

SCORPION

Z16040C

Z8040C

Z5120C

Version 6

FEATURES & OPERATION

MICRON SECURITY PRODUCTS LTD

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Abort Current Communication and Clear Reporting Queue (*59)	13
Abort Current Communications (*59)	10
Account Numbers: Locations 13-16	26
Add New User Code (*20)	10
Ademco 4+2 Reporting: Locations 121-156 and 238-281	27
Adjust Battery Charging Voltage (*07)	13
Alarm on Opening	14
Alternate Entry Delay: Locations 613-616	29
Alternate Entry Zones	15
Answer after XX Rings: Location 48	27
Areas to Report: Locations 56-61	27
Arm all Areas (9#)	9
Disarm by Selected Area	28
Arming and Disarming the Panel	14
Assign Outputs to Areas: Locations 521-525	29
Assign User Code to Areas: Locations 400-447	28
Assign Zones to Areas: Locations 451-466	28
Assigning Zones to Areas	15
Auto Arm and Auto Disarm Zones by Area(s)	14
Auto Arm and Auto Disarm: Location 651	30
Auto Arm if No Activity: Location 652	30
Auto Arm Time (*51)	10
Auto Arm Time with No Activity: Location 653	30
Auto Arm Zones by Area with no Activity	14
Auto Bypass Zones	15
Auto Disarm Time (*52)	10
Call Attempt Timer (Anti Jam): Location 47	26
Call Attempts: Locations 40-45	26
Change User Code (*21)	10
Chime Mode (*71 to *74)	11
Circuit Board Layout and Wiring Diagram	5
Clone Pre-programmed Data from Prom Socket to Panel (*08)	13
Clone to Prom Socket from Pre-programmed Panel (*09)	13
Closed Loop Zones	14
Common Entry Zones	15
Communication Option: Location 65	27
Communication Programming	25
Communication Progress Tracker (Initiates Call to CMS) (*03)	13
Connection to Mains Earth	33
Cross Zone Timer: Location 623	29
Cross Zones (Double Knock)	15
Cross Zones (Double Knock): Location 622	29
Current Rating	33
Custom Keypad Keys	14
Custom Keys: Locations 624-628	29
Delayed Night Zones (Stay Zones) (*91 to *94)	12
Delete User Code (*23)	10
Dialling Cycles: Location 46	26
Dialling Mode: Location 49	27
Disable Double End of Line Tamper: Location 661	30
Double End of Line Zones	14
Emergency Access to Program Mode: Location 661	28
Enter or Change Panel Clock Time (*05)	13
Enter or Change Panel Clock Time (*50)	10
Entering Data	25
Entering Hexadecimal Characters	30
Entering Program Mode from the Keypad	25
Entry / Exit and Pre-Alert Entry Zones	15
Entry Delay Time: Locations 609-612	29
EOL Resistors	33
Erasing a Memory Location	25
Event Reporting Codes (Contact ID): Locations 101-116 and 202-229	27
Example of Home Dialling	25
Exit Delay Time: Locations 605-608	29
Fax / Answer Phone Defeat: Location 22	26
Fire Panic (1 + 3)	12
Follow Me Telephone Numbers (call diversion) (*31 or *32)	10
Force Arming: Location 654	30

Force Panel to Answer Call (*00)	13
Hours Between Test Calls: Location 63	27
Icon LCD Keypad	31
Installer Access Programming Code: Location 300	28
Installer Keypad Commands	12
Installer Programming Access Code (XXXX) (Default 0000)	12
Installer Walk Test Mode (*85)	11
Instant Night Zones (Stay Zones) (*96 to *99)	12
Key Switch Zones	14
Keypad and Telephone Entry Commands	8
Line Test Mode: Location 67	27
Local Programming	28
Manual Bypass of Zones when Arming (*11)	10
Medical Panic (4 + 6)	12
Miscellaneous Options: Location 661	30
Miscellaneous Status Recall (*83)	11
Night Arm Entry Delay (Stay Mode): Locations 617-620	29
Non 'Alarm' Reports: Locations 17-18	26
Other Panel Functions	14
Output Events: Locations 556-582	29
Output Options: Locations 536-540	29
Output Timers: Locations 526-530	29
Pager Calling	26
Pager End Character: Location 21	26
Pager Space Character: Location 20	26
Pager Start Character: Location 19	26
Panel Dials and Calls Microcom Computer (Toll Saver) (*01)	13
Product Features	7
Product Overview	4
Programming Explanations	25
Programming Locations and Memory Map	16
Quick Arm	9
Reading Programmed Data from the Keypad.	31
Remote Arming From a DTMF Telephone (*1)	9
Remote Disarming from a DTMF Telephone (*3)	9
Remote Operation to Turn Off Output 4 from a DTMF Telephone (*7)	9
Remote Operation to Turn On Output 4 from a DTMF Telephone (*5)	9
Reset Panel to factory Defaults (*10)	13
Select Dialling Format: Locations 7-12	26
Sending Duress after Disarming	14
Sending Test Signals	11
Sequential Entry Zones	15
Sixteen Zone LED Keypad	32
Smoke Detector Reset (*77)	11
Smoke Detector Zones	15
Swinger Shut Down Zones	15
Swinger Shutdown: Location 621	29
System Walk Test (*85)	13
Technical Specifications	33
Telecom Waiver	34
Telephone Numbers: Locations 1-6	25
Temporary User Code (valid until midnight) (*24)	10
Test Signal: Location 62	27
The Keypads	31
Two Key Panic (*+ #)	12
Upload / Download Password: Location 66	27
User Code Options: Locations 349-396	28
User Codes	14
User Codes: Locations 301-348	28
User Initiated Call Diversion (follow me) Number Test (*38 or *39)	10
User Keypad and Telephone Entry Commands	9
Zone Alarm History Recall (*80)	11
Zone Disable	15
Zone Filters: Locations 499-514	29
Zone Input Sensitivity (Filters)	15
Zone Options: Locations 467-498	28
Zone Tamper Alarm Recall (*81)	11
Zone Wiring Configurations	6

Product Overview

The Scorpion Z16040C is a fully programmable sixteen zone, four partition control communicator.

The sixteen zone inputs can actively scan zones only, with single end of line resistors, or both zone and tamper detection with double end of line resistors. The zones may be programmed as instant, delayed, twenty four hour, fire, medical, home and away, chime, key switch and zone shutdown after a specified number of activations.

The Z16040C is scanning all inputs continuously and can be programmed by zone to capture any valid activation from 10mS to 1.28 seconds.

Up to four sixteen zone icon LCD or LED keypads and Nitewatch stations may be configured to the control panel.

The **forty eight** user codes can be individually programmed to action up to twelve different commands. The LCD and LED keypads have **three** custom keys that may be programmed for single action fast user response for fire, medical or panic conditions.

This user friendly panel offers many features including:

Automatic arm/disarm and auto arm if no activity in any of the selected areas.

Wireless capabilities, for remote arm/disarm, garage door operation, outside lighting control and full panic alert from a key ring transmitter. (**RCM receiver option**)

Four programmable switching outputs and one high current siren output to activate any of **thirty eight** different conditions.

Communication is programmable to call up to **six** telephone numbers and report to a central monitoring station in formats including Contact ID, 4+2 DTMF, 4+2 pulse 20pps and 4+2 pulse 10pps.

The alarm panel may also be programmed to call a private telephone or mobile phone (**home dial**), alerting the user to an alarm and informing the zone(s) that have been activated, or call a numeric pager with full visual description of the reported event.

In home dial mode the user can redirect the alarm call to an alternate telephone (follow me) number by entering a simple keypad command.

The Scorpion Z16040C can be programmed:

Locally at the keypad

With a pre-programmed 'clone' chip

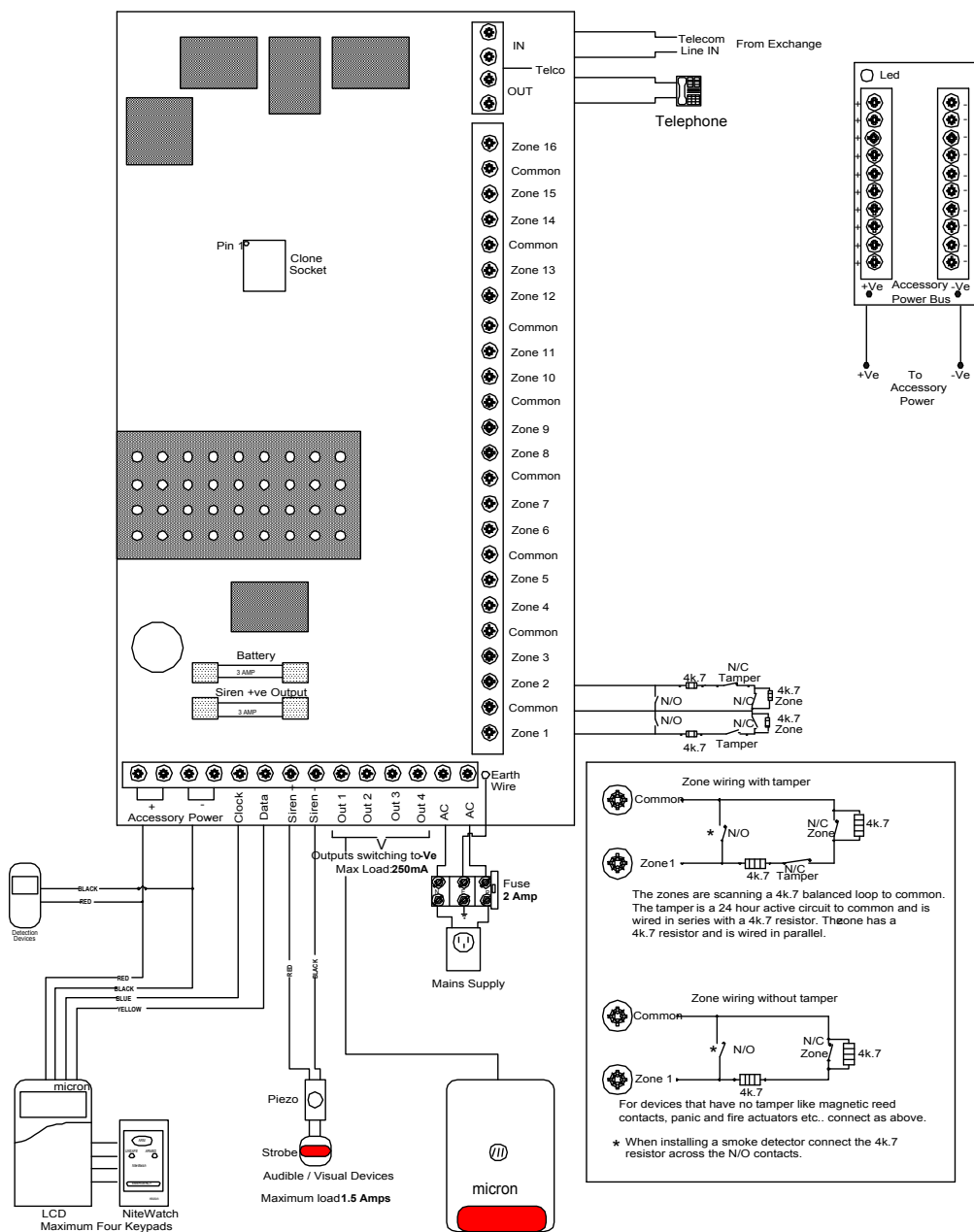
Remotely using micron's Microcom II upload/download software

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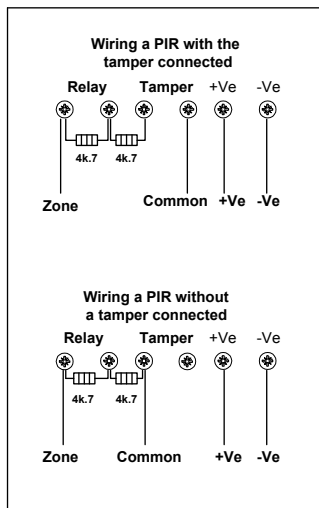
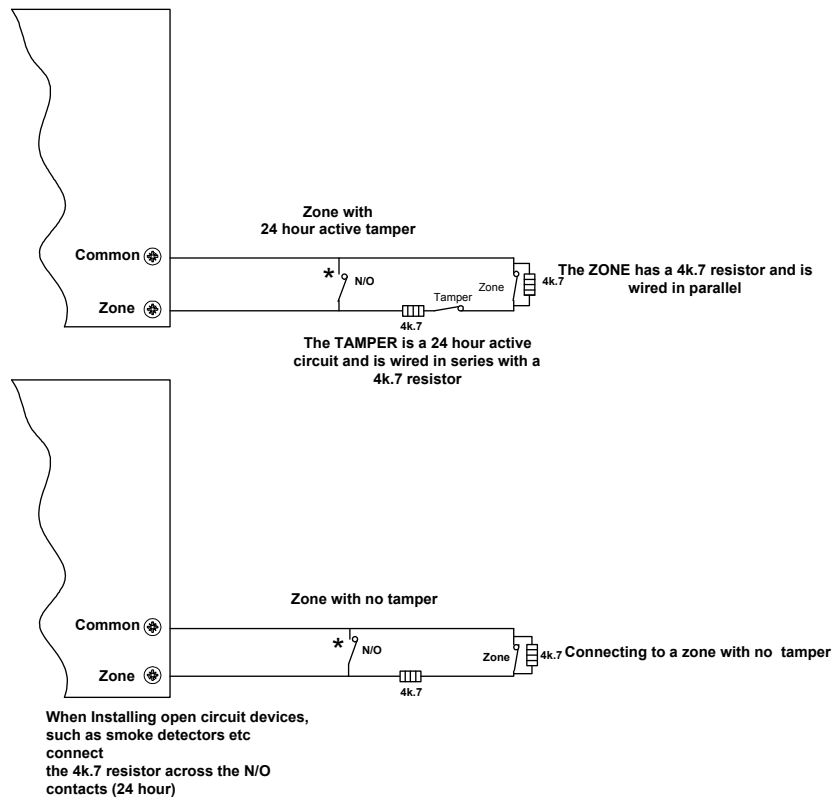
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Circuit Board Layout and Wiring Diagram



The siren +Ve is connected via a 3 Amp fuse to the +Ve side of the panel's standby battery. For devices that draw high current when in alarm, audible / visual warning indicators etc., it is recommended that this +Ve supply is used.

Zone Wiring Configurations



Note: Double end of line tampers can be disabled for all zones and **single 4k.7 resistor** alarm zones established at **Location 661, LED 5 turned on.**

Product Features

01. Sixteen zone control communicator.
 - a) Zone inputs actively scan both zone and tamper with double end of line resistors.
 - b) Zones may be selected to capture any valid activation from 10mS to 1.28 seconds.
 - c) Zone alarm history recall, (128 levels of memory).
 - d) Zones maybe programmed as:
 - Instant
 - Entry
 - Alternate entry
 - Sequential entry
 - Twenty four hour
 - Fire / smoke
 - Medical
 - Home or away
 - Chime
 - Key switch
 - Zone shutdown after xx activations
 - Common zones
 - Loop zones (no balanced line)
 - Zone disable
 - Cross zones / double knock
 - Zone input sensitivity (filters)
02. Four partitions.
03. Up to four sixteen zone icon LCD, LED keypads / night stations with full digital and graphic display.
04. Forty eight user codes from two to eight digits in length with twelve command types.
05. Three keypad custom keys for single action fast user response.
06. Quick arm commands for all four areas.
07. One key arm all or arm all disarmed areas.
08. Smoke detector reset command.
09. Two key panic, fire and medical emergency key combinations.
10. Disarm under duress key command.
11. Temporary user codes automatically disabled at midnight.
12. Remote arm / disarm and output control from a DTMF telephone.
13. Programmable 'lock out' for one minute if six invalid user codes are entered.
14. Auto arm / auto disarm (times selected by user).
15. Auto arm when no activity from selected areas.
16. Remote arm / disarm, panic, garage door and lighting control from a wireless receiver (option).
17. Five programmable outputs:
 - a) Siren Output..... Max: 1.5 Amps non inductive load
 - b) Aux: Output 1 Max: 250 mA sink output
 - c) Aux: Output 2 Max: 250 mA sink output
 - d) Aux: Output 3 Max: 250 mA sink output
 - e) Aux: Output 4 Max: 250 mA sink outputThirty eight events / options can be assigned to the outputs.
- 18 Keypad adjustment of battery charging voltage.
- 19 Dynamic battery test

Communicator

- 20 Six telephone numbers with up to twenty digits per number.
- 21 Transmits in all current formats to a central monitoring station (CMS).
- 22 Transmits to a user's telephone or mobile phone and sends a 'siren warble' and zone identifier (home dial).
- 23 Transmits to a numeric pager and sends full visual description of the reported event.
- 24 Four customer account numbers.
- 25 Non alarm reports may be programmed to a secondary number.
- 26 Dialling mode:
 - a) DTMF
 - b) Pulse dial (decadic)
 - c) Reverse dial (decadic)
- 27 Test signal DD:HH:MM
- 28 Line fault monitoring.
- 29 Communication progress tracker (keypad display).
- 30 Opening report after an alarm, when user open/close reporting to a CMS not programmed.
- 31 Alarm follow me command when programmed for home dial (call diversion).
- 32 Answer after xx rings (answer phone / fax defeat).
- 33 Microcom II upload / download programmable.
- 34 Full history log of events, time and date stamped.

Keypad and Telephone Entry Commands

Keypad Entry	Command
1#	Quick arm area A
2#	Quick arm area B
3#	Quick arm area C
4#	Quick arm area D
Call the alarm phone number from a touch tone phone and enter.....	*1 <master user code> # Area armed using a touch tone phone. For areas A-D. *3 <master user code> # Area disarmed using a touch tone phone. For areas A-D. *5 <master user code> # Output turned on using a touch tone phone. *7 <master user code> # Output turned off using a touch tone phone.
9#	Arm all areas or arm all areas not already armed
*11	<enabled user code> * <zone to exclude> # Manual bypass of a zone.
*20	<master user code> # <new user code> # Add a new user code.
*21	<master user code> # <old user code> # <new user code> # Change a user code.
*23	<master user code> # <user code to delete> # Delete a user code.
*24	<master user code> # <temporary user code> # Valid until midnight of the same day.
*31	<master user code> # <follow me telephone number 1> # Alarm calls this number when alarm activated.
*32	<master user code> # <follow me telephone number 2> # Alarm calls this number when alarm activated.
*38	<master user code> # Alarm calls this number to test telephone number 1.
*39	<master user code> # Alarm calls this number to test telephone number 2.
*50	<master user code> # <enter or change clock time HHMM> # 24 hour format.
*51	<master user code> # <auto arm time HHMM> # 24 hour format.
*52	<master user code> # <auto disarm time HHMM> # 24 hour format.
*59	<master user code> # To abort current communications.
*62	<master user code> # <enter time to send test signal HHMM> # Sets test signal time in 24 hour format
*71	Chime area A On/Off
*72	Chime area B On/Off
*73	Chime area C On/Off
*74	Chime area D On/Off
*77	Smoke alarm reset
*80	Zone alarm history recall. Step through history with the # key. Press any key to leave program.
*81	Tamper alarm recall
*83	Miscellaneous status recall (see alarm status recall menu on page 11)
*85	Walk test detector mode. Siren sounds once to verify an alarm activation.
*91	Nite arm area A
*92	Nite arm area B
*93	Nite arm area C
*94	Nite arm area D
*96	Instant Nite arm area A (In Instant mode you can only disarm using a valid user code)
*97	Instant Nite arm area B (In Instant mode you can only disarm using a valid user code)
*98	Instant Nite arm area C (In Instant mode you can only disarm using a valid user code)
*99	Instant Nite arm area D (In Instant mode you can only disarm using a valid user code)
* + #	Two key panic. Press both keys simultaneously.
1 + 3	Fire panic. Press both keys simultaneously.
4 + 6	Medical panic. Press both keys simultaneously.
0000	0000 # Enters panel program mode

User Keypad and Telephone Entry Commands

If the system is partitioned into areas, keypad commands with master user code operations can only be entered on a keypad assigned to the partitioned area. Assign a keypad to an area partition by assigning the four switches on the back of the sixteen zone LCD or LED keypad.

Switch 1: area 'A'

Switch 2: area 'B'

Switch 3: area 'C'

Switch 4: area 'D'

(Visual and audible enunciation is only displayed on keypad(s) assigned to specific partitioned areas).

Quick Arm

Arm selected programmed areas.

Enter **1** # for area 'A'

2 # for area 'B'

3 # for area 'C'

4 # for area 'D'

Remote Arming From a DTMF Telephone (*1)

Dial the panel telephone number and wait for **two rings**, hang up the telephone and call back within 60 seconds. The panel will automatically answer on the first ring with a high low tone acknowledgement. **Location 22** must be programmed with a **1** (fax and answer phone defeat) for this function to operate.

Enter ***1** then a <master user code> # for the area to arm. **Locations 349 to 396**, (user options) **LED 3** must be **turned on** for each authorised user code to enable this command. A 6 beep confirmation will be heard if a valid user code to arm that area is entered. A long beep will be heard if the area is already armed.

Remote Disarming from a DTMF Telephone (*3)

Dial the panel telephone number and wait for **two rings**, hang up the telephone and call back within 60 seconds. The panel will automatically answer on the first ring with a high low tone acknowledgement. **Location 22** must be programmed with a **1** (fax and answer phone defeat) for this function to operate.

Enter ***3** then a <master user code> # for the area to disarm. **Location 349 to 396**, (user options) **LED 3** must be **turned on** for each authorised user code for this command to operate. A 3 beep confirmation will be heard if a valid user code to disarm that area is entered. A long beep will be heard if the area is already disarmed.

Remote Operation to Turn On Output 4 from a DTMF Telephone (*5)

Dial the panel telephone number and wait for **two rings**, hang up the telephone and call back within 60 seconds. The panel will automatically answer on the first ring with a high low tone acknowledgement. **Location 22** must be programmed with a **1** (fax and answer phone defeat) for this function to operate.

Enter ***5** then a <master user code> # for output 4 to **turn on**. **Location 349 to 396**, (user options) **LED 2** must be **turned on** for each authorised user code to enable this command. If the output is already turned on, a long reject beep will be heard.

Remote Operation to Turn Off Output 4 from a DTMF Telephone (*7)

Dial the panel telephone number and wait for **two rings**, hang up the telephone and call back within 60 seconds. The panel will automatically answer on the first ring with a high low tone acknowledgement. **Location 22** must be programmed with a **1** (fax and answer phone defeat) for this to function to operate.

Enter ***7** then a <master user code> # for output 4 to **turn off**. **Locations 349 to 396**, (user options) **LED 2** must be **turned on** for each authorised user code to enable this command. If the output is already turned off, a long reject beep will be heard.

Arm all Areas (9#)

Entering **9#** will arm all areas or arm all areas not already armed. Disable this function at **Location 661, LED 8** on.

Manual Bypass of Zones when Arming (*11)

Enter ***11** then a **<master user code> ***, all zones 1 to 16 will be displayed. Select the zone to be bypassed by pressing the corresponding key on the keypad then **#**. The selected zone indicator will now be flashing, confirming the selected zone has been bypassed. Repeat this procedure for further zones followed by **#**. To arm the system, press the **#** key. **Locations 483 to 498**, (zone options) **LED 5** must be **turned on** to enable this command.

Add New User Code (*20)

Enter ***20** then **<master user code> #** then **<new user code> #**

Change User Code (*21)

Enter ***21** then **<master user code> #** then **<old user code> #** then **<new user code> #**

Delete User Code (*23)

Enter ***23** then **<master user code> #** then **<user code to delete> #**

Temporary User Code (valid until midnight) (*24)

Enter ***24** then **<master user code> #** then **<temporary user code> #**

Follow Me Telephone Numbers (call diversion) (*31 or *32)

This function allows the user to program two temporary telephone numbers and diverts alarm calls to that number.

Enter ***31** then **<master user code> #** then **<follow me telephone number 1> #**

Enter ***32** then **<master user code> #** then **<follow me telephone number 2> #**

User Initiated Call Diversion (follow me) Number Test (*38 or *39)

This function allows the user to test the 'follow me' number, which sounds a Hi Lo tone for call confirmation.

Enter ***38** then **<master user code> #**

Initiates test call to telephone number 1

Enter ***39** then **<master user code> #**

Initiates test call to telephone number 2

Enter or Change Panel Clock Time (*50)

Enter ***50** then **<master user code> #** then **<current clock time HHMM> #** (24 hour format).

Auto Arm Time (*51)

Enter ***51** then **<master user code> #** then **<auto arm time HHMM> #** (24 hour format)

Select areas to auto arm/disarm at **Location 651**. If an auto arm pre-alert is selected, the keypad will generate an audible alert 5 minutes before the panel auto arms. Pressing any key on a keypad assigned to that area during the pre-alert time will **cancel** auto arming for that 24 hour period. The pre-alert starts at the programmed auto arm time.

If auto arming is programmed for multiple areas, then the time between the auto arming times of those areas must **not be less than 10 minutes** apart. The auto arming time can only be activated by an authorised user code and keypad assigned to the area in which auto arming is to operate.

Auto Disarm Time (*52)

Enter ***52** then **<master user code> #** then **<auto disarm time HHMM> #** (24 hour format)

If the 5 minute pre-alert is selected, the panel will auto disarm 5 minutes after the programmed auto disarm time. The auto disarming time can only be activated by an authorised user code and keypad assigned to the area in which auto arming is to operate.

Abort Current Communications (*59)

Enter ***59** then **<master user code> #**

Aborts communications currently in progress and clears all outstanding events from the reporting buffer. Events deleted from the buffer are still retained in the event history file.

Sending Test Signals

Enter the ***62** command then **<master user code> #** then **<test signal time HHMM> #** to set the panel's test signal time. Enter **HHMM** in 24 hour format eg **1830 = 6:30pm**. See **Locations 62**, the test signal time, and **Location 63**, hours between test calls.

Chime Mode (*71 to *74)

Enter ***71 to *74** to turn **on/off** chime mode for selected areas '**A**' to '**D**'

Enter ***71** area '**A**'

Enter ***72** area '**B**'

Enter ***73** area '**C**'

Enter ***74** area '**D**'

Turning on an area chime zone command will generate a series of fast beeps for 3 seconds. Turning **off** chime mode will generate a two beep acknowledgement. When a chime zone is activated the keypad will emit a series of beeps. After the initial chime alert, chime mode sleeps while activity is present. When the panel senses **no activity**, it will count down 10 seconds and again sound an audible alert if further activity is detected in the chime zone.

Chime zones are selected at **Locations 467 to 482, LED 4 on**.

Chime mode is only active when the panel is **disarmed**.

Smoke Detector Reset (*77)

Entering the ***77** command will momentarily activate the assigned output and reset a latched smoke detector alarm.

Program **Locations 536 to 540, LED 7 on**.

A 12 second 'sleep period' is initiated after a smoke detector reset command to allow a smoke detector(s) to stabilize.

Zone Alarm History Recall (*80)

Entering ***80** recalls the last zone alarm event. Up to **128** activations may be recalled by pressing the **#** key.

The panel **steps back 1 event each time the # key is pressed**. Alarmed zones are displayed as flashing zone LED's. Press any key except **#** to exit program.

Zone Tamper Alarm Recall (*81)

Entering ***81** recalls the last zone tamper alarm.

Miscellaneous Status Recall (*83)

Entering ***83** recalls miscellaneous panel alarms. (See below for LED indication).

LED	MISCELLANEOUS ALARM CONDITIONS
LED 1	Panic alarm
LED 2	Battery is discharged or faulty
LED 3	AC mains power to the panel has failed
LED 4	A dialler communication has failed
LED 5	Phone line is faulty or disconnected
LED 6	Auxiliary 12V power supply overloaded
LED 7	Siren output fault. Circuit open or overloaded
LED 8	Duress initiated from keypad

Installer Walk Test Mode (*85)

Entering ***85** sets the panel to installer walk test mode without arming the system. The siren sounds once when a detection device is activated. Press any key to exit.

Delayed Night Zones (Stay Zones) (*91 to *94)

Enter ***91 to *94** to select night zones to arm by area. When night arming the keypad will sound a **three** beep acknowledgement and the panel will begin a **silent** arming cycle.

Enter ***91** area '**A**'

Enter ***92** area '**B**'

Enter ***93** area '**C**'

Enter ***94** area '**D**'

After the pre-programmed exit delay, **Locations 605 to 608**, the panel will night arm and give a **two beep** confirmation that the night zones are armed. If a night arm zone is in alarm, the keypad will emit an audible tone and the alarmed zone will flash. When the arming delay time has expired, the alarmed zone will auto isolate and remain in that condition until the panel is disarmed and re-armed. Select night zones at **Locations 483 to 498, LED 2 on**. Night zone entry delay times are selected at **Locations 617 to 620**. When night armed the alarm can only be disarmed using a valid user code.

Instant Night Zones (Stay Zones) (*96 to *99)

Enter ***96 to *99** to select instant night zones to arm by area. Zones will arm instantly and will activate on entry with no delay. If a zone is alarmed when arming, the panel will give no visual or audible indication and the zone will auto isolate. Select night zones at **Location 483 to 498, LED 2 on**. When night armed the alarm can only be disarmed using a valid user code.

Two Key Panic (* + #)

Pressing keys *** + #** together will generate a full panic alarm. Select the output at **Location 562**.

Fire Panic (1 + 3)

Pressing keys **1 + 3** together will generate a full fire panic alarm. Select the output at **Location 563**.

Medical Panic (4 + 6)

Pressing keys **4 + 6** together will generate a full medical panic alarm. Select the output at **Location 564**.

Installer Programming Access Code (XXXX) (Default 0000)

Enter **0000** then **#** to access program mode, to exit program mode press ******. Change the installer program code at **Location 300**. The installer code can be from **2 to 8** digits in length.

Installer Keypad Commands

Commands notated **<>** indicate a numeric code to be entered on the keypad to execute that function.

Keypad entry	Command
*00	Force panel to answer call
*01	<nnnnnn> # Panel dials telephone number nnnnnn
*03	<installer code> # Communication progress tracker (installer initiated test call to CMS)
*05	<installer code> # Enter or change the panel clock time
*07	<installer code> # Adjust battery charging voltage 1 = Increase voltage 2 = Decrease voltage # = Save voltage setting * = Abort setting
*08	<installer code> # Clone from prom socket to panel (24C32 chip)
*09	<installer code> # Clone to prom socket from panel (24C32 chip)
10	(3) (1) () (#) Resets panel to factory defaults. (Location 661, LED 4 must be Off)
*59	<master user code> # Abort current communications
*85	Panel enters walk test mode and the siren sounds once for each detector activation

Force Panel to Answer Call (*00)

The panel may be forced to answer by entering ***00**. This command forces the panel to immediately answer an incoming call. This function is typically used when an on site installer force answers the panel for a call initiated by micron's Microcom II upload/download program.

Panel Dials and Calls Microcom Computer (Toll Saver) (*01)

Enter ***01** then **<nnnnnnnn> #** the phone number for the Microcom computer. After the **#** is entered, the panel will give an acceptance beep-beep and dial the number, then wait for the Microcom computer's modem tone. If the connection is not successful, the panel disconnects from the line. If the number dialled is busy a long reject beep will be heard. Retry later.

Communication Progress Tracker (Initiates Call to CMS) (*03)

Enter ***03** then **<installer code> #** initiates a communications test call and tracks the progress of the dialler. Communication progress is displayed by the keypad zone LED's as each stage of the call is completed. The keypad beeps continuously as it steps through the monitoring process. See table below.

Zone LED	Communications progress
LED 1	Line seized
LED 2	Dialling
LED 3	Handshake received
LED 4	Sending data
LED 5	Data acknowledged
LED 6	Call successful, hanging up

Enter or Change Panel Clock Time (*05)

Enter ***05** then **<installer code> #** then **<the current time HHMM> #** (24 hour format).

Adjust Battery Charging Voltage (*07)

To adjust the battery charging voltage enter ***07** and **<installer code> #**.

- 1** To increase voltage
- 2** To decrease voltage
- #** To save voltage setting
- *** To abort voltage setting

Clone Pre-programmed Data from Prom Socket to Panel (*08)

Insert the **pre-programmed** clone chip into the socket mounted on the PCB. Enter ***08** then **<installer code> #**. The data programmed in the clone chip is copied into the panel's memory. The installer programming code and communicator account number are **not** copied

Clone to Prom Socket from Pre-programmed Panel (*09)

Insert the **blank** clone chip into the socket mounted on the PCB. Enter ***09** then **<installer code> #**. The data programmed in the panel is copied into the clone chips memory. The installer programming code and communicator account number are **not** copied

Reset Panel to factory Defaults (*10)

To reset the panel back to factory de-faults enter: ***10** then **(3) (1) (*) (#)**. **Location 661, LED 4** must be **off**

Abort Current Communication and Clear Reporting Queue (*59)

Entering ***59** then **<master user code> #** terminates the communication currently in progress and clears all outstanding events from the reporting buffer. Events deleted from the buffer are still retained in the event history file, allowing the installer to access and read back the event history.

System Walk Test (*85)

To walk test the system enter ***85**. The panel switches to **test mode** and will sound the siren **once** for an alarm activation as each detector is tested. Press any key to exit

Other Panel Functions

This section provides more detailed descriptions of the Scorpion Z16040C features and functions. A brief explanation of functionality is given for each memory location in the section headed **Programming Locations**.

User Codes

Each of the 48 user codes can be assigned to any of the **4 areas** at **Locations 400 to 447**. Each code can be from **two to eight digits** in length and programmed to execute up to twelve commands. If no options are selected for a user code, that code will be assigned to area 'A' and will perform only a basic arm/disarm function. See **Locations 349 to 396** for user code options. User code 48 can be reserved as a temporary code that is deleted at midnight.

Custom keypad Keys

There are three '**custom keys**' (**F1**) (**F2**) (**F3**) on the icon LCD and sixteen zone LED keypads. These keys can be programmed with up to eight commands, for fast single key response. See **Location 624 to 628** for custom key options. To operate '**custom keys**' press and hold the key until a second beep is heard then release.

Arming and Disarming the Panel

Enter a valid <enabled user code> followed by the # key.

Sending Duress after Disarming

To generate a duress alarm while disarming, enter a valid <enabled user code> then press and hold the # key until a second beep is heard (approx 1 second) then release. If monitored, an opening followed by a duress code will be reported to the central monitoring station (CMS).

Alarm on Opening

If the panel has been programmed **not** to report by user to a CMS but a report by user is required after an alarm on opening, select this option at **Location 65, LED 7 on** (global to all areas).

Auto Arm and Auto Disarm Zones by Area(s)

Programming zones in areas to auto arm and auto disarm, **Location 651** (area select), is a controlled function and can be initiated by the **user** with the ***51** and ***52** commands. A 5 minute pre-alert prior to arming is available using **Location 651, LED 8 on**. To cancel auto arming during the 5 minute pre-alert, press any key on the assigned area's keypad. Cancelling the auto arm will reset the timer to auto arm at the programmed time the next day.

Auto Arm Zones by Area with no Activity

Auto arm with no activity is a programmable function at **Location 652** (area select). **Location 653** sets the **no activity countdown time**. If selected, the detection devices within the areas will monitor movement (**activity**) and after the pre-programmed '**no activity time**', auto arm the system. A 5 minute pre-alert prior to arming is available using **Location 652, LED 8 on**. To cancel auto arming with no activity during the 5 minute pre-alert, press any key on the assigned area's keypad or walk into the assigned area and activate a zone. Cancelling the auto arm with no activity will reset the timer and the 'no activity' count down time will restart.

Double End of Line Zones

All 16 zones are balanced with **one or two 4k.7** end of line resistors (zone or zone and tamper). After an alarm event, the installer or user can enter a keypad command to re-call the alarm history and determine if the detector or the tamper caused the alarm event. Individual outputs can be assigned for the detector and tamper at **Locations 556 and 558**. Note that the tamper is a **24-hour circuit** and is active in both the armed and disarmed state.

Closed Loop zones

Zones can be programmed as 'closed loop zones' at **Locations 467 to 482, LED 7 on**. Zones in this mode do not require a 4k.7 resistor and are not tampered. Closed loop zones are normally used when installing door contacts etc.

Key Switch Zones

Zones programmed as key switch zones at **Locations 467 to 482, LED 3 on**, can be assigned to arm and disarm selected areas by a momentary key switch or an access control reader.

Entry / Exit and Pre-Alert Entry Zones

Entry / exit delay zones can be programmed at **Locations 467 to 482, LED 2 and 6 on**. Entry delay times are set at **Locations 609-612** and exit delay times at **Locations 605-608** with delays from 10 to 100 seconds.

Alternate Entry Zones

Zones maybe selected as an alternate entry path at **Locations 467 to 482, LED 2 and 5 on**. Alternate entry zones are zones that allow the user to gain access through a second area where a longer entry delay is required to disarm the alarm. Entry delay times are set at **Locations 613-616** with delays up to 100 seconds.

Sequential Entry Zones

Zones programmed as sequential entry at **Locations 483 to 498, LED 6 on**, behave as normal entry zones if the correct entry path is taken. Any sequential entry (follower) zones activated outside the programmed sequence will activate the alarm instantly. This feature should be installed and programmed in consultation with the customer.

Common Entry Zones

Common entry zones to areas are programmed at **Locations 451 to 466**. Up to four areas can be accessed through one common entry point. When common entry zones are assigned, the first user to disarm their area would also disarm the common entry zone. The common entry zone will remain disarmed until the last area arms.

Smoke Detector Zones

Smoke zones are programmed at **Locations 483 to 498**. With **LED 4 on** smoke zones are active in armed mode only. With **LED 3 and 4 on** smoke zones are 24 hour zones and are active in armed and disarmed mode. When a smoke detector activates, the installer can program an output to give a 4 second reset pulse on the first activation at **Locations 536 to 540, LED 7 on** (4 second reset). The panel will then wait for 20 seconds and check the smoke detector status. If the smoke detector is still in alarm after this period, an alarm is generated. A smoke alarm report will also be sent to the CMS if the system is monitored. See **Location 557** for smoke output event.

Swinger Shut Down Zones

The swinger shut down count may be set from 1 to 7 activations before a zone is disabled and is programmable at **Location 621**. When the programmed number of activations has occurred **within any one arming cycle**, the zone is disabled and can not generate further alarms until the panel is disarmed and re-armed. This applies to all zones including zones programmed as night or 24 hour zones.

Cross Zones (Double Knock)

Cross zones are selected at **Locations 483 to 498, LED 7 on**. The zones can be configured for **two activations** on the **same zone, different zones** or **same or different zones** at **Location 622**. The cross zone timer is set at **Location 623**. If two activations occur on either or any zone within the programmed time frame an alarm condition will be generated. If there is not a second activation within the programmed time, the zone will re-set and await the next activation count. For security reasons it is important to **carefully consider** the layout of the security system when programming cross zones.

Auto Bypass Zones

Zones to auto bypass after the exit delay are programmed at **Locations 483 to 498, LED 8 on** (zone select).

Zone Input Sensitivity (Filters)

The panel continuously scans all inputs and can be programmed by zone at **Locations 499 to 514** to capture any valid activation from 10mS to 1.28 seconds.

Assigning Zones to Areas

Zones can be assigned to any of the **4 partitioned areas** available at **Locations 451 to 466**. Each of the four areas can be assigned an output for that area at **Locations 521 to 525**.

Zone Disable

Spare zones can be disabled at **Locations 467 to 482, LED 8 on**. When zones are disabled there is no need to fit a 4.7k resistor across the zone input.

Programming Locations and Memory Map

Location	Contents and field size	Detail	Remarks	Defaults
1	Phone number 20 digits	Telephone number 1	Must be end user (follow me) number	
2	Phone number 20 digits	Telephone number 2	Must be end user (follow me) number	
3	Phone number 20 digits	Telephone number 3	Central Station or end user number	
4	Phone number 20 digits	Telephone number 4	Central Station number only	
5	Phone number 20 digits	Telephone number 5	Central Station number only	
6	Phone number 20 digits	Telephone number 6	Central Station number only	
7	Number 0-9	Telephone number 1 format	0 = Contact-ID 1 = 4+2 DTMF 2 = 4+2 pulse 20pps 3 = 4+2 pulse 10pps 4 = Home dial 5 = Pager	0
8	Number 0-9	Telephone number 2 format	As above	0
9	Number 0-9	Telephone number 3 format	As above	0
10	Number 0-9	Telephone number 4 format	As above	0
11	Number 0-9	Telephone number 5 format	As above	0
12	Number 0-9	Telephone number 6 format	As above	0
13	Account 4 digits	Area 'A' reporting		
14	Account 4 digits	Area 'B' reporting		
15	Account 4 digits	Area 'C' reporting		
16	Account 4 digits	Area 'D' reporting		
17	Account 4 digits	Non alarm reports	See location 18, phone number select	
18	Numbers 0-9	'Non alarm' reports to telephone number select	0 = 'alarm' & 'non alarm' reports sent 1 = Dials 1 st #, only 'non alarm' sent 2 = Dials 2 nd #, only 'non alarm' sent 3 = Dials 3 rd #, only 'non alarm' sent 4 = Dials 4 th #, only 'non alarm' sent 5 = Dials 5 th #, only 'non alarm' sent 6 = Dials 6 th #, only 'non alarm' sent 9 = only 'alarm' reports sent	0
19	Single digit	Pager start character	Sent before any other digit	
20	Two digits (Enter 11)	Pager space character	Space sent between account and code	
21	Single digit	Pager end character	Sent after all other digits	
22	Single digit	Fax / Answer phone defeat	Panel answers on second ring when recalled within 60 seconds	1=Answer Phone Defeat
23-39	Reserved			
40	Number 0-9	Telephone number 1: attempts	Number of call attempts until next telephone number is called.	4
41	Number 0-9	Telephone number 2: attempts		4
42	Number 0-9	Telephone number 3: attempts		4
43	Number 0-9	Telephone number 4: attempts		4
44	Number 0-9	Telephone number 5: attempts		4
45	Number 0-9	Telephone number 6: attempts		4
46	Number 0-9	Dial Cycles	Number of passes through phone list	4
47	Number 0-9	Call attempt timer 1-9	Call fail anti jam, multiples of 10 secs	4
48	Number 0-9	Answer after xx rings	Blank = no answer 1 to 10 rings before panel answers	0 = 10 rings
49	Number 0-9	Dialling mode	0 = DTMF 1 = Pulse dial (decadic) 2 = Reverse pulse dial (decadic)	0 = DTMF
50..55	Reserved			
56	Areas 1 to 4	Areas report to telephone 1	LED 1: on: area A	1, 2, 3, 4
57	Areas 1 to 4	Areas report to telephone 2	LED 2: on: area B	1, 2, 3, 4
58	Areas 1 to 4	Areas report to telephone 3	LED 3: on: area C	1, 2, 3, 4
59	Areas 1 to 4	Areas report to telephone 4	LED 4: on: area D	1, 2, 3, 4
60	Areas 1 to 4	Areas report to telephone 5		1, 2, 3, 4
61	Areas 1 to 4	Areas report to telephone 6	Note that the # key must be pressed after you have completed an LED toggle selection.	1, 2, 3, 4
62	Time HH:MM	Time to send 24 hour test signal	See Location 63	

Location	Contents and field size	Detail	Remarks	Defaults
63	Number 0-15	Hours between test calls Blank = No report	1 = 3 Hours, 2 = 6 Hours 3 = 12 Hours, 4 = 24 Hours 5 = 48 Hours, 6 = 72 Hours 7 = 96 Hours, 8 = 1 Week 9 = 2 Weeks, 0 = 1 Month	4
64	Reserved			
65	Numbers 1-8	Communication option	LED 7: on: opening report after an alarm (global all areas)	
66	4 digits	Microcom II	Upload/Download password	5555
67	Number 0-9	Line test mode	0 = disabled 1 = only when armed 2 = at all times	0
68-100	Reserved			
The following locations are used for Contact-ID Reporting Codes . Erasing one of these locations disables reporting of that event in ALL formats. The first digit is fixed; the remaining two digits are programmable.				
101	Zone 1	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
102	Zone 2	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
103	Zone 3	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
104	Zone 4	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
105	Zone 5	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
106	Zone 6	CID Activation/Restore Code	2 digits, prefix 1 (24 hr zone Z5120C)	30 = 130
107	Zone 7	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
108	Zone 8	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
109	Zone 9	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
110	Zone 10	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
111	Zone 11	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
112	Zone 12	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
113	Zone 13	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
114	Zone 14	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
115	Zone 15	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
116	Zone 16	CID Activation/Restore Code	2 digits, prefix 1	30 = 130
117-120	Reserved			
200-201	Reserved			
202	Contact-ID code 3 digits	Zone tamper	2 digits, prefix 1	37 = 137
203	Contact-ID code 3 digits	Zone bypass	2 digits, prefix 5	70 = 570
204	Contact-ID code 3 digits	Duress	2 digits, prefix 1	21 = 121
205	Spare			
206	Contact-ID code 3 digits	Two key panic	2 digits, prefix 1	20 = 120
207	Contact-ID code 3 digits	Fire panic	2 digits, prefix 1	10 = 110
208	Contact-ID code 3 digits	Medical panic	2 digits, prefix 1	00 = 100
209	Contact-ID code 3 digits	Night station panic	2 digits, prefix 1	20 = 120
210	Contact-ID code 3 digits	Arm failed	2 digits, prefix 4	54 = 454
211	Contact-ID code 3 digits	Auto arming time changed	2 digits, prefix 3	06 = 306
212	Contact-ID code 3 digits	User code changed	2 digits, prefix 3	06 = 306
213	Contact-ID code 3 digits	Manual test user initiated	2 digits, prefix 6	01 = 601
214	Contact-ID code 3 digits	Periodic test (24 hour test)	2 digits, prefix 6	02 = 602
215	Contact-ID code 3 digits	Line failure	2 digits, prefix 3	51 = 351
216	Contact-ID code 3 digits	Communications failure	2 digits, prefix 3	54 = 354
217	Contact-ID code 3 digits	AC power failure	2 digits, prefix 3	01 = 301
218	Contact-ID code 3 digits	Battery test failed	2 digits, prefix 3	02 = 302
219	Contact-ID code 3 digits	Auxiliary power overload	2 digits, prefix 3	12 = 312
220	Contact-ID code 3 digits	Output 1 fault	2 digits, prefix 3	20 = 320
221	Contact-ID code 3 digits	Program accessed /altered	2 digits, prefix 6	27 = 627
222	Contact-ID code 3 digits	Clock adjusted	2 digits, prefix 6	25 = 625
223	Contact-ID code 3 digits	User open/closed	2 digits, prefix 4	01 = 401
224	Contact-ID code 3 digits	User last closed/first open	2 digits, prefix 4	02 = 402
225	Contact-ID code 3 digits	Swinger shut down	2 digits, prefix 5	70 = 570
226	Contact-ID code 3 digits	24 hour zone	2 digits, prefix 1	33 = 133
227	Contact-ID code 3 digits	Quick arm	2 digits, prefix 4	08 = 408
228	Contact-ID code 3 digits	Auto arm	2 digits, prefix 4	03 = 403
229	Contact-ID code 3 digits	Key switch arm	2 digits, prefix 4	09 = 409
230..235	Reserved			

Location	Contents and field size	Detail	Remarks	Defaults
		4 + 2 Reporting Codes		
121	Zone 1	4+2 Activation Code	1 digit, 2 nd digit reports zone number	11
122	Zone 2	4+2 Activation Code	1 digit, 2 nd digit reports zone number	12
123	Zone 3	4+2 Activation Code	1 digit, 2 nd digit reports zone number	13
124	Zone 4	4+2 Activation Code	1 digit, 2 nd digit reports zone number	14
125	Zone 5	4+2 Activation Code	1 digit, 2 nd digit reports zone number	15
126	Zone 6	4+2 Activation Code	1 digit, 2 nd digit reports zone number	16
127	Zone 7	4+2 Activation Code	1 digit, 2 nd digit reports zone number	17
128	Zone 8	4+2 Activation Code	1 digit, 2 nd digit reports zone number	18
129	Zone 9	4+2 Activation Code	1 digit, 2 nd digit reports zone number	19
130	Zone 10	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*0
131	Zone 11	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*1
132	Zone 12	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*2
133	Zone 13	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*3
134	Zone 14	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*4
135	Zone 15	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*5
136	Zone 16	4+2 Activation Code	1 digit, 2 nd digit reports zone number	*5
137-140	Reserved			
141	Zone 1	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
142	Zone 2	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
143	Zone 3	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
144	Zone 4	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
145	Zone 5	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
146	Zone 6	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
147	Zone 7	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
148	Zone 8	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
149	Zone 9	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
150	Zone 10	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
151	Zone 11	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
152	Zone 12	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
153	Zone 13	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
154	Zone 14	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
155	Zone 15	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
156	Zone 16	4+2 Restore Code	1 digit, 2 nd digit reports zone number	
236-237	Reserved			
238	4+2 code 2 digits	Zone tamper	1 digit, 2 nd digit reports zone number	
239	4+2 code 2 digits	Zone bypass	1 digit, 2 nd digit reports zone number	
240	4+2 code 2 digits	Duress	1 digit, 2 nd digit reports user number	
241	4+2 code 2 digits	Zone shutdown	1 digit, 2 nd digit reports zone number	
242	4+2 code 2 digits	24 hour zone	1 digit, 2 nd digit reports zone number	
243	Reserved			
244	4+2 code 2 digits	Two key panic	2 digits	
245	4+2 code 2 digits	Fire panic	2 digits	
246	4+2 code 2 digits	Medical panic	2 digits	
247	4+2 code 2 digits	Night station panic	2 digits	
248	4+2 code 2 digits	Armed failed	2 digits	
249	4+2 code 2 digits	Auto arm/disarm time changed	2 digits	
250	4+2 code 2 digits	User code changed	2 digits	
251	4+2 code 2 digits	Manual test, user initiated	2 digits	
252	4+2 code 2 digits	Periodic test	2 digits	
253	4+2 code 2 digits	Line failure	2 digits	
254	4+2 code 2 digits	Communications failure	2 digits	
255	4+2 code 2 digits	AC power failed	2 digits	
256	4+2 code 2 digits	Battery test failed	2 digits	
257	4+2 code 2 digits	Auxiliary power overload	2 digits	
258	4+2 code 2 digits	Output 1 fault	2 digits	
259	4+2 code 2 digits	Program accessed or altered	2 digits	
260	4+2 code 2 digits	Clock adjusted	2 digits	
261	4+2 code 2 digits	User open code	1 digit, 2 nd digit reports user number	
262	4+2 code 2 digits	Quick arm code	2 digits	
263	4+2 code 2 digits	Auto arm	2 digits	
264	4+2 code 2 digits	Key switch arm	2 digits	

Location	Contents and field size	Detail	Remarks	Defaults
265	4+2 code 2 digits	User first to open	1 digit, 2 nd digit reports user number	
266-267	Reserved			
268	4+2 code 2 digits	Zone tamper restore	1 digit, 2 nd digit reports zone number	
269	4+2 code 2 digits	Zone bypass restore	1 digit, 2 nd digit reports zone number	
270	4+2 code 2 digits	Zone shutdown restore	1 digit, 2 nd digit reports zone number	
271	4+2 code 2 digits	24 hour zone restore	1 digit, 2 nd digit reports zone number	
272	4+2 code 2 digits	Line fail restore	2 digits	
273	4+2 code 2 digits	Communication fail restore	2 digits	
274	4+2 code 2 digits	Mains fail restore	2 digits	
275	4+2 code 2 digits	Battery restore	2 digits	
276	4+2 code 2 digits	Auxiliary fault restore	2 digits	
277	4+2 code 2 digits	Alarm fault restore	2 digits	
278	4+2 code 2 digits	User closing code	1 digit, 2 nd digit reports user number	
279	4+2 code 2 digits	User last to close	1 digit, 2 nd digit reports user number	
280	4+2 code 2 digits	Restore auto arm	2 digits	
281	4+2 code 2 digits	Restore key switch arm	2 digits	
282..299	Reserved			
Local				
300	Installer code 2-8 digits	Programming access code		0000
301	User code 1 2-8 digits			1234
302	User code 2 2-8 digits			
303	User code 3 2-8 digits			
304	User code 4 2-8 digits			
305	User code 5 2-8 digits			
306	User code 6 2-8 digits			
307	User code 7 2-8 digits			
308	User code 8 2-8 digits			
309	User code 9 2-8 digits			
310	User code 10 2-8 digits			
311	User code 11 2-8 digits			
312	User code 12 2-8 digits			
313	User code 13 2-8 digits			
314	User code 14 2-8 digits			
315	User code 15 2-8 digits			
316	User code 16 2-8 digits			
317	User code 17 2-8 digits			
318	User code 18 2-8 digits			
319	User code 19 2-8 digits			
320	User code 20 2-8 digits			
321	User code 21 2-8 digits			
322	User code 22 2-8 digits			
323	User code 23 2-8 digits			
324	User code 24 2-8 digits			
325	User code 25 2-8 digits			
326	User code 26 2-8 digits			
327	User code 27 2-8 digits			
328	User code 28 2-8 digits			
329	User code 29 2-8 digits			
330	User code 30 2-8 digits			
331	User code 31 2-8 digits			
332	User code 32 2-8 digits			
333	User code 33 2-8 digits			
334	User code 34 2-8 digits			
335	User code 35 2-8 digits			
336	User code 36 2-8 digits			
337	User code 37 2-8 digits			
338	User code 38 2-8 digits			
339	User code 39 2-8 digits			
340	User code 40 2-8 digits			
341	User code 41 2-8 digits			
342	User code 42 2-8 digits			
343	User code 43 2-8 digits			

Location	Contents and field size	Detail	Remarks	Defaults
344	User code 44 2-8 digits			
345	User code 45 2-8 digits			
346	User code 46 2-8 digits			
347	User code 47 2-8 digits			
348	User code 48 2-8 digits	Temporary user code	Deleted at midnight	
349	User Code 1 1-8 digits	User code options	LED 1: on: bypass zones	1,6
350	User code 2 1-8 digits	User code options	LED 2: on: output 4 control from a touch tone phone	1
351	User code 3 1-8 digits	User code options	LED 3: on: arm/disarm from a touch tone phone	1
352	User code 4 1-8 digits	User code options	LED 4: on: arm/disarm lock code	1
353	User code 5 1-8 digits	User code options	LED 5: on: disarm by selected area	1
354	User code 6 1-8 digits	User code options	LED 6: on: master user code	1
355	User code 7 1-8 digits	User code options	LED 7: on: arm only	1
356	User code 8 1-8 digits	User code options	LED 8: on: user movements not reported	1
357	User code 9 1-8 digits	User code options		1
358	User code 10 1-8 digits	User code options	Note that the # key must be pressed after you have completed an LED toggle selection.	1
359	User code 11 1-8 digits	User code options		1
360	User code 12 1-8 digits	User code options		1
361	User code 13 1-8 digits	User code options		1
362	User code 14 1-8 digits	User code options		1
363	User code 15 1-8 digits	User code options		1
364	User code 16 1-8 digits	User code options		1
365	User code 17 1-8 digits	User code options		1
366	User code 18 1-8 digits	User code options		1
367	User code 19 1-8 digits	User code options		1
368	User code 20 1-8 digits	User code options		1
369	User code 21 1-8 digits	User code options		1
370	User code 22 1-8 digits	User code options		1
371	User code 23 1-8 digits	User code options		1
372	User code 24 1-8 digits	User code options		1
373	User code 25 1-8 digits	User code options		1
374	User code 26 1-8 digits	User code options		1
375	User code 27 1-8 digits	User code options		1
376	User code 28 1-8 digits	User code options		1
377	User code 29 1-8 digits	User code options		1
378	User code 30 1-8 digits	User code options		1
379	User code 31 1-8 digits	User code options		1
380	User code 32 1-8 digits	User code options		1
381	User code 33 1-8 digits	User code options		1
382	User code 34 1-8 digits	User code options		1
383	User code 35 1-8 digits	User code options		1
384	User code 36 1-8 digits	User code options		1
385	User code 37 1-8 digits	User code options		1
386	User code 38 1-8 digits	User code options		1
387	User code 39 1-8 digits	User code options		1
388	User code 40 1-8 digits	User code options		1
389	User code 41 1-8 digits	User code options		1
390	User code 42 1-8 digits	User code options		1
391	User code 43 1-8 digits	User code options		1
392	User code 44 1-8 digits	User code options		1
393	User code 45 1-8 digits	User code options		1
394	User code 46 1-8 digits	User code options		1
395	User code 47 1-8 digits	User code options		1
396	User code 48 1-8 digits	User code options		1
397..399	Reserved			
			Select Area	
400	User code 1 1-4 digits	User code areas select A-D	LED 1: on: area A	1 = area A
401	User code 2 1-4 digits	User code areas select A-D	LED 2: on: area B	1
402	User code 3 1-4 digits	User code areas select A-D	LED 3: on: area C	1
403	User code 4 1-4 digits	User code areas select A-D	LED 4: on: area D	1
404	User code 5 1-4 digits	User code areas select A-D		1

Location	Contents and field size	Detail	Remarks	Defaults
405	User code 6 1-4 digits	User code areas select A-D	Note that the # key must be pressed after you have completed an LED toggle selection.	1
406	User code 7 1-4 digits	User code areas select A-D		1
407	User code 8 1-4 digits	User code areas select A-D		1
408	User code 9 1-4 digits	User code areas select A-D		1
409	User code 10 1-4 digits	User code areas select A-D		1
410	User code 11 1-4 digits	User code areas select A-D		1
411	User code 12 1-4 digits	User code areas select A-D		1
412	User code 13 1-4 digits	User code areas select A-D		1
413	User code 14 1-4 digits	User code areas select A-D		1
414	User code 15 1-4 digits	User code areas select A-D		1
415	User code 16 1-4 digits	User code areas select A-D		1
416	User code 17 1-4 digits	User code areas select A-D		1
417	User code 18 1-4 digits	User code areas select A-D		1
418	User code 19 1-4 digits	User code areas select A-D		1
419	User code 20 1-4 digits	User code areas select A-D		1
420	User code 21 1-4 digits	User code areas select A-D		1
421	User code 22 1-4 digits	User code areas select A-D		1
422	User code 23 1-4 digits	User code areas select A-D		1
423	User code 24 1-4 digits	User code areas select A-D		1
424	User code 25 1-4 digits	User code areas select A-D		1
425	User code 26 1-4 digits	User code areas select A-D		1
426	User code 27 1-4 digits	User code areas select A-D		1
427	User code 28 1-4 digits	User code areas select A-D		1
428	User code 29 1-4 digits	User code areas select A-D		1
429	User code 30 1-4 digits	User code areas select A-D		1
430	User code 31 1-4 digits	User code areas select A-D		1
431	User code 32 1-4 digits	User code areas select A-D		1
432	User code 33 1-4 digits	User code areas select A-D		1
433	User code 34 1-4 digits	User code areas select A-D		1
434	User code 35 1-4 digits	User code areas select A-D		1
435	User code 36 1-4 digits	User code areas select A-D		1
436	User code 37 1-4 digits	User code areas select A-D		1
437	User code 38 1-4 digits	User code areas select A-D		1
438	User code 39 1-4 digits	User code areas select A-D		1
439	User code 40 1-4 digits	User code areas select A-D		1
440	User code 41 1-4 digits	User code areas select A-D		1
441	User code 42 1-4 digits	User code areas select A-D		1
442	User code 43 1-4 digits	User code areas select A-D		1
443	User code 44 1-4 digits	User code areas select A-D		1
444	User code 45 1-4 digits	User code areas select A-D		1
445	User code 46 1-4 digits	User code areas select A-D		1
446	User code 47 1-4 digits	User code areas select A-D		1
447	User code 48 1-4 digits	User code areas select A-D		1
448..450	Reserved		Select Area	
451	Zone area select 1-4 digits	Zone 1 areas A-D	LED 1: on: zone in area A LED 2: on: zone in area B LED 3: on: zone in area C LED 4: on: zone in area D	1 = area A
452	Zone area select 1-4 digits	Zone 2 areas A-D		all zones
453	Zone area select 1-4 digits	Zone 3 areas A-D		1
454	Zone area select 1-4 digits	Zone 4 areas A-D		1
455	Zone area select 1-4 digits	Zone 5 areas A-D	Note that the # key must be pressed after you have completed an LED toggle selection.	1
456	Zone area select 1-4 digits	Zone 6 areas A-D		1
457	Zone area select 1-4 digits	Zone 7 areas A-D		1
458	Zone area select 1-4 digits	Zone 8 areas A-D		1
459	Zone area select 1-4 digits	Zone 9 areas A-D		1
460	Zone area select 1-4 digits	Zone 10 areas A-D		1
461	Zone area select 1-4 digits	Zone 11 areas A-D		1
462	Zone area select 1-4 digits	Zone 12 areas A-D		1
463	Zone area select 1-4 digits	Zone 13 areas A-D		1
464	Zone area select 1-4 digits	Zone 14 areas A-D		1
465	Zone area select 1-4 digits	Zone 15 areas A-D		1
466	Zone area select 1-4 digits	Zone 16 areas A-D		1
			Select Zone Options Part A	
467	Zone options 1-8 digits	Zone 1 options part A	LED 1: on: Zone restore delay (See Location 515)	1,2,6 zone 1

Location	Contents and field size	Detail	Remarks	Defaults
468	Zone options 1-8 digits	Zone 2 options part A	LED 2: on: Entry audible alert	1
469	Zone options 1-8 digits	Zone 3 options part A	LED 3: on: Key switch zone	1
470	Zone options 1-8 digits	Zone 4 options part A	LED 4: on: Chime mode	1
471	Zone options 1-8 digits	Zone 5 options part A	LED 5: on: Alternate entry zone	1
472	Zone options 1-8 digits	Zone 6 options part A	LED 6: on: Entry zone	1
473	Zone options 1-8 digits	Zone 7 options part A	LED 7: on: Closed loop zone (no resistors required)	1
474	Zone options 1-8 digits	Zone 8 options part A	LED 8: on: Zone disabled	1
475	Zone options 1-8 digits	Zone 9 options part A	Note that the # key must be pressed after you have completed an LED toggle selection.	1
476	Zone options 1-8 digits	Zone 10 options part A		1
477	Zone options 1-8 digits	Zone 11 options part A		1
478	Zone options 1-8 digits	Zone 12 options part A		1
479	Zone options 1-8 digits	Zone 13 options part A		1
480	Zone options 1-8 digits	Zone 14 options part A		1
481	Zone options 1-8 digits	Zone 15 options part A		1
482	Zone options 1-8 digits	Zone 16 options part A		1
			Select Zone Options Part B	
483	Zone options 1-8 digits	Zone 1 options part B	LED 1: on: Swinger shutdown	1, 5, 8 All zones
484	Zone options 1-8 digits	Zone 2 options part B	LED 2: on: Stay zone	1, 5, 8
485	Zone options 1-8 digits	Zone 3 options part B	LED 3: on: 24 hour active zone	1, 5, 8
486	Zone options 1-8 digits	Zone 4 options part B	LED 4: on: Smoke detector (inactive during smoke alarm reset)	1, 5, 8
487	Zone options 1-8 digits	Zone 5 options part B	LED 5: on: Manual bypass	1, 5, 8
488	Zone options 1-8 digits	Zone 6 options part B	LED 6: on: Sequential entry	1, 5, 8
489	Zone options 1-8 digits	Zone 7 options part B	LED 7: on: Cross zones (See Locations 622 & 623)	1, 5, 8
490	Zone options 1-8 digits	Zone 8 options part B	LED 8: on: Auto bypass	1, 5, 8
491	Zone options 1-8 digits	Zone 9 options part B	Note that the # key must be pressed after you have completed an LED toggle selection.	1, 5, 8
492	Zone options 1-8 digits	Zone 10 options part B		1, 5, 8
493	Zone options 1-8 digits	Zone 11 options part B		1, 5, 8
494	Zone options 1-8 digits	Zone 12 options part B		1, 5, 8
495	Zone options 1-8 digits	Zone 13 options part B		1, 5, 8
496	Zone options 1-8 digits	Zone 14 options part B	Zone 6 is a permanent 24 hr zone for Z5120C only	1, 5, 8
497	Zone options 1-8 digits	Zone 15 options part B		1, 5, 8
498	Zone options 1-8 digits	Zone 16 options part B		1, 5, 8
			Select Zone Filters	
499	Zone 1 filter 1 digit	Zone input sensitivity	Erased: 10mS	4: 160mS
500	Zone 2 filter 1 digit	Zone input sensitivity	1: 20mS	4: 160mS
501	Zone 3 filter 1 digit	Zone input sensitivity	2: 40mS	4: 160mS
502	Zone 4 filter 1 digit	Zone input sensitivity	3: 80mS	4: 160mS
503	Zone 5 filter 1 digit	Zone input sensitivity	4: 160mS	4: 160mS
504	Zone 6 filter 1 digit	Zone input sensitivity	5: 320mS	4: 160mS
505	Zone 7 filter 1 digit	Zone input sensitivity	6: 640mS	4: 160mS
506	Zone 8 filter 1 digit	Zone input sensitivity	7: 1.28 Seconds	4: 160mS
507	Zone 9 filter 1 digit	Zone input sensitivity		4: 160mS
508	Zone 10 filter 1 digit	Zone input sensitivity		4: 160mS
509	Zone 11 filter 1 digit	Zone input sensitivity		4: 160mS
510	Zone 12 filter 1 digit	Zone input sensitivity		4: 160mS
511	Zone 13 filter 1 digit	Zone input sensitivity		4: 160mS
512	Zone 14 filter 1 digit	Zone input sensitivity		4: 160mS
513	Zone 15 filter 1 digit	Zone input sensitivity		4: 160mS
514	Zone 16 filter 1 digit	Zone input sensitivity		4: 160mS
515	Numbers 0-9	Zone Restore timer by minutes	Refer locations 467-482, LED 1	5
516...520	Reserved			
521	Outputs 1-5 digits	Siren Output areas	LED1: on: area A events	LED 1
522	Outputs 1-5 digits	Aux. Output 1 areas	LED2: on: area B events	1
523	Outputs 1-5 digits	Aux. Output 2 areas	LED3: on: area C events	1
524	Outputs 1-5 digits	Aux. Output 3 areas	LED4: on: area D events	1
525	Outputs 1-5 digits	Aux. Output 4 areas	LED5: on: system events only	1
			LED6: on: system and area events	1
526	Number 0-9	Siren Output timer by minutes	Multiply by 1 minute Blank = Latched	5 minutes all outputs

Location	Contents and field size	Detail	Remarks	Defaults
527	Numbers 0-9	Aux. Output 1 timer by minutes	1-10 minutes '0' = 10 minutes	5
528	Numbers 0-9	Aux. Output 2 timer by minutes		5
529	Numbers 0-9	Aux. Output 3 timer by minutes		5
530	Numbers 0-9	Aux. Output 4 timer by minutes		5
531...535	Reserved			
536	Outputs 1-5 digits	Siren Output options	See output options below	5
537	Outputs 1-5 digits	Aux. Output 1 options	See output options below	8
538	Outputs 1-5 digits	Aux. Output 2 options	See output options below	8
539	Outputs 1-5 digits	Aux. Output 3 options	See output options below	
540	Outputs 1-5 digits	Aux. Output 4 options	See output options below	
LED 1: on: Output mimics keypad beeps (entry/exit) LED 2: on: Output disabled while disarmed LED 3: on: Output disabled while stay armed LED 4: on: Output disabled while away armed LED 5: on: Output monitored (for alarm output only) LED 6: Spare LED 7: on: Smoke detector activation resets the voltage supply output for 4 seconds. After 20 seconds the panel re-checks if the smoke detector is still in alarm. If not in alarm the panel waits a further 2 minutes then restores the zone. During the 2 minute wait mode the zone is disabled LED 8: on Invert output				
541..555	Reserved			
			Select Output Event	
556	Outputs 1-5 digits	Output event: Zone alarm	LED 1: on: Siren output	1,2,3
557	Outputs 1-5 digits	Output event: Smoke alarm	LED 2: on: Aux. output 1	1,3
558	Outputs 1-5 digits	Output event: Tamper	LED 3: on: Aux. output 2	
559	Outputs 1-5 digits	Output event: Zone bypass	LED 4: on: Aux. output 3	
560	Outputs 1-5 digits	Output event: Duress opening	LED 5: on: Aux. output 4	
561	Spare			
562	Outputs 1-5 digits	Output event: Two key panic		1,2,3
563	Outputs 1-5 digits	Output event: Fire panic	Note that the # key must be pressed after you have completed an LED toggle selection.	
564	Outputs 1-5 digits	Output event: Medical panic		
565	Outputs 1-5 digits	Output event: Night panic		1,2,3
566	Outputs 1-5 digits	Output event: Arm fail		
567	Outputs 1-5 digits	Output event: Arm time changed		
568	Outputs 1-5 digits	Output event: User code changed		
569	Outputs 1-5 digits	Output event: User manual test		
570	Outputs 1-5 digits	Output event: Periodic test		
571	Outputs 1-5 digits	Output event: Line failure		
572	Outputs 1-5 digits	Output event: Comms. failure		
573	Outputs 1-5 digits	Output event: Mains failure		
574	Outputs 1-5 digits	Output event: Battery failure		
575	Outputs 1-5 digits	Output event: Auxiliary power overload		
576	Outputs 1-5 digits	Output event: Siren output fault		
577	Outputs 1-5 digits	Output event: Program accessed		
578	Outputs 1-5 digits	Output event: Clock adjusted		
579	Outputs 1-5 digits	Output event: Opening/Closing		
580	Outputs 1-5 digits	Output event: Zone shutdown		
581	Outputs 1-5 digits	Output event: 24 hour activation		1,3
582	Outputs 1-5 digits			
583..604	Reserved			
605	Numbers 0-9	Exit delay area A	Multiply by 10 seconds Blank = Instant arm on exit	6= 20 secs
606	Numbers 0-9	Exit delay area B		6
607	Numbers 0-9	Exit delay area C		6
608	Numbers 0-9	Exit delay area D		6
609	Numbers 0-9	Entry delay area A	Multiply by 10 seconds Blank = Instant activation on entry	2 = 20 secs
610	Numbers 0-9	Entry delay area B		2
611	Numbers 0-9	Entry delay area C		2
612	Numbers 0-9	Entry delay area D		2
613	Numbers 0-9	Alt entry delay area A	Multiply by 10 seconds Blank = Instant activation on entry	
614	Numbers 0-9	Alt entry delay area B		
615	Numbers 0-9	Alt entry delay area C		
616	Numbers 0-9	Alt entry delay area D		

Location	Contents and field size	Detail	Remarks	Defaults
617	Numbers 0-9	Stay mode entry delay area A	Multiply by 10 seconds Blank = Instant activation on entry	
618	Numbers 0-9	Stay mode entry delay area B		
619	Numbers 0-9	Stay mode entry delay area C		
620	Numbers 0-9	Stay mode entry delay area D		
621	Numbers 0-9	Swinger shutdown after xx activations		4
622	Numbers 0-9	Cross zones: Two activation's on either or any zones within xx seconds time frame. (See Location 623)	0 = None 1 = Same zone 2 = Different zones 3 = Same or different zones	0
623	Numbers 0-9	Cross zones timer	Multiply by 10 seconds 0 = 10	
			Select Custom Key	
624	Numbers 0-9	Custom Key F1 function	0: Disabled 1: Night-arm area A only 2: Panic, night panic on Nitewatch 3: Fire event 4: Quick-arm all areas 5: Quick-arm area A 6: Quick-arm area B 7: Quick-arm area C 8: Quick-arm area D 9: Toggle alarm output 10: Toggle output 1 11: Toggle output 2 12: Toggle output 3 13: Toggle output 4 14: Pulse output 4	
625	Numbers 0-9	Custom Key F2 function		
626	Numbers 0-9	Custom Key F3 function		
627	Numbers 0-9	Nitewatch panic custom key function		2
628	Numbers 0-9	Nitewatch arm custom key function		1
			If an output has an associated time delay (Loc 526-530), output will turn off after the delay	
629..650	Reserved			
			Select Auto Arm/Disarm by Area	
651	Numbers 1-8	Auto-arm/disarm	LED 1: on: area A LED 2: on: area B LED 3: on: area C LED 4: on: area D LED 8: on: 5 minute pre-alert beep	
			Select Auto Arm if no Activity	
652	Numbers 1-8	Auto arm if no activity	LED 1: on: area A LED 2: on: area B LED 3: on: area C LED 4: on: area D LED 8: on: 5 minute pre-alert beep	
653	Time HH:MM	Auto arm time if no activity	HHMM (24 hour format)	
654	Force arming 1-4	Select by area	LED 1: on: area A LED 2: on: area B LED 3: on: area C LED 4: on: area D	1,2,3,4
655..660	Reserved			

Location	Contents and field size	Detail	Remarks	Defaults
661	Numbers 1-8	Miscellaneous options	Select Options	
			LED 1: on: 50/60Hz select. off = 60Hz	1,5,7
			LED 2: on: Zone LED's latch while area not armed	
			LED 3: on: Wrong code lockout after 6 attempts	
			LED 4: off: enable factory default reset with a keypad command	
			LED 5: on: Single 4K7 resistor zones, tampers disabled	
			LED 6: on: Not used	
			LED 7: on: Auto arm mode: on = away arm; off = night arm	
			LED 8: on: Arm all areas function (9#) disabled	
			Note that the # key must be pressed after you have completed an LED toggle selection.	

Programming Explanations

Entering Program Mode from the Keypad

To enter program mode enter <NNNN> (**installer programming access code**) (default **0000**) then press the # key. The mains power cord symbol will turn off on the icon LCD keypad. You are now in '**Address Mode**'. You may now enter a **location number** and press #. The exclamation symbol will appear on the icon LCD keypad indicating you are now in '**Data Entry Mode**'. Data may now be entered into this location. As data is entered, the exclamation symbol will **flash** indicating data is being entered. After you have entered data at a location, **you MUST press the # key to store that data.**

Entering Data

Example: The following enters the first user code 1234.

```
<installer code> # <location number> # <new user code> #
<0000> # <301> # <1234> #
```

The display screen is now blank and waiting for the next location selection. You can now select another location followed by #. After entering data at any location, the **# key MUST be pressed to store that data. Enter # again to move to the next location.**

At locations where multiple data entries are programmed (options), the keypad keys act as an **electronic switch** which can select or de-select zone options. If you are programming **Location 467** for example (zone 1 options) and you press keys 1, 2, 4 and 6, these keypad zone lamps will turn on. These are the options selected for zone 1. If zone 4 is pressed in error, then simply press key 4 again and the zone 4 indicator lamp will turn off. **Enter the # key to store your selection in memory.**

To exit program press ** (star star)

Erasing a Memory Location

To erase data from a selected location, press and hold the '**0**' key until a second beep is heard, then press the # key. This is confirmation that the location is now erased. This command also applies to multiple data entry locations.

Communication Programming

Telephone Numbers: Locations 1-6

All six telephone numbers can be programmed to report to a **central monitoring station, home telephone, mobile phone or numeric pager**. Telephone numbers of up to 20 digits can be entered. Telephone numbers are programmed by accessing program mode using the installer code.

The first two telephone numbers can also be changed by the end-user (**call diversion**) when '**home dial**' has been selected. If '**home dial**' is selected, **only a zone activation or panic alarm** will report to the programmed telephone. All other reports will be ignored. On activation, the panel will call the user and a siren warble tone will be heard, then a pause, followed by a series of beeps. The number of beeps identifies the zone that has activated. The alarm control will continue sounding siren

warble then beeps...siren warble then beeps for approximately 20 seconds. **To cancel the call the user presses the *key on any DTMF or mobile phone.** This will terminate the call and a hang up tone will be heard if the *command has been successful. This will prevent the alarm control calling any secondary programmed telephone numbers. If the initial call is not acknowledged by pressing the *key, the panel will search for a secondary number to call and repeat the process.

Example of Home Dialling

If zone 3 activates and calls the first telephone number a siren warble then zone beeps will be heard and repeated for 20 seconds. Data must be entered in **4+2 Locations: alarms** for the panel to report. The Contact ID reporting codes must **NOT** be deleted. In home dial mode, if the call has **not been acknowledged** by the user with the *key command on their DTMF telephone, the icon LCD keypad will display the triangular system fault symbol. Entering the ***83** command (miscellaneous alarm recall) will display zone LED 4, indicating the panel failed to communicate. This can be erased by entering a valid user code to arm and disarm the system. To abort a home dialling call the user can enter ***59** then **<master user code> #** to cancel the call.

Pager Calling

Activation reports to a pager are sent in the **4+2 format** and display account number plus two reporting digits. Enter a **5** at **Location 7**, pager selection. At **Locations 13 to 16** enter account numbers and at **Locations 238-247** program reporting codes. Only **Alarms** and **Panics** are reported. For alarm restores enter the restore reporting digits for the selected locations at **Locations 266-271**.

After the pager has been called a delay is required on most pager networks before the panel data is sent. Entering ***3** (13) after the pager number provides a 3 second delay. Entering ***3 *3** after the pager number provides a 6 second delay. To program a space between the customer ID number and the two reporting digits enter an **11** at **Location 20**.

Example:

Location 1: Enter pager number **026 326 4341** [***3**] [***3**] with a 6 second delay before sending report. (the delay entry is achieved by pressing the [*** + 3**] keys together)

Location 7: Enter a **5** (pager format)

Locations 13 – 16: Enter **customer ID number**

Location 20: Enter **11** for a space between the customer ID and reporting codes.

Select Dialling Format: Locations 7-12

Select the format the panel is to send.

Account Numbers: Locations 13-16

Enter the customer account number (4 digits) for area's 'A' to 'D'.

Non 'Alarm' Reports: Locations 17-18

Assign non alarm reports to secondary telephone numbers.

Pager Start Character: Location 19

This is sent before any other digit.

Pager Space Character: Location 20

This is sent between the account number and the reporting code. Enter **11** for a space between the account number and the reporting code.

Pager End Character: Location 21

This is sent after all other digits.

Fax / Answer Phone Defeat: Location 22

To defeat a fax or answer phone, call the panel and after two rings hang up. Now recall the panel within 60 seconds and the panel will answer after the second ring.

Call Attempts: Locations 40-45

This is the number of call attempts the panel will make for a telephone number before it moves to the next number. A value **must** be entered for the communicator to make a call. If these locations are empty, the **communicator is disabled**.

Dialling Cycles: Location 46

The number of times the communicator will pass through the phone list.

Call Attempt Timer (Anti Jam): Location 47

After making a call, this is the time the panel will wait for the central monitoring station or private telephone number to send an acknowledgement before aborting the call and making another attempt. If programmed to call a private telephone (siren warble), the alarm communicator will wait for the * key command before aborting the call.

Answer after XX Rings: Location 48

This is the number of rings before the panel will answer the call. For answer phone / fax defeat, call the panel, allow **2 rings** and hang-up, then re-call the panel within 60 seconds and the panel will answer on the first ring.

Dialling Mode: Location 49

Select the dialling format.

Areas to Report: Locations 56-61

Assign the areas to report to the telephone number the panel will call.

Test Signal: Location 62

This is the time in 24 hour format (HHMM) the test signal will be sent to the central monitoring station. If days or hours have been altered, **Location 63**, (first time test) then **Location 62 must be reprogrammed** to restart the days / hours count.

Hours Between Test Calls: Location 63

This is the time period after which the first test call will be generated after the programmed time set at **Location 62**. All subsequent reports will call at this programmed time.

Reporting Times

Blank	No report
1	3 Hours
2	6 Hours
3	12 Hours
4	24 Hours
5	48 Hours
6	72 Hours
7	96 Hours
8	1 Week
9	2 Weeks
0	1 Month

Communication Option: Location 65

An opening will be sent after an alarm, when opening/closing reports are programmed **not to report** to the central monitoring station.

Upload / Download Password: Location 66

Enter a 4 digit unique code that Microcom II will validate to ensure that the downloading computer is authorised to access the panel. The remote computer must have the same 4 digit code programmed to gain access.

Line Test Mode: Location 67

Select when the panel will test the telephone line.

Event Reporting Codes (Contact ID): Locations 101-116 and 200-229

These locations are used for the Contact ID reporting codes. If the panel is to communicate in Contact ID format these locations are pre-programmed and it is not necessary to enter Contact ID codes. **Erasing one of these locations disables reporting of all events in ALL formats.**

Ademco 4+2 Reporting: Locations 121-156 and 238-281

These locations are used for reporting in the Ademco 4+2 format. Enter 2 digits at these locations. Request the 4+2 reporting template from the central station that will monitor the alarm. Erasing the data at any of these locations will disable that report. See the table for entering hexadecimal reporting codes on page 31.

Local Programming

Emergency Access to Program Mode: Location 661

If the Installer programming code is lost, remove all power from the panel and then re-apply mains, pressing keys **1+3** simultaneously, the panel will switch into program mode and you can now select a location to commence programming. At **Location 661**, **LED 4** must be OFF.

Installer Access Programming Code: Location 300

Enter your unique installer code for accessing the panel's program mode, default **(0000)**

User Codes: Locations 301-348

Each of the 48 user codes can be 2 to 8 digits in length. After entering the user code press the # key and the panel will emit 2 beeps and step to the next location. Select user options at **Locations 349-396** and **Locations 400-447**. User 48 is a **temporary** code that disables at midnight.

User Code Options: Locations 349-396

Assign the user code attributes for user code commands.

LED 1: on: Bypass zones

LED 2: on: Turns output 4 on / off from a touch tone phone

LED 3: on: Arm / Disarm from a touch tone phone

LED 4: on: Arm / Disarm lock code (If armed by this code no other code can disarm)

LED 5: on: Arm and disarm all areas or disarm by selected area (see example below)

LED 6: on: Master user

LED 7: on: Arm only

LED 8: User movements not reported

Disarm By Selected Area

If programmed at **Locations 349 to 396** (user code options) **LED 5 on**, the user can disarm any selected area. Enter a valid enabled user code: **<XXXX> <1, 2, 3 or 4> #** and the panel will disarm the selected area.

When all areas are armed select the area to disarm. Enter a valid enabled user code: **<XXXX> 1 #** disarms area 'A'
<XXXX> 4 # disarms area 'D'

Assign User Code to Areas: Locations 400-447

Enter the area 'A' to 'D' that the user code controls. A fixed internally programmed code of **9 #** will arm all areas, or arm all disarmed area

Assign Zones to Areas: Locations 451-466

Enter the area 'A' to 'D' assigned to each zone. When selecting a zone for common entry, the zone allocated as the entry/exit zone should be assigned to those areas.

Example: Zone 1 is a common entry/exit zone for area 'A' and 'B'. At **Location 451** enter a 1 and 2 to enable both area 'A' and 'B' to have a common entry path through zone 1. The first to enter and disarm either area 'A' or 'B' will turn off zone 1. The first to exit will arm their area with the exception of zone 1. The last to exit will arm their area including zone 1.

Zone Options: Locations 467-498

Select zone options part 'A' and part 'B' at these locations.

Example: To program a **smoke zone** with a 4 second reset.

Locations 483 to 498: set zone as smoke, **LED 4 on**

Location 521: assign alarm output to area

Location 525: assign auxiliary output 4 to area

Location 540: assign auxiliary output 4 to smoke reset pulse, **LED 7 on** and invert output 4, **LED 8 on.**

Location 557: assign alarm output to smoke

Result: The smoke zone activates, the auxiliary output turns off for 4 seconds and the panel waits for the smoke detector stabilise time, then checks if the smoke zone is still in alarm. If the zone is still in alarm, then the output activates and sends a report to the central monitoring station.

Zone Filters: Locations 499-514

Select the zone input sensitivity from 10mS to 1.28 seconds. This is the zone response time. Response times of less than 160mS should be reserved only for special sensors such as vibration sensors.

Assign Outputs to Areas: Locations 521-525

Assign areas 'A' to 'D' to outputs 1 to 5 for alarm and system events.

Output Timers: Locations 526-530

Select output timers to reset after an alarm. Single digit 1 to 9 in minutes (0 is 10 minutes). Blank is output latched. The output only resets when a valid user code is entered.

Output Options: Locations 536-540

Select options for how outputs 1 to 5 behave.

Output Events: Locations 556-582

Assign outputs 1 to 5 for panel activation events.

Exit Delay Time: Locations 605-608

Enter the exit delay time for areas 'A' to 'D' (10 second multiples).

Blank = instant arm, no delay on exit.

Entry Delay Time: Locations 609-612

Enter the entry delay time for areas 'A' to 'D' (10 second multiples).

Blank = no delay, instant alarm on entry.

Alternate Entry Delay: Locations 613-616

Enter a second entry delay time for areas 'A' to 'D' (10 second multiples).

Blank = no alternate delay, instant alarm on entry.

Night Arm Entry Delay (Stay Mode): Locations 617-620

Enter the entry delay time when entering a night zone (10 second multiples).

Blank = no delay, instant alarm on entry.

Swinger Shutdown: Location 621

Enter a single digit in the range 1 to 9. This is the number of activations on any one zone before the zone is disabled. The swinger shutdown count is for one arming cycle. Disarming the panel resets the swinger shutdown count.

Cross Zones (Double Knock): Location 622

Enter a single digit for two activations on the same zone, different zones or either the same or different zones within an **XX** second time before the alarm activates. If the timer resets before a second activation within the programmed time, the zone will restore and wait for a further two activations. When selecting double knock zones it is recommended that the detection devices are space protection devices such as PIR's etc. It is not recommended that zones protecting doors fitted with reed switches are selected as double knock zones.

Cross Zone Timer: Location 623

Enter a single digit for the cross zone timer (10 second multiples).

Custom Keys: Locations 624-628

Select the operation of the special custom keys (F1, F2, F3) for one-key-commands.

Auto Arm and Auto Disarm: Location 651

Select by area(s) 'A' to 'D' for the panel to auto arm/auto disarm. Auto arm and auto disarm times are entered by the user with the ***51** and ***52** commands followed by a master user code. To program an area auto arm / disarm time a valid master user code assigned to the area to auto arm / disarm must be used. If more than one area is to auto arm /disarm at the same time then a valid master user code assigned to those areas must be used. See **Locations 400-447**.

Example: Master user code 1234 assigned to area 'A'
Master user code 4321 assigned to area 'B'
Master user code 2580 assigned to areas 'C' and 'D'

***51 <1234> # <17:00> #** to auto arm area 'A'
***52 <1234> # <08:00> #** to auto disarm area 'A'

***51 <4321> # <18:30> #** to auto arm area 'B'
***52 <4321> # <09:30> #** to auto disarm area 'B'

***51 <2580> # <19:00> #** to auto arm areas 'C' and 'D'
***52 <2580> # <08:30> #** to auto disarm areas 'C' and 'D'

The times selected will operate every 24 hour period or until such time as the function is disabled or a new time setting is programmed. If a pre-alert has been selected, the keypad will emit a series of beeps 5 minutes before arming. To abort auto arming during the pre-alert period for that day, press any key on the assigned keypad. In the event of a total loss of power to the panel, the real time must be re-programmed when power is restored with the ***50** master user code command.

Auto Arm if No Activity: Location 652

Select the area(s) 'A' to 'D' the panel will arm when **NO activity** is detected after the programmed **NO activity** time has elapsed at **Location 653**. If a pre-alert has been selected, the keypad will emit a series of beeps for 5 minutes prior to arming. Pressing any key on the assigned keypad, or entering the assigned area programmed for **NO activity arming**, will abort the arming cycle and reset the **NO activity** count down timer.

Auto Arm Time with No Activity: Location 653

Enter the time HHMM (24 hour format) when the panel will arm after sensing no activity. If a zone(s) is in an alarm state when the panel is disarmed, the no activity timer is disabled until the zone(s) is restored. When the zones restore the activity timer will commence and the panel will arm after the no activity programmed time.

Force Arming: Location 654

Select the area(s) A to D that allow arming when a zone or zones within that area are in alarm. If at **Locations 483 to 498, LED 8** is turned **on**, any zones still in alarm after the exit delay has expired will auto isolate. If this option has not been selected the panel will refuse to arm when an alarm condition exists within that area or the alarm will activate after the exit delay time has expired.

Miscellaneous Options: Location 661

Select the panel options at this location.

Disable Double End of Line Tamper: Location 661

If at **Location 661**, **LED 5** is turned **on**, double end of line tampers can be disabled for all zones and **single 4k.7 resistor** alarm zones established.

Entering Hexadecimal Characters

Press and hold the * (star) key together with the corresponding digit.

Entry digit	Character
*0	A
*1	B
*2	C
*3	D
*4	E
*5	F

Reading Programmed Data from the Keypad.

Reviewing numeric entries: in programming mode location data will be displayed by the keypad as a digital value. Each digit will display for 1 second and then step to the next digit automatically; a beep will sound every time a new digit is displayed. Locations may be selected at any point and the contents viewed, programmed and / or modified. The programmed data displayed is either decimal or hexadecimal. To read the values refer to the 'lookup table' below.

LED 1	LED 2	LED 3	LED 4	DEC	HEX
				0	0
X				1	1
	X			2	2
X	X			3	3
		X		4	4
X		X		5	5
	X	X		6	6
X	X	X		7	7
			X	8	8
X			X	9	9
	X		X	10	A
X	X		X	11	B
		X	X	12	C
X		X	X	13	D
	X	X	X	14	E
X	X	X	X	15	F

The Keypads

A maximum of four 16 zone LCD or LED keypads may be connected to the Z16040C controller. Each keypad can operate one or up to four areas. A keypad's audible alert and visual display for selected areas is set by a four position dipswitch on the back of the each keypad.

- 1 On = area 'A' visual display / beeper alert
- 2 On = area 'B' visual display / beeper alert
- 3 On = area 'C' visual display / beeper alert
- 4 On = area 'D' visual display / beeper alert

There are three 'custom keys' F1, F2 and F3 for fast key commands.

Icon LCD Keypad

The LCD keypad gives full visual and audible indication of the alarm status. The keypad has five graphic symbols, an area identifier and 16 zone indicators.



The **power lead symbol** is on when mains power is present and flashes together with the system fault symbol when there has been a mains failure.



The **system fault symbol** flashes when there has been a system fault condition, or a system two key panic command has been initiated.



The **bell symbol** flashes when an alarm condition has occurred or a system two key panic has been activated.



The **moon symbol** is displayed when the system is night armed.



The **padlock symbol** is displayed 'unlocked' when the system is disarmed or in programming mode and 'locked' when the system is away armed or night armed.



The **area identifier symbol** is the four segment box at the lower right hand side of the LCD display. This symbol displays the area(s) that is away armed or night armed. In non-partitioned systems only Area A is displayed.

Zone and Graphic LCD keypad Indicators

The zone indicator lamps are displayed as numbers 1 through 16 on the top two lines of the LCD keypad. The arming zone numbers will be displayed when an away arm or night arm command has been initiated. During the exit delay the keypad will also display the 'padlock' symbol flashing in an alternating lock and unlock state and the area identifier box will show the area(s) that are arming. A fast pulse audible tone will be heard.

In the event of a system alarm, the keypad will display the full status of the alarm condition. The zone indicators, power lead, system fault, bell and padlock symbols will flash together with the area identifier, indicating the area in which the zone(s) has activated.

If your system is partitioned into multiple areas, then only the user codes assigned to the designated area(s) are functional for that area(s). All zones assigned to an area are visually and audibly signalled on the keypad(s) programmed for that area(s).

Sixteen Zone LED Keypad

The LED keypad gives full visual and audible indication of the status of your alarm. The keypad has four area identifiers, AC power, night arm and 16 zone indicators.

The **green AC symbol** is on when mains power is present and flashes when there has been a mains failure.

The **AC symbol** flashes fast when there has been a system fault condition, or a system two key panic command.

The **area identifiers (S1, S2, S3, S4)** flash when an alarm condition has occurred within that area(s) or a system two key panic has been activated.

The **yellow Nite symbol** is on when the system is night armed.

The **area identifiers (S1, S2, S3, S4)** flash when arming an area(s) and remain steady on when an area has armed.

Zone LED keypad Indicators

The zone indicator lamps are displayed as numbers 1 through 16 on the LED keypad. The arming zones will be displayed when an away arm or night arm command has been initiated. A fast pulse audible tone will be heard.

In the event of a system alarm, the keypad will display the full status of the alarm condition. The zone indicators will flash together with the area identifier, indicating the area in which the zone(s) has activated.

If your system is partitioned into multiple areas, then only the user codes assigned to the designated area(s) are functional for that area(s). All zones assigned to an area are visually and audibly signalled on the keypad(s) programmed for that area(s).

Technical Specifications

AC Input.....14.8 VAC from transformer (**Do NOT exceed**).
 Accessory Power.....13.8 VDC, 500 mA total drain.
 Battery Capacity.....7.3 A/H.
 Battery Fuse.....3 Amp fast blow.

Siren Output.....Max: 1.5 Amps DC to non inductive load.
 Aux: 1 Output.....Max: 250 mA Sink output.
 Aux: 2 Output.....Max: 250 mA Sink output.
 Aux: 3 Output.....Max: 250 mA Sink output.
 Aux: 4 Output.....Max: 250 mA Sink output.

There are 38 events/options that can be assigned to the outputs. Assign areas at **Locations 521 to 525** and the options and events at **Locations 536 to 582**. Output timers are programmed at **Locations 526 to 530**.

Current Rating

The following table shows the approximate current draw for micron accessories fitted to the Scorpion Z16040 alarm control.

It is **important** to calculate total current draw when installing a micron system to ensure power supply is not overloaded during activation.

Accessory	Current Draw
Control PCB and LED Keypad	200mA (All LED's on)
Control PCB and LCD Keypad	210mA (All LED's on)
LCD Keypad	70mA (All LED's on)
LED Keypad	60mA (All LED's on)
iQ50 Passive infra-red	25mA (Activated)
PXI Passive infra-red (Pet sensor)	20mA (Activated)
ET Passive infra-red (Environmentally tolerant)	20mA (Activated)
GEM Passive infra-red	25mA (Activated)
Nitewatch Remote station (Home mode)	40mA
External siren	625mA (Active)
Piezo internal siren	200mA (Active)
RCM1 / RCM24 Wireless receiver module	35mA
Speech communicator	80mA (Active)
Smoke detector	30mA (Active)

EOL Resistors

All zones are actively scanning both zone and tamper detection with double end of line resistors. A **4.7k** resistor is in **series** with the tamper and a **4.7k** resistor is in **parallel** with the zone. The **tamper** is a **24 hour** active circuit and when activated will generate an alarm in the armed or disarmed state.

Connection to Mains Earth

For protection against the hazards of over voltages and damage to the alarm circuit board it is essential that the green earth wire from the printed circuit board is connected to a secure mains earth point.

Telecom Waiver

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with the minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is set up to carry out test calls at pre-determined times. Such test calls will interrupt any other calls that may be set up on the line at the same time. The timing set for such test calls should be discussed with the installer. The timing set for test calls from this equipment may be subject to 'drift'. If this proves to be inconvenient and your calls are interrupted, then the problem of timing should be discussed with the equipment installer. The matter should NOT be reported as a fault to Telecom Faults Service.

Recommended Method of Connection to the Telecom Network

- 1 Fit an **RJ31X Single Line Junction Box** alongside the existing **Telecom Master Socket**.
- 2 Locate the telephone line wires, which are connected to terminals 2 and 5 in the **Telecom Master Socket** and make some form of identifying mark on the wire connected to terminal 2.
- 3 Disconnect the 2 telephone line wires from terminals 2 (marked wire) and 5 in the **Telecom Master Socket** and connect them to terminals 4 (marked wire) and 5 in the **RJ31X Junction Box**.
- 4 Add a connecting wire from terminal 1 **RJ31X Junction Box** to terminal 5 in the **Telecom Master Socket**.
- 5 Add a connecting wire from terminal 8 in the **RJ31X Junction Box** to terminal 5 in the **Telecom Master Socket**.
- 6 Check that all other wires within the **Telecom Master Socket** are connected securely, especially if these have been disturbed during the re-wiring.
- 7 Check that all existing telephone equipment still functions correctly.
- 8 Plug the line cord from the security system into the socket on the **RJ31X Junction Box**.
- 9 Check again that all existing telephone equipment still functions correctly.
- 10 Check that the security system equipment functions correctly.

This equipment must not be programmed for decadic (pulse) dialing because its characteristics are incompatible with the telephone exchanges in New Zealand. DTMF (tone) dialing is considerably faster and is fully compatible

[illegible]

WARRANTY

1. Subject to clause 2 below, Micron guarantees this product against defects in materials and workmanship for a period of 24 months from the date of delivery to the purchaser as follows:
 - (a) Micron will repair or replace free of charge any goods or part thereof found to be defective by reason of faulty material or workmanship.
 - (b) The purchaser must give Micron notice of the alleged defect within 14 days of it becoming apparent and must return the defective goods or part thereof to Micron.
2. This guarantee does not apply or extend to:
 - (a) Any product altered or repaired by any person other than Micron so as in Micron's sole judgement to adversely affect the product.
 - (b) Damage, malfunction or failure arising from accident, misuse or misapplication, neglect, modifications, use of unauthorised replacement parts or accessories, exceeding the specific ratings, improper voltage or connection of any wire to any to any part of the circuit board other than the terminal block.
 - (c) Any product where the rating label or serial number is removed or altered.
 - (d) Any consequential or indirect loss.

Notice of Liability

While every effort has been made to ensure the accuracy of this document, neither Micron Security Products Ltd nor any of its official representatives shall have any liability to any person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by the information contained in this manual. Should any error or inconsistency be found, please notify us.

Micron Security Products Ltd reserves the right to make changes to features and specifications at any time, without notification, in the interest of ongoing product development and improvement. Most up to date versions of this manual can be downloaded from micron's secure web site.

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