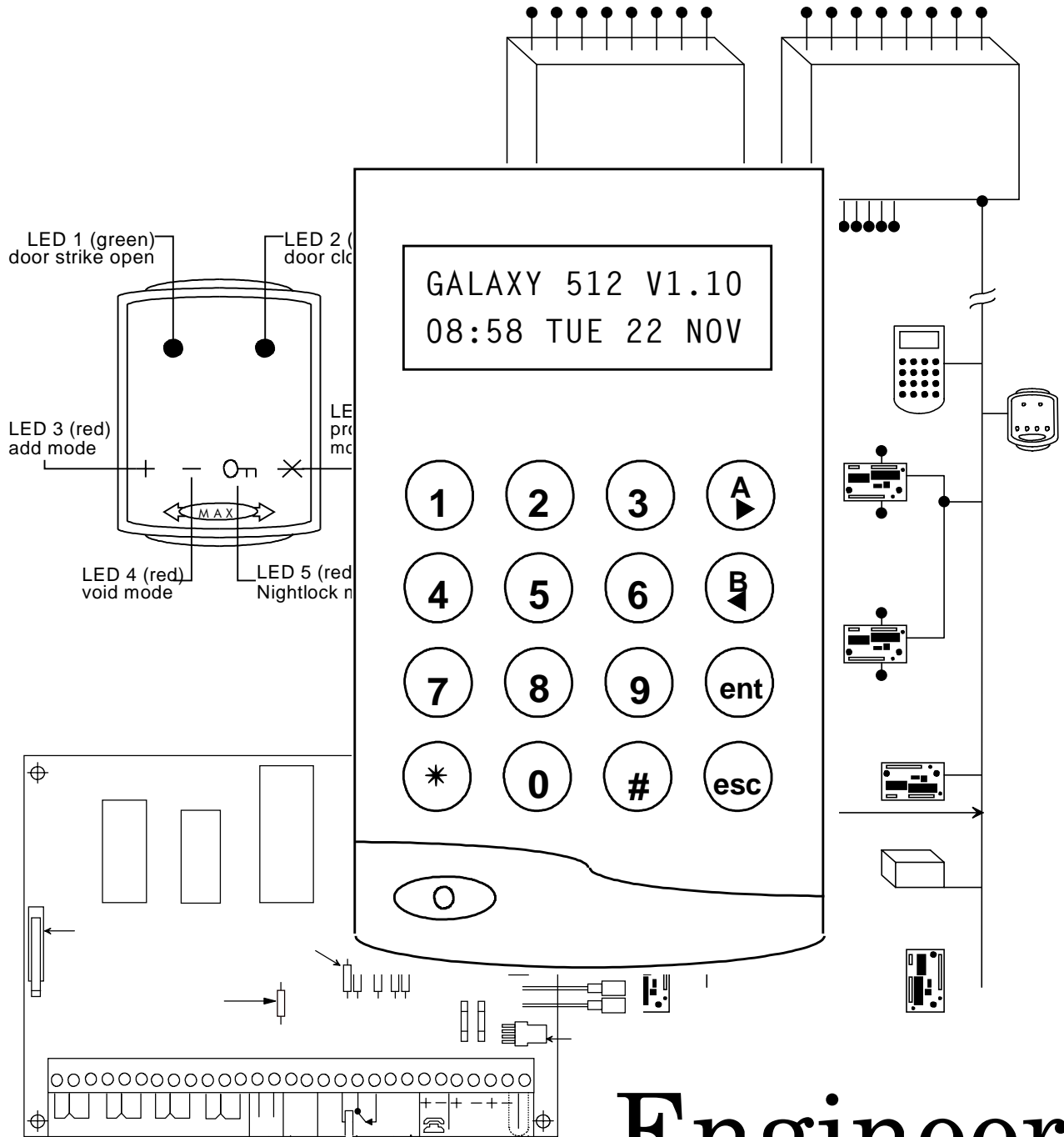


# GALAXY

## 8/18/60/500/512



# Engineer Manual

Part Number: **L027/D**

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## Section 1: Quick Setup

To quickly set up the Galaxy control panel for programming follow these simple steps:

1. Connect a 1k  $\Omega$  (1%) resistor across each of the zones on the panel and RIO (if connected).
2. Ensure that the tamper return loop — the terminal marked as **T** on the PCB — is a complete loop.  
**NOTE:** This is factory set as a completed loop with a 0 V return.
3. Connect a keypad to the **AB LINE** terminals on the control panel. The Galaxy 500 and 512 has four **AB LINE** terminals. Connect the terminals as follows:

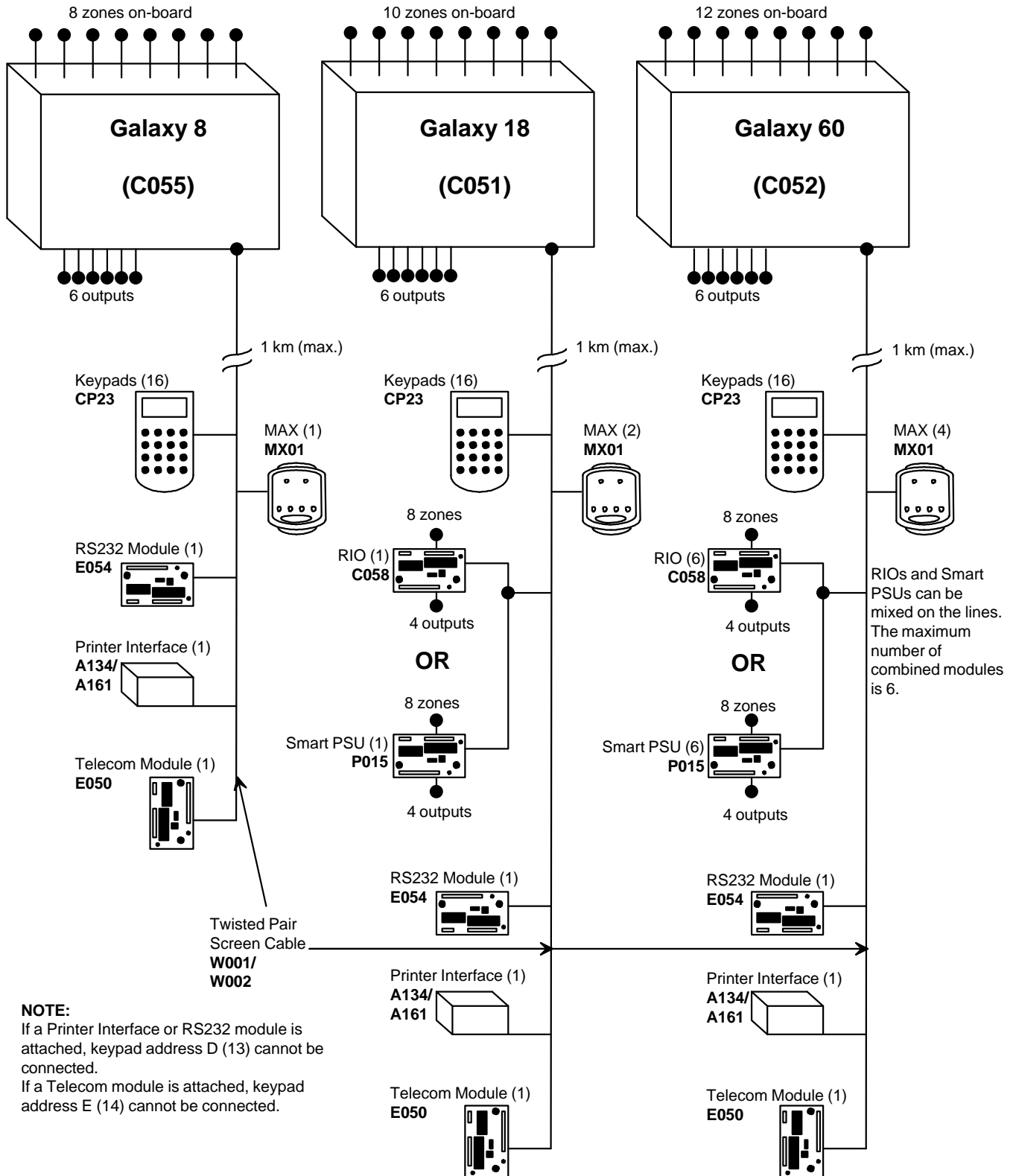
Control Panel	Keypad
+	+
-	-
A	A
B	B

4. Connect a 680  $\Omega$  End Of Line (EOL) resistor across the **A** and **B** terminals of the keypad.
5. Ensure that the keypad is fitted to the keypad mounting bracket. A keypad tamper will occur if the tamper spring is not retained when the panel is powered up.
6. Connect the mains wiring to the control panel. **Do not** switch the mains ON.
7. Replace the control panel lid and secure the fastening screw.
8. Switch on the mains voltage (230 V a.c. / 50 Hz).
9. The following sequence of events occur:
  - the keypad buzzer and control panel horn (if fitted) activate momentarily,
  - flashing \*\*\*\*\* is displayed on the keypad,
  - the sounders stop and the keypad displays become blank,
  - the green power LED lights,
  - the default banner is displayed on the keypad.

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10. The system is now ready to be programmed. Refer to **Section 6: System Operation** for programming details.

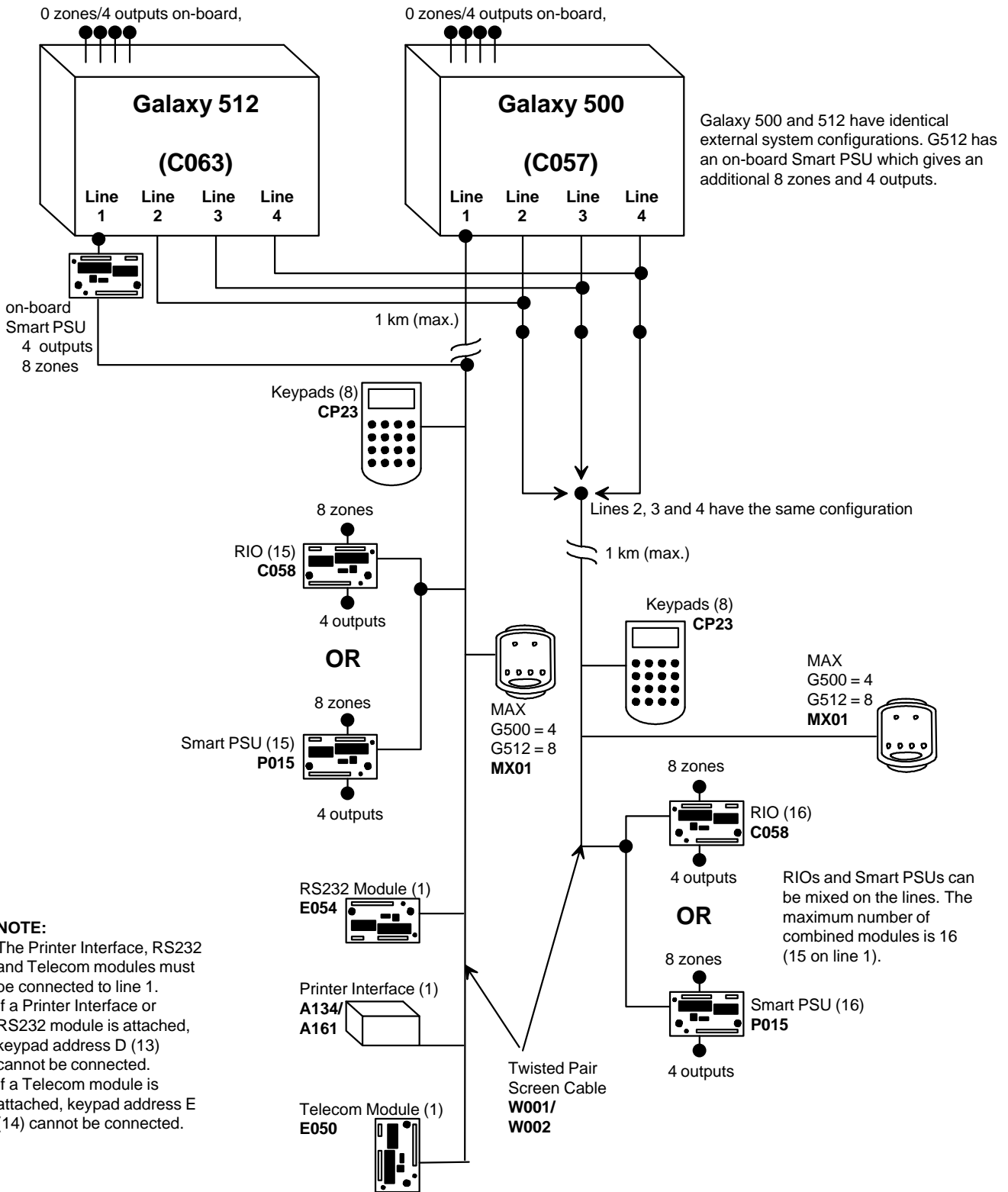
Section 2: System Architecture



**NOTE:**  
 If a Printer Interface or RS232 module is attached, keypad address D (13) cannot be connected.  
 If a Telecom module is attached, keypad address E (14) cannot be connected.

	On-board		RIOs				Keypads		MAX
	Zones	Outputs	Poss.	Address	Zones	Outputs	Poss.	Address	Poss.
<b>Galaxy 8</b>	8	6	0	–	–	–	16	0 – 9, A – F	1
<b>Galaxy 18</b>	10	6	1	2	8	4	16	0 – 9, A – F	2
<b>Galaxy 60</b>	12	6	6	2 – 7	8 – 48	4 – 24	16	0 – 9, A – F	4

Table 2-1. Galaxy 8, 18 and 60 System Configurations



**NOTE:**  
 The Printer Interface, RS232 and Telecom modules must be connected to line 1. If a Printer Interface or RS232 module is attached, keypad address D (13) cannot be connected. If a Telecom module is attached, keypad address E (14) cannot be connected.

RIOs and Smart PSUs can be mixed on the lines. The maximum number of combined modules is 16 (15 on line 1).

On-board		RIOs/ Smart PSUs				Keypads		MAX		
Galaxy Panel	Zones	Outputs	Poss.	Address	Zones	Outputs	Poss.	Address	Poss.	
500	(line 1)	0	4	15	1 - 9, A - F	504	256	8	0 - 4, D, E, F	4
	(lines 2, 3, 4)			16	0 - 9, A - F			8	0 - 7	4
512	(line 1)	8	8	15	1 - 9, A - F	504	256	8	0 - 4, D, E, F	8
	(lines 2, 3, 4)			16	0 - 9, A - F			8	0 - 7	8

Table 2-2. Galaxy 8, 18 and 60 System Configurations

Description	Part No.
Galaxy 8 (requires LCD keypad)	C055
Galaxy 8 Pack	C056
Galaxy 18 (requires keypad)	C051
Galaxy 60 (requires keypad)	C052
Galaxy 500 (requires keypad)	C057
Galaxy 512 (requires keypad)	C063
Galaxy Mk3 LCD Keypad	CP23
Galaxy RIO (Remote Input Output)	C058
Galaxy MAX Reader	MX01
Galaxy MAX Cards	MX04
Galaxy MAX Fobs	MX03
RS232 Interface Module (Boxed)	E054
(PCB)	A169
Galaxy Printer Interface (6 pin DIN)	A134
(25 way D)	A161
Engineer Keypad Cable	A136
Twisted Pair Screened Cable	
1 × pair (Belden Equivalent 8723)	W001
2 × pair (Belden Equivalent 8769)	W002
Power Supplies (boxed) 1A	P019
3A	P017
Smart 3A	P015

Table 2-3. Parts List

## Galaxy 8 PCB Layout

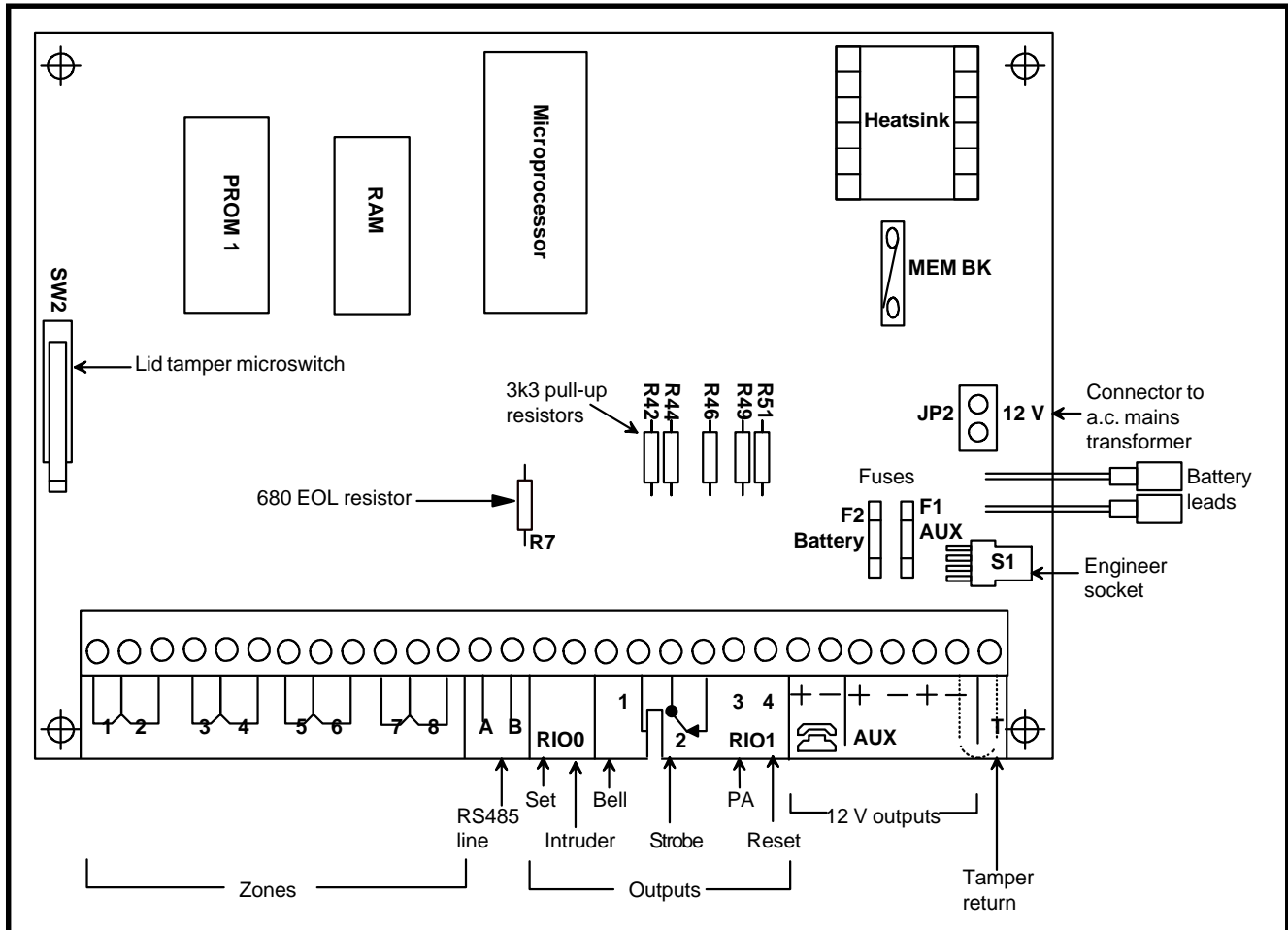


Figure 2-1. Galaxy 8 PCB Layout

The five transistorised outputs on the Galaxy 8 are converted to open collectors by cutting the appropriate pull-up resistor. Refer to Table 2-4.

Output Number	Pull-up Resistor
1001	R42
1002	R44
1011	R46
1013	R49
1014	R51

Table 2-4. Galaxy 8 Output Pull-up Resistors

Galaxy 18/60 PCB Layout

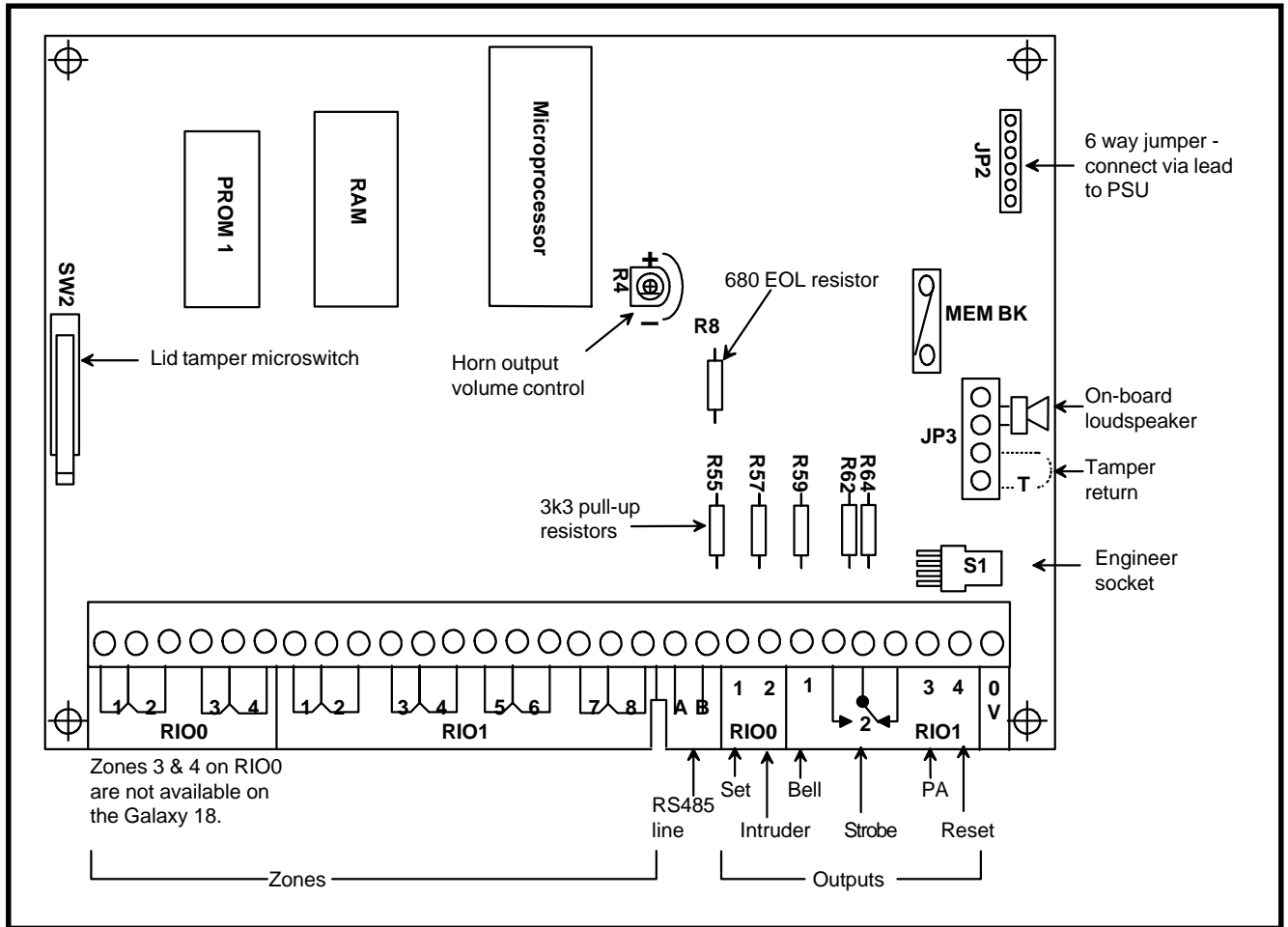


Figure 2-2. Galaxy 18/60 PCB Layout

The five transistorised outputs on the Galaxy 18/60 are converted to open collectors by cutting the appropriate pull-up resistor. Refer to Table 2-5.

Output Number	Pull-up Resistor
1001	R55
1002	R57
1011	R59
1013	R62
1014	R64

Table 2-5. Galaxy 18/60 Output Pull-up Resistors

## Galaxy 500 PCB Layout

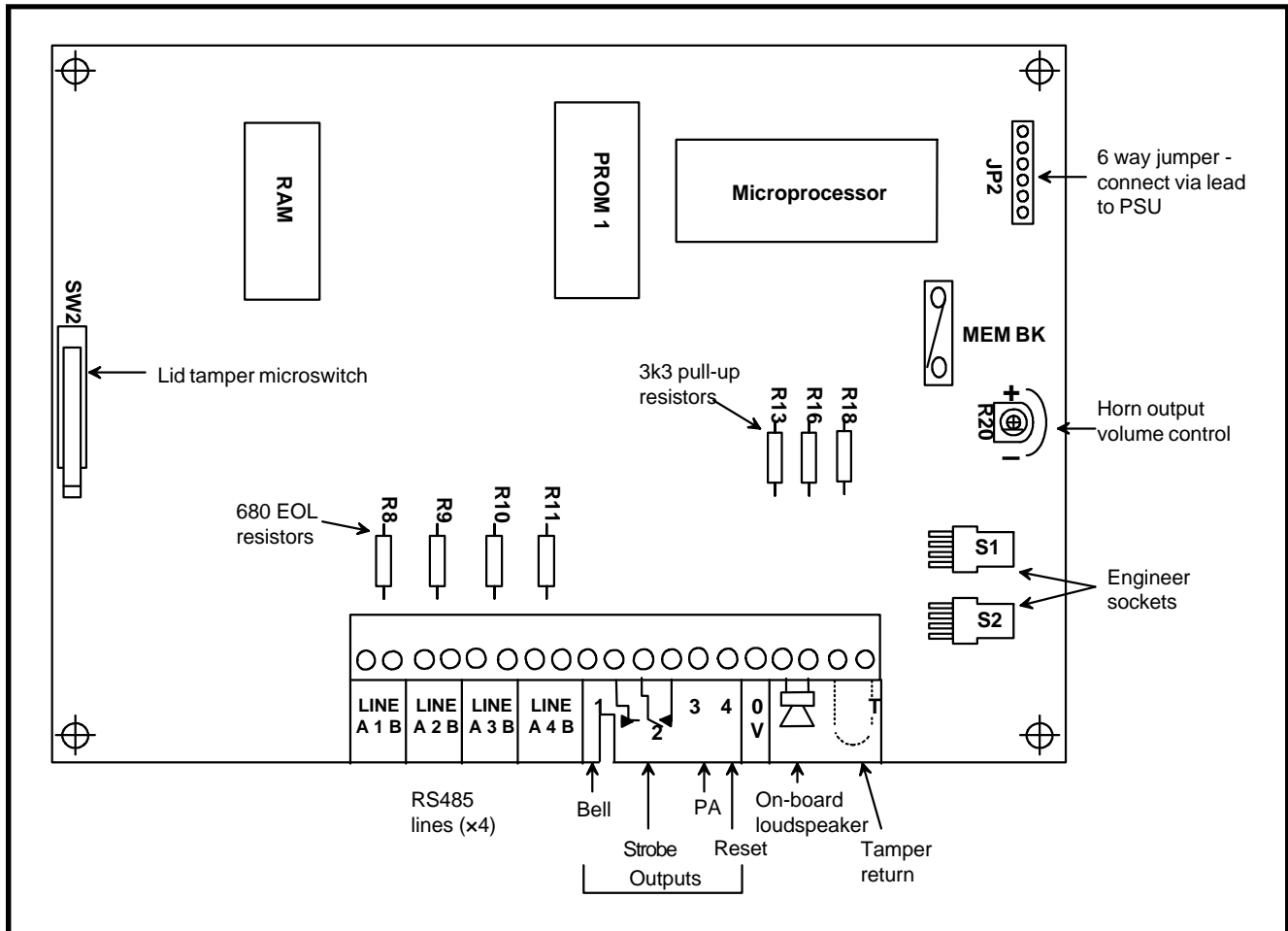


Figure 2-3. Galaxy 500 PCB Layout

The three transistorised outputs on the Galaxy 500 are converted to open collectors by cutting the appropriate pull-up resistor. Refer to Table 2-6.

Output Number	Pull-up Resistor
1001	R13
1003	R16
1004	R18

Table 2-6. Galaxy 500 &amp; 512 Output Pull-up Resistors

Galaxy 512 PCB Layout

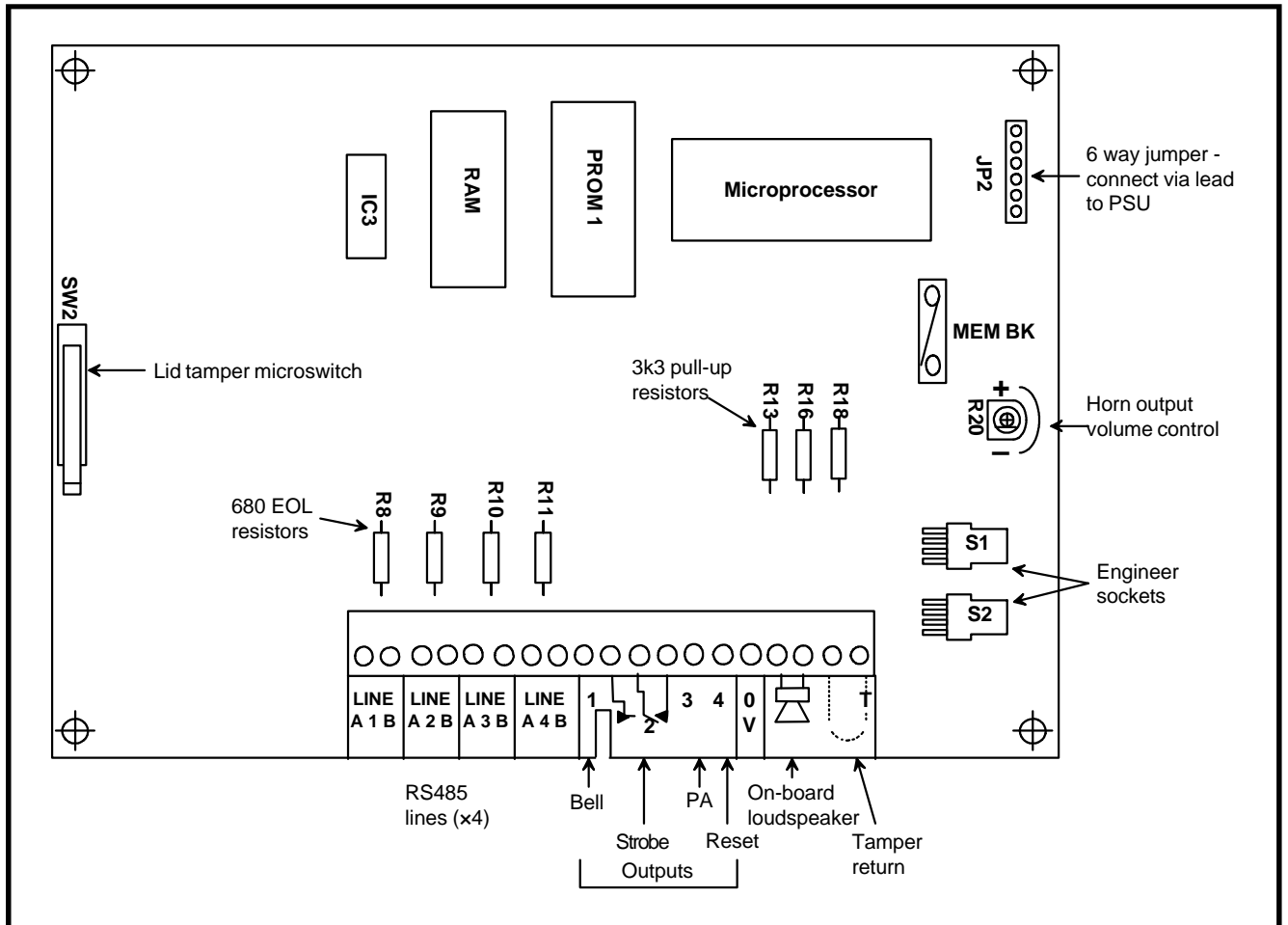


Figure 2-4. Galaxy 512 PCB Layout

The three transistorised outputs on the Galaxy 512 are converted to open collectors by cutting the appropriate pull-up resistor. Refer to Table 2-6.

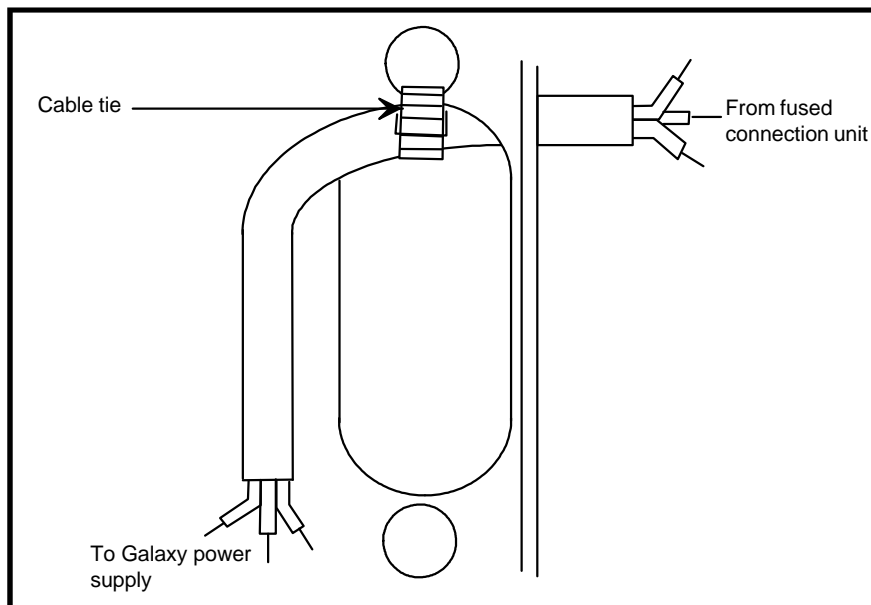


## System Installation and Wiring

The installation and wiring must be performed by a competent engineer. For permanently connected equipment, a readily accessible disconnect device must be incorporated in the fixed wiring having contact separation of at least 3 mm on each pole. The Galaxy control panel must be connected to the a.c. mains supply (230/240 V a.c. 50 Hz) via a fused connection outlet.

The fuse in the mains outlet must not exceed 3 A.

Route the mains cable through the hole on the right hand side of the enclosure base. Securely anchor the cable to the box using the tie-wrap as shown in Figure 2-5.



**Figure 2-5. Securing the Mains Cable to the Panel**

Secure the panel base to the wall using three 1.5" No. 8 round head steel screws through the holes provided.

The mains cable used must be a three core type (with green/yellow earth insulation) of adequate current carrying capacity.

**NOTE:** The mains cable must satisfy the requirements stated in BS6500.

Connect the mains cable to the mains terminal block as follows:

- blue wire to the terminal marked N (Neutral)
- green/yellow wire to the terminal marked  $\perp$  (Earth)
- brown wire to the terminal marked L (Live)

**NOTE:** No other connections to the mains connector are permitted.

All wiring must be in accordance with the latest edition of the IEE Wiring Regulations (Regulations for Electrical Installations), see also BS7671.

Once all zones and module wiring has been completed replace the lid of the enclosure and screw the lid to the base with the screw provided.

## Stand-by Battery

The Galaxy control panels can accommodate a 15 Ahr stand-by battery. Ensure that the battery connector leads on the control panel Powers Supply Unit (PSU) are connected to the correct terminals on the battery.

## Memory

The Galaxy control panels are fitted with a memory chip with its own battery backup on the main PCB. This allows the panels to retain the system configuration and programming details and the event log for up to eight hours when both the mains power and stand-by battery have been disconnected. The backup battery switch (marked **MEM BK** on the PCB) must be kept closed to retain the memory during a complete power down. This is known as a **warm start**.

**NOTE:** The period that the memory is retained for is dependent on the charge of the backup battery.

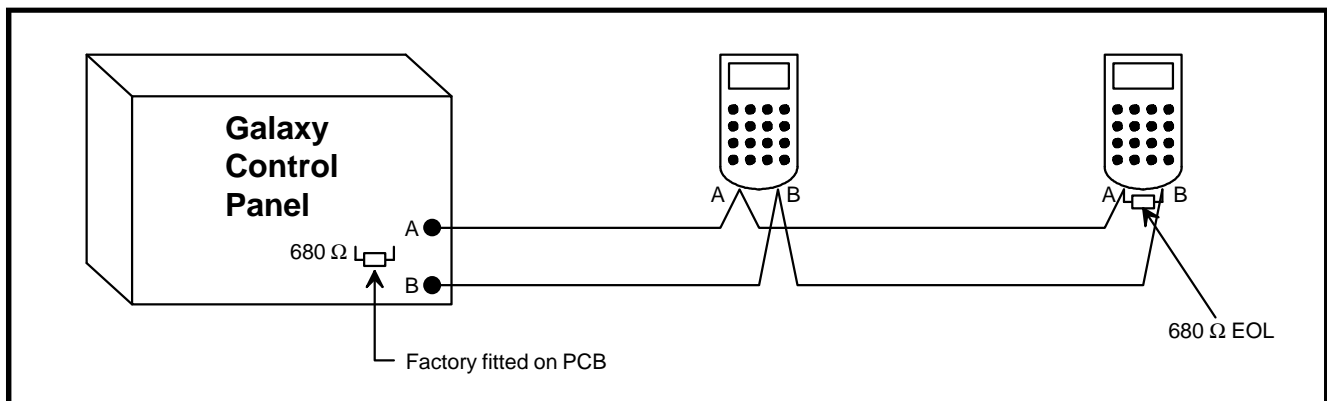
To completely erase the system memory and return to the factory default settings open the **MEM BK** switch and remove all power to the PCB. This is known as a **cold start**.

## RS485 Data Communications Bus (AB Lines)

Communication between the Galaxy control panels and the modules attached to the system takes place on the **AB** line. The communication protocol is RS485 format. The control panel constantly monitors the modules attached to it. A break in the communication from any of the modules generates a module tamper alarm.

## RS485 Wiring Configurations

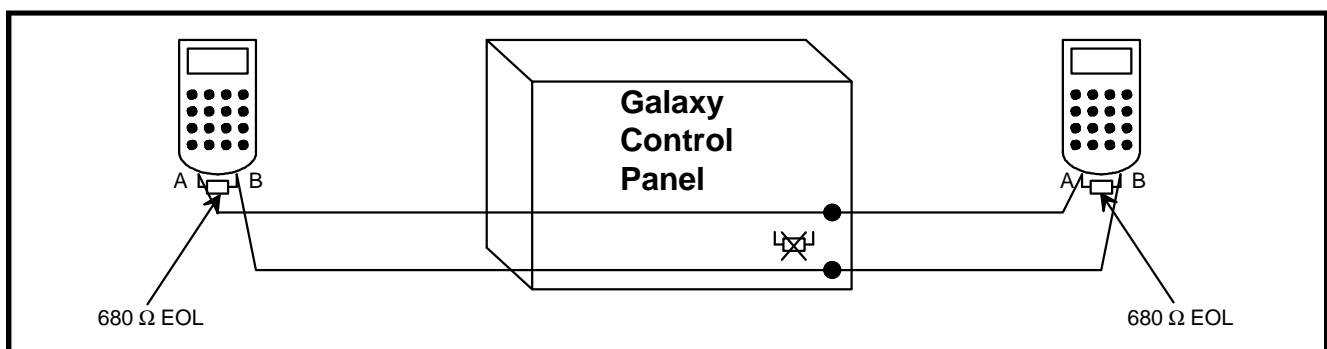
The system **must** be wired in a daisy-chain configuration. That is the **A** line from the previous module is connected to the **A** terminal of the current module and then on to the **A** line of the next module.



**Figure 2-6. Daisy-Chain Configuration**

Two **AB** lines can be run from the control panel. This requires a minor hardware modification to the control panel PCB.

- cut EOL resistor — G8 = R7, G18/60 = R8, G500 & G512 cut R8, R9, R10 and R11 for lines 1, 2, 3 and 4 respectively,
- run two lines from the **A** and **B** terminals of the line,
- terminate both Ends Of Line (EOL) with a 680 Ω resistor.



**Figure 2-7. Twin AB Line Daisy-Chain Configuration**

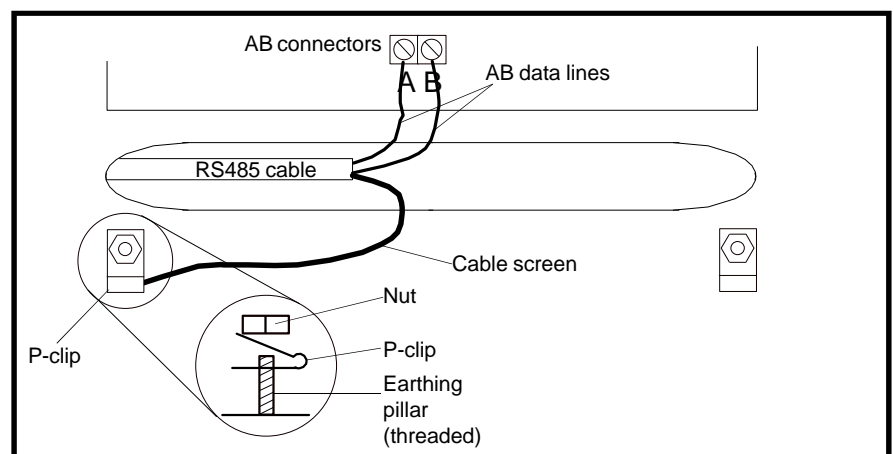
## RS485 Wiring Recommendations

To ensure that the system communicates at the maximum level of efficiency, the following recommendations **must** be adhered to:

- Each communication line can support 32 devices. The maximum number of devices on each line are:

	Galaxy 8	Galaxy 18	Galaxy 60	Galaxy 500	Galaxy 512
Keypads	16	16	16	8	8
RIOs/SPSUs	0	1	6	16 (line 1 =15)	16
MAX	1	2	4	4	4
RS232	1	1	1	1 (only line 1)	1 (only line 1)
Telecoms	1	1	1	1 (only line 1)	1 (only line 1)

- The system **must** be wired in a daisy-chain configuration. Spur and star configurations **must not** be used as they reduce the immunity to electrical interference.
- The cable used to wire the RS485 (**AB**) line **must** be a twisted pair (Part No. **W002**).
- Shielded twisted pair cable, where used, is connected to the earthing pillar on the Galaxy control panel using the P-clip and nut supplied (refer to Figure 2-8).
- The RS485 (**AB**) line must have a 680  $\Omega$  resistor fitted across the **A** and **B** terminals of the last module on the line. If two lines are connected, both ends must be terminated with 680  $\Omega$  resistors and the appropriate EOL resistor on the control panel PCB must be cut (refer to tables 2-4, 2-5 and 2-6).
- There must only be a single **AB** pair of wires in each of the cables.
- The power supply in the Galaxy control panel and remote power supplies **must not** be connected in parallel. The 0 V of all remote power supplies should be connected in common to the 0 V of the Galaxy control panel.
- Ensure that any extension loudspeakers are not wired in the same cable as an **AB** pair of wires.
- Where possible, ensure that the **AB** cable is at least 30 centimetres away from any other cables.
- Where possible, ensure that the **AB** cable does not run parallel to other cables for extended distances (maximum 5 metres).



**Figure 2-8. Connection of Cable Screen using the P-Clip**

## Zones

The default setting for the zones on the Galaxy panels are shown in table 2-7:

Galaxy Panel	Zone 1001	Zone 1002	Remaining zones
8, 18, 60	Final	Exit	Intruder
500	–	–	Intruder
512	Intruder	Intruder	Intruder

**Table 2-7. Default Zone Functions**

## Zone Addresses

Each zone has a four digit address; **1004, 4136**. The address is made up of three reference numbers:

1. The first number is the Galaxy panel line that the RIO is connected to. This is always **1** on the Galaxy 8, 18 and 60. On the Galaxy 500 and 512 this can be numbers **1 – 4**.
2. The next two numbers refer to the address of the RIO that the zone is on:

**Galaxy 8:** 00 (on-board RIOs only)

**Galaxy 18:** 00 & 01 (on-board RIOs) and 02 (external RIO)

**Galaxy 60:** 00 & 01 (on-board RIOs) and 02 – 06 (external RIOs)

**Galaxy 500:** 01 – 15 on line 1, 00 – 15 on lines 2 – 4 (external RIOs)

**Galaxy 512:** 01 – 15 on lines 1 – 4 (external RIOs)

3. The last number is the actual zone on the RIO:

**Galaxy 8** on-board RIO **00** zones **1 – 8**

**Galaxy 18** on-board RIO **00** zones **1 & 2**, RIO **01** zones **1 – 8**

**Galaxy 60** on-board RIO **00** zones **1 – 4**, RIO **01** zones **1 – 8**

**Galaxy 500** no zones on the on-board RIO **00**

**Galaxy 512** no zones on the on-board RIO **00**

**Galaxy RIO/SPSU** zones **1 – 8**

For example, zone **3057** is the detector connected to line **3**, RIO **05**, zone **7**.

## Wiring Zones

The zones on Galaxy panels are end-of-line monitored. The system reads 1 k $\Omega$  when the zone is closed and 2 k $\Omega$  when it is open. The transition from 1 to 2 k $\Omega$  generates an alarm condition. Refer to Table 2-8 for details of the zone resistance and resulting conditions.

**NOTE:** The circuit debounce time (the period the zone must remain open to register a change in condition) is 300 milliseconds.

Zone Resistance ( $\Omega$ )	Condition
0 – 800	Tamper short circuit
800 – 900	Low resistance
900 – 1200	Normal (Closed)
1200 – 1300	High resistance
1300 – 12000	Alarm (Open)
12000 – $\alpha$	Tamper open circuit

Table 2-8. Zone Resistance and Conditions

The standard wiring of a detector into a zone is shown in Figure 2-9.

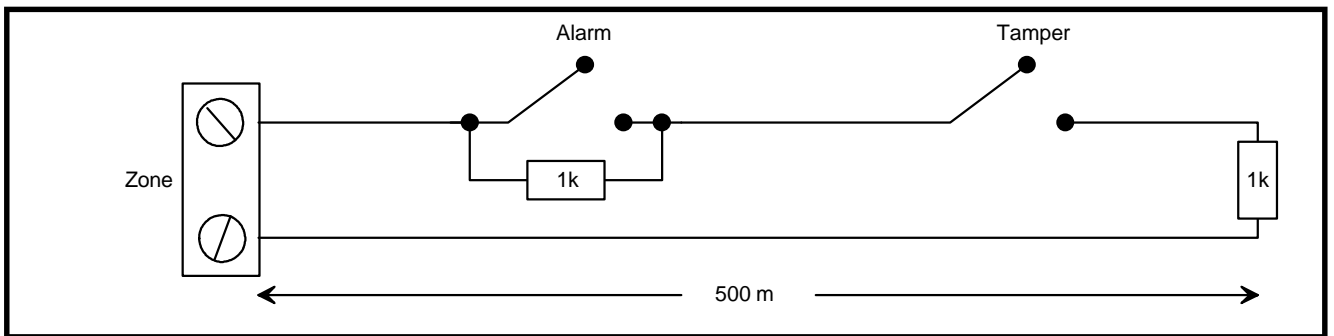


Figure 2-9. Standard Zone/Detector Wiring

**NOTE:** The recommended maximum cable run from a zone to a detector is 500 metres. This recommendation is based on 7 × 0.2 mm multicore cable.

**Wiring Multiple Zones**

Multiple detectors can be wired into a single zone as shown in Figure 2-10. The maximum number of detectors that can be connected to a single zone is ten.

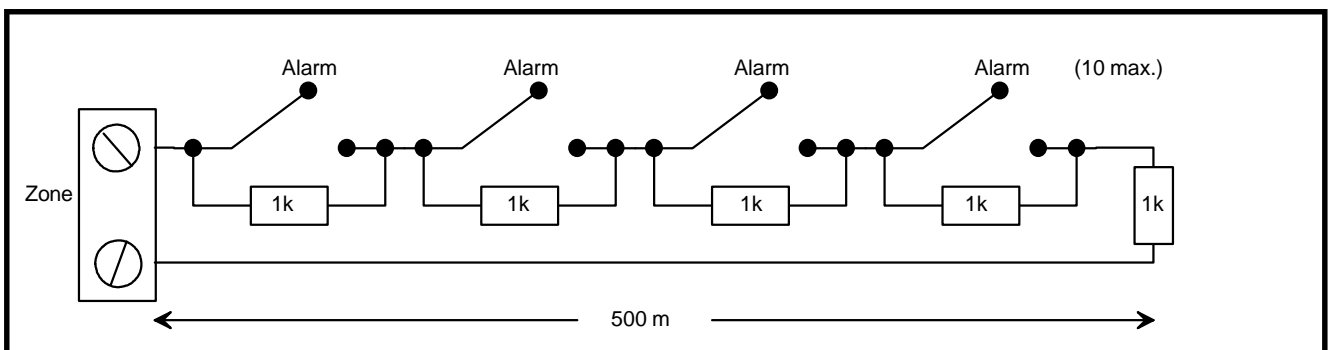


Figure 2-10. Zone to Multiple Detector Wiring

**Wiring Keyswitches**

Latching or spring loaded keyswitches can be used to set and unset the Galaxy panels; option 52 = PROGRAM ZONES has provision to accommodate both types of transition.

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 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 option.

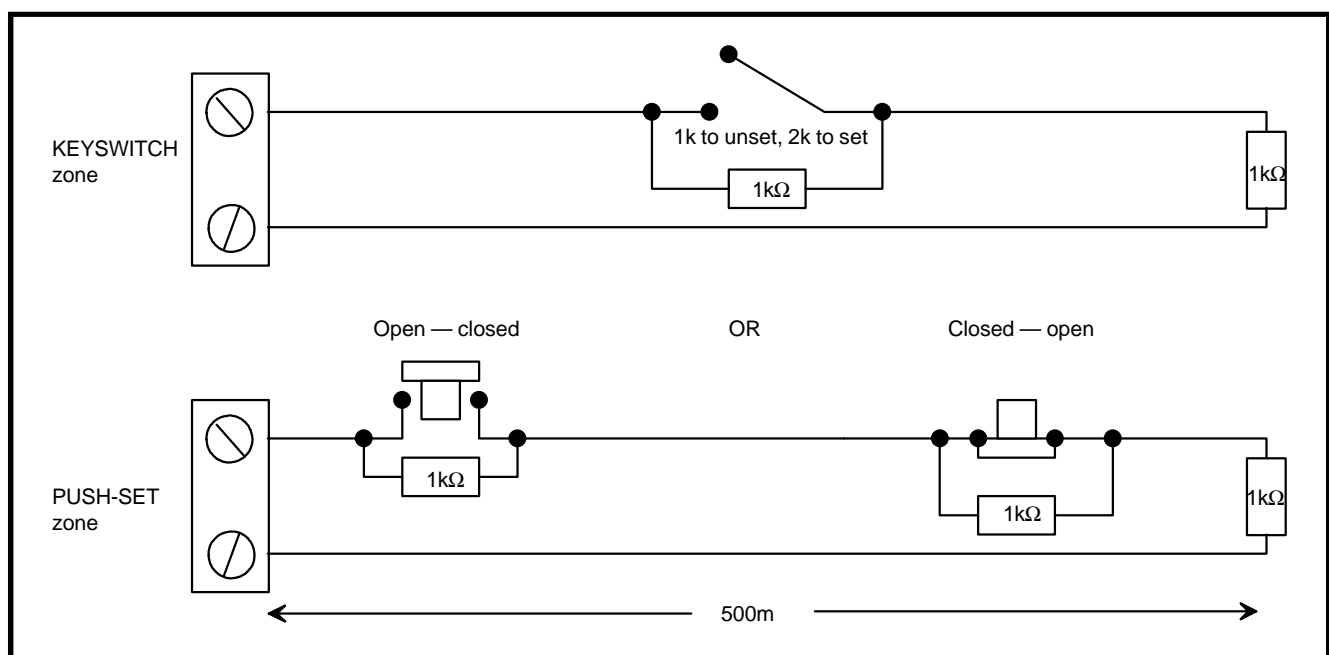
The wiring of the keyswitch is shown in Figure 2-11.

**Wiring Terminator Buttons (Push-to-Set)**

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 is shown in Figure 2-11.



**Figure 2-11. Terminator Zone Wiring**

Outputs

The Galaxy control panel outputs are detailed in Table 2-9.

Output Address		Default Function	Type	Current (mA)	Voltage (V)	Normal State
G8, 18, 60	G500, 512					
1001	–	Set	Transistorised	400	12	Positive
1002	–	Intruder	Transistorised	400	12	Positive
1011	1001	Bells	Transistorised	400	12	Positive
1012	1002	Strobe	Single Pole Change Over Relay	1000	30 (max.)	De-energised
1013	1003	PA	Transistorised	400	12	Positive
1014	1004	Reset	Transistorised	400	12	Positive

Table 2-9. Outputs

Output Applications

The outputs on the Galaxy panels, with the exception of the SPCO relay output, are transistorised outputs; negative applied (positive removed) by default. These supply up to 400 mA and can be used to drive the necessary output devices.

**NOTE:** The polarity of each output can be changed using option 53 = PROGRAM OUTPUTS.

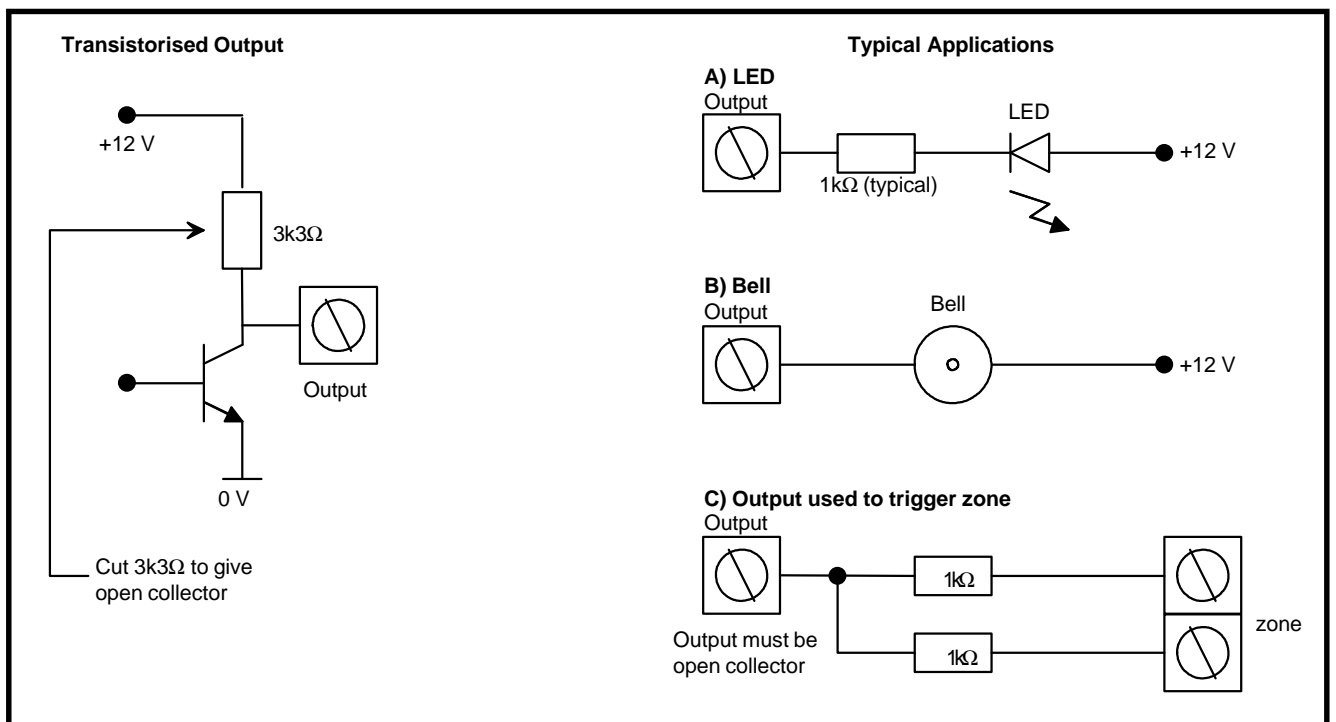
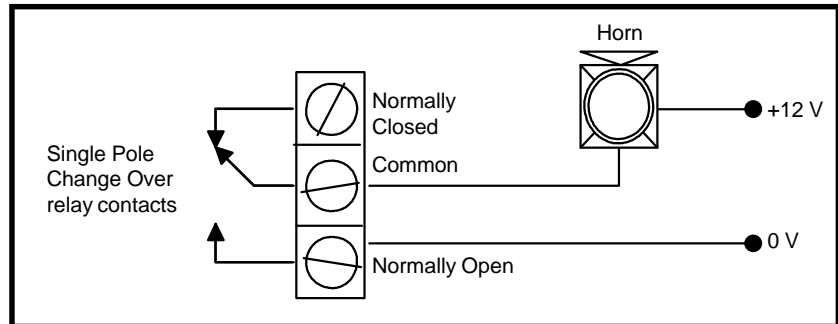


Figure 2-12. Output Configuration and Typical Applications



The relay output is a single pole change over; this can be used to drive output devices that require a clean set of contacts, isolated from the output voltage.



**Figure 2-13. Single Pole Change Over Relay Output Configuration and Typical Application**

### Section 3: Optional Modules and Facilities

#### Remote Input Output (RIO) Modules – C058

Galaxy RIOs can be added to the Galaxy 18, 60, 500 and 512 control panels. Each additional RIO expands the system by eight zones and four outputs.

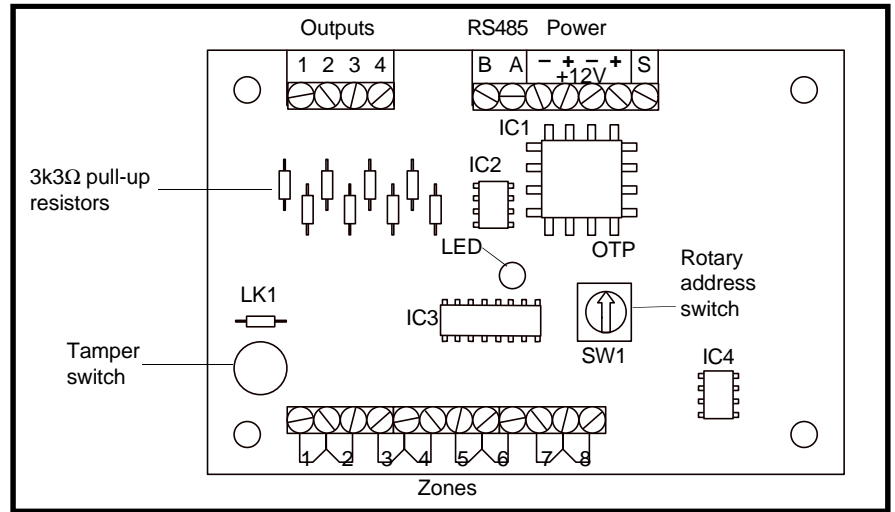


Figure 3-1. Galaxy RIO

#### Addressing

The Galaxy RIO **must** be given a unique address **before** it is connected to a power supply. This address is selected using the 16-way rotary switch (SW1). Refer to Figure 3-1.

Galaxy Panel	No. of RIOs (Max.)	Valid addresses
8	0	–
18	1	2
60	6	2–7
500	63	Line 1 = 1–15 Lines 2, 3, 4 = 0–15
512	64	Lines 1, 2, 3, 4 = 0–15

Table 3-1. Valid RIO Addresses

## Connecting the RIO

The RIO can only be connected to the system while engineer mode is accessed. The RS485 (**AB**) line of the Galaxy RIO **must** be wired in parallel (daisy-chain configuration) with the RS485 (**AB**) line of any keypads connected to the system. The RIO requires 12 Vd.c. (range 10.5 to 16.0 V) and 50 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.

**NOTE:** A 3 Ampere Smart PSU (part no. P015) can be fitted in place of a RIO.

Connect the RIO terminals as follows:

- + 12 V (either control panel, keypad or remote power supply);
- 0 V or ground (either control panel, keypad or remote power supply);
- A** to the **A** terminal of the previous module (or control panel if RIO is the first on the line);
- B** to the **B** terminal of the previous module (or control panel if RIO is the first on the line).

**NOTE:** If the RIO is the last module on the line, connect a 680  $\Omega$  resistor across the **A** and **B** terminals.

## Configuring the RIO

The added RIO is configured into the system on exiting from engineer mode. If the message **XX Mod Added [<],[>] To View** is displayed, the system has recognised that a new module is present. Press the **A** or **B** keys to confirming that the RIO has been added. If this message is not displayed or the RIO is not on the list of added modules, then the RIO is not communicating with the control panel.

The flash rate of the red LED (LED1) on the RIO indicates the status of the communication with the control panel — refer to Table 3-2. RIO LED Flash Rates.

Flash Rate	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

**Table 3-2. RIO LED Flash Rates**

## Zones

The Galaxy RIO has eight programmable zones. These default to **INTRUDER**. Each zone is End Of Line (EOL) monitored with a 1 k $\Omega$  resistor in series with the zone detector and a 1 k $\Omega$  resistor in parallel across the detector switch. The change to 2 k $\Omega$  resistance registers as an alarm condition.

## Outputs

The RIO has four transistorised outputs. Each output is connected to +12 V via a 3k3Ω pull-up resistor (refer to Table 3-2). When an output is activated, the load is switched to the negative supply voltage (ground or 0 V) of the RIO. The current available from each output is 400 mA.

The default functions and pull-up resistors of each RIO output, when connected to a Galaxy are shown in Table 3-3.

Output No.	Function	Pull-up Resistor
1	Bells	R1
2	Strobe	R3
3	PA	R5
4	Reset	R7

**Table 3-3. RIO Output Default Functions**

There are several links on the RIO which, if altered when the module is powered down, modify the RIO operation:

- LK1 — short circuit this to by-pass the RIO lid tamper switch SW2,
- LK2 — cut this to configure the module as an **Entry/Exit RIO**,
- LK4 — cut this to configure the module as a **Slave** or **Shunt RIO** (If LK2 is already cut this modifies the exit time on the **Entry/Exit RIO** from 30 to 90 seconds).

For further information refer to **Galaxy Remote Input Output (RIO) Installer's Guide** (Part Number: L/051).

**Entry/Exit RIO**

A RIO is configured as an **Entry/Exit RIO** if resistor LK2 is cut, this allows a further sub-system to be added to the Galaxy. The **Entry/Exit RIO** can be armed while the main system is unset, allowing protection of specific areas; or disarmed when the main system is set allowing access to particular areas without unsetting a group (shunting of zones). The **Entry/Exit RIO** configuration is shown in table 3-4.

Zone	Default Function	Programmed Function	Output	Default Function (Fixed)
1	Intruder	Any function	1	Ready
2	Intruder	Any function	2	Entry/Exit Horn
3	Intruder	Any function	3	Set
4	Intruder	Any function	4	Alarm
5	Intruder	Any function		
6	Exit	Non-Programmable		
7	Final	Log		
8	Keyswitch	Log		

**Table 3-4. Entry/Exit RIO Configuration**

**Entry Exit RIO Zone Programming** Zones 1 – 5 operate as normal zones. If a zone is programmed as **Security**, any activation — whether the **Entry/Exit RIO** is armed or disarmed and the Galaxy is set or unset — results in the appropriate alarm condition being generated on the control panel.

If zones 1 – 5 are programmed as **Intruder**, then an alarm condition can be generated on the **Entry/Exit RIO** when it is armed and the Galaxy is unset.

Zones 6 and 7 behave as an **Exit** and **Final** zone respectively. The functioning of these zones is fixed and is independent of the programming of the Galaxy. Zone 7 can be programmed as **Log** in order to report and record its activation in the Galaxy event log.

The function of zone 8 is fixed as a **Keyswitch**. This should also be programmed as **Log** in order to report and record its activation in the Galaxy event log.

**Entry Exit RIO Zone Operation**

The **Entry/Exit RIO** is armed by the transition of zone 8 (the keyswitch zone) from 2 k $\Omega$  to 1 k $\Omega$  (reverse to normal operation). This starts an exit/entry time of 30 seconds. Closing the contact on zone 7 (the Final zone) or expiry of the exit time set the RIO. Any activation of zones 1 – 5 when the **Entry/Exit RIO** is armed activates the Alarm output (output 4).

The **Entry/Exit RIO** is disarmed by the transition of the keyswitch zone (zone 8) from 1 k $\Omega$  to 2 k $\Omega$ . The disarming procedure can be started by activating the final zone (zone 7) and gaining access to the keyswitch zone via the exit zone (zone 6). Activating zones 1–5

during the disarming period result in an alarm condition being generated. If the **Entry/Exit RIO** is disarmed while the main Galaxy is set, then activation of any of its zones programmed as **Intruder** does not generate an alarm condition on the RIO or the control panel; the zones are **shunted**.

The exit/entry time can be changed from 30 seconds to 90 seconds by cutting resistor LK4.

## Slave RIO

A RIO is configured as a **Slave** or **Shunt RIO** if resistor LK4 is cut, this allows a further sub-system to be added to the Galaxy.

The programming and operation of the **Slave RIO** is identical to that of the **Entry/Exit RIO** except for zones 6 and 7, which are **Intruder** type zones by default. **Slave RIOs** do not have an **Exit** or **Final** zone, or an exit time; they are instantly unset and reset by the transition from 1 to 2 k $\Omega$  of zone 8.

Zone	Default Function	Programmed Function	Output	Default Function (Fixed)
1	Intruder	Any function	1	Ready
2	Intruder	Any function	2	Fail to Set
3	Intruder	Any function	3	Set
4	Intruder	Any function	4	Alarm
5	Intruder	Any function		
6	Intruder	Any function		
7	Intruder	Any function		
8	Keyswitch	Log		

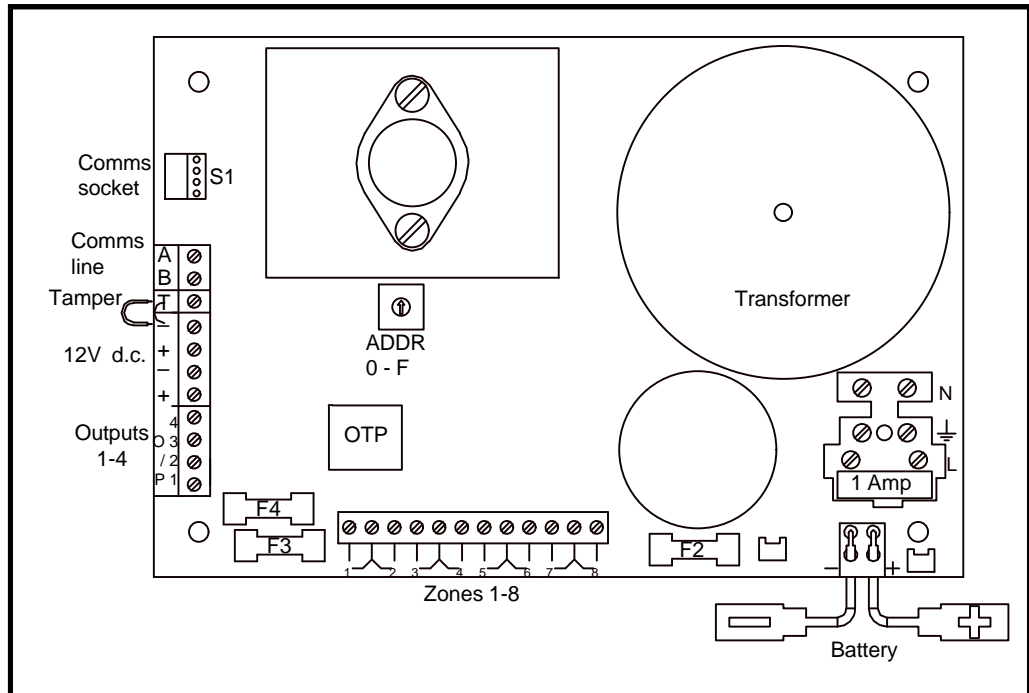
**Table 3-5. Slave RIO Configuration**

**NOTE:** Resistor LK2 must be intact for a RIO to be configured as a **Slave RIO** by cutting resistor LK 4.

### 3 Ampere Smart PSU – P015

The Galaxy Smart PSU can be connected to the Galaxy control panels. The Smart PSU integrates a three ampere power supply with an eight zone Galaxy RIO. This can be used in place of a standard RIO to overcome power problems that arise when the additional RIO is fitted distant to the control panel.

The connection, addressing, zones and outputs information is identical to that described in the previous **Remote Input Output (RIO) Modules** sub-section.



**Figure 3-2. Galaxy 3A Smart PSU**

The integrated RIO has eight programmable zones and four programmable outputs. It is programmed and operates in exactly the same as the standard Galaxy RIO. The Smart PSU has two separately fused regulated 12 Vd.c. outputs, each capable of supplying one ampere to additional modules and devices. A fused regulated voltage is also supplied to charge a 12 volt lead-acid stand-by battery.

For further information refer to **Galaxy Smart Power Supply Unit Installation Instructions** (Part Number: L/101).

The default functions and pull-up resistors of each Smart PSU output, when connected to a Galaxy are shown in Table 3-6.

Output No.	Function	Pull-up Resistor
1	Bells	R43
2	Strobe	R37
3	PA	R33
4	Reset	R23

**Table 3-6. Smart PSU Output Default Functions**

**Printer Interface Module – A134/A161**

The Printer Interface module allows the Galaxy to be connected to a serial printer and the contents of the event log and the programming details of the system to be printed out. The module is available with either a:

- 25 way sub D type RS232 serial connector (part number **A161**)
- OR**
- 6 pin DIN plug (part number **A134**)

The printer **must** have a serial interface port. The printer protocol **must** be set to:

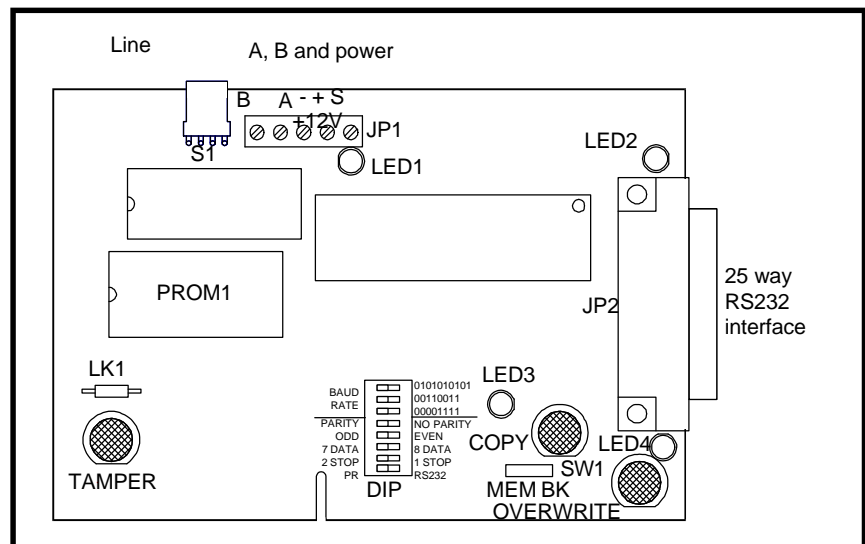
Protocol	Setting
Start Bit	ON
Stop Bit	ON
Word Length	8 Data Bits
Parity	None
Baud Rate	1200

**Table 3-7. Printer Protocol Settings**

**RS232 Interface Module – E054**

The Galaxy RS232 module provides full duplex serial communication between Galaxy control panels and PCs or printers. This module has three main functions:

1. Copy and overwrite the control panel programming
2. Interface with a PC
3. Interface with a serial printer



**Figure 3-3. RS232 Interface Module**



## Copy and Overwrite

The panel program can be copied to the RS232 module, stored and then transferred: back to the same panel or another Galaxy (overwrite); or to a PC with Galaxy Gold software installed. The data can be stored on the module for up to 28 days (indefinitely if the module is constantly powered).

## Interface with a PC

The panel can be directly linked to a PC via the RS232 module allowing remote servicing via Galaxy Gold or system supervision via Alarm Monitoring.

## Serial Printer Interface

The module can also operate as an interface to a serial printer. Refer to Table 3-7 for printer protocol settings.

DIP Switch	Function	Setting
1	Printer/PC interface	ON – Printer
2	Stop Bits	OFF – 1
3	Word Length	OFF – 8
4	Even/Odd Parity	N/A
5	Parity ON/OFF	OFF – No Parity
6	BAUD Rate	Must match printer Baud Rate
7		
8		

**Table 3-8. RS232 Module Printer Interface Protocol**

For further information refer to **The Galaxy RS232 Module Specification** (Part Number: L/085).

## Galaxy Gold

Galaxy Gold is an advanced, high performance software program that allows a PC to communicate and control the Galaxy control panels. The software program can also upload, store and download the control panel programming.

**NOTE:** This software program is only available to registered Galaxy Gold users.

## Alarm Monitoring

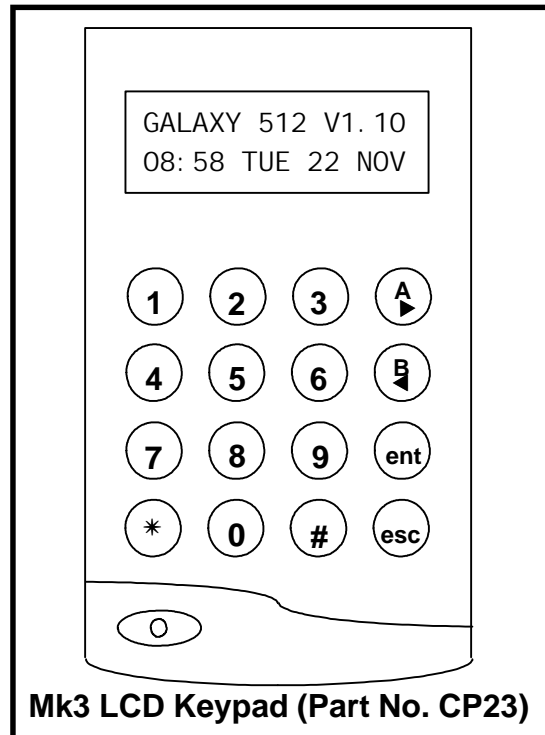
Alarm Monitoring is an advanced, high performance software program that allows a PC to receive and store detailed event and alarm information from Galaxy control panels.

**NOTE:** This software program is only available to registered Alarm Monitoring users.

## Section 4: The Galaxy Keypad

### General

The Galaxy Mk3 LCD keypad has a  $2 \times 16$  character display.



**Figure 4-1. Galaxy Keypads**

### Power Consumption

The Galaxy keypads require a 12 Vd.c. supply — from the control panel or a remote power supply. The current consumption of the keypad is:

	<b>Mk3 (LCD)</b>
<b>Backlight OFF</b>	60 mA
<b>Backlight ON</b>	90 mA
<b>Maximum (Buzzer and LED)</b>	120 mA

**Table 4-1. Keypad Current Consumption Figures**

### Wiring the Keypad

Connections to the keypad terminals are:

<b>Connector Terminals</b>	<b>Galaxy Keypads</b>
<b>A</b>	A line to panel
<b>B</b>	B line to panel
<b>+</b>	12 Vd.c. input (Max. LCD = 120 mA)
<b>-</b>	0 V

**Table 4-2. Keypad Terminal Connections**

## Addressing

The valid addresses of the keypads on each of the Galaxy panels are shown in the following table.

Control Panel Addresses	Valid Keypad
Galaxy 8, 18, 60	0-9, A-F
Galaxy 500, 512 Line 1	0-4, D, E & F
Line 2 3 & 4	0, 6, E

**Table 4-3. Valid Keypad Addresses**

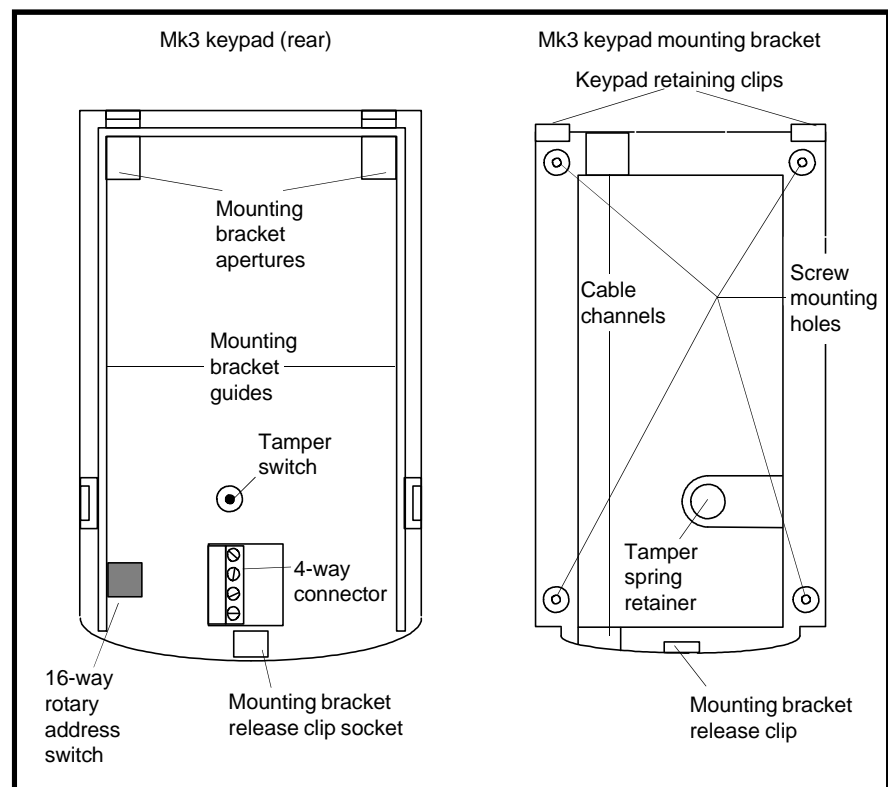
A 16-way rotary address switch is used to address Galaxy LCD keypads. The address switch assigns a hexadecimal address value to the keypad. The factory default address is set to 0.

**NOTE:** Any change to the keypad address must be made when the power is disconnected from the keypad.

## Tamper Switch

The Galaxy keypads provide a tamper switch that operates when the keypad is detached from the keypad mounting bracket.

The keypads are designed to allow the option of an additional wall tamper should the entire keypad (including the mounting bracket) be prised from its mounting. The tamper spring retainer (located on the Galaxy keypad mounting bracket) can be knocked-out to allow the tamper spring contact with the wall.



**Figure 4-2. Keypad Installation and Mounting Details**

## Keypad Installation Procedure

1. Remove the keypad from its packaging.
2. Release the keypad from the mounting bracket by inserting a screwdriver into the small hole in the bottom of the keypad and gently pushing the mounting bracket release clip.
3. If the wall tamper is required, remove the knock-out tamper spring retainer section on the mounting bracket.
4. Using the mounting bracket as a template, locate the fixings in the required position.  
**NOTE:** The LCD display is usually positioned at user eye level.
5. Run the cable for the keypad (A, B, +12 V and 0 V) behind the mounting bracket, in the channels provided. The cable can be run in from either the top or the bottom of the bracket. In some cases it may be necessary to remove the outer sleeve of the cable to ensure that mounting bracket fits flush against the wall.
6. Secure the mounting bracket to the wall using four 20 x 4 mm counter-sunk screws.
7. Address the keypad (refer to the paragraph headed **Addressing** for valid addresses).  
**NOTE:** Ensure that the power supply is disconnected.
8. Connect the A, B and power wires to the correct terminals on the four way connector block.
9. Attach the tamper spring to the tamper switch on the rear of the keypad.  
**NOTE:** The tamper spring may require to be stretched to ensure that it contacts the wall.
10. Attach the keypad to the mounting bracket:
  1. place the two apertures on the rear of the keypad over the keypad retaining clips on the mounting bracket.
  2. ensure that the tamper spring passes into the tamper spring retainer on the mounting bracket.
  3. push the keypad fully home on the mounting bracket ensuring that the mounting bracket release clip has fully engaged the keypad.
11. The keypad is now ready to be configured into the system.

## Adding a Keypad to the System

When adding a keypad to an existing system, the following points **must** be considered:

1. Ensure that the keypad to be added has a unique address from the other keypads on the system.
2. Ensure that the keypad a valid address.
3. Connect the keypad to the system — refer to the Keypad Installation Procedure.

A new keypad can only be configured into an existing Galaxy system from engineer mode.

1. Access engineer mode.
2. Connect the RS485 (**AB**) line of the keypad in parallel with the RS485 (**AB**) line of the existing keypads.
3. Connect + and – terminals of the keypad to a power supply.
4. Exit engineer mode — engineer code + **esc**:  
the Mk3 keypad displays the message **1 MOD. ADDED — esc=CONTINUE**. Press the **esc** key; the keypad returns to the unset banner. If this message is not displayed, the keypad is not communicating with the control panel and has not been configured into the system.
5. The keypad is now configured into the system

## Removing a Keypad From the System

A keypad can only be removed from an existing Galaxy system from engineer mode.

1. Access engineer mode.
2. Disconnect the keypad.
3. Exit engineer mode. The message **1 MOD. MISSING — [<],[>] to View** is displayed
4. Press the **A** or **B** key. The message **KEYPAD X — \* =REMOVE MODULE** is displayed.
5. Press the **\*** key to acknowledge and accept that the keypad has been removed. The keypad returns to the unset banner.

## Self Diagnostics

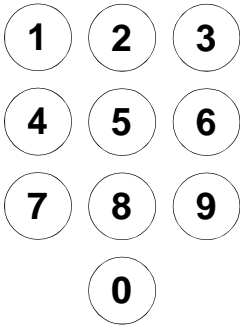
The keypad has a self diagnostic feature that is used to test the operational status of the inputs and outputs of the keypad.

The test is started by disconnecting the power from the keypad, then reapplying the power while pressing the **ent** key. The test routine commences immediately. Each test last approximately four seconds. The test is terminated by removing the power.

- Keypad address is displayed
- Keypad buzzer is activated and a bell symbol is displayed.
- Power LED is illuminated and an a.c. ( $\wedge$ ) and LED ( $\otimes$ ) symbol is displayed.
- Keypad and keys are displayed. Each key press is confirmed by the buzzer sounding and the key display being highlighted.

## Keypad Operation

### Number Keys



The number keys are used to enter the Personal Identification Number (PIN) which identifies users to the Galaxy and permits access to the system options. The PIN is a four digit number.

	Default Code
Engineer	112233
Remote User	543210
Master Manager	1234

**Table 4-4. Default Codes**

The number keys are also used, once access to the system has been gained, to select and modify options.

### VIEW KEYS



These keys are used to initiate the setting of the Galaxy.

Pressing the **A** or **B** key immediately after a valid PIN has been entered starts one of the routines for setting the system. The **A** key initiates the full setting of the Galaxy. The **B** key starts the part setting routine.

Once the system has been successfully accessed the **A** key can be used to step forward through the Galaxy menu options and the **B** key to step backwards.

### ENTER KEY



The **ent** key is used to:

- access the menu options;
- confirm the programming selections.

### ESCAPE KEY



The **esc** key cancels any modification made to the current option and returns to the previous option level. Successive pressing of this key returns the user to the entbanner display.

The **esc** key also aborts the setting routine if pressed during the exit time.

### HASH KEY



The **#** key is used:

- as a toggle key, which enables or disables the programming features of the Galaxy options, for example, enabling the OMIT attribute of a zone,
- to give additional information on the programming options, for example pressing the **#** key while in option **22 = DISPLAY LOG** shows details of the user number, descriptor and keypad used to cancel alarms or unset the system.
- to activate the **Duress** outputs; enter a valid user code followed by two presses of the **#** key, then the **ent** key to activate the duress alarm.

**STAR KEY**

The \* key is used:

- to correct or erase PINs in the **CODES** option and alphanumeric descriptors in the **TEXT** option,
- to start printing from the current event when viewing option **22 = DISPLAY LOG**.
- to display the set status of the groups. When **Show Status** (refer to option **58.6 = KEYPADS.Show Status**) is enabled, pressing the \* and # keys simultaneously when the normal banner is displayed indicates the group set status.

**U** = Unset

**S** = Set

**P** = Part Set

**L** = Locked Out

– = Group not assigned to keypad

**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.

Pressing the \* and # keys again toggles the display to show the status of the groups individually. To move between each groups, press the \* and **A** or the \* and **B** keys simultaneously.

Pressing the \* and # keys again returns the keypad to the banner display.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D. Press \* and **A** or \* and **B** keys to display each of the group blocks.

**POWER LED**

The green 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	a.c. OK	Battery OK	Fuses OK
Slow Flash	a.c. Fail	Battery OK	Fuses OK
Quick Flash	a.c. Fail	Battery Low	Fuse blown

**Table 4-5. a.c./Battery Status Indication**

**NOTE:** It is advised that a suitably rated stand-by battery is fitted to the system in order to provide continued protection in the event of a mains failure. The battery is not included.

### BANNER

```
GALAXY 512 V1.10  
08:58 TUE 22 NOV
```

```
ENGINEER MODE  
08:58 TUE 22 NOV
```

The banner is the information shown on the keypad display when the system is in the unset state.

There are two banners:

- the unset mode banner displays the Galaxy variant and software version, the time, day and date.
- the Engineer banner indicates that the system is in engineer mode as well as the Galaxy variant and software version.



## Section 5: MAX (Access Control)

### Installation Instructions

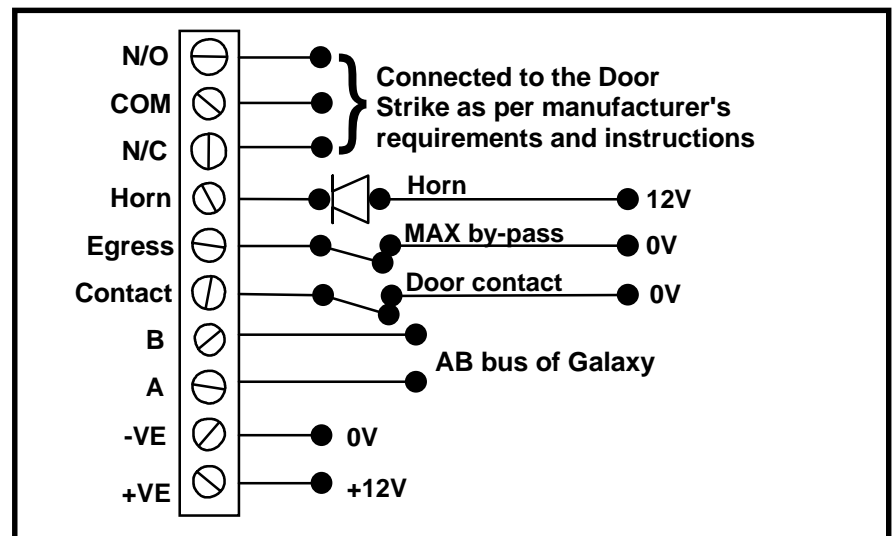
The MAX box contains the following:

- MAX reader (P/N **MX01**),
- MAX facia label (P/N 21\_1627),
- 10-way connector block.

The MAX installation sequence is as follows:

1. Wiring the MAX
2. Mounting the MAX
3. Attaching the facia label

### Wiring the MAX



**Figure 5-1. MAX Wiring Details**

1. Connect the A and B lines of the Galaxy communication bus to the **A** and **B** terminals. This configuration must be a daisy-chain (parallel) connection. If the MAX is the last module in the line, then the End of Line (EOL) resistor must be connected across the A and B terminals.
2. Connect the door strike in accordance with the manufacturer's recommendations, via the relay.
3. The **Horn** output is an open collector. This is connected to the output device via a relay.

**NOTE:** With MAX software version 1.23 the horn output does not function when the reader is programmed as on-line operating mode.

4. The **Egress** switch is used to activate the door strike, allowing the door to be opened without activating the horn (the egress switch is normally open).
5. The **Contact** switch is used to connect the access door to an alarm contact, giving alarm indication when the door is opened without the door strike being activated (either by a MAX card or the egress switch).
6. Connect a 12 Vd.c. power supply to the MAX terminals marked **-VE** and **+VE**.

**Mounting the MAX**

Attach the wired-up 10-way connector block to the pins on the rear of the MAX reader.

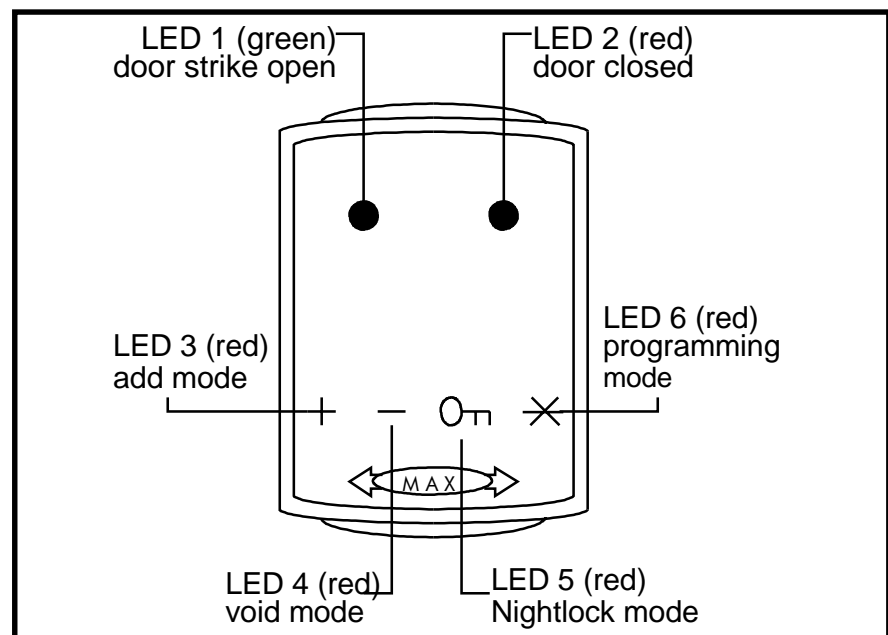
**Surface mounting the MAX:**

1. If the wiring is not wall recessed, remove the appropriate knock-out (from the sides, top or bottom of the MAX).
2. Using the MAX reader as a template locate the two mounting screws in the required positions.  
**NOTE:** The MAX is positioned with the two LEDs at the top of the module.
3. Securely attach the module to the wall with two No.8 roundhead 2 inch screws.

**Flush mounting the MAX:**

1. Using the template on the lid of the MAX flush mounting kit box (P/N **MX02**), locate the position of the screws and mark and cut-out the recess area required.  
**NOTE:** Ensure that there is sufficient wall surface to securely fix the screws.
2. Fit the MAX reader into the flush mounting kit; push the reader in from the rear ensuring that the four retaining arms on the flush mounting kit click into place
3. Securely attach the module to the wall with two No.8 roundhead 1½ inch screws.  
**NOTE:** The MAX is positioned with the two LEDs at the top of the module.

Remove the backing from the facia label, line up the label images with the six LEDs and place it on the face of the MAX.



**Figure 5-2. MAX LEDs**

## Configuring a MAX Reader into the System

MAX readers can only be configured into the Galaxy system from engineer mode.

**NOTE:** When adding a MAX reader to a Galaxy panel ensure that there are no more than eight MAX readers connected to the RS485 (AB) line.

Wire the MAX as per the instructions given with figure 5-1 then access engineer mode.

The MAX reader must be assigned as either an **On-Line** or a **Stand-Alone** module using option **63.2.2 = OPTIONS.MAX.MAX Address:**

**0 = On-Line:** The MAX is fully integrated with the Galaxy system and communicates via the AB line, sharing system resources and facilities.

**1 = Standalone:** The MAX operates as an entirely independent unit. The Galaxy does not monitor the MAX for alarms, tampers or power failure.

**NOTE:** Early versions of MAX readers cannot convert between the stand-alone and on-line operating modes:

- **MX01S (software V1.23)** is a dedicated stand-alone reader. This cannot be converted to on-line mode and must not be connected to the Galaxy AB line. The horn output is fully functional.
- **MX01 (software V1.23)** is programmed as an on-line reader. The horn output is non-functioning. The reader can be reprogrammed, via the Galaxy system, into stand-alone mode, however, once programmed as stand-alone it cannot be converted to on-line mode. In stand-alone mode the horn output is fully functional.
- **MX01 (software V1.32)** can be reprogrammed as stand-alone or on-line as often as required. In on-line mode, the horn output is non-functioning; in stand-alone mode the horn output is fully functional.

## Configuring as Stand-Alone MAX

1. Ensure that the MAX is connected to the Galaxy (**RS485 AB line**) and the MAX mode is enabled (option **63.2.1 = OPTIONS.MAX.MAX Mode**).
2. Select option **63.2.2 = OPTIONS.MAX.MAX Address** and press the **ent** key; the Galaxy searches for the MAX with the highest address (the new MAX reader). The Galaxy 500 and 512 prompt for the AB line (1 – 4) that is to be searched; select the line and press the **ent** key. On locating the MAX address, the keypad prompts for the **OPERATING MODE** of MAX to be assigned: select **1 = Standalone** and press the **ent** key. The MAX reader is readdressed as **32**.

When the reprogramming is complete the MAX bleeps, LED 2 on the MAX switches on and the keypad display returns to **2 = MAX Address**.

3. (**MAX software versions 1.23 and 1.32**) Disconnect the **AB line** from the MAX reader. Ensure that all other modules (keypads, RIOs and on-line MAX readers) are still daisy-chained into the Galaxy panel. If the MAX reader is the last module on the **AB line**, remove the 680 $\Omega$  end of line resistor and put it into the last module on the line.  
**NOTE:** The Galaxy cannot operate if the **AB line** is connected to stand-alone MAX readers with software V1.23 or V1.32.
4. The MAX reader is now programmed as a stand-alone module in sleep mode (LEDs 2 – 5 on) and can be programmed using the MAX cards (refer to Programming Stand-Alone MAX Readers).

## Configuring as On-Line MAX

1. **Only if reprogramming an existing stand-alone MAX reader:**
  - Put the MAX reader into the sleep mode (present the **Void Master** card then swipe twice with the **Program Master** card — LEDs 2 – 5 switch on. Refer to the **MAX Installation and Operations Guide (L120)**).
  - Remove the power from the MAX reader.
2. Connect the **AB line** of the MAX reader to the **AB line** from the control panel (ensuring that a daisy-chain connection is maintained and that the 680 $\Omega$  resistor is located in the last module on the line). Connect 12 Vd.c. to the +**VE** and –**VE** terminal of the MAX reader.
3. Ensure that the MAX mode is enabled (option **63.2.1 = OPTIONS.MAX.MAX Mode**).
4. Select option **63.2.2 = OPTIONS.MAX.MAX Address** and press the **ent** key; the Galaxy searches for the MAX with the highest address (the new MAX reader). The Galaxy 500 and 512 prompt for the AB line (1 – 4) that is to be searched; select the line and press the **ent** key.

**Only if adding a new MAX reader:** On locating the MAX address, the keypad prompts for the **OPERATING MODE** of MAX to be assigned: select **0 = On-Line** and press the **ent** key.

**NOTE:** If reprogramming an existing stand-alone reader, the system automatically selects the **On-Line** operating mode

The MAX can then be readdressed. The keypad displays the current address of the MAX and the range of valid addresses. Enter the new MAX address and press the **ent** key; the Galaxy then reprograms the address of the MAX. The keypad indicates the old and new MAX addresses and the status of the reprogramming.

**NOTE:** All new MAX readers default to address **7**. It is recommended that when adding a reader, it is addressed as the lowest available number on the line.

When the reprogramming is complete the MAX bleeps, the LEDs on the MAX switch off and the keypad display returns to **2 = MAX Address**.

**NOTE:** If the Galaxy has been warm-started with the MAX connected and the reader is re-programmed with its existing address, then the LED does not switch off and engineering mode does not have to be exited to configure the MAX into the system.

5. Program the MAX Parameters. This option defines the operational features of the MAX reader.
  - 1 = Descriptor:** This option is used to assign a name of up to 12 characters to each of the MAX modules.
  - 2 = Open Timeout:** This is the period, following the user card swipe, that the MAX relay is activated allowing a door strike to be unlocked and the door to be opened without creating an alarm. The MAX relay de-activates as soon as the door is closed or the **Close Timeout** occurs.
  - 3 = Close Timeout:** This is the period following the user card swipe that the door can remain open when gaining access. If the door remains open longer than the period assigned to the **Close Timeout**, then an alarm occurs.
  - 4 = Groups:** Each MAX module can be assigned to selected groups; the MAX then responds only to cards that have a group common to it.

**Keypad Group Restriction:** To restrict the operation of the function only to groups that are common to both the card and the MAX, press the \* key when assigning groups to the MAX. This means that when a card with access to groups 1, 2 and 3 activates the MAX card function on a MAX module assigned to groups 2, 3 and 4, the function only operates on the common groups (groups 2 and 3).
6. Exit engineer mode — engineer code + **esc**: the keypad displays the message **1 MOD. ADDED** — **esc=CONTINUE**. LED 2 on the MAX reader switches on. Press the **esc** key; the keypad returns to the unset banner.

If this message is not displayed, the MAX reader is not communicating with the control panel and has not been configured into the system (LED 2 does not switch on).

**NOTES:**

1. The MAX reader **will not** operate until engineer mode is exited and the reader is configured into the system.
  2. All MAX doors **must** be closed, otherwise engineer mode cannot be exited.
7. The on-line MAX reader is now configured into the system

## Removing a MAX Reader From the System

### Stand-Alone Mode

(Software V1.23 & V1.32)

The stand-alone MAX reader is not connected to the **AB line**, therefore it can be removed simply by disconnecting the power to the reader. There is no requirement to access engineer mode.

### On-Line Mode

1. Access engineer mode.
2. Disconnect the MAX reader (**AB line** and power).
3. Exit engineer mode.  
The message **1 MOD. MISSING — [<],[>] to View** is displayed.
4. Press the **A** or **B** key.  
The message **MAX X — \*=REMOVE MODULE** is displayed.
5. Press the **\*** key to acknowledge and accept that the MAX reader has been removed. The keypad returns to the unset banner.

## Programming Instructions for On-Line Readers

Refer to **Section 6: System Operation**, menu option **63 = OPTIONS** for details on programming the **Open Timeout**, **Close Timeout** and **Group** parameters for the MAX reader.

**NOTE:** These programming instructions refer only to on-line MAX readers (modules that are connected to a host Galaxy panel via the RS485 data bus). For details on stand-alone MAX installation refer to the **MAX Installation and Operations Guide (L120)**.

For details on the programming of the MAX user cards and functions refer to **Section 6: System Operation**, menu option **42 = CODES**.

## Operating Instructions (Stand-Alone and On-Line Modes)

The MAX must be presented with a valid user card to allow access. Opening the door while LED 2 is on activates an alarm; the buzzer sounds and LED 1 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.

### Gaining Access

1. Ensure that LED 2 is on and all other LEDs are off.
2. Swipe the MAX with a standard user or nightlock access user card. LED 2 switches off and LED 1 switches on for the programmed **Open Timeout**.
3. Open the door while the LED 1 is on and access the area.
4. Close the door; LED 1 switches off and LED 2 switches on. The door must be closed within the programmed **Close Timeout**; if the door remains open longer than this, an alarm is activated.

### Nightlock Access (Stand-Alone Only)

Only cards programmed as nightlock access users can gain access when the MAX is nightlocked. The operation is identical to the standard user card.

**NOTE:** Access cannot be gained using a standard user card.

### Card-Held Function (On-Line Only)

The MAX card can be assigned a single menu option (refer to option **42.2.8 = CODES.User Codes.MAX Function**). To activate the function assigned to the MAX 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 to the user displays the card-held function.

### Card-Held System Setting

If the MAX card is assigned one of the setting options (option 12, 13, 14 & 16 – 19), the card-held functions starts the setting procedure for the groups assigned to the card.

**NOTE:** If **Group Restriction** is assigned, then only the groups that are common to both the MAX reader and the MAX user are set.

If all of the groups that are assigned to the MAX are set (either by the card-held function or by any other setting means) all of the LEDs switch off.

To unset the system using the MAX, swipe the reader with a valid MAX card. The MAX reader beeps and LED 2 switches on. All of the groups assigned to the MAX are instantly unset.

## MAX Log

The Galaxy system has a 100 event log for the recording the MAX activations. This log is shared by all readers on the system and operates on a first-in-first-out basis for overwriting events when the log is filled.

To display the events in the MAX log select option **25 = ACCESS DOORS**; use the **A** or **B** keys to select the required MAX address then press the **ent** key. The first event that occurred on the selected MAX is displayed along with details of the time, date and MAX number.

To view the log press the **A** key to move forward in time through the events or the **B** key to move backwards. Press the **esc** key to return to the MAX address display. To view the log of another MAX, use the **A** or **B** key to select the required address. To escape from the **Access Doors** option press the **esc** key.

Time and date  
of event

```
02:25 SUN 22 OCT
USR032 Valid
```

MAX user number

Event type

## MAX Events Print-Out

The MAX events can be printed out as they occur to an on-line printer. To print the MAX events ensure that option **51.27 = PARAMETERS.On-Line Print** is enabled. Select option **51.28 = PARAMETERS.On-Line Level** and enter **2** to print out all system events including the MAX events or **3** to print out only the MAX events.

**NOTE:** A serial printer must be connected to line one of the Galaxy panel and the printer must remain on-line (ready to print) at all times.



## Section 6: System Operation

### Menu Options

#### General

The Galaxy provides various menu options for modifying the functional performance of the system.

There are two menu structures:

1. **Full Menu** — only accessed by default by the Manager code on the Galaxy 60, 500 and 512 control panels and by the engineer.
2. **Quick Menu** — a selection of options from the full menu. The quick menu is the default menu access for all user codes (level three and above) as well as the Manager code on the Galaxy 8 and 18 control panels.

#### The Full Menu

The full menu has a hierarchy of four structures contained within it. Each structure is accessible by an increased level of user code.

#### The Quick Menu

The quick menu offers level three and above users a selection of up to 10 options, numbered 0 – 9. The options available from the quick menu can be modified to the user's requirement via option **59 = QUICK MENU**.

Quick Menu	Full Menu					
	Level 3	Level 4	Level 5	Level 6	Engineer	Engineer
0 = Omit Zones	10 = Setting	20 = Display	30 = Test	40 = Modify	50 = Engineer 1	60 = Engineer 2
1 = Forced Set	11 = Omit Zones	21 = Display Zones	31 = Walk Test	41 = Time/Date	51 = Parameters	61 = Diagnostics
2 = Chime	12 = Timed Set	22 = Display Log	32 = Outputs	42 = Codes	52 = Program Zones	62 = Full Test
3 = Display Zones	13 = Part Set	23 = System		43 = Summer	53 = Program Outputs	63 = Options
4 = Display Log	14 = Forced Set	24 = Print		44 = Trace	54 = Links	64 = Assemble Zone
5 = Print	15 = Chime	25 = Access Doors		45 = Timer Control	55 = Soak	65 = Timers
6 = Walk Test	16 = Instant Set			46 = Group Omit	56 = Communication	66 = Pre-Check
7 = Time/Date	17 = Instant Part			47 = Remote Access	57 = System Print	67 = Remote Reset
8 = Codes	18 = Home Set			48 = Eng. Access	58 = Keypad	68 = Menu Access
9 = Summer	19 = All Set			49 = Timelock	59 = Quick Menu	

**Table 6-1. Quick and Full Menu Options Reference Table**

## Menu Access

Only valid codes (level 3 and above) can access the Galaxy menu options. Access to the user options is assigned by the engineer (refer to options **42 = CODES** and **68 = MENU ACCESS**). Users cannot view or access options for which they are not authorised; This includes options in the Quick Menu.

**NOTE:** Menu options **51 – 67 (ENGINEER 1 and ENGINEER 2)** can be assigned additional access to user level 3 – 6, by the engineer.

There are two methods of selecting menu options:

1. Direct Access:  
**Code + ent + option number + ent.**
2. Menu Driven Access:  
**Code + ent + A (to select menu level) + ent;**  
**A key (to select menu option) + ent.**

## Direct Access

Entering a valid menu option number while in the menu immediately moves to that option. For example, pressing **52** when the keypad is displaying **22 = DISPLAY LOG** moves directly to option **52 = PROGRAM ZONE**; Pressing **6** while accessing the **PROGRAM ZONES** option moves directly to **6 = Group**. The option number entered must be valid for the level of the menu structure that is currently being accessed

## Menu Driven Access

Menu driven access allows the engineer (and users) to enter the menu and, by using the **A** and **B** keys, navigate through the available options. The options are accessed by pressing the **ent** key.

## Keypad Menu Timeout

Once the user menu has been accessed (irrespective of user level), if there are no keypresses for two minutes, then the keypad timeout occurs; the system returns to the banner text.

**NOTE:** This feature does not apply when the system is in the **Walk Test** option. If no zones are tested or no keypresses occur for 20 minutes when **Walk Test** is selected, then the keypad timeout occurs.

## Engineer Mode

To program the Galaxy, the system must be in engineering mode. This allows access to the engineer menu options **50 = ENGINEER 1** and **60 = ENGINEER 2**.

## Accessing Engineer Mode (Galaxy 8, 18, 60 & 500)

To access engineer mode, enter the engineer code twice.

**Engineer Code + ent + Engineer Code + ent**

The default engineer code is **112233**.

The first entry of the code activates a tamper alarm. The second entry of the code cancels this alarm and puts the system into engineer mode; **ENGINEER MODE** is displayed on the keypad. This is the engineer banner and indicates that engineer mode is currently accessed. While engineer mode is accessed, all tampers are disabled, however, all constantly alert zone types — **PA zone types, 24 Hour, Security, Fire** — remain active.

On accessing engineering mode, any group that is set becomes inaccessible to the engineer. The set groups cannot be assigned to zones, outputs and any other functions permitting group allocation.

**NOTE:** The Galaxy 60 and 500 can be assigned manager authorised engineer access by adding a # to the engineer code.

Engineer access is then gained as described in the following paragraphs.

## Accessing Engineer Mode (Galaxy 512 – default, Galaxy 60 and 500 – optional)

### User Authorised Access

The default engineer code (**112233**) on the Galaxy 512 is allocated a #. With the # assigned, the engineer code operation is as follows:

1. Enable Engineer Access:

**User Code + ent + 48 + ent + 1 + ent + esc + esc**

2. Access Engineer Mode

**Engineer Code + ent**

Entry to the engineer mode is authorised by a user with access to menu option **48 = ENGINEER ACCESS**. The user selects this option and presses key **1** to enable engineer access. The engineer code must then be entered within five minutes of the option being enabled. A single entry of the engineer code directly accesses the mode, without activating an engineer tamper alarm. If the code is not entered within the five minute period, the engineer code is invalid and has no effect. Once the engineer mode has been accessed, there is no time limit on the period that the engineer can remain in the mode.

On accessing engineering mode, any group that is set becomes inaccessible to the engineer. The set groups cannot be assigned to zones, outputs and any other functions permitting group allocation. The system cannot be set by any user codes while engineer mode is accessed.

**Disabling User Authorisation of Engineer Access**

The remote code (**User 30 on G60, User 100 on G500 and User 200 on G512**) can remove the # from the engineer code. If the # is removed access to engineer mode is gained in the same manner as the Galaxy 8, 18, 60 and 500; the engineer code must be entered twice to gain menu access.

**NOTE:** The engineer code or remote code can assign the # to the engineer PIN. Only the remote code can remove it.

**Exiting from Engineering Mode**

To exit from engineer mode and return to the normal banner enter, carry out the following operation:

1. return to the engineer banner,
2. enter the engineer code,
3. press the **esc** key.

The Galaxy carried out the following checks:

1. that there are no module or zone tampers. If there are any module or zone tampers the escape procedure is aborted.
2. that it is communication with all of the attached modules. If any modules are reported as missing from the system, the Galaxy prompts the engineer to remove each of the missing modules by pressing the \* key. If the engineer does not remove the missing modules, the escape procedure is aborted.
3. that all of the access doors (controlled by the on-line MAX) are closed. If any of the access doors are open, then the exit procedure is halted until all of the doors are closed.

**Aborting the Exit Engineer Mode Procedure.**

If the **esc** key is pressed at any point while engineer mode is being exited, before the normal banner is displayed, the exit procedure is aborted and the system returns to the engineer banner.

**Multi-User Access**

The Galaxy 60, 500 and 512 allow multi-user access. A maximum of 4, 8 and 16 users respectively can simultaneously carry out tasks on the system.

The Galaxy 8 and 18 only permit single-user access.

## 6.1 Setting Options

### Setting the System

#### Full Setting

Enter: **CODE + A**

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

```
SET      A12345678
Groups  UU-U----
```

Pressing the keys for the groups toggles the **U** to an **S**.

```
SET      A12345678
Groups  SS-U----
```

Once the required groups have been selected press the **ent** key to begin the setting procedure.

If groups are not enabled or the user does not have group choice, entering the user code followed by the **A** key immediately starts the setting procedure.

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

The keypad displays the exit time countdown. 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** outputs and keypad buzzers become silent for four seconds, then emit two long tones to confirm that the system is set. The message **SYSTEM IS SET** appears briefly before the keypad display clears.

#### Part Setting

Enter: **CODE + B**

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

This is identical to the **Full Setting** procedure, except the keypad display indicates that the system is being **Part Set**. Only the zone which have the **Part** attribute enabled (refer to option **52.5 = PROGRAM ZONE.Part**).

#### Cancelling the Setting

The full and part setting routines can be aborted by pressing the **esc** key (on the keypad used to begin setting) before the system sets.

## Unsetting the System

During the unsetting procedure, initiated by the opening of **FINAL** or **ENTRY** zone on a set group, the system is unset by entering the user code followed by the **A** key.

- If user does not have group choice, all of the groups assigned to the code are instantly unset.
- If the user has 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 **U** — and then press the **ent** key.

## Engineer Unsetting (G8, 18, 60 & 500 only)

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

**NOTE:** The Galaxy 512 cannot be set while the system is in engineer mode.

## Keyswitch Setting Options

Zones programmed as **KEYSWITCH** can be used to full set, part set and unset the system. Refer to option **52 = PROGRAM ZONE**.

### Setting the System with a Keyswitch

The **KEYSWITCH** starts the setting procedure of each of the groups assigned to 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** outputs 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 option **52 = PROGRAM ZONE**) then the **KEYSWITCH** part sets the system.

### Unsetting the System with a Keyswitch

Activating the **KEYSWITCH** when the group that it is assigned to is set instantly unsets the group. All other groups which have been “starred” to the **KEYSWITCH** are not affected and remain set.

## MAX (Access Controller) Setting Options

### Setting with the MAX Cards

The MAX user cards can be used to set and unset the system. This is done by assigning a MAX user card (or fob) with one of the setting options (refer to option **42.1.8 = CODES.User Codes.MAX Function**). When the MAX card is held against a MAX module for three seconds, the MAX function is activated. For example, if the MAX function assigned is **13 = Part Set**, then activating the card held function results in the system being part set.

**NOTE:** If all the groups that are assigned to a MAX module are set (either by the MAX card or any other setting procedure) then all the MAX LEDs switch off. The LEDs remain off until at least one of the groups is unset.

### Unsetting with the MAX Cards

If any of the groups assigned to the MAX are set, then swiping the MAX module with card unsets the groups.

**NOTE:** The MAX module must have common groups to the MAX card to allow the card held function to be activated.

## Cancelling and Resetting Alarms

Following each alarm activation, the alarm must be cancelled and the Galaxy reset. The alarm is cancelled by entry of any valid user code (level 2 and above) that is assigned to the group that has alarmed. The alarm sounders are silenced and the keypad displays information on the zones that have been activated during the alarm.

If the user code entered is not of a sufficient level to reset the Galaxy, the keypad displays the message **CALL MANAGER RESET REQUIRED** or **CALL ENGINEER RESET REQUIRED** depending on the type of alarm and level of reset required.

The Galaxy is reset by entering a valid user code assigned to the group that has alarmed, with the appropriate reset level for the type of alarm that has activated — **System**, **Tamper** or **PA** (refer to option **51.6 = PARAMETERS.System Reset**, **51.7 = PARAMETERS.Tamper Reset** and **51.22 = PARAMETERS.PA Reset**). The keypad displays information on the zones that have been activated during the alarm.

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

### Galaxy 8, 18, 60 & 500

On the next setting of the Galaxy, if any of the zones that were opened during the previous alarm have not closed since the alarm activation, then the system is prevented from setting. The addresses of the open zones are displayed on the keypad; there is no sounder activation. 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**.



## Setting Features

The Galaxy control panels provide a range of features to assist the user in the setting and unsetting of the system, minimising the possibility of error when carrying out these procedures.

## Show Set Status

When **Show Status** is enabled (refer to option **58.7 = KEYPAD.Show Status**), pressing the \* and # keys simultaneously when the normal banner is displayed indicates the group set status.

U = Unset

S = Set

P = Part Set

L = Locked Out

- = Group not assigned to keypad

```
STATUS 12345678
Groups AUUSULP-P
```

Group block A  
Galaxy 512

**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.

Pressing the \* and # keys again toggles the display to show the status of the groups individually. To move between each groups, press the \* and **A** or the \* and **B** keys simultaneously.

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

Group A1 is unset  
(Galaxy 512)

Pressing the \* and # keys again returns the keypad to the banner display.

## Galaxy 512

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D. Press \* and **A** or \* and **B** keys to display each of the group blocks.

## 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, in seconds, remaining before the system sets.

## Exit Time Reset (Galaxy 8, 18, 60 & 500)

If any zones are open when setting starts or are opened during the setting routine, the sounder begins to pulse rapidly; zones types other than **Final**, **Exit**, **Entry** or **Push-Set** (and **Secure Final** or **Part Final** when acting as a **Final**) indicate on the setting keypad the number of zones open. The **A** or **B** keys can be used to view the open zone types and addresses. Closing the zones resets and restarts the exit time.

**Exit Time Reset  
(Galaxy 512)**

If the **Exit Alarm** parameter is disabled (default), any zone — other than **Final**, **Exit**, **Entry**, or **Push Set** (or **Secure Final** or **Part Final** when acting as a **Final**) — that is open when the system begins to set or are opened during the exit time activates an urgent beeping on the **Entry/Exit Horn** outputs; the keypad indicates which zones are open.

Any **Final**, **Exit**, **Entry**, or **Push Set** (or **Secure Final** or **Part Final** when acting as a **Final**) zone that is open when the system begins to set or are opened during the exit time activates a slow beeping on the **Entry/Exit Horn** outputs; the keypad does not indicate that these zones are open.

**Omitted Zones**

If zones are omitted when the system starts setting, this is indicated on the keypad. The keypad indicates how many zones are omitted.

**Expiry Warning**

During the last 25% of the programmed exit time outputs programmed as **Entry/Exit Horn** begin to pulse, indicating that time is running short.

**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. The keypad briefly displays the message **SYSTEM IS SET** before going blank.

**Group Logic Setting  
Restriction**

If **Setting Logic** has been assigned to a group (refer to **63.1.2 = OPTIONS.Groups.Setting Logic**), 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; 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. This message does not appear if at least one group sets.

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

<b>Entry Time</b>	The system begins the unsetting routine whenever a <b>Final</b> or <b>Entry</b> zone activates. The <b>Entry/Exit Horns</b> 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 <b>Entry/Exit horns</b> pulse rapidly, indicating that time is running short.
<b>Timeout (Slow Entry)</b>	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 <b>Timeout</b> against the group which was in the process of being unset.
<b>Straying From the Entry Route</b>	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.
<b>Abort Time</b>	Should the user exceed the entry time or stray from the entry route a full alarm occurs. However the activation of the communicator can be delayed to allow time for the user to abort the remote signalling. The <b>Abort Time</b> parameter can also be programmed so that an <b>Intruder</b> alarm is activated immediately the entry time expires or a zone is activated, but entry of any valid code cancels the alarm and deactivates the <b>Intruder</b> outputs without the need for a system reset.
<b>Fail to Set — Galaxy 60, 500 and 512</b>	An output type ( <b>40 Fail Set</b> ) is available that activates if a full set has not occurred after a programmed period of time (determined by <b>Parameter 35 — Fail to Set</b> ) from the start of the setting procedure.
<b>Power Failure While System is Set</b>	When power is restored to the system, following a complete mains (a.c.) and standby battery (d.c.) power failure, the system attempts to return to the set status — full or part — prior to the power failure. The system begins the setting procedure. If there are no zones open that prevent the system from setting, at the end of the programmed exit time, the appropriate groups and parts are set.

## Setting Menu Options 11 – 19

### Option 11 — Omit Zones (Quick Menu Option 0)

Code + ent + 11 + ent + A or B to select zone + # +  
A or B to select zone + # + .....  
ent (to set) or esc (to select another option)

This option allows zones to be temporarily removed (omitted) from the system. Once a zone has been omitted it does not generate an alarm condition (including tamper). The omitted zones are reinstated automatically when the system is unset or 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 option **52 = PROGRAM ZONE**). If there are no omissible zones, then the message **NO ENTRIES** is displayed.

Press the **A** or **B** keys to view other omissible zones. Press the **#** key toggle the omit status of the required zone. The display indicates the new omit status.

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

This process is continued until all the required zones have been omitted:

- pressing the **ent** key starts the timed setting routine. The number of zones omitted from the system are displayed during the exit time countdown;
- pressing the **esc** key returns to the **11 = OMIT ZONES** without starting the setting routine.

On returning to the banner (normal or engineer) the keypad displays the message **ZONES OMITTED**. Omitted zones remain omitted for one set period only or until they are manually reinstated to the system.

### Galaxy 60, 500 & 512

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.

## Galaxy 512

Code + ent + 11 + ent + A or B to select zone + # + ent (to set) or esc (to select another option)

The **Omit Zones** option allows a single eligible zone to be omitted from the system. Once a zone has been omitted from the system, it is not possible to view other zones that have the omit attribute enabled until the omitted zone is reinstated (either automatically or manually).

There are five zone types which vary from the standard **Omit Zones** operation:

- **Vibration Zones** — if the omitted zone is a **Vibration** zone, then all zones (in all groups) programmed as this type are block omitted. The **Vibration** zones remain omitted until they are manually reinstated. Unsetting the system does not reinstate **Vibration** zones;
- **ATM1/2/3/4 Zones** — a single **ATM** zone type can be omitted for the duration of the period entered in the **ATM Timeout** parameter (option **51.39**) The **ATM Delay** parameter (option **51.38**) determines the delay before **ATM** zones are omitted following the entry of one of the ten **ATM Codes** (User 188 – 197). Entry of a code allows the user to omit one of the **ATM** zone types. Once omitted, the initiating keypad indicates the number of minutes remaining until the selected **ATM** zones are reintroduced to the system. A warning is given ten and five minutes before the zones are reinstated. The omit time may be extended indefinitely by reentering an **ATM Code**. Outputs programmed as **ATM1/2/3/4** active when the respective **ATM** zone type is omitted, and remain active until the zone type is reinstated.

Refer to option **52 = PROGRAM ZONES** for details on the operation of **Vibration** and **ATM** zone types.

### Manually Reintroducing Omitted Zones to the System

Selecting the **OMIT ZONES** option; using the **A** or **B** keys, select the omitted zone to be reinstated. Press the **#** key 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; the display indicates that zones have been omitted. The zone remains omitted until the system is unset (with the exception of **Vibration** and **ATM** zones on the Galaxy 512).

**Option 12 — Timed Set** This option, when entered, starts the setting routine. The **Entry/Exit Horns** emit the expiry warning during 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 a 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 the **esc** key 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 level three (or above) user code and pressing the **A** key. The **A** key can be reprogrammed by the engineer to perform another function, or to start the setting routine without a code being entered.

**Option 13 — Part Set** This option operates exactly as the **Timed Set** option with the exception that only those zones that have the part attribute enabled (refer to option **52 = PROGRAM ZONES**) are set. All zones have the part attribute enabled by default. Therefore selecting **PART SET** from the factory will set all zones. The part attribute of the zones must be disabled if they are not to be included in the part set.

**NOTE:** The factory default setting allows the part setting routine to be initiated by entering a valid level three (or above) user code and pressing the **B** key. 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.

**Option 14 — Forced Set (Quick Menu Option 1)** **Forced Set** allows a timed set of the system when there are zones that are open at the point of selecting the option. The open zones must have the omit attribute enabled (refer to option **52 = PROGRAM ZONES**). This option is only available if the **Forced** parameter (option **51.26**) is enabled; otherwise, the selection is invalid and the keypad displays the message **Option not available**.

Galaxy 8, 18, 60 & 500

When the **Forced Set** option is entered, the keypad displays the number of zones that have been omitted (manually by option **11 = OMIT ZONES** and automatically by the **Forced Set**) and the setting routine begins. If there are any open zones that do not have the omit attribute enabled, the keypad displays the number of open zones that are not omissible and prompts the user to view them. The non-omissible zones must be closed before the setting routine can continue.

**Option 15 — Chime  
(Quick Menu Option 2)**

The **Chime** option allows the user to switch the chime facility on and off. Any zones that have the chime attribute enabled (refer to option **52 = PROGRAM ZONES**) momentarily operate **Entry/Exit Horns** when opened; two long tones are emitted.

**Option 16 — Instant Set**

Selecting this option immediately sets all zones. No sounder or exit time is involved.

**NOTE:** The zones must be closed to allow the system to set. If any zones are open, then the exit time reset feature (detailed previously) is activated.

**Option 17 — Instant  
Part**

Selecting this option immediately sets all zones that have the part attribute enabled. No sounder or exit time is involved.

**NOTE:** The zones must be closed to allow the system to part set. If any zones are open, then the exit time reset feature (detailed previously) is activated.

**Option 18 — Home Set**

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.

**Option 19 — All Set  
(Galaxy 18, 60, 500 &  
512)**

**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 is determined by the keypad group restriction (refer to option **58.6 = KEYPADS.Groups**):

- 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 groups 1, 2, 3, and 4 selecting the **All Set** option on a keypad assigned groups 2 and 3 will only set groups 2 and 3.

## 6.2 Display Options

### Option 21 — Display Zones (Quick Menu Option 3)

Selecting and entering the **Display Zones** option shows the first zone on the system. Other zones may be viewed by pressing the **A** and **B** keys or by entering the zone number directly. The top line displays:

- the address;
- the zone function alternating with the status — open, closed, high resistance, low resistance, tamper short or tamper open circuit;
- the group assigned — if the group mode is enabled. Only the zones assigned to the user's group are displayed.

The bottom line shows:

- the zone descriptor;
- by pressing the **#** key the bottom line changes to show the circuit resistance in Ohms and the RIO (not zone) voltage, pressing the **#** key returns the bottom line to the zone descriptor.

A printout of all the zones is available from this option by pressing the **\*** key; pressing the **esc** key aborts the printout.

**NOTE:** A serial printer must be connected to the Galaxy panel via a printer interface module or an RS232 interface module.



**Option 22 — Display Log  
(Quick Menu Option 4)**

The Galaxy event log is viewed using this menu option. The number of events that each of the Galaxy panels can store are as follows:

- Galaxy 8 — 250 events
- Galaxy 18 — 250 events
- Galaxy 60 — 300 events
- Galaxy 500 — 500 events
- Galaxy 512 — 1000 events

If group mode is enabled (refer to option 63 = **OPTIONS**) and the user code has group choice (refer to option 42 = **CODES**), then 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 **Y**. When all the required groups are selected press the **ent** key to access the log; only the events in the selected groups are displayed.

Once the event log is accessed, the most recent event is displayed. The **B** key steps backwards in time through the log, while the **A** key moves forward in time. Holding down either key quickly steps through the dates until the required date is found. When a selected date is on display the events of that day and previous days can be viewed by repeatedly pressing the **B** key; events on subsequent days are viewed by repeatedly pressing the **A** key. The event log is wrapped round from beginning to end. The message **START** or **END** (depending on whether the **A** key or the **B** key is being pressed) is briefly displayed when the wraparound is passed through.

The following information is detailed in the event log:

- time — time that event occurred;
- date — day and date that event occurred;
- event — information about the type of event that occurred.  
Certain events are displayed with a + (positive — indicating that the event started or was activated) or – (negative — 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 one that is not associated with a user code, for example, an alarm activation or a **Final** zone closing, then no user information is displayed.

Pressing the # while viewing the log can reveal additional information about certain event types:

- User events reveal the keypad, user level and user group involved in the event;
- Alarm events reveal the zone descriptor, if programmed.

**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 detector.

The event log can be printed while accessing the **Display Log** option. Pressing the \* key while displaying an event starts the printout from the displayed event and continues to the most recent event. The **esc** key aborts the print out.

**NOTE:** A serial printer must be connected to the Galaxy panel via a printer interface module or an RS232 interface module.

### Option 23 — System (Galaxy 18, 60, 500 & 512)

This option provides a quick overview of the system configuration; two lines of information are displayed at a time — the **A** and **B** keys are used to scroll through the entire list:

- Groups use the **A** and **B** keys to scroll through groups **A1–8**, **B1–8**, **C1–8** and **D1–8** on the Galaxy 512;
- 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 option **58 = KEYPADS**) allows the group set status to be displayed from the normal banner (when the system is set or unset) by pressing the \* and # keys simultaneously.

- Type Galaxy 8, 18, 60 500 or 512;
- Version version of software in Galaxy panel;
- RIOs fitted includes the on-board RIOs;
- Codes used includes the manager, engineer and remote codes;
- Keypads fitted 1–32 (Galaxy 8, 18 & 60), 1–64 (Galaxy 500 & 512);
- Comms modules 0–2 (Telecom Module and RS232 module);
- Printer 0–1 (Printer Interface Module);
- Mimic display 0 (module not available at time of printing);
- Panel location up to 16 characters of text entered in **System Text** parameter (option **51.15.1**).

**Option 24 — Print  
(Quick Menu Option 4)**

**NOTE:** A serial printer must be connected to the Galaxy panel via a printer interface module or an RS232 interface module.

This option allows one of the four listed options to be printed. Only information corresponding to the groups assigned to the user is printed

1. Codes — user number and name, level and groups assigned;  
**NOTE:** only the manger can print out the user PINs; the **Print Codes** parameter (option **51.23**) must be enabled (default is disabled).
2. Zones — 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;
3. Log — all events in the log, starting with the most recent and working backwards;
4. All — 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**.

## Option 25 — Access Doors

**NOTE:** If the MAX mode has not been enabled (refer to option **63.2 = OPTIONS.MAX**) the message **No Entries** is displayed on entering this option.

Accessing this option when the MAX mode is enabled and there are MAX modules connected to the system displays the address and descriptor details of the first MAX module on the system. Press the **A** and **B** keys to view details of the other MAX modules on the system.

If there are no MAX modules attached to the system the message **None Detected** is displayed.

### Address

The first digit of the two digit number refers to the line that the module is connected to (line 1 on Galaxy 18 & 60 and lines 1–4 on the Galaxy 500 & 512); the second digit is the physical address number of the MAX module. For example, a MAX module displaying as **25** indicates that the module is on line 2 and is addressed as **5**.

Pressing the # key gives a graphic representation of the MAX address in a binary format. The top two boxes on the top row indicate the line address; the bottom four boxes indicate the physical address.

### Descriptor

The descriptor is a maximum of 16 characters entered in the **MAX Parameters** option (**63.2.3**)

#### Engineer Mode

On accessing the **Access Doors** option in engineering mode, each on-line MAX module displays its address by lighting the appropriate LEDs. To help the engineer identify each of the MAX modules, the keypad displays a graphic representation of the MAX module address. By matching the  (LED off) and  (LED on) image to the LEDs on the MAX, the engineer can identify each MAX module on the system.

### MAX Log

To display the events in the MAX log use the **A** or **B** keys to select the required MAX address then press the **ent** key. The first event that occurred on the selected MAX is displayed along with details of the time, date and MAX number.

To view the log press the **A** key to move forward in time through the events or the **B** key to move backwards. Press the **esc** key to return to the MAX address display. To view the log of another MAX, use the **A** or **B** key to select the required address. To escape from the **Access Doors** option press the **esc** key.

Time and date  
of event

```
02:25 SUN 22 OCT
USR032 Valid
```

MAX user number

Event type

## 6.3 Test Options

### Option 31 — Walk Test (Quick Menu Option 6)

The **Walk Test** option offers two methods of testing zones.

1. **All Zones:** This option initiates a walk test that includes all zones that have the omit attribute enabled (refer to option **52 = PROGRAM ZONES**). When selected, the walk test starts immediately. The message **NO ENTRIES** is displayed if all zones are non-omittable when selecting **All Zones**. Non-omittable zones are not included in this test and remain active throughout the test.
2. **Selected Zones:** This test option allows the user to select any zones, irrespective of function type, for walk testing. As many zones as necessary may be added to the list before starting the test. On entering this option the details of the first zone are displayed. Each zone required for test can be selected using the **A** or **B** keys or by entering the zone number. Press the **#** to toggle the test status of each zone in the **Walk Test**: the test status of the zone changes to **TEST** if it is included in the test and **# = TEST** if it is not. When the all the required zones have been selected, press the **ent** key to start the walk test.

Press the **\*** key to include all zones in the **Selected Zones** walk test, without having to individually select the zones. Once all zones are selected, the **#** key can be used to remove selected zones from the test.

**NOTE:** **PA** and **Fire** are not included in the test when the **\*** key is used to include all zones.

The response times of the zone circuits are reduced to 60 msec for the duration of the walk test to facilitate the detection of 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, then the keypad indicates how many zones are open; the open zones can be viewed by pressing the **A** or **B** keys.

**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** will activate 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 the **#** key to view all zones that have been walk tested so far. To return to the walk test press the **#** key again.

**Ending the Walk Test**

To terminate the walk test, press the **esc** key. The test will terminate automatically if no zones are disturbed for 20 minutes.

The results of the test can be viewed by accessing the event log (refer to option **22 = DISPLAY LOG**). The start of the walk test is indicated by the display **WALK TEST +**; each zone that was tested 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 -**.

**Option 32 — Outputs**

Outputs are tested by function: for example, when **01 = BELLS** is selected, then all outputs programmed as **Bells** are activated. Refer to option **53 = PROGRAM O/P (OUTPUT)** for a full description of each output function.

On selecting the **Outputs** option, output function type **01 = BELLS** is offered for selection. Press the **A** or **B** keys to move to the required output function type. Alternatively, the function type number can be entered directly, for example entering **13** selects **SECURITY**. To test the selected output function press the **ent** key. The **ent** key can be used to toggle the function **ON** and **OFF** as required. To escape from the **Outputs** option, press the **esc** key.

**Users**

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

## 6.4 Modify Options

### Option 41 — Time/Date (Quick Menu Option 7)

Galaxy 8, 18, 60 & 500

The **Time/Date** option can be accessed and modified by users, the engineer and the remote code.

Galaxy 512

The **Time/Date** option can be accessed by users, the engineer and the remote code, however, users can only view the current time and date. Only the engineer and the remote code can modify the time and date. If any groups are locked (refer to option **49 = LOCKOUT**), then the time and date cannot be modified

**Modifying the Time and Date** The **Time/Date** option allows the system time and date to be modified. On entering this option the display prompts for selection **A = TIME B = DATE**. Press the **A** key to select the time option; this allows a new time to be entered. The time must be a valid four digit number — in the 24 hour format (hh:mm). The entry, if valid, will be accepted immediately and the display is returned to the selection screen. Press the **B** key to select the date option; this allows a new date to be entered. The date must be a valid six digit number — in the day, month and year format (dd/mm/yy). The date entry, if valid, will be accepted immediately and the display is returned to the selection screen.

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

### Adjusting the Clock Speed

Variations in the accuracy of the clock speed can be compensated by pressing the # key while the **A = TIME B = DATE** selection screen in the **Time/Date** menu is displayed. The keypad prompts for the **Adjustment/Week**, in seconds, to be entered; the range is 0 – 120 seconds. If the clock requires to gain time, enter the required number of seconds. If the clock requires to lose time, enter the required number of seconds and press the \* key; the \* retards the clock speed.

## Option 42 — Codes (Quick Menu Option 8)

The **Codes** option is used to assign, modify and delete the codes that allow user to operate and access the system. The **Codes** option is divided into three sub-menus:

1. **User Codes** — sub-divided into up to nine menus (depending on panel used and whether the group and MAX mode options are enabled) that determine all of the access information for users who are requiring PINs. This option also assigns MAX details to user numbers;
2. **PIN Warning** — (**Galaxy 500 & 512**) determines the warning period given to users prior to the programmed **PIN Change** date (refer to option **51.42 = PARAMETER.PIN Change**);
3. **MAX Users** — this option is only available if the MAX mode is enabled. The option is subdivided into two menus that assign the MAX card to users who do not have a PIN assigned.

Level 1	Level 2	Programming	Special Features
<b>Galaxy 8, 18, 60, 500 &amp; 512</b>			
1 = User Codes	1 = Modify PIN	4, 5 or 6 digit PIN	* – delete last digit (*) displayed. # – Engineer code (G60, 500 & 512): manager authorisation required.
	2 = Modify Level	1 – 6	* – full menu access (toggle on/off). # – duress user code (not G8).
	3 = Modify Name	6 alpha-numeric characters	* – delete last digit (*) displayed. # – toggles between lowercase, upper case and library text.
	4 = Time Zone	0 = OFF 1 = TIMER A 2 = TIMER B 3 = TIMER A+B	
	5 = Temporary Code	00–28 days	* – (G500 & 512) PIN change feature.
(if group mode is enabled)	6 = Modify Groups (not Galaxy 8)	G18: 1–3 G60: 1–4 G500: 1–8 G512: 1–32	* – group choice (toggle on/off). A/B – (G512) moves between group blocks A1–8, B1–8, C1–8, D1–8.
(If MAX mode is enabled)	7 = MAX Number	10 digit number on MAX card or fob	
	8 = MAX Function	number of required menu option.	
	9 = MAX Keypad	address of keypad that MAX function displays on.	
2 = PIN Warning (G500 & G512)		1–28 days	
3 = MAX Users	1 = MAX Number	10 digit number on the MAX card	
	2 = Groups	G18: 1–3 G60: 1–4 G500: 1–16 G512: 1–32	* – group choice (toggle on/off). A/B – (G512) moves between group blocks A1–8, B1–8, C1–8, D1–8.



**Default Codes**

The Galaxy system provides three default codes; these are the manager, engineer and remote user:

Galax	No. of Codes	Manager		Engineer		Remote	
		Default PIN	User No.	Default PIN	User No.	Default PIN	User No.
8	10	1234	8	112233	9	543210	10
18	20	1234	18	112233	19	543210	20
60	30	1234	28	112233	29	543210	30
500	100	1234	98	112233	99	543210	100
512	200	1234	198	#112233	199	543210	200

**Table 6–2. Default Codes**

**Engineer Code**

- The engineer code can only modify the engineer PIN; all other engineer **User Code** options are fixed;
- The engineer code cannot assign, modify or delete manager or user codes;
- On accessing engineering mode, any group that is set becomes inaccessible to the engineer. The set groups cannot be assigned to zones, outputs and any other functions permitting group allocation;  
**NOTE:** If the Galaxy 8 is set, then the engineer cannot gain access to engineer mode.
- While engineer mode is accessed, all tampers are disabled, however, all constantly alert zone types — **PA zone types, 24 Hour, Security, Fire** — remain active.
- The engineer banner is shown on all keypads while engineer mode is being accessed; the message **ENGINEER MODE** is displayed;
- The system cannot be set by any code — including the engineer and remote code — while engineer mode is accessed (**Galaxy 512 only**).

**(Galaxy 8, 18, 60 & 500)**

The first entry of the engineer code activates a tamper alarm. The second entry of the code cancels this alarm and accesses engineer mode.

**NOTE:** The Galaxy 60 and 500 can be assigned manager authorised engineer access by adding a # to the engineer code.

## Galaxy 60, 500 &amp; 512

The Galaxy 512 engineer code is allocated a # by default. With the # assigned, entry to the engineer mode **must be** authorised by a valid user (refer to option **48 = ENGINEER ACCESS**). The engineer code must then be entered within five minutes of the option being enabled. A single entry of the engineer code directly accesses engineer mode, without activating an engineer tamper alarm; **ENGINEER MODE** is displayed on the keypad. If the engineer code is not entered within the five minute period, the code is invalid and has no effect. Once the engineer mode has been accessed, there is no time limit on the period that the engineer can remain in the mode.

The Galaxy 512 cannot be set while engineer mode is accessed; the keypad will display **ENGINEER ON SITE / SETTING DISABLED** before returning to the engineer banner.

**Disabling User  
Authorisation of Engineer  
Access**

Only the remote code can remove the # from the engineer code. If the # is removed access to engineer mode is gained in the same manner as the Galaxy 8, 18, 60 and 500; the engineer code must be entered twice to gain menu access.

**NOTE:** The engineer code or remote code can assign the # to the engineer PIN. Only the remote code can remove it.

**Escaping from Engineer  
Mode**

To terminate the engineer mode the engineer code is entered and the **esc** key pressed. The Galaxy begins the exit engineer mode procedure by checking the integrity and security of the system:

- **CHECKING FOR TAMPERS** — if a SmartPSU is connected to the system, the panel calculates that the standby battery connected to it is capable of operating the system for the required period (as entered in the **Standby Battery** parameter — refer to option **51.37**). The system then verifies that there are no tamper conditions present on the panel, the modules or the zones.
- **SYSTEM MODULES** — if there are no tamper conditions the Galaxy checks the number of modules connected to the system:
  - If no modules have been added or removed the system returns to the normal banner.
  - If modules have been removed they are reported as missing; the engineer is prompted to view the missing modules and to remove them from the system by pressing the **\***; a warning is given before the module is removed. Press the **ent** key to confirm the removal of the module. Once all missing modules are removed, the Galaxy reports the previous and current number of modules connected to the system, before returning to the normal banner.
  - If modules have been added, the Galaxy reports the previous and current number of modules connected to the system, before returning to the normal banner.

If the **esc** key is pressed at any time during the exit engineer mode procedure, the procedure is aborted and the Galaxy returns to the engineer mode. This return may take several seconds to complete.

**Galaxy 512**

The engineer is prevented from exiting from engineer mode if a **PA** zone is open.

**Manager Code**

The manager is authorised to:

- program the **User Code** options of each of the user codes;
- allocate other codes to the manager level (6);
- modify the manager PIN — the manager PIN cannot be deleted — and assign the MAX features to the code.

**NOTE: Galaxy 8, 18, 60 & 500** — 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 option **51.21**).

**Galaxy 512** — The **Reset Manager** option can only be accessed by the remote code (**User 200**) on the Galaxy 512.

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) as required.

**Galaxy 8 & 18**

The manager code defaults to accessing the quick menu (option 0 – 9). Refer to option **59 = Quick Menu**. To access the full menu, assign a \* to the manager in the **Modify Level** option.

**Galaxy 60, 500 & 512**

The manager code defaults to accessing the full menu (option 11 – 68). To access the quick menu (options 0 – 9), remove the \* assigned to the manager in the **Modify Level** option.

<b>Control Panel</b>	<b>No. User Codes</b>	<b>No. MAX Codes</b>
G8	10	40
G18	20	80
G60	30	170
G500	100	200
G512	200	300

## Programming Codes

### 1 = User Codes

Enter the **Codes** option; **1=User Codes** is displayed. Press the **ent** key; details of the first user (**User 001**) are displayed. Each of the users can be displayed using the **A** and **B** keys, or a specific user can be selected by entering the required user number, for example 023, 069. When the required code is displayed, press the **ent** key to select the user codes modification options; **1=Modify PIN** is displayed. The available modification options can be viewed by pressing the **A** or **B** keys; press the **ent** key to select the required option. The options are detailed in the following paragraphs:

### 1 = Modify PIN

The PIN identifies each user to the Galaxy panel and permits the user to operate the system.

The **Modify PIN** option allows a PIN to be assigned to the user or an existing PIN to be modified. The PIN must be a four, five or six digit number that is unique to the system. If a duplicate PIN is assigned, the message **INVALID SELECTION** is displayed; the PIN is not assigned to the user. As each digit is entered it appears on the lower line of the display. Pressing the \* key erases the last digit displayed; continued pressing of the \* key will erase all of the digits. When the correct PIN has been assigned press the **ent** key to accept the programming and return to the previous menu level.

When a PIN has been assigned to a user number, a solid box (■) is displayed on the top line of the user number details screen.

### Deleting a PIN

Existing PIN entries can be completely erased by using the \* key instead of a digit entry. When there is no PIN assigned to a user number a hollow square (□) is displayed on the top line of the user number details screen.

### Assigning Dual Codes

To program a user code as a **Dual Code** press the # key while the **Modify PIN** option is selected. The # displays at the start of the assigned user PIN (**#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.

### Dual Codes Operation

Entry of a single dual code can not gain access to the menu, set or unset the system. 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, set or unset the system. Dual codes can be different levels, the highest level entered is granted access to the system — whether it is entered first or second.

### Galaxy 60, 500 & 512

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.

**2 = Modify Level**

Each user is assigned an access level which determines the menu options available to the user. The programmable levels are from 0 - 6; 7 is assigned to the engineer level — 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.

On selecting this option, enter the level to be assigned to the user and press the **ent** key to accept the programming and return to the previous menu level.

Level		Access Availability
0†	Guard	Entered into event memory – no other option
1†	Cleaner	Can only set the system
2†	Caretaker	Can only set and unset the system
3	Users	Menu options 11 - 19
4	Users	Menu options 11 - 29
5	Users	Menu options 11 - 39
6‡	Manager	Menu options 11 - 49
7‡	Engineer	Menu options 11 - 68
8‡	Remote	Menu options 11 - 68
† No access to menu functions ‡ The manager, engineer and remote codes (the last three codes on the system) have fixed levels which cannot be reprogrammed.		

**Table 6–3. User Access Levels**

**Duress Code (Galaxy 18, 60, 500 & 512)** If the # key is pressed while the **Modify Level** option is accessed, then the current user code is assigned as a **Duress Code**. Entry of a **Duress Code** at any time activates any output programmed as **Duress** (refer to option **53 = OUTPUTS**). There is no limit to the number of codes that can be assigned as **Duress Codes**.

**Quick Menu**

All of the user codes default to the quick menu. This menu is made up of a selection of ten options (0 – 9) from the full menu options 11 – 68. Access to the quick menu is controlled by the user code level. Any user can be upgraded from the quick menu to the full menu by assigning a \* to the user while the **Modify Level** option is accessed. Therefore a user with level \*5 would have access to the full menu from options 11 – 39. No code can access both menus.

The engineer can reprogram the options contained in the quick menu (refer to option **59 = QUICK MENU**).

**NOTE:** The manager code defaults to the quick menu on the Galaxy 8 and 18 but defaults to the full menu on the Galaxy 60, 500 & 512

**Galaxy 60, 500 & 512**

The engineer can determine the menu option access level (refer to option **68 = MENU ACCESS**); this allows users to access menu options that their code levels are not, by default, authorised to access.

**NOTE:** Users can only allocate codes up to the level that they have been assigned. A level 4 user cannot assign a user code as level 5.

**3 = Modify Name**

This option allows a name to be assigned to the user (maximum six characters). Each of the user codes default to the name **USER**. The engineer (**ENG**) and manager (**MGR**) are fixed and cannot be reprogrammed. On selecting the **Modify Name** option, a section of the alpha-numeric characters that can be assigned to the user name is displayed on the bottom line of the keypad; the cursor flashes on the letter **L**. Press the \* key to erase the characters of the default or previous name. When the previous name has been erased, use the **A** or **B** keys to move the cursor to the first character of the name and press the **ent** key; the selected character appears on the top line. Continue this process until the name is completed.

The # key toggles between upper and lower case characters and the system library. The alpha-numeric characters and library words can be selected by entering the character or word reference number (refer to **Appendix A — Library**) or by pressing the **A** or **B** keys..

**NOTE:** The Galaxy does not have a library.

When the user name is completed, press the **esc** key to accept the programming and return to the previous menu level.

**4 = Time Zone  
(Galaxy 60, 500 & 512)**

The **Time Zone** option allows the user codes to be restricted to operate only within the periods programmed in **Timer A** and/or **Timer B** (refer to option **65 = TIMERS**).

On selecting this option enter the number (0 – 3) of the **Time Zone** to be assigned to the user and press the **ent** key to accept the selection and return to the previous menu level.

Selection	Timer	Codes Restriction
0	OFF (Default)	Codes are always operational.
1	Timer A	Codes are inoperative between the Timer A ON and OFF time.
2	Timer B	Codes are inoperative between the Timer B ON and OFF time.
3	Timer A+B	Codes are inoperative between the Timer A and B ON and OFF time.

**Table 6–4. Time Zone Restrictions for User Codes**

Codes do not operate during the assigned time zone (**ON** to **OFF**). The times assigned to **Timer A** and **Timer B** can be viewed using option **45.3 = TIMER CONTROL.View**.

If a code that has been assigned to **1=Timer A**, **2=Timer B** or **3=Timer A+B** is entered outwith the assigned times, then an **Illegal Code** event is recorded in the log and any outputs programmed as **Illegal Code** are activated.

#### Galaxy 500

The **Autoset** feature (refer to option **65.3 = TIMERS.Autoset**) uses **Timer B** to provide the **ON** and **OFF** times for automatically setting and unsetting the system. A user allocated **Time Zone** option **2 = Timer B** or **3 = Timer A+B** cannot unset the system during the autoset period.

#### 5 = Temporary Codes (Galaxy 500 & 512)

**Temporary Codes** allows a PIN to be temporarily allocated to a user. On selecting this option, enter the number of days (0 – 28) that the code is to remain active. The default setting of **0** indicates that the code is permanent. A temporary code expires and is removed from the codes list at midnight after the assigned number of days. A code that has been assigned as a **Temporary Code** is indicated on the user code display by a **^** between the user number and the user name, for example **001^USER**.

**NOTE:** The manager, engineer, or remote codes cannot be assigned as **Temporary Codes**.

#### PIN Change (Galaxy 500 & 512)

If a user is assigned the **PIN Change** feature in the **Temporary Code** option, the user must assign a new PIN after a predetermined period — refer to option **51.42 = PARAMETERS.PIN Change** — otherwise the user PIN expires and is no longer operational.

To program a user code to prompt for a PIN change select the **Temporary Code** and press the **T** key instead of entering a number of days for a temporary code; press the **ent** key to accept the programming and return to the previous menu level. A code that has been assigned as a PIN Change code is indicated on the used code display with a **\*** between the user number and the user name, for example **001\*USER**. The Manager, Engineer, or Remote codes cannot be assigned as **PIN Change Codes**.

If the value entered in the **PIN Change** parameter is **0** then the code is assigned as a permanent PIN — a warning message is briefly displayed to indicate that a **Pin Change** will not be requested. However, if **PIN Change** is within the range 1 – 12, then the number entered is number of months after which the code must be changed, otherwise it expires.

**NOTE:** The PIN expires on the first day of the following month.

A notification (1 – 28 days) that the PIN requires to be changed can be assigned using the **PIN Warning** option (refer to option **42.2**); this prompts the user to assign a new code whenever the expiring code is entered — except when the system is unsetting — for the number of days in the **PIN Warning** before the day the PIN expires. The new PIN **must** be six digits and **must** be different from any current PIN including the user's existing one. The new PIN must be re-entered and, if confirmed, the user is returned to the banner. If the **esc** key is pressed or the new PIN entered is invalid, the user may continue to use the panel as normal; the next entry of the PIN will prompt for the PIN change.

**NOTE:** If the user has not assigned a new PIN by the end of the **PIN Warning** period, then the code is erased on the next unsetting of the system.

### 6 = Modify Groups (Galaxy 18, 60 , 500 & 512)

This option determines the system groups that the user has access to and operational control over. The **Modify Groups** option is only available when the group mode has been enabled (refer to option **63.1 = OPTIONS.Groups**); the system defaults to groups disabled.

On selecting the **Modify Groups** option, the groups currently allocated to the user are displayed. All user default to group 1. Pressing the group number toggles the group assigned to the user; pressing **2** and **3** assign 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 the \* key. When the required groups have been assigned to the user, press the **ent** key to accept the programming and return to the previous menu level.

### Galaxy 512

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:

Use the **A** or **B** key to move between the group blocks; press keys 1 – 8 to assign the relevant groups in each block to the user.

Group Block	Physical Groups
A1–8	1–8
B1–8	9–16
C1–8	17–24
D1–8	25–32



## Group Options

**Single Group** A user can be assigned to any single group. In this case the user can only access, set and unset the single group.

**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 the \* key 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 authorised to access Option **42 = CODES**, 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.

**7 = MAX Number**

Each MAX card has a unique 10 digit number laser etched onto it. A MAX card is assigned to a user by entering this number in the **MAX Number** option. This number identifies the MAX card to the system and references it to the user it has been assigned to.

Each **MAX Number** defaults to **0000000000** (ten zero's):

1. press and hold the **B** key until the zeros are deleted;
2. enter the unique 10 digit number laser etched onto the MAX card;
3. press the **ent** key to save the programming and return to the previous menu level.

**NOTE:** A MAX 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 MAX card; option **42.3 = CODES.MAX Users** is recommended for assigning MAX numbers to users who do not require a PIN.

**8 = MAX Function**

The MAX card can be assigned a single menu option. The user must be authorised to access the menu option assigned to the MAX — either by user level assigned or menu option **68 = Menu Access**.

The default option is **Not Used**. A new option is assigned by pressing the **A** or **B** key until the required option is displayed or by entering the option number directly and then pressing the **ent** to accept the selection.

**9 = MAX Keypad**

The menu option assigned to the MAX card can be limited to operate on a single keypad. On selecting this option the display shows \*\*, indicating that a keypad has not been specified. To specify a keypad, press the # key. The address of the first keypad on the system is displayed. Use the **A** or **B** key to select the required keypad and press the **ent** key 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” MAX Operation**

The MAX function is activated when the card is held directly in front of a MAX reader for three seconds. The MAX reader must be assigned a common group to the MAX user. The keypad specified in option **9 = MAX Keypad** displays the assigned MAX function.

**NOTE:** If the specified keypad is in use, then the option does not display; if the MAX function is an “action” type option — for example, option **12 = Full Set** — then the function is carried out.

If no keypad is specified (\*\*), then MAX menu option will operate on all keypads that share the groups of the MAX user. The message **Press any key** is displayed on all of the valid keypads. Press any key to activate the function on that keypad. If no keypresses occurs within five seconds, then the function automatically activates on all keypads.

**2 = PIN Warning  
(Galaxy 500 & 512)**

This option determines the number of days notification before the **PIN Change** expiry date (refer to option **51.42 = PARAMETERS.PIN Change**) that the user is prompted to assign new code on entry of the expiring PIN. The default period is **28** days, with a programmable range of **1 – 28**. If the user does not assign a new code by the end of the **PIN Warning** period, then the code is erased on the next unsetting of the system.

**NOTE:** The **PIN Warning** ends on the last day of the month, the PIN expires on the first day of the following month.

**3 = MAX Users**

This option is used to assign additional MAX users to the system without allocating PINs; MAX users are only authorised to operate the Access Control functions of the MAX modules.

Enter the **Codes** option and select **3=MAX Users**. Press the **ent** key; the first MAX user number (**User 201**) is displayed. Each of the users can be displayed using the **A** and **B** keys, or a specific user can be selected by entering the required user number, for example 223, 469. When the required code is displayed, press the **ent** key; the **1 = MAX Number** option is displayed.

**1 = MAX Number**

The MAX number assigned to the MAX user identifies the MAX card to the system and references it to the MAX user.

Each **MAX Number** defaults to **0000000000** (ten zero's):

1. press and hold the **B** key until the zeros are deleted;
2. enter the unique 10 digit number laser etched onto the MAX card;
3. press the **ent** key to save the programming and return to the previous menu level.

When a MAX number has been assigned to a MAX user number, a solid box (■) is displayed on the top line of the MAX user number details screen.

**2 = Groups**

This option assigns group access to the MAX user. The MAX user must be assigned a group that is common to the MAX module to permit the access control functions to operate. If the MAX user does not have access to the group assigned to the module, then the access control functions are denied. The **Modify Groups** option is only available when the group mode has been enabled (refer to option **63.1 = OPTIONS.Groups**); the system defaults to groups disabled.

On selecting the **Modify Groups** option, the groups currently allocated to the user are displayed. All user default to group 1. Pressing the group number toggles the group assigned to the user; pressing **2** and **3** assign groups 2 and 3 to the user; pressing **1** (when group 1 is already assigned) removes group 1 from the user code; press the **ent** key to accept the programming and return to the previous menu level.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:

Use the **A** or **B** key to move between the group blocks; press keys 1 – 8 to assign the relevant groups in each block to the user.

### Option 43 — Summer (Quick Menu Option 9)

On the first day of each year, the British Summer Time (BST) **Start** date is set to the last Sunday in March and the **End** date is set to the fourth Sunday in October.

The operation of the **Summer** option is as follows: at 01:00 hours on the **Start** date, the system clock advances to 02:00 hours; at 01:00 on the **End** date, the system clock goes back to 00:00 hours (midnight).

The **Start** and **End** dates can be reprogrammed by authorised user codes. Press the **A** key to modify the **Start** date or the **B** key select the **End** date; the new date must be a valid four digit number — in the day/month format (dd/mm).

#### Galaxy 512

The **Summer** option can only be modified by the engineer or remote codes.

### Option 44 — Trace (Galaxy 18, 60, 500 & 512)

This option provides a record of the most recent alarm activation. The **Trace** option records the details of the setting and unsetting of the system immediately before and after the alarm activation and the first five events occurring during the alarm activation. This information is maintained in the trace until the next alarm activation. On entering the option pressing the **A** and **B** keys steps through each of the seven trace entries.

Pressing the # key while viewing the **Trace** option displays additional information about certain events — user events reveal the keypad, user level and current group; alarm events reveal the zone descriptor if programmed.

The currently display trace can be printed out by pressing the \* key; pressing the **esc** key aborts the print-out.

**NOTE:** A serial printer must be connected to the Galaxy panel via a printer interface module or an RS232 interface module.

#### Group Mode

If group mode is enabled (refer to option **63 = OPTIONS**), 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 option **42 = CODES**) 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 the **ent** key.

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.

**Option 45 — Timer Control (Galaxy 60, 500 & 512)****1 = View  
(Galaxy 60, 500 & 512)**

This option allows the programmed times in each of the Timers to be viewed:

1. Timer A;
2. Timer B;
3. Autoset (Galaxy 500 & 512);
4. Lockout (Galaxy 512).

Use the **A** and **B** keys to scroll through each of the programmed times.

**NOTE:** The programmed times cannot be modified using this option.

All of the programmed timers — **Timer A**, **Timer B**, **Autoset** and **Timelock** — can be printed out using option **57.11 = SYSTEM PRINT.Timers**.

**2 = Holidays  
(Galaxy 60, 500 & 512)**

This function allows up to ten holiday periods to be allocated. A **Start** and **End** date is entered for each holiday period using the **1 = Modify Dates** option, and the groups that are affected by the programmed holiday periods are assigned using the **2 = Assign Groups** function. The operation of all timers for the assigned groups is suspended during these dates; the last operation of the **Timers** before the start date remains in operation until the first operation after the **end** date. For example, a code which has been allocated the **Timer A Zone** in the **CODES** option (**42.1.4.1**) will be inoperative during the programmed holiday period if the **Timer A** is in the **On** time when the holidays starts.

**1 = Modify Dates**

On selecting this option, the **Start** and **End** dates for holiday period **1** are displayed; an arrow (>) points to the **Start** date. If no dates have been entered for this period, then the display shows **\*\*/\*\***. To program the **Start** date, press the **ent** key; the date display changes to **>DD/MM<**; enter a valid four digit number and press the **ent** key to accept the selection; the year is not required, only the day and months (dd/mm).

Press the **#** key to move to the **end** date and follow the procedure for programming the **Start** date. The **#** key toggles between the **Start** and **End** dates for each holiday; the arrow (>) indicates which date is currently selected.

To remove a programmed date, press the **\*** key. The date display returns to **\*\*/\*\***.

Use the **A** or **B** key to move between the different holiday periods or enter the number of the holiday period (**1 – 10**) to be programmed.

**Galaxy 60 & 500**

The holiday periods can be programmed by a valid user.

- Galaxy 512** The holiday periods can only be programmed by the engineer. Users can access this option, however, they can only view the programmed holiday dates.
- 2 = Assign Groups** This function determines which of the groups are affected by the programmed holiday periods.
- On selecting the **Assign Groups** option, the groups currently assigned to the programmed holiday periods are indicated by a **Y** below the group; an **N** is displayed below the unassigned groups. All groups default to **N**. Pressing the group number toggles the group status. When the required groups have been assigned to the holidays, press the **ent** key to accept the programming and return to the previous menu level.
- Galaxy 512** The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:
- Use the **A** or **B** key to move between the group blocks; press keys 1 – 8 to assign the relevant groups in each block to the user.
- 3 = Timers  
(Galaxy 60 and 500)** This option allows **Timer A** and **Timer B** to be switched on and off as required. If a **Timer** is set to off, the operation of the **Timer** is suspended; this option cannot be used to alter the programmed times. Both timers default to **0 = Off**. To switch the timers on, select the required timer and change the setting to **1=On**.
- Galaxy 512** This option is not available on the Galaxy 512.
- 4 = Early Open (Galaxy 512)** If the **Early Open** option (**45.5.2**) is enabled, the **Lockout OFF** time (refer to option **65 = TIMERS**) for the following day is brought forward by the number of minutes (0 – 240) programmed in parameter **44 = Early Open**. This allows the system to be manually unset earlier than normal.
- 1 = Early Times** This function displays the time that the system can be manually unset on the following day; this time is the **Lockout OFF Time** minus the **Early Open** period and is displayed in the 24 hour format.
- If groups have been enabled, the early opening time for each of the groups enabled for early opening in the **Early Open** option can be viewed by pressing the **A** or **B** keys
- This function only displays the early time if the **Early Open** option is enabled; if this option is disabled or if no groups have been enabled, the message **NO ENTRIES** is displayed.

**2 = Early Open****Level 6 Users and Engineer when Groups are Disabled**

If groups have not been enabled on the system, the programming of the **Early Open** option is identical for Level 6 users and the engineer; the option permits early opening to be disabled or enabled:

- 0 = Disabled** (default) — early opening not permitted;
- 1 = Enabled** — early opening permitted.

Select the required status and press the **ent** key to accept the programming and return to the previous menu.

**Engineer Mode with Groups Enabled**

If groups have been enabled (option **63 = OPTIONS**), then the groups can be individually enabled to permit early opening.

On selecting the option, the early opening status of the groups is displayed; early opening enabled is indicated by a **Y** below the group; an **N** is displayed below the groups that are not programmed to open early. All groups default to **N**.

**NOTE:** Only the engineer can enable early opening for individual groups.

**5 = Late Working  
(Galaxy 500 & 512)**

The **Late Working** option — if programmed as **1 = ON** — authorises an **Autoset Extension** in advance of the prewarning period (refer to option **65.3 = TIMERS.Autoset**); only the groups assigned to the code requesting the **Late Working** option are delayed from setting.

**NOTE:** Additional extensions can be authorised by entry of a valid code during the subsequent autoset prewarning periods.

**6 = Weekend Work  
(Galaxy 512)**

The **Weekend Work** option allows a valid user code to authorise the system to unset at the weekend. If the **Weekend Day** is programmed other than **0 = OFF** (default), on the next occurrence of the programmed **Weekend Day**, the **Timers** adopt the times they have on the assigned **Pattern day**. For example, this allows a Sunday to use the Autoset and Lockout Timers of a Monday.

**NOTE:** Parameter **41 = Weekend Work** must be enabled (default is **Disabled**) to allow the **Pattern Day** option to be programmed by the engineer and the **Weekend Day** to be selected by the user.

On selecting this option, **1 = Program Days** is displayed. Press the **ent** key; **1 = Weekend Day** is displayed. Press **ent** to select this option, or the **A** or **B** keys to move between the available options

**1 = Weekend Day**

On selecting this option the programmed **Weekend Day** is displayed; the default is **0 = OFF**. Use the **A** or **B** keys to select the required day or days and press the **ent** key to accept the programming and return to the previous menu level:

- 0 = OFF**
- 1 = SAT**
- 2 = SUN**
- 3 = BOTH** (Saturday and Sunday)

The selected **Weekend Day** remains active for one occurrence only. The **Weekend Day** returns to the default of **OFF** immediately following the assigned day. The **Weekend Day** must be allocated each time the function is required.

**2 = Pattern Day**

The **Pattern Day** can only be allocated by the engineer. This option determines the programmed timers that are effective when the **Weekend Day** 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 the **ent** key to accept the programming and return to the previous menu level:

- 1 = MON**
- 2 = TUE**
- 3 = WED**
- 4 = THU**
- 5 = FRI**



**Option 46 — Group Omit (Galaxy 18, 60 & 500)** This option allows a level 6 user code to block omit all the omissible zones in a group or multiple groups. All zones in the required groups that have the omit attribute enabled (refer to option **51.4 = PROGRAM ZONES.Omit**) are omitted when this option is selected. Groups can be omitted and reinstated without setting and unsetting the system.

On selecting the **Group Omit** 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**.

**NOTE:** The zones in the selected groups are omitted from the system as soon as the group is selected.

On returning to the banner (normal or engineer) the keypad displays the message **ZONES OMITTED**. Omitted zones remain omitted for one set period only or until they are manually reinstated to the system.

### Galaxy 60 & 500

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.

## Option 47 — Remote Access

### 1 = Service

This option enables level six users to control the access mode of the Galaxy Gold remote servicing software. There are several options available for increased flexibility and security.

**NOTE:** This option is only available when the **Manager Authorise** option has been enabled (refer to option **56 = COMMUNICATIONS**). If the option is not enabled, the keypad displays **NO ACCESS - OPTION DISABLED**.

### 0 = Direct Access:

On selecting this option, a 40 minute access period is enabled on the Galaxy panel; Galaxy Gold software can directly access the system during this period. Once access to the panel has been gained, it can be maintained indefinitely; there is no maximum duration. On terminating the Galaxy Gold connection to the panel, the access period remains valid for an additional 15 minutes.

### 1 – 5 = Call Back 1 – 5

A maximum of five numbers can be preprogrammed by the engineer (refer to option **56 = COMMUNICATIONS**). On selecting one of the numbers (1 – 5) followed by the **ent** key, the Galaxy panel dials out to the preprogrammed telephone number associated with the **Call Back** number.

If the number selected does not have a preprogrammed telephone number, the system prompts for a one to be entered. Enter the required telephone number and press the **ent** key; the panel then dials out to the telephone number entered.

**NOTE:** The PC that the panel is dialling to **must** have Galaxy Gold running in the **Waiting for Call-Back** mode. Refer to the Galaxy Gold User Guide (L057).

**Option 48 — Engineer Access****(Galaxy 60, 500 & 512)**

The engineer code is assigned a # in the PIN by default. This prevents the engineer from accessing engineer mode unless authorised to do so by a valid code. To gain access to the engineer menu a level 4, 5 or 6 user must enter their code, and enable the **Engineer Access** option. This provides a five minute period during which a single entry of the engineer code provides access to engineering mode without causing a tamper alarm. Once the engineer mode has been accessed, there is no time limit on the access period.

If the **Engineer Mode** option has not been enabled, or the code is not entered within the five minute period, then the Engineer code is invalid and has no effect.

If the PIN is programmed without the #, the **Engineer Access** option does not require to be enabled to allow the engineer to gain access to engineer mode. The engineer code requires to be entered twice. The first entry activates a tamper alarm which is cancelled by the second entry.

**NOTE:** Only the remote code can remove the # from the engineer code. Both the engineer and remote codes can assign the # to the code.

## Option 49 — Datelock (Galaxy 512)

The **Datelock** option allows the system to be set and prevented from unsetting until the date and time specified by the user. This option can only be accessed by level 6 user codes with access to all groups. The **Datelock** menu option can only be accessed if parameter **40 — Datelock** has been enabled.

**NOTE:** This option can only be selected by level 6 users. The level access **Datelock** cannot be modified using menu option **68 — Menu Access**.

On selecting this option the user is prompted to enter the **Date** (day, month and year) and the **Time** (hours and minutes) when the panel will be unlocked. The date and time entered must be valid and also be some time in the future— 31/02/96 will be rejected as an invalid date.

The system then prompts for another code (level 3 or above) to be entered to confirm the **Date** and **Time** entered by the level 6 user code. To confirm the time and date press the **A** key (**A = YES**). To reject the programming press the **B** key (**B = NO**). If the **esc** key is pressed or a keypad timeout occurs, the **Datelock** is cancelled.

Once the second user has confirmed the **Date** and **Time**, the system immediately starts to set. If menu option **66.4 = PRE-CHECK.Forced Check** is enabled all of the zones on the system must be verified as being operational by opening and closing each zone. This also activates the **Vibtest** output to pre-check the operation of all **Vibration** zones before the system sets. Once set, all codes are locked out until the programmed **Datelock** date and time. The system can not be unset manually.

During the **Datelock** period, all outputs programmed as **Lockout** are active. Once the programmed **Datelock** expires the codes are re-enabled. The system can only be unset by entering any two valid codes.

During the **Datelock** period, the system rearms indefinitely. On rearming, any zone that is currently open or has alarmed twice is omitted whether or not it is omissible.

In the event of an alarm occurring, if the **Datelock** parameter is set to **2**, entry of two valid codes with access to all groups will unset the system before the programmed **Datelock** period has expired.

**NOTE:** After a warm start, the system removes any outstanding **Datelock** period to provide a means of cancelling it.

## 6.5 Engineer 1

**Option 51 — Parameters** This option allows the engineer to modify the system functions. Options can be selected using the **A** or **B** keys or by entering the two digit parameter number and pressing the **ent** key. The selected options can then be programmed by using the **A** key to increase or the **B** key to decrease the values assigned to the parameter; pressing the **ent** key accepts the new value and returns to the previous menu level. Any parameters that differ from this procedure are indicated in the following paragraphs. The parameters also prompt the engineer on which keys to press.

For example, press:

- **1** then **6** parameter **16 = Soak Test** selected;
- **ent** currently soak time is displayed along with the programmable range **07 (1–14) days**;
- **08** value of the required soak time, the display shows the new value **08 (1–14) days**;
- **ent** accept the programming and return to **16 = Soak Test** displayed.

**Assigning Parameters to Groups** Several of the parameters allow separate values to be assigned to the groups on the system. 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 using the procedure outlined in the previous example.

The parameters that permit group selection are indicated in the following paragraphs.

Parameter	Groups	Galaxy 8	Galaxy 18	Galaxy 60	Galaxy 500	Galaxy 512	
1	Bell Time	✓	✓	✓	✓	✓	
2	Bell Delay	✓	✓	✓	✓	✓	
3	Abort Time	✓	✓	✓	✓	✓	
4	Exit Time	✓	✓	✓	✓	✓	
5	Entry Time	✓	✓	✓	✓	✓	
6	System Reset	✓	✓	✓	✓	✓	
7	Tamper Reset	✓	✓	✓	✓	✓	
8	No. Re-arms		✓	✓	✓	not available	
9	Omit All		✓	✓	✓	not available	
10	Key '0'		✓	✓	✓	✓	
11	Local Part	✓	✓	✓	✓	✓	
12	Banner		✓	✓	✓	✓	
13	PA Delay	✓	✓	✓	✓	✓	
14	KEY/SW Level		✓	✓	✓	✓	
15	System Text		✓	✓	✓	✓	
16	Soak Time		✓	✓	✓	✓	
17	Restart		✓	✓	✓	✓	
18	Stop Set		✓	✓	✓	✓	
19	Part Alarm	✓	✓	✓	✓	✓	
20	Power Delay	✓		✓	✓	✓	
21	Reset Mgr.			✓	✓	✓	
22	PA reset	✓		✓	✓	✓	
23	Print Codes			✓	✓	✓	
24	Exit Alarm	✓		✓	✓	✓	
25	Global Copy			✓	✓	✓	
26	Forced			✓	✓	not available	
27	cct Debounce			✓	✓	not available	
28	Online print			✓	✓	✓	
29	Online level			✓	✓	✓	
30	Video	✓		✓	✓	✓	
31	Delay Alarm			✓	✓	✓	
32	Show Alarms			✓	✓	✓	
33	Secure Code				not available	not available	✓
34	Comfort Time				✓	✓	not available
35	Fail To Set	✓			✓	✓	✓
36	Battery Size				✓	✓	✓
37	Standby Time				✓	✓	✓
38	ATM Delay						✓
39	ATM Timeout						✓
40	Datelock						✓
41	Weekend Work						✓
42	PIN Change					✓	✓
43	Timer Access						
44	Early Open						✓

Table 6-5. System Parameters

**01 = Bell Time**  
(Galaxy 8, 18, 60, 500 & 512)

The duration of the **Bells** output activation is programmable within the range **0–30** minutes; the default is **20**. Assigning a value of **00** minutes sets the **Bell Time** to infinity.

This parameter can be assigned a different value for each group.

**02 = Bell Delay**  
(Galaxy 8, 18, 60, 500 & 512)

The delayed activation of the bell is programmable within the range **0–20** minutes; the default is **0**. The **Bell Delay** is overridden by a telecom failure (either a **Comms Fail** on the Galaxy Telecom Module or by the activation of a **Line Fail** zone used to monitor a digicom); an alarm condition in either of these conditions results in instant bells activation.

This parameter can be assigned a different value for each group.

**03 = Abort Time**  
(Galaxy 8, 18, 60, 500 & 512)

The **Abort Time** delays the activation of **Intruder** outputs during the unsetting of the system.

The abort time is initiated:

- whenever a zone that is not on the entry route (**Final**, **Entry** and **Exit** zones) is activated — a user strays from the entry route;
- a valid code is not entered before the entry time expires.

If the programmed **Abort Time** is allowed to expire, the **Intruder** outputs remain active (latched on) until a code authorised to reset the system is entered (refer to parameter **06 = System Reset**).

This parameter can be assigned a different value for each group.

**Star (\*) Features**

Pressing the \* key when assigning the **Abort Time** causes the **Intruder** outputs to activate as soon as the **Abort Time** is initiated (when a user strays from the entry route). Entry of a valid code (level 3 or above assigned to the group being unset) during the **Abort Time** cancels the alarm, unsets the group and resets the **Intruder** outputs. If a valid code is not entered during the **Abort Time**, the **Intruder** outputs remain active (latched on) until the system is reset.

If the **Abort Time** assigned is **\*000**, the **Intruder** outputs activate as soon as the entry route is strayed from, however, the **Intruder** outputs can be de-activated by entry of any valid code, without the system being reset.

**04 = Exit Time**  
(Galaxy 8, 18, 60, 500 & 512)

This parameter determines the time allowed to leave the premises via the exit route before the system time sets. The **Exit Time** is programmable within the range **0–300** seconds; the default is **120** seconds.

**Infinite Exit Time**

Assigning a value of 00 minutes sets the **Exit Time** to infinity; a 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**, an **Exit Time** of **00** causes the system to instantly set — there is no requirement for a **Push-Set** zone to be activated.

**Setting Multiple Groups**

This parameter can be assigned a different value for each group. If more than one is group is being set, the longest exit time is adopted for all setting groups.

**05 = Entry Time**  
(Galaxy 8, 18, 60, 500 & 512)

This parameter determines the entry time allowed to users when unsetting the system. The **Entry Time** is programmable within the range **0–300** seconds; the default is **120**. Assigning a value of **00** minutes sets the **Entry Time** to infinity

This parameter can be assigned a different value for each group.

**NOTE:** A **Final** zone assigned a \* when programming the function will double the programmed **Entry Time** for the group it is allocated to.

**06 = System Reset**  
(Galaxy 8, 18, 60, 500 & 512)

This option allows the engineer or the remote code to determine the code level that can reset the system following an intruder alarm. The default level is **6** — manager; the programmable range is:

- **0–7** for the engineer
- **0–8** for the remote code

This parameter can be assigned a different value for each group.

**07 = Tamper Reset**  
(Galaxy 8, 18, 60, 500 & 512)

This option allows the engineer or the remote code to determine the code levels that can reset the system following a tamper alarm. The default level is **7** — engineer; the programmable range is:

- **0–7** for the engineer
- **0–8** for the remote code

This parameter can be assigned a different value for each group.



**08 = No. Re-Arms**

(Galaxy 8, 18, 60, 500 &amp; 512)

The **No. Re-arms** parameter determines the number of alarm activations that are followed by an automatic re-arming system. The default setting is **0** (no re-arms) with a programmable range of **0 – 9**, where **9** is continuous re-arm. If the option is enabled, then the system re-arms at the end of the programmed bell time — only if all zones are closed or are open and can be omitted.

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

**NOTE:** If an open zone is not omissible, then the system will not re-arm.

**09 = Omit All**

(Galaxy 8, 18, 60, 500 &amp; 512)

The re-arm option omits any omissible zones that are open at the end of the bell time. The **Omit All** option, when set to **1** (enabled), omits any omissible zones that have been activated during the alarm condition; the default is **0** (disabled). The complete zone circuit including tamper is omitted. Refer to menu option **52 = PROGRAM ZONES** for details on enabling the zone omit attribute.

## Galaxy 512

This option is not available.

**10 = Key 0**

(Galaxy 8, 18, 60, 500 &amp; 512)

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

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

**11 = Local Part**

(Galaxy 8, 18, 60, 500 &amp; 512)

When the **Local Part** parameter is set to **0** (disabled — default setting) the **Intruder** outputs are disabled when the system is part set; the programmed bell delay is overridden. This 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** then the part setting and unsetting of the system is not signalled to the ARC.

This parameter can be assigned a different value for each group

**12 = Banner**

(Galaxy 8, 18, 60, 500 &amp; 512)

This option can be used to customise both 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 B selects alphabet character/words;
- 000–500 selects alphabet character or words;
- ent positions selected characters/words;
- esc accepts the programming and returns to the previous level; exits from the option.

The banner is displayed whenever any group on the system is unset.

**13 = PA Delay**

(Galaxy 8, 18, 60, 500 &amp; 512)

This parameter determines the delay between the activation of a **PA Delay** or **PA Delay Silent** zone and the alarm sounding. The **PA Delay** is programmable within the range **1–60** seconds; the default is **60**.

This parameter can be assigned a different value for each group.

**14 = Key/SW Level**

(Galaxy 8, 18, 60, 500 &amp; 512)

This parameter assigns a code level to zones programmed as **Keyswitch**. The **Keyswitch** zone can be used to reset system, tamper and PA alarms — depending on the reset level assigned to each of these parameters. The default level is **6** — manager; the programmable range is:

- 0–7 for the engineer
- 0–8 for the remote code

**15 = System Text**

(Galaxy 8, 18, 60, 500 &amp; 512)

This parameter allows two text strings to be assigned to the system: press **1** to select the **System ID** or **2** to select the **Panel Location**.

1. **System ID** — 8 character identification of system;
2. **Panel Location** — 16 character message of where control is fitted.

The text is written using the alpha-numeric assembly method:

- \* erases characters;
- # selects upper case, lower case or library;
- A B selects alphabet character/words;
- 000–500 selects alphabet character or words;
- ent positions selected characters/words;
- esc accepts the programming and returns to the previous level; exits from the option.

**16 = Soak Time**

(Galaxy 8, 18, 60, 500 &amp; 512)

This parameter determines the number of days that zones can be soak tested for; the programmable range is **1 – 14** days; the default is **7**.

- 17 = Restart**  
(Galaxy 8, 18, 60, 500 & 512)
- This parameter re-configures the system without the need to remove and reconnect the power. The system displays **WARNING!!! ent=RESET SYSTEM**, press the **ent** key 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.
- NOTE:** This parameter exits engineer mode.
- 18 = Stop Set**  
(Galaxy 8, 18, 60, 500 & 512)
- This parameter, when set to **1** (enabled), prevents the system from setting if there is a line fail or a mains 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, then the system can not be set until the zone is closed or omitted. The **Stop Set** parameter is set to **0** (disabled) by default.
- 19 = Part Alarm**  
(Galaxy 8, 18, 60, 500 & 512)
- When the **Part Alarm** parameter is set to **1** (enabled — default setting) the **Bells** and **Strobe** outputs activate if an alarm condition occurs when the system is part set.
- When the **Part Alarm** parameter is set to **0** (disabled) the **Bells** and **Strobe** outputs are disabled when the system is part set.
- NOTE:** The **Horn**, **Entry/Exit** and **Intruder** outputs are not affected by this parameter.
- This parameter can be assigned a different value for each group.
- 20 = Power Delay**  
(Galaxy 18, 60, 500 & 512)
- This parameter determines the delay between the activation of **AC Fail** outputs following a mains failure to allow the power to return before signalling the fault. The **Power Delay** is programmable within the range **0–50** minutes; the default is **10**.
- This parameter can be assigned a different value for each group.
- 21 = Reset MGR**  
(Galaxy 18, 60, 500 & 512)
- This parameter should only be used if the Master Manager code is lost or must be replaced. On selecting the **Reset MGR** parameter, a warning message is displayed: **WARNING!!! ENT=Code Change**; press the **ent** key to erase current code and reset it to the default of **1234**.
- Galaxy 512**
- The manager code (**User 198**) can only be reset by the remote code (**User 200**).

**22 = PA Reset**

(Galaxy 18, 60, 500 &amp; 512)

This option allows the engineer or the remote code to determine the code level that can reset the system following a PA activation. The default level is **6** — manager; the programmable range is:

- **0–7** for the engineer
- **0–8** for the remote code

This parameter can be assigned a different value for each group.

**23 = Print Codes**

(Galaxy 18, 60, 500 &amp; 512)

The **Print Codes** option, when set to **1** (enabled), allows the manager to print a list of the PINS for each of the users. The option defaults to **0** (disabled).

**24 = Exit Alarm**

(Galaxy 18, 60, 500 &amp; 512)

If the **Exit Alarm** parameter is set to **1** (enabled), any zone other than **Final**, **Exit**, **Entry** or **Push-Set** (or **Secure Final** or **Part Final** when acting as a **Final**) that is opened during the exit time causes a full alarm condition to be activated. The default is **0** (disabled).

**NOTE:** This option must be used only when specified.

This parameter can be assigned a different value for each group.

**Galaxy 512**

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**.

**25 = Global Copy**

(Galaxy 18, 60, 500 &amp; 512)

The **Global Copy** parameter changes all zones within the selected range to the function of the first zone in the range. On selection of the parameter, a warning message is displayed indicating that the zone functions will be altered — **WARNING!!! ENT=ZONECHANGES:** press the **ent** key to continue or the **esc** key to abort the programming. The address and function of the first zone on the system are displayed:

- **Copy Start:** Use the **A** or **B** key to select the first zone in the range to be copied and press the **ent** key. The function of this zone will be copied to all subsequent zones in the range;
- **Copy End:** Use the **A** key to move to the last zone in the range to be copied.
- Press the **ent** key to copy the zone function to the selected range.

**26 = Forced**  
(Galaxy 18, 60, 500 & 512)

The **Forced** parameter enables or disables option **14 = FORCED SET**. If the parameter is set to **1** (enabled) the user can force the system to set, automatically omitting any omissible zones that are open at the time of setting. If the parameter is set to **0** (disabled), option **14 = FORCED SET** is not available to the user; the message **Option not available** is displayed. The parameter defaults to **0** (disabled).

**NOTE:** It is recommended that **Final, Entry** and **Push-Set** zones have the omit attribute disabled.

## Galaxy 512

This option is not available.

**27 = CCT Debounce**  
(Galaxy 18, 60, 500 & 512)

The **cct Debounce** parameter determines the response time of the zones (how long they must remain open before registering as changing state). The **cct Debounce** is programmable within the range **60–1000** milliseconds (**0.06–1** second); the default is 300 msecs. All entries are rounded up to the nearest 20 msecs.

**28 = Online Print**  
(Galaxy 18, 60, 500 & 512)

This parameter is used to select the print mode required when connecting a serial printer to the Galaxy panel; there are two options:

- **0 = disabled** (default): system only prints specific details at the user's request. The printer can be connected and disconnected at any time as required;
- **1 = enabled**: this option switches the printer to **on-line** mode and requires that a printer be continuously connected to the system. Events are printed as and when they occur. The events printed are controlled by parameter **29 = Online Level**.

**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.

**29 = Online Level**  
(Galaxy 18, 60, 500 & 512)

The **On-line Level** parameter determines the level of events that are printed when parameter **28 = Online Print** 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.

**NOTE:** If **Online Level** is set to **1** (exclude MAX events), then all MAX events are recorded in the log; if **2** (include MAX events) is selected, then the MAX events are not recorded in the event log.

**30 = Video**

(Galaxy 18, 60, 500 &amp; 512)

This parameter determines 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 **1–9** activations; the default is **2**. The Galaxy 8 is fixed at **2** activations. 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.

This parameter can be assigned a different value for each group.

**31 = Delay Alarm**

(Galaxy 18, 60, 500 &amp; 512)

This parameter determines the delay between the activation of an **Intruder Delay** zone and the alarm sounding or a **Log Delay** zone being recorded as opening in the event log. The **Delay Alarm** is programmable within the range **0–3000** seconds; the default is **60**.

If a second **Intruder Delay** zone opens followed by the first zone closing, the **Delay Alarm** time continues to count from the activation of the first zone. The **Delay Alarm** timer is reset only when all delay type zones return to the closed state.

This parameter can be assigned a different value for each group.

**32 = Show Alarms**

(Galaxy 18, 60, 500 &amp; 512)

If the **Show Alarms** parameter is enabled, the first alarm activation is immediately displayed on all the keypads when an alarm condition occurs. Normally alarm messages are not displayed until the alarm is cancelled by entry of a valid code.

- **0 = disabled** (default) — alarms displayed only on valid code entry;
- **1 = enabled** - instant display of first alarm activation.

**33 = Secure Code**

(Galaxy 512)

Once this parameter has been selected, the engineer code is randomly changed each day at 08:00 hours. The service engineer must be informed of the “code of the day” by head office. The random code that is generated 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 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.

Select **1** to enable **Secure Code**, or **0** to disable the parameter; the default is **0** (disabled).

**34 = Comfort Time**  
(Galaxy 60, 500 & 512)

The **Comfort Time** parameter permits a period of time to be allocated when the values assigned to the entry and abort time parameters and the number of wrong code attempts are doubled; the programmable range is **0–14** days; the default is **0**. This allows new or unfamiliar users to become accustomed to the system without causing false alarm activations. At the end of the **Comfort Time** the system returns all the affected parameters to the programmed values.

**35 = Fail To Set**  
(Galaxy 60, 500 & 512)

This parameter determines the period of time that a zone must remain open, following the start of the setting procedure, before the **Fail Set** outputs activate. The programmable range is **0–600** seconds; the default is **360**.

**NOTE:** The **Fail To Set** countdown time begins as soon as the setting procedure is started.

This parameter can be assigned a different value for each group.

**36 = Battery Size**  
(Galaxy 60, 500 & 512)

Enter the size of the standby battery on the SmartPSU that is connected to the Galaxy panel. The programmable range is **0–99**Ah; the default is **0**.

**NOTE:** The **Battery Size** should only be entered if a SmartPSU is being used to supply power to the Galaxy panel.

**37 = Standby Time**  
(Galaxy 60, 500 & 512)

Enter the value (in hours) that the system is required to run on standby battery if there is a mains fail. The programmable range is **0–99** hours; the default is **0**.

**NOTE:** The **Standby Time** should only be entered if a SmartPSU is being used to supply power to the Galaxy panel.

The SmartPSU calculates the battery run time from the programmed **Battery Size** (parameter **36**) and the load current. If the programmed **Standby Time** exceeds the calculated battery run time, a **STANDBY TIME LOW** message is displayed on the keypad on attempting to exit engineer mode. Exiting engineer mode is prevented until a **Standby Time** that is less than the calculated battery time is entered or a larger battery is installed in the system and the new battery size is entered in the **Battery Size** parameter.

**38 = ATM Delay**  
(Galaxy 512)

This parameter determines the period of time before the selected **ATM** zone type is omitted following the entry of one of the **ATM** codes (**User 188–197**). The programmable range is **0–30** minutes; the default **ATM Delay** is **5**.

**39 = ATM Timeout**  
(Galaxy 512)

This parameter determines the period of time that the selected **ATM** zone type is omitted following the entry of one of the **ATM** codes (**Users 188–197**). The programmable range is **1–90** minutes; the default **ATM Timeout** is **30**.

**40 = Datelock**  
(Galaxy 512)

This parameter is used to enable or disable menu option **49 = DATELOCK**; the parameter can be set to one of the three following options:

- **0 Disabled** (default setting): the **Datelock** menu option is not available to the user; the message **Option not available** is displayed.
- **1 Enabled**: the **Datelock** prevents the system from being manually unset until the **Lockout** time has expired (refer to option **65 = TIMERS**);
- **2 Dual Unlock**: following an alarm activation, two level 2 (or above) codes, assigned to all groups, can unset the system before the **Lockout** time expires.

**41 = Weekend Work**  
(Galaxy 512)

This parameter is used to enable or disable menu option **45.4 = TIMER CONTROL.Weekend Work**. If the parameter is set to **1**, the engineer can assign a **Pattern Day** and the user can authorise **Weekend Working**. If the parameter is set to **0** (disabled — default setting), the message **Option not available** is displayed on selecting the **Weekend Work** menu option..

**42 = PIN Change**  
(Galaxy 500 & 512)

This parameter defines the expiry period of user codes allocated the **PIN Change** attribute (refer to option **42 = CODES**). The **PIN Change** parameter is programmable within the range **0–12** months; the default is **0**. The user PIN must be changed before the assigned **PIN Change** month ends. On entering the expiring user code a warning that the code is due to expire and a prompt to assign a new code is given to the user. The period of this warning message is determined by the **PIN Warning** option (refer to menu option **42.3 = CODES. PIN Warning**).

The default value is **0** — this means that although codes have been allocated the expiry attribute, they do not expire.

**43 = Timer Access**

Option not available.

**44 = Early Open**  
(Galaxy 512)

This parameter determines the number of minutes before the **Lockout OFF** time that the system can be manually unset when the **Early Open** option (refer to menu option **45 = TIMERS**) is switched on. The **Early Open** parameter is programmable within the range **0–240** minutes; the default is **0**.



## Option 52 — Program Zones

This option is used by the engineer to modify the programming of the zones on the system. The option also allows the attributes of the zone to be changed. The programmable options are:

Attributes		Description
1	Function	assign zone type
2	Description	16 character (max.) alpha-numeric description
3	Chime	enabled = momentarily chime effect if zone opened while unset
4	Omit	enabled = zone can be omitted
5	Part	enabled = zone included in part setting of system
6	Group	assign zone to a single group on the system
<b>Note:</b> Groups only appear if the Group option is enabled (refer to option 63.1 = OPTIONS.Groups).		

**Table 6-6. Zone Attributes**

## Selecting Zones

On entering the option, the first zone on the system is displayed; the zone address, function and group assigned are displayed on the top line, the descriptor is displayed on the bottom line. Pressing the # key toggles 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**.

From the display of the first zone, any zone on the system can be displayed by pressing the **A** or **B** keys or by entering the address of a specific zone.

**NOTE:** For direct zone address selection the Galaxy 8, 18 and 60 only require the last two digits of the zone address to be entered; the Galaxy 500 and 512 require a four digit address to be entered.

The zone is selected for programming by pressing the **ent** key; the first zone programming attribute **1=Function** is displayed.

## Attributes

The attributes can be stepped through by pressing the **A** or **B** keys or directly selected by pressing the attribute number (**1–6**). Once the required attribute is on display, press the **ent** key to gain access for modification.

Once the attribute has been assigned press the **ent** key to save the programming and return to the attribute selection level.

Pressing the **esc** key at any time when assigning attributes **1** and **3–5** to a zone aborts the programming and returns to the attribute selection level. Pressing the **esc** key when assigning a descriptor to a zone saves the assigned alphanumeric text and returns to the attribute selection level.

### 1 = Function

Entering the **Function** attribute displays the address and the current function of the selected zone along with the zone function reference number. The zone functions can be stepped through, forwards or backwards, using the **A** and **B** keys. Alternatively a zone function can be directly selected by entering the zone function reference number, for example, entering the **19** displays zone function **19 = FIRE**.

Once the required zone function is displayed, it is assigned to the zone by pressing the **ent** key.

### 2 = Descriptor

Each zone can be assigned with an alpha-numeric descriptor of up to 16 characters. This descriptor is assembled from the character set and/or library options. On selecting the **Descriptor** attribute, the currently assigned descriptor (blank by default) 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 the **\*** key to erase the characters already assigned to the descriptor.

The **A** or **B** keys can be used 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 the **ent** key to copy the character to the descriptor in the top line. Repeat this procedure to assemble the required zone descriptor.

### Text Case and Library

On entering the **Descriptor** attribute the alpha-numeric characters are all presented in upper case. Pressing the **#** key toggles the characters to lower case.

Pressing the **#** key when the lower case alphanumeric characters are displayed toggles to the library words. The words can be viewed using the **A** or **B** keys or directly selected using the reference number — refer to **Appendix A — Library**. When the required word is displayed, press the **ent** key to copy it to the descriptor.

**NOTE:** Library words are a maximum of 12 characters and upper case only.

### 3 = Chime

If the **Chime** attribute is set to **1** (enabled) the zone will chime momentarily whenever it is opened while the system is unset. The **Chime** attribute defaults to **0** (disabled) for all zone functions.

The **A** or **B** keys can be used to toggle the status of the **Chime** attribute — pressing **1** or **0** will also select the required status; press the **ent** key to accept the programming.

**NOTE:** The **Chime** option (full menu option **15**, quick menu option **2**) must be enabled if the zones are to chime when opened.

**4 = Omit**

If the **Omit** attribute is set to **1** (enabled) the zone can be omitted from the system by using one of the omit functions (**11 = OMIT ZONES**, **14 = FORCED SET**, **46 = GROUP OMIT**). The **Omit** attribute defaults to **0** (disabled) for all zone functions.

The **A** or **B** keys can be used to toggle the status of the **Omit** attribute — pressing **1** or **0** will also select the required status; press the **ent** key to accept the programming.

**Galaxy 512**

Only one zone can be omitted at any one time on the Galaxy 512. The only exception to this is the **Vibration** zone function; selecting a single **Vibration** zone automatically omits all **Vibration** zones on the system — irrespective of the group that each is assigned to.

**5 = Part**

If the **Part** attribute is set to **1** (enabled) the zone will be included in the setting procedure when one of the part setting options is used to set the system (**13 = PART SET**, **17 = INSTANT PART**). The **Part** attribute defaults to **1** (enabled) for all zone functions except zones programmed as **09 = Keyswitch**.

The **A** or **B** keys can be used to toggle the status of the **Part** attribute — pressing **1** or **0** will also select the required status; press the **ent** key to accept the programming.

**6 = Group  
(Galaxy 18, 60, 500 & 512)**

**NOTE:** The **Groups** attribute is only available if groups have been enabled on the system (refer to option **63 = OPTIONS**)

The **Group** attribute allows the zone to be assigned to a single group on the system. All zones default to **Group 1**.

On selecting the **Group** attribute, the group that the zone is currently assigned to is displayed. All zones default to group 1. Press the number of the group that the zone is to be reassigned to and press the **ent** key.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:

Use the **A** or **B** key to select the required group (**A1–D8**). When the end of a block is reached, the next block of eight groups is displayed; use keys **1–8** to assign the relevant group in the current block to the zone; press the **ent** key to accept the selection.

**Star (\*) Group Function**

Certain zone functions have an additional **Group** attribute feature that allows the other groups to be affected by their operation. This feature is assigned by pressing the \* key when allocating the group to the zone.

On pressing the \* key 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 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 these zone functions.

**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 zone function.

**System Alarms**

The Galaxy panels have tamper and alarm monitoring circuits which are not programmable. These circuits maintain the integrity of the system and all correspond to **Group 1**.

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 6-7. Control Panel Alarms**

## Zone Functions

Zone Function		Galaxy 8	Galaxy 18	Galaxy 60	Galaxy 500	Galaxy 512
01	Final	✓	✓	✓	✓	✓
02	Exit	✓	✓	✓	✓	✓
03	Intruder	✓	✓	✓	✓	✓
04	24 Hours	✓	✓	✓	✓	✓
05	Security	✓	✓	✓	✓	✓
06	Dual	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓
17	Link	✓	✓	✓	✓	✓
18	Spare	✓	✓	✓	✓	✓
19	Fire	✓	✓	✓	✓	✓
20	Tamper	✓	✓	✓	✓	✓
21	Bell Tamper	✓	✓	✓	✓	✓
22	Beam Pair	✓	✓	✓	✓	✓
23	Battery Low	✓	✓	✓	✓	✓
24	Line Fail	✓	✓	✓	✓	✓
25	AC Fail	✓	✓	✓	✓	✓
26	Loss	✓	✓	✓	✓	✓

Table 6-8. Available Zone Functions per Galaxy Panel

Zone Function		Galaxy 8	Galaxy 18	Galaxy 60	Galaxy 500	Galaxy 512
27	Remote Access	✓	✓	✓	✓	✓
28	Video	✓	✓	✓	✓	✓
29	Video Exit	✓	✓	✓	✓	✓
30	Intruder Delay	✓	✓	✓	✓	✓
31	Log Delay	✓	✓	✓	✓	✓
32	Set Log	✓	✓	✓	✓	✓
33	Custom-A			✓	✓	✓
34	Custom-B			✓	✓	✓
35	Exitguard			✓	✓	✓
36	Mask			✓	✓	✓
37	Urgent			✓	✓	✓
38	PA Unset			✓	✓	✓
39	Keyswitch Reset			✓	✓	✓
40	Not Used					
41	Not Used					
42	Not Used					
43	Not Used					
44	Not Used					
45	Not Used					
46	Not Used					
47	Vibration					✓
48	ATM-1					✓
49	ATM-2					✓
50	ATM-3					✓
51	ATM-4					✓
52	Alarm Extend					✓

**Table 6-8. Available Zone Functions per Galaxy Panel (contd.)**

**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 the \* key when programming a **Final** zone doubles the entry time of the group.

Opening a **Final** zone during the exit time is not 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 the \* key 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 not 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 the \* key 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 authorised for **System Reset** — refer to option **51.6 = PARAMETERS.System Reset**.

All zones (except zone 1001 and 1002 on the Galaxy 8, 18 & 60) are programmed as **Intruder** by default; this includes the zones on RIOs that are added to the system at a later date.

**04 24 Hours**

The **24 Hours** zone function is continuously operational. In the unset state, activation of the zone function generates a local alarm condition (the **Intruder** outputs are not activated). If the zone is activated while the system is set, the **24 Hours** function operates the same as an **Intruder** function and results in a full alarm condition. The **24 Hours** zone function requires a system reset following an activation in both the set and unset conditions.

**05 Security**

The operation of the **Security** zone function is identical to the **24 Hours** zone function, except a **Security** zone activation in the unset generates a local alarm (**Horn** outputs activated) that does not require a system reset; any valid code (level 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.

**06 Dual (Double Knock)**

The operation of the **Dual** (Double Knock) function is identical to the **Intruder** function, with the exception that an alarm condition is activated only when there have been two activations from any **Dual** zones (assigned to the same group) within a 20 minute period while the system is set.

**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 the \* key when programming an **Entry** zone doubles the entry time of the group.

Opening an **Entry** zone during the exit time is not reported on the keypad as an open zone; 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 the button is pressed; 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 1k $\Omega$  going to 2k $\Omega$  or 2k $\Omega$  to 1k $\Omega$  — refer to **System Architecture** for wiring details. The first time that the **Push Set** is used to terminate the setting, the button will require to be pressed 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; 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 the \* key when assigning a group to the zone. Refer to the **Star \* Group Function**.



## 09 Keyswitch

The **Keyswitch** function allows a zone to be used 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, therefore the exit time is applicable. The system sets when the exit time expires or a **Final** or **Push Set** is activated. If the system is set, operating a **Keyswitch** immediately unsets the assigned groups; there is no entry time countdown.

The **Part** attribute of the **Keyswitch** function defaults to **0** (disabled); the standard **Keyswitch** function full sets the system. To part set the system using the **Keyswitch**, the **Part** attribute must be enabled.

**NOTE:** The operation of a **Keyswitch** zone can be extended to the setting and unsetting of multiple groups by pressing the \* key 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 1k $\Omega$  to 2k $\Omega$  to both set and unset the system. If the **Keyswitch** connected has a latching mechanism, press the \* key when assigning the function; the display indicates **09=\*KEYSWITCH** has been assigned. The \***Keyswitch** operation is as follows: 1k $\Omega$  to 2k $\Omega$  sets the system; 2k $\Omega$  to 1k $\Omega$  unsets the system.

The **Keyswitch** function can also be programmed to reset alarms — to option **51.22 = PARAMETERS.Keyswitch Level**. If the **Keyswitch** is assigned a sufficient level 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 depending on whether the system is set or unset. When the system is setting, set or unsetting the operation is identical to the **Final** zone function. When the system is unset the operation is identical to the **Security** zone function.

Pressing the \* key when programming a **Secure Final** zone doubles the entry time of the group.

Opening a **Secure Final** zone during the exit time is not reported on the keypad as an open zone; 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 the \* key when assigning a group to the zone. Refer to the **Star \* Group Function**.

**11 Part Final**

This zone has dual functionality depending on whether the system is full set or part set. When the system is full set the zone operation is identical to the **Final** zone function. When the system is part set the zone operation is identical to the **Intruder** zone function.

Pressing the \* key when programming a **Part Final** zone doubles the entry time of the group.

Opening a **Part Final** zone during the exit time is not reported on the keypad as an open zone; the **Entry/Exit Horns** bleep rapidly to indicate that the zone is open.

The termination feature of a **Part Final** zone can be extended to terminate the part setting of multiple groups by pressing the \* key when assigning a group to the zone. Refer to the **Star \* Group Function**.

**12 Part Entry**

This zone has dual functionality depending on whether the system is full set or part set. When the system is full set the zone operation is identical to the **Exit** zone function. When the system is part set the zone operation is identical to the **Entry** zone function.

Pressing the \* key 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 that requires to be reset with a code authorised for **PA Reset** — refer to option **51 = PARAMETERS**; the **Intruder** outputs are not activated by **PA** zones.

**NOTES**

1. 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.
2. The tamper facility on the **PA** zone remains active while engineer mode is accessed.
3. **Galaxy 512 only** — engineer mode cannot be exited if a **PA** zone is open.

**14 PA Silent**

The **PA Silent** function is identical to the **PA** function, with the exception that there is no audible or visual 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. The tamper facility on the **PA** zone remains active while engineer mode is accessed.
3. **Galaxy 512 only** — 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; this is determined by option **51.13 = PARAMETER.PA Delay**. 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.

**NOTES**

1. 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.
2. The tamper facility on the **PA** zone remains active while engineer mode is accessed.
3. **Galaxy 512 only** — engineer mode cannot be exited if a **PA Delay** zone is open.

**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 visual 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 is recorded in the event log.

**NOTES**

1. At the time of setting, any **PA Delay Silent** zones that are currently open are reported to the user.
2. The tamper facility on the **PA** zone remains active while engineer mode is accessed.
3. **Galaxy 512 only** — engineer mode cannot be exited if a **PA Delay Silent** zone is open.

**17 Link**

This zone type has no operational function; it is designed to be used as a source of a link — refer to option **54 = LINKS**. The activation (+) and de-activation (–) of **Link** zones is recorded in the event log.

**NOTE:** Option **54 = LINKS** is not available on the Galaxy 8.

**18 Spare**

The **Spare** function allows any zones that are not being used to be ignored by the system; the resistance readings from the circuit — including the tamper conditions — do not activate an alarm condition.

**NOTE:** It is recommended that all unused zones are programmed as **Spare** and that a 1k $\Omega$  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 (1k $\Omega$  to 2k $\Omega$ ), a tamper alarm is generated; this requires to be reset by a code authorised for **Tamper Reset** — refer to option **51.7 = PARAMETERS.Tamper Reset**. If a tamper condition (open or short circuit) occurs, a tamper alarm is also generated.

**21 Bell Tamper**

This function is identical to the operation of the **Tamper** function but is dedicated to bells, sirens and other modules or output devices requiring tamper protection.

**22 Beam Pair**

This function is only operational when two consecutively addressed zones programmed as **Beam Pair** are open in the set condition; the 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; the first **Beam Pair** zone must have an even number address, the second **Beam Pair** must have the next address (an odd number). For example, valid **Beam Pair** addresses are **1036 & 1037, 2018 & 2031** — in this case, RIO **203** has not been connected, therefore zone **2031** is the next address to **2018**.

**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**

The **Line Fail** function is used to monitor the telephone 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 **TELECOM 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; on unsetting the system a local alarm is generated and the keypad gives an indication that **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 Power Fail**

This function is used to monitor a remote power supply. In the event of a power failure the **Power 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.

**27 Remote Access**

This function is used to disable remote servicing of the Galaxy panel. When the **Remote Access** zone is active the Galaxy Gold software is prevented from gaining access to the Galaxy panel.

**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 **1–9** (Galaxy is fixed at 2 activations). 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**

The **Video Exit** 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.

**30 Intruder Delay**

The **Intruder Delay** function is identical to the **Intruder** function, with the exception that the full alarm activation can be delayed for up to 40 minutes (0–3000 seconds); this is determined by the **Delay Alarm** parameter (option **51.31**). The **Intruder Delay** zone must remain open for the period of the **Delay Alarms** parameter; while the zone is open the **Entry/Exit Horns** activate to remind the user that the **Delay Alarms** is counting down. Unsetting the system or closing the **Intruder Delay** zone aborts the alarm and resets the timer.

If a second **Intruder Delay** zone opens followed by the first zone closing, the **Delay Alarm** time continues to count from the activation of the first zone. The **Delay Alarm** timer is reset only when all delay type zones return to the closed state.

**31 Log Delay**

The **Log Delay** function operation is identical to the **Log** function, with the exception that the recording of the zone activation can be delayed for up to 40 minutes (0–3000 seconds); this is determined by the **Delay Alarm** parameter (option **51.31**). Closing the **Log Delay** zone resets the timer and aborts the recording of the event in the log.

**32 Set Log**

The **Set Log** 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**

The **Custom A** 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 menu option **64 = ASSEMBLE ZONE**. 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**.

**35 Exit Guard**

The **Exitguard** function allows a zone to be used to omit other zones on the system. This is useful for permitting access via doors programmed as **24 Hours** or **Security**.

The **Exitguard** zone must be the source of a link (refer to option **54 = LINKS**); the destination of the **Exitguard** link is either a zone address or an output type.

When opened, the **Exitguard** omits the zone entered as the link destination; an alarm is not activated if the **Exitguard** zone is open while a zone that it is omitting is open. If the destination zone is opened while the **Exitguard** zone is closed, an alarm activation occurs; opening the **Exitguard** omits the zone and silences the output types assigned to the link destination. Closing the **Exitguard** zone while the destination zone is still open does not result in an

alarm activation; closing the destination zone deactivates the link and returns the zone to its normal operation.

**NOTE:** The **Exitguard** function cannot be used as a link source to activate a link destination output.

Link	Source	Destination
1	Zone = 1014	Zone = 1015
2	Zone = 1015	Output = Link A
3	Zone = 1014	Output = Link A

- Programming Example:**
- Zone 1014 = An on/off keyswitch programmed as **Exitguard**.
  - Zone 1015 = A door contact programmed as **Security**.
  - Output type **Link A** = An output wired to a local horn and programmed as **Link A**.

**Operation:** The **Security** door contact (**1015**) can be omitted at any time by operating the **Exitguard** keyswitch (1014). If the door (1015) is opened without first being omitted, then the **Link A** horn activates and needs to be reset by operating the keyswitch (1014).

### 36 Mask

The **Mask** function is designed to be used with detectors capable of reporting that their field of view has been blocked or masked. The **Mask** function is identical to the **Security** function, with the exception that the **Mask** output is activated instead of **Security**.

### 37 Urgent

The **Urgent** function is continuously operational; it is identical to the **Intruder** function, with the exception that it activates a full alarm condition (including the Intruder outputs) in any set or unset condition.

### 38 PA Unset

This **PA Unset** function is identical to the **PA Silent** function, with the exception that it is only operational when the system is unset; the function is inactive when the group is set.

### 39 Keyswitch Reset

The **Keyswitch Reset** function allows alarms to be cancelled and the system to rearm without unsetting the Galaxy. The level of reset authorisation is determined by the **Keyswitch Level** (option **51.14**). The level required to reset **Intruder**, **PA** and **Tamper** alarms is determined by the **System Reset**, **Tamper Reset** and **PA Reset** parameters (option **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.

**47 Vibration**

The **Vibration** function is continuously operational and is designed for use with vault sensors. **Vibration** zones can be block omitted using menu option **11 = Omit Zones**. If the zone selected to be omitted from the system is a **Vibration zone**, then all zones programmed with this function are omitted.

**NOTES**

1. All **Vibration** zones in all groups are omitted when any **Vibration** zone is omitted. The user code does not have to have access to all of the groups.
2. **Vibration** zones remain omitted until a single **Vibration** zone is manually reinstated. The unsetting of the system does not reinstate omitted **Vibration** zones.

**48–51 ATM-1, ATM-2, ATM-3 & ATM-4**

The Galaxy 512 has four **ATM** (Automatic Teller Machine) zone types. These zone functions are continuously operational and are designed for the special maintenance and restocking requirements of ATM's

A single **ATM** zone type can be omitted for the duration of the period entered in the **ATM Timeout** parameter (option **51.39**) The **ATM Delay** parameter (option **51.38**) determines the delay before the selected **ATM** zones are omitted once selected by an ATM code (**User 188–197**). Each of the zones **ATM-1** to **ATM-4** zones activates a corresponding **ATM** output.

**NOTE:** The relevant **ATM** outputs are activated as soon as the **ATM** zone is selected, not when the **ATM Delay** expires.

On entering an ATM code, the system prompts for one of the **ATM** zone types to be selected; to select the **ATM** zone type to be omitted use the **A** or **B** key or enter the number of the **ATM** zone type. Once the zone is selected, the keypad indicates the **DELAY ACCESS** — the number of minutes remaining until the **ATM** zones are omitted. Once the zone is omitted, the initiating keypad indicates the **ACCESS TIMEOUT** —the number of minutes remaining until the selected ATM zones are reintroduced to the system. The **Entry/Exit Horns** sound a warning ten and five minutes before the zones are reinstated.

The omitted **ATM** zone type can be reinstated at any time, or the omit period can be extended by the ATM user code. Enter the ATM code and press the **ent** key; the system prompts for **1 = RESET ACCESS** or **2 = ABORT ACCESS**. Press **2** to restart the **ATM Timeout** or **1** to reinstate the omitted **ATM**'s.

**NOTE:** Only one ATM zone type may be omitted at any time.

**49 ATM-2**

Refer to the **ATM-1** function.

**50 ATM-3**

Refer to the **ATM-1** function.

**51 ATM-4**

Refer to the **ATM-1** function.



### 52 Alarm Extend

The **Alarm Extend** function is identical to the **Urgent** function, with the exception that if the zone is open (and has not been previously omitted) at the end of the bell duration (refer to option **51.1 = PARAMETERS.Bell Time**) it immediately activates another full alarm condition. **Alarm Extend** zones can only be omitted by option **11 = OMIT ZONES**.

## Option 53 — Program Outputs

This option is used by the engineer to modify the programming of the outputs on the system. The option also allows the attributes of the outputs to be changed. 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 (001 – 300 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	Output Groups	assign groups to the output.
Note: Groups only appear if the Group option is enabled (refer to option 63.1 = OPTIONS.Groups).		

**Table 6-9. Output Attributes**

## Selecting Outputs

On entering the option, the first output on the system is displayed; the output address, function and mode are displayed on the top line, the polarity and assigned groups are displayed on the bottom line.

From the display of the first output, any output on the system can be displayed by pressing the **A** or **B** keys or by entering the address of a specific output.

**NOTE:** For direct output address selection the Galaxy 8, 18 and 60 only require the last two digits of the zone address to be entered; the Galaxy 500 and 512 require a four digit address to be entered.

The output is selected for programming by pressing the **ent** key; the first output programming attribute **1=Op Function** is displayed.

## 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 addresses of the keypads on each of the panels and the respective output addresses are indicated in the following table:

Panel	Line	Address	Output Address
8, 18 & 60	1	0 – 9 & A – F	* 00 – * 15
500 & 512	1	0 – 4, D, E & F	* 10 – * 14 * 17 * 18 * 19
	2	0 – 6 & F	* 20 – * 26 & * 29
	3	0 – 6 & F	* 30 – * 36 & * 39
	4	0 – 6 & F	* 40 – * 46 & * 49

**Table 6-10. Addresses of Valid Keypad Outputs**

**NOTE:** Keypad addresses D, E and F on line 1 are reserved for the RS232 module, Telecoms module and Engineer keypad but can be used for keypads if these modules are not connected.

**Control Horn ( \*99)**

The control unit horn output — addressed as \*99 — is fully programmable.

**NOTE:** The Galaxy 8 does not have an on-board horn output.

**Attributes**

The attributes can be stepped through by pressing the **A** or **B** keys or directly selected by pressing the attribute number (**1–4**). Once the required attribute is on display, press the **ent** key to gain access for modification.

Once the attribute has been assigned press the **ent** key to save the programming and return to the attribute selection level. Pressing the **esc** key at any time when assigning attributes aborts the programming and returns to the attribute selection level.

**1 = Output Function**

Entering the **Output Function** attribute displays the address and the current function of the selected output along with the output function reference number. The output functions can be stepped through, forwards or backwards, using the **A** and **B** keys. Alternatively, a function can be directly selected by entering the function reference number, for example, entering **16** displays output function **16 = FIRE**.

Once the required output function is displayed, it is assigned to the output by pressing the **ent** key.

**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 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 (1-300 seconds).

**Programming Mode**

Select the required mode using the **A** or **B** keys or by selecting the number **1 – 3**. Once the required mode is on selected, press the **ent** key to accept the programming. If assigning the **Pulse** output mode, enter the pulse time (001 – 300 seconds) and press the **ent** key.

**3 = Output Polarity**

The **Output Polarity** determines 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 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 = Output Groups  
(Galaxy 18, 60, 500 & 512)**

**NOTE:** The **Groups** attribute is only available if groups have been enabled on the system (refer to option **63 = OPTIONS**)

The **Group** attribute allows the output to be assigned to the groups on the system; an output can be assigned to more than one group. All outputs default to all groups on the system

On selecting the **Output Groups** 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 the **ent** key; if the group number is displayed on the top line, then the group is assigned to the output; if a dash (–) appears in place of the group number, the group has been removed from the output.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:

Group Block	Physical Groups
A1–8	1–8
B1–8	9–16
C1–8	17–24
D1–8	25–32

Use the **A** or **B** key to select the required group (**A1–D8**). When the end of a block is reached, the next block of eight groups is selected; press keys **1–8** to toggle the status of the relevant group in the current block to the output; press the **ent** key to accept the selection.

**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 the \* key when selecting the groups: an arrow (>) is displayed on the bottom line as well as the current **Status**. Press the relevant number keys to toggle the status of the groups and press the **ent** key 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**

The following table shows all the outputs and the zone functions and conditions that result in their activation.

Output Functions		Output Functions													
		Bells	Strobe	PA	Intruder	Tamper	24 Hours	Reset	Switch DC	Set	Engineer	Spare	Ready	Security	AC Fail
Zone	Function	01	02	03	04	05	06	07	08	09	10	11	12	13	14
01	Final	S	S	-	S	T	-	X	-	-	-	-	A	-	-
02	Exit	S	S	-	S	T	-	-	-	-	-	-	A	-	-
03	Intruder	S	S	-	S	T	-	-	-	-	-	-	A	-	-
04	24 Hours	S	S	-	S	T	A	-	-	-	-	-	A	-	-
05	Security	S	S	-	S	T	-	-	-	-	-	-	A	A	-
06	Dual	S	S	-	S	T	-	-	-	-	-	-	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	-	-
17	Link	?	?	?	?	?T	?	?	?	?	?	?	?	?	?
18	Spare	-	-	-	-	T	-	-	-	-	-	-	-	-	-
19	Fire	A	A	-	-	T	-	-	-	-	-	-	-	-	-
20	Tamper	S	S	-	S	A	-	-	-	-	-	-	A	-	-
21	Bell Tamper	A	S	-	S	A	-	-	-	-	-	-	A	-	-
22	Beam Pair	S	S	-	S	T	-	-	-	-	-	-	A	-	-
23	Battery Low	-	-	-	-	T	-	-	-	-	-	-	-	-	-
24	Line Fail	-	-	-	-	T	-	-	-	-	-	-	-	-	-
25	AC Fail	-	-	-	-	T	-	-	-	-	-	-	-	-	A
26	Log	-	-	-	-	T	-	-	-	-	-	-	A	-	-
27	Remote Access	-	-	-	-	T	-	-	-	-	-	-	-	-	-
28	Video	S	S	-	S	T	-	-	-	-	-	-	A	-	-
29	Video Access	S	S	-	S	T	-	-	-	-	-	-	A	-	-
30	Intruder Delay	S	S	-	S	T	-	-	-	-	-	-	A	-	-
31	Log Delay	-	-	-	-	T	-	-	-	-	-	-	-	-	-
32	Set Log	-	-	-	-	T	-	-	-	-	-	-	-	-	-
33	Custom-A	?	?	?	?	?T	?	?	?	?	?	?	?	?	?
34	Custom-B	?	?	?	?	?T	?	?	?	?	?	?	?	?	?
35	Exitguard	L	L	L	L	LT	L	L	L	L	L	L	L	L	L
36	Mask	S	S	-	S	T	-	-	-	-	-	-	A	-	-
37	Urgent	A	A	-	A	T	-	-	-	-	-	-	A	-	-
38	PA Unset	-	-	U	-	T	-	-	-	-	-	-	U	-	-
39	Keyswitch Reset	-	-	-	-	T	-	X	-	-	-	-	-	-	-
40-46	Not Used	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	Vibration	A	A	-	A	T	-	-	-	-	-	-	A	-	-
48	ATM-1	A	A	-	A	T	-	-	-	-	-	-	A	-	-
49	ATM-2	A	A	-	A	T	-	-	-	-	-	-	A	-	-
50	ATM-3	A	A	-	A	T	-	-	-	-	-	-	A	-	-
51	ATM-4	A	A	-	A	T	-	-	-	-	-	-	A	-	-
52	Alarm Extend	A	A	-	A	T	-	-	-	-	-	-	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 <800Ω or >12000Ω  
O = Activates when zone is omitted

**Table 6-11. Output Activations per Zone**

Output Functions		Batt Low	Fire	Horn	E/E Horn	Part Set	Confirm	Line Fail	Video	Comm Fail	Not Used	Alert	DLYD Fire	No Re-arm	Timer-A
		15	16	17	18	19	20	21	22	23	24/25	26	27	28	29
01	Final	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
02	Exit	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
03	Intruder	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
04	24 Hours	-	-	S	A	-	-	-	S	-	-	-	-	S	-
05	Security	-	-	S	A	-	-	-	S	-	-	-	-	S	-
06	Dual	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
07	Entry	-	-	S	SXE	-	S	-	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	-	-	-	-	-	-	-	-	A	-
14	PA Silent	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	PA Delay	-	-	A	A	-	-	-	-	-	-	-	-	A	-
16	PA Delay Silent	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Link	?	?	?	?	?	?	?	?	?	-	?	?	?	?
18	Spare	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Fire	-	A	A	A	-	-	-	-	-	-	-	A	A	-
20	Tamper	-	-	A	A	-	-	-	S	-	-	-	-	S	-
21	Bell 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	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Remote Access	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Video	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
29	Video Access	-	-	S	SXE	-	S	-	S	-	-	-	-	S	-
30	Intruder Delay	-	-	S	SXE	-	-	-	S	-	-	-	-	S	-
31	Log Delay	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Set Log	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	Custom-A	?	?	?	?	?	?	?	?	?	-	?	?	?	?
34	Custom-B	?	?	?	?	?	?	?	?	?	-	?	?	?	?
35	Exitguard	L	L	L	L	L	L	L	L	L	-	L	L	L	L
36	Mask	-	-	S	SXE	-	-	-	S	-	-	-	-	S	-
37	Urgent	-	-	A	A	-	-	-	-	-	-	-	-	A	-
38	PA Unset	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Keyswitch Reset	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40-46	Not Used	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	Vibration	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	ATM-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	ATM-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	ATM-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	ATM-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	Alarm Extend	-	-	A	A	-	-	A	-	A	-	-	-	A	-

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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 <800Ω or >12000Ω  
O = Activates when zone is omitted

Table 6-11. Output Activations per Zone (Cont'd)

Output Functions		Timer-B	Walk Test	Zone Omit	Warning	Custom-A	Custom-B	Test	Reset RQD	Mask	Valid Cd.	Fail Set	Duress	Illegal Code	Not Used
		30	31	32	33	34	35	36	37	38	39	40	41	42	43-45
01	Final	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
02	Exit	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
03	Intruder	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
04	24 Hours	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
05	Security	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
06	Dual	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
07	Entry	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
08	Push Set	-	U	O	A	-	-	-	-	-	-	-	-	-	-
09	Keyswitch	-	U	O	A	-	-	-	-	-	-	UX	-	-	-
10	Secure Final	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
11	Part Final	-	U	O	A	-	-	-	SX?	-	-	-	-	-	-
12	Part Entry	-	U	O	A	-	-	-	SX?	-	-	-	-	-	-
13	PA	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
14	PA Silent	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
15	PA Delay	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
16	PA Delay Silent	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
17	Link	?	U?	O?	?	?	?	?	?	?	?	?	?	?	?
18	Spare	-	-	-	A	-	-	-	-	-	-	-	-	-	-
19	Fire	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
20	Tamper	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
21	Bell Tamper	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
22	Beam Pair	-	U	O	A	-	-	-	-	-	-	-	-	-	-
23	Battery Low	-	U	O	A	-	-	-	-	-	-	-	-	-	-
24	Line Fail	-	U	O	A	-	-	-	-	-	-	-	-	-	-
25	AC Fail	-	U	O	A	-	-	-	-	-	-	-	-	-	-
26	Log	-	U	O	A	-	-	-	-	-	-	-	-	-	-
27	Remote Access	-	U	O	A	-	-	-	-	-	-	-	-	-	-
28	Video	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
29	Video Access	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
30	Intruder Delay	-	U	O	A	-	-	-	S?	-	-	-	-	-	-
31	Log Delay	-	U	O	A	-	-	-	-	-	-	-	-	-	-
32	Set Log	-	U	O	A	-	-	-	-	-	-	-	-	-	-
33	Custom-A	?	?	O?	?	?	?	?	?	?	?	?	?	?	?
34	Custom-B	?	?	O?	?	?	?	?	?	?	?	?	?	?	?
35	Exitguard	L	L	LO	L	L	L	L	L	L	L	L	L	L	L
36	Mask	-	-	-	-	-	-	-	-	SPE	-	-	-	-	-
37	Urgent	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
38	PA Unset	-	U	O	A	-	-	-	U?	-	-	-	-	-	-
39	Keyswitch Reset	-	U	O	A	-	-	-	-	-	-	-	-	-	-
40-46	Not Used	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	Vibration	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
48	ATM-1	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
49	ATM-2	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
50	ATM-3	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
51	ATM-4	-	U	O	A	-	-	-	A?	-	-	-	-	-	-
52	Alarm Extend	-	U	O	A	-	-	-	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 <800Ω or >12000Ω  
O = Activates when zone is omitted

Table 6-11. Output Activations per Zone (Cont'd)



Output Functions		Set Late	U/S Early	Pre-warn	Autoset	Not Used	Link A-O	Not Used	Lockout	Vib. Test	Atm 1-4
		46	47	48	49	50	51-65	66-69	70	71	72-75
01	Final	-	-	?	-	-	?	-	-	-	-
02	Exit	-	-	?	-	-	?	-	-	-	-
03	Intruder	-	-	?	-	-	?	-	-	-	-
04	24 Hours	-	-	?	-	-	?	-	-	-	-
05	Security	-	-	?	-	-	?	-	-	-	-
06	Dual	-	-	?	-	-	?	-	-	-	-
07	Entry	-	-	?	-	-	?	-	-	-	-
08	Push Set	U?	S?	-	-	-	?	-	-	-	-
09	Keyswitch	-	-	?	-	-	?	-	-	-	-
10	Secure Final	-	-	?	-	-	?	-	-	-	-
11	Part Final	-	-	?	-	-	?	-	-	-	-
12	Part Entry	-	-	?	-	-	?	-	-	-	-
13	PA	-	-	?	-	-	?	-	-	-	-
14	PA Silent	-	-	?	-	-	?	-	-	-	-
15	PA Delay	-	-	?	-	-	?	-	-	-	-
16	PA Delay Silent	-	-	?	-	-	?	-	-	-	-
17	Link	?	?	?	?	?	?	-	?	?	?
18	Spare	-	-	?	-	-	?	-	-	-	-
19	Fire	-	-	?	-	-	?	-	-	-	-
20	Tamper	-	-	?	-	-	?	-	-	-	-
21	Bell Tamper	-	-	?	-	-	?	-	-	-	-
22	Beam Pair	-	-	?	-	-	?	-	-	-	-
23	Battery Low	-	-	?	-	-	?	-	-	-	-
24	Line Fail	-	-	?	-	-	?	-	-	-	-
25	AC Fail	-	-	?	-	-	?	-	-	-	-
26	Log	-	-	?	-	-	?	-	-	-	-
27	Remote Access	-	-	?	-	-	?	-	-	-	-
28	Video	-	-	?	-	-	?	-	-	-	-
29	Video Access	-	-	?	-	-	?	-	-	-	-
30	Intruder Delay	-	-	?	-	-	?	-	-	-	-
31	Log Delay	-	-	?	-	-	?	-	-	-	-
32	Set Log	-	-	?	-	-	?	-	-	-	-
33	Custom-A	?	?	?	?	?	?	-	?	?	?
34	Custom-B	?	?	?	?	?	?	-	?	?	?
35	Exitguard	L	L	L	L	L	L	-	L	L	L
36	Mask	-	-	?	-	-	?	-	-	-	-
37	Urgent	-	-	?	-	-	?	-	-	-	-
38	PA Unset	-	-	?	-	-	?	-	-	-	-
39	Keyswitch Reset	-	-	?	-	-	?	-	-	-	-
40-46	Not Used	-	-	?	-	-	?	-	-	-	-
47	Vibration	-	-	?	-	-	?	-	-	A	-
48	ATM-1	-	-	?	-	-	?	-	-	-	O
49	ATM-2	-	-	?	-	-	?	-	-	-	O
50	ATM-3	-	-	?	-	-	?	-	-	-	O
51	ATM-4	-	-	?	-	-	?	-	-	-	O

**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 <800Ω or >12000Ω  
**O** = Activates when zone is omitted

Table 6-11. Output Activations per Zone (Cont'd)

**01 Bells (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Bells** output is activated on a full alarm event when the system is set. This output is subject to the **Bell Time**, **Bell Delay** and **No. Rearm** parameters.

The relay output (1002 on the Galaxy 512) is fixed (non-programmable) as Bells with negative polarity, latch, no delay and a three minute duration. This output cannot be altered in any way.

**01 Strobe (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Strobe** output is activated on a full alarm event during the set state. This output is subject to the **Bell Time**, **Bell Delay** and **No. Rearm** parameters.

**03 PA (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **PA** output is activated whenever any of the **PA** zone types activate. The output is not subject to the **Rearm** parameter: it latches on remains active until a valid code, with the appropriate **PA Reset** level, is entered.

**NOTE:** Outputs programmed as **PA** are not activated by entry of a **Duress Code**.

**04 Intruder (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Intruder** output is activated on a full alarm event during the set state. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code, with the appropriate **System Reset** level, is entered.

**05 Tamper (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Tamper** output is activated whenever a circuit tamper or lid tamper occurs. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code, with the appropriate **System 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 on the Galaxy 512 when engineer access is authorised by the user.

**06 24 Hours (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **24 Hours** output is activated whenever a **24 Hour** zone is activated. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code, with the appropriate **System Reset** level, is entered.

**07 Reset (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Reset** output type is used as a control line output to latch, freeze and reset movement detector LEDs.

**08 Switch DC (Pulse)**  
(Galaxy 8, 18, 60, 500 & 512)

This **Switch DC** output is used to power detectors that require a momentary power interruption to reset them, for example, break glass or vibration detectors. This output 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 installing detectors that require to be powered from a **Switch DC** output, connect the positive lead of the detector to the 12 V terminal of a power supply and the negative lead to **Switch DC** output terminal. **Do not** change the **Output Polarity** to **1=Neg**: it must remain as positive polarity.

**09 Set (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Set** output is activated when the assigned groups on the system are set. This output is a **Reflex** output and follows the set and unset status of the groups.

**10 Engineer (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Engineer** output is activated while the engineer mode is being accessed.

**11 Spare (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Spare** output has function: it is used to designate outputs that are not being used on the system.

**12 Ready (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Ready** output is active when all zones in the system (group) are closed. This output activates in both the unset and set conditions.

**13 Security (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Security** output is activated whenever a **Security** zone is activated. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code (level 2 or above) is entered.

**14 AC Fail (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **AC Fail** 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. The output is reset when the a.c. supply is restored or the **AC Fail** zone is closed. The activation is delayed subject to the time entered in the **20=Power Delay** parameter.

**15 Battery Low (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Battery Low** output activates whenever the control unit stand-by battery falls below 10.5 V or a **Battery Low** zone is activated. The output is restored when the voltage rises above 10.5 V or the **Battery Low** zone is closed.

**16 Fire (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Fire** output is activated whenever a **Fire** zone is activated. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code (level 2 or above) is entered.

**17 Horn (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Horn** 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. Rearm** parameters.

**18 E/E Horn (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Entry/Exit Horn** output has a dual function:

- in an alarm condition its function is identical to that of the **Horn** output;
- during the unsetting and setting of the system it is used to provide an indication on the status of the system. The indication states are as follows:
  - General Alarm — ON 500 msec. OFF 500 msec
  - Clear to exit — Continuous
  - Exit interrupted — ON 100 msec. OFF 100 msec
  - 75% Exit time — ON 200 msec. OFF 200 msec
  - Set — ON 600 msec. OFF 600 msec (twice)
  - Normal Entry — ON 800 msec. OFF 200 msec
  - 75% Entry time — ON 200 msec. OFF 200 msec
  - Fire — ON 500 msec. OFF 100 msec
  - Chime — ON 500 msec. OFF 400 msec (twice)

**19 Part Set (Reflex)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Part Set** 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 (Pulse)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Confirm** output is activated when there have been activations on two separate zones: the second activation must occur at least five seconds after and within 300 seconds of the first activation. The zones do not have to be in the same group, however, both groups must be assigned to the **Confirm** output to allow activation. The output **Pulses** for the period defined in the **Output Mode** attribute. Up to four activations of the **Confirm** output can occur during any single set period of the group.

**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)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Line Fail** 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)**  
(Galaxy 8, 18, 60, 500 & 512)
- The **Video** output is activated by the **Video** zone when the system is set. This output can be used to activate video recorder or video transmission systems.
- 23 Comm Fail (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)
- The **Comm Fail** 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.
- 24/25 Not Used**
- 26 Alert (Latch)**  
(Galaxy 60, 500 & 512)
- The **Alert** output is activated when the control panel loses communication with one of the remote modules or keypads.
- 27 Fire Delay (Latch)**  
(Galaxy 60, 500 & 512)
- The **Fire Delay** output is activated whenever a **Fire** zone is activated. The activation of the output is delayed subject to the period determined by the **03=Abort Time** parameter.
- The **Fire Delay** output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code (level 2 or above) is entered.
- 28 No Re-Arm (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)
- The **No Rearm** output is activated on a full alarm event during the set state: it is subject to the **Bell Time** and **Bell Delay** parameters.
- The **No Rearm** output is identical to the **Strobe** output with the exception that it is not subject to the **No. Rearms** parameter.
- 29 Timer A (Reflex)**  
(Galaxy 60, 500 & 512)
- The **Timer-A** output is controlled by the **Timer-A** option (refer to option **65 = Timers A/B**) and activates in accordance with the programmed on and off times assigned to the function.
- 30 Timer B (Reflex)**  
(Galaxy 60, 500 & 512)
- The **Timer-B** output is controlled by the **Timer-B** option (refer to option **65 = Timers A/B**) 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.
- 31 Walk Test (Reflex)**  
(Galaxy 60, 500 & 512)
- The **Walk Test** output is activated when a zone included in the walk test is tested (refer to option **31 = Walk Test**).

**32 Zone Omit (Reflex)**  
(Galaxy 60, 500 & 512)

The **Zone Omit** output is activated as soon as a zone is omitted from the system by option **11 = OMIT ZONES** or by option **54 = LINKS**. 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.

**33 Warning (Latch)**  
(Galaxy 60, 500 & 512)

The **Warning** output is activated by the first occurrence of a high (1200–1300Ω) and low (800–900Ω) resistance reading on each of the system zones in a single 24 hour period: the activating zone is recorded in the log.

Subsequent high and low resistance readings from the same zone on the same day do not activate the output if it has been reset by a valid user code.

**NOTE:** If a low resistance reading is followed by a high resistance reading, the **Warning** output activates on the first occurrence of both activations.

**34 Custom A (Latch)**  
(Galaxy 60, 500 & 512)

The **Custom-A** output is activated whenever a **Custom-A** zone is activated.

**35 Custom B (Latch)**  
(Galaxy 60, 500 & 512)

The **Custom-B** output is activated whenever a **Custom-B** zone is activated.

**36 Test (Pulse)**  
(Galaxy 60, 500 & 512)

The **Test** output is activated at 12:00 hours each day for two seconds — the period of the **Pulse** can be altered. This output can be used to perform a daily test on a digicom connected to the system.

**37 Reset RQD (Latch)**  
(Galaxy 60, 500 & 512)

The **Reset RQD** output is activated when a system, tamper or PA alarm has occurred that requires to be reset by the engineer (level 7) code. Refer to option **51 = PARAMETERS** for details modifying the code levels assigned to the **06 = System Reset**, **07 = Tamper Reset** and **22 = PA Reset** parameters.

**38 Mask (Latch)**  
(Galaxy 60, 500 & 512)

The **Mask** output is activated whenever a **Mask** zone is activated. The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code (level 2 or above) is entered.

**39 Valid Code (Reflex)**  
(Galaxy 60, 500 & 512)

The **Valid Code** output is activated by the entry of any valid code. If the **Output Mode** assigned is **Reflex**, the output remains active while the user is accessing the menu and setting and unsetting the system. Once the menu is exited or the system sets or unsets, the output is restored.

**40 Fail Set (Latch)**  
(Galaxy 60, 500 & 512)

The **Fail Set** is activated if the system (or assigned groups) fails to set within the time assigned in parameter **35=Fail To Set** — refer to option **51 = PARAMETERS**.

**41 Duress (Latch)**  
(Galaxy 8, 18, 60, 500 & 512)

The **Duress** function is activated on entry of a **Duress Code** (any valid code followed by two #'s, or a code assigned as a **Duress Code** using menu option **42 — Codes**). The output is not subject to the **Rearm** parameter: it latches on and remains active until a valid code (level 2 or above) is entered.

**42 Illegal Code (Latch)**  
(Galaxy 60, 500 & 512)

The **Illegal Code** output is activated 60 seconds after an entry of a single **Dual Code** or a code which is entered outwith the **Timer A** and/or **Timer B** times assigned to it in menu option **42.1.4 = CODES.User Codes.Time Zone**.

**43/45 Not Used**

**46 Set Late (Latch)**  
(Galaxy 500 & 512)

The **Set Late** output is activated if the system has not been set by the programmed **Monitor** time — refer to option **65.3.1 = TIMERS.Autoset.Status**.

**47 Unset Early (Latch)**  
(Galaxy 500 & 512)

The **Unset Early** output is activated if the system has not been unset by the programmed **Monitor** time — refer to option **65.3.1 = TIMERS.Autoset.Status**.

**48 Prewarn (Reflex)**  
(Galaxy 60, 500 & 512)

The **Prewarn** output is active during the programmed prewarning period of the autoset function. The mode is **Reflex**. The **Prewarn** emits a constant tone if the autosetting of the system can be extended. If an extension is not possible, the **Prewarn** output pulses.

**49 Autoset (Latch)**  
(Galaxy 500 & 512)

The **Autoset** output is activated when the system has been set by the autoset function — refer to option **65.3 = TIMERS.Autoset**. The default **Output Mode** attribute is programmed as **Reflex**, therefore the output remains active until the system unsets.

**NOTE:** The **Set** output is also activated when the system autosets.

**50 Not Used**

**51 – 55 Link A – E (Latch)**

(Galaxy 18, 60, 500 &amp; 512)

**56 – 65 Link F – O (Latch)**

(Galaxy 60, 500 &amp; 512)

**Link** output types have no inherent function: they are designed for use with option **54 = LINKS** 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.

Five **Link** outputs (A–E) are provided for the Galaxy 18.

The Galaxy 60, 500 and 512 have 15 **Link** outputs (A-O).

**NOTE:** When a zone function is the source of a link to a **Link** output type, then a point to point link is available and is as effective as direct wiring.

**66–69 Not Used****70 Lockout (Reflex)**

(Galaxy 512)

The **Lockout** output is active between the **ON** and **OFF** times assigned to the **Lockout Status** (option **65.3.6 = TIMERS.Autoset.Lockout Status**). The **Lockout** output mode is **Reflex**, therefore it remains active until the lockout switches **OFF**.

**71 Vibration Test (Pulse)**

(Galaxy 512)

The **Vibration Test** function is used to test zones programmed as **Vibration**. This output is used in conjunction with **Precheck** (menu option **66 — Pre-Check: 1 — Mode: 4 — Forced Check**). The **Vibration Test** output sends a five second positive removed pulse to the vault sensors. Any sensor not activated by the test is reported by the pre-check function and prevents the system from setting.

**72 – 75 ATM-1, ATM-2, ATM-3, ATM-4 (Reflex)**

(Galaxy 512)

The relevant **ATM** output is activated when the respective **ATM** zone type is selected for omission; the output **does not** wait until the **ATM Delay** period expires before it activates. This output is a **Reflex** output and follows omit status of the **ATM** zone types.



## Option 54 — Links (Galaxy 18, 60, 500 & 512)

The **Links** option offers a powerful method of interconnecting zones, output functions, codes, keypads and MAX modules. The links table is constructed by creating a link between one of the source types and a valid destination type. Activating the source of a link activates the destination — this can be used to switch outputs on and off and to omit zones, codes, keypads and MAX modules from the system.

The number of links that can be assigned on each of the Galaxy systems is:

- Galaxy 18 = **16**
- Galaxy 60 = **32**
- Galaxy 500 = **99**
- Galaxy 512 = **99**

## Programming Links

On selecting the **Links** option, the details of **Link 01** are displayed. If no link has been assigned the screen displays **01 NOT USED**. The details of each link can be displayed using the **A** and **B** keys, or a specific link can be selected by entering the required link number, for example **05, 29**. When the required link is displayed, press the **ent** key to begin the programming procedure. The system prompts for the **Link Source** to be assigned:

1. Press the **#** key to select the required link source from the available types (refer to the **Links Table**).
2. Press the **A** or **B** keys 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 **\*** key. The source is prefixed by a **\*** on the display. If the source is a code, then source is displayed as **\*\*001** (where the digits represent the user code selected).

**NOTE:** The link destination is activated by the first operation of the source and then deactivated by the second operation.

4. Press the **ent** key; the source of the link is assigned and the keypad prompts for the link destination to be allocated.
5. Press the **#** key to select the required link destination from the available types (refer to **Table 6-12. Link Sources and Destinations**).
6. Press the **A** or **B** keys to select the actual link destination (for example, the zone address or the output type).
7. Press the **ent** key.
8. If the link destination is **d). Output Type and Groups** have been enabled (refer to option **63 = OPTIONS**) then each link must be allocated to at least one group (use the **A** or **B** key to move between the group blocks; press keys 1 – 8 to assign the relevant groups in each block) and press the **ent** key.

**NOTE:** The groups determine which of the assigned output type destinations the link activates.

9. 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 – (negative) symbol is displayed.
10. Press the **A** or **B** key to move to the next link to be assigned and repeat steps 1 – 9 or press the **ent** key to escape from the **LINKS** menu option.

Source Type	Destination Type	Notes
a) not used (default)	a) not used	
b) zone address	b) zone address: omitted when link is active	The link is the physical address of the zone. If an Exitguard zone is used as the source for a link to another zone, activating the link omits the destination zone. The omitted zone remains omitted until the Exitguard and the zone are both closed. If the omitted zone remains open after the Exitguard zone closes, then the zone remains omitted until it returns to the closed state.  If an Exitguard zone is used as the source for a link to an output type, then this source does not activate the output type. The Exitguard zone disables any output type that it is linked to.
c) user code	c) user code: omitted when link is active	Selected codes are displayed as *01, *02. If a code is assigned as a toggle source then the code is prefixed by **. If a code is assigned as a destination, then whenever the link is active, the code is disabled. This may be used to prevent unsetting a Group while another Group is set.
	d) output type (default): switched on when link is active	The link activates all outputs programmed with the function selected as the link destination. If groups are enabled, the groups that the required output types are allocated to must also be assigned.
d) output address	e) output address: Switched ON when link is active; OFF when passive.	The link is the physical address of the output, not the output type. This means that the link must refer to an actual output which has been programmed in menu option 53 — Program Outputs. If the output address is assigned as the link destination, then whenever the link is active the output is disabled; the output address is not activated by the link.
	f) keypad address: omitted when link is active	The destination is the physical address of the keypad. Selected keypads are displayed as *10, *43. The links function can be used to disable a keypad. When the source of the link is activated the destination keypad does not respond to any keypresses, however, the LCD, keypad buzzer and any keypad output device act as normal.
e) MAX address	g) MAX address: omitted when link is active	The link is the physical address of the MAX reader. If there are no MAX readers connected to the AB communication line of the system, then this option does not appear. If a MAX is assigned as a destination, then whenever the link is active, the MAX reader is disabled.

**Table 6-12. Link Sources and Destinations**

**Option 55 — Soak**

The **Soak** option allows selected zones to be put onto test for a period ranging from 1 – 14 days (refer to option **51.16 = PARAMETERS.Soak Time**). Activations from a zone on the soak test do not cause alarms but are recorded in the event log and are reported to level 2 (and above) users on unsetting of the system. The zone remains on soak test until the selected number of days has passed without any alarm activation, the zones then resume normal operation — that is, activations result in alarms being generated. The **Soak Time** is reset to the full number of days if there is an alarm activation on any of the selected zones.

**NOTE:** 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**. On unsetting the system the number of days remaining in the **Soak Time** are indicated on the keypad display.

**Programming Soak Zones**

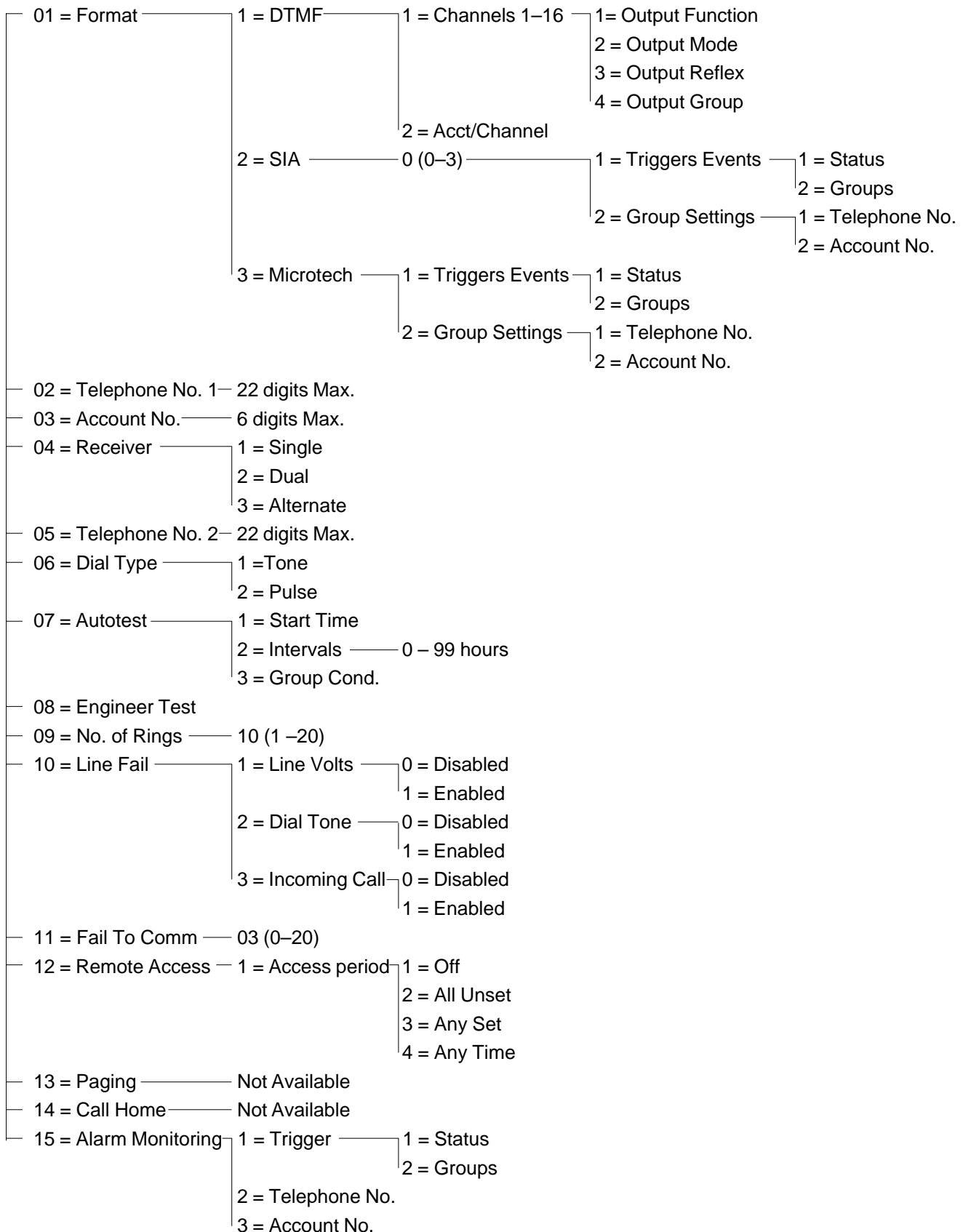
On selecting the **Soak** option, the address and function of the first zone on the system is displayed. Move to the required zone by pressing the **A** or **B** keys or by entering the zone address. To place the zone on the soak test press the **#** key; the keypad indicates that the zone is now **ON TEST**. Select other zones to be put on soak test in the same way. Once all of the zones have been selected, press the **esc** key; the keypad briefly displays the number of days remaining in the **Soak Time** parameter before escaping from the **Soak** option.

**Option 56 —  
Communications**

The **Communications** option is used to program the Telecom and RS232 interface modules.

**Telecom Module**

1 = Telecom



All Galaxy panels and PSUs meet the requirements of approval number **NS/G/23/J/100003** for general safety of apparatus connected to certain telecommunications systems.

The Telecom module allows two way communication via the telephone network. This can be used:

- as a digital communicator, transmitting alarm and event signals to ARCs,
- transmit detailed alarm and event signals to receivers with SIA compatible software,
- transmit detailed alarm and event signals to remote PCs with Galaxy Alarm Monitoring software installed,
- to remotely service the Galaxy control panel via a PC with Galaxy Gold software installed.

For information on the installation and operation of the Telecom module refer to **Section 3 — Additional Modules/Facilities**, the **Telecom Module Installation Instructions** (part number L079).

**NOTE:** When using the Telecom module as a digital communicator to signal alarms and events to ARCs or to a PC with Alarm Monitoring software installed, the **Format**, **Telephone Number 1** and **Account Number** required to be programmed. Programming of the remaining options is either optional or not required

## 1 Format

The communicator provides three signalling formats.

- DTMF
- SIA
- Microtech

Once the format has been selected, the alarm and event triggers that the panel will transmit to the ARCs are programmed

### 1 = DTMF (Dual Tone Multiple Frequency)

This is the most popular format and is accommodated by most Monitoring Stations.

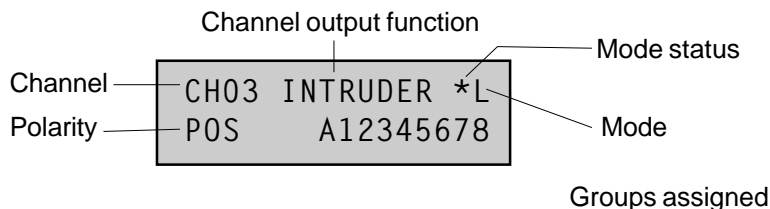
#### NOTES

1. DTMF is fast format
2. A battery low condition occurring on the Galaxy panel is always to the ARC as a code 8. This may cause problems for some ARCs. If a channel is assigned as **Battery Low**, then both the channel and the code 8 is transmitted.

When DTMF 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 – 16 are programmed as **Spare**.

## Programming Channels

On selecting **DTMF**, the keypad displays **1 = Channels 1 – 16**. All 16 channels can be individually programmed. To access the **Channels** option press the **ent** key; the programming details of the first channel are displayed. Select the required channel using the **A** and **B** keys or by entering the channel number directly and press the **ent** key.



## Channels 1–16

Each channel can be programmed with the following attributes:

- 1 = Output function
- 2 = Output mode
- 3 = Polarity
- 4 = Groups

**1 = Output Function** Any of the system output functions can be assigned to each of the channels 1 – 16. Channel 3 defaults to output function **04 = INTRUDER**. All other channels default to **11 = SPARE**. Select the required output function using the **A** and **B** keys or by entering the function number directly. Once the required function is displayed, press the **ent** key to assign the function to the selected channel. For example, a **PA** function programmed on channel 2 results in a **PA** code to be transmitted on channel 2 to the ARC when there is a **PA** alarm activation.

**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 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 (1-300 seconds).

**Programming the Output Mode** Select the required mode using the **A** or **B** keys or by selecting the number **1 – 3**. Once the required mode is selected, press the **ent** key to accept the programming. If assigning the **Pulse** output mode, enter the pulse time (001 – 300 seconds) and press the **ent** key.

**NOTE:** The **Output Mode** status determines the operation of the channel restore. The status is modified by pressing the \* key when the channel details display on the keypad. 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)

**3 = Output Polarity** 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.

**4 = Output Groups** **NOTE:** The **Groups** attribute is only available if groups have been enabled on the system (refer to option **63 = OPTIONS**)  
(Galaxy 18, 60, 500 & 512)

The **Group** attribute allows the channel to be assigned to the groups on the system; a channel can be assigned to more than one group. All channels default to all groups on the system

On selecting the **Output Groups** attribute, the groups that the channel is currently assigned to are displayed. Press the relevant number keys to toggle the status of the group and press the **ent** key: if the group number is displayed on the top line, then the group is assigned to the channel; if a dash (–) appears in place of the group number, the group has been removed from the channel.

**Galaxy 512** The Galaxy 512 has 32 groups; these are displayed on the keypad in blocks of eight groups, sub-divided into A, B, C and D.

Use the **A** or **B** key to select the required group (**A1–D8**). When the end of a block is reached, the next block of eight groups is selected, press keys **1–8** to toggle the status of the relevant group in the current block to the channel; press the **ent** key to accept the selection.

**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 the \* key when selecting the groups: an arrow (>) is displayed on the bottom line as well as the current **Status**. Press the relevant number keys to toggle the status of the groups and press the **ent** key 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.

#### Programming Individual Channel Account Numbers

When the account number is programmed using option **56.1.2 = COMMUNICATIONS.Telecoms. Account No.**, then all 16 channels are automatically programmed with the same number. The **Account/Channel** menu option allows each channel to be programmed with a separate account number if required. The account number can be up to a maximum of six digits, however a four digit account number is the standard.

**NOTE:** Changing the main account number overwrites all separate account numbers previously programmed for channels 1 – 16.

On selecting **DTMF**, the keypad displays **1 = Channels 1 – 16**. Press the **A** key; the **2 = Acct/Channel** option is displayed. All 16 channels can be individually programmed. To access the **Acct/Channel** option press the **ent** key; the first channel is displayed. Select the required channel using the **A** and **B** keys or by entering the channel number directly and press the **ent** key; the account number currently assigned to the channel is displayed. Press the \* key to delete each of the digits and then enter the new account number.

#### 2 = SIA (Security Industries of America)

The SIA format is to level 3 and provides a protocol that transmits detailed information including zone descriptions to a PC loaded with suitable software or to a SIA compatible receiver. The SIA format is capable of transmitting over 130 different Galaxy events.

On selecting the SIA format, the keypad prompts for the required SIA level to be entered, there are four SIA levels available:

- 0 (default)
- 1
- 2
- 3



**Trigger Events** When the SIA level has been selected press the **ent** key, the keypad displays the first trigger event and its **On/Off** status. These are the events and alarms that are transmitted to the ARC or PC. If the trigger status is set to **On**, an activation of the trigger event results in the transmission to the receiver of the event details. Step through the trigger events using the **A** and **B** keys.

**1 = Status** To modify the trigger event select the required event using the **A** and **B** keys and press the **ent** key. The **1 = Status** option is then displayed; to program the status to **On** press **1**, to set it to **Off** press **0**. Press the **ent** key 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 option **63 = OPTIONS**), then the SIA format menu alters slightly; an additional level is added.

**1 = Trigger Events** On selecting the SIA level (0 – 3) the keypad displays **1 = Trigger Events**; press the **ent** key to display the first trigger event; the keypad shows the trigger, the trigger status and the groups assigned.

**1 = Status** To modify the trigger event select the required event using the **A** and **B** keys and press the **ent** key. The **1 = Status** option is then displayed. If the status requires to be modified, press the **ent** key. To program the status to **On** press **1**, to set it to **Off** press **0**. Press the **ent** key to save the programming and return to the previous menu level.

**2 = Groups** If groups have been enabled on the system (refer to option **63 = OPTIONS**), then groups can be assigned to the events. This means that the events have to occur in assigned groups before they are signalled. Press the **A** key, the keypad displays **2 = Group Events** and then press the **ent** key; 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 the **ent** key to save the programming and return to the previous menu level.

**Galaxy 512** The Galaxy 512 has 32 groups; these are displayed on the keypad in blocks of eight groups, sub-divided into A, B, C and D. Use the **A** or **B** key to select the required group (**A1–D8**). When the end of a block is reached the next block of eight groups is selected, press keys **1–8** to toggle the status of the relevant group in the current block; press the **ent** key to accept the selection.

**2 = Group Settings** **NOTE:** This option is only displayed if the groups have been enabled (refer to option **63 = OPTIONS**).

The event triggers are signalled to the telephone number, with the account number, programmed in the menu options **56.1.2 = Telephone Number 1** and **56.1.3 = Account Number**. However, each group can be programmed to transmit event details to a unique telephone number and assigned a separate account number. On selecting the **Group Settings** option the first system group is displayed. Select the required group using the **A** or **B** keys and press the **ent** key, **1 = Telephone Number** is displayed.

**1 = Telephone Number** To assign a telephone number to the group press the **ent** key and enter the required number. The telephone number can be a maximum of 22 digits (including dial pause \* and dial tone detect # characters); press the **ent** key to save the programming and return to the previous menu level.

**2 = Account Number** To assign an account number to the group press the **ent** key and enter the required number. The account number can be a maximum of six digits; press the **ent** key to save the programming and return to the previous menu level.

### **3 = Microtech**

Microtech format is a protocol that transmits detailed point identification information to a Personal Computer (PC) which has the Galaxy Alarm Monitoring software installed.

The menu structure and programming of the options are identical to the SIA format. Refer to **2 = SIA** for programming details.

### **2 Telephone No. 1**

Telephone number 1 **must** be entered. This is the main telephone number that the alarms are signalled to. Up to 22 digits may be entered, including control modifiers. The control modifiers are entered using the \* and # keys:

- \* 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.

The **B** key is used to erase an existing telephone number. Each press deletes the last digit displayed.

**3 Account No.**

This is the site identifier. A unique account number **must** be entered, this can be up to a maximum of six digits although 4 digits is the standard.

The **B** key is used to erase an existing number. Each press deletes the last digit displayed.

**NOTE:** Entering the account number into this menu option automatically copies the number to all triggers in the selected format (DTMF, SIA and Microtech). Any individual account numbers that have been programmed are overwritten.

**4 Receiver**

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 OR Telephone Number 2**. Each number is tried in sequence until the alarm is successfully transmitted. The alarm is **only** transmitted to one number.

**5 Telephone No. 2**

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**.

The **B** key is used to erase an existing number. Each press deletes the last digit displayed.

**6 Dial Type**

The transmission mode can be selected from two types:

- 1. Tone** (also known as “DTMF Dial”) this is much quicker at dialling than the **Loop Disconnect** option.
- 2. Pulse** (also known as “Rotary” or “Loop Disconnect”) is universal, however, 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.

**7 Autotest**

An engineer test (code 9) can be automatically transmitted to the Monitoring Station at programmed intervals.

**1 = Start Time**

The engineer uses this option to enter the time that the first engineer test is transmitted. Subsequent engineer test transmissions are offset by the value assigned in the **Test Interval** option.

**2 = Test Interval**

This option determines the period between engineer test transmissions following the **Start Time**, the programmable range is 0 – 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 = Group Condition (Galaxy 512 only)**

**NOTE:** This option is only displayed if the groups have been enabled (refer to option **63 = OPTIONS**).

The **Group Condition** determines the status that each group must satisfy before the **Autotest** is transmitted. This can be used to prevent an **Autotest** from being signalled when groups are set on the system. On selecting this option press the relevant number keys to toggle the status of the groups and press the **ent** key to accept the programming. The available group status conditions are:

**S** = Set — group must be set to allow autotest transmission;

**U** = Unset — group must be unset to allow autotest transmission;

**-** = Set or unset — autotest transmission is independent of the group status.

**8 Engineer Test**

An engineer test (code 9) can be sent to the Monitoring Station once the **Account Number** and the **Telephone Number 1** have been entered, to ensure that the station is receiving transmissions sent from the Telecom module.

On selecting this option a warning message is displayed on the keypad. Press the **ent** key to send the engineer test. The current status of the 16 channels is transmitted along with the engineer test code.

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**.

**9 No. of Rings**

This option determines the number of rings before the Telecom module answers, The programmable range is 0 – 20, the default is 10.

## 10 Line Fail

The Telecom module continually monitors the telephone line that it is connected to. This option determines the line monitoring conditions that result in a **LINE FAIL** event being reported and recorded in the log. The three line monitoring capabilities are

- 1 = Line Volts** (default **Enabled**): A line fail occurs if the voltage on the telephone line falls below three volts.
- 2 = Dial Tone** (default **Disabled**): A line fail occurs if the Telecom module cannot detect a dial tone on the telephone line.
- 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 sent to the Galaxy and is stored in the event log. If the system is unset, the **TELECOM FAILURE** message appears on the keypad display and a local alarm is sounded — the keypad buzzers and on-board horn (if connected) are activated. If the system is set when a line fail condition occurs, the message **TELECOM FAILURE** will be displayed when the system is unset. This will be 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 **TELECOM FAILURE** messages on the keypad for the duration of the condition and are recorded in the event log.

If an alarm occurs during a line fail condition, then the programmed bell delay for each of the groups is overridden (refer to option **51.02 = PARAMETERS.Bell Delay**).

## 11 Fail to Communicate

This option determines the number of unsuccessful communications 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 Telecom module snatches the telephone line and dials the programmed telephone numbers. After a successful communication the LED lights for three seconds, the module then 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**.

**NOTE:** The Telecom 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 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 left at the default setting of **3**, if the first three dialling attempts are unsuccessful, the **COMM FAIL** message is recorded in the event log. If the next two attempts (five attempts in total) are unsuccessful, the communicator **cannot** make any more communication attempts for two hours (from the time of the first unsuccessful attempt). The alarms to be transmitted are erased from the buffer. This conforms with the repeat attempts procedure as detailed in the BAPT requirements BS6789, 1985, Section 3-1, Paragraph 7.

**NOTE:** If the **Receiver** option is programmed as **Dual** and the **Format** is **DTMF**, then successful transmission **must** be made to both telephone numbers. Five unsuccessful attempts to a single telephone number prevents the communicator from transmitting any alarm events for two hours.

## 12 Remote Access

This option defines when and how Galaxy Gold remote servicing will operate. The options are described as follows.

### 1 = Access Period

This option determines the type of access that is available to the remote Galaxy Gold operator. There are four modes:

- 0 = Off:** Galaxy Gold access to the Galaxy panel is disabled
- 1 = All Unset:** access only when all the groups are unset
- 2 = Any Set:** no access if any of the groups are set
- 3 = Any Time:** (default) access available at any time

### 2 = Mode

1 = Direct

This permits access at anytime. Once access is authorised, uploading, downloading and remote servicing can begin.

### 2 = Manager Authorise

There are two methods that an authorised user can use to enable access to the Galaxy via Galaxy Gold:

- **Timed Access:** Galaxy Gold **must** access the Galaxy within 40 minutes of this option being enabled by the manager. Once connected, there is no time limit on the access period. On terminating the connection, Galaxy Gold can reaccess the system within a 15 minute period of the termination.
- **Call Back:** the manager instructs the Galaxy to initiate a connection to a PC (with Galaxy Gold 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 into this option. Galaxy Gold requests the Galaxy to call back to one of the numbers

**NOTES:**

1. If **Manager Authorise** is selected as the **Remote Access Mode**, then the telecoms module can only make outgoing calls — it is disabled from answering all incoming 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, then access to the Galaxy is denied **unless** the call back option in Galaxy Gold is used to initiate the connection.

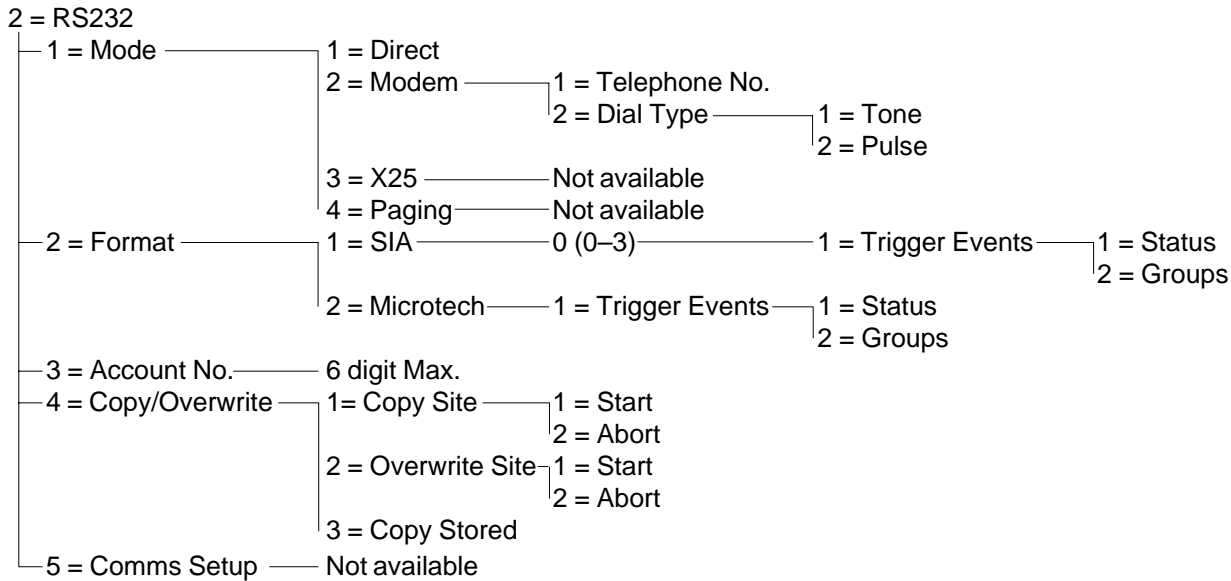
## 15 Alarm Monitoring

This is identical to the **Microtech** format communications (**56.1.3**). This option is used to allow alarms to be dialled to a PC with Alarm Monitoring software loaded as well as to an ARC using the DTMF or SIA formats.

The **Alarm Monitoring** option transmits alarm events information only when all of the alarms have been sent to the ARC (or all five of the 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 DTMF or SIA formats.

The menu structure and programming of the **Alarm Monitoring** options are identical to the SIA format. Refer to **2 = SIA** for programming details.

## RS232 Interface Module



The Galaxy RS232 Interface module also provides two way communication but with computer type peripherals. This can be used to:

- signal alarms and events to a single local PC with Galaxy Alarm Monitoring software installed,
- remotely service the Galaxy control panel via a PC with Galaxy Gold software installed,
- copy and store the programming details from a Galaxy control panel or a PC with Galaxy Gold software installed,
- Overwrite the stored programming details to a Galaxy panel or to a PC with Galaxy Gold software installed.

For information on the installation and operation of the RS232 Interface module refer to **Section 3 — Additional Modules/Facilities** and the **RS232 Module Operating Instructions** (part number L114).

### 1 Mode

The **Mode** option is selected depending on the method of connection to the PC:

#### 1 = Direct

This mode is selected if the Galaxy panel and PC are located in close proximity to one another and can interface via an RS232 cable.

#### 2 = Modem

This mode is selected if the RS232 is communicating, via a modem and telephone line, with a remote PC. The telephone number of the remote PC must be entered in option **1 = Telephone Number** and the type of telephone exchange (**Pulse** or **Tone**) must be assigned in option **2 = Dial Type**.



**2 Format**

There are two formats available for the RS232 module:

**1 = SIA** refer to the Telecom menu for programming details

**2 = Microtech** refer to the Telecom menu for programming details

**NOTE:** The SIA and Microtech formats for the RS232 module are identical in structure and programming to the Telecom menu. The only difference is that when groups have been enabled there is no **Group Settings** option.

**3 Account No.**

This is the site identifier. A unique account number **must** be entered, this can be up to a maximum of six digits.

The **B** key is used to erase an existing number. Each press deletes the last digit displayed.

**4 Copy/Overwrite****1 = Copy Site**

The **Copy Site** option copies the programming details stored on the Galaxy panel to the RS232 module. On selecting this option the keypad indicates if a panel program is already stored in the module memory. To copy the panel programming press **1**; the message **COPYING** is displayed; the green **COPY LED** (LED3) on the RS232 module flashes. When the entire program has been copied to the module, the message **COPY STORED** appears; the green **COPY LED** (LED3) remains on.

**NOTE:** The copying procedure can be aborted at any time by pressing key **2**.

**2 = Overwrite Site**

The **Overwrite Site** option copies the program stored on the RS232 module to the Galaxy panel, overwriting all current programming details. On selecting this option the keypad indicates that the Galaxy is **WAITING TO WRITE**. To overwrite the panel programming press **1**; the message **OVERWRITING** is displayed; the green **OVERWRITE LED** (LED4) on the RS232 module flashes. When the entire program has been copied to the Galaxy panel, the message **OVERWRITE DONE** appears; the green **COPY LED** (LED4) remains on.

**NOTE:** The overwriting procedure can be aborted at any time by pressing key **2**.

**3 = Copy Stored**

If the RS232 has programming details stored in its memory, the **Copy Stored** option indicates: the date; the panel type (Galaxy 8, 18, 60, 500 or 512); and the version of software that was copied.

If there is no program in the RS232 module memory, the message **NO COPY STORED** is displayed.

## Option 57 — System Print

The **System Print** option allows the details of the system programming to be printed. The specific details of one or all of the menu options in the following table can be selected:

	Menu Option	Menu No.
01	SYSTEM DATA	23
02	CODES	42
03	PARAMETERS	51
04	ZONES	52
05	OUTPUTS	53
06	LINKS	54
07	COMMUNICATION	56
08	GROUPS	63
09	KEYPADS	58
10	TIMERS	65
11	EVENT LOG	22
12	ALL (Items 1 – 11)	

**Table 6-13. System Print Options**

### Selecting a Print Option

The required print option is selected by entering the option number 01 – 12 or by using the **A** and **B** keys and then pressing **ent**. When printing option **11 = EVENT LOG**, the system prompts for **Groups** to be selected; the print shows only those events logged for the groups selected. The print can be aborted at any time by pressing the **esc** key.

**NOTE:** A serial printer, in on-line (ready-to-print) mode, must be connected to communication line 1 of the Galaxy before the print option is selected. If the printer is off-line or is not connected, the **PRINTER off-line / ESC to abort** message is displayed. Press the **ESC** key and correct the problem.

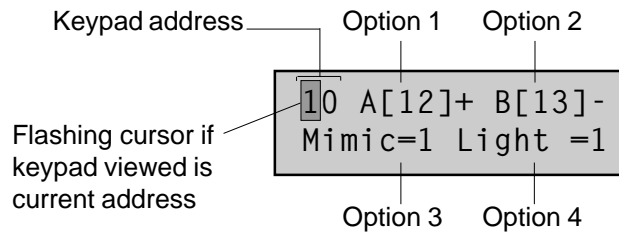
### Printing Timers

Printing **10 = Timers** gives details of all the times that have been assigned in option **65 = TIMERS**; this includes the autoset time, the pre-warning period and lockout times.

## Option 58 — Keypad

The keypads connected to the Galaxy control panel can be assigned individual attributes allowing each keypad to respond in a particular way.

On selecting the **Keypad** option the details of the first keypad connected to the system are displayed.



The required keypad is selected by entering the keypad address or by using the **A** and **B** keys and then pressing **ent**; the keypad displays **1=A-key**. Press the **A** and **B** keys to select the required option and press the **ent** key.

**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.

### 1 = A-key Code Status

This option assigns a menu function to the **A** key. On selecting the option the keypad displays **1 = Code Status**, this determines the method of operation of the **A** key:

**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 press the **ent** key.

**NOTE:** The **Code Status** assigned to the key is displayed when selecting the keypad address, for example **A[12]-** indicates that the **A** key does not require a user code.

### Menu Option

To assign one of the menu options to the **A** key, press the **A** key to move to the **2 = Menu option** and press the **ent** key. The keypad displays the currently assigned menu option.

```

10 A-key Option
12=Timed Set
  
```

To assign a new menu function, enter the full menu option number 11 – 59 or press the **A** and **B** keys until the required menu option is displayed; press the **ent** key to accept the selection and return to the previous menu level.

**2 = B-key**

The programming of the **B** key is identical to that of the **A** key.

**3 = Mimic**

This option determines whether the keypad buzzer mimics the function of the programmed keypad output (refer to option **53 = PROGRAM OUTPUTS**). 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**.

**4 = Backlighting**

This option determines when the keypad backlighting switches on and off.

**0** = always off,

**1** = always on (default),

**2** = on when the system is unset;  
off when the system is set;  
switches on when the keys are pressed,

**3** = on during setting and unsetting;  
switches on when keys are pressed;  
switches off after keypad timeout and when menu is exited,

**4** = switches on when keys are pressed;  
switches off after keypad timeout and when menu is exited.

**5 = Keypad Mute**

This option allows the bleep which normally accompanies a valid keypress to be disabled. This feature improves security and reduces tampering with the keypad when it is located in a public place.

When the **Mute** option is set to **1 = On**, whenever the keypad banner is displayed the keypresses are silent, there are no \*s displayed as each key is pressed and the keypad backlighting remains off. As soon as a valid code is entered the keypad returns to normal operation — the keys are accompanied by beeps and the backlighting switched on. The **Mute** option defaults to disabled (**0 = Off**).

**Keypad Disable**

A keypad may be disabled by programming the address of the keypad as a link destination (refer to menu option **54 — Links**). When the source of the link is activated the keypad does not respond to any keypress, however, the LCD, keypad buzzer and any keypad output device acts as normal.

**6 = Show Status**

This option allows the keypad to display the set status of the groups. When **Show Status** is enabled, pressing the \* and # keys simultaneously when the normal banner is displayed indicates the group set status.

**U** = Unset

**S** = Set

**P** = Part Set

**L** = Locked Out

- = Group not assigned to keypad

STATUS	12345678
Groups	AUSSPLP--

Group block A  
(Galaxy 512)

**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.

Pressing the \* and # keys again toggles the display to show the status of the groups individually. To move between each groups, press the \* and **A** or the \* and **B** keys simultaneously.

Pressing the \* and # keys again returns the keypad to the banner display.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D. Press \* and **A** or \* and **B** keys to display each of the group blocks.

**7 = Keypad Groups**

Each keypad can be assigned 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 which is 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 only to group 1, for example, can be used to set groups 1, 2, 3 and 4 by 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 \* key 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.

**Galaxy 512**

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D. Use the **A** or **B** key to move between the group blocks; press keys **1 – 8** to assign the relevant groups in each block to the user.

When the required groups have been assigned to the user, press the **ent** key to accept the programming and return to the previous menu level.

**Option 59 — Quick Menu**

The Galaxy quick menu consists of up to ten menu options that are accessed by all level 3 (and above) user codes that do not have a \* assigned to their code level. This option allows the quick menu to be reprogrammed to any selection of the menu options. The **Quick Menu** defaults to a factory selection as shown below.

	Menu Option		User Level
0	Omit Zones	11	3
1	Forced Set	14	3
2	Chime	15	3
3	Display Zones	21	4
4	Display Log	22	4
5	Print	24	4
6	Walk Test	31	5
7	Time/Date	41	6
8	Codes	42	6
9	Summer	43	6

**Table 6-14. Quick Menu Options****Modifying the Quick Menu**

On selecting the **Quick Menu** option, the details of the first option assigned to the quick menu are displayed; this includes the quick menu location, the menu option assigned, the full menu option number and the current user level assigned to the option.

Quick Menu location — 0=OMIT ZONES — Menu option  
 Option=[11] L=3 — User level  
 Full menu option number —

Select the quick menu number to be modified by entering the option number 0 – 9 or by using the **A** and **B** keys and then pressing **ent**. The display indicates the quick menu location and the full menu option number currently assigned.

To modify the quick menu, enter the full menu option number 11 – 59 or press the **A** and **B** keys until the required menu option is displayed; press the **ent** key to accept the selection and return to the previous menu level. To delete a quick menu option, press the \* key instead of a menu option number; \*\*=**NOT USED** is displayed.

The system arranges the quick menu in order of lowest user level access required, therefore if quick menu number **0** is assigned a menu option which is of a higher access level than options **2**, **3** and **4**, the menu is rearranged and the display indicates that the option is now number **4**.

**NOTE:** Assigning duplicate quick menu options is denied. The message **DUPLICATE ENTRY** is displayed and the system prompts for a new option to be assigned.

## Option 61 — Diagnostics

This option allows several diagnostic tests to be run on the system, providing valuable information on the operational status of the Galaxy and connected modules. The Galaxy polls each module 32 times every second and reports the successful communications during this period as a percentage. Typical figures are:

- 70% and above — satisfactory communication level
- 50 – 69% — module requires monitoring
- 49% and below — remedial action required

**NOTE:** The Galaxy gives greater priority to modules that are active, therefore this can affect the communication percentages on other modules on the system as they are being polled less frequently due to their zone inactivity.

The **Diagnostic** options are:

1. **MEMORY TEST** — checks the status of the Galaxy memory.
  - **PASS** — there are no problems reported from the memory.
  - **FAIL** — the memory is corrupt. The recommended action in the event of a **FAIL** is to cold start the system — open the **MEM BK** (memory backup) link on the Galaxy main PCB and remove the power supply (both a.c. mains and standby battery).
  - **MEM STATUS [X][Y]** — press the \* key to view the **MEM STATUS** diagnostic. This diagnostic gives details on the use of different areas of the system memory and is designed to assist the development engineers. The diagnostic reports that the available memory in stack **X** has fallen to **Y** bytes. No remedial action is ever required when a **MEM STATUS** message is displayed.
2. **KEYPAD COMMS** — the communication level between the Galaxy panel and the keypads.
3. **RIO COMMS** — the voltage at each RIO as well as the communication level between the Galaxy panel and the RIO.
4. **PSU COMMS** — the voltage at each Smart Power Supply Units and the communication level between the Galaxy panel and the SPSUs. It is identical to the **RIO COMMS** diagnostic with the exception that it also indicates the current output from the SPSU

**95% 13.6V 1.9A.**

Pressing the # key indicates how long the stand-by battery will power the load connected to the SPSU in the event of an a.c. mains failure as well as the battery recharge time.

Standby Time 8h
Charge Time 4h

5. **MAX COMMS** — the communication level between the Galaxy panel and the MAX readers.



**Option 62 — Full Test  
(Galaxy 18, 60, 500 &  
512)**

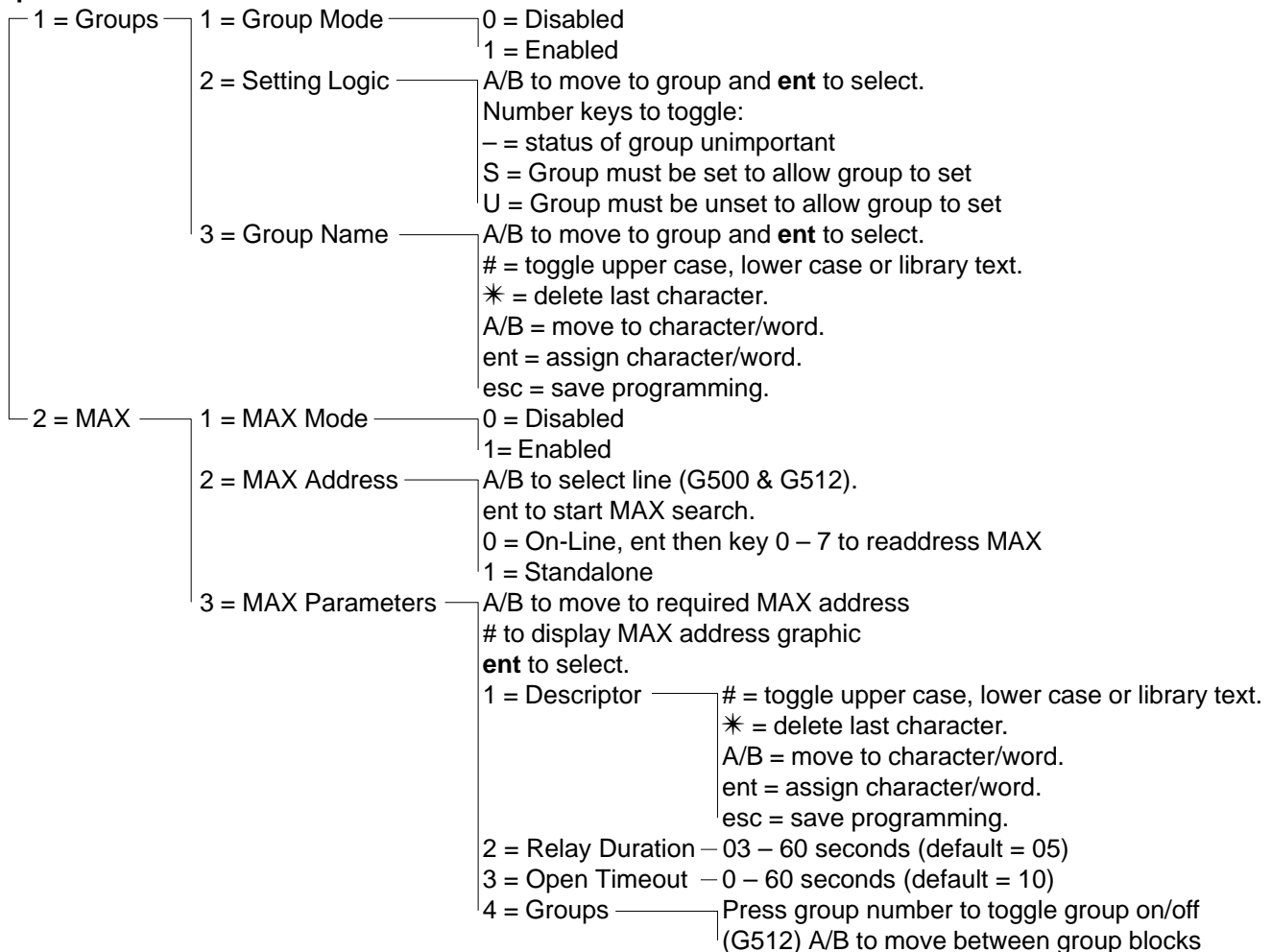
The **Full Test** option allows a single zone to be selected and tested under full set conditions. Activating the selected zone results in a full alarm condition, including remote signalling. Constantly active zones (**Security, 24 Hours, PA, Fire**) remain active throughout the **Full Test**; an activation generates the appropriate local or full alarm depending on the zone.

On selecting the **Full Test** option, the address and function of the first zone on the system is displayed. Move to the required zone by pressing the **A** or **B** keys or by entering the zone address. Press the **ent** key; the system begins the full setting procedure. Activating the zone results in a full alarm condition. To end the full test unset the system.

## Option 63 — Options (Galaxy 18, 60, 500 and 512)

The **Options** function allows the Galaxy to be divided into group subsystems and also allows the MAX proximity access control readers to be integrated into the system

### Options



### Groups

On selecting **Options**, the keypad displays **1 = Groups**; press the **ent** key to select this function.

### 1 = Group Mode

This option is used to enable the **Groups** function (default is **0 = Disabled**). When enabled, the system options that are eligible for group programming are made available throughout the menu, otherwise they do not appear display as **Option not Available**.

### Enabling Groups

On selecting **1 = Enabled**, press the **ent** key to accept the programming and return to the previous menu level. The groups are not yet initialised into the system. Press the **esc** key to return to the engineer banner. The groups are now fully enabled on the system. Reentering the menu allows the groups to be assigned in the relevant menu options.

**NOTE:** The groups are not enabled until the menu has been exited.

## Disabling Groups

If groups have been previously enabled, and assigned to system menu option (for example zones, codes), disabling groups disables all of the programming assigned to groups 2 – 32. Only options programmed as Group 1 remain active.

**NOTE:** To completely disable groups from the system, all of the menu options must be reassigned to group 1 only.

## 2 = Setting Logic

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, 7 are already set. The **Setting Logic** is individually defined for each group.

## Programming Setting Logic

On selecting the **Setting Logic** option, group 1 is displayed. Use the **A** or **B** keys to move to the required group or directly select it by pressing the required group number; press the **ent** key to access the group. On selecting the group, the current **Setting Logic** details are displayed:

- **S** below a group means that it must be set to allow the selected group to set
- a dash (–) below the group indicates that the set status of this group is not important.

Toggle the status between **S** and – by pressing the # key. When the required setting logic pattern has been defined press the **ent** key to accept the programming and return to the previous menu level.

## Galaxy 512

The Galaxy 512 has 32 groups; these are displayed on the keypad in block of eight groups, sub-divided into A, B, C and D:

Group Block	Physical Groups
A1–8	1–8
B1–8	9–16
C1–8	17–24
D1–8	25–32

Use the **A** or **B** key to move between the group blocks; press keys 1 – 8 to toggle the **Setting Logic** for the relevant groups in each block.

**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; 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.

**3 = Group Name**

This option is used to assign a name of up to 12 characters to each of the groups. This name is assembled from the character set and/or library options. On selecting the **Group Name** option, the name currently assigned to group 1 is displayed. All group names default to **Group X** (where **X** is the group number). Use the **A** or **B** keys to move to the required group or directly select it by pressing the required group number; press the **ent** key to access the group. On selecting the group, the following details are displayed:

Upper case text # to toggle upper case/lower case/library

```
A2 Group Name
EFG HIJKLMNÖØ P
```

Current group name

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 the **\*** key to erase the characters already assigned to the name.

The **A** or **B** keys can be used 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 the **ent** key to copy the character to the descriptor in the top line. Repeat this procedure to assemble the required **Group Name**.

**Text Case and Library**

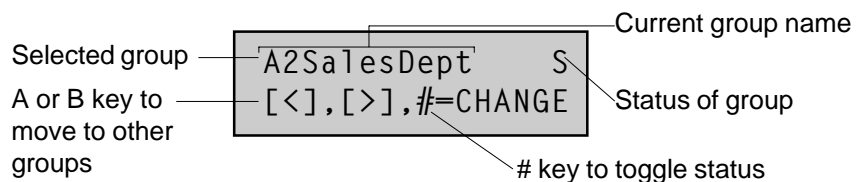
On entering the **Group Name** option the alpha-numeric characters are all presented in upper case. Pressing the # key toggles the characters to lower case.

Pressing the # key when the lower case alphanumeric characters are displayed toggles to the library words. The words can be viewed using the **A** or **B** keys or directly selected using the reference number — refer to **Appendix A — Library**. When the required word is displayed, press the **ent** key to copy it to the name.

**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, simultaneously pressing the # and \* keys displays the groups individually. The keypad displays the group number, name and the status of the particular option being displayed. Press the # key to toggle the status of the group. To move to another group press the **A** or **B** keys or enter the number 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 in regard to other groups during the setting and unsetting procedures (refer to option **52 = PROGRAM ZONES**).
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 option **53 = PROGRAM OUTPUTS**).
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 Galaxy 60, 500 and 512 control panels have multi-user software that allows several users to operate the system simultaneously.

**MAX**

This option is used to program the Galaxy MAX access control readers. The MAX can be fully integrated into the system, communicating on the AB lines and fully utilising the facilities of the Galaxy control panel. If the MAX is programmed as a standalone module, it is completely separate from the Galaxy; the panel does not monitor the module or share any of the facilities or options with it.

**Programming the MAX**

On selecting the **MAX** option, **1 = MAX Mode** is displayed; press the **ent** key to select this function.

**1 = MAX Mode**

This option is used to enable the **MAX** functions and allow the MAX modules to be programmed (default is **0 = Disabled**). 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 next MAX cards and fobs, is possible until the mode is enabled.

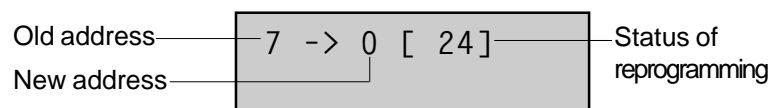
**2 = MAX Address**

The address and the on-line or standalone status of the MAX Modules are assigned and modified using this option. On selecting **MAX Address** the Galaxy searches for the MAX with the highest address. The Galaxy 500 and 512 prompt for the AB line (1 – 4) that is to be searched; select the line and press the **ent** key. On locating the MAX, the keypad prompts for the **TYPE** of MAX to be assigned:

**0 = On-Line** The MAX is fully integrated with the Galaxy system and communicates via the AB line, sharing system resources and facilities

**1 = Standalone** The MAX operates as an entirely independent unit. The Galaxy 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 the **ent** key; the Galaxy 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**

This option defines the individual operational features of each of the MAX modules. On selecting this option the address of the first MAX on the system is displayed along with the descriptor currently assigned to it. While the MAX address is displayed on the keypad, the address pattern on the MAX module is indicated by the LEDs switching on. Pressing the # key displays a graphic on the keypad which corresponds to the LED pattern on the MAX module.



The top two LEDs indicate the line that the MAX is connected to;

- line 1 = □■
- line 2 = ■□
- line 3 = ■■
- line 4 = □□

The bottom four LEDs indicate the MAX address

- MAX 0 = □□□□
- MAX 1 = □□□■
- MAX 2 = □□■□
- MAX 3 = □□■■
- MAX 4 = □■□□
- MAX 5 = □■□■
- MAX 6 = □■■□
- MAX 7 = □■■■

Select the required MAX address using the **A** and **B** keys or by entering the MAX address directly and pressing the **ent** key. The first MAX parameter, **1 = Description** is displayed. Use the **A** or **B** keys to move to the required parameter and press the **ent** key.

**1 = Descriptor**

This option is used to assign a name of up to 12 characters to each of the MAX modules. 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 the \* key to erase the characters already assigned to the name.

The **A** or **B** keys can be used 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 the **ent** key to copy the character to the descriptor in the top line. Repeat this procedure to assemble the required **Descriptor**.

**Text Case and Library**

On entering the **Descriptor** parameter the alpha-numeric characters are all presented in upper case. Pressing the # key toggles the characters to lower case.

Pressing the # key when the lower case alphanumeric characters are displayed toggles to the library words. The words can be viewed using the **A** or **B** keys or directly selected using the reference number — refer to **Appendix A — Library**. When the required word is displayed, press the **ent** key to copy it to the name.

Library words are a maximum of 12 characters and upper case only.

**2 = Relay Duration**

This is the period, following the user card swipe, that the MAX relay is activated allowing a door strike to be unlocked and the door to be opened without creating an alarm. The MAX relay de-activates as soon as the door is closed or the **Open Timeout** occurs.

On entering the **Relay Duration** parameter, the current value is displayed; assign the required time within the range 03 – 60 seconds, the default time is 5 seconds. Press the **ent** key to save the programming and return to the previous menu level.

**NOTE:** Pressing the **A** key increases the time by one second increments, the **B** key decreases the time in one second decrements.

**3 = Open Timeout**

This is the period following the user card swipe that the door can remain open when gaining access. 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.

On entering the **Open Timeout** parameter, the current value is displayed; assign the required time within the range 03 – 60 seconds, the default time is 5 seconds. Press the **ent** key to save the programming and return to the previous menu level.

**NOTE:** Pressing the **A** key increases the time by one second increments, the **B** key decreases the time in one second decrements.



**4 = Groups**

Each MAX module can be assigned to selected groups; the MAX then responds only to cards that have a group common to it.

**Assigning MAX Groups**

On selecting the **Groups** option, the groups currently allocated to the MAX are displayed (the default is all groups assigned). Pressing the group number toggles the group assigned to the MAX.

## Galaxy 512

The Galaxy 512 has 32 groups; these are displayed on the MAX in block of eight groups, sub-divided into A, B, C and D. Use the **A** or **B** key to move between the group blocks; press keys **1 – 8** to assign the relevant groups in each block to the MAX.

When the required groups have been assigned to the user, press the **ent** key to accept the programming and return to the previous menu level.

## Group Name Display

When viewing the groups assigned to the MAX, simultaneously pressing the # and \* keys displays the groups individually. The keypad displays the number, name and the assigned status of each group on the particular MAX being displayed. Press the # key to toggle the status of the group. To move to another group press the **A** or **B** keys or enter the number of the group directly.

## Group Operation of the MAX Function

Each MAX card can be assigned a single menu function (refer to option **42 = CODES**). 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.

**NOTE:** The groups are assigned to the MAX card using option **42 = CODES**.

**Keypad Group Restriction**

To restrict the operation of the function only to groups that are common to both the card and the MAX, press the \* key when assigning groups to the MAX. This means that when a card with access to groups 1, 2 and 3 activates the MAX card function on a MAX module assigned to groups 2, 3 and 4, the function only operates on the common groups (groups 2 and 3).

### Option 64 — Assemble Zone (Galaxy 60, 500 and 512)

The **Assemble Zones** option allows two zone functions to be customised to the user's requirements; these are the **Custom-A** and **Custom-B** zones. Once a custom zone function has been assembled, it is assigned to zones using option **52 = PROGRAM ZONES**.

#### 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 four stages:

1. Outputs
2. Status
3. Setting
4. Log

1 = Outputs	Output Type:	Disabled Set Unset Set/Unset	A/B – select output type # – toggle between Disabled, Set, Unset & Set/Unset esc – save programming
2 = Status	1 = Unset	Disabled Alarm	# – toggle between Disabled and Alarm esc – save programming
	2 = Entry/Exit	Disabled Alarm	
	3 = Part Set	Disabled Alarm	
	4 = Full Set	Disabled Alarm	
3 = Setting	1 = Begin Set	Disabled Enabled	# – toggle between Disabled and Enabled esc – save programming
	2 = Begin Entry	Disabled Enabled	
	3 = Sets System	Disabled Enabled	
4 = Log	Disabled Entry Exit 24 Hours Alarms		# – toggle between Disabled, Entry/Exit, 24 Hours & Alarms esc – save programming

## 1 = Outputs

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:

- Disabled** the output is not activated by the custom zone,
- Set** the output is activated by the custom zone only when the system is set,
- Unset** the output is activated by the custom zone only when the system is unset,
- 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 assign the required status. When all of the output types have been selected, press the **esc** key to return the previous menu level.

## 2 = Status

The **Status** attribute determines the system conditions that the custom zone is operational in. 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 # key; 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

## 3 = Setting

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.

#### 4 = Log

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).

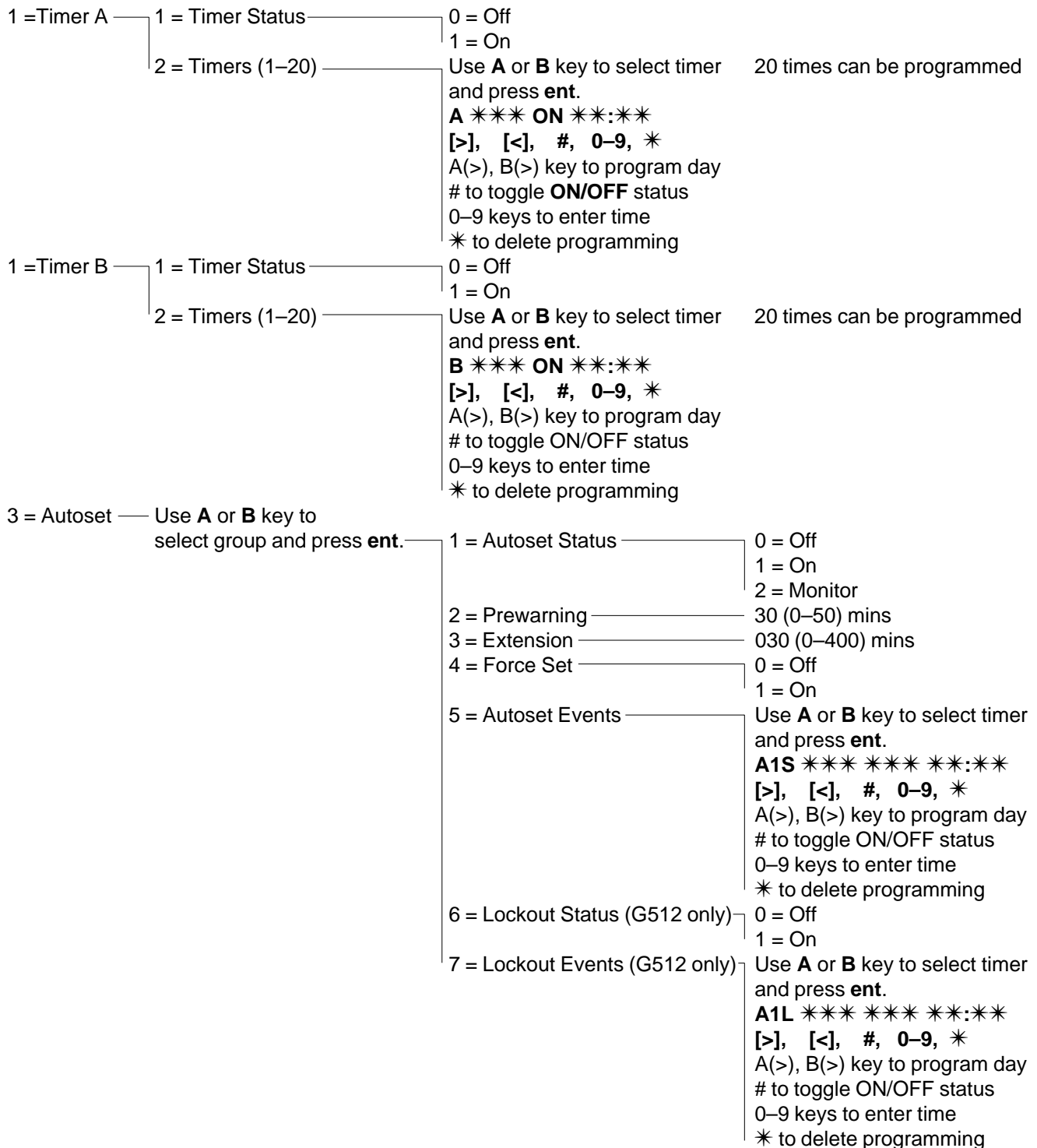
**Programming:**

(Assuming factory default settings)

1. Select option **64 = ASSEMBLE ZONES**; press the **ent** key,
2. Select custom zone (**1 = Custom-A, 2 = Custom-B**); press the **ent** key,
3. **Outputs** is displayed. Press the **ent** key to select this option,
4. **Bells** is displayed. Press the # key. **Set** is displayed,
5. Enter **51**. **Link-A** is displayed. Press the # key. **Set** is displayed,
6. Press the # key. **Unset** is displayed,
7. Press the **esc** key. **Outputs** is displayed,
8. Press the **A** key. **Status** is displayed. Press the **ent** key to select this option,
9. **Unset Disabled** is displayed,
10. Press the **A** key. **Entry/ Exit Disabled** is displayed,
11. Press the **A** key. **Part Set Disabled** is displayed,
12. Press the # key. **Part Set Alarm** is displayed,
13. Press the **A** key. **Full Set Disabled** is displayed,
14. Press the # key. **Full Set Alarm** is displayed,
15. Press the **esc** key. **Status** is displayed,
16. Press the **A** key. **Setting** is displayed. Press the **ent** key to select this option,
17. **Begin Entry Disabled** is displayed,
18. Press the **A** key. **Sets System Disabled** is displayed,
19. Press the # key. **Sets System Enabled** is displayed,
20. Press the **esc** key. **Setting** is displayed,
21. Press the **A** key. **Log** is displayed. Press the **ent** key to select this option,
22. **Log Disabled** is displayed,
23. Press the # key. **Log Entry/Exit** is displayed,
24. Press the # key. **Log 24 Hours** is displayed,
25. Press the **esc** key three times to return to the **64 = ASSEMBLE ZONES** display.

## Option 65 — Timers

(Galaxy 60, 500 &amp; 512)

The **Timers** menu options are as follows:

**Timer A and B**

The Galaxy 60, 500 and 512 control panels provide two timers that allow up to 20 times to be assigned over a seven day period; these can be combined in any order of **On** and **Off** times as required.

**Programming Timers**

1. Enter the **Timers** option; **1=TIMER A** is displayed. To modify or assign times go to **Step 5**.
2. Press the **ent** key to select **Timer A** or the **A** then **ent** keys to select **Timer B**; **1=TIMER STATUS** is displayed.
3. Press the **ent** key; the status of the selected timer is displayed (the default setting is **0=OFF**). To change the status press the **A** or **B** key or press key **1** to select **ON** or **2** to select **OFF**.
4. Press the **ent** key to accept the programming and return to the previous menu level. Press the **esc** key once to return to **1=TIMER A**, or twice to escape from the option.
5. To modify the times, press the **ent** key to select **Timer A** or the **A** then the **ent** keys to select **Timer B**; **1=TIMER STATUS** is displayed.
6. Press the **A** then **ent** key to select **2=TIMERS (1-20)**; the first two times assigned to the timer are displayed (the first time is on the top line, the second is on the bottom).

```
A  MON ON  19:30
   TUE OFF 07:30
```

7. Press the **A** key to step through each of the times until the required time is displayed on the top line of the display.
8. Press the **ent** key to select the time to be modified:
  - the **\*** key deletes the programmed time information;
  - the **A** or **B** keys change the programmed day;
  - the **#** key toggles whether the timer switch **ON** or **OFF**;
  - the number keys (**0-9**) assign the time (the time must be four digits in the 24 hour format);

```
A  MON ON  19:30
   [<],[>],#,0-9,*
```

9. Press the **ent** key to accept the programming and return to the previous menu level.
10. Press the **esc** key three times to escape from the **Timers** option.

Once the times have been programmed and the **Timer Status** is set to **1=On**, the **Timer-A** or **Timer-B** outputs are activated at the programmed **On** times and deactivated at the **Off** times. User codes that they have been attributed to a **Time Zone A** or **B** are invalid between an **On** time and the next **Off** time for the appropriate timer

**NOTE:** The **Timer Status** can be switched **On** and **Off** by users via option **45 = TIMER CONTROL**.

**Autoset (Galaxy 500 & 512)** The **Autoset** option is available on the Galaxy 500 and 512 control panels only. The Galaxy 500 can be programmed to automatically set and unset each of the system groups individually at predetermined times.

**NOTE:** The Galaxy 512, as part of the high security requirements, can be programmed to automatically set only; it cannot be programmed to automatically unset.

Each group can be programmed with 20 **Autoset** times over a seven day period. These can be combined in any order of **On** and **Off** times as required — for example 20 **On** times may be allocated to a group, or six **Off** times and 14 **On** times; on the Galaxy 512 all of the times are fixed as **On** times.

When the system has been set by the **Autoset** function, outputs programmed as **Autoset** (refer to option **53 = PROGRAM OUTPUTS**) are activated; the **Set** outputs are also activated.

#### Exit Alarm (Galaxy 512 only)

Where **Exit Alarm** is enabled (refer to option **51 = PARAMETERS**) for a group, any zone open at autoset immediately activates a full alarm. If **Exit Alarm** is disabled (default) the **Entry/Exit Horns** pulse if zones are open. If the zones remain open, on expiry of the times programmed in **Fail To Set** parameter, the **Fail Set** outputs are activated along with a full alarm.

#### Programming Autoset

If groups are enabled (refer to option **63 = OPTIONS**) the keypads prompts for the group that the autoset time is to be allocated to. Press the **A** or **B** keys to step through the groups until the required number is displayed and press the **ent** key.

**NOTE:** The group can be directly selected by entering the group number. The Galaxy 512 has 32 groups; these are displayed in blocks of eight groups, sub-divided into A, B, C and D;

Group Block	Physical Groups
A1–8	1–8
B1–8	9–16
C1–8	17–24
D1–8	25–32

Use the **A** or **B** key to select the required group (**A1–D8**). When the end of a block is reached, the next block of eight groups is displayed; use keys **1–8** to assign the relevant group in the current block to the zone; press the **ent** key to accept the selection.



There are five stages to programming the **Autoset** function:

**1. Autoset Status** 0 = Off (default)

1 = On

2 = Monitor — if selected, the setting and unsetting of the group is monitored:

- if not set by the **On** time, then the **Set Late** output is activated
- if not unset by the **Off** time, then the **Unset Early** output is activated.

**2. Prewarning** 0 – 50 minutes (default 30 minutes):

this option determines the warning period given to users prior to the system autosetting. Outputs programmed as **Prewarning** activate during the prewarning period. The output normally emits a constant tone, however if an extension is not possible, then a pulsed tone is emitted. At the end of the prewarning period, the system begins the timed setting procedure.

**NOTE:** Pressing the **esc** key at any time during the **prewarning** resets and restarts the **prewarning** countdown.

**3. Extension** 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**.

On the Galaxy 500 the **Extension** can be repeated as many times as requested.

**NOTE:** The **Late Working** option (refer to option **45 = TIMERS**) authorises an **Extension** in advance of the **Prewarning** period.

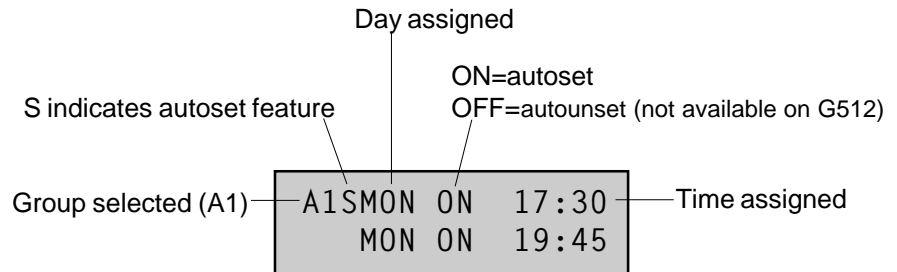
An **Extension** cannot be granted once the timed setting procedure begins. An **Extension** cannot be granted beyond 23.00 hours on the Galaxy 512.

**4. Force Set** 0 = Off (default)

**(Galaxy 500 only)** 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 omissible. If one of the above listed zones is open and is non-ommissible, on expiry of the time programmed in the **Fail-to-Set** parameter the **Fail-to-Set** outputs are activated along with a full alarm.

**5. Autoset Events** This option programs the times when the selected group is automatically switched **On** (Autoset) and **Off** (Autounset).

On selecting the option, the first two times assigned to the timer are displayed (the first time is on the top line, the second is on the bottom). If no autoset times have been assigned, the keypad displays stars (\*) on the top line. Press the **A** key to step through each of the times until the required time is shown on the top line of the display.



Press the **ent** key to select the time to be modified. The keypad displays:

```
A1SMON ON 17:30
[<],[>],#,0-9,*
```

- the \* key deletes the programmed time information;
- the **A** or **B** keys change the programmed day;
- the # key toggles whether the timer switch **ON** or **OFF**;
- the number keys (**0-9**) assign the time in the 24 hour format);

Press the **ent** key to accept the programming and return to the previous menu level.

**Lockout (Galaxy 512 only)**

Each group can be programmed with 20 **Lockout** times over a seven day period. These can be combined in any order of **On** and **Off** times as required.

If **Lockout** has been assigned to a group, the group is locked-out at the **Lockout On** time or when the group sets — whichever occurs first. Outputs programmed as **Lockout** are active while the system is locked out — this will not always correspond to the times assigned to the **Lockout** depending on whether the group sets prior to **Lockout On**. When a group is locked-out the setting status indicates that it cannot be unset by displaying an **L**.

GROUPS	12345678
	CLLUULLSL

During the **Lockout** period, the group can not be unset unless an alarm has been activated in the group. In the event of an alarm occurring during the **Lockout** period, any valid level 2 (or above) code assigned to the group in alarm may be used to unset and/or reset the group. If multiple locked-out groups are in an alarm condition entry of a single valid code (level 2 or above with access to the relevant groups) cancels the alarms and unsets the activated groups.

The group can only be manually unset once in each **Lockout Off** period. If no **Lockout** times are programmed, the group may be unset at any time.

Codes are not affected by **Lockout**, and can be used to gain access to the menus and to manually set the group.

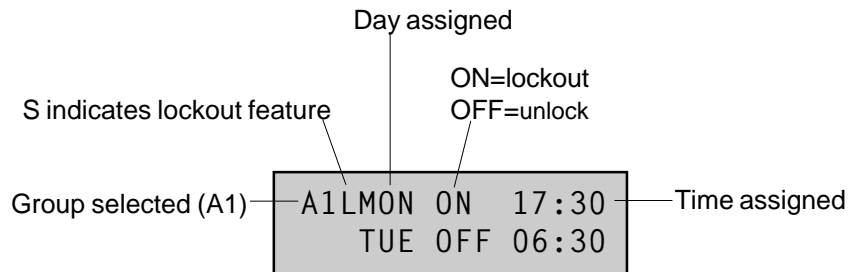
**Programming Lockout**

There are two stages to programming the **Lockout function**. These are options **6 = Lockout Status** and **7 = Lockout Events** of the Autoset programming menu:

- 6. Autoset Status** 0 = Off (default)  
1 = On

**7. Lockout Events** This option programs the **Off** (Unlock) and **On** (Lockout) times for the selected group.

On selecting the option, the first two times assigned to the timer are displayed (the first time is on the top line, the second is on the bottom). If no lockout times have been assigned, the keypad displays stars (\*) on the top line:



Press the **A** key to step through each of the times until the required time is shown on the top line of the display.

Press the **ent** key to select the time to be modified. The keypad displays:

```
A1LMON ON 17:30
[<],[>],#,0-9,*
```

- the \* key deletes the programmed time information;
- the **A** or **B** keys change the programmed day;
- the # key toggles whether the timer switch **ON** or **OFF**;
- the number keys (**0-9**) assign the time (in the 24 hour format);

Press the **ent** key to accept the programming and return to the previous menu level.

**Option 66 — Pre-Check  
(Galaxy 60, 500 & 512)**

The **Pre-Check** 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.

**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:

1. **Disabled** (default): the pre-check option is disabled; even if zones are selected, they are not checked.
2. **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 the **A** or **B** keys to view the zones. Press the **ent** key to continue the setting routine. The zone that have not been activated do not have to be tested.
3. **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.
4. **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 the **A** or **B** keys. All of the pre-selected zones must be tested before setting can take place.

**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 remain to be tested. When the last zone is successfully tested the **Entry/Exit Horn** sounds twice and the keypad displays **0 CHECK ZONES**; press the **ent** key to resume the system routine.

0 CHECK ZONES  
ENT=SET

**2 = Select Zones**

On selecting **2 = Select Zones**, the address and function of the first zone on the system is displayed. Move to the required zone by pressing the **A** or **B** keys or by entering the zone address. To toggle the status of the pre-check attribute of the zone press the **#** key; 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 the **esc** key.

## Option 67 — Remote Reset

The **Remote Reset** option allows a user to perform an engineer reset authorised by the Alarm Receiving Centre (ARC). In the event of alarm that requires 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 Galaxy panel. Entering the engineer code also resets the Galaxy 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 (level 7).

Each alarm activation generates a random number, therefore, the number requires to reset the panel constantly changes. 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 Services (4 digits)

**2 = Technistore** (5 digits) - requires a four digit local modifier (000 – 255) to be assigned.

**3 = Microtech** (6 digits) — requires a four digit local modifier (0000 – 9999) to be assigned.

**NOTE:** The local modifier for the **Technistore** or **Microtech** reset modes must be assigned after discussion with the ARC.

### Option 68 — Menu Access (Galaxy 60, 500 & 512)

The **Menu Access** option is used to assign access levels to each of the menu options. This allows code levels 3 – 6 to have access to menu options to which they would normally have insufficient access rights.

On selecting this option, **11 = OMIT ZONES** is displayed along with the current code levels assigned (**3456** default).

```
Levels      3456
11=OMIT ZONES
```

Use the **A** or **B** key to select the required menu option or enter the option number directly and press the **ent** key. The currently assigned levels appear displayed on the top line of the display. The level maps default to the standard access. To modify the levels, press the required number keys; this toggles the access level numbers on the bottom line of the display on and off.

```
Levels      3456
>_5_
```

Press the **ent** key 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, level 5 codes can be given access to menu 42 which would allow them to allocate codes.

```
Levels      --56
42=CODES
```

Users can only allocate codes up to the level that they have been assigned. A level 4 user cannot assign a user code as level 5.

**NOTE:** The following menu access levels are fixed: option **48 = DATELOCK** level **6**, and option **68 = MENU ACCESS** engineer access (level 7 and 8).

## Appendix A: Library

00	0	001	ABOVE	061	CAFE	121	DOG
01	1	002	ACCESS	062	CALL	122	DOOR
02	2	003	ACCOUNTANT	063	CANTEEN	123	DOUBLE
03	3	004	ACCOUNTANTS	064	CAR	124	DOWNSTAIRS
04	4	005	ACCOUNTS	065	CARGO	125	DRAMA
05	5	006	ADMIN.	066	CARPENTER	126	DRAWER
06	6	007	ALARM	067	CARPET	127	DRAWING
07	7	008	ALERT	068	CASH	128	DRINKS
08	8	009	ANIMAL	069	CASHIER	129	DRIVE
09	9	010	ANNEXE	070	CEILING	130	DRUGS
10	space	011	ARCH	071	CELL	131	EAST
11	Å	012	AREA	072	CELLAR	132	ECONOMICS
12	Ä	013	ARENA	073	CENTRAL	133	EDGE
13	A	014	AROUND	074	CENTRE	134	EIGHT
14	Æ	015	ART	075	CHAIR	135	EIGHTEEN
15	B	016	ASSEMBLY	076	CHANGING	136	EIGHTY
16	C	017	ASSISTANT	077	CHEMISTRY	137	ELECTRIC
17	D	018	AT	078	CHICKEN	138	ELECTRICIAN
18	E	019	ATTACK	079	CHURCH	139	ELECTRONICS
19	F	020	ATTIC	080	CLASSROOM	140	EMERGENCY
20	G	021	AUTOMATIC	081	CLEANER	141	END
21	space	022	AUXILIARY	082	CLEANERS	142	ENGINE
22	H	023	BACK	083	CLEANING	143	ENGINEER
23	I	024	BAGGAGE	084	CLERK	144	ENGINEERS
24	J	025	BAKERY	085	CLERKS	145	ENGLISH
25	K	026	BALCONY	086	COAL	146	ENTRANCE
26	L	027	BALLROOM	087	COAT	147	ENTRY
27	M	028	BANK	088	COIN	148	EQUIPMENT
28	N	029	BANKING	089	COLD	149	ESCAPE
29	Ø	030	BAR	090	COLLECTION	150	ESCALATOR
30	Ö	031	BARN	091	COMMUNICATOR	151	EXIT
31	O	032	BASEMENT	092	COMPUTER	152	EXPORT
32	space	033	BATH	093	CONFERENCE	153	EXTERNAL
33	P	034	BATHROOM	094	CONTAINER	154	FACTORY
34	Q	035	BAY	095	CONTACT	155	FAILURE
35	R	036	BEAM	096	CONSERVATORY	156	FAR
36	S	037	BEDROOM	097	CORNER	157	FARM
37	T	038	BEHIND	098	CORRIDOR	158	FAX
38	U	039	BELL	099	COUNTER	159	FEED
39	Ü	040	BELOW	100	COURT	160	FEMALE
40	V	041	BENCH	101	COW	161	FENCE
41	W	042	BESIDE	102	CUPBOARD	162	FIELD
42	X	043	BIOLOGY	103	CURRENCY	163	FIFTEEN
43	space	044	BIRD	104	DAIRY	164	FIFTY
44	Y	045	BLOCK	105	DARK-ROOM	165	FLING
45	Z	046	BLUE	106	DATA	166	FIRE
46	.	047	BOARD	107	DAY	167	FIRST
47	,	048	BODY	108	DEPARTURE	168	FIRST-AID
48	/	049	BOILER	109	DEPUTY	169	FISH
49	-	050	BOOTH	110	DEPT.	170	FIVE
50	+	051	BOTTOM	111	DESIGN	171	FLAT
51	&	052	BOX	112	DESK	172	FLOOR
52	(	053	BOYS	113	DETECTOR	173	FOR
53	)	054	BRANCH	114	DEVELOPMENT	174	FOREIGN
54	space	055	BROOM	115	DEVICE	175	FORTY
		056	BROWN	116	DIARY	176	FOUNTAIN
		057	BUILDING	117	DINING	177	FOUR
		058	BUNKER	118	DIRECTOR	178	FREEZER
		059	BY	119	DIRECTORS	179	FRENCH
		060	CABINET	120	DISPATCH	180	FRIDGE



181	FROM	241	LANDING	301	NURSERY
182	FRONT	242	LAST	302	NORTH
183	GAMES	243	LATIN	303	OF
184	GARAGE	244	LAUNDRY	304	OFFICE
185	GARDEN	245	LAVATORY	305	OFFICER
186	GATE	246	LAWN	306	OFFICERS
187	GENTS	247	LEAST	307	OFFICES
188	GEOGRAPHY	248	LECTURE	308	OIL
189	GERMAN	249	LEFT	309	ON
190	GIRLS	250	LEVEL	310	ONE
191	GLASS	251	L.H.S.	311	OPEN
192	GOLD	252	LIBRARY	312	ORANGE
193	GOODS	253	LIFT	313	OUT
194	GREAT	254	LIGHT	314	OUTER
195	GREEN	255	LINE	315	OUTSIDE
196	GROCERY	256	LITTLE	316	OVAL
197	GROUND	257	LOADING	317	OVER
198	GROUNDS	258	LOBBY	318	P.A. BUTTON
199	GROUNDSMAN	259	LOCK	319	PACKING
200	GROUP	260	LOFT	320	PAINT
201	GUARD	261	LORRY	321	PANEL
202	GUN	262	LOUNGE	322	PANIC
203	GYM	263	LOW	323	PANTRY
204	HALL	264	LUNCH	324	PARCEL
205	HAND	265	MACHINE	325	PARK
206	HANGER	266	MAGNETIC	326	PARTITION
207	HEAD	267	MAIN	327	PASSIVE
208	HEAT	268	MAJOR	328	PATH
209	HEATER	269	MALE	329	PATIO
210	HIGH	270	MAN	330	PEN
211	HISTORY	271	MANAGER	331	PENTHOUSE
212	HOME	272	MANAGERS	332	PERIMETER
213	HORSE	273	MASTER	333	PERSONAL
214	HOT	274	MAT	334	PERSONNEL
215	HOUSE	275	MATHS	335	PHONE
216	ICE	276	MEDICAL	336	PHYSICS
217	IN	277	MEN	337	PIG
218	INDUSTRIAL	278	MESS	338	PIR
219	INFANT	279	METAL	339	PIR BY
220	INFANTS	280	METER	340	PIR IN
221	INFORMATION	281	MEZZANINE	341	PIR ON
222	INFRARED	282	MICROWAVE	342	PLACE
223	INSIDE	283	MIDDLE	343	PLANT
224	INSTRUCTORS	284	MILK	344	PLAY
225	INTERIOR	285	MINOR	345	PLAZA
226	INTO	286	MOBILE	346	PLUMBER
227	IRON	287	MODEL	347	PLUMBERS
228	ISOLATION	288	MONITOR	348	POINT
229	IT	289	MOULDING	349	POND
230	ITALIAN	290	MOVEMENT	350	POOL
231	JANITOR	291	NEAR	351	PORCH
232	JANITORS	292	NEW	352	POST
233	JUDGE	293	NEXT	353	POWER
234	JUNIOR	294	NIGHT	354	PRESSURE
235	JUST	295	NINE	355	PRIMARY
236	KEEP	296	NINETEEN	356	PRIME
237	KEYPAD	297	NINETY	357	PRINT
238	KITCHEN	298	NODE	358	PROCESSING
239	LAB	299	NOISE	359	PRODUCTION
240	LADIES	300	NURSE	360	PUBLIC

361	PURCHASING	421	SITTING	481	TOP
362	PURPLE	422	SIX	482	TRACK
363	QUALITY	423	SIXTEEN	483	TRACTOR
364	QUANTITY	424	SIXTY	484	TRADE
365	QUIET	425	SLIDING	485	TRAILER
366	QUICK	426	SMOKE	486	TRAIN
367	RANGE	427	SOFTWARE	487	TRAINING
368	READING	428	SOLITARY	488	TRANSPORT
369	REAR	429	SOUND	489	TRAP
370	RECEPTION	430	SOUTH	490	T.V.
371	RECORDS	431	SPANISH	491	TWELVE
372	RECTOR	432	SPRAY	492	TWENTY
373	RECTORS	433	SPRING	493	TWIN
374	RED	434	SQUARE	494	TWO
375	REED	435	SQUASH	495	TYPE
376	REFECTORY	436	STABLE	496	TYPING
377	REMOTE	437	STADIUM	497	TYRE
378	REPAIR	438	STAFF	498	ULTRASONIC
379	RESEARCH	439	STAIRS	499	UNDER
380	REST	440	STAIRWELL	500	UNIT
381	RESTAURANT	441	STALLS	501	UP
382	REVOLVING	442	STAND	502	UPPER
383	RIGHT	443	START	503	UPSTAIRS
384	R.H.S.	444	STATION	504	USER
385	ROLLER	445	STOP	505	UTILITY
386	ROOF	446	STORE	506	VAN
387	ROOM	447	STORES	507	VARIABLE
388	ROUND	448	STROBE	508	VAULT
389	RUN	449	STRONG	509	VENTILATOR
390	SAFE	450	STUDY	510	VISUAL
391	SALES	451	SUITE	511	VOLTAGE
392	SCAN	452	SUMMER	512	WAITING
393	SCANNER	453	SUNDAY	513	WALK
394	SCANNERS	454	SUPPLY	514	WALL
395	SCANNING	455	SURGERY	515	WARD
396	SCREEN	456	SWIMMING	516	WAREHOUSE
397	SEA	457	SWITCH	517	WASH
398	SECOND	458	SYSTEM	518	WATER
399	SECURE	459	TABLE	519	WAY
400	SECRETARIES	460	TALL	520	W.C.
401	SECRETARY	461	TAMPER	521	WEAPON
402	SECTION	462	TEA	522	WEEKEND
403	SECURITY	463	TEACHER	523	WEST
404	SENSOR	464	TECHNICAL	524	WINDOW
405	SEVEN	465	TECHNICIAN	525	WINTER
406	SEVENTEEN	466	TELLER	526	WITH
407	SEVENTY	467	TEN	527	WOOD
408	SHACK	468	TENNIS	528	WOODWORK
409	SHAFT	469	TEST	529	WORK
410	SHED	470	THE	530	WORKS
411	SHEEP	471	THEATRE	531	WORKSHOP
412	SHOP	472	THEN	532	X-RAY
413	SHOWROOM	473	THIRTEEN	533	YARD
414	SHORT	474	THIRTY	534	YEAR
415	SHOWER	475	THREE	535	YELLOW
416	SHUTTER	476	TICKET	536	ZERO
417	SIDE	477	TILL	537	ZONE
418	SILENT	478	TO	538	ZOO
419	SILVER	479	TOILET		
420	SITE	480	TOOL		

## Appendix B: Event Log Messages

KEYPAD TEXT	DESCRIPTION
0001 + CU-BATT	Control Unit Standby Battery Low has occurred (battery voltage below 10.5 Vd.c.).
0001 - CU-BATT	Control Unit Standby Battery Low has finished (battery voltage now above 10.5 Vd.c.).
0002 + CU-AC	Control Unit Mains (a.c.) Power Fail has occurred.
0002 - CU-AC	Control Unit Mains (a.c.) Power Fail has finished.
0003 + LID TAMP	Lid Tamper on control unit has occurred.
0003 - LID TAMP	Lid Tamper on control unit has finished.
0004 + AUX TAMP	Auxiliary Tamper on control unit has occurred.
0004 - AUX TAMP	Auxiliary Tamper on control unit has finished.
+ AC FAIL	AC Fail zone activated (opened) or an AC Fail on 3 A Smart Power Supply Unit.
- AC FAIL	AC Fail zone de-activated (closed) or an AC Fail on 3 A Smart Power Supply Unit has stopped.
ALARM EXT	Alarm extend zone activated.
ADDED	Engineer has Added a module to the system.
ATM-1	ATM-1 zone activated.
ATM-2	ATM-2 zone activated.
ATM-3	ATM-3 zone activated.
ATM-4	ATM-4 zone activated.
AUTOTEST	Automatic Test of the system via the Telecom Module.
AUTOTIMER +	Autoset timer activated.
AUTOTIMER -	Autoset timer de-activated.
+ BATT LOW	Battery Low activated on 3 A Smart Power Supply Unit.
- BATT LOW	Battery Low de-activated on 3 A Smart Power Supply Unit.
BEAM PAIR	Beam Pair zones activated (opened).
+ BELL TAMP	Bell Tamper zone activated (opened).
- BELL TAMP	Bell Tamper zone de-activated (closed).
CANCEL	Alarm activation Cancelled by a valid user Code (system or Group(s) still Set).
COMM FAIL	Communication Failure has occurred on a Telecom Module.
COPY SITE	Remote Copy of the Site (system) has occurred via Galaxy Gold or the RS232 Module.
CUSTOM-A	Custom-A zone activated (opened).
CUSTOM-B	Custom-B zone activated (opened).
CU-FUSE +	Control Unit Fuse removed (Galaxy 8 only).
CU-FUSE -	Control Unit Fuse replaced (Galaxy 8 only).
DELAY ALM	PA Delay Alarm zone activated after PA Delay timeout.
DL/SL ALM	PA Delayed Silent zone activated after PA Delay timeout.
DUAL	Dual (Double Knock) zone activated (opened).

KEYPAD TEXT	DESCRIPTION
DURESS	Duress code has been entered.
ENG ASSEM	Engineering Assemble Zone menu (Menu Option 64) has been accessed.
ENG CHECK	Engineering Pre-Check menu (Menu Option 66) has been accessed.
ENG DIAG	Engineering Diagnostics menu (Menu Option 61) has been accessed.
ENG DIGI	Engineering Digicom (Communications) (Menu Option 56) has been accessed.
ENG GROUP	Engineering Groups (Menu Option 63) has been accessed.
ENG KPAD	Engineering Keypad (Menu Option 58) has been accessed.
ENG LINKS	Engineering Links (Menu Option 54) has been accessed.
ENG O/PS	Engineering Outputs (Menu Option 53) has been accessed.
ENG PARAM	Engineering Parameters (Menu Option 51) has been accessed.
ENG PRINT	Engineering Print (Menu Option 57) has been accessed.
ENG QUICK	Engineering Quick Menu (Menu Option 59) has been accessed.
ENG SOAK	Engineering Soak Test (Menu Option 56) has been accessed.
ENG TMRS	Engineering Timers A/B (Menu Option 65) has been accessed.
ENG ZONES	Engineering Zones (Menu Option 52) has been accessed.
ENG TAMP	Tamper when entering Engineer Mode.
ENG TEST	Engineer Test of the system via the Telecom Module.
ENGINEER +	Entering Engineer mode.
ENGINEER –	Leaving Engineer mode.
+ ENTRY	Entry zone activated (opened) during Setting/Unsetting procedure or when Set.
– ENTRY	Entry zone de-activated (closed) during Setting/Unsetting procedure or when Set.
EXTENSION	System or Group(s) are in the Autoset Extension period.
+ EXIT	Exit zone activated (opened) during the Unsetting procedure or when Set.
– EXIT	Exit zone de-activated (closed) during the Unsetting procedure or when Set.
EXITGUARD	ExitGuard zone activated (opened).
FAIL SET	Fail to set event.
+ FINAL	Final zone activated (opened) during Setting/Unsetting procedure or when Set.
– FINAL	Final zone de-activated (closed) during Setting/Unsetting procedure or when Set.
FIRE	Fire zone activated (opened).
FORCE OMT	Force Omit of a zone (Menu Option 14).
FULL SET	Full Set (Menu Option 12) of the system or Group(s).
FULL TEST	Full Test (Menu Option 62) has occurred.
GRP OMIT +	Group Omit has occurred (Group(s) has been omitted).
GRP OMIT –	Group Omit has finished (Group(s) has been un-omitted).
HIGH RES +	Zone changing to High Resistance (1200 to 1300 Ohm) Engineer Log only.
HIGH RES –	Zone changing from High Resistance to Normal Closed (900 to 1200 Ohm) Eng. Log only

KEYPAD TEXT	DESCRIPTION
INTRUDER	Intruder zone activated (opened).
INT DELAY	Intruder Delay zone activated (opened).
INT ALARM	Intruder Alarm from an Intruder Delay zone after the Delay Alarm time.
KEYSWITCH	Keyswitch zone activated (opened).
KSW CANCL	Keyswitch Cancels alarm activation (system or Group(s) still Set).
KSW P/SET	Keyswitch part sets the system or Group(s).
KSW SET	Keyswitch Full Sets the system or Group(s).
KSW UNSET	Keyswitch Unsets the system or Group(s).
KSW RESET	Keyswitch Resets the system or Group(s).
LATE SET	Late Set of the system or Group(s).
LEGAL CD	Legal Code entered (This a Level 0 Code or a valid user Code after an engineer's Code the system or Group(s) is Set).
LINE FAIL +	Telecom Module Line Fail has occurred or a telephone Line Fail zone activated (opened).
LINE FAIL –	Telecom Module Line Fail has finished or a telephone Line Fail zone de-activated (closed).
+ LINK	Link zone activated (opened).
– LINK	Link zone de-activated (closed).
LOCKTIMER +	Lockout timer activated.
LOCKTIMER –	Lockout timer de-activated.
+ LOG	Log zone activated (opened).
– LOG	Log zone de-activated (closed).
LOG DELAY	Log Delay zone has been activated (opened) for longer than the Delay Alarm time.
+ LOW RES	Zone changing to low resistance (800 to 900 Ohm).
– LOW RES	Zone changing from Low Resistance to Normal Closed (900 to 1200 Ohm).
+ MASK	Mask zone activated (opened).
– MASK	Mask zone de-activated (closed).
MAX ALARM	MAX alarm — door forced.
MEM RESET	Memory Reset (Restart) to factory default settings (Cold Start).
MEMORY OK	Memory Reset (Restart) with programming details saved (Warm start).
MISSING +	Module Missing its AB (RS485) communications.
MISSING –	Module that was Missing now has its AB (RS485) communications re-established.
MOD CODES	Modify Codes menu (Menu Option 41) has been accessed.
MOD REM	Galaxy Gold menu option has been accessed.
MOD SUMMR	Modify Summer menu (Menu Option 43) has been accessed.
MOD T/D	Modify Time/Date menu (Menu Option 42) has been accessed.
MOD TMRS	Modify Timers Control menu (Menu Option 45) has been accessed.

KEYPAD TEXT	DESCRIPTION
NEW T/D	New Time/Date after modification.
OMIT ATM-1	Omit all ATM-1 zones.
OMIT ATM-2	Omit all ATM-2 zones.
OMIT ATM-3	Omit all ATM-3 zones.
OMIT ATM-4	Omit all ATM-4 zones.
OMIT VIBS	Mass omit of vibration zones.
OMIT ZONE	Omit Zones menu (Menu Option 0 (in the Quick Menu) or Menu Option 11 (in the Full Menu)) has been accessed.
OMITTED	Zone has been omitted.
OVWR SITE	Remote Overwrite of the Site (system) has occurred via Galaxy Gold or the RS232 Mod
PA	PA zone activated (opened).
PA DEL/SL	PA Delayed Silent zone activated (opened).
PA DELAY	PA Delayed zone activated (opened).
PA UNSET	PA Unset zone activated while group in unset condition.
PA RESET	PA Reset has occurred.
PA SILENT	PA Silent zone activated (opened).
PART SET	Part Set of system or Group(s).
PREWARN	System or Group(s) in the Autoset Prewarning period.
PRINT OC	Print On Command.
PRINT OL	Print On Line, the automatic printing of the Event Log. Not to be confused with the print on-line message from a printer.
+ PRT ENTRY	Part Entry zone activated (opened).
- PRT ENTRY	Part Entry zone de-activated (closed).
+ PRT FINAL	Part Final zone activated (opened).
- PRT FINAL	Part Final zone de-activated (closed).
PUSH SET	Push Set (Exit Terminator) zone activated (opened).
REARM	Rearm of system has occurred.
REM CALL +	Remote device connected.
REM CALL -	Remote device disconnected.
REM COPY	Remote Copy of site details via SIA has occurred.
REM OVRWR	Remote Overwrite via SIA has occurred.
REMOVED	Engineer has Removed a module from the system.
RM ACCESS	Remote Access zone activated (opened).
+ SEC FINAL	Secure Final zone activated (opened).
- SEC FINAL	Secure Final zone de-activated (closed).
SET LOG	Set Log zone activated (opened) when the system or Group(s) is Set.

KEYPAD TEXT	DESCRIPTION
+ SECURITY	Security zone activated (opened).
– SECURITY	Security zone de-activated (closed).
SOAK TEST	Zone under Soak Test (Menu Option 56) activated when the system or group(s) is Set.
STANDLOW	Standby time for the battery is Low.
SYS RESET	System Reset has occurred event.
+ TAMP O/C	Zone changing to Tamper Open Circuit (greater than 12,000 Ohm).
– TAMP O/C	Zone changing from Tamper Open Circuit to Normal Closed (900 to 1200 Ohm).
TAMP RST	Tamper Reset of the system has occurred.
+ TAMP S/C	Zone changing to Tamper Short Circuit (less than 800 Ohm).
– TAMP S/C	Zone changing from Tamper Short Circuit (less than 800 Ohm). to Normal Closed (900 to 1200 Ohm).
+ TAMPER	Tamper on a module activated (opened). A module is either a keypad, Galaxy RIO, Telecom Module or RS232 Module.
– TAMPER	Tamper on a module de-activated (closed). A module is either a keypad, Galaxy RIO, Telecom Module or RS232 Module.
TEST O/P	Test Outputs menu (Menu Option 32) has been accessed.
TIMEOUT	Timeout alarm after the Entry Time has expired.
TIMER A +	Timer A activated (on).
TIMER A –	Timer A de-activated (off).
TIMER B +	Timer B activated (on).
TIMER B –	Timer B de-activated (off).
T/O-BURGL	Timeout alarm after the Entry Time has expired (same as TIMEOUT but used as a SIA event).
UNSET	Unset of the system or Group(s).
URGENT	Urgent zone activated.
U/S EARLY	Unset Early of the system or Group(s).
VIBRATION	Vibration zone activated.
VIDEO	Video zone activated (opened).
VID EXIT	Video Exit zone activated (opened).
WALK TEST +	Walk Test has occurred.
WALK TEST –	Walk Test has finished.
WRONG CD	Wrong Code alarm activation (6 consecutive wrong codes). This Requires a system reset.
24 HOURS	24 Hours zone activated (opened).

## Appendix C: Panel Comparisons

FUNCTIONS	Galaxy			GALAXY (v1.10)				
	6	16	16+	8	18	60	500	512
Zones (max.)	8	8 – 16	8 – 16	8	10 – 18	12 – 60	0 – 504	0 – 512
RIO Modules	0	1	1	0	1	6	63	64
Remote Keypads (LED)	3	3	3	0	0	0	0	0
Remote Keypads (LCD)	–	3	3	16	16	16	32	32
MAX Modules	–	–	–	1	2	4	16	32
User Codes	8	15	15	10	20	30	100	200
MAX Codes	–	–	–	40	80	170	200	300
Groups	0	0	0	0	3	4	16	32
Outputs	5	7 – 11	7 – 11	6	6 – 10	6 – 30	4 – 256	4 – 260
Printer Module	–	optional	optional	optional	optional	optional	optional	optional
Telecom Module	–	–	–	optional	optional	optional	optional	optional
Line Fail Monitor	–	Yes	–	–	–	–	–	–
7 Day Timers	–	–	–	0	0	2	2	2
RS485 Line (km)	1	1	1	1	1	1	4	4
Zone Types	8	12	12	32	32	39	39	45
Output Types	5	8	8	25	30	56	59	66
Library (words)	–	100	100	0	538	538	538	538
Event Log	50	250	250	100	250	300	500	1000
Multi-Users	No	4	5	No	No	4	8	16
Auto Set Monitor	–	–	–	No	No	No	1	1
Pre-Check	–	–	–	No	No	1	1	1
Group Omit	–	–	–	0	3	4	8	–
Links	–	–	–	0	16	32	99	99
Link Outputs	–	–	–	0	5	15	15	15
Part Set	3	3	3	1	1	1	1	1
RS232 Module	–	1	1	1	1	1	1	1
Integrated Comms	–	–	1	–	–	–	–	–
Remote Servicing	–	1	1	1	1	1	1	1
Up/Down Loading	–	1	1	1	1	1	1	1
Shift Keys	5	13	13	–	–	–	–	–



## Appendix D: Specifications

PCBs	Weight	Order code
Galaxy 8 .....	217 g	A129-01
Galaxy 18 .....	192 g	A124-01
Galaxy 60 .....	193 g	A130-01
Galaxy 500 .....	201 g	A138-01
Galaxy 512 .....	201g	A185-01
Galaxy RIO .....	92 g	A158
1 A Power Supply Unit (PSU) .....	822 g	A125
3 A PSU .....	1,190 g	A155
3 A Smart PSU .....	1,212 g	A139
RS232 .....	124 g	A169
Telecom Module .....	90 g	E050-01

**NOTE:**The above weights and order codes are for the populated Printed Circuit Board (PCB) only.

Modules	Weight	Order code
Galaxy Keypad (Mark II) .....	313 g	C050-01
Size: .....	110 × 180 × 37 (L × B × H)	
Galaxy Keypad (Mark III) .....	248 g	CP23-01
Size: .....	90 × 150 × 29 (L × B × H)	
Keypad Material: .....	Polycarbonate.	
Keypad Colour: .....	Ash Grey 00A01.	
Galaxy RIO (Boxed) .....	793 g	C058
Size: .....	180 × 155 × 35 (L × B × H)	
RS232 Module (Boxed) .....	823 g	E054
Size: .....	180 × 155 × 35 (L × B × H)	
Doorguard .....	995 g	C061
Size: .....	150 × 185 × 40 (L × B × H)	
Printer Interface (6-Way DIN plug) .....	120 g	A134
Printer Interface (25-Way D plug) .....	130 g	A161
Box Size: .....	75 x 52 x 28 mm (L × B × H)	
Cable Size: .....	2 m for the 4-Way IDC and 0.3 m for the 6-Way/25-Way plug.	
<b>Galaxy Control Panel Box</b>	<b>Weight</b>	<b>Order code</b>
6 Ahr size (Special Small) .....	2,925 g	W1242
Size: .....	395 × 81 x 251 mm (L × B × H)	
15 Ahr size (Standard Large) .....	3,892 g	W1246
Size: .....	415 x 93 x 310 mm (L × B × H)	
Panel Box Material: .....	18 SWG (1.2 mm) Mild Steel.	
Panel Colour: .....	Ash Grey 00A01 Epoxy Texture.	

**NOTE:**The above weights and order codes are for the empty box only.