, or if the Omit all force is enabled.

The intruder output remains active until a system re-arm occurs.

Zones that are open at the end of the bell time must be omittable (Omit attribute enabled); the re-arm will omit these zones. The complete zone circuit, including the tamper facility, is omitted. Refer to **Program Zones [52]** for details on enabling the zone omit attribute.

Note: If an open zone is not omittable, then the system will not re-arm, unless parameter **09=Omit All** is set to 2.

Omit All [51.09]

This option determines if activated zones can be omitted at re-arm as described above.

0=Disabled

1=Omit All   Omits any omittable zones that are open at re-arm. The complete zone circuit including tamper is omitted.

2=Force   As Omit All but omits zones whether omittable or not. Refer to **Program Zones [52]** for details on enabling the zone omit attribute.

Key "0" [51.10]

Key **0** on the keypad can be assigned to operate as a Push-set zone function. This terminates the timed setting procedure. When the option is set to 1 (enabled), pressing **0** during the exit time completes the setting of the system. The default is 0 (disabled).

Note: Key **0** must be pressed only on the keypad used to start the setting procedure.

Local Part [51.11]

When the Local Part parameter is set to 0 (disabled, the default setting) the Intruder outputs are disabled when the system is part set and the programmed bell delay is overridden. This option is normally used to prevent the communicator from dialling the Alarm Receiving Centre.

If the Local Part parameter is set to 1 (enabled) the Intruder outputs activate if an alarm condition occurs when the system is part set.

Option 2 (SIA part off) is identical to option 1 with the exception that when the alarm format of the telecom module is set to SIA, part setting and unsetting of the system is not signalled to the ARC. You can assign a different value to each group.

Banner [51.12]

Use this option to customise the top and bottom lines of the banner display.

Press **1** to select the TOP LINE or **2** to select the BOTTOM LINE. The display is written using the alpha-numeric assembly method:

✶   erases characters.

selects upper case, lower case or library.

A and **B** can be used to scroll through alphabet characters or words.

001–538 select alphabet character or words from the library using a number code.

ent   positions selected characters/words.

esc   accepts the programming and returns to the previous level.

The banner is displayed when the system is in the normal mode (set/unset).

PA Delay [51.13]

Use this option to set the delay between the activation of a PA Delay or PA Delay Silent zone and the alarm sounding and signalling a PA via the communicator.

The default is 60 seconds and the range is 1 to 60 seconds.

You can assign a different value to each group.

Key/SW Level [51.14]

Use this option to assign a code type to zones programmed as Keyswitch. The Keyswitch zone can be used to reset system, tamper and PA alarms, depending on the reset type assigned to each of these parameters. The default type is 6 (manager) and the programmable range is 1 to 7 (7 for the engineer).

System Text [51.15]

Use this option to assign two text strings to the system: press 1 to select the System ID or 2 to select the Panel Location.

1=System ID   16 character identification of the system. Use this when connecting to Remote Servicing software.

2=Panel Location   16 character message of where control is fitted.

Text is written using the alpha-numeric assembly method:

✱   erases characters.

selects upper case, lower case or library.

A B   scrolls through the alphabet of character/words.

000–500 selects alphabet character or words directly.

ent   positions selected characters/words.

esc   accepts the programming and returns to the previous level.

Soak Time [51.16]

Use this option to set the number of days that zones can be soak tested for. The default is 7 days and the range is 1 to 14 days.

Note: Change default settings before programming in **Soak [55]**.

Restart [51.17.1]

Use this option to re-configure the system without the need to remove and reconnect the power. The system displays **WARNING!!! ent=RESET SYSTEM**.

Press **ent** to reconfigure the system. The keypad display becomes blank for a few seconds, then displays the message **Configuring Please Wait**. When configuration is complete the banner returns to the normal display (day mode). The Restart option configures any modules that have been added to the system but gives an alarm if there are any tampers open or if any modules are reported as missing.

Notes:

1.   This parameter exits engineer mode. It is however recommended that the exit engineer mode sequence is used when adding or removing modules from the system.

2.   Outputs are momentarily reset during the restart. If the system has a communications requirement, put it on test before using the restart.

Defaults [51.17.2]

Use this option to select the panel default settings for a particular country.

The system displays **WARNING!!! ent=RESET SYSTEM**.

Press **ent** to reconfigure the system.

Language [51.17.3]

Use this option to select the keypad display language.

Press **ent** to change the display immediately.

Cold Start [51.17.4]

Use this option to set all defaults back to factory settings.

Stop Set [51.18]

Use this parameter to prevent the system from set override if there is a communication or power fail condition at the time of starting the setting procedure. If the condition is the result of an open Line Fail or AC Fail zone, the system cannot be set until the zone is closed or omitted. The Stop Set default is disabled (set to 0).

Note: Battery Low also prevents the system from setting.

Part Alarm [51.19]

Use this parameter to enable the Bells and Strobe outputs to activate if an alarm condition occurs when the system is part set. Select 1 to enable and 0 the disable.

Note: The Horn, Entry/Exit and Intruder outputs are not affected by this parameter.

You can assign a different value to each group.

Power Delay [51.20]

Use this parameter to delay activation of the AC Fail signal following a mains failure. This is to allow the mains to return before signalling a fault.

The default is 10 minutes and the range is 0 to 600 minutes.

You can assign a different value to each group.

Reset MGR [51.21]

Use this option if the Master Manager code is lost or must be replaced.

When you select the Reset MGR parameter the system displays **WARNING!!! ENT=Code Change**

Press **ent** to erase current code and reset it to the default of 1234.

PA Reset [51.22]

Use this option to select the user type that can reset the system following a PA activation. A remote code can also change this option. The default type is 3 and the range is

- 3 to 5 for the user.

- 6 for the manager.

- 7 for the engineer.

You can assign a different value to each group.

The panel only requests Engineer Level Reset if alarms have been signalled via the Communication Module and appropriate type reset is set to 7. If no signal is transmitted, the reset is automatically reduced to type 6. This feature is only active when the DTMF signalling format is selected.

Exit Alarm [51.24]

Use this parameter to enable a full alarm condition to activate if any zone other than Final, Exit, Entry or Push-Set (or Secure Final or Part Final when acting as a Final) is opened during the exit time causes. The default is 0 (disabled).

Note: This option must be used only when specified.

You can assign a different value to each group.

If the Exit Alarm parameter is enabled, any zone that is open when the Autoset begins (at the end of the pre-warning period) causes an immediate full alarm condition to be activated.

If the Exit Alarm parameter is disabled, any zone open when the Autoset begins (at the end of the pre-warning period) results in an urgent bleeping from the entry/exit horns. If the open zones are not closed by the end the time assigned in parameter **35=Fail To Set**, a full alarm is activated along with any outputs programmed as Fail-Set.

CCT Debounce [51.27]

Use this option to set the response time of the zones (how long they must remain open before registering as changing state).

The default is 300 milliseconds and the range is 20 to 1000 milliseconds (0.02 to 1 second). All entries are rounded up to the nearest 20 ms.

Note: The value programmed in this option is the value allocated to the SYSTEM selection when programming zone response time in option 52.

Online Print [51.28]

Use this parameter to select the print mode required when connecting a printer to the panel. There are two options:

0=DISABLED (default)   The system only prints specific details at the user's request. The printer can be connected and disconnected at any time.

1=PRINTER MODULE Switches the printer to online mode and requires a continuously connected printer. Events are printed as and when they occur. The events printed are controlled by **Online Level [51.29]**.

Note: If Online Print is enabled, the event log and other options will not be printed at the user's request. The parameter must be disabled to permit all other print options to operate.

Online Level [51.29]

Use this option to set the level of events that are printed when **Online Print [51.28]** is enabled:

0 (default)   basic print (setting, unsetting, alarms).

1   full print excluding MAX events (setting, unsetting, alarms, modifications, technical details).

2   full print including MAX events (all logged events).

3   MAX events only (only card events).

4   Basic Print plus MAX events (option 0 + MAX events).

Video [51.30]

Use this parameter to set the number of activations that must occur on any of the zones programmed as Video, in a single set period, before a full alarm occurs. There is no time limit on the period between activations. The Video parameter is programmable within the range 1 to 9 activations, and the default value is 2. The video output occurs on every activation but a full alarm does not occur until the programmed number of activations is reached. The Video zones activation counter is reset when the system is unset.

Note: The activations of the Video zones are cumulative - the counter is incremented each time any Video zone in the group is activated.

You can assign a different value to each group.

Show Alarms [51.32]

Use this parameter to display immediately, on all the keypads, the first alarm activation when an alarm occurs. By default, alarm messages are not displayed until the alarm is cancelled. **Banner Alerts [51.63]** must be enabled to view alarms on the keypad. The default setting is disabled (0).

Note: This parameter only functions when at least one group is unset.

Secure Code [51.33]

Use this parameter to program the system to randomly change the engineer code each day at 08:00 hours. The service engineer must be given the code of the day by head office.

The random code is dependent on the local engineer code, therefore each area, company, branch or even system can have a unique secure code.

Either the engineer or remote user code can select the Secure Code parameter. On selecting this parameter the secure code equivalent to the current engineer code must be entered to confirm the selection. Only the remote user code (or a cold start - erasing all programming details) can cancel it. The default is 0 (disabled).

Fail to Set [51.35]

Use this option to set the period of time that a zone must remain open following the start of the setting procedure and before the Fail Set outputs activate.

The default is 360 seconds and the range is 0 to 999 seconds.

Notes:

1.   The Fail to Set countdown time begins as soon as the setting procedure is started.

2.   The Fail to Set time should be at a minimum 5 seconds longer than the Exit Time (option 51.04), to allow for the setting period to expire.

You can assign a different value to each group.

Weekend Work [51.41]

Use this parameter to enable or disable the **Weekend Work [45.5]** option. If the parameter is set to 0 (disabled – default setting), the message **Option not available** is displayed on selecting **Weekend Work [45.5]**.

Timer Access [51.43]

If enabled a type 6 user can change all the Weekly Schedule information (name, status, events, holiday period, holiday schedule and pattern day) with the **Timers [45.3]** option.

If disabled, users can change the Weekly Schedule status only with the **Timers [45.3]** option.

Resistance Select [51.46]

RIOs rev 1.2 and Smart PSUs rev 0.7 and above allow zones to be programmed with different resistance preset values for zone status activation. You can select end-of-line or double-balanced zone resistance types. Onboard zones can also be modified.

The system default value is 1k fault, double balanced. There are 14 preset resistance configurations covering both double-balanced and end-of-line.

To select a preset, enter an option number from the tables below, which show the resistance windows for each type:

	Option 01 1k	Option 03 2k2	Option 05 4k7	Option 07 5k6	Option 09 3k3	Option 11 1k fault	Option 13 1k N/O
Tamper S/C	0 - 800	0 - 1800	0 - 3700	0 - 1400	0 - 2600	0 - 800	-
Low Res	800 - 900	1800 - 2000	3700 - 4200	1400 - 2800	2600 - 3000	800 - 900	-
Normal	900 - 1200	2000 - 2500	4200 - 5500	2800 - 8400	3000 - 4000	900 - 1200	1200 - infinity
High Res	1200 - 1300	2500 - 2700	5500 - 6500	8400 - 9800	4000 - 4400	1200 - 1300	-
Open	1300 - 12000	2700 - 12000	6500 - 12000	9800 - 12600	4400 - 12000	1300 - 3500	0 - 1200
Fault	-	-	-	-	-	3500 - 4500	-
Masked	12000 - 19000	12000 - 19000	12000 - 22000	12600 - 25000	12000 – 22000	4500 - 19000	-
Tamper O/C	19000 - infinity	19000 - infinity	22000 - infinity	25000 - infinity	22000 - infinity	19000 - infinity	-

Table 1 Preset value limits (ohms) - double balanced

	Option 02 1k	Option 04 2k2	Option 06 4k7	Option 08 5k6	Option 10 3k3	Option 12 1k fault	Option 14 1k N/O
Tamper S/C	0 - 800	0 - 1800	0 - 3700	0 - 1400	0 - 2600	0 - 800	-
Low Res	800 - 900	1800 - 2000	3700 - 4200	1400 - 2800	2600 - 3000	800 - 900	-
Normal	900 - 1200	2000 - 2500	4200 - 5500	2800 - 8400	3000 - 4000	900 - 1200	1200 - infinity
High Res	1200 - 1300	2500 - 2700	5500 - 6500	8400 - 9800	4000 - 4400	1200 - 1300	-
Fault	-	-	-	-	-	1300 - 4500	-
Masked	1300 -19000	2700 - 19000	6500 - 22000	9800 - 25000	4400 - 19000	4500 - 19000	-
Open	19000 - infinity	19000 - infinity	22000 - infinity	25000 - infinity	19000 - infinity	19000 - infinity	0 - 1200

Table 2 Preset value limits (ohms) - end of line

When a preset is selected it sets the zone resistance range used by every zone on the system. Each zone on the system can be further customised to a specific preset by using the **Resistance Select [52.9]** option.

Set Confirm [51.47]

Use this option to cause the system to emit a short double beep when the system/group has set. There are three options:

0=Off   No indication.

1=Alert on Set   A double beep when the system has set.

2=Alert on Comm   A double beep after a successful signal to the ARC that setting has occurred.

Alarm Limits [51.48]

Use this parameter to program the maximum number of alarms, per group, which may be transmitted to an Alarm Receiving Centre in any set period. There are three options:

1=No of Alarms	The total number of zone activations signalled in any one set period. The selectable values are 0 to 10 where 0 is unlimited.
2=Unset Limit	The number of activations logged from any one zone in any one unset period. The selectable values are 0 to 10 where 0 is unlimited. The default is 3. Fire alarms are not restricted by this parameter.
3=Set Limit	The number of activations logged from any one zone in any one set period. The selectable values are 0 to 10 where 0 is unlimited. The default is 3. Fire alarms are not restricted by this parameter.

Note: This feature only affects Contact ID, SIA and Microtech communication formats.

Confirm Time [51.49]

Use this option to set the maximum time between two separate zones for a confirmed alarm to be generated up to a maximum of 99 minutes, which is equivalent to the complete set period, with a default of 30 minutes.

Keypad Access [51.54]

Use this option to select how the keypad unsets the system. There are two options:

1=Always	Keypad always unset the system.
2=Except Entry	Except when entry time is running. This ensures that users are unsetting using a fob or MAX tag (portable device).

Confirm Operation [51.55.1]

Use this option to control when confirmed alarms can be triggered. The choices are:

1=Before Entry	Confirmed alarms can be triggered before starting entry time only.
2=Except entry	Confirmed alarms can be triggered any time except during the entry delay period. (PD6662: 2004)
3=Always	Confirmed alarms are always enabled. (PD6662: 2010)

Confirm Entry Timeout [51.55.2]

Use this option to control whether exit type zones can cause confirmed alarms after an entry timeout.

0=Disable Exits	Exit type zones will only cause unconfirmed intruder alarms. They will not contribute to the two activations required for a confirmed alarm.
1=Enable Exits	After the expiry of the entry delay, activation of an exit type zone will be identical to an intruder zone.

Confirm Reduce Reset [51.55.3]

Use this option to allow user reset following an unconfirmed alarm.

0=Off   Full system reset is required for any intruder alarm.

1=On Unconfirmed   The system can be reset by a user if the alarm is unconfirmed.
                             If the alarm is classed as confirmed, a full system reset is required.

Timeout Confirm [51.55.4]

Use this option to define if an Entry Time-out alarm will contribute to a confirmed alarm

0=Disabled   Time-out will not contribute (PD6662: 2004)

1=Enabled   Time-out will contribute (PD6662: 2010)

Force Restore [51.56]

Use this option to select when intruder restore signals are transmitted.

1=Unset/Unconfirm   On unset or at the end of the confirmed time if the alarm is not
                             confirmed.

2=System Reset   Sent when the system is fully reset.

[51.57] Not used

Power Alarm [51.58]

Enable this parameter to allow the Bells, Strobe and Horn outputs to activate when there is
an a.c. failure and the system is set. The default is 0.

Part Tone [51.59]

Enable this parameter to change the setting tone for a part set. The new tone is on for 2
seconds and off for 0.1 seconds.

RF Address [51.60.1]

Use this option to specify the number of virtual RIO addresses available for wireless
detectors zones. Up to 24 addresses in total can be allocated with a limit of 3 addresses for
each RF Portal configured.

Each RIO address is displayed with **E** if enabled for wireless or **D** if disabled. To change the
status, press **ent**.

Select **0** to disable or **1** to enable the line/address. When disabling a RIO address you may
be prompted to remove or reassign programmed zones to another RIO address.

RF Fob PA [51.60.2]

Use this option to enable a user to program the Panic Alert function of a wireless keyfob.

Note: In some locations, the Panic Alert function may not be permissible.

RF Supervision [51.60.3]

1=Silent Alarm   Stop supervision alarms from activating sounders when set.

2=Debounce   Extends the normal 2 hour delay for supervision by a further 24 hours.

RF Bat Delay [51.60.4]

Use this option to give a warning at the panel if an RF low battery is detected. An additional option allows a delay to be programmed of up to 100 hours (default) before a signal of RF BAT LOW is sent to the ARC.

RF Jam Delay [51.60.5]

This option allows the RF Portal to send an RF jam signal to the panel if it detects interference for 30 seconds. If the interference is continuously present for five minutes (default), the signal is transmitted to the central station. The programmable range is 0 to 30 minutes.

RF Stop Set [51.60.6]

Enable this option to prevent setting if all supervised devices have not signalled to the receiver in the stop set period, prior to setting. The range is 0 to 250 minutes. The default is 20 minutes.

RF Stop Mode [51.60.7]

This option controls whether, and how, an RF fault prevents the panel from being set. There are three options:

0=Disabled   An RF fault will not prevent setting

1=Warning   If there is a failure the user will get a warning but can continue to set

2=Auto Check   If there is a failure the system cannot be set until the zone(s) have been activated

Activity Mon [51.61]

Use this option to check zone activity. If zones programmed for zone activity checks are not activated within the programmed time period, and/or number of set/unset cycles, a zone masked fault is indicated at the panel. Six different combinations of check criteria are available for each zone.

Each criteria type can be programmed to check the number of days, the set/unset cycles or both. The default value is both.

1=Mode   The mode can be set to one of three options: Max Period, Max Unsets or Either.

2=MAX Period   The time period that zone activity is checked can be set to between 1 and 28 days. The default is 14 days.

3=MAX Unsets   This is the number of programmable set/unset cycles that must take place before a zone masked fault is indicated at the panel. The number of set/unsets can be programmed from 1 to 10. The default is 7.

Lockout [51.62.1]

Use this option to set the number of invalid code attempts that can be made before keypad lockout occurs. Keypad lockout prevents any entry via all keypads associated with the groups assigned to the keypad where the invalid attempts were made. The lockout lasts for 5 minutes. If you are locked out, and after the lockout period, you can make another x invalid code attempts before being locked out again, where x is the lockout value.

Entry of a valid code resets the lockout counter. The number of lockout attempts between each lockout can be programmed between 0 and 10. The default is 5 and 0 disables the function.

Lockout Tamper [51.62.2]

Use this option to set the number of invalid code attempts that can be made before system tamper occurs.

The default is 15 and the range is 0 to 21. 0 disables the function.

Banner Alerts [51.63]

Use this option to program whether system alerts are displayed on the keypad banner. If enabled, system events are indicated on the display. The default setting is disabled.

Set Override [51.64]

Use this option to change the type of user that can override specific fault events to set the system.

A different value can be programmed for each group.

Reset levels [51.65]

This parameter determines the type of user that can reset specific fault types.

Note: This parameter affects and is affected by parameters **51.06** (System Reset), **51.07** (Tamper Reset) and **51.22** (PA Reset). If the parameter reset level is changed at **51.65** it is reflected at **51.06**, **51.07** and **51.22**.

Min PIN Size [51.66]

Use this option to set the minimum size of each user code. This can be set from four to six digits. The default is four digits.

[51.67] Not used

Line Fail [51.68]

Use this option to program the period between the panel being alerted by a communication module of a Line Fail condition and the user being alerted of the alarm condition.

The default is 50 seconds and the range is 0 to 1800 seconds.

Note: The communication module may take up to 40 seconds to alert the panel of a Line Fail condition. This time is in addition to the programmed time of 0 to 1800 seconds.

This parameter affects all communication modules on the system.

Alert Inds [51.69]

Use this option to switch off the audio alert indication.

0=No Indication

1=Audio Only (default setting)

2=Visual Only (only when parameter 63 enabled)

3=Audio/Visual (only when parameter 63 enabled)

SWDC Set Dly [51.70]

Enable this parameter to delay the indication of open zones at the start of a set sequence while the Switch DC output (53.08) is active. This includes keypad text and sounders.

If there are no outputs programmed as Switch DC, there is no delay at the start of the set.

MF BL Enable [51.71]

Enable this option to send an SIA event if the battery is low and there is a mains power failure. When the event is sent, the Power Delay time set in parameter 51.20 stops immediately.

Max Alm Cause [51.72]

Use this option to define the range of valid cause codes agreed with the Alarm Receiving Centre. When this function is enabled, a cause code must be entered by the user to perform a system reset. To disable, set the alarm cause code to 000.

Guard Unset [51.73]

Enable this option to allow a type 1 user code to unset the system if an alarm has occurred. This gives the type 1 user 60 minutes to check for the cause of the alarm and set the system. Once the system is set the type 1 user can no longer unset it.

Backup Link [51.74]

Use this option to switch to another communications method if the current one fails to report.

0=Disabled

1=GPRS-PSTN To switch to Telecoms communication if the Ethernet/GPRS fails to report.

2=PSTN-GSM To switch to GSM communication if the Telecoms fails to report.

3=GPRS-GSM To switch to GSM communication if the GPRS fails to report.

Backup Timer [51.75]

Use this option to set the time that the backup link is active.

The default is 90 seconds and the range is 0 to 300 seconds.

MAX LEDs off [51.76]

0=Disabled   LEDs are on regardless of group set state.

1=Enabled   Turns the MAX LEDs off in the set state (on a MAX[4], LED 1 remains on in the Set state).

Duress User [51.77]

Use this option to allow duress to be added to a user's attributes.

0=Disabled, **1=Enabled**.

Program Zones [52]

Program zones menu

```
52 = Program Zones

      ── 1 = All Zones – Select a zone, and then press ent

                         └── Select an attribute (see table below)

                             If you select 1 = Function, scroll to a zone function or type
                             its number directly, for example 19 to display 19 = Fire

      ── 2 = RF Zones – Select a zone, and then press ent

                         └── Select an attribute (see table below)

                             If you select 1 = Function, scroll to a zone function or type
                             its number directly, for example 19 to display 19 = Fire
```

Use this option to modify zone programming and zone attributes. The programmable options are shown below:

Attributes	Description
1 = Function	Assign zone type
2 = Descriptor	16 character (max.) alpha-numeric description
3 = Chime	Momentary chime effect if zone opened while unset=enabled
4 = Omit	Zone can be omitted=enabled
5 = Part	Zone included in part setting of system=enabled
6 = TimeResp.	Modify circuit debounce time
7 = Custom SIA	Select SIA event
8 = Activity Mon.	Selects criteria for zone activity checking
9 = SelectRes.	Selects resistance range for zone
10 = Group	Assign zone to a single group on the system
11 = RF options	Setup, learn and test RF devices
12 = Zone Restoral	Send the restoral event of a zone to the ARC
13 = Audio Channel	Allocate a zone to an audio channel

Table 3 Zone Attributes

Selecting Zones

When you enter the option the first zone on the system is displayed with the zone address, function and group assigned on the top line, and the descriptor on the bottom line.

Press **#** to toggle the descriptor to reveal the status of the chime, omit and part attributes. If the attribute is enabled, the initial attribute letter is displayed, if it is disabled, a dash (–) is shown. For example, chime, part and omit enabled display as COP, if omit is disabled the display would be C – P.

Use **A** or **B** to scroll through the zones, or enter the address of a specific zone.

Press **ent** to programme a zone. The first programming attribute **1=Function** is displayed.

Attributes

On entering programming mode for a zone as described above, use **A** or **B** to scroll to an attribute, or enter an attribute number directly, and then press **ent**.

Press **ent** to save the programming and return to the attribute selection level.

Press **esc** at any time when assigning attributes 1 and 3 to 13 to abort programming and return to the attribute selection level. When the attribute is **2=Descriptor** the assigned alpha-numeric text is saved.

1=Function

The Function attribute displays the address and the current function of the selected zone along with the zone function reference number. You can scroll through the zone functions or you can enter a zone function reference number directly, for example, enter 19 to display zone function **19=FIRE**. For zone function details, see the *Zone Function menu* on page 95 and subsequent pages.

Once the required zone function is displayed, press **ent** to assign it to the zone.

2=Descriptor

Use this attribute to add an alpha-numeric descriptor of up to 16 characters to a zone. You can use the inbuilt character set and/or library options.

When you enter the attribute, the current descriptor (blank by default) is displayed on the top line and an underscore shows where the next character will be positioned. A selection of the alphabet is shown on the bottom line and the cursor flashes on the letter L.

Press **∗** to erase the characters already assigned to the descriptor.

Use **A** or **B** to move the alphabet left or right until the required character is positioned underneath the flashing cursor. When the required character is in position press **ent** to copy the character to the descriptor on the top line. Repeat this procedure to assemble the required zone descriptor.

Text Case and Library

When you enter the attribute the alpha-numeric characters are presented in upper case. Press **#** to toggle the characters to lower case.

Press **#** when the lower case alphanumeric characters are displayed to toggle to the library words. Use **A** or **B** to scroll through the words, or enter a reference number directly (see *Appendix A: Library*). When the required word is displayed, press **ent** to copy it to the descriptor.

Note: Library words are a maximum of 12 characters and upper case only.

3=Chime

Enable the Chime attribute to make a zone chime momentarily whenever it is opened while the system is unset. The Chime attribute defaults to 0 (disabled) for all zone functions.

Use **A** or **B** to toggle the status of the Chime attribute, and then press **ent** to accept the programming.

Note: This attribute only works when the **Chime [15]** option is enabled.

4=Omit

Enable the Omit attribute to allow these zone omit functions to be programmed, **11=OMIT ZONES**, **46=GROUP OMIT**).

The Omit attribute defaults to 0 (disabled) for all zone functions.

Use **A** or **B** to toggle the status of the Omit attribute, and then press **ent** to accept the programming.

5=Part

Disable the Part attribute to ensure the zone is excluded from the setting procedure when the part setting options is used to set the system: **13=PART SET**. The Part attribute defaults to 1 (enabled) for all zone functions except zones programmed as **09=Keyswitch**.

Use **A** or **B** to toggle the status of the Part attribute, and then press **ent** to accept the programming.

6=Resp. Time

This function is only applicable to zones on RIO rev 1.2 and Smart PSU rev 0.7 and above.

Use this option to select either Fast (10 ms), System (default value programmed in **Parameters [51]**, option 27) or Slow (750 ms), for each zone.

7=Custom SIA

Use this option to change a zone's SIA mnemonic. The default is the standard SIA mnemonic for each zone type.

The customisable mnemonics are shown in the following table:

No	Event text	Description	Alarm	Closed	Omit	Unomit	Troub	ResTr.	Test	Tamp
1	Default									
2	AT/R Power	AC Trouble, AC Restoral	AT	AR	BB	BU	BT	BJ	BX	TA
3	BA/R Burglary	Burglary Alarm, Burglary Restoral	BA	BR	BB	BU	BT	BJ	BX	TA
4	DG/D Access	Access Granted, Access Denied	DG	DD	BB	BU	DT	DJ	BX	TA
5	FA/R Fire	Fire Alarm, Fire Restoral	FA	FR	FB	FU	FT	FJ	FX	TA
6	GA/R Gas	Gas Alarm, Gas Restoral	GA	GR	GB	GU	G	GJ	GX	TA
7	HA/R Holdup	Holdup Alarm, Holdup Restoral	HA	HR	HB	HU	HT	HJ	BX	TA
8	KA/R Heat	Heat Alarm, Heat Restoral	KA	KR	KB	KU	KT	KJ	BX	TA
9	LT/R Line Fail	Line Trouble, Line Restoral	LT	LR	BB	BU	BT	BJ	BX	TA
10	MA/R Medical	Medical Alarm, Medical Restoral	MA	MR	MB	MU	MT	MJ	BX	TA
11	PA/R Panic	Panic Alarm, Panic Restoral	PA	PR	PB	PU	PT	PJ	BX	TA
12	QA/R Assist	Emergency Alarm, Emergency Restoral	QA	QR	QB	QU	QT	QJ	BX	TA
13	RO/C Relay	Relay Open, Relay Closed	RO	RC	BB	BU	BT	BJ	BX	TA
14	SA/R Sprinklr	Sprinkler Alarm, Sprinkler Restoral	SA	SR	SB	SU	ST	SJ	BX	TA
15	TA/R Tamper	Tamper Alarm, Tamper Restoral	TA	TR	TB	TU	BT	BJ	TX	TA
16	WA/R Water	Water Alarm, Water Restoral	WA	WR	WB	WU	WT	WJ	BX	TA
17	YT/R Battery	Battery Alarm, Battery Restoral	YT	YR	BB	BU	BT	BJ	BX	TA
18	ZA/R Freezer	Freezer Alarm, Freezer Restoral	ZA	ZR	ZB	ZU	ZT	ZJ	BX	TA

Table 4 Customisable Mnemonics

Note: If two zones, programmed as Custom SIA (with the same type assigned, e.g. both WA/R) activate within the confirm time window in SET or UNSET condition, a CONFIRM is logged.

8=Activity Mon.

Use this attribute to check a zone's activity during a set time period or set/unset cycle. The options are:

0=None (default), **1=Type1**, **2=Type2**, **3=Type3**, **4=Type4**, **5=Type5**, **6=Type6**

If the zone does not activate at least once within the programmed criteria a zone masked fault is indicated at the panel. The fault is logged as a masked event indicating that the zone has been inactive for the programmed period. Refer to **Activity Monitoring [51.61]**.

9=Res. Select

See **Resistance Select [51.46]**.

10=Group

Note: The Groups attribute is only available if groups have been enabled on the system (refer to option **Options [63]**).

The Group attribute allows the zone to be assigned to a single group on the system. All zones default to Group 1.

Press the number of the group to which the zone is to be reassigned, and then press **ent**.

Star (∗) Group Function

Certain zone functions have an additional Group attribute feature that allows the other groups to be affected by their operation.

Press ∗ when allocating the group to the zone.

When you press ∗ the display indicates the group currently assigned to the zone and prompts for other groups to be added, for example 1∗1 – – – – – – – –, pressing 4 and 7 assigns 1∗ 1 – – 4 – – 7 –.

Final, Secure Final, Part Final Keyswitch and Push Set Zones

If the star ∗ group feature is assigned a zone programmed as Final, Secure Final, Part Final or Push Set, then closing the zone when setting multiple groups terminates the setting procedure for all groups assigned to the zone.

Refer to the zone functions for further information on the operation of this feature.

Exit Zones

The star ∗ group feature can be assigned to a zone programmed as Exit. This allows an Exit zone to be activated in a group which is not currently being unset without activating an Intruder alarm condition.

Refer to the zone functions for further information on the operation of this feature.

System Alarms

Flex panels have tamper and alarm monitoring circuits that are not programmable. These circuits maintain the integrity of the system and all correspond to Group A1.

Zone	Alarm	Description
0001	CUBATT	Control unit battery low
0002	CUAC	Control unit AC fail
0003	LID TAMPER	Control unit lid tamper
0004	AUX TAMPER	Control unit tamper return

Table 5 Control Panel Alarms

11=RF options

These sub-options are available:

1=Serial No.   The serial number of the wireless detector associated with this zone is displayed if this already exists. Press **#** to view the serial number in hexadecimal format. To learn a new detector, program the serial number manually or use Self-Learn mode.

If you enter the serial number manually, select the device type: **1=Alpha** or **2=V2**. To program a serial number using Self-Learn mode:

1. Press ✱ instead of typing a serial number.

2. Insert the battery in the detector and activate the tamper switch. The serial number of the detector is recorded and displayed for 2 seconds.

If the signal strength is less than 3/10, the message **Signal strength too low** is displayed for 2 seconds.

If there is already an identical serial number on the system, the message **Zone already allocated** is displayed followed by the zone details.

If the detector is a multi-loop device, the **2=Loop No** option is displayed. Enter the loop number.

Note: If the RF device does not learn, remove the battery, short circuit the battery terminals, replace the battery and repeat the above procedure.

2=Loop No.   If the wireless device has multiple inputs (loops) use this option to enter a loop number from 1 to 6, or 0 if it is a single input device.

3=Supervision   Provides periodic supervision. **0=Disabled** or **1=Enabled**.

4=Auto Reset   Enable to force the zone to close automatically after five seconds if no close signal is received from the transmitter. This is useful installations where many motion sensors are activated at the same time.

5=Signal Level   Displays the current signal level of the device.

12=Zone Restoral

Use this attribute to send the restoral event of an individual zone, with the trigger event to the ARC. This is also dependent on the global zone restoral (56.1.1.2/3/4 (SIA/MICROTECH/CONTACT_ID).18) setting.

13=Audio Channel

Use this attribute to allocate a zone to an audio channel. More than one zone can be allocated to the same audio channel.

Scroll through the available channels, and then press **ent** to select the available audio channel.

Zone Function menu

01 = Final	14 = PA Silent	28 = Video
02 = Exit	15 = PA Delay	29 = Video Exit
03 = Intruder	16 = PA Delay Silent	32 = Set Log
05 = Security	18 = Spare	33 = Custom-A
07 = Entry	19 = Fire	34 = Custom-B
08 = Push Set	20 = Tamper	39 = Keyswitch Reset
09 = Keyswitch	22 = Beam Pair	40 = Bell Fail
10 = Secure Final	23 = Battery Low	41 = Intr Low
11 = Part Final	24 = Line Fail	42 = Intr High
12 = Part Entry	25 = AC Fail	43 = PSU Fault
13 = PA	26 = Log	44 = Fault

01 Final

Zones programmed as Final initiate the unsetting procedure and terminate setting procedure; opening the Final zone when the system or group is set starts the entry timer; opening and then closing the Final zone during the exit procedure sets the system or assigned groups, providing all the zones are closed. The opening (+) and closing (–) of Final zones during the setting and unsetting procedures are recorded in the event log.

Pressing ✶ when programming a Final zone doubles the entry time of the group.

Opening a Final zone during the exit time is reported on the keypad as an open zone; the entry/exit horns bleep rapidly to indicate that the zone is open.

Note: The termination feature of a Final zone can be extended to terminate the setting of multiple groups by pressing ✶ when assigning a group to the zone. Refer to the Star ✶ Group Function.

02 Exit

Zones that protect the entry and exit routes are programmed as Exit. During the setting and unsetting procedures Exit zones have a non-alarm operation. If the Exit zone is activated while the system is set, without the unsetting of the group being initiated, an Intruder alarm condition is activated.

Opening an Exit zone during the exit time is reported on the keypad as an open zone; the entry/exit horns bleep rapidly to indicate that the zone is open.

Note: The Exit zone can be assigned to multiple groups by pressing ✶ when assigning a group to the zone. This allows an Exit zone to be activated in a group which is not currently being unset without activating an Intruder alarm. Refer to the Star ✶ Group Function.

03 Intruder

The Intruder function is inactive when the system is unset. When the system is set, activation of an Intruder zone causes a full alarm activation that requires to be reset with a code authorized for System Reset (refer to **System Reset [51.6]** and **Reduce Reset [51.55.3]**).

All zones are programmed as Intruder by default, including the zones on RIOs that are added to the system at a later date.

05 Security

The Security zone function is continuously operational, except that a Security zone activation when the system is unset generates a local alarm (Horn outputs activated) that does not require a system reset. Any valid code (type 2 or above) cancels the alarm and resets the system. An activation in the set state generates a full alarm that requires a system reset. The activation (+) and restoration (–) of Security zones is recorded in the event log.

07 Entry

This function initiates the unsetting procedure in the same way as a Final zone. However, during the setting routine an Entry zone operates as an Exit zone type. This function is normally used in conjunction with a Push Set zone, which acts as the exit terminator for the setting procedure.

Pressing ✷ when programming an Entry zone doubles the entry time of the group.

Opening an Entry zone during the exit time is reported on the keypad as an open zone, and the entry/exit horns bleep rapidly to indicate that the zone is open.

08 Push Set

This zone function is used to terminate the setting routine. The system sets when the Push Set zone, usually a push button, is activated. The entry/exit horn stops immediately when the button is pressed and the system sets after four seconds, allowing the doors to settle to the closed state. The Push Set zone remains inactive until the next setting routine.

Note: The Push Set zone can be either 1 kΩ going to 2 kΩ or 2 kΩ to 1 kΩ - refer to Installation Manual (II1-0033), System Architecture for wiring details. The first time that the Push Set is used to terminate the setting, the button needs pressing twice. The first press identifies the normal status of the button to the system.

Activating a Push Set zone during the exit time is not reported on the keypad as an open zone.

Note: The termination feature of a Push Set zone can be extended to terminate the setting of multiple groups by pressing ✷ when assigning a group to the zone. Refer to the Star ✷ Group Function.

09 Keyswitch

Use the Keyswitch function to use a zone as an on/off switch for the system or assigned groups. Operating a Keyswitch zone when the system is unset starts the timed full setting routine and the exit time is applied. The system sets when the exit time expires or a Final or Push Set is activated.

Note: Assign a **#** to the Keyswitch zone function to cause the Instant setting routine to be activated. In this case the exit time is not applicable. If a Keyswitch Zone has its omit attribute enabled, activation of the Keyswitch force sets the assigned groups.

When the Keyswitch is activated twice during the exit time of an autoset, the autoset is temporarily cancelled for a few seconds, then it restarts the exit time causing the panel to reset.

Operating a Keyswitch zone type during the pre-warn period of an autoset starts a Force Set. If you then activate the switch again (i.e. unset with Keyswitch) before the panel sets, the pre-warn continues on the autoset.

Note: When the Keyswitch is activated the second time to take the panel back into pre-warn, it can be up to 10 seconds before the pre-warn tones at the keypad start up again.

If the system is set, operating a Keyswitch immediately unsets the assigned groups and there is no entry time countdown.

The Part attribute of the Keyswitch function defaults to 0 (disabled) and the standard Keyswitch function full sets the system. To part set the system using the Keyswitch, enable the Part attribute.

Note: The operation of a Keyswitch zone can be extended to the setting and unsetting of multiple groups by pressing ✶ when assigning a group to the zone. Refer to the Star ✶ Group Function.

The standard programming of the Keyswitch function requires a momentary change from 1 kΩ to 2 kΩ to both set and unset the system. If the Keyswitch connected has a latching mechanism, press ✶ when assigning the function. The display indicates **09=KEYSWITCH** has been assigned. The Keyswitch operation is as follows: 1 kΩ to 2 kΩ sets the system; 2 kΩ to 1 kΩ unsets the system.

The Keyswitch function can also be programmed to reset alarms (refer to **Keyswitch Level [51.14]**). If the Keyswitch is assigned a sufficient type to reset the alarm condition, the alarm is cancelled and immediately reset when the Keyswitch is used to unset the system following an alarm activation.

Note: The activated zones are not displayed on the keypad when a Keyswitch is used to reset the alarm.

10 Secure Final

This zone has dual functionality:

▪ When the system is setting, set or unsetting operation is identical to the Final zone function.

▪ When the system is unset operation is identical to the Security zone function.

Pressing ✱ when programming a Secure Final zone doubles the entry time of the group.

Opening a Secure Final zone during the exit time is reported on the keypad as an open zone and the entry/exit horns bleep rapidly to indicate that the zone is open.

The termination feature of a Secure Final zone can be extended to terminate the setting of multiple groups by pressing ✱ when assigning a group to the zone. Refer to the Star ✱ Group Function.

11 Part Final

This zone has dual functionality:

▪ When the system is full set operation is identical to the Final zone function.

▪ When the system is part set operation is identical to the Intruder zone function.

Pressing ✱ when programming a Part Final zone doubles the entry time of the group.

Opening a Part Final zone during the exit time is reported on the keypad as an open zone; the entry/exit horns bleep rapidly to indicate that the zone is open.

12 Part Entry

This zone has dual functionality:

▪ When the system is full set operation is identical to the Exit zone function.

▪ When the system is part set operation is identical to the Entry zone function.

Pressing ✱ when programming a Part Entry zone doubles the entry time of the group.

13 PA

The PA (Personal Attack) function is continuously operational. Activation of this zone type overrides the Bell Delay parameter and causes an instant full alarm condition. A PA Reset authorized code is required to reset the condition (refer to **Parameters [51]**, **22=PA Reset**). Intruder outputs are not activated by PA zones.

Note: If a PA zone is open, it is indicated on the keypad whenever a valid code is entered. The group that the open PA is assigned to cannot be set until it is closed.

14 PA Silent

The PA Silent function is identical to the PA function, with the exception that there is no audible or visible indication of the activation; that is, no bells or strobes are activated. Only the PA output (normally channel 2 on the digital communicator) signals the alarm. The activation (+) and restoral (–) of PA Silent zones is recorded in the event log.

Notes:

1. At the time of setting, any PA Silent zones that are currently open are reported to the user.

2. Engineer mode cannot be exited if a PA Silent zone is open.

15 PA Delay

The PA Delay function is identical to the PA function, with the exception that the PA output activation can be delayed for up to 60 seconds and is set with the **PA Delay [51.13]** option. During the period of delay the entry/exit horns activate to remind the user that the PA Delay is counting down. Entering a valid code or closing the PA Delay zone aborts the alarm.

Note: If a PA Delay zone is open, it is indicated on the keypad whenever a valid code is entered. The group that the open PA Delay is assigned to cannot be set until it is closed.

16 PA Delay Silent

The PA Delay Silent function is identical to the PA Delay function, with the exception that there is no audible or visible indication of the activation; that is, no bells or strobes are activated. Only the PA output (normally channel 2 on the digital communicator) signals the alarm. The activation (+) and restoral (–) of PA Delay Silent zones are recorded in the event log.

Note: At the time of setting, any PA Delay Silent zones that are currently open are reported to the user.

18 Spare

The Spare function allows any unused zones to be ignored. The resistance readings from the circuit, including the tamper conditions, do not activate an alarm condition.

Note: We recommend that all unused zones are programmed as Spare and that a 1 kΩ 1% resistor is connected across each of these zones.

19 Fire

The Fire function is continuously operational. When activated, a Fire zone overrides the Bell Delay parameter and activates an instant alarm (Bell, Strobe and Fire). The keypad buzzer and control panel horn output, if fitted, emit an interrupted tone (one second on, 0.5 seconds off), easily distinguishable from all other alarm conditions. Any valid code entry cancels the Fire activation.

20 Tamper

The Tamper function is continuously operational. When a Tamper zone is activated (1 kΩ to 2 kΩ), a tamper alarm is generated. A Tamper Reset authorized code is required to reset the alarm (refer to **Tamper Reset [51.7]**). If a tamper condition (open or short circuit) occurs, a tamper alarm is also generated.

22 Beam Pair

This function is only operational when two consecutively addressed zones, programmed as Beam Pair, are open in the set condition. Activation is identical to the Intruder function.

The system cannot set if a single Beam Pair is open.

Note: Beam Pair zones must be consecutively addressed. For example, valid Beam Pair addresses are 1036 and 1037.

23 Battery Low

This function is used to monitor the voltage output of a standby battery connected to a power supply. The activation (+) and de-activation (–) of Battery Low zones is recorded in the event log.

24 Line Fail

This function is used to monitor the communication line that a remote signalling device is connected to for communications failure.

When the system is in the unset state, the first activation of a Line Fail zone causes a local alarm and the message **COMMS FAILURE** is displayed, subsequent Line Fail activations do not sound the local alarm; the only indication is the keypad display.

When the system is set, activation of the Line Fail zone overrides the Bell Delay parameter. When the system is unset a local alarm is generated and the keypad gives an indication that a Line Fail zone has activated. If an alarm condition occurs while the Line Fail is active, an instant full alarm is generated.

If the Line Fail zone is active at the point of setting, a warning message is displayed. The user can choose to continue or abort the setting procedure. It is also possible to prevent the system setting if the Line Fail is active by enabling the Stop Set parameter (option 51.18).

25 AC Fail

This function is used to monitor a remote power supply. In the event of a power failure the AC Fail zone is activated; the activation (+) and de-activation (–) of the zone is recorded in the event log.

26 Log

This zone type has no operational function. It is designed to record the activation of a zone in both the set and unset state. The activation (+) and de-activation (–) of Log zones is recorded in the event log.

28 Video

This function is identical to the Intruder function, with the exception that the cumulative number of activations from Video zones, before a full alarm is generated, is programmable. The number of activations required is determined by the Video parameter (option 51.30). The range is 1 to 9. The activation count is incremented when any Video zone in the group activates. The count is reset to zero when the group is unset.

29 Video Exit

This function is identical to the Video function, with the exception that the user can activate the zone during setting and unsetting without incrementing the Video activations count. The Video output is not activated during setting and unsetting.

32 Set Log

This function is identical to the Log function, with the exception that zone activations are only recorded in the event log during the set period.

33 Custom A

This function allows a zone to be assembled. The functionality of the zone (when it activates; the outputs activated; if it sets or unsets the systems; if it logs) are assigned using **Assemble Zones [64]**. Once the Custom A zone has been created, it can be assigned to as many zones as required.

34 Custom B

This function is identical in operation and assembly to Custom A.

39 Keyswitch Reset

The Keyswitch Reset function allows alarms to be cancelled and the system to rearm without unsetting the system. The type of reset authorization is determined by the **Keyswitch Level [51.14]**. The type required to reset Intruder, PA and Tamper alarms is determined by the System Reset, Tamper Reset and PA Reset parameters (options 51.06, 51.07 and 51.22) respectively.

This function is designed to permit a remote signal, for example REDCare's Return Path Signalling feature, to reset the system following an alarm condition.

40 Bell Fail

This zone type is for bells that have diagnostic capabilities and failure outputs. If activated, it causes fault for any bell failure condition.

41 Intr Low

This zone type assigns a low priority to a zone in the event of an intruder alarm. The event is logged as low priority in the event log.

42 Intr High

This zone type assigns a high priority to a zone in the event of an intruder alarm. The event is logged as high priority in the event log.

43 PSU Fault

This zone type triggers a general fault output and logs a PSU fault in the event log. The fault is signalled to the ARC as YP when using SIA format and 314 when using CID format.

44 Fault

This zone type triggers a general fault output and logs a fault in the event log. The fault is signalled to the ARC as IA when using SIA format and 150 when using CID format.

Program Outputs [53]

Use this option to modify the programming of the outputs on the system. You can also change the attributes of the outputs. The programmable options are:

Attributes	Description
1 = Output Function	Assign output type
2 = Output Mode	1 = Latch - requires valid code to reset 2 = Reflex - follows activation status of zones 3 = Pulse (1 - 3000 secs) - activates for programmed period
3 = Output Polarity	0 = POS – 12 V going to 0 V in activation 1 = NEG – 0 V going to 12 V in activation
4 = Diag. Recording	Assigns output to be active during Diagnostic Test
5 = Descriptor	Assigns a descriptor of up to 12 characters for each output
6 = Control	1 = Mode (0=OFF, 1=Toggle, 2=Trigger) 2 = Show Status (0=OFF, 1=ON)
7 = Output Groups	Assign groups to the output
Note: Groups only appear if the Group option is enabled (refer to Groups [63.1]).	

Table 6 Output Attributes

Selecting Outputs

RIO Outputs

When you enter the option the first output on the system is displayed with the output address and function on the top line, and the polarity and assigned groups on the bottom line.

Use **A** or **B** to scroll through the outputs, or enter the address of a specific output.

Press **ent** to programme an output. The first programming attribute **1=Op Function** is displayed.

Control panel outputs

Outputs 1 and 2 on the control panel use addresses 1001 and 1002 respectively

Horn (3)

The Horn output is labled as Output 3 on the PCB. The horn output is fully programmable, Address ✶99 -.Keypad Outputs

The keypad outputs are fully programmable. The address of the keypad output is the keypad address prefixed with a star, for example the output for keypad 06 is ✶06. The function of keypad outputs default to **Entry/Exit Horn**.

The valid keypad addresses and the respective output addresses are indicated in the following table:

Line	Address	Output Addresses
1	0 – 7	10 – 17

Table 7 Addresses of Valid Keypad Outputs

Attributes

Use **A** or **B** to step through the attributes, or enter an attribute number (1 to 7). Once the required attribute is on display, press **ent** to gain access.

Once the attribute has been assigned press **ent** to save the programming and return to the attribute selection level. Press **esc** at any time when assigning attributes to abort programming and return to the attribute selection level.

1=Output Function

The Output Function attribute displays the address and the current function of the selected output along with the output function reference number. You can scroll through the output functions or you can enter an output function number directly, for example, enter 16 to display output function **16=FIRE**.

Once the required output function is displayed, press **ent** to assign it to the output.

2=Output Mode

Each output function defaults to a specific, logical output mode. However, the output mode of each function can be modified to meet special requirements: when reprogrammed, the new mode applies to all outputs assigned to that function. The output modes are:

1=Latch   the output remains active until a valid code is entered.

2=Reflex   the output follows the activity of the triggering event, for example, the Set output follows the setting and unsetting of the group.

3=Pulse   the output remains active for the programmed pulse time of 1 to 3000 seconds (50 minutes).

3=Output Polarity

Use this attribute to set the normal operational state of the output. All outputs are referred to having positive (0=POS) or negative (1=NEG) polarity. An output programmed as positive polarity is 12 V in the normal condition and goes to 0 V when activated. A negative polarity output goes from the normal condition of 0 V to 12 V in the active state. All outputs except SET (09) default to positive output mode.

Note: The Switch DC output is a positive polarity output, however, the normal condition is 0 V going to 12 V when activated. The output mode is normally Pulse.

4=Diag Recording

Enable this attribute so that it is used during the diagnostic test (see **Record [61.2.3]**). This test can also be carried out remotely.

5=Descriptor

Use this attribute to assign a descriptor of up to 12 characters to each output.

6=Lighting

Use this attribute to allow users to control the state of certain panel outputs from the TouchCenter. There are two options:

1=Control   Each lighting output can be controlled by setting to 0=OFF, 1=Toggle or 2=Trigger.

If the Control is set to Toggle or Trigger for an output, it will be controllable via the TouchCenter whose group map contains the output's group. If the Control is set to OFF it cannot be controlled or viewed by the TouchCenter.

2=Show Status   The status can be either 0=OFF or 1=ON. When set to ON the light shows the state of the output.

7=Output Groups

Note: The Groups attribute is only available if groups have been enabled on the system (refer to **Options [63]**).

Use this attribute to assign the output to groups on the system. An output can be assigned to more than one group. All outputs default to all groups on the system.

When you select the attribute, the groups that the output is currently assigned to are displayed. Press the relevant number keys to toggle the status of the group and press **ent**.

If the group number is displayed on the top line, the group is assigned to the output.

If a dash (–) is displayed in place of the group number, the group has been removed from the output.

The output activates if triggered by an event in any of the groups assigned to that output unless output group status has been programmed.

Group Status

This group attribute offers an additional feature that makes the operation of the output conditional on the set status of each of the system groups. An output assigned Group Status only activates if the set conditions of the programming are met, for example, an Intruder output used to trigger a communicator can be programmed to activate only if groups 2 and 4 are set and group 3 is unset.

```
Groups  12345678
STATUS >-SUS----
```

To assign the Group Status conditions, press ✱ when selecting the groups. An arrow (>) is displayed on the bottom line as well as the current Status.

Press the relevant number to toggle the status of the groups, and then press **ent** to accept the programming. The available group status conditions are:

S = Set   group must be set to allow output to activate.

U = Unset   group must be unset to allow output to activate.

– = Set or unset   output activation is independent of the group status.

Output Functions

This table shows all the outputs and the zone functions and conditions that result in their activation.

Zone Function		Bells	Strobe	PA	Intruder	Tamper	Reset	Switch DC	Set	Spare	Ready	Security	AC Fail	Batt Low
		01	02	03	04	05	07	08	09	11	12	13	14	15
01	Final	S	S	–	S	T	X	–	–	–	A	–	–	–
02	Exit	S	S	–	S	T	–	–	–	–	A	–	–	–
03	Intruder	S	S	–	S	T	–	–	–	–	A	–	–	–
05	Security	S	S	–	S	T	–	–	–	–	A	A	–	–
07	Entry	S	S	–	S	T	–	–	–	–	A	–	–	–
08	Push Set	–	–	–	–	T	X	–	–	–	–	–	–	–
09	Keyswitch	–	–	–	–	T	X	X	S	–	–	–	–	–
10	Secure Final	S	S	–	S	T	X	–	–	–	A	U	–	–
11	Part Final	S	S	–	S	T	X	–	–	–	A	–	–	–
12	Part Entry	S	S	–	S	T	–	–	–	–	A	–	–	–
13	PA	A	A	A	–	T	–	–	–	–	A	–	–	–
14	PA Silent	–	–	A	–	T	–	–	–	–	A	–	–	–
15	PA Delay	A	A	A	–	T	–	–	–	–	A	–	–	–
16	PA Delay Silent	–	–	A	–	T	–	–	–	–	A	–	–	–
18	Spare	–	–	–	–	T	–	–	–	–	–	–	–	–
19	Fire	A	A	–	–	T	–	–	–	–	–	–	–	–
20	Tamper	S	S	–	S	A	–	–	–	–	A	–	–	–
22	Beam Pair	S	S	–	S	T	–	–	–	–	A	–	–	–
23	Battery Low	–	–	–	–	T	–	–	–	–	–	–	–	U
24	Line Fail	–	–	–	–	T	–	–	–	–	–	–	–	–
25	AC Fail	–	–	–	–	T	–	–	–	–	–	–	A	–
26	Log	–	–	–	–	T	–	–	–	–	A	–	–	–
28	Video	S	S	–	S	T	–	–	–	–	A	–	–	–
29	Video Exit	S	S	–	S	T	–	–	–	–	A	–	–	–
32	Set Log	–	–	–	–	T	–	–	–	–	–	–	–	–
33	Custom-A	?	?	?	?	?T	?	?	?	?	?	?	?	?
34	Custom-B	?	?	?	?	?T	?	?	?	?	?	?	?	?
39	Keyswitch Reset	–	–	–	–	T	X	–	–	–	–	–	–	–
40	Bell fail	–	–	–	–	–	–	–	–	–	–	–	–	–
41	Intr Low	S	S	–	S	T	–	–	–	–	A	–	–	–
42	Intr High	S	S	–	S	T	–	–	–	–	A	–	–	–
43	PSU Fault	–	–	–	–	T	–	–	–	–	–	–	–	–
44	Fault	–	–	–	–	T	–	–	–	–	–	–	–	–

Key:

S   Activates when system is Set

P   Activates when system is Part Set

U   Unset

A   Activated in any condition

–   No effect

O   Activates when zone is omitted

?   Activation dependant on system programming

X   Activates during Exit Time

E   Activates during Entry Time

L   Switches output off if linked to destination output

T   Activates if zone resistance is less than value for tamper s/c or greater than value for tamper o/c

		Output Functions										
		Fire	Horn	E/E Horn	Part Set	Confirm	Line Fail	Video	Comm Fail	DLYD Fire	No Re-arm	Timer-A	Timer-B
Zone Function		16	17	18	19	20	21	22	23	27	28	29	30
01	Final	–	S	SXE	–	-	–	S	–	–	S	–	–
02	Exit	–	S	SXE	–	S	–	S	–	–	S	–	–
03	Intruder	–	S	SXE	–	S	–	S	–	–	S	–	–
05	Security	–	S	A	–	–	–	S	–	–	S	–	–
07	Entry	–	S	SXE	–	-	–	S	–	–	S	–	–
08	Push Set	–	–	X	–	–	–	–	–	–	–	–	–
09	Keyswitch	–	–	–	X	–	–	–	–	–	–	–	–
10	Secure Final	–	A	A	X	S	–	S	–	–	S	–	–
11	Part Final	–	A	SXE	X	S	–	S	–	–	S	–	–
12	Part Entry	–	A	XE	–	S	–	S	–	–	S	–	–
13	PA	–	A	–	–	–	–	–	–	–	A	–	–
14	PA Silent	–	–	–	–	–	–	–	–	–	–	–	–
15	PA Delay	–	A	A	–	–	–	–	–	–	A	–	–
16	PA Delay Silent	–	–	–	–	–	–	–	–	–	–	–	–
18	Spare	–	–	–	–	–	–	–	–	–	–	–	–
19	Fire	A	A	A	–	–	–	V	–	A	A	–	–
20	Tamper	–	A	A	–	–	–	S	–	–	S	–	–
22	Beam Pair	–	S	SXE	–	–	–	S	–	–	S	–	–
23	Battery Low	–	–	–	–	–	–	–	–	–	–	–	–
24	Line Fail	–	–	U	–	–	A	–	–	–	–	–	–
25	AC Fail	–	–	–	–	–	–	–	–	–	–	–	–
26	Log	–	–	–	–	–	–	–	–	–	–	–	–
28	Video	–	S	SXE	–	S	–	S	–	–	S	–	–
29	Video Exit	–	S	SXE	–	S	–	S	–	–	S	–	–
32	Set Log	–	–	–	–	–	–	–	–	–	–	–	–
33	Custom-A	?	?	?	?	?	?	?	?	?	?	?	?
34	Custom-B	?	?	?	?	?	?	?	?	?	?	?	?
39	Keyswitch Reset	–	–	–	–	–	–	–	–	–	–	–	–
40	Bell fail	–	–	–	–	–	–	–	–	–	–	–	–
41	Intr Low	–	S	SXE	–	S	–	S	–	–	S	–	–
42	Intr High	–	S	SXE	–	S	–	S	–	–	S	–	–
43	PSU Fault	–	–	–	–	–	–	–	–	–	–	–	–
44	Fault	–	–	–	–	–	–	–	–	–	–	–	–

Key:

S Activates when system is Set

P Activates when system is Part Set

U Unset

A Activated in any condition

– No effect

O Activates when zone is omitted

? Activation dependant on system programming

X Activates during Exit Time

E Activates during Entry Time

L Switches output off if linked to destination output

T Activates if zone resistance is less than value for tamper s/c or greater than value for tamper o/c

		Output Functions												
		Zone Omit	Custom A	Custom B	Reset RQD	Fail Set	Duress	Illegal Code	Abort	Unset	Set Late	U/S Early	Pre-Warn	Autoset	Link A-E
Zone Function		32	34	35	37	40	41	42	44	45	46	47	48	49	51-55
01	Final	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
02	Exit	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
03	Intruder	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
05	Security	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
07	Entry	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
08	Push Set	O	–	–	–	–	–	–	–	–	U?	S?	–	–	?
09	Keyswitch	O	–	–	–	UX	–	–	–	U	–	–	?	–	?
10	Secure Final	O	–	–	–	–	–	–	–	–	–	–	?	–	?
11	Part Final	O	–	–	–	–	–	–	–	–	–	–	?	–	?
12	Part Entry	O	–	–	–	–	–	–	–	–	–	–	?	–	?
13	PA	O	–	–	–	–	–	–	–	–	–	–	?	–	?
14	PA Silent	O	–	–	–	–	–	–	–	–	–	–	?	–	?
15	PA Delay	O	–	–	–	–	–	–	–	–	–	–	?	–	?
16	PA Delay Silent	O	–	–	–	–	–	–	–	–	–	–	?	–	?
18	Spare	–	–	–	–	–	–	–	–	–	–	–	–	–	–
19	Fire	O	–	–	A?	–	–	–	–	–	–	–	?	–	?
20	Tamper	O	–	–	A?	–	–	–	–	–	–	–	?	–	?
22	Beam Pair	O	–	–	–	–	–	–	–	–	–	–	?	–	?
23	Battery Low	O	–	–	–	–	–	–	–	–	–	–	?	–	?
24	Line Fail	O	–	–	–	–	–	–	–	–	–	–	?	–	?
25	AC Fail	O	–	–	–	–	–	–	–	–	–	–	?	–	?
26	Log	O	–	–	–	–	–	–	–	–	–	–	?	–	?
28	Video	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
29	Video Exit	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
32	Set Log	O	–	–	–	–	–	–	–	–	–	–	?	–	?
33	Custom-A	O?	?	?	?	?	?	?	?	?	?	?	?	?	?
34	Custom-B	O?	?	?	?	?	?	?	?	?	?	?	?	?	?
39	Keyswitch Reset	O	–	–	–	–	–	–	–	–	–	–	?	–	?
40	Bell Fail	–	–	–	–	–	–	–	–	–	–	–	–	–	–
41	Intr Low	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
42	Intr High	O	–	–	S?	–	–	–	–	–	–	–	?	–	?
43	PSU Fault	O	–	–	–	–	–	–	–	–	–	–	?	–	?
44	Fault	O	–	–	–	–	–	–	–	–	–	–	?	–	?

Key:

S   Activates when system is Set

P   Activates when system is Part Set

U   Unset

A   Activated in any condition

–   No effect

O   Activates when zone is omitted

?   Activation dependant on system programming

X   Activates during Exit Time

E   Activates during Entry Time

L   Switches output off if linked to destination output

T   Activates if zone resistance is less than value for tamper s/c or greater than value for tamper o/c

		Output Functions						
		RF Jam	RF Super	Bell Fail	Fault	Bell Test	Comms Test	Listen–in
Zone Function		66	67	68	76	77	78	81
01	Final	–	–	–	–	–	–	–
02	Exit	–	–	–	–	–	–	–
03	Intruder	–	–	–	–	–	–	?
05	Security	–	–	–	–	–	–	–
07	Entry	–	–	–	–	–	–	–
08	Push Set	–	–	–	–	–	–	–
09	Keyswitch	–	–	–	–	–	–	–
10	Secure Final	–	–	–	–	–	–	–
11	Part Final	–	–	–	–	–	–	–
12	Part Entry	–	–	–	–	–	–	–
13	PA	–	–	–	–	–	–	?
14	PA Silent	–	–	–	–	–	–	?
15	PA Delay	–	–	–	–	–	–	?
16	PA Delay Silent	–	–	–	–	–	–	?
18	Spare	–	–	–	–	–	–	–
19	Fire	–	–	–	–	–	–	?
20	Tamper	–	–	–	–	–	–	–
22	Beam Pair	–	–	–	–	–	–	–
23	Battery Low	–	–	–	A	–	–	–
24	Line Fail	–	–	–	A	–	–	–
25	AC Fail	–	–	–	A	–	–	–
26	Log	–	–	–	–	–	–	–
28	Video	–	–	–	–	–	–	–
29	Video Exit	–	–	–	–	–	–	–
32	Set Log	–	–	–	–	–	–	–
33	Custom-A	?	?	?	–	–	–	–
34	Custom-B	?	?	?	–	–	–	–
39	Keyswitch Reset	–	–	–	–	–	–	–
40	Bell Fail	–	–	A	A	–	–	–
41	Intr Low	–	–	–	–	–	–	?
42	Intr High	–	–	–	–	–	–	?
43	PSU Fault	–	–	–	A	–	–	–
44	Fault	–	–	–	A	–	–	–

Key:

S	Activates when system is Set		**?**	Activation dependant on system programming
P	Activates when system is Part Set		**X**	Activates during Exit Time
U	Unset		**E**	Activates during Entry Time
A	Activated in any condition		**L**	Switches output off if linked to destination output
–	No effect		**T**	Activates if zone resistance is less than value for tamper s/c or greater than value for tamper o/c
O	Activates when zone is omitted			

01 Bells (Latch)

This output is activated on a full alarm event when the system is set, and is subject to the Bell Time, Bell Delay and No. Re-arm parameters.

02 Strobe (Latch)

This output is activated on a full alarm event during the set state, and is subject to the Bell Delay. It follows the Bell Time, but latches on after the last re-arm.

03 PA (Latch)

This output is activated whenever any of the PA zone types activate. The output is not subject to the Re-arm parameter. It latches on and remains active until a valid code, with the appropriate PA Reset level, is entered.

04 Intruder (Latch)

This output is activated on a full alarm event during the set state. Depending on the programming of **Force Restore [51.56]**, the intruder output restore is either subject to the Confirm Time Window + unset or entry of a valid code with the appropriate system reset level. Refer to the **Force Restore [51.56]** description for more information.

05 Tamper (Latch)

The Tamper output is activated whenever a circuit tamper or lid tamper occurs. The output is not subject to the Re-arm parameter. It latches on and remains active until a valid code, with the appropriate Tamper Reset level, is entered. The output is also activated on the first entry of the engineer code when accessing engineer mode.

Note: The Tamper output is not activated when engineer access is authorized by the user.

07 Reset (Latch)

This output is used as a control line output to latch, freeze and reset movement detector LEDs.

08 Switch DC (Pulse)

This output is used to power detectors that require a momentary power interruption to reset them, for example, break glass or vibration detectors. It reverses its polarity (changes from 0 V to 12 V) for the period of the Pulse output mode when the setting procedure has been initiated.

Note: When wiring detectors to a Switch d.c. output, connect the positive lead of the detector to the 12 V terminal of a power supply and the negative lead to the Switch d.c. output terminal. Do not change the Output Polarity to **1=Neg**.

09 Set (Reflex)

The Set output is activated when the assigned groups on the system are set. It is a Reflex output and follows the set and unset status of the groups.

11 Spare (Latch)

Use this function for outputs that are not being used on the system.

12 Ready (Reflex)

The Ready output is active when all zones in the system (group) are closed, and activates in both the unset and set conditions.

13 Security (Latch)

This output is activated whenever a Security zone is activated. The output is not subject to the Re-arm parameter. It latches on and remains active until a valid code (type 2 or above) is entered.

14 AC Fail (Reflex)

This output indicates the status of the a.c. (mains) power supply. The output activates when the a.c. supply fails or an AC Fail zone is activated. It is reset when the a.c. supply is restored or the AC Fail zone is closed. Activation is delayed subject to the time entered in **20=Power Delay**.

15 Battery Low (Reflex)

This output activates whenever the control unit stand-by battery falls below 10.5 V or a Battery Low zone is activated. It is restored when the voltage rises above 10.5 V or the Battery Low zone is closed.

16 Fire (Latch)

This output is activated whenever a Fire zone is activated. The output is not subject to the Re-arm parameter. It latches on and remains active until a valid code (type 2 or above) is entered.

17 Horn (Latch)

This output is a general alarm output and is activated by most zone types in both the local and full alarm modes. For example, a Fire zone activation causes the Horn output to pulse on and off – on for 0.5 seconds, off for 0.1 seconds. The Horn output is subject to the Bell Time, Bell Delay and No. Re-arm parameters.

18 E/E Horn (Latch)

The entry/exit horn output has a dual function:

▪ In an alarm condition its function is identical to that of the Horn output.

▪ It provides a system status indication during unsetting and setting. The indicated states are as follows:

General Alarm	On 500 ms. Off 500 ms
Clear to Exit	Continuous
Exit interrupted	On 100 ms. Off 100 ms
75% Exit Time	On 200 ms. Off 200 ms
Set	On 600 ms. Off 600 ms (twice)
Normal Entry	On 800 ms. Off 200 ms
75% Entry Time	On 200 ms. Off 200 ms
Fire	ON 500 ms. Off 100 ms
Chime	ON 500 ms. Off 400 ms (twice)

19 Part Set (Reflex)

This output is activated when the assigned groups on the system are part set. This output is a Reflex output and follows the part set and unset status of the groups.

20 Confirm (Latch)

This output is activated when there have been activations in two separate zones. The second activation must occur within the Confirm Time Window. The zones do not have to be in the same group, however, both groups must be assigned to the Confirm output to allow activation. Cross-group confirmation is controlled by the Communications programming in **Internal Telecoms [56.1]** or **GSM [56.5]**. If signalling is by DTMF format, cross-group confirmation occurs on groups that share the same confirm channel. In all other signalling formats, cross-group confirmation occurs on groups that share the same account number.

Note: The Confirm output is used to give positive identification that a genuine intruder alarm condition has occurred and to minimise the possibility of false alarm activations.

21 Line Fail (Reflex)

This output is activated whenever a Line Fail zone is active or the telecom module detects and sustains a line failure for more than 30 seconds.

22 Video (Pulse)

This output is activated by the Video zone when the system is set, and can be used to activate video recorder or video transmission systems.

23 Comm Fail (Latch)

This output is activated whenever there is a communication failure on the telecoms module telephone line. A fail to communicate event overrides the remaining Bell Delay period.

27 Fire Delay (Latch)

This output is activated whenever a Fire zone is activated. Activation is delayed subject to the **03=Abort Time** parameter. The Fire Delay output is not subject to the Re-arm parameter. It latches on and remains active until a valid code (type 2 or above) is entered.

28 No Re-Arm (Latch)

This output is activated on a full alarm event during the set state, and is subject to the Bell Delay parameter. The No Re-arm output is similar to the strobe output, but it stays on at the end of the bell time, until unset.

29 Timer A (Reflex)

This output is controlled by the Timer-A option (refer to **Timers [65]**) and activates in accordance with the programmed on and off times assigned to the function.

30 Timer B (Reflex)

This output is controlled by the Timer-B option (refer to **Timers [65]**) and activates in accordance with the programmed on and off times assigned to the function.

Note: If the Timer A or B outputs are programmed as Latch mode, then they can only be reset by a user code with access to all of the groups assigned to the relevant timer.

32 Zone Omit

This output is activated by **11=OMIT ZONES** or by **54=LINKS**, as soon as a zone is omitted from the system. If the Output Mode attribute is assigned as:

- Reflex (default), the output remains active until the zone is reinstated.
- Latch, the output is reset on entry of a valid code.

34 Custom A (Latch)

This output is activated whenever a Custom-A zone is activated.

35 Custom B (Latch)

This output is activated whenever a Custom-B zone is activated.

37 Reset RQD (Latch)

This output is activated when a system, tamper or PA alarm occurs that needs to be reset.

Refer to **Parameters [51]** for details modifying the code levels assigned to the **06=System Reset**, **07=Tamper Reset** and **22=PA Reset** parameters.

40 Fail Set (Latch)

Fail Set is activated if the system (or assigned groups) fails to set within the time assigned in **35=Fail to Set** (refer to **Parameters [51]**).

41 Duress (Latch)

This function is activated by any code assigned as a Duress Code using **Codes [42]**. The output is not subject to the Re-arm parameter. It latches on and remains active until a valid code (type 2 or above) is entered.

42 Illegal Code (Latch)

This output is activated 60 seconds after a single Dual Code entry or a code entry without the Timer A and/or Timer B times assigned to it (refer to **Schedule [42.1.4]**).

44 Abort (Latch)

This output is activated after a valid code entry during the Abort period on system entry.

45 Unset

This output is activated each time the system (or group) is unset. The default output mode attribute is programmed as pulse, for two seconds. This can be used to activate a buzzer to notify a user that the system has been unset, when using an RF fob.

46 Set Late (Latch)

This output is activated if the system has not been set by the programmed Monitor time (refer to **Status [65.3.1]**).

47 U/S Early (Latch)

This output is activated if the system has been unset before the programmed Monitor time (refer to **Status [65.3.1]**).

48 Prewarn (Reflex)

This output is active during the programmed pre-warning period of the autoset function. The mode is Reflex. The Prewarn emits a constant tone if the auto setting of the system can be extended. If an extension is not possible, Prewarn outputs pulses.

49 Autoset (Reflex)

This output is activated when the system has been set by the autoset function (refer to **Autoset [65.3]**). The default Output Mode attribute is programmed as Reflex, therefore the output remains active until the system unsets.

Note: The Set is also activated when the system autosets.

51 – 55 Link A – E (Reflex)

Link outputs have no inherent function. They are designed for use with **Links [54]** to provide the engineer with a means of activating a specific output address. Link outputs can be activated by any of the link option sources. The operation of the Link output is dependent on the Output Mode and Groups assigned to the output. The Groups assigned to the Link must have at least one group common to the link output if that output is to be activated. This feature can be used to multiply the number of different link outputs available on the system.

Note: When a zone function is the source of a Link output type, then a point-to-point link is available and is as effective as direct wiring.

66 RF Jam (Latch)

This output is activated when an RF RIO detects an interference level sufficient to cause radio jamming.

67 RF Super (Latch)

This output is activated when there is a supervision failure on a supervised RF detector. Activation occurs when the system has received no signals (including periodic check-in signals) from a particular detector within the programmed supervision period.

68 Bell Fail

This output activates when a bell fail zone causes a fault condition.

76 Fault (Latch)

This output activates any time there is a fault condition present on the panel and clears when all the fault conditions have cleared.

The following fault types activate the fault output:

Line Fail (any module), ARC Comms Fail (any module), RF Jam, RF Low Battery, RF Supervision Failure, Bell Fail (from a bell fail zone), AC Fail (panel, AC zone or power supply), Battery Fail (panel, battery zone or power supply), Mask.

SMS signalling faults will not activate the fault outputs.

77 Bell Test

This output activates when Bell Test is selected via option 32, and causes the bell and strobe output to activate. This output is normally used to activate a relay to cut power to the bell.

78 Comms Test (Pulse)

This output is used for remote routine inspection via the downloader software. When a remote inspection is carried out, the output activates for 10 seconds in order to trigger the test input of an external comms device.

81 Listen-in

This output activates after an alarm activation when an audio transmission is in progress.

Links [54]

Links offer a powerful method of interconnecting zones, output functions, codes, keypads, and MAX modules. When you create a link between one of the source types and a valid destination type a links table is constructed. Activating the source of a link activates the destination and this can be used to switch outputs on and off and to omit zones, codes, and keypads from the system.

The number of links that can be assigned is 5.

Programming Links

When you select the Links option, the details of link 01 are displayed. If no link has been assigned the screen displays **01 NOT USED**.

Use **A** or **B** to scroll through the links, or enter a specific link number, for example 03, 05. When the required link is displayed, press **ent** to begin the programming procedure. The system prompts for the Link Source to be assigned. If groups are set then some sources and destinations will not be available for programming

To program links:

1. Press **#** to select the required link source (refer to Table 8 Link Source).

2. Press **A** or **B** to select the actual link source (for example, the zone address or the user code number).

3. If the source is required to toggle the destination on and off, press **✱**. The source is prefixed by a on **✱** the display.

    Note: The link destination is activated by the first operation of the source and then deactivated by the second operation.

4. Press **ent**. The source of the link is assigned and the keypad prompts for the link destination to be allocated.

5. Press **#** to select the required link destination (refer to Table 8 Link Source).

6. Press **A** or **B** to select the actual link destination (for example, the zone address or the output type). To cancel a link program the source as not used.

7. Press **ent**.

8. If the link destination is **d). Output Type** and **Groups** have been enabled (refer to **Options [63]**), allocate each link to at least one group.

    Note: The groups determine which of the assigned output type destinations the link activates.

    The details of the assigned link are displayed.

    Note: If the link is currently active, the source is separated from the destination by a + (plus) symbol. If the link is not active a – (minus) symbol is displayed.

9. Press **A** or **B** to move to the next link to be assigned and repeat the process or press **ent** to escape from the LINKS option.

Source Type	* Modifier	Example Display	Notes
a) Not Used	–		This link is not operational
b) Zone Address	Off	*1014	When the zone is opened the link is active. When the zone is closed the link is inactive.
	On	*1014	When the zone opens the first time, the link is activated. When the zone opens a second time, the link is deactivated.
c) User Code	Off	*001	When the code is entered, the link is activated momentarily only. This option is only practical to trigger a destination event, for example, an output pulse.
	On	**001	When the code is entered the first time, the link is activated. When the code is entered the second time the link is deactivated.
d) Output Address	Off	#1014	When the output is on, the link is active. When the output is off, the link is inactive.
	On	*#1014	When the output turns on the first time, the link is activated. When the output turns on a second time, the link deactivates.
e) MAX Address	Off	01	When the MAX is swiped with a card the link activates momentarily only. This option is only practical to trigger a destination event, for example, an output pulse.
	On	*01	When the MAX is swiped with a card, the link is activated. When the MAX is swiped a second time, the link deactivates.
f) Weekly Schedule	On	WK01	On time activates the link. Off time deactivates the link.
	Off	*WK01	The first on time activates the link. The next on time deactivates the link.

Table 8 Link Source

Destination Type	* Modifier	Notes
a) Not used	–	The link is not operational.
b) Zone Address	–	When the link is active, the zone is omitted from the system
c) User Code	–	When the link is active, the user's PIN and MAX card are not operational.
d) Output Type	–	When the link is active, all outputs programmed with the selected function are activated.
e) Output Address	–	When the link is active, the specific output address is switched on. Please note that when using the output address as the destination, the deactivation of the link will switch the output off immediately, overriding any pulse time or latch mode of the output programming.
f) Keypad Address	–	When the link is active, the buttons on the keypad will not operate.

Table 9 Link Destination

Soak [55]

Use the Soak option to test selected zones for a period ranging from 1 to 14 days. Program the **Soak Time [51.16]** before starting a soak test.

Zones that activate on soak test do not cause alarms but are recorded in the event log and are reported to type 2 (and above) users when the system is unset. At the end of the soak test period, zones revert to normal operation.

The Soak Time is reset to the full number of days if there is an alarm activation on any of the selected zones.

The Soak Time starts when the first zone is put onto soak test. Subsequent additions are only tested for the period remaining in the Soak Time.

Activation of an Exit or Video Exit zone during the Entry Time does not reset the soak test and period.

To program Soak Zones:

When you select the Soak option, the address and function of the first zone on the system is displayed.

1.   Use **A** or **B** to select a zone, or enter the zone address directly, and then press **#**. **ON TEST** is displayed on the keypad.

2.   Repeat step 1. to add more zones to the test.

3.   Once all the zones have been selected, press **esc**. The keypad briefly displays the number of days remaining in the test.

Communications [56]

Use this option to program the communication peripherals. There is a sub-menu for each communication peripheral.

Notes: 1. If you are planning to transmit data using GPRS (refer to **[56.4.10]**), do not fit an Ethernet module. Only one data external transmission system is allowed in the Flex system. See Parameter 51.74 for backup signalling options

2. The priorities for SIA and Microtech alarms are:

   1. Fire
   2. Duress
   3. Silent panic
   4. Panic alarm
   5. Security
   6. Intruder
   7. Other alarms
   8. Events
   9. Audio

1=Int Telecoms (Comm 1)

Use this option to program the onboard telecom module for alarm signalling and remote servicing over the PSTN.

3=ISDN (Comm 3)

Use this option to program the ISDN module for alarm signalling and remote servicing over ISDN B and D channels.

4=Ethernet or GPRS (Comm 4)

Use this option to program the Ethernet module for alarm signalling and remote servicing over an Ethernet LAN/WAN using both TCP/IP and UDP/IP protocols. If the GSM/GPRS module is fitted instead you can use this option to program the GPRS in just the same way.

5=GSM (Comm 5)

Use this option to program the remote GSM module for alarm signalling and remote servicing over the GSM network.

6=USB (Comm 6)

Use this option to program the onboard USB port.

7=Audio (Comm 7)

Use this option to program of the audio options.

Int Telecoms [56.1]

```
── 01 = Format
            ── 1 = DTMF
                        ── 1 = Channels 1-16
                                    ── 1 = Output Function
                                    ── 2 = Output Mode
                                                ── 1 = Latch
                                                ── 2 = Reflex
                                                └─ 3 = Pulse
                                    ── 3 = Output Polarity
                                    ── 4 = Diag Recording (not available)
                                    ── 5 = Descriptor (not available)
                                    ── 6 = Control (not available)
                                    └─ 7 = Output Groups
                        └─ 2 = Acct/Channel
            ── 2 = SIA 0  -  (0-4)
                        ── 1 = Trigger Events
                                    ── 1 = Status
                                    └─ 2 = Groups
                        └─ 2 = Group Settings
                                    ── 1 = Telephone No.
                                    └─ 2 = Account No.
            ── 3 = Microtech
                        ── 1 = Trigger Events
                                    ── 1 = Status
                                    └─ 2 = Groups
                        └─ 2 = Group Settings
                                    ── 1 = Telephone No.
                                    └─ 2 = Account No.
            └─ 4 = Contact ID
                        ── 1 = Trigger Events
                                    ── 1 = Status
                                    └─ 2 = Groups
                        ── 2 = Ack Timeout
                                    ── 1 = 30 seconds
                                    └─ 2 = 60 seconds
                        └─ 3 = Group Settings
                                    ── 1 = Telephone No.
                                    └─ 2 = Account No.
```

Int Telecoms [56.1] (continued)

```
— 02 = Telephone No. 1 – 22 digits maximum
— 03 = Account No. - 6 digits maximum
— 04 = Receiver
          — 1 = Single
          — 2 = Dual
          — 3 = Alternate
— 05 = Telephone No. 2 - 22 digits maximum
— 06 = Dial Type
          — 1 = Tone
          — 2 = Pulse
— 07 = Autotest
          — 1 = Start Time
          — 2 = Intervals - 0 - 99 hours
          — 3 = Int. Test (0 = Disabled, 1 = Enabled)
— 08 = Engineer Test
— 09 = No. of Rings - 10 (1-20)
— 10 = Line Fail
          — 1 = Line Volts (0 = Disabled, 1 = Enabled)
          — 2 = Dial Tone (0 = Disabled, 1 = Enabled)
          — 3 = Incoming Call (0 = Disabled, 1 = Enabled)
— 11 = Fail to Comm
          — 1 = 60
          — 2 = 120
          — 3 = 180
          — 4 = 240
          — 5 = 300
— 12 = Remote Access
          — 1 = Access Period
                    — 1 = Off
                    — 2 = All Unset
                    — 3 = Any Set
                    — 4 = Any Time
          — 2 = Mode
                    — 1 = Direct Access
                    — 2 = Manager Authorize
                    — 3 = Call Back
— 13 = Call Home Not Available
```

Int Telecoms [56.1] (continued)

```
── 14 = Alarm Monitoring
         ── 1 = Trigger (1-20)
         ── 2 = Telephone No.
         └─ 3 = Account No.
── 16 = Forced V.21 (option not available)
── 17 = SMS Paging
         ── 1 = Mobile No.(s)
                  ── 1 = Mobile No.1
                  ── 2 = Mobile No.2
                  └─ 3 = Mobile No.3
         ── 2 = Centre No.
         ── 3 = Format
                  ── 1 = TAP (1 = Status, 2 = Groups)
                           ── 1 = Status
                           └─ 2 = Groups
                  ── 2 = UCP (SMS) (1 = Status, 2 = Groups)
                           ── 1 = Status
                           └─ 2 = Groups
                  ── 3 = UCP (Minicall) (1 = Status, 2 = Groups)
                           ── 1 = Status
                           └─ 2 = Groups
                  └─ 4 = UCP (Numeric) (1 = Status, 2 = Groups)
                           ── 1 = Status
                           └─ 2 = Groups
         ── 4 = Site ID
         └─ 5 = Password
── 18 = No. Tel 3
```

Int Telecoms Format [56.1.01]

The Telecom module provides four signalling formats:

- DTMF

- SIA

- Microtech

- Contact ID

Select a format and program the alarm and event triggers that the panel transmits to ARCs.

DTMF [56.1.01.1]

When DTMF (Dual Tone Multiple Frequency) format is selected, the operation of the Telecom module is similar to that of a hardwired 8 or 16 channel communicator. The Telecom module transmits as an eight channel communicator if channels 9 to 16 are programmed as Spare.

Notes:

1. DTMF is fast format.

2. A battery low condition is always sent to the ARC as a code 8 in the status channel. This may cause problems for some ARCs. If a channel is assigned as Battery Low, then both the channel and the code 8 in channel 9 are transmitted.

Programming Channels

When you select DTMF, the keypad displays **1=Channels 1 – 16**. All 16 channels can be individually programmed.

To access the Channels option press **ent**. The programming details of the first channel are displayed.

Select the required channel, or enter the channel number directly.
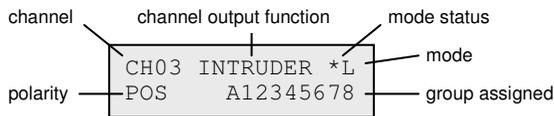
DTMF Channels 1-16 [56.1.01.1.1]

Each channel can be programmed with the following attributes:

1=Output Function

2=Output Mode

3=Output Polarity

4=Diag Recording (option not available)

5=Descriptor (option not available)

6=Control (option not available)

7=Output Groups

DTMF Channel Output Function [56.1.01.1.1.1]

Any of the system output functions (see **Program Outputs [53]**) can be assigned to each of the channels 1 to 16. Channel 3 defaults to output function **04=INTRUDER** and Channel 7 defaults to **20=CONFIRM**. All other channels default to **11=SPARE**.

Select the required output function, and then press **ent** to assign the function to the selected channel. For example, a PA function programmed on channel 2 results in a PA code transmitted on channel 2 to the ARC, when there is a PA alarm activation.

Confirmed alarm conditions work across multiple groups. Confirmed outputs (and channels in DTMF format, option **56.1.01.1**) activate after alarms across groups as long as both groups concerned have been assigned to that output or channel.

DTMF Channel Output Mode [56.1.01.1.1.2]

Each output function defaults to a specific, logical output mode. However, the output mode of each function can be modified to meet special requirements. When reprogrammed, the new mode applies to all outputs assigned to that function. The output modes are:

1=Latch   the output remains active until a valid code is entered.

2=Reflex   the output follows the activity of the triggering event, for example, the Set output follows the setting and unsetting of the group.

3=Pulse   the output remains active for the programmed pulse time (1 to 3000 seconds).

To program the Output Mode:

1.   Select the required mode.

2.   Press **ent** to accept the programming.

3.   If assigning the Pulse output mode, enter the pulse time and then press **ent**.

Note: The Output Mode status determines the operation of the channel restore. Press ✱ to modify the status when the channel details are displayed.

The status options are:

✱ = Restore – channel sends restore code when reset.

+ = Open/close – channel reports setting/unsetting.

blank = Alarm only – channel signals alarm only (no restore signal transmitted).

DTMF Channel Output Polarity [56.1.01.1.1.3]

The Output Polarity determines the normal operational state of the output.

0=POS – channel activates when the output is triggered.

1=NEG – channel activates when the output is reset.

Diag Recording [56.1.01.1.1.4]

Option not available.

Descriptor [56.1.01.1.1.5]

Option not available.

Control [56.1.01.1.1.6]

Option not available.

DTMF Channel Output Groups [56.1.01.1.1.7]

Note: The Groups attribute is only available if groups have been enabled on the system (refer to **Options [63]**).

Use the Groups attribute to assign the channel to a group. A channel can be assigned to more than one group. The channel only triggers when an event occurs on one of the groups assigned to the channel. All channels default to all groups on the system.

When you select the Output Groups attribute, the groups to which the channel is assigned are displayed.

Press the relevant number keys to toggle the status of the group, and then press **ent**.

If the group number is displayed on the top line, then the group is assigned to the channel.

If a dash (–) is displayed, the group has been removed from the channel.

Group Status

This group attribute offers an additional feature that makes the operation of the channel conditional on the set status of each of the system groups. A channel assigned Group Status only activates if the set conditions of the programming are met, for example, an Intruder channel can be programmed to activate only if groups 2 and 4 are set and group 3 is unset.

To assign the Group Status conditions, press ✶ when selecting the groups. An arrow (>) is displayed on the bottom line with the current status. Press the relevant number keys to toggle the status of the groups, and then press **ent** to accept the programming. The available group status conditions are:

S = Set - group must be set to allow channel to activate.

U = Unset - group must be unset to allow channel to activate.

– = Set or unset - channel activation is independent of the group status.

DTMF Acct/Channel [56.1.01.1.2]

When the account number is programmed using **Telecoms Account No. [56.1.03]**, all 16 channels are automatically programmed with the same number. You can program each channel with a separate account number if required.

Account number can be up to six digits long, however a four digit number is the standard.

Note: Changing the main account number overwrites all separate account numbers previously programmed for channels 1 to 16.

When you select Acct/Channel the first channel is displayed. Select the required channel, and then press **ent**. The account number currently assigned to the channel is displayed. Press **B** to delete each of the digits, and then enter a new account number.

SIA [56.1.01.2]

The SIA (Security Industries Association) format is a protocol that transmits detailed information, including zone descriptions, to a computer with suitable software or to an SIA compatible receiver. The SIA format is capable of transmitting over 330 different events (refer to *Appendix B* for further details).

On selecting the SIA format, you are prompted for the required SIA level. There are five SIA levels available:

- 0 (default) – Basic event information with 4 digit account number.

- 1 – as level 0 plus 6 digit accounts.

- 2 – as level 1 but with event modifiers.

- 3 – as level 2 but with text descriptions.

- 4 – as level 3 but allows control commands to be received by the control panel.

SIA Trigger Events [56.1.01.2.level.1]

When you select the option, the first trigger event and its **On/Off** status is displayed (see Table 10 for a list of available triggers). These are the events and alarms that are transmitted to the ARC or computer. If the trigger status is set to **On**, an event activation results in transmission of the event details to the receiver.

The table below shows the list of signalling triggers that are available to the Telecom module, the USB module, the ISDN module and the Ethernet module.

No.	Trigger Event	No.	Trigger Event
1	PA/Duress	12	Modules/Comms
2	Intruder	13	Elec Status
4	Security	14	Menu Access
5	Custom Zones	15	Trouble
6	Fire	16	Log Zone
7	Set Fault	17	Max Tag
8	Omit	18	Zone Restoral
9	Tamper	19	RF Supervision
10	Setting	20	Fault
11	Reset/Cancel		

Table 10 Trigger Events

1=Status

To modify the trigger, select the required trigger type using **A** and **B** and press **ent**. To program the status to On press **1**, to set it to Off press **0**. Press **ent** to save the programming and return to the previous menu level.

Programming the SIA Format with Groups Enabled

If groups have been enabled on the system (refer to **Options [63]**) the SIA format option alters, and an additional level is added.

1=Trigger Events

Press **ent** to display the first trigger event. The keypad shows the trigger, the trigger status and the groups assigned.

1=Status   As described above.

2=Groups   Assign Groups to events so that the events have to occur in assigned groups before they are signalled. Press **A**, the keypad displays **2=Group Settings** and then press **ent**. The status of the groups assigned to the trigger is displayed. If the group has Y below it, then this event occurring in this group is signalled. If N is displayed, then the event is not signalled for that group. To toggle the status of a group, enter the group number. When all the groups have been assigned press **ent** to save the programming.

Cross Group Confirmation

Confirmed outputs (and channels in DTMF format, option 56.1.01.1) activate for alarms across groups as long as both groups concerned have been assigned to that output or channel. In the point ID signalling formats (SIA, Microtech and Contact ID), confirmed signals are transmitted across groups that share the same account number. For example, in option 56.1.01.2 (SIA), it is possible to select a different account number for each group on the system. Group 1 and group 2 can be programmed with the same account number. If there is a single activation in group 1 then a single intruder activation in group 2, within the confirmed time window, a confirmed alarm signal is transmitted for group 2.

SIA Group Settings [56.1.01.2.level.2]

Note: This option is only displayed if groups have been enabled (refer to **Options [63]**).

Event triggers are signalled, with the account number, to the telephone number programmed in the **Account Number [56.1.03]** and **Telephone Number 1 [56.1.02]** options. However, each group can be assigned a separate account number and programmed to transmit event details to a unique telephone number. Select the required group, and then press **ent**.

SIA Group Settings Telephone Number [56.1.01.2.level.2.1]

To assign a telephone number to the group press **ent**, and then enter the required number. The telephone number can be a maximum of 22 digits (including dial pause ✱ and dial tone detect **#** characters). Press **ent** to save the programming.

SIA Group Settings Account Number [56.1.01.2.level.2.1]

To assign an account number to the group, press **ent**, and then enter the required number. The account number can be a maximum of six digits. Press **ent** to save the programming.

Account Groups

It is possible to have a number of groups bound by the same Account Number (an Account Group). This means that one CL signal is not sent until all the groups within the Account Group are set. Individual groups within the Account Group will not send a CL signal. The groups within the Account Group are identified by a starred (✱) Account Number, for example, ✱2112.

When the Account Group is fully set, the identifier of the CL message is 999 to identify it as an Account Group that has set.

When unset, each group that is part of the Account Group can report individually that it is open.

Note: Account Groups only operate for SIA signalling.

Microtech [56.1.01.3]

Microtech format is a protocol that transmits detailed point identification information to a computer that has the Alarm Monitoring software installed.

The menu structure and programming of the options is identical to the SIA format (see above).

Note: Microtech can not be chosen if Dual Receiver is selected.

Contact ID [56.1.01.4]

Contact ID format is a protocol that transmits point identification information to an Alarm Receiving Centre that is capable of receiving the Galaxy variant of contact ID.

The menu structure and programming of the options is identical to the SIA format except for the addition of the **2=Ack timeout** option. Use this option to select how long the telecom module waits for the handshake tone from the receiver. The settings are 1 (30 seconds) or 2 (60 seconds).

Telephone No. 1 [56.1.02]

Telephone number 1 must be entered. It is the main telephone number to which alarms are sent. Up to 22 digits may be entered, including control modifiers. Enter control modifiers using ✱ and #.

✱ Pause (for two seconds before dialling the next digit). Multiple entries can be made, for example, entering ✱✱✱ gives a six second pause.

Dial tone detect (wait for new dial tone). Each dial tone detect lasts for 15 seconds. Multiple entries can be made, for example, entering ## gives a 30 second dial tone detect. If a new dial tone is not detected in this time, then the dialling attempt is aborted. This is counted as a fail to communicate.

Account No. [56.1.03]

This is the site identifier. A unique account number must be entered, which can be up to a maximum of six digits although four digits is the standard.

Note: Enter the account number to automatically copy the number to all triggers in the selected format. Any individual account numbers that have been programmed are overwritten.

Receiver [56.1.04]

The transmission destination can be set to one of three modes:

1=Single	Reports to the telephone number programmed in Telephone Number 1.
2=Dual	Reports to both numbers programmed in Telephone Number 1 and Telephone Number 2. The alarm must be transmitted to both numbers.
3=Alternate	Reports to Telephone Number 1, Telephone Number 2 or Telephone Number 3. Each number is tried until the alarm is transmitted. The alarm is only transmitted to one number. Telephone number 1 is always the first number attempted.

Telephone No. 2 [56.1.05]

A second telephone number is available to support **Dual** and **Alternate** dialling to a second destination receiver. The programming is identical to **Telephone Number 1 [56.1.02]**.

Dial Type [56.1.06]

Select a transmission mode:

1=Tone   also known as DTMF dial, is much quicker at dialling than the pulse option.

2=Pulse   also known as rotary or loop disconnect is universal, but an increasing number of exchanges now provide the tone (DTMF dial) option.

Note: If unsure of the type of exchange that the panel is connected to, leave as Pulse dialling.

Int Telecom Autotest [56.1.07]

Use this option to automatically transmit an engineer test to the Monitoring Station at programmed intervals, to indicate alarm transmission path integrity.

1=Start Time	Enter the time the first engineer test is transmitted. Subsequent engineer test transmissions are offset by the value assigned in the **Intervals** option.
2=Intervals	Sets the period between engineer test transmissions following the Start Time. The range is 0 to 99 hours.

Notes:

1. If the Test Interval is 0 (default) the Autotest is disabled, even if a Start Time has been assigned.

2. To disable Autotest enter 00:00 (default); no transmissions of test signals can be sent at midnight.

3=Intelligent Test   Stops the transmission of an automatic engineer test if an alarm signal has already been sent during the autotest interval.

Engineer Test [56.1.08]

Once an **Account Number** and **Telephone Number 1** have been entered, you can use this option to verify that the station is receiving transmissions sent from the module.

On selecting the option this warning message is displayed on the keypad:

WARNING!!! ent=SEND MESSAGE

Press **ent** to send the engineer test.

The test attempts to transmit once for each selection of the option. If the test is not successfully transmitted, the communicator does not attempt to resend. An unsuccessful transmission is not counted as a **FAIL TO COMMUNICATE**.

Note: Activation of an engineer test will send a test signal via all communication modules.

No. of Rings [56.1.09]

This option determines the number of rings before the Telecom module answers an incoming call. The range is 1 to 20 and the default is 10.

Line Fail [56.1.10]

The Telecom module continually monitors the telephone line to which it is connected. Use this option to select the line monitoring conditions that result in a LINE FAIL event being reported and recorded in the log. The line monitoring capabilities are:

1=Line Volts	(default **Enabled**) A line fail occurs if the voltage on the telephone line falls below three volts, or the line is cut.
2=Dial Tone	(default **Disabled**) A line fail occurs if the Telecom module cannot detect a dial tone on the telephone line. The Telecom module records the line fail, but continues the call attempt even if no dial tone is detected.
3=Incoming Call	(default **Disabled**) A line fail occurs if the Telecom module attempts to transmit an alarm while there is an incoming call.

Note: Any combination of the above options may be enabled or disabled at any time.

When one of these conditions is detected, a LINE FAIL message is stored in the event log, with the exception of line volts which is monitored for a further period determined by the value programmed in option 51.68. If sufficient line voltage is restored within this period no event is stored.

If an attempt is made to set the system or part of the system within this period, the message **ALERT - LINE FAIL 1 ENT=CONTINUE SET** is displayed. If **ent** is pressed the set continues; if **esc** is pressed a line fail is logged immediately. If the system is unset, the **COMM LINE FAIL** message is displayed on the keypad display and a local alarm is sounded. The keypad buzzers and onboard horn (if connected) are activated. If the system is set when a line fail condition occurs, the message **COMM LINE FAIL** is displayed when the system is unset and is accompanied by a local alarm.

The local alarm is only activated for the first line condition of each unset period. Subsequent line fails are displayed as **COMM LINE FAIL** messages on the keypad for the duration of the condition and are recorded in the event log

Note: The **COMM LINE FAIL** message is only displayed if **Banner Alerts [51.63]** is enabled (off by default). The keypad only shows **LINE FAIL COMx** when a valid PIN is entered.

If an alarm occurs during a line fail condition the programmed bell delay for each of the groups is overridden (refer to **Bell Delay [51.02]**).

Fail to Communicate [56.1.11]

Use this option to set the length of time the telecom module attempts to gain a connection before the **COMM FAIL** message is recorded in the event log.

When an alarm condition or event needs to be transmitted to the monitoring station, the Telecom module takes over the telephone line and dials the programmed telephone

numbers. After a successful communication the LED lights for three seconds, and the module releases the telephone line and reconnects any serially connected equipment. This procedure is repeated for the second telephone number if the **Receiver** option has been programmed as **Dual**.

If the communication attempt is unsuccessful, the LED flashes rapidly for three seconds. The communicator then waits for a short period before redialling the number (or the second telephone number if the **Receiver** option has been programmed as **Dual** or **Alternate**). When the **Fail To Communicate** option is set to the default value of 120 seconds a communication Fail will be recognised if there has not been a successful kiss-off, irrespective of the number of failed attempts. **Bell Delay [51.2]** is overridden when this condition occurs.

The FAIL TO COMM parameter has 5 time values:

1=60 seconds; 2=120 seconds; 3=180 seconds; 4=240 seconds.

Note: If the **Receiver** option is set to **Dual**, then successful transmission must be made to both telephone numbers.

Remote Access Period [56.1.12.1]

Use this option to control how the remote site is accessed by the Remote operator. There are four modes:

1=Off   Remote Servicing access to the panel is disabled.

2=All Unset   Access only when all the groups are unset. If groups are not enabled access is available at any time.

3=Any Set   Remote Servicing access will only be granted if any of the groups or the complete system are set.

4=Any Time (default)   Access available at any time.

Remote Access Mode [56.1.12.2]

1=Direct Access   Permits access at anytime. Once access is authorized, uploading, downloading and remote servicing can begin.

2=Manager Authorize   An authorized user can access the system via Remote Servicing in these ways:

- **Timed Access:** Remote Servicing must access the system within 40 minutes of the option being enabled. Once connected there is no time limit on the access period. After terminating the connection, Remote Servicing can re-access the system within 15 minutes of the termination.

- **Call Back:** the manager instructs the panel to initiate a connection to a computer (with Remote Servicing software loaded) by dialling one of the numbers programmed in the Call Back option.

3=Call Back   Up to five telephone numbers can be programmed, with which Remote Servicing can instruct the panel to call back.

Notes:

1. If **Manager Authorize** is selected as the Remote Access Mode, the telecoms module can only make outgoing calls. This allows another telephone, fax or answering machine to be connected to the line without interference from the telecom module when calling into the premises.

2. If **Call Back** is selected, access to the panel is denied unless the call back option in Remote Servicing is used to initiate the connection.

Call Home [56.1.13] Not used

Alarm Monitoring [56.1.14]

Use this option to allow events to be dialled to a computer with Alarm Monitoring software.

Alarm events information is only transmitted when all of the alarms have been sent to the ARC (or all communication attempts have been unsuccessfully made). If a new alarm event occurs while the system is transmitting in the Alarm Monitoring mode, the transmission is terminated and the alarms are sent to the ARC using the primary format selected.

The menu structure and programming of the Alarm Monitoring options are identical to the SIA format. Refer to **SIA [56.1.01.2]**.

SMS [56.1.17]

Use this option to generate and transmit SMS text messages in response to events that occur.

1=Mobile No.(s)   Press **ent** to access and enter up to three mobile numbers (22 digits max.) of message recipients.

2=Centre No.   The phone number (22 digits max.) of the SMS centre. Each operator has a different number.

3=Format   The options are:

      1=TAP   For mobile phones (UK)

      2=UCP   (SMS) For mobile phones (outside UK)

      3=UCP   (Minicall) For alpha pagers

      4=UCP   (Numeric) For numeric pagers

4=Site ID   A 16 character alphanumeric string used to identify the panel/site sending the message. If the format is UCP (Numeric), then the site ID is numeric only, and only the first four characters are sent out.

5=Password   A 16 character string that is an optional field required by some paging centres.

No. TEL 3 [56.1.18]

A third telephone number is available to support alternate dialling to a third destination receiver. The programming is identical to **Telephone No. 1 [56.1.02]**. The No. TEL 3 option can also be used as a primary destination receiver for audio events when option 56.7.1 is set to No. TEL 3, irrespective of the receiver mode.

[56.2] Not used

ISDN module [56.3]

```
—— 01 = Primary
 |        —— 1 = Default Tel No
 |        —— 2 = Default Acc No
 |        —— 3 = Dial Type
 |        |         —— 1 = Analogue
 |        |         —— 2 = Digital
 |        |         —— 3 = X.25
 |        |         |         —— 1 = TEI
 |        |         |         —— 2 = LCGN
 |        |         |         —— 3 = LCN
 |        |         |         —— 4 = Polling Rate
 |        |         |         |         —— 1 = None
 |        |         |         |         —— 2 = 90 secs
 |        |         |         |         —— 3 = 15 mins
 |        |         |         |         —— 4 = 60 mins
 |        |         |         |         —— 5 = Programmable (0 - 999 minutes)
 |        |         |         —— 5 = CUG Index
 |        |         —— 4 = RAM – not available
 |        —— 4 = Format
 |                  —— 1 = DTMF
 |                  —— 2 = SIA
 |                  —— 3 = Microtech
 |                  —— 4 = Contact ID
 |                  —— 5 = Robofon
 |                  —— 6 = X.25 Protocol 1
 |                  —— 7 = X.25 Protocol 2
—— 02 = Secondary
 |        —— 1 = Default Tel No
 |        —— 2 = Default Acc No
 |        —— 3 = Dial Type
 |        —— 4 = Format
 |        —— 5 = Copy Primary
 |        —— 6 = Alternate (1 = Disable, 2 = Enable)
—— 03 = ISDN Type
 |        —— 1 = Point to Multipoint
 |        —— 2 = Point to Point
 |
```

Continued on next page

ISDN module [56.3] (continued)

```
— 04 = ISDN Snatch
        — 1 = Hardware
                — 1 = Always Snatch
                — 2 = Never Snatch
                — 3 = Snatch if Line Fail
        — 2 = Software (1 = Disable, 2 = Enable)
— 05 = Autotest
        — 1 = Start Time
        — 2 = Intervals - 0 - 99 hours
        — 3 = Int. Test (0 = Disabled, 1 = Enabled)
        — 4 = Group Condition
— 06 = Engineer Test
— 07 = Line Fail
        — 1 = None
        — 2 = Line Vols Only
        — 3 = Layer 1 Only
        — 4 = Volts and Layer 1
        — 5 = Volts or Layer 1
— 08 = Fail to Comm
— 09 = Remote Access
        — 1 = Access Time
                — 1 = Off
                — 2 = All Unset
                — 3 = Any Set
                — 4 = Any Time
        — 2 = Mode
                — 1 = Direct Access
                — 2 = Manager Authorize
                — 3 = Call Back
— 10 = Alarm Monitoring
        — 1 = Trigger (1-20)
        — 2 = Phone Number
        — 3 = Account Number
```

ISDN Primary Telephone No [56.3.01.1]

See **Telephone No [56.1.02]**.

ISDN Primary Default Account No [56.3.01.2]

See **Account No [56.1.03]**.

ISDN Dial Type [56.3.01.3]

Use this option to select the type of ISDN transmission.

Note: The available signalling formats are only compatible with certain dial types. If a dial type is selected that does not match the currently programmed format a warning is displayed momentarily to indicate the mismatch.

1=Analogue   Uses voice mode to transmit data to ISDN or PSTN networks. It is the default selection for ISDN B-channel communications.

2=Digital   Alarm data transmitted in digital format at a speed of 64 Kbps.

3=X.25   Enables transmission of data via an X.25 network to compatible X.25 receivers using the ISDN D-channel. After setup the connection remains activated. The following configurations are available after setup:

> **1=TEI (Terminal Endpoint Identifier)**
>
> Set the TEI number issued by the telecom provider. Values can be 00 to 63.
>
> **2=LCGN (Logical Channel Group Number)/ 3=LCN (Logical Channel Number)**
>
> The X.25 data network uses the LCGN and LCN to identify the users that are connected. Normally users are connected directly to the X.25 network. To allow for a high number of users the LCN can be set from 000 to 255. The LCGN can multiply this number of users by 15. The LCGN can vary from 00 to 15. When using X.25 over ISDN the LCGN is set to 00 and the LCN is set to 001.
>
> **4=Polling Rate**
>
> The polling rate is used to monitor the X.25 end-to-end connection. A poll is sent from the ISDN Module to the X.25 receiver. The receiver also monitors if the poll is received within the specified limit. The interval between the polls can be programmed using this parameter.
>
> **5=CUG (Closed User Group)**
>
> Use of the CUG index depends on the country in which the panel is installed and the local telecom. The telecom provider can issue a closed number group to a certain monitoring station. The extra subscription for X.25 use over the ISDN line is often available in several packages depending on the use of the X.25 facility. The value can vary from 0 to 9.

4=RAM   Option not used

ISDN Primary Format [56.3.01.4]

The ISDN module provides seven signalling formats:

1=DTMF

2=SIA

3=Microtech

4=Contact ID

5=Robofon

6=X.25 Protocol 1 (SIA based format compatible with the OA BX X.25 receiver)

7=X.25 Protocol 2 (SIA based format compatible with the Alphatronics RC 4000 receiver)

Note: The DTMF, SIA, Microtech and Contact ID formats are identical in structure and programming to the Telecom Module menu.

Note: X.25 Protocol 1 and Protocol 2 are similar in programming structure to the SIA protocol.

ISDN Secondary [56.3.02]

The secondary option is available to support Dual and Alternate dialling to a second destination receiver. If using alternate mode both the dial type and format must be identical to the values programmed for the primary number.

1=Default Telephone Number	The programming is identical to **Telephone Number 1 [56.1.02]**.
2=Default Account Number	Refer to **Primary [56.3.01.2]**.
3=Dial Type	Refer to Primary Dial Type (except X.25 should be option not available).
4=Format	Refer to Primary Format. It is possible to assign different formats to both the Primary and Secondary numbers, however, when using the alternative signalling option the format must be identical.
5=Copy Primary (1 to 2)	Copies Primary Program to Secondary Program, for ease of programming.
6=Alternate	If enabled, signalling is attempted alternately to primary and secondary numbers until successful transmission to either is achieved. If enabled, the user will be requested to copy the primary programming to the secondary programming to ensure both paths are configured identically.

ISDN Type [56.3.03]

Two types of ISDN lines are available on the EURO ISDN network; Point to Multipoint and Point to Point.

Use this option to select the type to be used.

1=Point to Multipoint (default)

Use this configuration when more than one ISDN system is connected to the ISDN bus. To ensure that the ISDN module responds to incoming calls from Remote Servicing only a specific MSN (Multiple Subscriber Number) should be entered. The MSN number should be provided by the Telecom provider.

Note: All devices not programmed with an MSN number will also respond to incoming calls.

2=Point to Point

Only one device is allowed on the ISDN bus. In this configuration a TEI number must be programmed. The default is 0. Since only one device is allowed the ISDN module will act differently when programmed to Point to Point.

The hardware ISDN snatch relay is always activated before the module starts a dialling sequence. After all the alarms are transmitted the relay will be deactivated and the customer PABX, if connected, will be connected to the ISDN network again. During the dialling sequence it is not possible to use the PABX for an outside call.

Upon an incoming call for the module, the relay will be activated directly switching the PABX off the ISDN line, after which the ISDN module will seize the line. To ensure correct functionality of the PABX and the ISDN module always connect the PABX to the ISDN out ports.

The phone numbers that are available on a Point-to-Point line often only vary in the last 2 digits e.g.123401 ~ 123409. To handle incoming calls from Remote Servicing one phone number need to programmed into the ISDN module. This specific phone number cannot be used by the PABX because the ISDN module will seize the incoming call directly.

Note: X.25 in combination with a Point-to-Point ISDN line is not possible.

ISDN Snatch [56.3.04]

In order to ensure maximum security the ISDN Module must be able to make a call in every circumstance. The ISDN Module offers both hardware and software line seizure options.

1=Hardware

The hardware snatch is performed using a relay. This relay can switch the other devices off when the ISDN Module needs to communicate. In order to switch the other devices off it is important that these other devices are connected to the ISDN out connection of the module. Some ISDN devices are not willing to release a B-channel even when the network indicates that the B-channel must be released. When this is detected or a tamper causes interference on the ISDN bus communication the relay will be activated.

A number of configurations are available for the hardware snatch function.

1=Always Snatch	A hardware snatch is always attempted irrespective of the software snatch programming.
2=Never Snatch	A hardware snatch is never attempted.

3=Snatch if Fail   A hardware snatch is attempted if the software snatch fails or the software snatch is disabled.

2=Software

The ISDN module monitors every communication on the ISDN bus including those of other devices. The software snatch can clear a B-channel when both are in use. The call that started first is the one that is cleared.

Certain ISDN devices do not release the B-channel when a software snatch is attempted. However, a hardware snatch can be attempted instead (see the **Hardware snatch [56.3.04.1]** option). Software snatch can be enabled or disabled.

ISDN Autotest [56.3.05]

See **Int Telecom Autotest [56.1.07]** for details.

ISDN Engineer Test [56.3.06]

See **Engineer Test [56.1.08]** for details.

ISDN Line Fail [56.03.07]

The module continually monitors the ISDN line. In addition to DC volts monitoring, the module can be programmed to use layer 1 check monitoring. The layer 1 option activates the ISDN line every 40 seconds and monitors the activation response from the ISDN network. This activation remains for about 20 seconds. When X.25 is used the layer 1 check is not performed because the ISDN line is already activated continuously.

The module can be configured using these options:

1=None   No line monitoring.

2=Line Volts   D.C. volts monitored only.

3=Layer 1   Layer 1 monitored only.

4=Volts and Layer 1   Volts and layer 1 both monitored. Line Fail activated if both fail.

5=Volts or Layer 1   Volts and Layer 1 both monitored. Line Fail activated if either fail.

Fail to Comm [56.3.08]

Use this option to set the number of unsuccessful communication attempts before the **COMM FAIL** message is recorded in the event log.

When an alarm condition or event is to be transmitted to the monitoring station, the ISDN module snatches the telephone line and dials the programmed telephone numbers. This procedure is repeated for the second telephone number if the Receiver option has been programmed as Dual.

Note: The ISDN module communicator snatches and holds the line until a successful attempt has been made to the required telephone numbers or all the repeat attempts have been tried.

If the communication attempt is unsuccessful, the communicator waits for a short period before redialling the number (or the second telephone number if the Receiver option has been programmed as Dual or Alternate). When the Fail To Communicate option is left at the default setting of 3, and the first three dialling attempts are unsuccessful, the **COMM FAIL** message is recorded in the event log and the alarms to be transmitted are erased from the buffer.

Remote Access [56.3.09]

See **Remote Access [56.1.12]** for details.

Alarm Monitoring [56.3.10]

Use this option to allow events to be dialled to a computer with Alarm Monitoring software.

Alarm events information is only transmitted when all of the alarms have been sent to the ARC (or all communication attempts have been unsuccessfully made). If a new alarm event occurs while the system is transmitting in the Alarm Monitoring mode, the transmission is terminated and the alarms are sent to the ARC using the primary format selected.

The menu structure and programming of the Alarm Monitoring options are identical to **Alarm Monitoring [56.1.14]**.

Ethernet/GPRS [56.4]

```
─── 01 = Module Config
│        ─── 1 = IP Address
│        ─── 2 = Site Name
│        ─── 3 = Gateway IP
│        ─── 4 = Network Mask
─── 02 = Alarm Reporting
│        ─── 1 = Format
│        │        ─── 1 = SIA (0-4)
│        │        │        ─── 1 = Trigger (1 = Status, 2 = Groups)
│        │        │        ─── 2 = Group Setting
│        │        │                 ─── 1 = Account No.
│        │        │                 ─── 2 = IP Address
│        │        │                 ─── 3 = Port No.
│        │        ─── 2 = Microtech (Same as SIA format)
│        ─── 2 = Primary IP (1 = IP Address, 2 = Port No.)
│        ─── 3 = Secondary IP (1 = IP Address, 2 = Port No.)
│        ─── 4 = Account No.
│        ─── 5 = Receiver (1 = Single, 2 = Dual)
│        ─── 6 = Alarm Mon.
│        │        ─── 1 = Trigger (1 = Status, 2 = Groups)
│        │        ─── 2 = Account No.
│        │        ─── 3 = IP Address
│        │        ─── 4 = Port No.
│        ─── 7 = Heartbeat – 1 = Interval
│        ─── 8 = Protocol (0 = UDP, 1 = TCP)
─── 03 = Remote Access
│        ─── 1 = Access Period
│        │        ─── 1 = Off
│        │        ─── 2 = All Unset
│        │        ─── 3 = Any Set
│        │        ─── 4 = Any Time
│        ─── 2 = Mode
│                 ─── 1 = Direct Access
│                 ─── 2 = Manager Authorize
│                          ─── 1 = Call Back IP1 (1 = IP Address, 2 = Port No.)
│                          ─── 2 = Call Back IP2 (1 = IP Address, 2 = Port No.)
│                          ─── 3 = Call Back IP3 (1 = IP Address, 2 = Port No.)
│                          ─── 4 = Call Back IP4 (1 = IP Address, 2 = Port No.)
│                          ─── 5 = Call Back IP5 (1 = IP Address, 2 = Port No.)
```

Ethernet/GPRS [56.4] (continued)

```
— 04 = Autotest
        — 1 = Start Time
        — 2 = Intervals
— 05 = Engineer Test
— 06 = Fail to Comm
— 07 = Line Fail
        — 1 = Network (0 = Off, 1 = Available)
        — 2 = Signal Path
                — 1 = Primary
                — 2 = Secondary
                — 3 = Alarm Mon.
                — 4 = Any
                — 5 = All
— 08 = SIA Control – 1 = IP Address
— 09 = Encrypt
        — 1 = Alarm Report (0 = Off, 1 = On)
        — 2 = Remote Access (0 = Off, 1 = On)
        — 3 = SIA Control (0 = Off, 1 = On)
        — 4 = Alarm Mon. (0 = Off, 1 = On)
— 10 = GPRS Network
        — 1 = APN (Access Point Name)
        — 2 = Login (GPRS provider)
        — 3 = Password (GPRS provider)
```

The Ethernet module enables the control panel to communicate over Ethernet local and wide area networks, using UDP and TCP Ethernet protocols. It supports alarm signalling and remote servicing, including data encryption and path supervision between the module and alarm receiving applications.

Note: Use the programming functions in this section if you plan to transmit data with the GPRS element of the module.

Module Config [56.4.01]

Each Ethernet module is pre-programmed with a unique MAC address that identifies it on the network. However, to communicate with other applications an IP address must be assigned to the unit. The information programmed in this section is required for other applications on the network to recognise the Ethernet module.

1=IP Address   This must be a unique, static IP address. The dot separator is automatically added after each sequence of three numbers or can be manually added by pressing ✱. The address is provided by your IT administrator. This is not required for GPRS.

2=Site Name   This option is not used.

3=Gateway IP   Enter the IP address of the gateway router connected to the Ethernet local area network. This information is supplied by the IT administrator.

4=Network Mask   The network mask identifies the class of network being used. This field masks off the parts of the gateway IP address that are common and not required for specific identification of the Ethernet module. This information is supplied by the IT administrator.

Alarm Reporting [56.4.02]

Use these options to:

▪ Select of the alarm signalling format used to transmit the events.

▪ Control the types of event which are sent.

▪ Control the destination and identification for each independent group.

Alarm Reporting SIA (0-4) Format [56.4.02.1.1]

The SIA (Security Industries Association) format can be programmed between levels 0 and 4 and provides a protocol that transmits detailed information including textual descriptors to an SIA compatible receiver or computer loaded with suitable receiver software. The SIA format is capable of transmitting the panel events indicated in *Appendix B*. Refer to *Appendix C* for the detailed breakdown of the SIA event structure for each level.

On selecting the SIA format you are prompted for the required SIA level.

▪ **0** (default) – basic event information with 4 digit account numbers.

▪ **1** – as level 0 plus 6 digit account numbers.

▪ **2** – as level 1 but with event modifiers.

▪ **3** – as level 2 but with text descriptors.

▪ **4** – as level 3 but also enables the SIA control command feature (refer option 08 SIA control).

1=Trigger Events

Once the SIA level has been selected, press **ent**.

The keypad displays the first trigger event and its ON/OFF status (see Table 10 on page 126 for the list of available triggers, and *Appendix B* for the events that are controlled by each trigger). The triggers control the transmitted events. If the trigger is set to **ON**, any logged events controlled by the trigger are transmitted.

1=Status   Select the trigger to be modified using **A** and **B**, and then press **ent**. Set the status to **1=ON** or **0=OFF**. To accept the new status, press **ent**.

Programming the SIA format with groups enabled

If groups are enabled (refer to **Groups [63.1]**) the SIA format option alters slightly to support the independent event trigger programming for each group.

1=Trigger Events

Once the SIA level has been selected, press **ent**.

The keypad displays the trigger, the trigger status and the groups assigned.

Select the trigger to be modified using **A** and **B**, and then press **ent**. The **1=Status** option is displayed. Press **ent** to select this option or scroll to **2=Groups** and then press **ent**.

1=Status   Set the status to **1=ON** or **0=OFF**. To accept the new status, press **ent**.

2=Groups   Use this option to assign groups to each event trigger. To assign or unassign a group from a specific trigger press the number key corresponding to the group number. The display shows the new status. To accept the new status, press **ent**.

2=Groups Setting

Each of the events is signalled to Primary IP/Port Numbers programmed in option **56.4.02.2** and the account number programmed in **56.4.02.4**. However, each group can be programmed to transmit event details to a unique IP address and port number, with a unique account number.

On selecting this option the first group is displayed. Select the group to be modified, and then press **ent**. Select one of the following options:

1=Account No.   By default the account number programmed in option **56.4.02.4** is displayed. Erase the old number, enter a new number (4 to 6 digits), and then press **ent**.

2=IP Address   By default the IP address programmed in option **56.4.02.2.1** is displayed. Erase the old address, enter a new address, and then press **ent**.

3=Port No.   By default the port number programmed in option **56.4.02.2.2** is displayed. Erase the old number, enter a new number, and then press **ent**.

Alarm Reporting Microtech Format [56.4.02.1.2]

Microtech format is a protocol that transmits detailed point ID information to a computer that has the Alarm Monitoring application installed and running.

The level of information supplied is similar to SIA level 3.

The menu structure and programming of the options are identical to the SIA format. Refer to **Alarm Reporting SIA (0-4) Format [56.4.02.1.1]** for programming details.

Alarm Reporting Primary IP [56.4.02.2]

The Primary IP defines the receiver destination details for the primary alarm transmission path. The destination comprises an IP address and a port number. If groups are enabled the information programmed for the primary IP and port numbers is automatically copied to all groups.

1=IP Address   Enter the IP address of the primary receiver, and then press **ent**.

> **Note:** This number must be programmed, even if groups have been enabled and all groups have a programmed IP address. This is the IP address used for all system wide events.

2=Port No. Enter the port number of the primary destination receiver. The default value is 10002. Press **ent** to save the programmed number.

Alarm Reporting Secondary IP [56.4.02.3]

The Ethernet module supports signalling to more than one receiver destination. The Secondary IP defines the receiver destination details for the secondary alarm transmission path. The destination is made up of an IP address and a port number.

1=IP Address Enter the IP address of the secondary receiver, and then press **ent**.

2=Port No. Enter the port number of the secondary destination receiver. The default value is 10002. Press **ent** to save the programmed number.

Alarm Reporting Account No. [56.4.02.4]

The account number (4 to 6 digits) identifies the system to the receiver every time a signal is transmitted.

If groups are enabled the account number you enter in this field is automatically copied to all groups.

Alarm Reporting Receiver [56.4.02.5]

Use this option to select the paths used for alarm signalling.

1=Single If this option is selected, and a Secondary IP is programmed, the Secondary IP destination is used in the event of a failure to the Primary IP. A Fail to Comm is logged against the Primary alarm transmission path.

2=Dual If this option is selected, and a secondary IP is programmed, events are sent to both the primary and secondary IP destinations.

Alarm Reporting Alarm Monitoring [56.4.02.6]

Use these options specifically for events that are sent to the Alarm Monitoring application.

1=Trigger The keypad displays the first trigger event and its ON/OFF status (see Table 10 on page 126 for the list of available triggers, and *Appendix B* for the events that are controlled by each trigger). The triggers control the transmitted events. If the trigger is set to **ON**, any logged events controlled by the trigger are transmitted.

Select the trigger to be modified using **A** and **B**, and then press **ent**. The **1=Status** option is displayed. Press **ent** to select this option, or scroll to **2=Groups** and then press **ent**.

1=Status Set the status to **1=ON** or **0=OFF**. To accept the new status, press **ent**.

2=Groups Use this option to assign groups to each event trigger. To assign or unassign a group from a specific trigger press the number key corresponding to the group number. The display shows the new status. To accept the new status, press **ent**.

2=Account No. Erase the old number, enter a new number (4 to 6 digits), and then press **ent**. Enter this number before any events are sent to Alarm Monitoring.

3=IP Address Erase the old address, enter a new address, and then press **ent**.

4=Port No. Erase the old number, enter a new number, and then press **ent**.

Alarm Reporting Heartbeat [56.4.02.7]

The Ethernet module checks that the alarm transmission paths are always available. Use this option to set the checking frequency.

1=Interval Enter a time interval that a path supervision signal (heartbeat) must be received from each alarm transmission path (refer to **Line Fail – Signalling Path [56.4.07.2]**). The default period is 30 minutes. If a heartbeat is not received within the programmed interval a line fail condition is activated. The Line Fail event indicates which path has failed (Primary, Secondary or Alarm Monitoring).

Alarm Reporting Protocol [56.4.02.8]

The Ethernet module can signal using either TCP (Transmission Control Protocol) or UDP (Universal Datagram Protocol). **0=UDP** and **1=TCP**.

If communicating with V3.26 Alarm Monitoring or V6.26 Remote Servicing, select TCP.

If encryption is required for alarm signalling, select UDP.

Note: Irrespective of the programming in this option, Remote Servicing and SIA control command protocol always use TCP.

Remote Access [56.4.03]

Use this option to setup panel remote servicing. You can control when remote access is granted and whether access is initiated from the panel or the Remote Servicing computer.

Remote Access Period [56.4.03.1]

Use this option to set when the panel is accessed remotely.

1=Off Remote Servicing access is disabled.

2=All Unset Remote Servicing access is only granted when all groups or the complete system are unset.

3=Any Set Remote Servicing access will only be granted if any of the groups or the complete system are set.

4=Any Time Access available at any time (default).

Remote Access Mode [56.4.03.2]

Use this option to control access authorization and whether the remote session is initiated from the panel or a computer.

1=Direct Access

Use this option to permit access at any time (in conjunction with Access period). Access is initiated from Remote Servicing. Once access is authorized/initiated, uploading, downloading and remote servicing can begin.

2=Manager Authorize

Use this option to require site manager authorization prior to remote access. There are two methods of doing this:

Timed Access – Remote Servicing must access the panel within 40 minutes of this option being enabled (see option **47.1.2.0**). Once connected there is no time limit on the access period. On terminating the connection, Remote Servicing can re-access the system within 15 minutes of the termination.

Call Back – the manager programmes the panel to initiate a connection to the Remote Servicing computer (see option **47.1.2.1**) by selecting one of the Call back IP addresses programmed into the system.

1=Call Back IP 1-5   There are 5 possible IP address/Port number destinations that can be programmed, allowing communication with up to five different Remote Servicing locations.

                1=IP Address Enter the IP address of the PC running the Remote Servicing application.

                2=Port No.   Enter the port number allocated to Remote Servicing on the PC (default is 10001).

Autotest [56.4.04]

Use this option to automatically transmit an engineer test to the Receiving Station at programmed intervals.

1=Start Time   Enter the time the first engineer test is transmitted. Subsequent engineer test transmissions are offset by the value assigned in the **Intervals** option.

2=Intervals   Sets the period between engineer test transmissions following the Start Time. The range is 0 to 99 hours.

Engineer Test [56.4.05]

Use this option to send an engineer test on each of the transmission paths to ensure that the receiving station is receiving events correctly, once the appropriate IP address/port no, and account numbers have been programmed into the system.

When you select this option a warning message is displayed, **WARNING!!! ENT=SEND MESSAGE**.

Press **ent** to send the engineer test.

Fail to Comm [56.4.06]

Use this option to program the number of unsuccessful communication attempts before the **COMM FAIL** message is recorded in the event log.

When an event is to be transmitted to the monitoring station, the Ethernet module attempts to initiate a session with the destination receiver for each programmed transmission path. If the programmed number of attempts is reached a Fail to Comm message is logged, including which path has failed.

Note: If the receiver option is programmed as Dual then a successful transmission must be made to both primary and secondary to be considered a successful transmission.

Line Fail [56.4.07]

The line fail option controls which Ethernet connections are monitored. The Ethernet module can be programmed to monitor both the network availability and the programmed transmission paths between the Ethernet module and receiver applications.

Line fail events (whether network or transmission path) must be present for the time programmed in parameter 51.68 before the event is activated. If a line fail is present and an attempt is made to set the system within parameter 51.68 delay period, the line fail will immediately be logged and indicated.

Line Fail Network [56.4.07.1]

Use this option to monitor the connection between the Ethernet module and the local network. **0=OFF** and **1=Available**. When set to **1=Available** a Line Fail event is activated if the Ethernet module is disconnected from the network or the local network is not available at the panel.

Line Fail Signal Path [56.4.07.2]

Use this option to program which signalling paths are monitored by the Ethernet module. The Ethernet module is programmed to expect a path supervision signal at the frequency programmed in **Alarm Reporting Heartbeat [56.4.02.7]**. If the signal is not received a line fail event is logged, which indicates the path that failed and the destination IP address of that path.

Note: If groups are enabled a failure on the primary path will not provide specific IP information.

Options are available to select specific paths or all paths.

1=Primary   Monitors the primary transmission path only.

2=Secondary   Monitors the secondary transmission path only.

3=Alarm Mon.   Monitors the Alarm Mon. transmission path only.

4=Any   Monitors all transmission paths. If a supervision failure is detected in any of the paths a line fail condition is activated.

5=All   Monitors all transmission paths. If a supervision failure is detected in all of the paths a line fail condition is activated.

SIA Control [56.4.08]

When using the SIA control command protocol for integration purposes, enter the IP address of the computer sending the SIA control commands to ensure that only commands from a computer with the programmed IP address are recognised by the Ethernet module.

Enter the IP address in the form XXX.XXX.XXX.XXX. The dot separator is added automatically after each sequence of three numbers. To add the separator manually press ✱.

Encrypt [56.4.09]

The Ethernet module supports 128 bit encryption for all communication options. Use this option to enable and disable encryption for each communication option. The default setting is OFF for each option.

1=Alarm Report	Controls encryption for the Primary and Secondary alarm transmission paths.
2=Remote Access	Controls encryption for the Remote Servicing sessions.
3=SIA Control	Controls encryption for communications between the Ethernet module and remote computer using the SIA control command protocol.
4=Alarm Mon.	Controls encryption for the Alarm Monitoring alarm transmission paths.

GPRS Network [56.4.10]

To enable GPRS operation you need to setup **Format [56.4.02.1]**, **Primary IP [56.4.02.2]**, and **Account No. [56.4.02.4]** as well as the following options:

1=APN	The Access Point Name for the GPRS provider; a maximum of 30 characters.
2=Login	The login (username) for the GPRS provider; a maximum of 20 characters.
3=Password	The password for the GPRS provider; a maximum of 20 characters.

GSM [56.5]

The GSM module has the same menu structure and function as the **Internal Telecoms [56.1]** with the following exception:

11=Fail to Comm

This is controlled by the number of attempts and not time.

Line Fail [56.5.10]
1=Network Fail (default **Disabled**) A line fail occurs if a network failure is detected. The signal strength should be above 30% for reliability. Check this in the diagnostic menu 61.1.06.

SMS [56.5.17]
Use this option to generate and transmit SMS text messages in response to events that occur. **1=Mobile No.(s)** Press **ent** to access and enter up to three mobile numbers (22 digits

max.) of message recipients.

2=Centre No. The phone number (22 digits max.) of the SMS centre. Each operator has a different number.. Always use the full telephone number including the country code for the centre number. Start the number with a ✱ in place of the zero.

3=Format The option is:

1=SMS For mobile phones

4=Site ID   A 16 character alphanumeric string used to identify the panel/site sending the message.

USB [56.6]

```
 ┌─ 1 = Format
 │          ┌─ 1 = SIA (0-4)
 │          │            └─ 1 = Trigger (1 = Status, 2 = Groups)
 │          └─ 2 = Microtech (Same as SIA format)
 └─ 2 = Account No. (6 digits maximum)
```

SIA Format [56.6.1.1]

For details see **Int Telecom SIA Format [56.1.01.2]**.

Microtech Format [56.6.1.2]

For details see **Int Telecom Microtech Format [56.1.01.3]**.

Account No. [56.6.2]

This is the site identifier. Enter a unique account number (6 digits maximum).

Audio [56.7]

Use this option to setup Audio Transmission to allow audio verification of an alarm. Each system zone can be assigned one audio channel, each with a maximum of three microphones. Following an alarm transmission over PSTN, you can program the panel to route recorded audio from the time of the alarm activation, and live audio, direct to the Alarm Receiving Centre. The following options are available:

```
 ┌─ 1 = Listen In
 │          ┌─ 0 = Disabled
 │          ├─ 1 = Tel No. 1/2/3
 │          └─ 2 = Tel No. 3
 ├─ 2 = Alarm Monitoring – Not used
 ├─ 3 = Dial In – Not used
 ├─ 4 = Audio Module
 │          ┌─ 1 = Path (PSTN) (0 = Disabled, 1 = Enabled)
 │          └─ 2 = Audio Channels – Channel No (0 = Disabled, 1 = Enabled)
 └─ 5 = Pre-Alarm – Pre Listen Time 00 (0 to 10 sec)
```

Listen-In [56.7.1]

Use this option to allow onsite audio verification by an operator, after the panel sends an alarm signal to the ARC.

0=Disabled	No audio on any number.
1=Tel No. 1/2/3	All telephone numbers are used to transmit all calls, including audio and non-audio events.
2=Tel No. 3	Alarms enabled with audio are reported to telephone no 3 only (entered with option **56.1.18**), and the audio follows on the same number. No audio is sent to Primary(TEL 1) / Secondary(TEL 2).

Alarm Monitoring [56.7.2] Not Used

Dial In [56.7.3] Not Used

Audio Module [56.7.4]

This option enables the Audio Interface Module and configures the audio channels that will be used to record sound in the event of an alarm.

1=Path (PSTN)	This option selects PSTN as the communication line between the panel and ARC when set to 1=Enabled.
2=Audio Channels	This option controls the audio channels' status. It can be enabled or disabled.

The channel is in a four-digit format. For example: Channel 9024.

9=Line number (fixed)

0=Audio Interface number (fixed)

2=Mux Module number

4=Audio channel

Press **ent** to display the status of the current audio channel, for example:

```
ENABLED  9024 E ──────  E = enabled, D = disabled
0=DISABLED
```

Press **ent** again to disable the audio channel.

```
CHANNEL  9024
[ent] to select
```

Pre Alarm [56.7.5]

Use this option to set the alarm delay recording time. The audio channel continuously records a rolling 10 seconds of audio. When an alarm activation occurs, the system stops recording and stores 10 seconds of audio. Use the pre-listen time parameter to set the amount of alarm delay in the recorded audio.

Pre-Listen Time

The alarm delay listen time can be set from 0 to 10 seconds. Setting the time to 5 seconds (default) means that 5 seconds of pre-alarm and 5 seconds of post alarm audio is saved.

System Print [57]

Use this option to print system programming details. There are 2 options:

System Print menu

```
57 = System Print
      └─ 1 = Printer Module
                  ├── 01 = System Data [23]
                  ├── 02 = Codes [42]
                  ├── 03 = Parameters [51]
                  ├── 04 = Zones [52]
                  ├── 05 = Outputs [53]
                  ├── 06 = Links [54]
                  ├── 07 = Communication [56]
                  ├── 08 = ISDN [56.3]
                  ├── 09 = Groups [63]
                  ├── 10 = Keypads [58]
                  ├── 11 = Timers [65]
                  ├── 12 = Event Log [22]
                  └── 13 = Options 01 to 12
```

When printing option **12=EVENT LOG**, the system prompts for Groups to be selected. The print shows only those events logged for the groups selected.

To abort the print at any time, press **esc**.

Note: Connect a printer before selecting the print option. If the printer is off-line, or is not connected, the **PRINTER off-line / ESC to abort** message is displayed. Press **esc** and correct the problem.

Printing Timers

Printing **11=Timers** provides details of all the times that have been assigned in **Timers [65]**, and includes the autoset time, the pre-warning period and lockout times.

Keypad [58]

You can assign individual attributes to each keypad to control how each responds.

On selecting the Keypad option, details of the first keypad connected to the system are displayed.
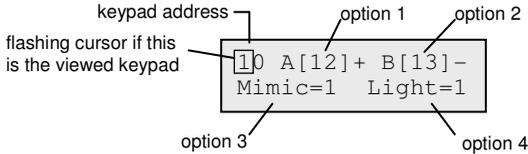
To select a keypad address enter its address or by use **A** and **B** and then pressing **ent**. **1=A-key** is displayed. Press **A** or **B** to select the required option, and then press **ent**.

Note: When the address of the keypad currently being used is displayed, a black square flashes on and off over the first digit of the keypad address.

A-key [58.1]

Code Status

Use this option to assign a function to the **A** key. When you select the option, **1=Code Status** is displayed. The options are:

0=OFF [ ]   A key disabled.

1=WITH CODE [+]   A key requires code to be entered prior to operation.

2=NO CODE [–]   A key is a single touch operation no code is required.

Select the required Code Status, and then press **ent**.

Note: The **Code Status** assigned to the key is displayed when selecting the keypad address, for example **A[12]**, which indicates that the **A** key does not require a user code.

Menu Option

To assign one of the options to the **A** key, press **A** to select **2=Menu**, and then press **ent**. The currently assigned option is displayed.

```
10 A-key Option
12=Timed Set
```

To assign a new function, enter the full menu option number 11 to 72, or press the **A** or **B** keys until the required option is displayed; press **ent** to accept the selection and return to the previous menu level.

B-key [58.2]

B key programming is identical to that of the **A** key.

Buzzer Mimic [58.3]

Use this option to program the keypad buzzer to mimic the function of the programmed keypad output (refer to **Program Outputs [53]**). The default function of the keypad output is entry/exit horn and the default Mimic defaults to On, therefore the keypad buzzer operates as an entry/exit horn at factory setting.

To disable the keypad buzzer from mimicking the output select **0=Off**.

Backlighting [58.4]

Use one of the following options to set the keypad backlighting:

0   Always off

1   Always on (default)

2   On when the system is unset
         Off when the system is set
         On when keys are pressed

3   On during setting and unsetting
         On when keys are pressed
         Off after keypad timeout and menu exit

4   On when keys are pressed
         Off after keypad timeout and menu exit

Keypad Mute [58.5]

Use this option to improve security and reduce tampering with the keypad when it is located in a public place.

0=Off   (default).

1=On   The keypad remains silent and no backlight or key press symbols are displayed until a valid code is entered.

Keypad Disable

A keypad may be disabled by programming the address of the keypad as a link destination (refer to **Links [54]**). When the source of the link is activated the keypad does not respond to any key press, however, the LCD, keypad buzzer and any keypad output device act as normal.

Show Status [58.6]

Enable this option to allow the set status of the groups to be displayed.

To display group set status, press ✱ and **#** together.

F = Fault

R = Ready

S = Set

P = Part Set

```
STATUS  12345678
Groups  RRSRSPFP
```

— group block

– = Group not assigned to keypad
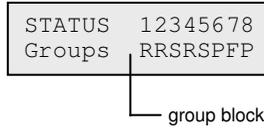
Note: This option works when the system is set (keypad blank) or unset (normal banner). It does not operate in engineer mode.

To show the status of the groups individually, press ✱ and **#** again.

To move between each groups, press ✱ and **A** or ✱ and **B** together.

To return to the banner display, press ✱ and **#** again.

Keypad Groups [58.7]

You can assign each keypad to selected groups. The keypad then responds only to user codes that have a group common to it and only displays alarm information on the groups assigned.

Entering a user code, assigned to all groups on a keypad, which is only assigned to a single group, allows access to all of the user's groups. The user is not restricted by the groups that are assigned to the keypad as long as there is one group common to both. This means that a keypad assigned to group 1 only, for example, can be used to set groups 1, 2, 3 and 4 by using a code with all of these groups allocated.

Keypad Group Restriction

To restrict access only to groups that are common to both the user and the keypad, press the ✱ when assigning groups to the keypad. This means that when a user with access to groups 1, 2 and 3 sets the system on a keypad assigned to groups 2, 3 and 4, only the common groups (groups 2 and 3) are set.

Assigning Keypad Groups

On selecting the Keypad Groups option, the groups currently allocated to the keypad are displayed (the default is all groups assigned). Pressing the group number toggles the group assigned to the keypad.

Note: Also see option 53, to control the buzzer operation on each keypad. This is independent of the keypad group parameter.

Quick Menu [59]

The quick menu consists of up to ten menu options that are accessed by all type 3 user codes and above that do not have a ✱ assigned to their code type. You can reprogram the quick menu to include any menu options. The default settings are shown in the following table:

Quick Menu No.	Menu Option	User Type
0	Omit Zones [11]	3
1	Chime [15]	3
2	Display Zones [21]	4
3	Display Log [22]	4
4	Print [24]	4
5	Walk Test [31]	5
6	Time/Date [41]	6
7	Codes [42]	1
8	Summer [43]	6
9	Eng. Access [48]	6

Modifying the Quick Menu

On selecting the Quick Menu option, the details of the first option assigned are displayed. This includes the quick menu location, the assigned menu option, the full menu option number and the assigned user type.

quick menu location   menu options

```
0=OMIT ZONES
Option=[11]  L=3
```

full menu option number   user type (user level)
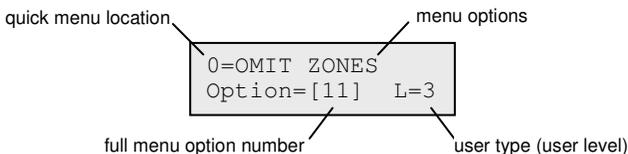
To modify the quick menu:

1.   Type, or navigate to, a quick menu number, and then press **ent**.

2.   Type, or navigate to, a full menu number (11 to 72), and then press **ent**.

To delete a quick menu option:

▪   Press ✱ instead of a full menu number. ✱✱=**NOT USED** is displayed.

The system arranges the quick menu in order of lowest user type access required, therefore if quick menu number 0 is assigned a menu option which is of a higher access type than options 2, 3 and 4, the menu is rearranged and the display indicates that the option is now number 4.

Note: You cannot assign duplicate quick menu options. The message **DUPLICATE ENTRY** is displayed and the system prompts for a new option to be assigned.

Engineer 2

Diagnostics [61]

Use this option to run these diagnostic tests:

- the communication integrity between the panel and modules
- voltage measurements
- resistance measurements
- module version checks
- panel memory checks
- fuse checks

This option is split into two sections:

- **Latest:** providing real time diagnostic information for the system.
- **Historical:** a snapshot of the system diagnostic status can be generated and saved.

Latest [61.1]

The Diagnostic options are:

1=MEMORY TEST　this option forces a check of the panel memory.

2=KEYPAD COMMS　the communication level between the panel and the keypads.

3=RIO COMMS　the voltage and version at each RIO as well as the communication level between the panel and the RIO.

4=PSU COMMS　the voltage at each Power Supply Unit and the communication level between the panel and the SPSUs. It is identical to the RIO COMMS diagnostic with the exception that it also indicates the fuse status and battery status. A number to the right of the current indicates a blown fuse:

　　　2=Battery fault
　　　3=+12V Auxiliary 1 fault
　　　4=Not Used
　　　5=Not Used
　　　6=Not Used
　　　A ✶ indication means low battery or a missing battery.
　　　95% ✶2 13.6V

5=MAX COMMS　the communication level between the panel and the MAX/DCM readers.

6=COMM MODULES　the communication level between the panel and the Int Telecoms, Ethernet/GPRS, ISDN, GSM, the USB, and the Audio Module.

```
┌─────────────────────────┐              ┌─────────────────────────┐
│ Audio Module            │  press #     │ Audio Module            │
│ 100% CM08 V1.0          │ ──────────▶  │ 100% CM08 13.72V        │
└─────────────────────────┘              └─────────────────────────┘
```
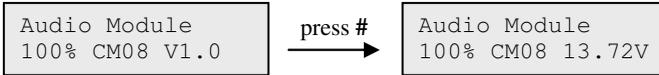
To access MUX module diagnostics, press ✱ when the audio interface diagnostics are displayed. You can then scroll between each MUX module.

7=ZONES   the status of each zone can be viewed.

8=DCM ZONES   the status of each DCM zone can be viewed.

9=RF Modules   displays a list of RF addresses. Select an address to view the RF Module version and percentage of communications with the panel from 0 to 100%. Scroll through the available RF addresses, and use **#** to toggle between noise levels for V2 or Alpha channels, where Ch1=V2 channel and Ch2=Alpha channel.

10=RF Zones   displays diagnostic information for RF zones only. There are two sub-options.

- Select **1=RF Zones** to display a list of RF zones. Select a zone and press **ent**. Select sub-option **2=Reset lowest** to reset the lowest recorded signal strength of the current zone only.

- Select **2=Reset lowest** directly to reset the lowest recorded signal strength of all RF zones.

Historical [61.2]

The following options allow a full diagnostic baseline to be performed on the complete system, including power supplies and peripherals.

View [61.2.1]

Use this option to view any stored baseline data from the **Record [61.2.3]** option.

1=MEMORY TEST – as latest.

2=KEYPAD COMMS – snapshot value from last test.

3=RIO COMMS – snapshot value from last test.

4=PSU COMMS – snapshot value from last test.

5=MAX COMMS – snapshot value from last test.

6=COMM MODULES – snapshot value from last test.

7=ZONES – snapshot value from last test. The ✱ key allows printing of results.

8=DCM ZONES – snapshot value from last test.

Timeline [61.2.2]

Use this option to show the time and date of the last check carried out for each of the areas listed:

1=Batt Size	Battery size in Ah.
2=Batt RF	The battery status of all RF devices. Shows LOW if not OK.
3=PSU Volts	The voltage level of all Smart PSUs in the system including onboard PSUs.
4=RIO Volts	The voltage level of all Smart PSUs in the system including the onboard RIOs.
5=Zone Ohms	The current resistance across all zones in the system. For RF zones signal strength and time since supervision are displayed.
6=Communication	Type of device, address, and the percentage level with all peripherals in the system.
7=Panel Memory	A check of the panel memory.
9=Batt Volts	Voltage level of the battery connected to the control panel.

Record [61.2.3]

Use this option to start a baseline check of areas 1 to 7 in the table above. You are prompted to press ✱ to continue with the diagnostic check.

Checks [61.2.4]

Use this option to disable or enable each of the areas 1 to 9 listed above from the baseline recording..

Print [61.2.5]

Use this option to print the stored baseline data via a print interface module on the RS485 line.

Full Test [62]

Use this option to select and test two zones under full set conditions. Activating the selected zone results in a full alarm condition, including remote signalling. Constantly active zones (Security, PA, and Fire) remain active throughout the Full Test. An activation generates the appropriate local or full alarm depending on the zone.

To start the full test:

1. Select the Full Test option. The address and function of the first zone on the system is displayed.

2. Navigate to the required zone, and then press **ent**.

3. An option is then given to choose a second confirm zone.

    ▪ If you press **A** (YES), select a second required zone by pressing **ent**.

    ▪ If you press **B** (NO), the system begins the full setting procedure. Activating the zone results in a full alarm condition.

To end the full test:

▪ Unset the system.

Options [63]

Use this function to divide the system into group subsystems.

Options Menu

```
63 = Options
    └── 1 = Groups
              ├── 1 = Group Mode
              │         ├── 0 = Disabled
              │         └── 1 = Enabled
              ├── 2 = Setting Logic
              │         ├── - = Status of group unimportant
              │         └── S = Group must be set to allow group to set
              └── 3 = Group Name      A/B to move to group and ent to select
                                      # = toggle upper case, lower case or library text
                                      * = delete last character
                                      A/B = move to character/word
                                      ent = assign character/word
                                      esc = save programming.
```
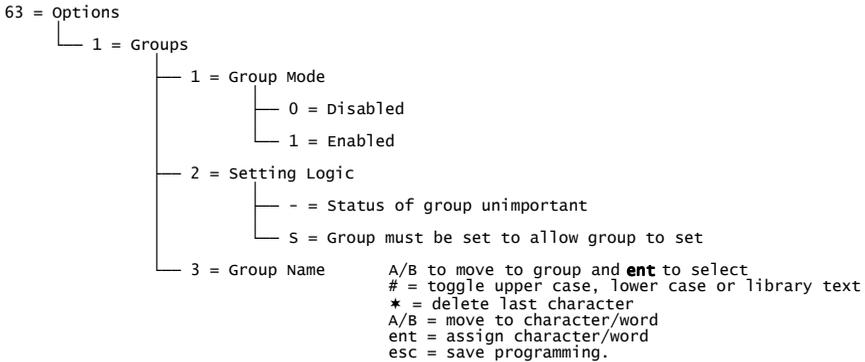
Group Mode [63.1.1]

Use this option to enable the Groups function (default is 0=Disabled). When enabled, the system options that are eligible for group programming are then made available throughout the menu, otherwise they do not appear.

To enable Groups:

1. Select the Group Mode enable option, and then press **ent** to accept the programming.

2. Return to the Engineer Mode banner to enable groups completely.

To disable Groups:

1. Select the Group Mode disable option, and then do one of the following:

   ▪ Press **1** (Reset Groups), and then press **ent**.

     All group programming for all the panel features is reset to A1. The message **ATT!!! GRPS OFF, SYS. OP. IMPACT** is displayed on exit from engineering mode, warning that groups have been reset and there will be an impact on the operation of all functions not programmed as group A1.

     Note: When group programming is re-enabled all previous group programming is not restored.

   ▪ Press **2** (Disabled), and then press **ent**.

     All group programming other than A1 is disabled (zones, outputs, links, and users). The message **ATT!!! GRPS OFF, SYS. OP. IMPACT** is displayed on exit from engineering mode, warning that groups have been disabled and there will be an impact on the operation of all areas not programmed as group A1.

> **Note:** If this option is selected when group mode is re-enabled all previous group programming is restored. However, while group mode is disabled, a zone not programmed to group A1 will not operate normally on the system. We strongly recommended that, whenever possible, groups are always reset to A1 when disabling groups.

2. When you exit engineering mode, press **esc** to remove the warning message.

Setting Logic [63.1.2]

The Setting Logic option restricts a group from setting by determining which other groups must be set before it can set. For example, group 1 may be prohibited for setting unless groups 3 and 7 are already set. The Setting Logic is individually defined for each group.

To program Setting Logic:

1. Select the Setting Logic option. Group 1 is displayed.

2. Navigate to the required group, and then **ent** to access the group. The current Setting Logic details are displayed for each of the other groups.

   ▪ **S** below a group means that it must be set to allow the selected group to set.

   ▪ **–** below a group indicates that the group does not need to be set.

3. To toggle the status of a group, press its number.

4. When you have defined the setting logic pattern, press **ent** to save the programming.

Setting Logic Operation

If Setting Logic has been assigned to a group, the set status of the groups must satisfy the conditions defined in the option to permit the group to set. If the Setting Logic conditions are not satisfied, then the group cannot set. If multiple groups are being set simultaneously, but one group is restricted due to the programmed Setting Logic, the remainder of the groups set. The restricted group does not set and there is no warning or indication given.

If the programmed Setting Logic results in none of the selected groups being allowed to set, a warning message is displayed on the keypad.

```
2 Groups not set
[<],[>] to view
```

This message does not appear if at least one group sets.

Group Name [63.1.3]

Use this option to assign a name of up to 12 characters to each of the groups. Names are made up from the character set and/or library options.

To name a group:

1. Select the Group Name option. The name currently assigned to group 1 is displayed.

    Note: All group names default to Group X (where X is the group number).

2. Navigate to the group you want to name, and then press **ent**. The following details are displayed:
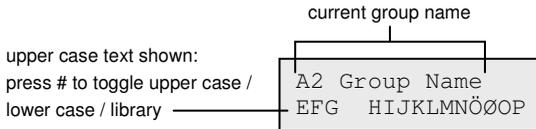
The currently assigned name is displayed on the top line. An underscore shows where the next character will be positioned, and a selection of the alphabet is shown on the bottom line. The cursor flashes on the letter L.

3. Press ✱ to erase the characters already assigned to the name.

4. Use **A** or **B** to move the alphabet left or right until the required character is positioned underneath the flashing cursor, and then press **ent** to copy the character to the descriptor in the top line.

5. Repeat step 4 until the group name is complete.

Text Case & Library

On entering the Group Name option the alpha-numeric characters are all presented in upper case. You can toggle to lower case characters and library words as follows:

■   Press **#** to toggle from upper case to lower case.

■   Press **#** again to toggle from lower case to library words. Use **A** or **B**, or enter a reference number to view library words (refer to *Appendix A*).

    Note: Library words are a maximum of 12 characters and upper case only.

Group Name Display

When viewing the groups assigned to an option, for example user code or outputs, you can press **#** and ✶ together to display the groups individually. The keypad displays the group number, name and the status of the particular option being displayed.

Press **#** to toggle the status of the group. To move to another group press **A** or **B**, or enter the number of the group directly.
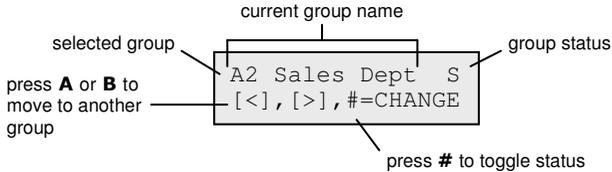
Notes on Groups

1. All zones default to group 1.

2. All keypads, user codes and outputs default to all system groups assigned.

3. Remove unused groups from user codes, otherwise the unused groups will set and unset even though they are not programmed.

4. Final, Keyswitch and Exit can be programmed to function with regard to other groups during the setting and unsetting procedures (refer to option **Program Zones [52]**).

5. Outputs can be assigned to any selection of groups. Output activation can be made dependent on the set or unset status of the assigned groups (refer to **Program Outputs [53]**).

6. After programming zones, codes, keypads and outputs into their various groups they remain programmed if the Group Mode function is disabled. Only Group 1 remains active.

7. The control panel has multi-user software that allows several users to operate the system simultaneously.

Assemble Zone [64]

The Assemble Zone option allows 2 zone functions to be customised to the user's requirements; these are the 1 Custom-A and 2 Custom-B zones. Once a custom zone function has been assembled, it is assigned to zones using **Program Zones [52]**.

Programming a Custom Zone

The flexibility of this menu option allows for an extensive range of possibilities. It is therefore important that the engineer is fully aware of the system and has a clear picture of what is required of the new zone function.

The procedure for assembling a custom zone has 4 stages:

- Outputs
- Status
- Setting
- Log

Assemble Zone Menu

```
64 = Assemble Zone (select of two custom zones)
      ── 1 = Outputs      (Select output type, then press # to toggle between Disabled,
                            Set, Unset, Set/Unset. Press esc to save programming)
      ── 2 = Status
                  ── 1 = Unset (Press # to toggle between Disabled and Alarm)
                  ── 2 = Entry/Exit (Press # to toggle between Disabled and Alarm)
                  ── 3 = Part Set (Press # to toggle between Disabled and Alarm)
                  ── 4 = Full Set (Press # to toggle between Disabled and Alarm)
      ── 3 = Setting
                  ── 1 = Begin Set (Press # to toggle between Disabled and Enabled)
                  ── 2 = Begin Entry (Press # to toggle between Disabled and Enabled)
                  ── 3 = Sets System (Press # to toggle between Disabled and Enabled)
      ── 4 = Log (Press # to toggle between Disabled, Entry/Exit, 24 Hours, Alarms)
```

Outputs [64.1]

Any of the available output types can be assigned to the custom zone. On selecting this attribute the **01=BELLS** output type is displayed along with its status. The default status is disabled. The status indicates the conditions under which the custom zone activates the output. To assign the output type status press the # key, this toggles between each of the status settings:

1=Disabled   the output is not activated by the custom zone.

2=Set   the output is activated by the custom zone only when the system is set.

3=Unset   the output is activated by the custom zone only when the system is unset.

4=Set/Unset   the output is activated by the custom zone when the system is both set and unset.

Select the output types to be assigned by pressing the **A** and **B** keys or by entering the number of the required output type, and then assign the required status. When all of the output types have been selected, press **esc** to return the previous menu level.

For a full list of output types refer to option **Program Outputs [53]**.

Status [64.2]

The Status attribute determines the system conditions under which the custom zone is operational. The four Status attributes are:

1=Unset   activates an alarm when the system is unset.

2=Entry/Exit   activates an alarm when the system is setting and unsetting.

3=Part Set   activates an alarm when the system is part set.

4=Full Set   activates an alarm when the system is full set.

The default for each of the Status attributes is disabled. To enable the zone to activate an alarm, select the required Status attribute using the **A** or **B** keys and press **#**. The display indicates that a custom zone activation, while the system is in the selected Status, will create an Alarm condition and switch on the assigned outputs.

Note: The custom zone can be operational in all four status conditions if required.

Setting [64.3]

The Setting attribute determines the function (if any) that the custom zone has in setting and unsetting the system.

1=Begin Set   if enabled, the custom zone starts the setting procedure.

2=Begin Entry   if enabled, the custom zone starts the unsetting procedure.

3=Sets System   if enabled, the custom terminates the setting procedure.

The default for each of the Setting attributes is disabled. To enable the options, select the required Setting attribute using the **A** or **B** keys and press the **#** key; the display indicates that attribute is ENABLED for the custom zone.

Note: The custom zone can be assigned all three Setting attributes if required, however, it is recommended that either attribute 1 (Begin Set) or 3 (Sets System) is enabled, but not both.

Log [64.4]

This attribute determines which custom zone activations are logged. On selecting Log the current selection is displayed. To change the selection press the # key, this toggles between the Log options:

Disabled   the custom zone activations are not logged.

Entry/Exit   the custom zone activations only log during the setting and unsetting procedure.

24 Hours   all custom zone activations log (both in the set and unset states).

Alarms   the custom zone only logs when an activation results in an alarm condition.

Note: The opening (+) and closing (–) of custom zones are recorded in the event log.

Assemble Zone Example

Assemble a zone that:

▪   Activates Bells outputs when the system is set.

▪   Activates Link-A outputs when the system is unset.

▪   Generates an alarm condition when the system is part and full set.

▪   Does not generate an alarm condition during the setting and unsetting procedure.

▪   Acts as a terminator when the system is setting.

▪   Logs all activation (in both set and unset states).

To program Assemble Zone:

(Assuming factory default settings)

1.   Select option **64=ASSEMBLE ZONES**, and then press **ent**.

2.   Select custom zone (1=Custom-A, 2=Custom-B), press **ent**. **Outputs** is displayed.

3.   Press **ent** to select this option. **01=Bells** is displayed.

4.   Press **#**. **Set** is displayed.

5.   **Type 51. Link-A** is displayed. Press **#**. **Set** is displayed.

6.   Press **#**. **Unset** is displayed.

7.   Press **esc**. **Outputs** is displayed.

8.   Press **A**. **Status** is displayed.

9.   Press **ent** to select this option. **Unset Disabled** is displayed.

10.   Press **A**. **Entry/ Exit Disabled** is displayed.

11.   Press **A**. **Part Set Disabled** is displayed.

12.   Press **#**. **Part Set Alarm** is displayed.

13. Press **A**. **Full Set Disabled** is displayed.

14. Press **#**. **Full Set Alarm** is displayed.

15. Press **esc**. **Status** is displayed.

16. Press **A**. **Setting** is displayed.

17. Press **ent** to select this option. **Begin Set Disabled** is displayed.

18. Press **B**. **Sets System Disabled** is displayed.

19. Press **#**. **Sets System Enabled** is displayed.

20. Press **esc**. **Setting** is displayed.

21. Press **A**. **Log** is displayed.

22. Press **ent** to select this option. **Log Disabled** is displayed.

23. Press **#**. **Log Entry/Exit** is displayed.

24. Press **#**. **Log 24 Hours** is displayed.

25. Press **esc** three times to return to **64=ASSEMBLE ZONES**.

Timers [65]

Timers Menu

```
65 = Timers

        — 1 = Weekly Schedule (1-4)

                    — 1 = Name (12 alpha-numeric)

                    — 2 = Status

                    — 3 = Events      Use A or B to select timer, then press ent
                                      W1-4 ***  ***  **:**
                                      [>], [<], #, 0-9, *
                                      A, B key to program day (Mon - Sun)
                                      # to toggle ON/OFF status
                                      0-9 keys to enter time
                                      * to delete programming

                    — 4 = Holiday Period — 00-40 (00=None)

                    — 5 = Holiday Schedule — 1-4 schedules

                    — 6 = Pattern day
                              — 1 = Mon
                              — 2 = Tue
                              — 3 = Wed
                              — 4 = Thu
                              — 5 = Fri

        — 2 = Timer Outputs

                    — 1 = Timer A

                                — 1 = Status
                                        — 0 = Off
                                        — 1 = On

                                — 2 = Weekly Schedule — 1-4 schedules

                    — 2 = Timer B

                                — 1 = Status
                                        — 0 = Off
                                        — 1 = On

                                — 2 = Weekly Schedule — 1-4 schedules

        — 3 = Autoset (groups) — Use A or B to select groups, then press ent

                                — 1 = Status
                                        — 0 = Off
                                        — 1 = On
                                        — 2 = Monitor

                                — 2 = Prewarning

                                            — 1 = Period — 30 (0-50) mins

                                            — 2 = Audible
                                                    — 0 = Off
                                                    — 1 = On

                                — 3 = Extension — 030 (0-400) mins

                                — 4 = Force Set
                                        — 0 = Off
                                        — 1 = On

                                — 5 = Weekly Schedule — 1-4 schedules
```

The Flex control panel provides programming of timer schedules on a weekly basis. Each event corresponds to an ON or an OFF time. The state of the schedule is ON or OFF depending on the last event that was reached.

Timers can be assigned to:

▪ Individual users to disable them

▪ Individual doors to lock them

▪ Individual groups for autoset

▪ Outputs for automatic activation

Note: The ON period is the secure period for a particular schedule when users will be unable to gain access to allocated areas when the Autoset and Lockout features for allocated groups are enabled.

Weekly Schedule [65.1]

A weekly schedule consists of a selection of daily time programs for each day of the week. The state of the weekly schedule is ON or OFF depending on the last event that was reached. Up to 4 weekly schedules with 28 time slots are available for programming depending on panel variant

The weekly schedules are used to control these panel functions:

▪ Auto setting

▪ Lockout times

▪ User access times

▪ Timer Outputs

Name [65.1.1]

A maximum 12 character alpha-numeric name can be entered here for a weekly schedule

Status [65.1.2]

The status of each of the timers is shown here whether 0=OFF or 1=ON. To change the status press **A** or **B**, or press **1** to select ON or **2** to select OFF.

Events [65.1.3]

This option programs the weekly timer events with Day (Mon-Sun) and ON/OFF times.

Note: The number of weekly timer events is dependent on panel variant.

Programming Timer Events

1. Select the Events option. The programmed status (if any) of the first timer is displayed.

If the timer has not been programmed the keypad displays the following information:

first timer ——— W01*** *** **:**

2.   To enter a new timer program for W01:

   a.   Press **ent** to select the timer.

   b.   Press **A** or **B** to select the day (MON to SUN).

   c.   Press **#** to select the status ON or OFF.

   d.   Press the number keys (0-9) to select the first time (4 digit 24 hour format) on the top row.

   e.   Press **ent** to accept the programming. Typically the following information is displayed:

W01MON ON   08:30

3.   To program the OFF time on the bottom row repeat step 2. Typically the following information is displayed:

W01MON ON   08:30
   MON OFF 17:00

4.   Press **esc** three times to escape from the Timers option.

Note: The Timer Status can be switched On and Off by users via option **Timer Control [45]**.

Holiday Period [65.1.4]

This is the holiday period programmed in **Modify Dates [45.2.1]**. Up to 40 holiday periods can be viewed with this option.

Holiday Schedule [65.1.5]

This is an alternative schedule that is used if the **Holidays** [**45.2**] option is activated. The system defines a selection of holiday dates **[65.1.4]** and then a schedule of times can be used on those dates under this option. Up to 4 holiday schedules can be selected.

Pattern Day [65.1.6]

Use this option to set the programmed timers that are effective when the **Weekend Work [45.5.1.1]** option is selected by the user; the timers of the selected Pattern Day are adopted by the days selected for weekend work.

On selecting this option the programmed Pattern Day is displayed; the default is **1=MON**.

Use the **A** or **B** keys to select the required day or days and press **ent** to accept the programming and return to the previous menu level:

1=MON; **2=TUE**; **3=WED**; **4=THU**; **5=FRI**

Timer Outputs [65.2]

Once the times have been programmed and the Status is set to **1=On**, the Timer-A or Timer-B outputs **types 29** and **30** are activated at the On times and deactivated at the Off times programmed in **Weekly Schedule [65.1]**..

Autoset [65.3]

Each group can be programmed with up to 42 Autoset events over a 7 day period. These can be combined in any order of On and Off times as required.

When the system has been set by the Autoset function, outputs programmed as Autoset are activated (refer to **Program Outputs [53]**); the Set outputs are also activated.

Programming Autoset

If groups are enabled (refer to **Options [63]**) the keypads prompts for the group that the autoset time is to be allocated to. Press **A** or **B** to step through the groups until the required number is displayed and press **ent**.

Account Group Autosetting

Account Group autosetting is allowed. This means that several groups can be bound together into one account group and, instead of a sending a normal CA (closed automatically) event, the panel sends a CL (closed late) event.

Refer to **Account No [56.1.2.2.2]**.

There are five stages to programming the Autoset function:

Autoset Status [65.3.1]

0=Off (default)

1=On

2=Monitor   If selected, the setting and unsetting of the group is monitored:

If not set manually before the On time, then the Set Late output is activated.

If unset before the Off time, then the Unset Early output is activated.

Prewarning [65.3.2]

1=Period 0 – 50 minutes (default 30 minutes)

2=Audible (this can be turned ON or OFF)

Use this option to set the warning period given to users prior to the system autosetting. Outputs programmed as Pre-warning activate during the pre-warning period. The output normally emits a constant tone, however if an extension is not possible, then a pulsed tone is

emitted and Prewarn activates at the Autoset time. At the end of the pre-warning period, the system begins the timed setting procedure.

Note: Pressing **esc** at any time during the pre-warning resets and restarts the pre-warning count down. If more than one group is in the pre-warning period, each group can be viewed by pressing ✳ and **A** or ✳ and **B**.

Extension [65.3.3]

0 – 400 minutes (default 30 minutes):

An autoset Extension can be assigned to each group on the system - programmed with different values per group. Entering a user code during the Prewarning delays the autosetting by the period assigned to the Extension.

Note: The Late Working option (refer to **Timers [45]**) authorizes an Extension in advance of the pre-warning period.

Late Set appears if the system is not set after Prewarn time plus 300 seconds (longest possible exit delay). An Extension cannot be granted once the timed setting procedure begins.

Force Set [65.3.4]

0=Off (default), 1=On

As a factory preset, any zone that is open at the start of the setting procedure - except Final, Exit, Entry, or Push Set, (or Secure Final or Part Final when acting as a Final) - is omitted by the autoset routine whether or not it is omittable. If one of the above listed zones is open and is non-omittable, on expiry of the time programmed in the Fail-to-Set parameter the Fail-to-Set outputs are activated along with a full alarm.

Autoset Weekly Schedule [65.3.5]

Use this option to assign a programmed weekly schedule to each group when the selected group is automatically switched On (Autoset) and Off (Autounset).

When the keyswitch is activated twice during the exit time of an autoset, the autoset is temporarily cancelled for a few seconds, then it restarts the exit time causing the panel to reset.

Operating a keyswitch zone type during the pre-warn period of an autoset will start a Force Set. If you then activate the switch again (i.e. unset with keyswitch) before the panel sets, the pre-warn continues on the autoset.

Note: When the keyswitch is activated the second time to take the panel back into pre-warn, it can be up to 10 seconds before the pre-warn tones at the keypad start up again.

Pre-checks [66]

This option provides added system security by alerting the user to zones that may not be operating correctly.

Note: Pre-check does not operate when the system is in the engineer mode.

Testing Zones

```
16 CHECK ZONES
A=VIEW
```

The entry/exit horns beep once when each zone is tested. As each zone is successfully tested, the keypad indicates the number that remains to be tested. When the last zone is successfully tested the entry/exit horn sounds twice and the keypad displays **0 CHECK ZONES**; press **ent** to resume the system routine.

1=Mode

The Mode determines the pre-check level that the selected zones are subjected to before the system can set. The Mode is selected from one of the following:

Disabled (default): the pre-check option is disabled; even if zones are selected, they are not checked.

Warning: when the setting routine is started the user is informed of the number of selected pre-check zones that have not been activated since the system was unset. Press **A** or **B** to view the zones. Press **ent** to continue the setting routine. The zones that have not been activated do not have to be tested.

Autocheck: when the setting routine is started the user is informed of the number of selected pre-check zones that have not been activated since the system was unset and a warning is sounded; press the **A** or **B** keys to view the zones. These zones must be tested before setting can be resumed.

Forced Check: when the setting routine is started the keypad indicates the number of pre-check zones that are on the system; to view the pre-check zone addresses press **A** or **B**. All of the preselected zones must be tested before setting can take place.

```
0 CHECK ZONES
ENT=VIEW
```

2=Select Zones

When you select the option, the address and function of the first zone on the system is displayed. Use **A** or **B** to select a zone, or enter the zone address directly. To toggle the status of the pre-check attribute of the zone press **#**. The keypad indicates that the zone is included in the pre-check by displaying **PRE-CHECK ZONE**. Select other zones to be pre-checked in the same way. Once all of the zones have been selected, press **esc**.

Remote Reset [67]

Use this option to perform an engineer reset authorized by the Alarm Receiving Centre (ARC). In the event of an alarm that requires an engineer reset, the keypad displays a number, which, when quoted to the ARC is decoded and exchanged for a new number. When this new number is entered it resets the panel. Entering the engineer code also resets the panel.

Note: The alarm conditions that require to be reset remotely must have the appropriate System Reset, Tamper Reset or PA Reset parameters programmed for engineer reset (type 7).

Each alarm activation generates a random number, therefore the number required to reset the panel changes each activation. As ARCs have different decoding equipment, the appropriate reset system must be selected from the following Remote Mode options:

0=OFF (default)

1=SMS – Southern Monitoring Service (4 digits)

2=Technistore – requires a three-digit local modifier (000 to 255) to be assigned

Note: Assign the local modifier for the Technistore reset mode after discussion with the ARC.

Menu Access [68]

Use this option to assign access types to each of the menu options. You can allow code types 3 to 6 to have access to menu options for which they would normally have insufficient access rights.

On selecting this option, **11=OMIT ZONES** is displayed along with the current code types assigned (3456 default).

```
Levels      3456
11=OMIT ZONES
```

Use **A** or **B** to select the required menu option or enter the option number directly and press **ent**. The currently assigned types appear displayed on the top line of the display. The type maps default to the standard access. To modify the types, press the required number keys; this toggles the access type numbers on the bottom line of the display on and off.

```
Levels      3456
            >--5-
```

Press **ent** to save the programming and return to the previous menu level. If the level is assigned to the option the number is displayed, if it has been removed a dash (–) is displayed.

For example, type 5 codes can be given access to option 42, which would allow them to allocate codes.

```
Levels       ---6
42=CODES
```

Users can only allocate codes up to the type that they have been assigned. A type 4 user cannot assign a user code as type 5.

Access Control [69]

The Access Control system is a complete security system. You can choose the type of access control to use: either the MAX[4] or the door control module or both.

Access Control menu

```
69 = Access Control

        ─ 1 = Mode

                  ─ 0 = Disabled

                  ─ 1 = Enabled

        ─ 2 = MAX

                  ─ 1 = MAX Address  A/B to select line
                                     ent to start MAX search
                                     0 = Online, ent then key 0 - 7 to readdress MAX
                                     1 = Standalone

                  ─ 2 = MAX Parameters      A/B to move to required MAX address
                        MAX XXX (select)    # to display MAX address graphic
                                            ent to select:

                            ─ 1 = Descriptor  # = toggle upper case, lower case or
                                              library text
                                              * = delete last character
                                              A/B = move to character/word
                                              ent = assign character/word
                                              esc = save programming

                            ─ 2 = Relay Duration ── 1 - 60 seconds (default = 05)

                            ─ 3 = Open Timeout ── 0 - 60 seconds (default = 10)

                            ─ 4 = Groups
                                   ─ 1 = Alarm Group
                                   ─ 2 = Group Restrict
                                   ─ 3 = Exit group

                            ─ 5 = Emergencies  Enable or disable option. If group mode is
                                               enabled, a separate enable is available for
                                               each group.

                            ─ 6 = Security
                                   ─ 1 = Nightlock ── 0-4 weekly schedules
                                   ─ 2 = Unlock Time ── 0-4 weekly schedules
                                   ─ 3 = Dual Mode
                                          ─ 0 = Disabled
                                          ─ 1 = Card and Card
                                          ─ 2 = Card and Pin

                                   ─ 4 = Dual Time ── Option not available

                            ─ 7 = Menu Recall

                                   ─ 1 = Menu Function (** = not used)

                                   ─ 2 = Menu Mode      1 = Card Held

                                   ─ 3 = Keypad         ** = Keypad
                                                        # = enable/disable
```

Continued on next page

```
69 = Access Control (continued)

    └─ 3 = DCM

          ├─ 1 = DCM Parameters MAX DCM (select)

          │        ├─ 1 = Descriptor ABCDE_ (9 characters)
          │        │                          │              │
          │        ├─ 3 = System Group        │              │
          │        │                          │              │
          │        └─ 5 = Reader (01 or 02)

          │                 ├─ 01 = Descriptor (ABCDE_ 9 characters)

          │                 ├─ 02 = Relay Duration - 0-60 seconds (default = 05)

          │                 ├─ 03 = Open Timeout - 1-60 seconds (default = 10)

          │                 ├─ 04 = Group Config
          │                 │        ├─ 1 = Alarm Group
          │                 │        ├─ 2 = Group Restrict
          │                 │        └─ 3 = Exit Group

          │                 ├─ 05 = Emergencies 0 = Disabled, 1 = Enabled

          │                 ├─ 06 = Security
          │                 │        ├─ 1 = Nightlock 0-4 weekly schedules
          │                 │        ├─ 2 = Unlock Time 0-4 weekly schedules
          │                 │        ├─ 3 = Dual Mode
          │                 │        │        ├─ 1 = Disabled
          │                 │        │        ├─ 2 = Card and Card
          │                 │        │        └─ 3 = Card and Pin
          │                 │        │
          │                 │        └─ 4 = Dual Time - Option not available

          │                 └─ 07 = Menu Recall

          │                          ├─ 1 = Menu Function 11-72 (** = not used)

          │                          ├─ 2 = Menu Mode
          │                          │        ├─ 1 = Triple Repeat
          │                          │        └─ 2 = Recall Button

          │                          └─ 3 = Keypad       ** - Keypad
          │                                              #  = Enable

          └─ 2 = Card Format

                   ├─ 0 = 26bit

                   ├─ 1 = Crp 1K 35bit

                   ├─ 2 = 37bit no FC

                   ├─ 3 = Northern 34

                   └─ 4 = Custom

                            ├─ 1 = Format Name

                            ├─ 2 = Card Length
                            │        1 = 26 Bit, 2 = 27 Bit, 3 = 32 Bit, 4 = 34 Bit
                            │        5 = 35 Bit, 6 = 37 Bit, 7 = 40 Bit

                            └─ 3 = Card Number
                                     ├─ 1 = Start point
                                     └─ 2 = Field Length
```

Access Mode [69.1]

0=Disabled or 1=Enabled (default)

MAX [69.2]

Use this option to program the MAX access control readers. The MAX can be fully integrated into the system, communicating on the AB lines. If the MAX is programmed as a standalone module, it is completely separate from the control panel, which does not monitor the module or share any of the facilities or options with it.

When enabled, the options that are eligible for MAX programming are made available throughout the menu, otherwise they do not appear or appear as Option not Available.

Note: If the MAX Mode is disabled following programming of MAX readers, the readers remain operational, however, no further programming, including assigning new MAX cards and fobs, is possible until the mode is enabled.

MAX Address [69.2.1]

The address and the online or standalone status of the MAX Modules are assigned and modified using this option. On selecting MAX Address the system searches for the MAX with the highest address. Select the line and press **ent**. On locating the MAX, the keypad prompts for the type of MAX to be assigned:

0=Online

The MAX is fully integrated with the system and communicates via the AB line, sharing system resources and facilities.

1=Standalone

The MAX operates as an entirely independent unit. The control panel does not monitor the MAX for alarms, tampers or power failure.

The MAX can then be readdressed. The keypad displays the current address of the MAX and the range of valid addresses. All MAX modules default to address 7, it is recommended that when adding MAX modules, the first is redressed as 0, the second as 1 and so on.

Enter the new MAX address and press **ent**; the control panel then reprograms the address of the MAX. The keypad indicates the old and new MAX addresses and the status of the reprogramming.

When the reprogramming is complete the MAX bleeps and the display returns to **2=MAX Address**.

MAX Parameters [69.2.2]

Use this option to define the operational features of each MAX module. When you select this option the address of the first MAX on the system is displayed along with the descriptor currently assigned to it. At the same time LEDs on the MAX module display the address in a pattern format. Press **#** to display a graphic on the keypad that corresponds to the LED pattern on the MAX module. For more information see **Reader [25.3]** on page 44.

Descriptor [69.2.2.1]

Use this to assign a name of up to 12 characters to each of the MAX modules.

Relay Duration [69.2.2.2]

After a user card swipe, this is the time allowed to open a door without creating an alarm. The MAX relay de-activates as soon as the door contact opens or the Open Timeout occurs.

The range is 01 to 60 seconds, and the default time is 5 seconds.

Press **A** or **B** to increase or decrease the time in one second increments.

Open Timeout [69.2.2.3]

This is the time a door can remain open after a card swipe. If the door remains open longer than the period assigned to the Open Timeout, then an alarm occurs.

Note: If the Open Timeout is programmed as 0 seconds, then the door can remain open indefinitely without resulting in an alarm being activated.

The range is 00 to 60 seconds, and the default time is 10 seconds.

Press **A** or **B** to increase or decrease the time in one second increments.

Alarm Group [69.2.2.4.1]

When you select the Alarm Group option, the group currently allocated to the MAX is displayed. Press the group number to toggle the group assigned to the MAX. The MAX does not allow access through the door when the group is set. A user must have this group assigned to them in order to gain access at this door.

Multi-group Systems

When the required groups have been assigned to the user, press **ent** to accept the programming.

Group Restrict [69.2.2.4.2]

Use this option to assign selected groups to each MAX module. Group restriction affects the operation of the MAX readers for card held functions. A card can only be used at a reader if there are common groups between them. By default each reader is assigned to all groups on the system. Groups can be removed as required to restrict the operation of the MAX reader.

Note: Each MAX card can be assigned a single menu function (refer to **Codes [42]**). Activating this function with a card that is assigned to all groups, on a MAX that is only assigned to a single group, results in the function operating on all of the card's groups. The MAX function is not restricted to the groups assigned to the MAX, it is restricted to the groups assigned to the card, as long as there is one group common to both.

This means that a MAX assigned only to group 1, for example, can be used to activate the MAX function on groups 1, 2, 3 and 4 by a card with all of these groups allocated. The groups are assigned to the MAX card using **Codes [42]**.

In access mode, access will be granted if there are common groups between the card and the MAX reader and all the groups assigned to the card are unset. For the card held function, the groups affected by the function will be all the groups assigned to the card, so long as there is at least one common group between the card and the MAX.

Common Group Restriction

To enhance group restrictions press ✶ when assigning groups in Group Restriction. This limits the operation described in the paragraph above only to groups which are common to both the MAX and the card.

Refer to the following table for examples of how the readers respond to different situations with the Common Group Restriction on and off. The card held function used in the example is **Timed Set**.

	Action on card held	
Situation at time of card swipe	**No ✶**	**✶ on Group Restriction**
All groups unset	All groups on card start to set	All common groups start to set
All groups set	All groups on card are unset	All common groups are unset
Common groups unset and one or more groups on card set	Groups on card are unset	Common groups are set
One or more common groups set, other groups unset	All groups on card are unset	All common groups are unset

Assigning Groups to Group Restriction

When you select the option the groups currently allocated to the MAX are displayed. Press the group number to toggle the group assigned to the MAX.

When you have assigned the required groups to the user, press **ent**.

Emergencies [69.2.2.5]

Use this option to configure each individual MAX to respond to fire zones in a given set of groups. When a fire zone is opened in one of the groups allocated to the MAX, the MAX triggers the door strike and holds the door open until the system is reset. All the MAX LEDs light and the buzzer sounds. Closing the fire zone has no effect; MAX units are treated as latched outputs and an appropriate level reset is required. Reset occurs immediately when applied.

A second group map is allocated to each MAX in order to facilitate this function. This permits the existing door control features to be completely detached from the fire escape features.

The default setting for each MAX is all groups selected. Therefore, a system which is unchanged from the default will open all MAX doors in response to any fire zone activation. On selecting the Emergencies option, select the groups you want allocated to the MAX for escape purposes and accept the programming by pressing the enter key. When a fire zone is activated in any of the groups programmed, the door controlled by the MAX will be opened.

Security Nightlock [69.2.2.6.1]

Use this option to allocate a time schedule to define when access to the door will be blocked. Up to 4 weekly time schedules can be programmed. Setting the schedule to 00 disables the function.

Security Unlock Time [69.2.2.6.2]

Use this option to allocate a time schedule to define when the door will be unlocked to provide unrestricted access. Up to 4 weekly time schedules can be programmed. Setting the schedule to 00 disables the function.

Security Dual Mode [69.2.2.6.3]

Use this option enable dual authority via the assigned keypad. The options are:

0=Disabled   A card or a PIN is required to gain access.

1=Card and Card   Two cards are required to gain access.

2=Card and Pin   A card and a PIN from the same user are required to gain access.

Menu Recall [69.2.2.7]

Use this option to assign a card-held function to the reader. Users are then able to perform card-held functions even if they do not have card-held privileges.

1=Menu Function   Depending on the level of access granted in **Menu Access [68]**, a user can hold a card at a compatible reader for three seconds to activate a single function selected from the available list. Assign a double asterisk (✶✶) to the function to make it not used.

2=Menu Mode   This determines whether a card held function can be used to access the reader. There is one option which is **1=Card Held**.

2=Keypad   This assigns a specific keypad address to work in conjunction with a MAX. This keypad is used to display the menu action assigned in **1=Menu Function**.

Note: If a function is assigned to both the User Code and the Max/DCM reader, only the function from the User Code will be started.

DCM [69.3]

Use this option to program door control module (DCM) access control readers. A DCM can be fully integrated into the system, communicating on the AB lines, fully using the control panel facilities. Each DCM can control up to two readers. The exit reader can be replaced with a request to exit button.

When enabled, the options that are eligible for DCM programming are made available throughout the menu, otherwise they do not appear, or appear as Option not Available.

Addressing the DCM

The DCM takes its address from an onboard rotary hex switch, or by setting with DIP switches. Refer to *Door control module* on page 240.

DCM Parameters [69.3.1]

Use this option to define the operational features of each of the DCMs. On selecting this option the address of the first DCM on the system is displayed along with the descriptor currently assigned to it. If there are no DCMs on the system the message **NO ENTRIES** is displayed.

Select the required DCM address using **A** and **B**, then press **ent**. The first parameter, **1=Descriptor** is displayed. Use **A** or **B** to move to the required parameter, and press **ent**.

DCM Descriptor [69.3.1.1]

Use this option to assign a name of up to 9 characters to each of the DCMs. This name is assembled from the character set and/or library options. On selecting the Descriptor parameter the currently assigned name is displayed on the top line - an underscore shows where the next character will be positioned, and a selection of the alphabet is shown on the bottom line - the cursor flashes on the letter L.

Press ✱ to erase the characters already assigned to the name.

Use **A** or **B** to move the alphabet left or right until the required character is positioned underneath the flashing cursor. When the required character is in position press **ent** to copy the character to the description in the top line. Repeat this procedure to assemble the required Descriptor.

DCM System Group [69.3.1.3]

This is the group that the DCM will report on for module tampers and diagnostics.

DCM Reader Descriptor (01 or 02) [69.3.1.5.01]

Use this option to assign a name of up to 9 characters to each of the readers. This name is assembled from the character set and/or library options. On selecting the Descriptor parameter the currently assigned name is displayed on the top line - an underscore shows where the next character will be positioned, and a selection of the alphabet is shown on the bottom line - the cursor flashes on the letter L.

Press ✱ to erase the characters already assigned to the name.

Use **A** or **B** to move the alphabet left or right until the required character is positioned underneath the flashing cursor. When the required character is in position press **ent** to copy the character to the description in the top line. Repeat this procedure to assemble the required Descriptor.

DCM Reader Relay Duration [69.3.1.5.02]

After a user card swipe, this is the time allowed to open a door without creating an alarm. The reader relay de-activates as soon as the door contact opens or the Open Timeout occurs.

When you enter this option, the current value is displayed. Assign a time in the range 0 to 60 seconds, the default time is 5 seconds. Press **ent** to save the programming and return to the previous menu level.

Note: Press **A** or **B** to increase or decrease the time in one second increments.

DCM Reader Open Timeout [69.3.1.5.03]

This is the time a door can remain open after a card swipe. If the door remains open longer than the period assigned to the Open Timeout an alarm occurs.

Note: If the Open Timeout is programmed as 0 seconds, then the door can remain open indefinitely without resulting in an alarm being activated.

The range is 0 to 60 seconds, and the default time is 10 seconds.

Press **A** or **B** to increase or decrease the time in one second increments.

DCM Reader Alarm Group [69.3.1.5.04.1]

When you select this option, the group currently allocated to the DCM reader is displayed. Press the group number to toggle the group assigned to the reader. The reader does not allow access through the door when the group is set. A user must have this group assigned in order to gain access at this door.

DCM Reader Group Restrict [69.3.1.5.04.2]

Use this option to assign selected groups to each DCM reader. This group restriction affects the operation of the DCM readers for both access and card held functions. A card can only be used at a reader if there are common groups between them. By default each reader is assigned to all groups on the system. Groups can be removed as required to restrict the operation of the DCM reader.

Note: Each DCM card can be assigned a single menu function (refer to **Codes [42]**). Activating this function with a card that is assigned to all groups, on a reader that is only assigned to a single group, results in the function operating on all of the card's groups. The DCM function is not restricted to the groups assigned to the reader, it is restricted to the groups assigned to the card, as long as there is one group common to both. This means that a DCM reader assigned only to group 1, for example, can be used to activate the DCM reader function on groups 1, 2, 3 and 4 by a card with all of these groups allocated. The groups are assigned to the DCM card using **Codes [42]**.

DCM Emergencies [69.3.1.5.05]

Use this option to configure each individual DCM reader to respond to fire zones in a given set of groups. When a fire zone in one of the groups allocated to the reader is opened, the reader triggers the door strike and holds the door open until the system is reset. The DCM LED lights and the buzzer sounds. Closing the fire zone has no effect - the DCM readers are treated as latched outputs and an appropriate reset is required.

A second group map is allocated to each DCM reader in order to facilitate this function. This permits the existing door control features to be separate from the fire escape features.

The default setting for each DCM reader is all groups selected. Therefore, a system, which is unchanged from the default, opens all DCM doors in response to any fire zone activation.

Select the Emergencies option to select the groups you want allocated to the DCM readers for escape purposes. When a fire zone is activated in any of the programmed groups, the door controlled by the DCM is opened.

DCM Security Nightlock [69.3.1.5.06.1]

This allows a time schedule to be allocated to determine when access to the door will be blocked. Up to 4 weekly time schedules can be programmed. Setting the schedule to 00 disables the function.

DCM Security Unlock Time [69.3.1.5.06.2]

This allows a time schedule to be allocated to determine when the door will be unlocked to provide unrestricted access. Up to 4 weekly time schedules can be programmed. Setting the schedule to 00 disables the function.

DCM Security Dual mode [69.3.1.5.06.3]

This defines if access at a door requires dual authority or not via the assigned keypad. The options are:

0=Disabled   A card or a PIN is required to gain access.

1=Card and Card   Two cards are required to gain access.

2=Card and Pin   A card and a PIN from the same user are required to gain access.

DCM Security Dual Time [69.3.1.5.06.4]

Option not available.

DCM Menu Recall [69.3.1.5.07]

This determines whether the user is allowed to apply the menu recall function at any DCM reader. This is in addition to any DCM function that may be assigned. There are three options as follows.

DCM Menu Recall Menu Function [69.3.1.5.07.1]

Depending on the level of access granted in **Menu Access [68]**, the user can use their card at a compatible reader to activate a single menu function selected from the available list (11-72). To assign a new option press **A** or **B** until the required option is displayed, or enter the option number directly, and then press **ent** to accept the selection. Assign a double asterisk (✶✶) to make the menu function not used.

DCM Menu Recall Menu Mode [69.3.1.5.07.2]

Use this option to control the menu function. There are two options:

1=Triple Repeat   The card is presented to the reader three times to activate the menu.

2=Recall Button   The recall button is pressed once to activate the menu.

DCM Menu Recall Keypad assignment [69.3.1.5.07.3]

Use this option to assign a specific keypad address to work in conjunction with a DCM. This keypad is used to display the menu action assigned in **1=Menu Function**.

Card Format [69.3.2]

Use this option to select the type of card used with the DCM reader. There are five options:

0=26 bit, 1=Crp 1K 35 bit, 2=37 bit no FC, 3=Northern 34 bit, 4=Custom.

4=Custom has a further four sub-options:

1=Format Name   The maximum number of characters in the name is 12.

2=Card Length   Bit size options: 26, 27, 32, 34, 35, 37 or 40.

3=Card Number   This is where the card number is specified. Two options can be selected:

1=Start point If the card structure is unknown, a start number can be chosen that is a numeric value less than the maximum length of the card.

2=Field Length This is the length of the card number. The maximum field length is from the start of the card number to the maximum length of the card.

Engineer 3

Auto Detect [72]

Use this option to let the system automatically recognise new and removed modules without leaving engineer mode.

On entering the option the number of modules on the system is displayed.

```
SYSTEM MODULES
was 5 now 5
```

In Auto Detect mode the system continuously poles for any new or missing modules. A list of added or removed module information (address) is displayed for 3 seconds per module.

When a module is removed it is identified as missing and listed, but the **now** count is not decreased until you confirm that removal is valid.

When a module is added the **now** count is increased.

```
SYSTEM MODULES
was 5 now 8
```

To view all the added or missing modules:

1.   Press **esc**.

2.   Press **A** or **B** to scroll through the list.

To confirm module removal:

▪   Press ✱.

Modules added and removed are recorded in the event log.

To program or configure a new module, exit the Auto Detect option.

Engineering Exit operation and Auto Detect operation are mutually exclusive; when one operation is initiated or in progress the other can't be initiated.

If you attempt to exit Engineer mode from another keypad while Auto Detect is in operation the **INSUFFICIENT ACCESS RIGHTS** message is displayed.

Note: During the auto detection process, you may see a performance delay on other keypads in the system.

Appendix A: Library

00	0	52	(	050	BOOTH	102	CUPBOARD
01	1	53	)	051	BOTTOM	103	CURRENCY
02	2	54	space	052	BOX	104	DAIRY
03	3	001	ABOVE	053	BOYS	105	DARK-ROOM
04	4	002	ACCESS	054	BRANCH	106	DATA
05	5	003	ACCOUNTANT	055	BROOM	107	DAY
06	6	004	ACCOUNTANTS	056	BROWN	108	DEPARTURE
07	7	005	ACCOUNTS	057	BUILDING	109	DEPUTY
08	8	006	ADMIN.	058	BUNKER	110	DEPT.
09	9	007	ALARM	059	BY	111	DESIGN
10	space	008	ALERT	060	CABINET	112	DESK
11	Å	009	ANIMAL	061	CAFE	113	DETECTOR
12	Ä	010	ANNEXE	062	CALL	114	DEVELOPMENT
13	A	011	ARCH	063	CANTEEN	115	DEVICE
14	Æ	012	AREA	064	CAR	116	DIARY
15	B	013	ARENA	065	CARGO	117	DINING
16	C	014	AROUND	066	CARPENTER	118	DIRECTOR
17	D	015	ART	067	CARPET	119	DIRECTORS
18	E	016	ASSEMBLY	068	CASH	120	DISPATCH
19	F	017	ASSISTANT	069	CASHIER	121	DOG
20	G	018	AT	070	CEILING	122	DOOR
21	space	019	ATTACK	071	CELL	123	DOUBLE
22	H	020	ATTIC	072	CELLAR	124	DOWNSTAIRS
23	I	021	AUTOMATIC	073	CENTRAL	125	DRAMA
24	J	022	AUXILIARY	074	CENTRE	126	DRAWER
25	K	023	BACK	075	CHAIR	127	DRAWING
26	L	024	BAGGAGE	076	CHANGING	128	DRINKS
27	M	025	BAKERY	077	CHEMISTRY	129	DRIVE
28	N	026	BALCONY	078	CHICKEN	130	DRUGS
29	Ø	027	BALLROOM	079	CHURCH	131	EAST
30	Ö	028	BANK	080	CLASSROOM	132	ECONOMICS
31	O	029	BANKING	081	CLEANER	133	EDGE
32	space	030	BAR	082	CLEANERS	134	EIGHT
33	P	031	BARN	083	CLEANING	135	EIGHTEEN
34	Q	032	BASEMENT	084	CLERK	136	EIGHTY
35	R	033	BATH	085	CLERKS	137	ELECTRIC
36	S	034	BATHROOM	086	COAL	138	ELECTRICIAN
37	T	035	BAY	087	COAT	139	ELECTRONICS
38	U	036	BEAM	088	COIN	140	EMERGENCY
39	Ü	037	BEDROOM	089	COLD	141	END
40	V	038	BEHIND	090	COLLECTION	142	ENGINE
41	W	039	BELL	091	COMMUNICATOR	143	ENGINEER
42	X	040	BELOW	092	COMPUTER	144	ENGINEERS
43	space	041	BENCH	093	CONFERENCE	145	ENGLISH
44	Y	042	BESIDE	094	CONTAINER	146	ENTRANCE
45	Z	043	BIOLOGY	095	CONTACT	147	ENTRY
46	.	044	BIRD	096	CONSERVATORY	148	EQUIPMENT
47	,	045	BLOCK	097	CORNER	149	ESCAPE
48	/	046	BLUE	098	CORRIDOR	150	ESCALATOR
49	-	047	BOARD	099	COUNTER	151	EXIT
50	+	048	BODY	100	COURT	152	EXPORT
51	&	049	BOILER	101	COW	153	EXTERNAL

154	FACTORY	210	HIGH	266	MAGNETIC	322	PANIC
155	FAILURE	211	HISTORY	267	MAIN	323	PANTRY
156	FAR	212	HOME	268	MAJOR	324	PARCEL
157	FARM	213	HORSE	269	MALE	325	PARK
158	FAX	214	HOT	270	MAN	326	PARTITION
159	FEED	215	HOUSE	271	MANAGER	327	PASSIVE
160	FEMALE	216	ICE	272	MANAGERS	328	PATH
161	FENCE	217	IN	273	MASTER	329	PATIO
162	FIELD	218	INDUSTRIAL	274	MAT	330	PEN
163	FIFTEEN	219	INFANT	275	MATHS	331	PENTHOUSE
164	FIFTY	220	INFANTS	276	MEDICAL	332	PERIMETER
165	FLING	221	INFORMATION	277	MEN	333	PERSONAL
166	FIRE	222	INFRARED	278	MESS	334	PERSONNEL
167	FIRST	223	INSIDE	279	METAL	335	PHONE
168	FIRST-AID	224	INSTRUCTORS	280	METER	336	PHYSICS
169	FISH	225	INTERIOR	281	MEZZANINE	337	PIG
170	FIVE	226	INTO	282	MICROWAVE	338	PIR
171	FLAT	227	IRON	283	MIDDLE	339	PIR BY
172	FLOOR	228	ISOLATION	284	MILK	340	PIR IN
173	FOR	229	IT	285	MINOR	341	PIR ON
174	FOREIGN	230	ITALIAN	286	MOBILE	342	PLACE
175	FORTY	231	JANITOR	287	MODEL	343	PLANT
176	FOUNTAIN	232	JANITORS	288	MONITOR	344	PLAY
177	FOUR	233	JUDGE	289	MOULDING	345	PLAZA
178	FREEZER	234	JUNIOR	290	MOVEMENT	346	PLUMBER
179	FRENCH	235	JUST	291	NEAR	347	PLUMBERS
180	FRIDGE	236	KEEP	292	NEW	348	POINT
181	FROM	237	KEYPAD	293	NEXT	349	POND
182	FRONT	238	KITCHEN	294	NIGHT	350	POOL
183	GAMES	239	LAB	295	NINE	351	PORCH
184	GARAGE	240	LADIES	296	NINETEEN	352	POST
185	GARDEN	241	LANDING	297	NINETY	353	POWER
186	GATE	242	LAST	298	NODE	354	PRESSURE
187	GENTS	243	LATIN	299	NOISE	355	PRIMARY
188	GEOGRAPHY	244	LAUNDRY	300	NURSE	356	PRIME
189	GERMAN	245	LAVATORY	301	NURSERY	357	PRINT
190	GIRLS	246	LAWN	302	NORTH	358	PROCESSING
191	GLASS	247	LEAST	303	OF	359	PRODUCTION
192	GOLD	248	LECTURE	304	OFFICE	360	PUBLIC
193	GOODS	249	LEFT	305	OFFICER	361	PURCHASING
194	GREAT	250	LEVEL	306	OFFICERS	362	PURPLE
195	GREEN	251	L.H.S.	307	OFFICES	363	QUALITY
196	GROCERY	252	LIBRARY	308	OIL	364	QUANTITY
197	GROUND	253	LIFT	309	ON	365	QUIET
198	GROUNDS	254	LIGHT	310	ONE	366	QUICK
199	GROUNDSMAN	255	LINE	311	OPEN	367	RANGE
200	GROUP	256	LITTLE	312	ORANGE	368	READING
201	GUARD	257	LOADING	313	OUT	369	REAR
202	GUN	258	LOBBY	314	OUTER	370	RECEPTION
203	GYM	259	LOCK	315	OUTSIDE	371	RECORDS
204	HALL	260	LOFT	316	OVAL	372	RECTOR
205	HAND	261	LORRY	317	OVER	373	RECTORS
206	HANGER	262	LOUNGE	318	P.A. BUTTON	374	RED
207	HEAD	263	LOW	319	PACKING	375	REED
208	HEAT	264	LUNCH	320	PAINT	376	REFECTORY
209	HEATER	265	MACHINE	321	PANEL	377	REMOTE

378	REPAIR	419	SILVER	460	TALL	501	UP
379	RESEARCH	420	SITE	461	TAMPER	502	UPPER
380	REST	421	SITTING	462	TEA	503	UPSTAIRS
381	RESTAURANT	422	SIX	463	TEACHER	504	USER
382	REVOLVING	423	SIXTEEN	464	TECHNICAL	505	UTILITY
383	RIGHT	424	SIXTY	465	TECHNICIAN	506	VAN
384	R.H.S.	425	SLIDING	466	TELLER	507	VARIABLE
385	ROLLER	426	SMOKE	467	TEN	508	VAULT
386	ROOF	427	SOFTWARE	468	TENNIS	509	VENTILATOR
387	ROOM	428	SOLITARY	469	TEST	510	VISUAL
388	ROUND	429	SOUND	470	THE	511	VOLTAGE
389	RUN	430	SOUTH	471	THEATRE	512	WAITING
390	SAFE	431	SPANISH	472	THEN	513	WALK
391	SALES	432	SPRAY	473	THIRTEEN	514	WALL
392	SCAN	433	SPRING	474	THIRTY	515	WARD
393	SCANNER	434	SQUARE	475	THREE	516	WAREHOUSE
394	SCANNERS	435	SQUASH	476	TICKET	517	WASH
395	SCANNING	436	STABLE	477	TILL	518	WATER
396	SCREEN	437	STADIUM	478	TO	519	WAY
397	SEA	438	STAFF	479	TOILET	520	W.C.
398	SECOND	439	STAIRS	480	TOOL	521	WEAPON
399	SECURE	440	STAIRWELL	481	TOP	522	WEEKEND
400	SECRETARIES	441	STALLS	482	TRACK	523	WEST
401	SECRETARY	442	STAND	483	TRACTOR	524	WINDOW
402	SECTION	443	START	484	TRADE	525	WINTER
403	SECURITY	444	STATION	485	TRAILER	526	WITH
404	SENSOR	445	STOP	486	TRAIN	527	WOOD
405	SEVEN	446	STORE	487	TRAINING	528	WOODWORK
406	SEVENTEEN	447	STORES	488	TRANSPORT	529	WORK
407	SEVENTY	448	STROBE	489	TRAP	530	WORKS
408	SHACK	449	STRONG	490	T.V.	531	WORKSHOP
409	SHAFT	450	STUDY	491	TWELVE	532	X-RAY
410	SHED	451	SUITE	492	TWENTY	533	YARD
411	SHEEP	452	SUMMER	493	TWIN	534	YEAR
412	SHOP	453	SUNDAY	494	TWO	535	YELLOW
413	SHOWROOM	454	SUPPLY	495	TYPE	536	ZERO
414	SHORT	455	SURGERY	496	TYPING	537	ZONE
415	SHOWER	456	SWIMMING	497	TYRE	538	ZOO
416	SHUTTER	457	SWITCH	498	ULTRASONIC		
417	SIDE	458	SYSTEM	499	UNDER		
418	SILENT	459	TABLE	500	UNIT		

Appendix B: SIA and contact ID event codes

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
A - Alarm Cause						
AC	Alarm Cause	ALM CAUSE	User report alarm cause	USER	ALWAYS TR	None
A - AC Power						
AR	AC Restoral	AC FAIL-	AC Fail zone restored	ZONE	13.ELEC.ST	301
		CU-AC-	Control Unit AC restred	ZONE	13.ELEC.ST	301
		AC FAIL-	Module AC fail restored	MOD	13.ELEC.ST	301
		STAND LOW-	Standby Battery Low	MOD	13.ELEC.ST	301
		CU FUSE-	Control Unit fuse rest.	MISC	9.TAMPER	300
AT	AC Trouble	AC FAIL+	AC Fail zone trouble	ZONE	13.ELEC.ST	301
		CU-AC+	Control Unit AC trouble	ZONE	13.ELEC.ST	301
		AC FAIL+	Module AC fail trouble	MOD	13.ELEC.ST	301
		STAND LOW+	Standby Battery Low	MOD	13.ELEC ST	301
		CU FUSE+	Control Unit fuse trouble	MISC	9.TAMPER	300
					13.ELEC ST	
		12V FLT	12V auxiliary trouble	MOD	9.TAMPER	300
					13.ELEC ST	
		FUSE BELL	Bell fuse trouble	MOD	9.TAMPER	300
					13.ELEC ST	
B - Burglary						
BA	Burglary Alarm	ENTRY	Entry zone alarm	ZONE	NONE	150
		EXIT+	Exit zone alarm	ZONE	2.INTRUDE	134
		INTRUDER+	Intruder zone alarm	ZONE	2.INTRUDE	130
		SECURITY+	Security zone alarm	ZONE	4.SECURITY	135
		DUAL+	Dual zone alarm	ZONE	2.INTRUDE	130
		FINAL	Final zone alarm	ZONE	NONE	150
		SEC FINAL+	Secure final zone alarm	ZONE	4.SECURITY	134
		PRT FINAL+	Part final zone alarm	ZONE	2.INTRUDE	134
		PRT ENTRY+	Part entry zone alarm	ZONE	2.INTRUDE	134
		BEAM PAIR+	Beam pair zone alarm	ZONE	2.INTRUDE	130
		VIDEO+	Video zone alarm	ZONE	2.INTRUDE	130
		VIDEO EXT+	Video exit zone alarm	ZONE	2.INTRUDE	130
		CUSTOM A+	Custom A zone alarm	ZONE	5.CUS ZON	130
		CUSTOM B+	Custom B zone alarm	ZONE	5.CUS ZON	130
		MASK+	Mask zone alarm	ZONE	4.SECURITY	135
		INT DELAY	Intruder Delay alarm	ZONE	2.INTRUDE	150
		VIBRATION+	Vibration zone alarm	ZONE	2.INTRUDE	133
		T/O BURGL+	Entry timeout with zone	ZONE	2.INTRUDE	134
BC	Burg Cancel	KSW CANCL	Keyswitch Cancel	ZONE	11.RESET	406
		CANCEL	Cancel by user	USER	11.RESET	406
BF	Intruder High	INTR HIGH	Intruder zone alarm	ZONE	2. INTRUDE	130
BJ	Burg Troub rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
		RF SUPER-	RF Supervision Failure	ZONE	15.TROUBL	381
BL	Intruder Low	INTR LOW	Intruder zone alarm	ZONE	2. INTRUDE	130

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
BR	Burglary Rest	EXIT-	Exit zone type restored	ZONE	2.INTRUDE 18.ZN RESTO	134
		INTRUDER-	Intruder zone restored	ZONE	2.INTRUDE 18.ZN RESTO	130
		SECURITY-	Security zone restored	ZONE	4.SECURITY 18.ZN RESTO	135
		DUAL-	Dual zone restored	ZONE	2.INTRUDE 18.ZN RESTO	130
		SEC FINAL-	Secure final zone rest.	ZONE	4.SECURITY 18.ZN RESTO	134
		PRT FINAL-	Part final zone restored	ZONE	2.INTRUDE 18.ZN RESTO	134
		PRT ENTRY-	Part entry zone restored	ZONE	2.INTRUDE 18.ZN RESTO	134
		BEAM PAIR-	Beam pair zone rest.	ZONE	2.INTRUDE 18.ZN RESTO	130
		VIDEO-	Video zone restored	ZONE	2.INTRUDE 18.ZN RESTO	130
		VIDEO EXT-	Video exit zone rest.	ZONE	2.INTRUDE 18.ZN RESTO	130
		CUSTOM A-	Custom A zone rest.	ZONE	5.CUS ZON 18.ZN RESTO	130
		CUSTOM B-	Custom B zone rest.	ZONE	5.CUS ZON 18.ZN RESTO	130
		MASK-	Mask zone restored	ZONE	4.SECURITY 18.ZN RESTO	135
		INT ALARM-	Intruder Delay restored	ZONE	2.INTRUDE 18.ZN RESTO	130
		VIBRATION-	Vibration zone restored	ZONE	2.INTRUDE 18.ZN RESTO	133
		T/0 BURGL-	Entry timeout restore	ZONE	2.INTRUDE 18.ZN RESTO	134
BT	Burg. Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
		RF SUPER+	RF Supervision Failure	ZONE	15.TROUBL	381
		MASKED	Zone masked	ZONE	15.TROUBLE	380
BV	Burg Confirm	CONFIRM	2 independent alarms	EVENT	2.INTRUDE	None

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
BX		EXIT	Exit zone tested	ZONE	NOT SENT	611
		INTRUDER	Intruder zone tested	ZONE	NOT SENT	611
		24 HOURS	24 hour zone tested	ZONE	NOT SENT	611
		SECURITY	Security zone tested	ZONE	NOT SENT	611
		DUAL	Dual zone tested	ZONE	NOT SENT	611
		ENTRY	Entry zone tested	ZONE	NOT SENT	611
		PUSH SET	Push set zone tested	ZONE	NOT SENT	611
		KEYSWITCH	Keyswitch zone tested	ZONE	NOT SENT	611
		SEC FINAL	Secure final zone test.	ZONE	NOT SENT	611
		PRT FINAL	Part final zone tested	ZONE	NOT SENT	611
		PRT ENTRY	Part entry zone tested	ZONE	NOT SENT	611
		PA	PA zone tested	ZONE	NOT SENT	611
		PA SILENT	PA silent zone tested	ZONE	NOT SENT	611
		PA DELAY	PA delay zone tested	ZONE	NOT SENT	611
		PA DEL/SL	PA delay sil zone tested	ZONE	NOT SENT	611
		LINK	Link zone tested	ZONE	NOT SENT	611
		SPARE	Spare zone tested	ZONE	NOT SENT	611
		TAMPER	Tamper zone tested	ZONE	NOT SENT	611
		BELL TAMP	Bell tamper zone tested	ZONE	NOT SENT	611
		BEAM PAIR	Beam pair zone tested	ZONE	NOT SENT	611
		BATT LOW	Battery Low zone tested	ZONE	NOT SENT	611
		LINE FAIL	Line fail zone tested	ZONE	NOT SENT	611
		AC FAIL	AC fail zone tested	ZONE	NOT SENT	611
		LOG	Log zone tested	ZONE	NOT SENT	611
		RM ACCESS	Rem acc zone tested	ZONE	NOT SENT	611
		VIDEO	Video zone tested	ZONE	NOT SENT	611
		VIDEO EXT	Video exit zone tested	ZONE	NOT SENT	611
		INT DELAY	Intrud delay zone tested	ZONE	NOT SENT	611
		SEC DELAY	Security del zone tested	ZONE	NOT SENT	611
		SET LOG	Set Log zone tested	ZONE	NOT SENT	611
		CUSTOM A	Custom A zone tested	ZONE	NOT SENT	611
		CUSTOM B	Custom B zone tested	ZONE	NOT SENT	611
		EXITGUARD	Exitguard zone tested	ZONE	NOT SENT	611
		MASK	Mask zone tested	ZONE	NOT SENT	611
		URGENT	Urgent zone tested	ZONE	NOT SENT	611
		PA UNSET	PA unset zone tested	ZONE	NOT SENT	611
		KSW RESET	Ksw. reset zone tested	ZONE	NOT SENT	611
		VIBRATION	Vibration zone tested	ZONE	NOT SENT	611
		ATM-1	ATM-1 zone tested	ZONE	NOT SENT	611
		ATM-2	ATM-2 zone tested	ZONE	NOT SENT	611
		ATM-3	ATM-3 zone tested	ZONE	NOT SENT	611
		ATM-4	ATM-4 zone tested	ZONE	NOT SENT	611
		ALARM EXT	Alarm extend zone test.	ZONE	NOT SENT	611
		SOAK TEST	Soak test zone act	ZONE	NOT SENT	611
C - Closing						
CA	Closing Report	FULL SET	Automatic Set	EVENT	10.SETTING	401
CE	Closing Extend	EXTENSION	Auto arm exten. delay	USER	10.SETTING	464
		PREWARN	Auto arm prewarn delay	MISC	NEVER TR	464
CG	Close Area	PART SET	Part set by user	USER	10.SETTING	441
		KSW P/SET	Part set by user	KSSET	10.SETTING	442
CI	Fail to Set	FAIL SET	Fail to Set	EVENT	7. SET FAULT	454
CJ	Late to Set	LATE SET	Late to Set	EVENT	10.SETTING	454

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
CL	Closing Report	FULL SET	Full set	USER	10.SETTING	401
		FULL SET	Set by keypad	EVENT	10.SETTING	401
		KSW SET	Keyswitch set	ZONE	10.SETTING	409
CP	Auto. Closing	REARM	Re-arm after alarm	EVENT	10.SETTING	463
CR	Recent Close	RECEN.SET	Previous alarm was within 5 mins of set	EVENT	2.INTRUDER	459
CT	Late to Open	TIMEOUT	Entry timeout	EVENT	10.SETTING	None
D - Access						
DD	Access Denied	Invalid Card	MAX tag unknown	MOD	17.MAXTAG	421
DF	Door Forced	MAX ALARM	Door contact broken	MOD	4.SECURITY	423
					17.MAXTAG	
		DCM EVENT	Door contact broken	MOD	4.SECURITY	423
DG	Access Granted	LEGAL CD	Legal code entered	USER	16.LOG	462
		LEGAL CD	ATM code entered	USER	16.LOG	462
		Valid	MAX tag accepted	USER	17.MAXTAG	422
DK	Access Lockout	ILL-CODE	Illegal code entry	USER	16.LOG	421
		REJECT CARD	Illegal MAX tag	USER	17.MAXTAG	421
		FOB REJECT	Illegal Fob	ZONE	10.SETTING	421
DK	Access Lockout	DCM EVENT	Invalid Card Reader Lockout	USER	16.LOG	421
					10.SETTING	
					17.MAXTAG	
DT	Door propped	DOOR PROP	MAX - Door left open	MOD	4.SECURITY	426
E - System Trouble						
ER	Mod Removed	REMOVED	Module Removed	MOD	TAMPER	532
ET	RF NVM Fail	RF MEM!	RF NVM RAM Fail	MOD	TAMPER	333
F - Fire						
FA	Fire Alarm	FIRE+	Fire zone alarm	ZONE	6.FIRE	110
FB	Fire Bypass	OMITTED	Fire zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
FJ	Fire Troub rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
FR	Fire Restoral	FIRE-	Fire zone restored	ZONE	6.FIRE	110
					18.ZN RESTO	
FT	Fire Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
FU	Fire Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
FX	Fire Test	FIRE	Fire zone tested	ZONE	NOT SENT	None
		SOAK TEST	Soak test fire zone act	ZONE	NOT SENT	None
G - Gas (Custom SIA - See Note 2)						
GA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
GB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	Note 1
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	Note 1
GJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	Note 1
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	Note 1
GR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
					18.ZN RESTO	
GT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	Note 1
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	Note 1
GU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	Note 1

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
H - Holdup						
HA	Holdup Alarm	PA SILENT+ PA	Silent zone alarm	ZONE	1.PA/DURE	122
		PA DEL/SL+	PA Delay Sil.zone alarm	ZONE	1.PA/DURE	122
		DURESS	Duress with code	USER	1.PA/DURE	121
		PA UNSET+	PA Unset zone alarm	ZONE	1.PA/DURE	122
HB	Holdup Bypass	OMITTED	Holdup zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
HJ	Hold Troub rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
HR	Hold Restoral	PA SILENT-	PA Silent zone restored	ZONE	1.PA/DURE 18.ZN RESTO	122
		PA DEL/SL-	PA Delay Sil.zone rest.	ZONE	1.PA/DURE 18.ZN RESTO	122
		PA UNSET-	PA Unset zone restored	ZONE	1.PA/DURE 18.ZN RESTO	122
HT	Holdup Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
HU	Hold Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
I - Peripheral Fault						
IA	Equipment Fail	FAULT+	Specific condition reported	ZONE	20.FAULT	330
IR	Equipment Fail Rest	FAULT-	Condition restored to normal	ZONE	20.FAULT	330
J - Wrong code, Time changed						
JA	Code Tamper	WRONG CD	Wrong code alarm act.	MOD.	9.TAMPER	461
	Invalid Code	INVALID CD	Invalid Code entered	MOD.	ALWAYS TR	None
JL		LOG 90%		MISC	ALWAYS TR	632
JR		TIMER A		MISC	NONE	0
		TIMER B		MISC	NONE	0
		AUTOTIMER		MISC	NONE	0
		LOCKTIMER		MISC	NONE	0
JT	Time changed	NEW T/D	Time/Date modified	USER	ALWAYS TR3	625
K - Heat (Custom SIA - See Note 2)						
KA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
KB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
KJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
KR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON 18.ZN RESTO	Note 1
KT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
KU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
L - Phone, Program						
LB	Program begin	ENGINEER+	Engineer mode entered	MISC	ALWAYS TR	627
		TEST O/P		USER	NONE	0
		FULL TEST		SET	NONE	0
		MOD T/D		USER	NONE	0
		MOD CODES		USER	NONE	0
		MOD REM		USER	NONE	0
		OMIT ZONE		USER	NONE	0
		ENG PARAM		USER	NONE	0
		ENG ZONES		USER	NONE	0
		ENG O/PS		USER	NONE	0

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
		ENG LINKS		USER	NONE	0
		ENG SOAK		USER	NONE	0
		ENG DIGI		USER	NONE	0
		ENG PRINT		USER	NONE	0
		ENG QUICK		USER	NONE	0
		ENG DIAG		USER	NONE	0
		ENG GROUP		USER	NONE	0
		ENG ASSEM		USER	NONE	0
		ENG TMRS		USER	NONE	0
		ENG CHECK		USER	NONE	0
LR	Line Restore	LINE FAIL-	Zone Tel line fail rest.	ZONE	12.MD/COM	351
		LINE FAIL-	Module Tel line fail rest.	MOD	12.MD/COM	351
LT	Line Trouble	LINE FAIL+	Zone Tel line fail trouble	ZONE	12.MD/COM	351
		LINE FAIL+	Mod Tel line fail trouble	MOD	12.MD/COM	351
LX	Local Prog end	ENGINEER-	Engineer mode exited	EVENT	ALWAYS TR	627
M - Medical (Custom SIA - See note 2)						
MA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
MB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
MJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
MR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
					18.ZN RESTO	
MT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
MU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
O - Opening						
OA	Open Report	UNSET	Automatic Unset	EVENT	10.SETTING	401
OG	Open Area	UNSET	Part Unset	USER	10.SETTING	401
		KSW UNSET	Keyswitch part unset	ZONE	10.SETTING	409
OK	Early Open	U/S EARLY	Unset Early	EVENT	10.SETTING	451
OP	Open Report	UNSET	Unset	USER	10.SETTING	401
		KSW UNSET	Keyswitch unset	ZONE	10.SETTING	409
OR	Disarm alarm	SYS RESET	All Burglar alarms reset	USER	11.RESET	313
		PA RESET	All PA alarms reset	USER	1.PA/DURE	465
		TAMP RST	All Tamper alarms reset	USER	9.TAMPER	313
		SYS RESET	Ksw reset Burglar alarm	EVENT	11.RESET	313
		PA RESET	Ksw reset PA alarms	EVENT	1.PA/DURE	465
		TAMP RESET	Ksw reset Tamp alarm	EVENT	9.TAMPER	313
		LF RESET		USER	20.FAULT	313
		FAULT RST		USER	20.FAULT	313
		PF RESET		USER	20.FAULT	313
P - Panic						
PA	Panic Alarm	PA+	PA zone alarm	ZONE	1.PA/DURE	120
		DELAY ALM+	PA Delay zone alarm	ZONE	1.PA/DURE	120
PB	Panic Bypass	OMITTED	PA zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
PJ	Pan Troub rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
PR	Panic Restoral	PA-	PA zone restored	ZONE	1.PA/DURE	120
					18.ZN RESTO	
		DELAY ALM-	PA Delay zone restored	ZONE	1.PA/DURE	120
					18.ZN RESTO	

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
PT	Panic Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
PU	Panic Unbypas	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
Q - Assist (Custom SIA - see note 2)						
QA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
QB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
QJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
QR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
					18.ZN RESTO	
QT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
QU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
R - Remote, Log, Test						
RB		REM LOG		USER	NONE	0
		REM RESET		USER	NONE	0
		REM ID		USER	NONE	0
		REM COPY		USER	NONE	0
		REM OVRWR		USER	NONE	0
		REM MSG		USER	NONE	0
		COPY SITE		MODULE	NONE	0
		OVWR SITE		MODULE	NONE	0
RC	Relay closed	LINK-	Link zone closed	ZONE	16.LOG	150
		LOG-	Log zone closed	ZONE	16.LOG	150
		LOG DELAY-	Log delay zone closed	ZONE	16.LOG	150
		CUSTOM A-	Zone closed(Non alarm)	ZONE	16.LOG	150
		CUSTOM B-	Zone closed(Non alarm)	ZONE	16.LOG	150
		EXITGUARD-	Exitguard zone closed	ZONE	16.LOG	150
RD	Prog, denied	RMACCESS+	Zone denied rem. acc	ZONE	14.MEN AC	553
RO	Relay open	BELL FAIL	Bell fail zone opened	ZONE	16.LOG	150
		KEYSWITCH		KS	NONE	150
		LINK+	Link zone opened	ZONE	16.LOG	150
		LOG+	Log zone opened	ZONE	16.LOG	150
		LOG DELAY+	Log delay zone opened	ZONE	16.LOG	150
		NOT USED		ZONE	16.LOG	150
		SET LOG		ZONE	16.LOG	150
		CUSTOM A+	Zone opend(Non alarm)	ZONE	16.LOG	150
		CUSTOM B+	Zone opend(Non alarm)	ZONE	16.LOG	150
		EXITGUARD+	Exitguard zone opened	ZONE	16.LOG	150
		PUSH SET	Push set zone opened	ZONE	NONE	150
		KSW RESET		KS	NONE	150
		SPARE	Spare zone opened	ZONE	16.LOG	150
RP	Automatic test	AUTOTEST	Automatic test	EVENT	ALWAYS TR	602
RR	Power Up	MEMORY OK	Warm start of panel	EVENT	13.ELEC ST	305
RS	Prog, success	RM ACCESS-	Zone allowed rem acc	ZONE	14.MEN AC	553
		REM CALL	Remote call complete	MOD	14.MEN AC	412
RX	Manual test	ENG TEST	Engineer test	USER	ALWAYS TR	601
S - Sprinkler (Custom SIA - see note 2)						
SA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
SB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
SJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
SR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
ST	Trouble LOW	RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
SU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
T - Tamper, Test						
TA	Tamper Alarm	TAMPER+	Tamper zone alarm	ZONE	9.TAMPER	137
		BELL TAMP+	Bell Tamper zone alarm	ZONE	9.TAMPER	137
		LID TAMP+	Lid Tamper alarm	ZONE	9.TAMPER	137
		AUX TAMP+	Auxiliary Tamper alarm	ZONE	9.TAMPER	137
		TAMP S/C+	Tamper short circuit	ZONE	9.TAMPER	383
		TAMP O/C+	Tamper open circuit	ZONE	9.TAMPER	383
		TAMPER+	Module Tamper	MOD	9.TAMPER	145
		MISSING+	Missing module alarm	MOD	9.TAMPER	145
		CV TAMP+	Voltage tamper on zone	ZONE	9.TAMPER	383
		MAX TAMP+	MAX Module Tamper	MOD.	9.TAMPER	145
		WALL TAMP	Wall tamper zone alarm	ZONE	9.TAMPER	137
		MASK TAMP		ZONE	9.TAMPER	383
		DCM EVENT	Invalid Card Tamper alarm	MOD.	9.TAMPER	None
		ADDED	Module Added	MOD.	9.TAMPER	531
		ENG TAMP+	Engineering Tamper	MISC	9.TAMPER	None
TE	Test End	WALK TEST-	Walk test finished	USER	14.MEN AC	607
TR	Tamper Restor	TAMPER-	Tamper zone restored	ZONE	9.TAMPER 18.ZN RESTO	137
		BELL TAMP-	Bell Tamper zone rest.	ZONE	9.TAMPER 18.ZN RESTO	137
		LID TAMP-	Lid Tamper restored	ZONE	9.TAMPER 18.ZN RESTO	137
		AUX TAMP-	Auxiliary Tamper rest.	ZONE	9.TAMPER 18.ZN RESTO	137
		TAMP S/C-	Tamper s/circuit rest.	ZONE	9.TAMPER 18.ZN RESTO	383
		TAMP O/C-	Tamper o/circuit rest.	ZONE	9.TAMPER 18.ZN RESTO	383
		TAMPER-	Module Tamper rest.	MOD	9.TAMPER 18.ZN RESTO	145
		MISSING-	Missing module rest.	MOD	9.TAMPER 18.ZN RESTO	145
		CV TAMP-	Voltage tamper rest.	ZONE	9.TAMPER 18.ZN RESTO	383
		MAX TAMP-	MAX Module Tamp rest	MOD.	9.TAMPER 18.ZN RESTO	145
		ENG TAMP-	Engineer Tamper	MISC	9.TAMPER 18.ZN RESTO	None
TS	Test Start	WALK TEST+	Walk test started	USER	14.MEN AC	607
		ARC TEST		TEST	ALWAYS TR	607
V -??						
V Y		PRINT OC		USER	NONE	0
		PRINT OL		MISC	NONE	0

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
W - Water(Custom SIA - see note 2)						
WA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
WB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
WJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
WR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
					18.ZN RESTO	
WT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
WU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573
X - RF						
XQ	RF Jam	RF JAM+	RF Signal Jammed	MOD	15.TROUBLE	344
XT	RF Batt Low	RF BATLOW+	RF Battery Low	ZONE	13.ELEC ST	384
					15.TROUBLE	
XH	RF Jam Restore	RF JAM-	RF Jam Restore	MOD	15.TROUBLE	344
XR	RF Batt Lo Rst	RF BATLOW-	RF Battery Low Restore	ZONE	13.ELEC ST	384
					15.TROUBLE	
Y						
YC	Comms Fail	internal to tel	Tel module lost RS485	EVENT	ALWAYS TR	350
YF	Panel Cold Start	MEM RESET	Power Up Panel	MISC	13.ELEC ST	None
YK	Comm Restoral	internal to tel	Tel module rest. RS485	EVENT	ALWAYS TR	350
YL	+AC+ Batt Fail	+AC+BATT	Mains fail and batt low	EVENT	13.ELEC ST	None
YP	PSU fail	PSU FLT+	Power Supply Unit fault	EVENT	13.ELEC ST	314
YR	Sys Batt Rest.	BATT LOW-	Battery Low restored	ZONE	13.ELEC ST	302
		CU BATT-	Control unit batt restore	ZONE	13.ELEC ST	302
		BATT LOW-	Mod Battery Low rest	MOD	13.ELEC ST	302
		BATT.FLT-	Battery fault restored	MOD	13.ELEC ST	302
YT	Sys Batt Troub	BATT LOW+	Battery Low	ZONE	13.ELEC ST	302
		CU BATT+	Control unit Battery Low	ZONE	13.ELEC ST	302
		BATT LOW+	Module Battery Low	MOD	13.ELEC ST	302
		BATT.FLT+	Battery fault	MOD	13.ELEC ST	302
		FUSE A2P		MOD	13.ELEC ST	302
Z - Freezer (Custom SIA - see note 2)						
ZA	Alarm	Note 1	zone in alarm	ZONE	5.CUS ZON	Note 1
ZB	Bypass	OMITTED	zone omitted	ZONE	8.OMIT	573
		FORCEOMT+	Force omit after rearm	ZONE	8.OMIT	573
ZJ	Trouble Rest	LOW RES-	Restor zone resistance	ZONE	15.TROUBL	380
		HIGH RES-	Restor zone resistance	ZONE	15.TROUBL	380
ZR	Alarm Restore	Note 1	zone restored	ZONE	5.CUS ZON	Note 1
					18.ZN RESTO	
ZT	Trouble	LOW RES+	Low resistance on zone	ZONE	15.TROUBL	380
		HIGH RES+	High resistance on zone	ZONE	15.TROUBL	380
ZU	Unbypass	FORCE OMT-	Unomitted after rearm	ZONE	8.OMIT	573

Ev	SIA Event Description	Log Event	Log Event Description	Ev Type	Trigger	Contact ID Event
00 - Non-reported Events						
00		SUSP. SET		USER	NONE	0
00		BEGIN SET		USER	NONE	0
00		INST SET		USER	NONE	0
00		ENT UNSET		UNSET	NONE	0
00		ENT SETTING		USER	NONE	0
00		ENT DELAY		USER	NONE	0
00		ENT SET		USER	NONE	0
00		ENT UNSTG		USER	NONE	0
00		ABORT SET		USER	NONE	0
00		AUDIBLE		MISC	NONE	0
00		JAM DELAY		MISC	NONE	0
00		FB BATLOW		USER	NONE	0
00		DIAG REC		LIST	NONE	0
00		LOC WRITE		LIST	NONE	0
00		REM WR/RD		LIST	NONE	0
00		DIAG CHK		LIST	NONE	0
00		DISCHARGE		ZONE	13.ELEC ST	0
00		ETST PASS		USER	NONE	0
00		ETST FAIL		MISC	NONE	0
00		OVERRIDE		MISC	NONE	0
00		R. TIMESET		MISC	NONE	0
00		CU-RIO.SW		MISC	NONE	0
00		CLBK1 ERR		USER	NONE	0
00		REM TRY		USER	NONE	0
00		REM FIN		USER	NONE	0
00		REM ABORT		USER	NONE	0
00		REM FAIL		USER	NONE	0

Note 1: Dependent upon zone type selected.

Note 2: Custom SIA events allow existing zone types to be modified in order to send specific SIA events from the panel. This allows more specific SIA information to be transmitted. The zones used to program the custom SIA events will continue to function as per the zone description.

Appendix C: SIA event structure

Event Type	SIA Level	ACC. Block	DATA Block Format (N block code)	Ascii Block Format (A block code)	Explanation
Zone	3,4	#xxxxxx	Ntixx:xx/rixx/EVzzzz	Aeeeeeeeeesiiiiiiii dddddddddddddddd	Detector alarmed, keyswitch etc
	2	#xxxxxx	Ntixx:xx/rixx/EVzzzz		
	1	#xxxxxx	NEVzzzz		
	0	#xxxx	NEVzzzz		
User	3,4	#xxxxxx	Ntixx:xx/rixx/iduuu/pixxx/EV	Aeeeeeeeeesiiiiiiii dddddd	User Set/Unset, reset, duress, etc
	2	#xxxxxx	Ntixx:xx/rixx/iduuu/pixxx/EV		
	1	#xxxxxx	NEVmmm		
	0	#xxxx	NEVmmm		
Module	3,4	#xxxxxx	Ntixx:xx/rixx/pimmm/EV	Aeeeeeeeeesiiiiiiii ddd	1. With ri modifier: Set with **A** or **B** key without code
	2	#xxxxxx	Ntixx:xx/rixx/pimmm/EV		2. Without ri modifier: Keypad added, Rio missing etc
	1	#xxxxxx	NEVmmm		
	0	#xxxx	NEVmmm		
Event	3,4	#xxxxxx	Ntixx:xx/rixx/EV	Aeeeeeeeeesiiiiiiii	1. With ri modifier: Automatic set, timer activated
	2	#xxxxxx	Ntixx:xx/rixx/EV		2. Without ri modifier: Automatic test, engineer mode
	1	#xxxxxx	NEV		
	0	#xxxx	NEV000		

Key

Data Block

ti	Time modifier
ri	Group modifier (not used if groups are disabled)
id	User modifier
u	User number
pi	Peripheral modifier
m	Peripheral number
EV	Event Code Type (see SIA event list supplied)
z	Zone number
x	maximum digits for modifier field

Ascii Block

e Log event (9 chars, see Log Event in table supplied)

s Event state ('+' : ON, '-' : OFF, ' ' : NOT USED)

l Site identifier (8 char description of site - can be blank)

d Descriptor (additional text to describe event),

1. Zone Event - 16 character zone descriptor

2. User Event - 6 character user name

3. Module Event - 3 character module name, **'RIO'** (8 zone module), **'KEY'** (keypad), **'MAX'** (Proximity Reader), **'COM'** (COM1 = Int Telecom, COM3 = ISDN, COM4 = Ethernet, COM5 = GSM/GPRS, COM6 = USB)

Appendix D: Specifications

Mechanical

Panel enclosure	width: 337 mm
	height: 333 mm
	depth: 93 mm
	weight: 1.8 kg, excluding battery and in-box peripherals
Maximum battery size	151 x 65 x 115 mm
Battery capacities	4 Ah Yuasa 7 Ah Yuasa 9 Ah Yuasa Yucel 10 Ah Yuasa
Operating temperature	−10°C to + 55°C
Humidity	0 to 85%

Electrical

Mains input	230 V (+10%, −15%) @ 50Hz
Control panel current consumption	120 mA maximum
Power supply	Type A
Battery type	Sealed lead-acid, plastic enclosure
Max ripple voltage	≤ 150 mV pk-pk
Maximum auxiliary current rating	0.9 A
EN grade 2 maximum auxiliary current rating	0.7 A
Minimum standby battery capacity required for maximum load (EN50131/PD6662 @ 12 hrs)	8.4 Ah
Maximum Battery Size	10Ah
Time to recharge Battery to 80%	10Ah Battery: 67 hrs
Total PSU output	1 A
Aux voltage output	13.8 V nominal (10 V to 14.5 V)
APS fault	10.7 V nominal
Switched outputs: Output 1 Output 2 Output 3 (speaker)	 400 mA maximum sink current 400 mA maximum sink current 8 to 32 ohms
PTC ratings: AUX1 BATT Data retention	 1.1 A 3 A 10 years @ 150 deg. C

Peripherals' current consumption

Device	Nominal Current (mA)	Alarm Current (mA)
Galaxy RIO (C072) [1]	30	30
RF Portal (C079)	50	50
Power RIO (P026) [1]	70	70
Audio Interface Module (C084)	60	60
Speaker-mic Unit (TP2-800GY)	10	10
Keypad (CP050-xx)	70	90
Keyprox (CP051-xx)	90	130
TouchCenter (CP041-xx)	105	110
MAX^4 Reader (MX04)	35	35
Door Control Module (C080)	65	65
Vplex Module (C090)	75	75
GPRS Module (A070-xx)	35	150[2]
ISDN Module (A211)	40	50[2]
Ethernet (E080-2)	155	165[2]

Note 1: Measured with no detectors or sirens attached.

Note 2: Communication on and average current during normal alarm transmission.

Appendix E: Declaration of conformity

Compliance and Approvals

This product has been independently tested and certified by BRE Global Ltd to the following directive and standard.

R&TTE 99/5/EC

EN50131-3: 2009 security grade 2, environmental class II

The Flex control panel is compatible with the relevant parts of the following standards:

EN50131-1:2006+A1:2009	Alarm systems – Intrusion systems – General requirements (grade 2).
EN50131-5-3:2005	Alarm systems – Intrusion systems: Part 5-3 systems using wire-free interconnections (grade 2).
EN50131-6:2008	Alarm systems – Intrusion systems – Power supplies (grade 2).
EN50136-1-1: 1998+A2:2008	Alarm systems – Alarm transmission systems and equipment – General requirements for alarm transmission systems.
EN50136-1-3:1998	Alarm systems – Alarm transmission systems and equipment – Requirements for systems with digital communicators using the public switched telephone network.
EN50136-2-1:1998	Alarm systems – Alarm transmission systems and equipment – General requirements for alarm transmission equipment.
EN50136-2-3:1998	Alarm systems – Alarm transmission systems and equipment – Requirements for equipment used in systems with digital communicators using the public switched telephone network.
PD6662:2010	Scheme for the application of European Standards for intruder alarm systems.
BS8243: 2010	Installation and configuration of intruder alarm systems designed to generate confirmed alarm conditions - code of practice.

EN50131 Compliance

This product is suitable for use in systems designed to comply with EN50131-3:2009:

▪ Security Grade: 2

▪ Environmental Class: II

▪ Power Supply Type: A

▪ Alarm Transmission System: ATS2=D2, M2, T2, S0, I0

PD6662 Compliance

This product is suitable for use in systems designed to comply with PD6662: 2004 at grade 2 and environmental class II.

Public Switched Telephone Network (PSTN) approval

The equipment has been approved to Council Decision 98/482/EC for Pan -European single terminal connection to the Public Switched Telephone Network (PSTN). However due to differences between the individual PSTNs provided in different countries the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems contact the equipment supplier in the first instance.

The product is designed to work with the following networks:

Austria, Belgium, Denmark, Finland, France, *Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom

* May have interworking difficulties.

Note: Contact the equipment supplier before using the product on any network not listed.

Appendix F: Parts list

Part	UK Part No	Comments
Accessories		
Doorguard	C075	Door isolation unit
Doorguard common key	C075C	All use same key
Engineer keypad cable	A136	
PSUs		
Power Unit	P025	2.75 monitored power supply
Power RIO	P026	As P025 but with one RIO expander
Keypad/KeyProx		
MK8 Keypad	CP050	
MK8 Keyprox	CP051	
Mk7 Keypad	CP037	With volume control
Mk7 KeyProx	CP038	ASK format with volume control
KeyProx HID	CP038-01-H	ASK/HID format
TouchCenter Keypad	CP041-00	Multi-language
TouchCenter Keyprox	CP042-00	Multi-language
Remote Modules		
RIO (PCB)	A158-B	Expander module, 8 zone, 4 outputs
RIO (boxed)	C072	Expander module, 8 zone, 4 outputs
Printer Interface	A161	25 way sub D connector
ISDN Module	E077	
Ethernet module	E080-2	
RF Portal (boxed)	C079-2	Gateway for wireless peripherals
RF Portal Kit		For installation inside panel box
Audio Controller	C084	2-channel audio, 2-way
Speaker-mic Unit	TP2-800GY	
Access Control		
MAX4 Reader, standard	MX04-NC	Bus mounted reader and door controller
MAX4 Reader, N/O contact	MX04-NO	Bus mounted reader and door controller
MAX4 vandal resistant cover	MX04-VRC	
MAX4 extension read head	MX03-ERH	
MAX4 hand-held programmer	MX03-HP	

Part	UK Part No	Comments
MAX4 Mounting plate	MX03-MP	
Door control module	C080	2-door, 2-reader door controller module
Door control module with PSU	C081	C080 plus P026 in one box
Proximity Cards		
MAX card	YX0-0002	ISO credit card for MAX and Keyprox
MAX tear-drop key-tag	YX0-0004	Black tag for MAX and Keyprox
Keyprox grey Key-tag	YX0-0020	Grey tag for Keyprox only
Remote Servicing Suite		
Installer version, Stand-alone	R056-CD-L	For stand-alone installation on 1 PC
Installer version, Network	R057-CD-DG	Installation CD plus 1 dongle for network installations
Additional dongle for user version and installer network	YY0-0010	Allow one more network operator
User Management Suite		
UMS Installation kit – 1 user	R058-CD-DG	Installation CD plus 1 dongle
Additional Dongle for 1 more user	YY0-0010	Allow another user installation or one more network operator
Literature		
Flex Installer manual	800-07751	
Flex User Guide	800-07752	
Flex Quick User Guide	800-07753	
Flex Quick Start Guide	800-07754	
Door Control Module Instructions	II1-0800	
Audio Controller Instructions	II1-0801	
TouchCenter Instructions	II1-0802	
TouchCenter User Guide	II8-0803	

Appendix G: Peripherals

MK8 Keypad

Note: References in the text to the Mk8 Keypad also includes the KeyProx.

The Flex system is backwards compatible with Mk7 Keypad/KeyProx devices.

Features

- A 2 x 16 alphanumeric character back lit display

- 16 backlit push buttons

- Internal horn

- Power indicator LED

- Lid tamper

- Off wall tamper

- Address switch

- RS485 serial connector
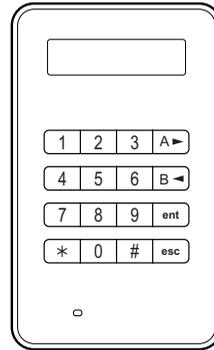
Power consumption

The Mk 8 Keypad/KeyProx needs 12 V d.c., supplied by the control panel or a remote power supply. The current consumption of the Keypad/KeyProx is:

Mode	Mk8 Keypad	Mk8 KeyProx
Nominal (backlight off)	30 mA	50 mA
Backlight on	60 mA	80 mA
Maximum (alarm mode)	90 mA	110 mA

Installation

Setting the address

Set a unique address for the keypad using the rotary switch on the PCB, before applying power. You can add additional keypads to any unused comms module addresses (B, C, D and E).

Mounting instructions

Mount the keypad according to the instructions supplied with the device.

Wiring

Connect the keypad to the RS485 data bus. Refer to the wiring instructions supplied with the keypad.

Configuration

Once wiring is complete and the Auto Detect procedure has been followed, or following an Engineer Exit, the keypad displays **1 MOD ADDED – Esc TO CONTINUE**.

Restart the system or exit engineer mode. The system automatically recognises the new module.

Volume control

Some models of keypad are fitted with a volume control switch marked VOL at the bottom right-hand corner of the PCB. Make sure the keypad/KeyProx is powered up and adjust to the desired volume for buzzer functions. Refer to Appendix F for keypad/KeyProx part numbers with the volume control function.

Self diagnostics

Use this feature to test the keypad inputs and outputs.

To start the test, disconnect the power to the keypad. Press and hold **ent**, and then re-apply the power. The test routine starts immediately. Each test last approximately four seconds.

To stop the test, disconnect the power.

Keypad/KeyProx operation

Number keys	Used to enter access codes and to select and modify programming options.
View keys (**A** and **B**)	Used to set the system in conjunction with a PIN, and also used to scroll through menu options.
Enter key (**ent**)	Used to access menu option and to confirm programming options.
Escape key (**esc**)	Used to cancel modifications made to an option, and to return to a previous option level. **Esc** can also be used to abort the setting routine.

Hash key (#)   Used for the following:

- as a toggle key to enable or disable programming options. For example, enabling the OMIT attribute of a zone.

- to give additional information on a programming options. For example press **#** while in option **Display Log [22]** to show details of the user number, descriptor and keypad used to cancel alarms or unset the system.

- to activate the Duress and PA outputs.

Star key (✶)   Used for the following:

- to correct or erase PINs in the CODES option and alpha-numeric descriptors in the TEXT option.

- to start printing from the current event when viewing option **Display Log [22]**.

- to display the set status of the groups. When Show Status (refer to option **Show Status [58.6]**) is enabled, pressing the ✶ and **#** keys simultaneously when the normal banner is displayed indicates the group set status.

Power LED

The power LED indicates the status of the a.c. power supply and the stand-by battery.

Power LED	A.C. status	Battery status	Fuse status
ON	OK	OK	OK
Slow flash	Fail	OK	OK
Quick flash	Fail/OK	Low	Blown

Compliance

This product is suitable for use in systems designed to comply with PD6662:2004 and EN50131-1: 2006
Independently tested for compliance to EN50131-3: 2009 by BRE Global Ltd

Security Grade - 3
Environmental Class – II
ACE Type B

RF Portal

The RF Portal is a wireless interface for the Honeywell V2 Domonial and Alpha transmitter range. It allows the control panel to receive signals from wireless detectors and radio keyfobs.

All Domonial sensors and 2-way keyfobs with panic buttons are supported by this device, using the SECOM Alpha and V2 protocols. The Flex 100 system can support:

▪   8 RF Portals

▪   88 wireless sensors[1,2]

▪   98 wireless keyfobs

All wireless transmitters with model numbers 58xx are from a different radio range and are NOT compatible with the RF Portal.

Planning a wireless system

Plan to install a sufficient number of RF Portals to provide wireless coverage around all parts of the area to be protected. This should include all areas where either detectors or portable fobs and panic buttons will be used.

▪   RF Portals will automatically communicate with RF detectors and fobs which give the highest received signal strength.

▪   There is no link between individual RF Portals and zones or users.

▪   The Panel will automatically switch to an alternate RF Portal if the signal path becomes blocked.

▪   Adding an increased number of RF Portals around the building will increase the number of possible signal paths for each detector or fob.

▪   At least one RF Portal must be installed for every 24 detectors. Beyond this limit there will be a risk of signal collisions.

Order of installation

1.   Install the RF Portals.

2.   Configure the RF Portals and adjust the number of Virtual RIOs.

3.   Program the wireless zones and learn the serial number of each detector.

4.   Learn the keyfobs onto each of the required users.

---

[1] A maximum of 3 RIO addresses can be enabled per RF Portal.
[2] When mixing V2 and Alpha protocol RF devices in a system it is recommended that only 2 RIOs are enabled per RF Portal.

Mounting and setting guidelines

1. Set sensors to Alpha mode if possible.

2. Use only the C079-2 or A073-00-01 RF Portal with the Flex.

3. Do not locate externally mounted RF Portals within 30 cm of a mains cable, control panel, power RIO or any other metal object, consumer unit, broadband router or television set. Internally mounted RF Portals are specifically located to avoid interference issues.

4. Do not locate RF Portals in cellar locations or any other location below ground level as poor reception is likely.

5. Mount RF Portals with the antenna in a vertical orientation for best reception.

Installation

Setting the address

Using the rotary switch on the PCB set each RF Portal address to a unique value before power is applied. Any address in the range 0 to 15 can be used. This address is independent of the addresses used by other types of modules. For example, an RF Portal can share the same address as a RIO or keypad but not another RF Portal.

Remote installation

Connect the RF Portal to the RS485 data bus. Refer to the wiring instructions supplied with the RF Portal.

Internal installation

To mount an RF Portal in the control panel:

1. Slide the portal (A) into the PCB guides in the top right-hand corner of the panel.
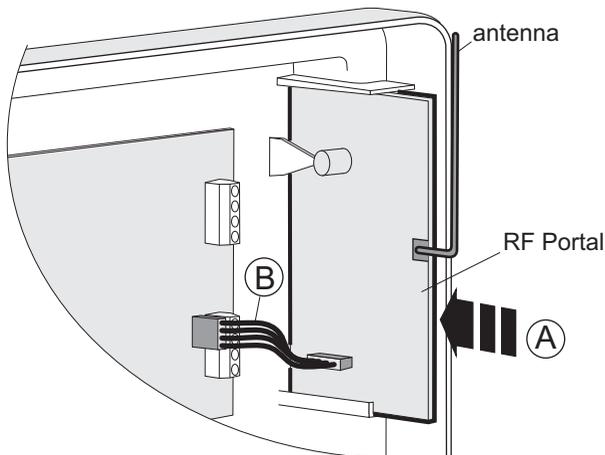
2. Plug one end of the connecting cable (B) into the portal, and then plug the other end into the control PCB.

Configuration

When you have wired a portal, restart the system or exit engineer mode. The system automatically recognises the new module.

Virtual RIOs

The system assigns virtual RIOs so it can allocate zones for wireless detectors. Please note the following:

▪ Virtual RIO addresses are not related to RF Portal addresses.

▪ The virtual RIO address will be the next available address on the system.

▪ The system initially allocates two virtual RIO addresses when an RF Portal is configured.

You can manually alter the number and addresses of the virtual RIO using the **RF Address [51.60.1]** menu option.

You can view the zones allocated to wireless detectors using the **RF Zones [52.2]** menu option.

Programming

Program wireless zones using the **RF Zones [52.2]** menu option.

If required customise operation of the wireless system using the **RF Parameters [51.60]** menu option.

Use the **Display Zones [21]** menu option to see the address and signal strength of a wireless device.

Use the **Latest [61.1]** menu option to access additional diagnostic features.

Compliance

This product is suitable for use in systems designed to comply with EN50131-5-3:2005+A1:2008

▪ Security Grade – 2

▪ Environmental Class – II

Independently tested to EN50131-5-3 at Telefication bv, The Netherlands and CNPP, France

RIO wired zone/output expander

A RIO wired zone/output expander provides 8 programmable zones and 4 outputs.

Note: A Power RIO can be fitted in place of a RIO.

The RIO requires 12 V d.c. (range 10.5 V to 16.0 V) and 40 mA. This can be supplied from the control panel power supply or from a remote power supply if the distance causes a large voltage drop on the cable.

Wiring

1. On a keypad, enter engineer mode before connecting the RIO.

2. Connect the RIO terminals as follows:

RIO terminals	Connection point
+12 V	control panel, keypad or remote power supply
–0 V or ground	control panel, keypad or remote power supply
A	A terminal of the previous module on the line or control panel if the RIO is the first on the line
B	B terminal of the previous module or control panel if the RIO is the first on the line

Note: If the RIO is the last module on the line, connect a 680 Ω EOL resistor across the **A** and **B** terminals.

Configuration

To configure the RIO in the system, exit from engineer mode. If the message **XX Mod Added [<],[>] To View** is displayed, the system has recognised the module. Press **A** or **B** to confirm that the RIO has been added. If the message is not displayed or the RIO is not on the list of added modules, then it is not communicating with the control panel or has been set to the same address as a RIO already connected to the system.

The flash rate of the red LED (LED 1) indicates module to panel communication status.

Flash rate (secs)	Meaning
0.1 on / 0.9 off	Normal communications
Off	No d.c. supply
1.5 on / 1.5 off	RIO has not been configured into system
0.2 on / 0.2 off	RIO has lost communication with system
0.9 on / 0.1 off	Very poor communications

Zones

The RIO has eight programmable zones that default to **INTRUDER**. Each zone is Double Balance monitored with a 1 kΩ resistor in series with the zone detector and a 1 kΩ (1%) resistor in parallel across the detector switch. The change to 2 kΩ (1%) resistance registers the zone as open/alarm.

RIO outputs

The RIO has four transistorised outputs (Table 11). Each output is connected to +12 V via a 3.3 kΩ pull-up resistor. When an output is activated, the load is switched to the negative supply voltage (ground or 0 V). The current available from each output is 400 mA.

The default functions and pull-up resistors are shown below:

Output	Function	Pull-up resistor
1	Bells	R1
2	Strobe	R3
3	PA	R5
4	Reset	R7

Table 11 RIO output default functions

Specification

Width:	160mm	6 ¼"
Height:	151mm	6"
Depth:	40mm	1 ½"
Weight: (approx)	300g	11oz
Humidity	0-85%	
Nominal Supply voltage	12V DC	
Current : Nominal	30mA	
Current : Maximum	590mA	
Max output current (max combined load through all switched outputs)	560mA	
Max switched sink current via outputs:	Output Output 2, 3 & 4	400mA 100mA

GSM/GPRS module

A GSM/GPRS interface module can be connected to the control panel to allow an alternative communication path to the PSTN telephone line.

Installation Instructions

CAUTION: **Install the control panel with the GSM/GPRS module at least 1.5 m from any wireless peripheral device to avoid interference generated by the GSM. Do not install the module in the immediate proximity of a sound source (loudspeaker, TV set, Hi-fi chain etc.)**

1. Disconnect the battery and mains power from the control panel.

2. Plug one end of the connecting cable (A) into the socket on the underside of the module, and then plug the other end into the socket on the control panel PCB.
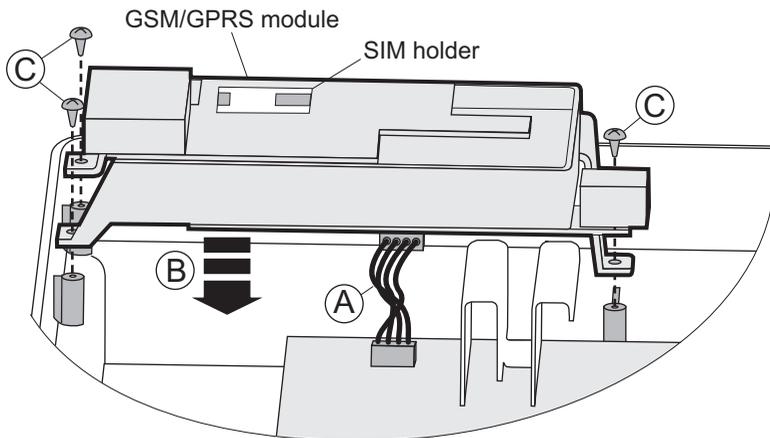
3. Locate the module on the three mounting pillars as shown (B) and secure it in position with the supplied screws (C).

4. Fit a suitable SIM card into the SIM holder on the top of the module (see SIM cards below).

5. Re-connect the battery and mains power to the control panel.

SIM cards

Any valid GSM SIM card can be used. We recommend a contract type for systems with alarm signalling to avoid a situation where credit may run out, resulting in a loss of signalling capability. Use a data enabled SIM card if you intend to use the GSM Channel for remote servicing. Most service providers can supply this service on contract SIMs and will issue a separate data number. Use this data number for remote servicing when dialling into the panel.

Signal Strength

Ensure that the signal strength for the chosen network is at least 30% .

Programming

Program the module using the **GPRS [56.4]** and **GSM [56.5]** menu options.

Remote Servicing connections

If the GSM module is to be used for Remote servicing please note that a suitable GSM modem must be used on the PC running the RSS or UMS software. A modem such as the Sierra Wireless Fastrack is suitable. Communication over GSM will be significantly slower than PSTN. Using the GPRS channel and an Ethernet link to the PC will allow faster communications.

Characteristics

The following table shows the technical characteristics of the GSM module:

GSM fault detection	Dedicated internal GSM fault code is triggered by the lack of a network
Service temperature	0 deg to 40 deg C
Storage temperature	-20 deg to +70 deg C
Dual band	GSM 900 MHz and DCS 1800 MHz
Power	2 W (GSM)/ 1W (DCS)
Antenna	Supplied
SIM card	Micro

Compliance

This product is suitable for use in systems designed to comply with EN50131-1 and PD6662:2004.

- Security Grade – 2

- Environmental Class – II

- Alarm Transmission System – 2

Ethernet module

The Ethernet module is an optional add-on to the control panel. It is compact and combines alarm signalling, remote servicing and integrated facilities over Ethernet LAN and/or WAN. The module connects to 10 Base-T Ethernet networks supporting UDP/IP and TCP/IP protocols, and has the following features:

▪ Full alarm signalling on SIA

▪ Microtech protocol signalling with Event Monitoring Software

▪ Remote servicing via remote servicing software
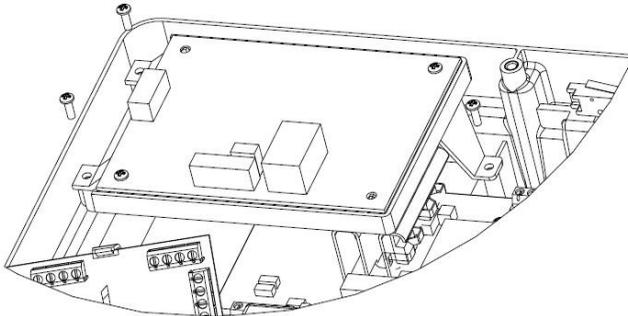
Figure 9 Ethernet module on mounting bracket

Note: The position of components on the Ethernet PCB may vary with different hardware revisions.

Configuring the module

To configure the module in the system, exit from engineer mode. It is allocated keypad address 15 (B). If the message **XX Mod Added [<],[>] To View** is displayed, the system has recognised the module. Press **A** or **B** to confirm that comm 4 has been added. If this message is not displayed or the Ethernet module is not on the list of added modules, then it is not communicating with the control panel.

The flash rate of the red LED (LED 3) indicates module to panel communication status.

Ethernet communication

The green LED (LED 1) is lit when the module is connected to Ethernet.
The amber LED (LED 2) flashes when the module is sending or receiving data.

For further information refer to *Ethernet module, Installation Instructions (II1-0080)*.

TouchCenter Keypad/KeyProx

The TouchCenter connects to the control panel RS485 data bus. It combines a clear graphical display with simple touch-screen control, providing an easy user interface. It can also include an optional proximity reader in the enclosure.
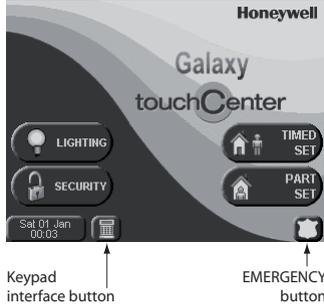
Figure 10 Homepage screen

Installation procedure

1. Remove the mounting plate from the TouchCenter by pushing it towards the bottom of the keypad.

2. Locate the mounting plate over the mounting surface such that the opening of the mounting plate is aligned with the cable.
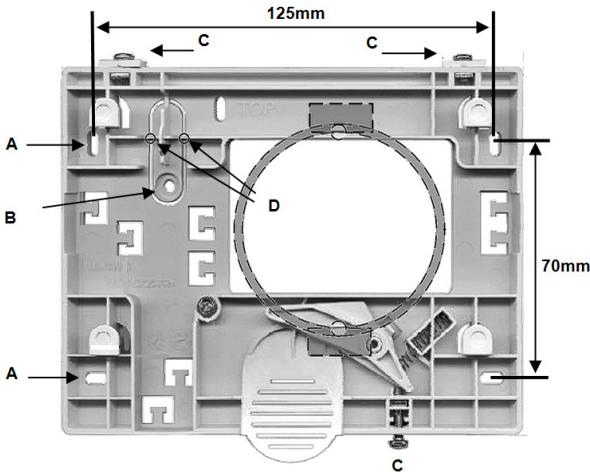
3. Pass the cable through the opening of the mounting plate.

4. Secure the mounting plate in place using the screws supplied. There are four screw holes (A) in the mounting plate.

5. Fit a retaining screw to the tamper bracket (B) and then cut away the plastic webbing (D).

6. Connect the wires to the TouchCenter terminals as shown in the table:

Panel	TouchCenter
A	G
B	Y
GND	−
+12 V	+

7. Mount the TouchCenter to the mounting plate, and push down until it snaps into position.

8. Tighten the three locking screws (C).

9. If required, fit the Prox sticker to the lower right-hand side of the keypad to indicate the location of the proximity reader.
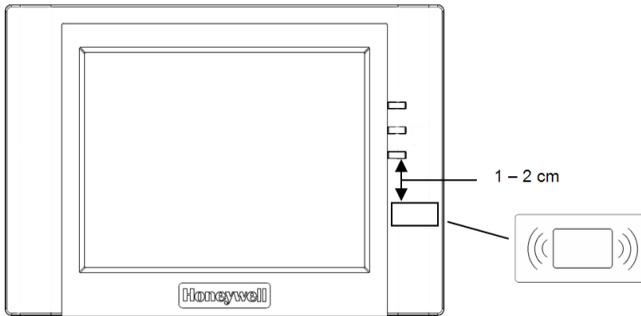
Configuration

To configure a new TouchCenter:

1. Set an address using one of these methods:

    ▪ On first power up, the TouchCenter immediately prompts for a bus address. This can be any valid address that is not shared with any other keypad, KeyProx or MAX device. The default address is usually acceptable.

    Note: A KeyProx needs two module addresses, one for the keypad and one for the prox device. The address used must be suitable for both a keypad and MAX device.

    ▪ If the address has previously been set and the address prompt does not appear, re-power the keypad and within five seconds of power up, press the Keypad Interface button, and then press **ent** to change the address.

2. Re-power the control panel or, if another keypad, KeyProx or MAX device is already configured, exit from Engineer mode and the new TouchCenter will be registered. The Home Page is displayed and the keypad is ready to use.

Setup menu

The TouchCenter has a number of configuration settings that are set up directly within the keypad. To access these settings, the TouchCenter must be in communication with the panel and the panel must be in Engineer mode. Proceed as follows:

1.   From the home screen, press the **SECURITY** button, and then enter the Authorization code. This is the Engineer PIN of the control panel. The Security screen is displayed.

2.   Press the **MORE CHOICES** button.

3.   Press the **SETUP** button.

4.   Press the **TEST** button.

From this screen, the following options are available:

Self Diagnostics

These three diagnostic tests are provided to verify correct operation of the TouchCenter and to check the connection to the control panel:

▪   LCD Display Test

▪   Audio Test

▪   LED Test

Address

If required, use the option SERVICE to change the RS485 address. If changed, reconfigure the TouchCenter with the control panel.

TouchCenter operation

For general operation:

1.   On the homepage, press the required function button.

   Note: To program the control panel from the TouchCenter, press the Keypad Interface button. The TouchCenter emulates a standard installer keypad.

2.   Enter a valid PIN when requested.

3.   Select the appropriate on-screen options. For help refer to the on-screen information and to the separate user's guide.

You can set and unset the system by presenting a prox tag to the Proximity reader (see the instructions in the help file on the home page).

Specifications

Mechanical

Width:	182 mm
Height:	128 mm
Depth:	34 mm
Boxed weight:	723 g (approx)
Humidity:	0 to 85%RH
Temperature:	−10 to +50°C

Electrical

Voltage: 12 V d.c. (nominal)

	Keypad	KeyProx
Current:	203 mA (maximum)	287 mA (maximum)
	175 mA (display on)	210 mA (display on)
	107 mA (standby)	140 mA (standby)

Note: Ensure that sufficient power is available for the TouchCenter keypad. A local power supply may be required.

Compliance

This product is suitable for use in systems compliant to EN50131-1:2006 and PD6662: 2006.

This product has been tested for compliance to EN50131-3: 2009 by BRE Global Ltd.

Security Grade:	3
Environmental class:	II
ACE type:	B

MAX^4 reader

The MAX^4 is a proximity reader access control device for a single door, which can also be used for setting and unsetting your alarm control panel. The MAX^4 can be configured in one of two ways:

Standalone

In standalone mode the MAX^4 operates as an entirely independent unit and is not monitored by the control panel for alarms, tampers or power failure. The MAX^4, in this mode, is used for door control or alarm system set/unset control, by connecting the internal relay output to a door lock or an external relay. It is programmed and operated using MAX^4 proximity cards or tags. The proximity cards and tags each have unique ID numbers and must be identified to the MAX^4 before being used to operate the system. MAX^4 memory can store up to 999 ID numbers, including at least three reserved for Masters. Once programmed, the ID numbers of the tags and cards are stored in the MAX^4 memory until voided (removed) or erased. Removing power from the MAX^4 does not erase the programming memory.

Note: The MAX^4 defaults to standalone mode. It can be configured to online mode directly from the control panel.

Online

The MAX^4 can operate in fully integrated online mode with the control panel, communicating via the AB line to share system resources and facilities. In this configuration the MAX^4 can be used for both door control and alarm system set/unset control, with complete user traceability stored within the control panel. For detailed instructions on how to program the MAX^4 onto the system, refer to the **MAX [69.2]** menu option.

Installing the MAX^4

Your MAX^4 pack contains the following:

- MAX^4 proximity reader *

- Drilling template

- Installation instructions

- Surge suppressor

* The MAX^4 is supplied with 3 metres of 12 wire E111235 AWG cable which is fixed and sealed through a keyhole opening on the rear surface of the unit.

Mounting the MAX^4

To mount the MAX^4 use the step by step diagrams provided with the drilling template.

Use the drilling template as an aid to locate the holes required to secure the unit and insert the connection cable.

The MAX^4 is fitted with an infrared lid tamper.

Wiring the MAX^4

The MAX^4 unit can be connected to the control panel in online or standalone configuration. The diagram opposite provides details for both configurations.

The MAX^4 relay is configured in either the NC or NO configuration depending upon the variant purchased (MX04-NC, MX04-NO).

Note: An external relay may be required when using a.c. powered locks.

Figure 11 MAX^4 LEDs

1 = Read (Amber)
2 = Open (Green)
3 = Closed (Red)
4 = Nightlock (Red)
5 = Add (Red)
6 = Void (Red)
7 = Program (Red)
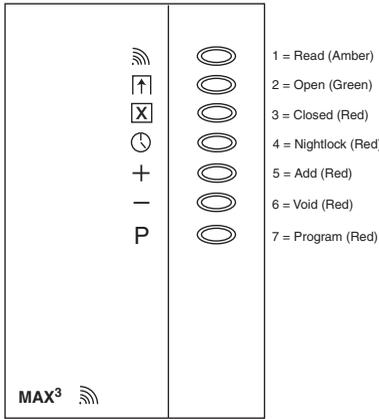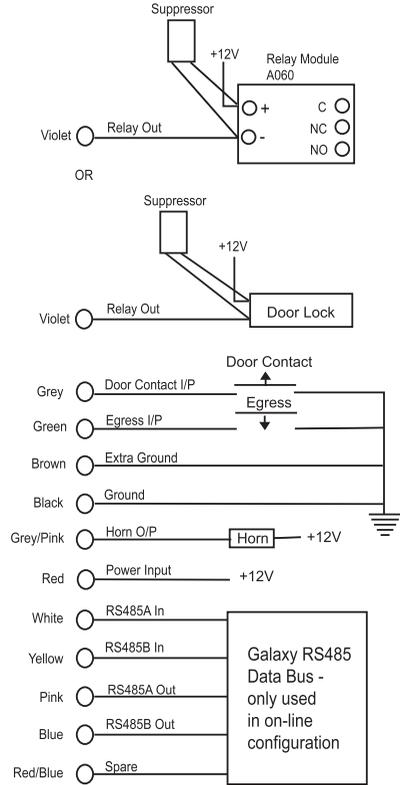
Figure 12 Connection diagram

Specification

Supply Volts	12 V d.c.
Nominal Current	35 mA
Maximum Current	50 mA
Maximum Switching Current	1 A @ 30 V d.c. max.
Security Grade	3
Environmental Class	IV
ACE type	B
Weight (boxed)	267 gm
Dimensions (box)	185 x 120 x 48 mm (LxBxH)

Configuration

Note: MAX^4 readers can only be configured into the system from engineer mode.

1.   Access engineer mode.

2.   Check that **Access Mode [69.1]** is enabled.

3.   Configure the reader as On-Line or Standalone using **MAX Address [69.2.1]**: 0=On-Line, 1=Standalone (default).

4.   Press **ent**. The panel may prompt for the AB line (1 – 4) that is to be searched; select the line and press **ent**. The panel searches for the MAX^4 with the highest address. New MAX^4 readers are addressed as 8 (standalone) by default.

5.   Only if adding a new MAX^4 reader: On locating the MAX^4 address, the keypad prompts for the OPERATING MODE of MAX^4 to be assigned: select 0=On-Line or 1=Standalone as required and press **ent**. When 0=On-Line mode is selected, the keypad displays the current address of the MAX^4 and the range of valid addresses. Enter the new MAX^4 address and press **ent**. The keypad indicates the old and new MAX^4 addresses and the status of the reprogramming.

   Note: We recommend addressing new readers with the lowest available number on the line.

   When reprogramming is complete the MAX^4 bleeps, the LEDs on the MAX^4 switch off and the keypad display returns to 1=MAX Address.

6.   Enter your engineer code, and then press **esc** to exit from engineer mode. The message **1 MOD. ADDED - esc=CONTINUE** is displayed on the keypad and LED 2 on the MAX^4 reader switches on. Press **esc** and the keypad returns to the unset banner.

   If this message is not displayed, the MAX^4 reader is not communicating with the control panel and has not been configured into the system (LED 2 does not switch on).

The online MAX^4 reader is now configured into the system.

Operating instructions

Opening the door without presenting a valid card activates a door forced alarm at the panel; the buzzer sounds and LED 2 flashes until the door is closed.

Activating the egress switch allows the door to be opened without activating an alarm when no card has been presented to the MAX^4.

1.   Ensure that LED 3 is on and all other LEDs are off.

2.   Swipe the reader with a standard user or nightlock access user card. LED 3 switches off and LED 2 switches on for the programmed Open Timeout.

3.   Open the door while the LED 2 is on and access the area.

4. Close the door. LED 2 switches off and LED 3 switches on. The door must be closed within the programmed Close Timeout. If the door remains open longer than this, an alarm is activated.

Card-Held function

The MAX^4 or DCM card can be assigned a single menu option (refer to the **MAX Function [42.1.8]** menu option). To activate the function assigned to the MAX^4 or DCM card, hold the card in front of the reader for three seconds; all of the LEDs switch on. If a keypad has been assigned to the MAX function then it displays the details of this option. If no keypad is assigned, pressing a key on any of the keypads assigned to a common group displays the card-held function.

Card-Held system setting

If the MAX^4 or DCM card is assigned one of the setting options (options 12, 13, and 16 to 19), the card-held functions starts the setting procedure for the groups assigned to the card.

Note: If Group Restriction is assigned, only the groups that are common to both the MAX^4 reader and the MAX^4 user are set/unset.

To unset the system using the MAX^4 or DCM card, swipe the reader with a valid card. The reader beeps. All of the groups assigned to the card are instantly unset.

MAX^4 Log

Refer to Access Doors [25]

MAX^4 events print out

Refer to **Online Print [51.28]**, and **Online Level [51.29]**.

Downloading the MAX^4/ DCM Log

The MAX^4/DCM event log can be downloaded to Remote Servicing by using the MAX/DCM Log copy option in Remote Servicing.

Power Supply Unit and Power RIO

The Power Supply Unit is available in 2 variants:

▪ The Power RIO comprising power block and control unit with onboard RIO.

▪ The Power Unit comprising power block and control unit only.

WARNING: There are lethal voltages present in the power block. Remove mains power from the power block before handling it.

The number of Power Units or Power RIOs that can be used on a system is limited by the number of RIOs that can be added to a panel.
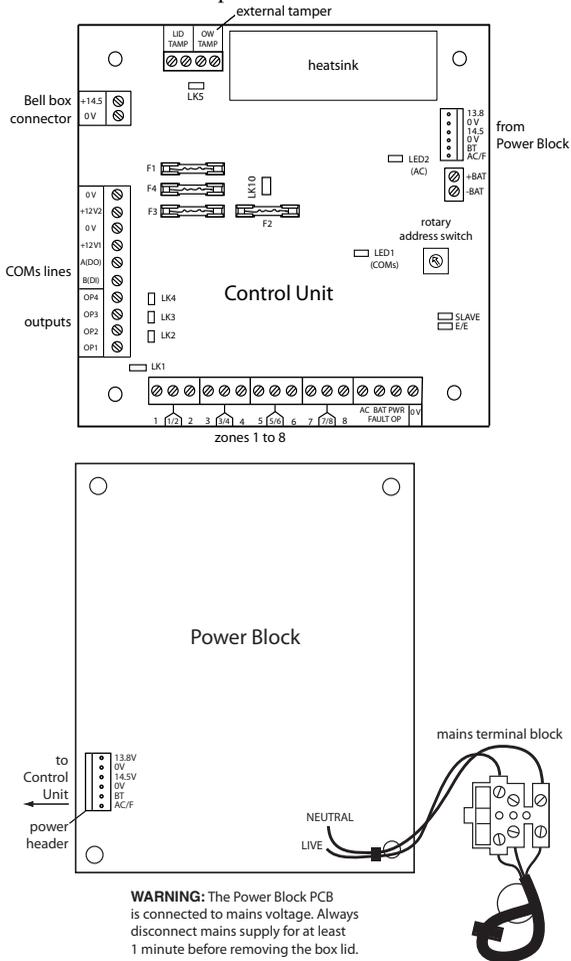
Figure 13 Power supply unit

Battery

The minimum capacity battery to supply the PSU is 1 x 7 Ah. The maximum capacity battery is 2 x 17 Ah.

Battery test

A battery test on full load is automatically performed once an hour and during the Engineer Mode exiting procedure. If the battery voltage falls to 10 V while the Power Supply Unit is running on the battery, then it is automatically disconnected to prevent deep discharge of the battery.

Smart battery monitoring

The total current used in the system is constantly measured and reported to the control panel in the **PSU Comms [61.4]** menu option.

.

Configuration

Addressing for either variant is identical to that described for RIO Modules. Set the address using the rotary switch before applying power.

The 4 outputs are switched 0 V (0 V active). Without the jumper links (LK1-4) fitted, the outputs float in the OFF state. They can apply a +12 V signal, if required, by fitting the appropriate pull-up jumper supplied.

Fit LK5 if you do not intend to use an off-wall tamper.

For normal operation, ensure that the **SLAVE** and **E/E** links are in place.

There are three open-collector, normally off, output fault signals:

FAULT OP AC   activated by an a.c. failure.

FAULT OP BAT   activated by a battery low or battery fail condition.

FAULT OP PWR activated by low voltage present in +12V1, +12V2.

Installation instructions

The installation and wiring must be performed by a competent engineer. Connect the PSU to the a.c. mains supply (230/240 Va.c. 50 Hz) via a 3 A fused connection outlet.

To install the panel:

1. Route the mains cable through the hole on the right-hand side of the enclosure base and secure the panel base to the wall using three 40 mm No. 8 round-head steel screws.
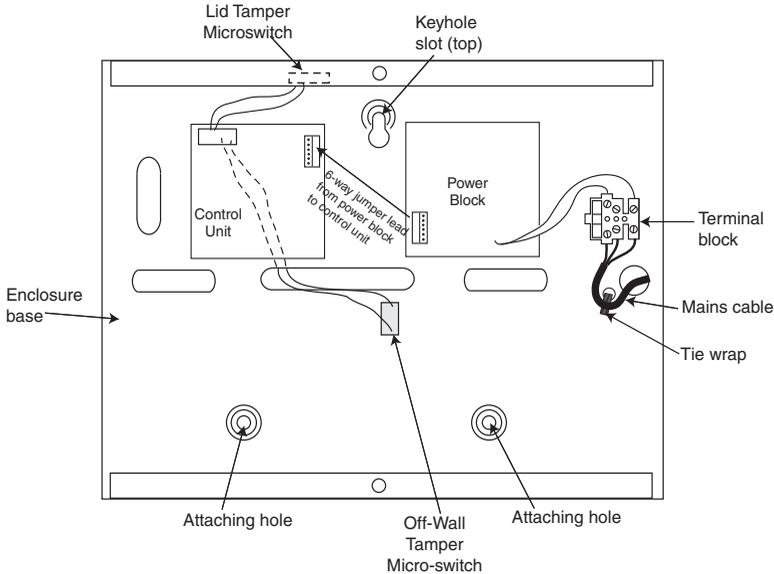
2. Tie wrap the mains cable as shown.

3. Using a three core cable that satisfies local regulations, wire mains power to the mains terminal block as follows:

   - blue wire to the terminal marked N (Neutral)

   - green/yellow wire to the terminal marked E (Earth)

   - brown wire to the terminal marked L (Live)

   Note: No other connections to the mains terminal block are permitted.

   All wiring must be in accordance with local regulations and the installation must conform to EN60950.

4. Apply mains power. This unit can be powered up from the battery by momentarily shorting LK10. Never leave LK10 connected as deep discharge of the battery will occur. LK10 is for start-up only.

Specifications

Based on 34 Ah battery and UK grade 3 compliance.

Input voltage	230 V a.c. (+10%/-15%) @ 50 Hz
Output voltage (nominal)	13.8 V and 14.5 V
Output current (max)	3.0 A
Operating temperature	-10 deg C to +50 deg C
Aux1 & Aux2	
Output voltage (nominal)	13.8 V
Output current (max)	0.75 A each
14.5 V Output (French variant only)	14.5 V
Output voltage (nominal)	
Output current (max)	0.15 A (when using this current, the AUX1 & AUX2 currents will be reduced by an equivalent amount).
Battery charge current (max)	1.4 A
Maximum ripple voltage	<100 mV
Fuses	
F1 (14.5 V)	500 mA – 20 mm anti-surge
F2 (Battery)	1.6 A – 20 mm anti-surge
F3 (12 V Aux1)	1.0 A – 20 mm anti-surge
F4 (12 V Aux2)	1.0 A – 20 mm anti-surge

EN50131 Compliance

This product is suitable for use in systems designed to comply with EN50131-6 and PD6662:2004.

- Security Grade - 3

- Environmental Class - II

- Power Supply Type - A

ISDN module

The ISDN module is an optional add-on. It connects directly to the RS485 communication bus, allowing signalling and remote servicing over an ISDN network. The ISDN module is housed inside the panel enclosure. The ISDN module supports the following features:

▪ Full existing telecom module functionality

▪ Analogue/digital/X.25 communication

▪ Support for existing DTMF, SIA, Contact ID and Microtech signalling formats in addition to two receiver specific X.25 protocols

▪ Hardware and software line snatch

▪ Comprehensive line fail detection and reporting

▪ Two-way communication using B-Channel and D-Channel

The ISDN Module is allocated keypad address C, and reports itself as Comm Mod 3.

As a result of the addition of the ISDN module, keypad address C is not available. If this keypad is required, the ISDN Module should be removed.
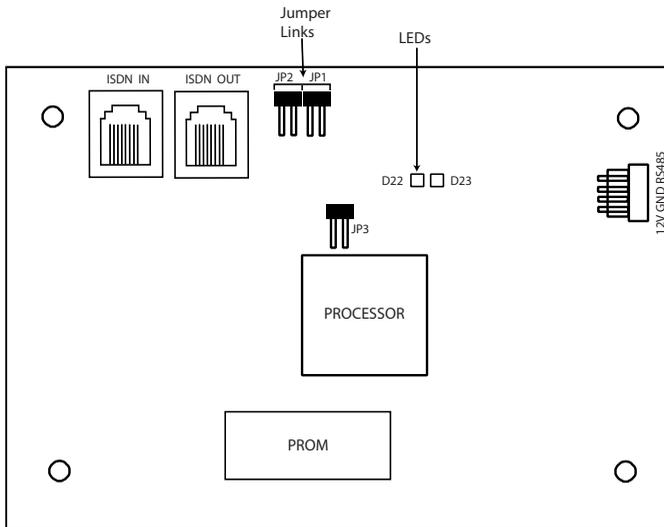
Figure 14 ISDN module PCB Layout

The position of components on the ISDN PCB may vary with different hardware revisions.

Programming

Program the module using the **ISDN [56.3]** menu option.

Audio interface module

Using the optional audio interface module you can link two audio channels to provide audio verification following an alarm activation. This verification in the form of recorded or live audio captured from the area of the alarm activation is transmitted to the Alarm Receiving Centre, along with the alarm signal. If setup, it is possible for the operator at the receiving centre to talk back to the site. The audio channel can be assigned to more than one zone.

The Audio Interface Module is connected to the system via the RS485 line. Up to three speaker-mic devices, such as the TP800, can be connected to each audio channel.
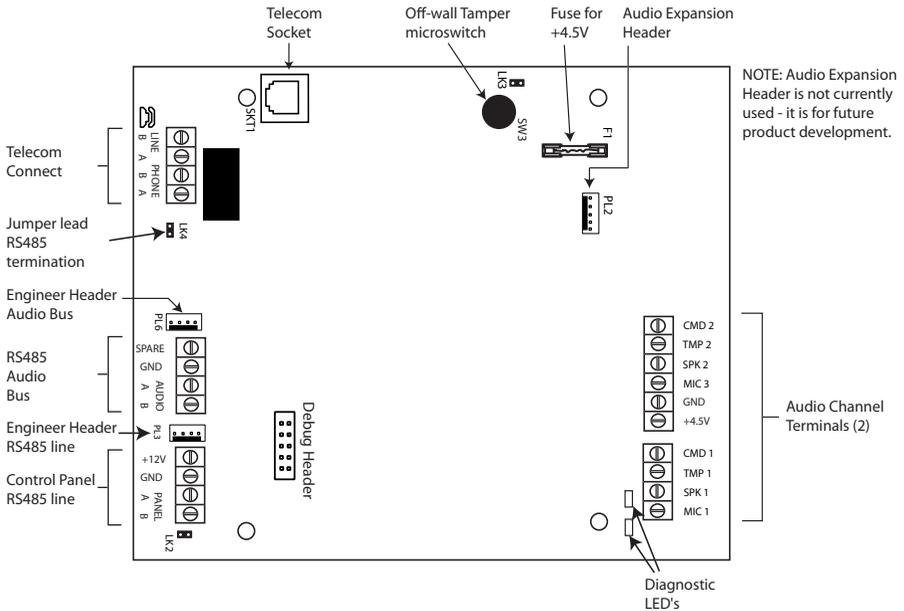
Figure 15 Audio Interface Module PCB layout

Addressing

The Audio Interface has a fixed module address.

Mounting

The module can be mounted as follows:

- inside the panel in one of the peripheral mounting spaces.

- inside a standard RIO box separate from the control panel.

Connecting the Audio Interface Module to the PSTN

Connect the module to the panel PCB as shown below:
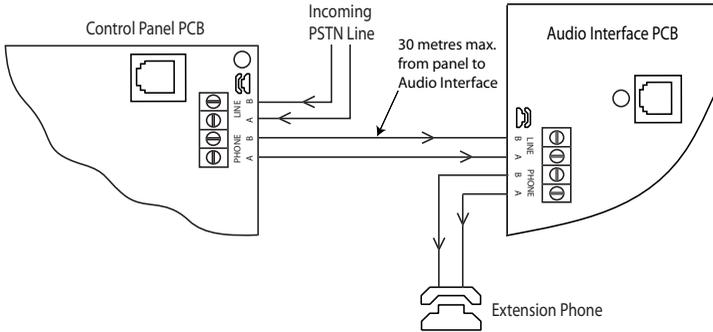
Figure 16 Audio Interface connected to PSTN

Connecting microphones and speakers

The audio channels will work with most line-level audio equipment. Use microphones with a pre-amplifier that delivers audio at line-level (3 V peak to peak). The module can transmit audio to speakers that accept line-level signals. Please read any instructions that come with your microphone regarding the adjustment of sensitivity. The module can be used with the following Honeywell audio devices:

TP800/TP2-800GY   Speaker and microphone unit

IS215TCE-MIC   PIR detector with built-in microphone

DT7450-MIC   Dual Tech detector with built-in microphone

TP800/TP2-800GY connection

Speaker and microphone connections

Audio Interface	TP800/TP2-800GY
GND	VS-*
+4.5 V	VS+
CMD	CMD
SPK	RML
MIC	ECOUT
TMP	AP
	AP*

* Connect these two points together to complete the tamper

IS215TCE-MIC/DT7450-MIC connection

Detector connections

Audio Interface	IS215TCE-MIC/DT7450-MIC
GND	–
12 V	+
MIC	M
GRD	G

Door control module

Door control modules (DCMs) can be added onto the RS485 bus line to add fully integrated access control. Each DCM allows up to two Wiegand readers to be connected to control two separate doors; each door with an exit button or one door with an entry and exit reader.

Installation and mounting

The DCM can be supplied installed in a standard plastic RIO box or within a Power RIO box.

Mounting the RIO box

1. If necessary, remove the DCM PCB from the box to allow access to the screw holes.

2. Fix the base to the mounting surface, using the screw holes provided.

3. Bring all cables into the enclosure via the base cable entry points. There are six cable entry holes.

4. Attach the RIO box lid with the four thread forming screws provided.

Mounting the power RIO box

The DCM is mounted above the control PCB on a mounting plate.

1. Remove the screws securing the left hand control PCB to the box.

2. Fit the four mounting pillars supplied with the kit in place of the PCB screws.

3. Fit the mounting plate to the pillars and secure using the screws removed from the PCB.

4. Attach the DCM to the mounting plate using the plastic clips supplied.

Inputs

The DCM includes the following sensing inputs:

Door Contact (DC)

This input is a normal alarm zone input that has the same functionality as a normal security zone type. It uses normal 1 k/2 k double balanced zone wiring.
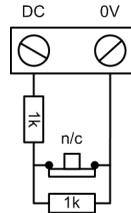

door contact

Request To Exit Contact (EC)

This input is a normally open contact. When activated it allows the door to unlock for the programmed duration. Additionally, the door can be held unlocked indefinitely by holding the EC closed. In this case, the relay activates only for the programmed duration but the door propped alarm is held off. This can be achieved, for example, by using a keyswitch wired in parallel with the normal EC button.
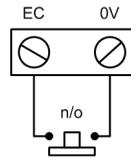
request to exit

Function Contact

This uses normal 1 k/2 k double balanced zone wiring. It initiates a pre-programmed menu option following a valid card. The normal use is to activate the setting procedure via the reader but any menu option can be programmed.
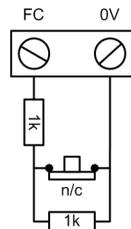

function contact

Tamper Inputs

The tamper circuits for both readers should be wired to the same tamper terminals on the DCM. The two circuits are wired in parallel, each with its own series resistor as follows:

The reader tamper is double-balanced.

- Reader 1 – 5.6 kΩ

- Reader 2 – 12 kΩ
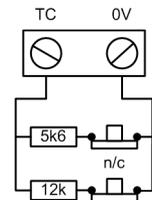
tamper contact

Wiring the reader to the DCM

The wires from the Reader are connected to the Wiegand Reader Inputs (see Figure 17).
Refer to separate Reader instructions for method of wiring the Reader to the DCM.
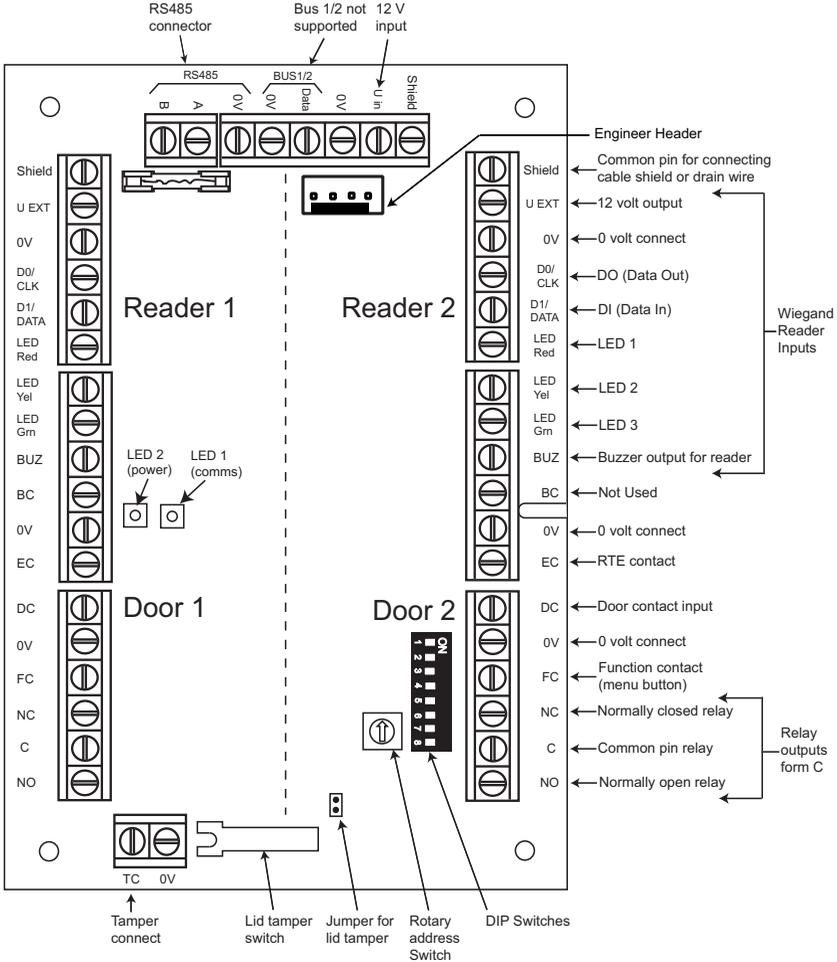
Figure 17 Door control module PCB

Note: If only one door is being connected, then always use the connections for Door 1 (left side) and terminate the inputs with a 1 kΩ resistor.

Connecting a Wiegand device

A standard Wiegand card reader or keypad can be connected to the DCM. The keypad can operate in 4-bit and 8-bit burst mode.

Addressing with DIP switches

Using the DIP switches set the DCM address to a unique value before it is connected to a power supply. The following table shows each DIP switch with related address number. Set switches 4 to 8 in the off position.

	Switch			
Address	1	2	3	4 to 8
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF

Connecting the DCM to the system

Wire the DCM to the RS485 line. The DCM requires 12 V d.c., which can be supplied from the control panel power supply or from the Power RIO when mounted inside the Power RIO box (see Figure 17).

Note: If the DCM is the last module on the line, connect a 680 Ω EOL resistor across the A and B terminals.

Configuring the DCM

The DCM is configured into the system on power up of the control panel or when exiting from engineer mode. The flash rate of the green comms LED (LED 1) on the DCM indicates the status of the communication with the control panel. A short flash once per second indicates good communications. LED 2 when lit indicates that there is power to the DCM.

Specifications

Physical

Weight (RIO): 270 g approx.

Dimensions (RIO box mm): 150 wide x 162 high x 39 deep

For additional weight and dimensions when housed within a Power RIO enclosure, please see the Power RIO documentation.

Electrical

Operating voltage range: 10.5 V to 15 V

Current draw, typical: 40 mA

Current draw, maximum (2 readers): 130 mA

Compliance

This product is suitable for use in systems compliant to EN50131-1: 2006, EN50133-1 and PD6662.

This product has been tested for compliance to EN50131-3 and EN50133-3 by CNPP.

- Security Grade: 3

- Environmental class: II

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