

SCORPION

Z4120C, Z6020C & Z8020C
(Version 1.4)

FEATURES & OPERATION

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Z4120C, Z6020C and Z8020C

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Schematic Diagram

Product Features

01. Two 'user selectable' night arming options.
 - a. Perimeter (instant) arming with no delay.
 - b. Perimeter arming with entry and exit delay.
02. Auto arming at programmed time (end user can set time for arming).
 - a. Auto arm in Away mode.
 - b. Auto arm in Home mode.
03. Four modes of line fault monitoring.
 - a. LFM disabled.
 - b. LFM always on.
 - c. LFM only when armed.
 - d. LFM only when 'Away' armed (recommended)
04. Arm + Disarm panel with user code from any touch-tone phone.
05. 64 telephone number digits.
06. User can program his own 'follow me' phone numbers.
07. 24 User codes.
08. Quick Arm both areas.
09. Disarm all areas code.
10. Each User Code may be programmed as (can be any or all):
 - a. Master user code (can program other user codes).
 - b. Arming code only (cannot disarm)
 - c. User code can bypass zones
 - d. User code reports to central station
 - e. Remote arm and disarm by user code from touch tone phone
 - f. Select area to arm (Z8020C only)
11. Two account numbers (Z8020C only).
12. High current (1.5 amp) siren output can:
 - a. Drive horn speakers (2 x 8 ohm), siren wail generated by panel PCB.
 - b. Drive 2 x siren speakers with voltage output.
13. Two programmable auxiliary outputs.
14. Programmable dual strike function (2 activation's on 2 different zones)
15. Double knock mode, pulse count 2 activation's on one zone
16. Auxiliary output programmable as smoke detector reset.
17. 128 full history event memory (time and date stamped).
18. Swinger shutdown counter with programmable counter.
19. Siren output monitored for tamper or failure and report.
20. Two partitions with common zones allowed (Z8020C only).
21. Communication progress monitor (keypad display).
22. First to open / last to close reports for partitioned systems.
23. Fire, Medical, Emergency keys.
24. Clone data to or from the panel with a simple inexpensive chip.
25. Duress opening and report.
26. Auxiliary supply has electronic auto re-set fuse.
27. Follower (hand over) zones.
28. Terminate immediately command for communications in progress.
29. Dynamic battery test and report.
30. Forced arming disable / enable with auto bypass.
31. Keypad up/down adjustment of battery charge voltage.
32. Test report programmable as daily, weekly, etc.

The LED Keypad

The keypad communicates with the panel over a 4 wire bus. Data from the panel is displayed on the zone and status led's. A maximum of 4 keypads or 'Nitewatch' stations may be connected to a panel. The keypad sounder answers with two short beeps for a valid data entry and a single long beep for invalid data. Therefore, if a valid user code is entered, followed by the # key, the keypad beeps twice and arms/disarms the panel. Similarly, when programming, the keypad beeps twice for a valid data entry, but if invalid data is attempted the keypad sounds a long beep and returns the programmer to the beginning of the data slot.

The Icon LCD Keypad

Programming and function of the LCD keypad is identical to the LED keypad, except for three additional programmable locations at 344, 345 and 346. These locations control the function of the F1, F2 and F3 custom keys at the bottom of the keypad. To program F1 to generate a "Fire Panic", turn on led 13(* + 3) at location 344. To program F2 to "Quick Arm" Area A, turn on led 7 at location 345. LCD function is described in the Z4120C, Z6020C, Z8020C User Manual.

Keypad Commands & Functions

KEYPAD ENTRY	COMMAND
1# or 2#	Quick arm
7#	Smoke reset
71# or 72#	Chime mode On/Off
80#	Alarm history recall
81# or 82#	Instant perimeter arm, instant alarm
89#	Panel status recall
91# or 92#	Night (perimeter) arm with delays
99#	Force panel to answer call
99# + nnnnnnn	Panel dials nnnnnnn
[*+#]	Two key panic
[1+3]	Fire panic
[4+6]	Medical panic
(Master P code) ##	Enter programming mode
(Master P code) # [1+3]	Clone 'from' prom socket
(Master P code) # [4+6]	Clone 'to' prom socket
(Master User code)[1+3](new user code) # (User number:1-15)	Add, change or remove a user code

Quick Arm.

If this option is selected [Loc 410, led 2] the panel may be armed by entering **1 #**. Entering **2 #** will arm Area B [Z8020C only].

Smoke Reset.

If one [or both] of the Auxiliary outputs are to be used as 'smoke re-set' the keypad command **7 #** will momentarily switch the output to the opposite state for 5 seconds. The output may be selected as smoke re-set at Loc 426, led's 5 & 6, and the output state may be set at the same location led's 2 & 3. Remember to observe the maximum current rating for each output or permanent damage may result to the PCB.

Chime Mode.

Chime zones are enabled by keypad entry **7 1 #** [area A] and **7 2 #** [area B]. Chime zones only operate in the disarmed state and sound consecutive beeps at the keypad for 3 seconds when activated. Chime is temporarily 'turned off' each time the panel is armed and re-activated when disarmed.

Alarm History Recall.

Enter **8 0 #** to recall past alarm events. Up to 128 activations may be recalled by pressing the Hash [#] key. The panel steps back 1 event each time the # key is pressed. Alarmed zones are displayed as flashing zone leds. The keypad displays all the zones activated during any one arming period. Press any key [except #] to exit.

Panel Status Recall.

Enter **89 #** to display current status events. The events displayed are listed below. Press any key to exit.

LED	MEANING
Led 1	NiteWatch panic, 2 key panic, medical panic or fire panic activated
Led 2	The battery is discharged or faulty
Led 3	AC mains power to the panel has failed
Led 4	A dialer communications error has occurred
Led 5	Phone line is faulty or disconnected
Led 6	Aux power supply overloaded
Led 7	Siren output fault. Circuit open or overloaded.

Night Arm / Instant Arm.

Enter **8 1 #** [area A] or **8 2 #** [area B] to arm Night / Instant zones. The zones must first be selected at Loc.386. Enter **9 1 #** [area A] or **9 2 #** [area B] to arm Night zones with exit and entry delays.

1. If 'Night' mode **9 1 #** is selected the panel allows an exit period [Locs. 348, 349] before arming, but the exit alert is **not** sounded. At the end of the exit period the keypad beeps 3 times. Violating a Night arm zone starts the (pulsed) entry pre-alert beeper [locs. 350,351] before sounding an alarm.
2. If 'Instant' mode **8 1 #** is selected the panel arms instantly and alarms instantly.

Panel Forced to Answer.

The panel may be forced to answer by entering **9 9 #**. This command forces the panel to immediately answer an incoming call.

Call Remote Computer. [Toll Saver]

Enter **9 9 # n n n n n n**, where 'n n n n n n' is the phone number for a remote computer. The panel waits 2.5 seconds after 9 9 # for the first digit to be entered and 2.5 seconds after each successive digit. If no further digits are entered within 2.5 seconds the keypad beeps twice and the panel then waits 30 seconds for a remote computer modem tone. If connection is not successful the panel disconnects from the line.

Two Key Panic.

Two key panic audible alarm is selected at Loc. 420, led 2 and reporting is selected at Loc.216. Press **Star + Hash** [* + #] together to activate this function. Reset the panel by entering any valid user code.

Fire Panic.

Enable audible at Loc. 420, led 3. Enable reports at Loc. 220. Press **1 + 3** together to activate. Reset the panel with a valid user code.

Medical Panic.

Press **4 + 6** together to activate. Reports only (no audible). Reset the panel with a valid user code.

Clone Memory from / to Prom Socket.

Fit the clone chip into the socket. Enter the master programming code **n n n n** then # then **1 + 3**. The data programmed in the clone chip is copied into the panel memory. To copy data from the panel to the clone socket, enter the master programming code **n n n n** then # then **4 + 6**. [note: The master programming code and communicator account number are not copied].

Arming and Disarming the Panel.

Enter a valid user code followed by the Hash [#] key.

Sending Duress after Disarming.

To transmit a duress code while disarming, enter a valid user code then press the # key and keep held down until a second beep is heard (about 1 second) then release. An 'opening' and 'duress' will be sent to the monitoring station.

Opening After an Alarm.

If the alarm control has been programmed NOT to report by user [Loc 428 – 482], and an alarm condition occurs, on disarming the system the control will send an opening report to the monitoring station.

Arming the Panel and Excluding a Zone(s).

Enter a valid user code *then* Star [all zone led's light] *then* zone number(s) to exclude [leds off] *then* Hash.

Example: **n n n n then * then 236 then #**. In this example the panel will arm with zones 2,3 and 6 excluded.

Swinger Shutdown.

The swinger shut down count is programmable at Loc. 359 and may be set in the range 1 to 7. 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 rule applies to all zones including zones programmed as night or 24 hour zones.

Adding, Changing or Deleting a User Code.

Enter a **master user code then 1 + 3 then a new user code then # then the user number** [1 to 15]. To delete a user code follow exactly the same procedure as above but omit the 'new user code'. Finish with #.

Temporary User Codes.

User codes 8 and 9 may be programmed by the end user as 'temp' user codes by making the first digit a 15 (Star + 5). Example: user code 8 programmed as 15 1 2 3. Entering the last 3 digits of the temp code will arm/disarm the panel. The panel discards temp codes at midnight. The panel clock **MUST** be set.

Adjusting the Battery Charging Voltage.

The battery charging voltage is factory pre-set. If it becomes necessary to adjust the voltage proceed as follows: Enter **N N N N** (programming code) then # then [**star + hash**]. Now press **1** to step **down** the charging voltage or **3** to step **up** the voltage. Press # to **save** the voltage setting or * (star) to **abort**. Warning: Do not attempt to adjust the charging voltage if the battery is partially discharged **or** if the battery is old **or** if the Aux. supply voltage is heavily loaded. The battery charge voltage (with a fully charged battery connected) should **NEVER** exceed 13.80 volts.

Emergency Access to Program Mode.

If the master programming code is lost and the installer has not disabled this function at Loc.410, led 3 then proceed as follows: Disconnect all power from the panel. Hold down the **1 + 3** keys while power is re-connected to the panel (two beeps) *then* press the # key within 6 seconds. The panel will jump directly to 'Program' mode. If this function has been disabled at Loc. 410 the panel **can not be accessed** and must be returned to a Micron master distributor.

Other Panel Functions

A brief explanation of functionality is given for each memory location in the section headed **Programming**. This section provides more detail for some of the 4120, 6020 and 8020 features and functions.

How the 24 Hour Zones Work

Important, read this carefully. When a 24 hour zone is repeatedly activated and reaches the swinger shutdown count, it is automatically disabled. This zone will remain disabled until the next arming cycle. When the panel is armed the swinger shut down counter for ALL zones is re-set and the 24 hour zone is enabled.

User Codes (including user code 15 function)

Each user code may be programmed for several functions. If no options are selected for a user code that code will be assigned to area A [Z8020C] and will perform only a basic arm/disarm function. See Loc. 428 for options. **User code 15** is reserved as a '**disarm all areas**' code for a partitioned Z8020C and as a night-lock code for the Z4120C/Z6020C. If the Z4120C and Z6020C are armed with user code 15, **only** this user code can disarm the system. See Loc. 456.

Two Key Panic

The user 2 key panic function is activated by pressing * [star] and # [hash] simultaneously. The installer may select which output(s) to activate at Locs.420, 422 and 424. If this function is to send reports in non Contact ID formats a 2 digit code must be entered at Loc. 272.

Fire Panic - Medical Panic

Each of the above conditions are assigned a 'two key' sequence. Pressing 1 + 3 activates a Fire Panic condition. Pressing 4 + 6 activates Medical Panic. Select an output to activate for Fire Panic at Locs.420, 422 and 424.

Line Fault Monitoring

When this option is selected at Loc. 363 the panel checks for line voltage every 4 minutes. If a fault is detected a fault and restore code are loaded into the panel reporting queue for transmission when the line is restored. An output may also be selected at Locs. 420, 422 and 424. If an audible alarm output is selected for Line Fail it is highly recommended that only 'Option 2' is selected at Loc. 363.

Test Signal

Test signal timing is set at Loc. 180. Enter the time in 24Hr format when the first test signal will be sent. Subsequent test signals will be sent every 24 hours thereafter. Examples: 11.30pm = 2330, 2.30am = 0230, 12 midnight = 2400.

Auto Arming

If a valid 'Auto Arm' time has been programmed at Loc. 172, the keypad will sound three beeps every 6 seconds for the programmed pre-alert time (Loc. 347). At the end of the pre-alert time the panel starts counting down the exit delay and sounds the exit warning beeper, then arms all zones. During pre-alert, entering any key at the keypad will abort the auto arming cycle. Once the panel has started the exit timer a valid user code is required to abort the arming cycle. Entering an invalid auto arm time (eg. 9999) disables this function.

Siren Output

The high power siren output may be used as an on board siren driver for driving 2 x 8 ohm horn speakers, or as a current source for sounding 2 x 12 volt siren speakers. Select the option required at Loc. 426, led 4 'on', for driving 8 ohm speakers, or led 4 'off', for driving siren speakers with internal drivers. This output is constantly scanned for shorts or opens. If the siren (speaker) wires are cut, shorted or overloaded the panel reports a fault.

Caution: This output defaults to driving horn speakers with a siren wail. Do NOT accidentally configure this output to a voltage output with horn speakers connected as permanent damage may occur to the output power FET.

Alternate Entry / Night Arm Timer

In 'Away' or 'Full Arm' mode, any zone selected as an alternate entry path at Loc. 392 **must** also be selected as an entry zone at Loc. 390. If an alternate entry path and time are not required for 'away' arming, the alternate entry timers at Locs. 352 and 353 may be used to set the night arm pre-alert. Night arming zones, which are also selected as 'entry zones' when the panel is armed in 'Delayed Arming Night Mode', use the entry delay timers at Locs. 350 and 351. Night zones may be changed to a longer or shorter pre-alert time by programming night zones also as alternate entry zones but NOT as entry zones. Any zone selected as a night arming zone at Loc. 386, which is also selected as an alternate entry zone at Loc. 392, will sound the pre-alert beeper (Loc. 400) for the programmed alternate entry timer settings at Locs. 352 and 353.

The rule to remember here is that if a zone is selected as an entry zone **and also** an alternate entry zone the alternate entry zone time is used. This rule applies when the panel is fully armed **or** night armed.

Using the 'Hold Down' Commands

To use a 'hold down' command the function key (digit) must be pressed and held down until a second key-beep is heard. *Note that all hold down commands operate ONLY when the panel is fully disarmed.* The installer or the end user may use the following functions.

Changing the Clock Time.

Press and hold down key **6** until a second 'beep' is heard *then* enter a Master user code *then* # *then* the time in 24 hour format *then* #.

Example: In the following example the panel time is re-set to 12.00 noon.
[Hold-6] **1234 # 1200 #**

Changing the Auto Arming Time.

Same procedure as above using key **7**.

Example: In the following example the panel will auto-arm at 5:30 pm.
[Hold-7] **1234 # 1730 #**

User Phone Number Entry [Follow Me].

Selecting this option forces all communicator transmissions to be signaled in the 'home-warble' format. The user can program a 'follow me' phone number(s). If more than one number is to be programmed the numbers must be separated by a # (Hash). Press and hold down key **8** until a second beep is heard *then* enter a Master user code *then* # *then* the follow me number *then* **Star** [*].

Example: In this example the panel will call 8197654 *then* 8256631 *then* 5292048
[Hold-8] **1234 # 8197654 # 8256631 # 5292048 Star** [*]

Calling: The panel will call each number in turn until a handshake [touch tone *(star)] is heard. The panel will call each number in the list until the programmed number of calls has been completed.

DIGIT	MEANING
1~9 inclusive	Dial digits 1~9
0 or 10	Dial 0
11	Dial a * [Star]
12	Dial a # [Hash]
13	Pause for 3 seconds
14	Call progress detection
15	Number separator
#	Separator [same as 15]

Note: Unlike all other hold down keys this function is terminated with the 'Star' key. This is because the # key is a valid entry when entering multiple phone numbers.

Communication Progress Tracker.

The hold down key **9** is used to initiate a test call and track the progress of the dialer. Communication progress is displayed by the keypad zone leds as each part of the call is completed. The keypad beeps continuously throughout the monitoring process. The table below shows the monitoring process.

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

Notes:

- Five seconds after led 6 has lit, the display will terminate.
- If there are multiple events in the queue the display will toggle between leds 4 & 5 until all data is acknowledged. Led 6 [hang up] **only** lights if the call is successful.
- Only one call attempt is displayed.
- Communications progress tracking is only available when all areas are disarmed.

Abort Current Communication

The following function aborts 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.

Press and hold down the **0** key till a second beep is heard *then* enter a Master user code *then* #.

[Hold-0] **1234** #

Communication in progress stops immediately.

Programming

Programming Rules

To enter programming mode press **N N N N** [master programming code (default 0 0 0 0)] then # then #. The status led will light and you are now in 'Address Mode'. You may now enter an address [Location] number and press #. The status led will flash indicating that you are in 'Data Mode' and data may now be entered into this location. To exit programming mode press Star Star [**].

Entering Data

Enter digits [or multiple digits] into memory. When the location is programmed with valid data the panel beeps twice and automatically advances to the next memory location. Do not press enter [#] after data entry, except when programming zone data. If you think you have made a mistake, press star [*] then the location number you wish to view or program, then enter. The data in that location will be displayed by the keypad zone led's and may be changed by entering new data.

Erasing a Memory Location

To erase data press **1+3** together. Erasing data from a location usually disables the function controlled by that location.

Setting the Default Dialing Mode

The panel may be programmed to default dial in DTMF or Decadic (pulse). Panels are shipped from the factory with DTMF set as the default dialing mode. To change to Decadic, enter programming mode. At Location 412 turn on led 6. The default is now set to decadic dialing. Should DTMF be required as a communication mode for pager signals etc. the panel may be temporarily switched back to DTMF by programming a 15 then a 1 in the dialing string [see 'Phone Number Lists' below].

The Memory Map / Programming Locations

Programming locations

LOCATION	CONTENTS & FIELD SIZE	REMARKS
0	Phone number list (64 digits)	
64	User 1 code (4 digits)	Default 1234
68	User 2 code (4 digits)	See also locations
72	User 3 code (4 digits)	428 – 474 for further
76	User 4 code (4 digits)	user code data.
80	User 5 code (4 digits)	
84	User 6 code (4 digits)	
88	User 7 code (4 digits)	
92	User 8 code (4 digits)	
96	User 9 code (4 digits)	
100	User 10 code (4 digits)	
104	User 11 code (4 digits)	
108	User 12 code (4 digits)	
112	User 13 code (4 digits)	
116	User 14 code (4 digits)	
120	User 15 code (4 digits)	
124	User 16 code (4 digits)	
128	User 17 code (4 digits)	
132	User 18 code (4 digits)	
136	User 19 code (4 digits)	
140	User 20 code (4 digits)	
144	User 21 code (4 digits)	
148	User 22 code (4 digits)	
152	User 23 code (4 digits)	

LOCATION	CONTENTS & FIELD SIZE	REMARKS
156	User 24 code (4 digits)	
160	Installer code (4 digits)	Default 0000
164	Area A account (4 digits)	
168	Area B account (4 digits)	
172	Auto-arming time (4 digits) See also Locs 347,412	Default 9999
176	Upload/download password (4 digits)	Default 5555
180	Test signal time (4 digits)	Default 9999
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. (Non Contact-ID reporting codes follow this section)		
184	Zone 1 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
186	Zone 2 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
188	Zone 3 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
190	Zone 4 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
192	Zone 5 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
194	Zone 6 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
196	Zone 7 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
198	Zone 8 alarm and restore code (2 digits, prefix 1)	Default 30 = 130
200	Zone bypass code (2 digits, prefix 5)	Default 70 = 570
202	Reserved (2 digits)	
204	Reserved (2 digits)	
206	Zone transmitter low battery (2 digits, prefix 3)	Default 84 = 384
208	User open/close code (2 digits, prefix 4)	Default 01 = 401
210	User last close/first open code (2 digits, prefix 4)	Disabled
212	User pendant battery low code (2 digits, prefix 3)	Default 84 = 384
214	User duress code (2 digits, prefix 1)	Default 21 = 121
216	User night panic code (2 digits, prefix 1)	Default 20 = 120
218	User 2-key panic code (2 digits, prefix 1)	Default 20 = 120
220	User Fire panic code (2 digits, prefix 1)	Default 10 = 110
222	User medical panic code (2 digits, prefix 1)	Default 00 = 100
224	User arming failure code (2 digits, prefix 4)	Default 54 = 454
226	Reserved	
228	User code changed (2 digits, prefix 3)	Default 06 = 306
230	User initiated test code (2 digits, prefix 6)	Default 01 = 601
232	Line fault code (2 digits, prefix 3)	Default 51 = 351
234	Comms fail code (2 digits, prefix 3)	Default 54 = 354
236	AC Power failure code (2 digits prefix 3)	Default 01 = 301
238	Battery test fail code (2 digits, prefix 3)	Default 02 = 302
240	Test signal code (2 digits, prefix 6)	Default 02 = 602
242	Auxiliary power overload (2 digits, prefix 3)	Default 12 = 312
244	Siren output fault (2 digits, prefix 3)	Default 20 = 320
246	Reserved (2 digits)	
248	Program accessed or altered (2 digits, prefix 6)	Default 27 = 627
250	Clock setting changed code (2 digits, prefix 6)	Default 25 = 625
252	Reserved (2 digits)	
254	Reserved (2 digits)	
The following locations are used for non-contact-ID formats.		
256	Zone 1 alarm code and zone ID (2 digits)	
258	Zone 2 alarm code and zone ID (2 digits)	
260	Zone 3 alarm code and zone ID (2 digits)	
262	Zone 4 alarm code and zone ID (2 digits)	
264	Zone 5 alarm code and zone ID (2 digits)	
266	Zone 6 alarm code and zone ID (2 digits)	
268	Zone 7 alarm code and zone ID (2 digits)	
270	Zone 8 alarm code and zone ID (2 digits)	
272	Night panic code (2 digits)	
274	Two key panic code (2 digits)	
276	Fire panic code (2 digits)	

LOCATION	CONTENTS & FIELD SIZE	REMARKS
278	Medical panic code (2 digits)	
280	Arming failure (2 digits)	
282	Reserved	
284	User code changed (2 digits)	
286	User initiated test code (2 digits)	
288	Line fault code (2 digits)	
290	Line restore code (2 digits)	
292	Comms fail code (2 digits)	
294	AC Power failure code (2 digits)	
296	AC Power restore code (2 digits)	
298	Battery test fail code (2 digits)	
300	Battery restore code (2 digits)	
302	Test signal code (2 digits)	
304	Auxiliary power overload (2 digits)	
306	Reserved	
308	Siren output fault (2 digits)	
310	Reserved	
312	Panel program accessed or altered (2 digits)	
314	Clock setting changed code (2 digits)	
The following locations are single digit entries. The user ID number or zone ID is automatically sent as the second digit. Note: Press 'star' + N for 10,11,12,13,14,15.		
316	Zone bypass code (1 digit)	
317	Zone restore code (1 digit)	
318	Zone transmitter low battery (1 digit)	
319	User open code (1 digit)	
320	User close code (1 digit)	
321	User first to open code (1 digit)	
322	User last to close code (1 digit)	
323	User pendant battery low code (1 digit)	
324	User duress code (1 digit)	
325	Reserved (1 digit)	
326	Spare (9 digits)	
335	Days between tests (test interval) erased = 1 day, 1-15 = 1-15 days	
336	Spare (8 digits)	
344	Custom key 1 definition (LCD model keypads only) Erased - No function 1 - Toggle chime area A 2 - Toggle chime area B 3 - Instant night arm area A 4 - Instant night arm area B 5 - Delay night arm area A 6 - Delay night arm area B 7 - Quick-arm area A 8 - Quick-arm area B 9 - Strike 0 - Answer 11- Reserved 12 - Medical panic (enter as 'star' + 2) 13 - Fire panic (enter as 'star' + 3) 14 - Keypad panic (enter as 'star' + 4) 15 - Reserved	
345	Custom key 2 definition	
346	Custom key 3 definition	
347	Auto-arming pre-alert (minutes)	
348	Area A exit delay (1 digit) Erased: instant, 1-15: 10 to 150 seconds	Default 6, 60 seconds (multiply by 10)
349	Area B exit delay (1 digit) As above	Z8020C only
350	Area A entry delay (1 digit) As above	Default 2, 20 seconds

LOCATION	CONTENTS & FIELD SIZE	REMARKS
351	Area B entry delay (1 digit) As above	Z8020C only
352	Area A alternate entry delay (1 digit) As above	
353	Area B alternate entry delay (1 digit) As above	Z8020C only
354	Spare (2 digits)	
356	Siren output timer (1 digit) Erased: no timeout 1-15: 1 to 15 minutes	Default 5 (minutes)
357	Aux. output 1 timer (1 digit) As above	Default - 5 (minutes)
358	Aux. output 2 timer (1 digit) As above	Default - 5 (minutes)
359	Zone swinger shutdown count (1 digit) 1-7: one to seven activations	Default 4 See Loc. 396
360	Rings before answering (1 digit)	Default 15
361	Call attempts before communication failure (1 digit) Erased: Communicator disabled 1-15: number of dialing attempts	Erased
362	Call attempt timer 1- 15, anti jam (1 digit) Times 10 seconds	Default 4 (40 seconds)
363	Line test mode Erased: no line test 1: Tests at all times 2: Tests when away armed only (recommended) 3: Tests when away or night armed	Looks to area A (the system area) to determine arm state. Default (erased – no line test)
364	Cross zones mode (1 digit) Erased: No cross mode 1: Same zone twice 2: Different zones 3: Either same or different zones	
365	Cross zones timer (1 digit) Erased: 30 seconds 1-15: 1-15 minutes	
366	Zone 1 filter (1 digit) Erased: 10mS 1: 20mS 2: 40mS 3: 80mS 4: 160mS 5: 320mS 6: 640mS 7: 1.28 Seconds	Default 4
367	Zone 2 filter (1 digit) As above	Default 4
368	Zone 3 filter (1 digit) As above	Default 4
369	Zone 4 filter (1 digit) As above	Default 4
370	Zone 5 filter (1 digit) As above	Default 4
371	Zone 6 filter (1 digit) As above	Default 4
372	Zone 7 filter (1 digit) As above	Default 4
373	Zone 8 filter (1 digit) As above	Default 4
374	Area A zones select (toggle) Select zones for this area. Zones selected in both areas become common zones	Z4120C 1 – 4 Z6020C 1 – 6 Z8020C 1 – 8
376	Area B zones select (toggle) As above	Z8020C only
378	Reserved – do not program	
380	Spare	
382	Key-switch zones select (toggle) Key-switch controlled area is defined by Loc. 374	
384	Smoke / 24-hour zones select (toggle)	
386	Night or instant arming zones select (toggle)	
388	Spare	

LOCATION	CONTENTS & FIELD SIZE	REMARKS
390	Entry delay zones select (toggle)	Default 1
392	Alternate entry zones select (toggle)	
394	Follower entry zones select (toggle)	
396	Swinger shutdown zones select (toggle)	Default All zones
398	Cross zones select (toggle)	
400	Pre-alert zones select (toggle)	Default 1
402	Chime zones select (toggle)	
404	Select outputs to mimic key beeps Led 1: Siren output Led 2: Aux. Output 1 Led 3: Aux. Output 2	
406	Select output to mimic Arm / Disarm state Area A Led 1: Siren output Led 2: Aux. Output 1 Led 3: Aux. Output 2	
408	Same as Loc. 406. Area B.	
410	Miscellaneous system settings (toggle) Led 1: Zone led's latch while area not armed Led 2: Quick-arm command enabled Led 3: 1+3 at power-up into program mode enabled Led 4: 50/60Hz select. On = 60Hz Led 5: Answer phone defeat Led 6: 'Follow me' mode enabled	Default 2 3 5
412	More miscellaneous system settings (toggle) Led 1: On = No zone restore reports Led 2: On = NiteWatch arm in instant mode Off = NiteWatch arm in delayed mode Led 3: Auto-arm mode:on=night arm; off=away arm Led 4: Force arming enable Led 5: Default dialing ratio, on = 70/30 , off = 60/40 Led 6: Default dial mode, on = pulse, off = DTMF	Default 4 Led 5 only applicable if led 6 is on.
414	Zones to activate siren output (toggle)	Default All zones
416	Zones to activate aux1 output (toggle)	Default All zones
418	Zones to activate aux2 output (toggle)	Default All zones
420	System events to activate siren output (toggle) Led 1: NightWatch panic Led 2: Two key panic Led 3: Fire panic Led 4: Siren output fault (use in Loc's 422 & 424) Led 5: Communications failure Led 6: Line fail	Default 1 2
422	System events to activate Aux1 output (toggle)	Default 1 2
424	System events to activate Aux2 output (toggle)	Default 1 2
426	Output options (toggle) Led 1: Invert siren output (N/A if led 4 on) Led 2: Invert Aux1 output Led 3: Invert Aux2 output Led 4: Siren output sends wail to a speaker Led 5: Aux1 set as smoke reset output Led 6: Aux2 set as smoke reset output	Default 2 3 4
428	User 1 code options (toggle) Led 1: User code is in area B Led 2: User is a master user Led 3: User can arm only Led 4: User may bypass zones Led 5: User movements are <u>not reported</u> Led 6: User code arm/disarm by touchtone phone	Default 2,4,6
430	User 2 code options (toggle)	
432	User 3 code options (toggle)	
434	User 4 code options (toggle)	
436	User 5 code options (toggle)	
438	User 6 code options (toggle)	

LOCATION	CONTENTS & FIELD SIZE	REMARKS
440	User 7 code options (toggle)	
442	User 8 code options (toggle)	
444	User 9 code options (toggle)	
446	User 10 code options (toggle)	
448	User 11 code options (toggle)	
450	User 12 code options (toggle)	
452	User 13 code options (toggle)	
454	User 14 code options (toggle)	
456	User 15 code options (toggle)	Disarm all areas Z8020C, Night-Lock Z6020C, Z4120C
458	User 16 code options (toggle)	
460	User 17 code options (toggle)	
462	User 18 code options (toggle)	
464	User 19 code options (toggle)	
466	User 20 code options (toggle)	
468	User 21 code options (toggle)	
470	User 22 code options (toggle)	
472	User 23 code options (toggle)	
474	User 24 code options (toggle)	
476	Quick arm reporting Led 5: User movements are not reported	
478	Night or instant reporting Led 5: No report	
480	Key switch reporting Led 5: No report	
482	Auto arm reporting Led 5: No report	

Dialing and Reporting

Locations 0 – 63 Phone Number List.

When entering data into the phone number list, the control digit 15 must precede digits representing a protocol (see following table). All other digits [eg. phone number] may be entered in normal sequence. The panel defaults to DTMF dialing, therefore it is only necessary to program the DTMF protocol digit [1] if dialing is switching between Decadic and DTMF part way through dialing. Therefore if the panel is to dial DTMF **3 7 8 6 0 1 4**, the number may be programmed directly starting at Location 0. At the end of each phone number the control digit 15 must be entered followed by a protocol digit.

To enter a hex digit [11, 12, 13, 14 or 15] press and hold down the ‘Star’ key [tens] and then press the second digit of the hex number. Example: To enter a 15, press and hold down the ‘Star’ key and press 5 at the same time. A 10 may be programmed as a 0 or a 10.

Phone number digits

DIGIT	MEANING
Clear/Erased	End of call – terminate call
1~9 inclusive	Dial digits 1 through 9
0 (or 10)	Dial 0
11	Dial a * (This is usually a space in a pager message)
12	Dial a # (This is usually ‘message end’ pager message)
13	Pause for 3 seconds
14	Initiate call progress
15	Control digit – precedes protocol digit

Protocol digits

DIGIT	PROTOCOL
Clear/Erased	Not allowed – call aborted
1	Switch to DTMF
2	Switch to Decadic 60/40 make break ratio
3	Switch to Decadic 70/30 make break ratio
4	3+2 & 4+2 @ 10bps 2 rounds 1900Hz
5	3+2 & 4+2 @ 20bps 2 rounds 1800Hz

DIGIT	PROTOCOL
6	3+2 & 4+2 @ 40bps 2 rounds 1800Hz
7	Ademco Express (DTMF with checksum)
8	DTMF 4+2 with checksum
9	Ademco Contact ID
0 (or 10)	Pager message (DTMF 4+2 no handshake)
11	Siren warble – home dial (no handshake)
12 – 15	Not allowed – call aborted

Entering telephone numbers, pauses and data protocol digits. You **MUST** start at location 0. *If location 0 is empty the panel will not make any calls.* You may enter pauses at the beginning or at any point in the dialing string. To switch to decadic dialing part way through a dialing string enter 15 then 2 then the phone number followed by 15 and the required protocol digit[s]. The control digit 15 must always be programmed before a protocol digit.

Example 1 : **3 7 8 6 0 1 4 - 15 - 9**

In this example the panel will dial DTMF 3 7 8 6 0 1 4 and send it's data in Contact ID format.

Example 2 : **5 2 1 3 8 1 9 - 15 - 11 - 3 7 8 6 0 1 4 - 15 - 9**

In this example the panel will dial DTMF 5 2 1 3 8 1 9 and transmit a siren tone to the line for 60 seconds, it then hangs up and dials 3 7 8 6 0 1 4 and transmits data to a central station in Contact ID format.

You may program as many phone numbers, pauses, control and protocol digits as can be fitted into the 64 memory locations. It is not necessary to leave a space [1+3] between each dialing sequence and the next phone number, **except** where a pager is called.

Pagers and Call Progress

A 'space' [1+3] is required at the end of a Pager call sequence. Sending a message to a pager is not an exact art and requires some experimentation. We have included a special 'Call Progress' feature to make programming pager calls simpler. The call progress tool works as follows:

1. Panel dials pager number, call progress initiated [program a 14]
2. Panel listens on the line for ringing. No ringing in 40 seconds = panel hangs up.
3. Panel detects ringing = panel waits 40 seconds for 2.5 seconds of silence = ringing stopped.
4. Panel transmits next data in phone number string.
5. Panel hangs up.

Example 1: At Loc. 0. Program **8197741 [14] [15] 0**

In this example the panel calls 8197741 and listens for ringing. If ringing is heard the panel waits for a silence period [2.5 sec] then sends the alarm event in 4 + 2 DTMF format. The pager would display 1234 26, where 1234 is the communicator account number, 2 is the zone alarm code and 6 is the zone activated.

Example 2: At Loc. 0. Program **8197741 [14] [13] 9999**

The panel calls the pager number and initiates call progress. If the panel detects ringing followed by silence it waits 3 seconds then sends the data 9999, then hangs up. The pager displays 9999.

Note: It may be necessary to add pauses before sending data as the timing of pager networks varies worldwide. *Micron strongly suggests calling your local pager network operator and seeking advice. Micron does **not** guarantee that this panel will be able to send messages to your local pager network.*

Locations 64 – 156 User Codes.

Each 4 digit user code occupies 4 memory locations. At the end of each user code the keypad emits 2 beeps to acknowledge the code entry and to signal the start of the next user code. Each of the 24 user codes may be entered this way. Alternatively, if a user code is entered at Location 64, and this code is assigned an option of 'Master User Code' [Led 2 at Location 428], then the following user code locations [Locs. 68-120] may be programmed using this master code. See also Location 428 for more detail of 'options' for user codes. Note: User code 15 (Loc. 456) is a 'Disarm All Areas' only code and can not be used for arming.

Location 160 Master Programming Code.

This is a 4 digit code used to enter programming mode. Micron suggests leaving this code at 0 0 0 0 until all other programming is complete and tested. Do not forget to change the code when the panel is installed and commissioned. It is not good practice to leave this code at 0 0 0 0 or to give the Master Programming Code to the end user.

Location 164 Area A Account Number.

This is the 4 digit account number [Area A] transmitted to the central station which identifies the panel. You **MUST** enter 4 digits.

Location 168 Area B Account Number.

If the panel has been partitioned, enter the Area B account number here. [Z8020C only]

Location 172 Auto Arming Time.

Enter the time of day for the panel to auto arm. The time must be entered in 24Hour format, example: 2030 is 8.30pm or 0750 is 7.50am. If an invalid 24 hour time is entered the auto arm function is disabled. Panels are shipped with the factory default 9999 [disabled]. Refer also **Loc. 412** Led 4, also **Loc. 347**.

Location 176 Up/Download Password.

Enter 4 digits. This is the code that MicroCom will check 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.

Location 180 Test Signal Time.

Enter the time that the first test report will be sent to the central station. Subsequent test reports will be sent 24 hours later. The time is entered in 24 Hour format [see Loc. 172]. If an invalid time is entered this function is disabled. A test interval may also be programmed at Loc. 335 (Default = 24 hours)

Locations 184 – 254 Event Reporting Codes [Contact ID]

These locations are used for Contact ID reporting codes. If the panel is to communicate in Contact ID format these locations are default pre-programmed. The panel reports standard Contact ID messages. If a non-standard message is required, the second two digits of the 3 digit message may be entered at any of these locations. ***Erasing the data at any location will disable that particular report in all formats.*** If the panel is to report only zone alarm and restore data, opens and closes, then locations 200, 206 and 210 – 250 should all be erased using the 1 + 3 erase keys. Once erased these functions will not report **in any format**.

Contact ID reporting codes

Event	Contact-ID code	Enter code
Medical alarm	100	00
Fire alarm	110	10
Smoke alarm	111	11
Heat	114	14
Fire call-station	115	15
Panic alarm	120	20
Duress	121	21
Silent panic	122	22
Burglary zone	130	30
Perimeter zone	131	31
Interior zone	132	32
24-hour alarm	133	33
Tamper	137	37
24-hour non-burglary	150	50
24-hour refrigeration	152	52
Water leak	154	54
AC power loss	301	01
Communications failure	354	54
Open/close	401	01
Zone bypass	570	70
Manual test	601	01
Periodic test	602	02

Locations 256 – 270 Zone Reporting Data [Non Contact ID]

For all other central station formats [except Contact ID] enter 2 digits at these locations. The central station normally specifies the data entered. A usual format is 21 for zone 1, 22 for zone 2, ...etc...where the 2 is the alarm code and the second digit represents the zone activated.

Locations 272 – 314 Non Alarm Reports [Non Contact ID]

Enter 2 digits for each report. It is only necessary to enter digits for the reports that have NOT been disabled in locations 184 to 254. If a report location is left blank and it has NOT been disabled in Loc's. 184 to 254 it will report as 00. The central station always specifies the two digit codes for each of these reports.

Locations 316 – 324 Single Digit Reports [Non Contact ID]

Enter a single digit for each of the reports required. The panel will automatically append a second digit to the report that will identify the zone or user ID. Note that in Loc. 319 and 320, if the panel is programmed for 'Slow Speed' or DTMF 4 + 2 reporting format, the communicator can not report user ID's above User 15. User 16 will be reported as ID 0 and User 24 will be reported as ID 8.

Delays and Timers - Programming

Location 335 Test Report Interval

Enter a value here in the range 1 to 15 [blank - default = 1]. This is the interval in DAYS that the panel will send a test report. Eg. If a 7 is entered here the panel will send a test report once per week.

Location 347 Auto Arming Pre-alert

Enter a single digit. This is the number of minutes the keypad[s] will sound the pre-alert prior to auto arming.

Location 348 Area A Exit Delay

Enter a single digit. 1 = 10 seconds, 2 = 20 seconds ... etc. You may enter a value in the range 1 - 15 [10 - 150 seconds]. If this location is erased arming is instant.

Location 349 Area B Exit Delay

Same as Loc. 348

Locations 350 – 351 Area A & B Entry Delays

Same as Loc. 348

Locations 352 – 353 Area A & B Alternate Entry Path Delay

Same as Loc. 348

Location 356 Siren Output Reset Time

Enter a single digit in the range 1 to 15 minutes. 1 = 1 minute, 15 = 15 minutes. If this location is erased the output is latched [strobe] and can only be reset by entering a valid user code.

Locations 357 – 358 Auxiliary Outputs 1 & 2 Reset Timers

Same as Loc. 356

Location 359 Swinger Zone Shutdown

Enter a single digit in the range 1 to 7. This is the number of activations on any one zone before the zone is disabled.

Communications - Programming

Location 360 Number of Rings before Panel Answers

Enter a single digit in the range 1 to 15.

Location 361 Call Attempts before Communication Failure

Enter a single digit in the range 1 to 15. If this location is erased the panel will not make any calls.

Location 362 Call Attempt Timer [Anti-Jam]

Enter a single digit in the range 1 to 15 seconds X 10. 1 = 10 seconds. This is the time the panel will wait for a central station or 'Domestic Dialing' handshake before aborting the call and making another attempt. If 'siren warble' has been selected as the reporting format, this is the time the panel will wait for the *(star) 'kiss-off' before aborting the call.

Location 363 Line Test Monitor Mode

There are 4 options at this location. Enter 1 digit to select an option.

Erasing this location disables the line test function.

- 1 Line tests at all times.
- 2 Only tests when armed (not 'instant' or 'night arm' modes).
- 3 Tests the line when armed, instant armed or night armed.

Due to low phone line voltages when older style phones are used, the most reliable option is 2.

- Notes:
- a. See Locs. 420, 422, 424 for: 'System Events to Activate'.....led 6.
 - b. For partitioned systems (Z8020C) the armed state is determined by area A.

Zone Options - Programming

Location 364 Cross Zoning [Double Knock]

There are 4 options. Enter 1 digit to select.

Erased: No cross zones

- | | |
|---|---|
| 1 | 2 activations on the same zone |
| 2 | 2 activations on 2 different zones |
| 3 | 2 activations on the same zone or 2 different zones |

Location 365 Cross Zoning Timer

Enter a value in the range 1 to 15 minutes. If this location is erased the timing is set to 30 seconds. This is the time that the panel will wait for a second activation after a first activation. If the timer expires with no further activations the timer is re-set, no alarm is signaled and no report is transmitted.

Location 366 – 373 Zone Filters [Zone Sensitivity]

This is the zone response time. Enter 1 digit to select the sensitivity required for each zone. Response times of less than 160mS should be reserved only for special sensors [vibration etc.]

Erased	10mS	1	20mS
2	40mS	3	80mS
4	160mS	5	320mS
6	640mS	7	1.28 Seconds

Zone Programming

The zone led's are used as selection indicators for this section of programming. **Example:** To select zone 4 press digit 4, the zone 4 led will light. To de-select zone 4, press digit 4 again. You may toggle zones on and off as required. Once the selection is complete, press 'Enter'.

Location 374 Area A Zones Select

Select the zones for area A from the keypad. *[Zones selected here and in Loc. 376 (area B) become common zones (Z8020C ONLY)].* Any zone not selected in area A [or B] is disabled and performs no further function.

Location 376 Area B Zones Select [Z8020C Only]

Select the zones for area B. Zones also selected in area A are common zones.

Location 382 Keyswitch Zones Select

Select zone[s] to act as keyswitch arming. Any zone selected here will arm the area in which the same zone is selected. Example: If zone 4 is programmed as an area A zone in Loc. 374 and also as a keyswitch zone, then momentarily opening this zone will arm area A.

Location 384 24 Hour Zones Select

Select zones for 24 hour response. Any zone selected here must also be selected in Loc. 374 or 376. If more than one zone is selected here and they are performing different functions [eg. Fire & Tamper] then it will be necessary to program the correct reporting codes in Locs. 184-198 [Contact ID] or Locs. 256-270 [non Contact ID]. Select the correct Contact ID reporting code from the list at Loc. 184. The central station specifies Non Contact ID codes.

Location 386 Night Zones [or] Instant Zones

Select the zones here that will arm in Night or Instant mode.

Location 390 Entry Delay Zones Select

Select zones for entry delay. Zones must also be selected at Locs. 374 or 376. See also Loc. 350 for delay.

Location 392 Alternate Entry Zones Select

Select alternate entry zones. Zones must also be selected at Locs. 374 or 376 and 390. See also Loc. 352 for delay.

Location 394 Follower Zones Select

Select follower zones. These zones will also act as entry zones if a zone selected at Loc. 390 is tripped first. If a zone selected at Loc. 390 is not tripped first then these zones will alarm without delay.

Location 396 Swinger Shutdown Zones Select

Select zones which will automatically shut down after multiple activations. Select count at Loc. 359.

Location 398 Cross Zones [Double Knock Zones] Select

Select zones for cross activation. Zones selected must also be selected at Locs. 374 or 376. See also Loc. 364.

Location 400 Pre-alert Zones Select

Select zones that will activate the keypad beeper during entry. Zones selected must also be selected at Locs. 374 or 376 and 390, 392.

Location 402 Chime Zones Select

Select zones to activate the keypad beeper when the panel is unset and chime mode is turned on.

System Settings - Programming

Location 404 Output Mimics Keypad Beeper

Outputs selected here will mimic the keypad beeper eg. exit / entry beeps, door chime, error beeps, etc. Key press beeps are NOT mimicked.

Led 1 On: Siren Output

Led 2 On: Aux. Output 1.

Led 3 On: Aux. Output 2.

Location 406 Output Mimics Panel Armed / Disarmed Status Area A.

Outputs selected here mimic the panel armed / disarmed status. Outputs change as soon as a valid user code is entered, not at the expiry of the exit delay.

Led 1 On: Siren Output

Led 2 On: Aux. Output 1.

Led 3 On: Aux. Output 2.

Location 408 Output Mimics Panel Armed / Disarmed Status Area B.

Outputs selected here mimic the panel armed / disarmed status. Outputs change as soon as a valid user code is entered, not at the expiry of the exit delay.

Led 1 On: Siren Output

Led 2 On: Aux. Output 1.

Led 3 On: Aux. Output 2.

Location 410 Miscellaneous System Settings

Led 1 On: Zone leds latch on when panel is unset and the zone is tripped

Off: Zone leds toggle on and off when panel is unset and zone is tripped.

Led 2 On: Quick arming command enabled [1 # area A or 2 # area B]

Off: Quick arm disabled.

Led 3 On: 1+3 keys at power-up jump to programming mode [emergency access].

Off: 1+3 command at power-up disabled.

Led 4 On: 60Hz Mains power.

Off: 50Hz Mains power.

Led 5 On: Answer phone defeat enabled [double call].

Off: Answer phone defeat disabled.

Led 6 On: User access to 'Follow Me' (home dial) mode enabled. (see page 21)

Off: 'Follow me' mode disabled

Location 412 More Miscellaneous System Settings

Led 1 On: Zone restore reports are disabled.

Led 2 Reserved

Led 3 On: Auto arming will night / instant arm.

Off: Auto arming will away arm.

Led 4 On: Forced arming enabled.

Led 5 On: Decadic dial make break ratio 70/30

Off: Decadic dial make break ratio 60/40

Led 6 On: Default dialing is decadic (pulse)

Off: Default dialing is DTMF (touch-tone)

Siren and Aux.1 & 2 Outputs - Programming

Location 414 Zones to Activate Siren Output

Select the zones that will activate the siren output. If a zone is to be a 'silent alarm' zone do not turn on the led for that zone. Zones NOT selected here will still report.

Location 416 Zones to Activate the Aux. Output 1

The same rules apply here as at Loc. 414 except that the Aux. 1 output will be enabled.

Location 418 Zones to Activate the Aux. Output 2

The same rules apply here as at Loc. 414 except that the Aux. 2 output will be enabled.

Location 420 System Events to Activate the Siren Output

- Led 1 On: NiteWatch panic.
- Led 2 On: Two key panic.
- Led 3 On: Fire panic.
- Led 4 On: Siren output fault. (use in Loc's 422 & 424)
- Led 5 On: Communications failure.
- Led 6 On: Phone line failure.

Location 422 System Events to Activate Aux. Output 1

Same options as at Loc. 420.

Location 424 System Events to Activate Aux. Output 2

Same options as at Loc. 420.

Location 426 Output Options

- Led 1 On: Siren output normally pulled low [-ve]
Off: Siren output normally floating [open circuit]
- Led 2 On: Aux. output 1 normally pulled low [-ve]
Off: Aux. output 1 normally floating [open circuit]
- Led 3 On: Aux. output 2 normally pulled low [-ve]
Off: Aux. output 2 normally floating [open circuit]
- Led 4 On: Siren output produces siren wail for horn speakers.
Off: Siren output switches low/open for siren speakers with built-in driver [see led 1]
- Led 5 On: Aux. output: 1. 7 # command resets smoke detectors [momentary 5 sec]
Off: No smoke reset.
- Led 6 On: Aux. output: 2. 7 # command resets smoke detectors [momentary 5 sec]
Off: No smoke reset.

User Code Options - Programming

Location 428 User Code 1 Options

Select the functions for this user code. By default, if **no** options are selected the user code will arm/disarm the panel and all other functions are disabled.

- Led 1 On: User code controls Area B [Z8020C only].
- Led 2 On: User code is Master Code [can program other user codes].
- Led 3 On: User code is an Arm Only code, cannot disarm.
- Led 4 On: User code can Exclude Zones at arming.
- Led 5 On: User code activity does **NOT** send reports.
- Led 6 On: User code can arm/disarm remotely from touch tone phone.

Locations 430 – 474 User Codes 2 to 24 Options

Select options from the list at Loc. 428.

Location 456 User Code 15 Options

User code 15 is reserved as a 'disarm all areas' code for a partitioned Z8020C (this code can not arm any area or perform any other function) and as a night-lock code for a Z4120C and Z6020C systems. If the Z4120C or Z6020C is armed with user code 15, **only** this user code can disarm the system.

- Led 5 On: User code activity does NOT send reports.
- Led 6 On: User code can disarm both areas remotely from touch tone phone.

Location 476 Quick Arm Reports

- Led 5 On: Does not report.
- Off: Reports Quick Arm [1 #] as User 25.

Location 478 Night Arm or Instant Arm Reports

- Led 5 On: Does not report.
- Off: Reports Night and Instant arming [9 1 #] as User 26.

Location 480 Key Switch Arming Reports

Led 5 On: Does not report.

Off: Reports Arming by Key Switch as User 27.

Location 482 Auto Arm Reports

Led 5 On: Does not report.

Off: Reports Auto Arming as User 28.

Using the Follow Me Function (Home Dial)

If "Follow Me" mode is required, turn on Led 6 at Loc 410. If "Follow Me" is selected, all non-alarm reports should be deleted. Using the 1+3 command, delete Loc's 200 to 214 inclusive and 220 to 250 inclusive. Also turn on Led 1 at Loc. 412 (no zone restore). Ensure the reporting codes for the zones have not been deleted at Loc's 184 to 198. Loc's 172 and 180 are defaulted to 9999. This is an invalid time and disables 'auto arming time' and prevents 'test signal' transmissions. At Loc 361 enter a 1 or 2 (call attempts). At Loc's 428 to 474 (user code options) turn on Led 5 (user movements are not reported). If only zone alarms are required, delete Loc's. 216 & 218.

When programming is completed use the Hold-0 function to abort any calls which may be in the reporting queue (see "Hold Down Commands", "Abort Current Communication" pg 9)). This will prevent any unnecessary calls to the user's private telephone. When a call is Kissed-Off from a remote phone using the * (star) key, the panel sends back a beep pattern handshake. If other events are in the reporting queue they are also sent to the remote phone and must be kissed-off at this time.

Selecting the Keypad Beeper

If the panel is programmed to operate in partition mode it may be necessary to select the keypad beeper operation to annunciate exit warnings and entry pre-alerts for a specific area. A mini-shunt jumper is located on the back of the keypad PCB and may be set in one of three operating modes. Keypads are shipped ex factory with the jumper selected for Area A. Moving the jumper to the opposite two pins (the center pin is common) selects the keypad for Area B. Removing the jumper from the Area A position and placing it over only one pin selects the keypad to annunciate exit/entry warnings for both areas.

Reporting of AC Power

When AC power fails the following sequence of events occurs:

The failure of AC power to the panel is logged in user memory (# 83 to recall)

The report timer is started (run time 12.5 minutes)

If the report timer times out before AC power is restored, the event is reported

If AC power is restored prior to timeout, the event is not reported.

Dynamic Battery Test Operation and Reporting

The battery test results in dropping the main supply voltage to 10.6 Volts for 12 seconds every 25.5 minutes. Tests are performed shortly after power-up and 25.5 minutes thereafter (unless rescheduled by a power/battery failure).

Battery voltage is monitored continuously (except while in installer program mode). A low battery report is sent immediately upon detection of a low/failed battery condition. The restore report will not be sent until 12.5 minutes after the battery has recovered.

Telecom Connection:

A 4 way terminal block at the right hand side of the PCB provides Line in and Line out connections. Circuit is line grabbing. Ensure that the telco line connected to 'Line in' is not also connected to any other device within the premises. Failure to observe this precaution may result in the alarm panel not being able to accept incoming up/downloading calls and may also prevent the panel from making calls.

Current Draw

This table shows the approximate current draw by micron alarm accessories configured to Scorpion alarm controllers **during alarm activation**.

It is important to calculate total current draw when configuring micron systems to ensure power supplies are not overloaded during activation.

Accessory	Current Draw
Control PCB and LED Keypad	185mA (all LED's on)
Control PCB and LCD Keypad	200mA (all LED's on)
LED Keypad (all LED's on)	50mA
LCD Keypad (all LED's on)	75mA
TX2	25mA
PXI/ET	20mA
GEM	25mA
Nitewatch	40mA
Piezo	200mA
RCM1/24 Receiver	35mA
DD6	38mA
DD6 (Active)	60mA
Speech Communicator	50mA
Speech Communicator (Active)	80mA
Smoke Detectors (Active beeper)	30mA
External Siren (Active)	625mA

Siren Wiring Diagram for Security and Fire

At Location 426, turn off LED 4 and turn on LED 2. Output 1 is inverted (-Ve), is present and is removed in alarm.

The internal piezo is terminated to the siren +Ve and -Ve outputs. The maximum load of the siren output is 1.5 amps. A second piezo can be configured if required.

Output 1 is maximum 250mA Sink (-Ve)
Output 2 is maximum 250mA Sink (-Ve)
Siren Output maximum 1.5 Amps

Assign fire zone sensors to Output 2

Technical Specifications

AC Input	16VAC from transformer (do NOT exceed)
Accessory Power	13.8VDC. 500mA total drain.
Aux. Output 1.....	Max. 250mA Sink output.
Aux. Output 2.....	Max. 250mA Sink output.
Siren Output.....	Max. 1.5 Amps DC to non inductive load or: 2 x Siren speakers with built in driver @ 350mA per siren. 2 x 4ohm reflex horn speakers when siren wail output selected.
Battery Capacity.....	Max 7.2 A/H
Battery Fuse.....	3 Amp fast blow.

Outputs: Aux. outputs 1 and 2 are open collector sink outputs. When connecting a load to these outputs they should be thought of as switches that close to –Ve when activated. Therefore connect loads between +Ve and the output. Do not exceed the rating stated above or permanent damage will result to the output transistors.

EOL Resistors: All zones are balanced line with standard 4K7 (+- 5%) value EOL resistors.

Keyswitch Arming: Arming and disarming is achieved by momentarily shorting and restoring a keyswitch zone.

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.

Connection to Mains Earth

For protection against hazards from over voltages on the telecommunications network it is important that the green earth wire from the printed circuit board is connected to a secure mains earthing point.

GUARANTEE

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 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.

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