

SCORPION

Z4110C

(Version 1.2)

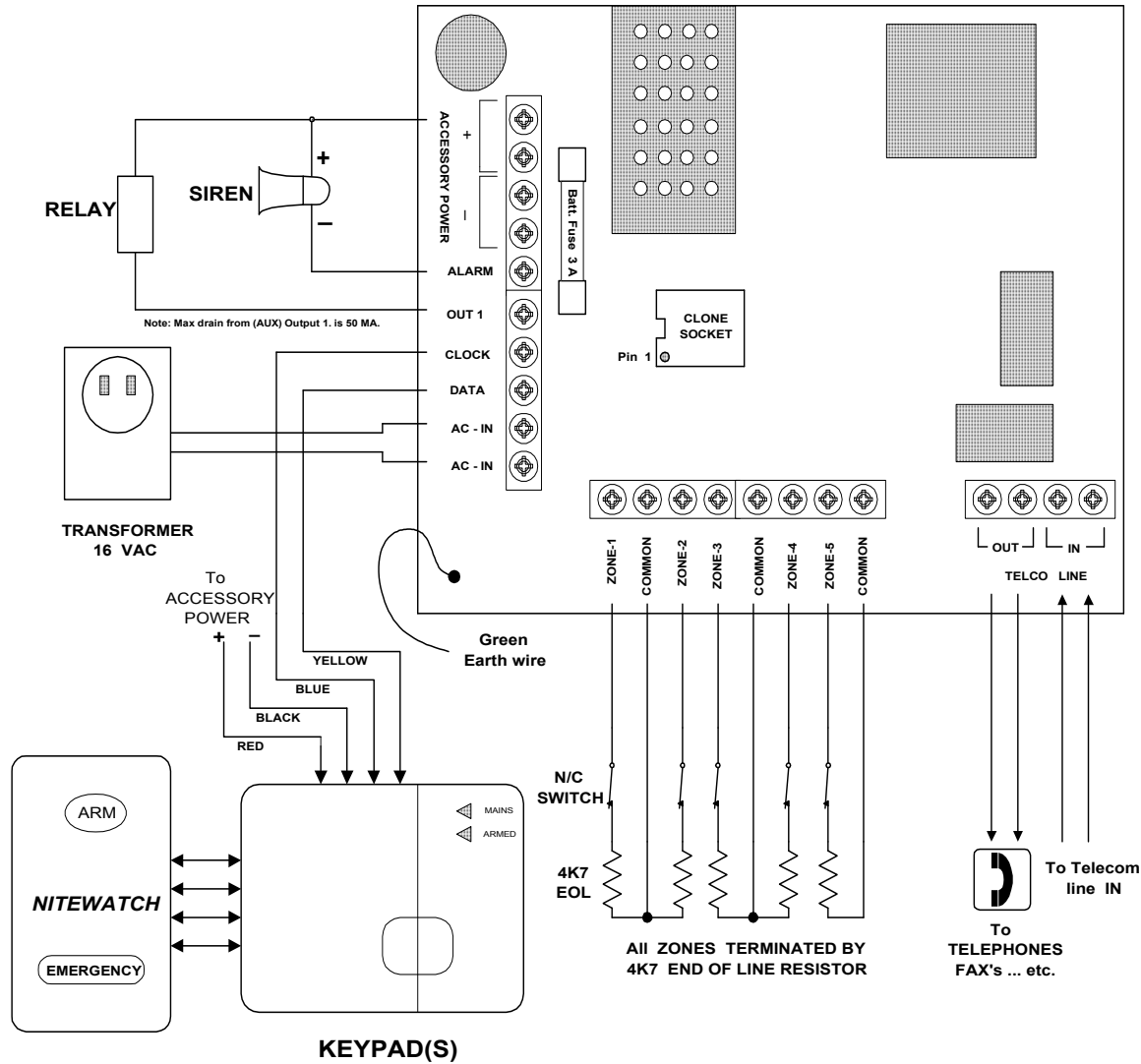
FEATURES & OPERATION

MICRON SECURITY PRODUCTS LTD.

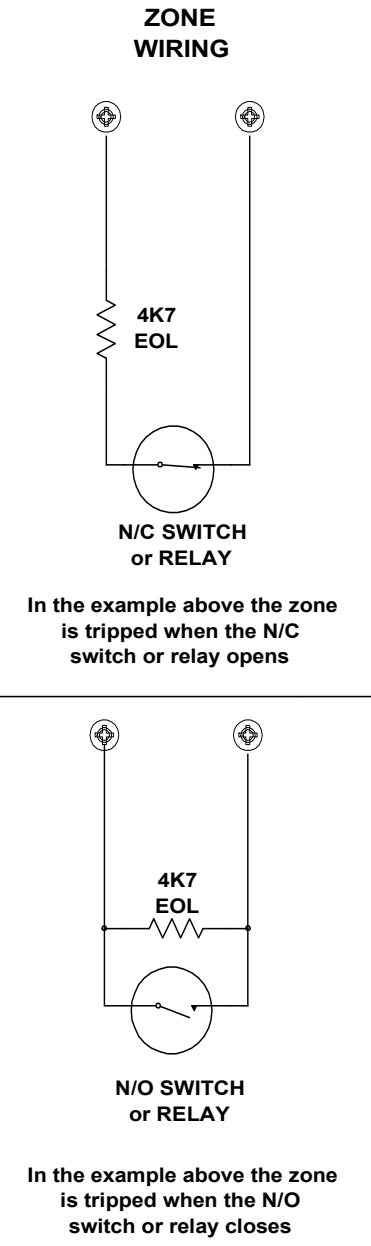
AUGUST 2001

Z4110C

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Z4110C CONNECTION DIAGRAM
 Caution: Do not exceed output ratings or permanent damage may result.



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. Arm panel from a touch-tone phone.
03. 40 telephone number digits.
04. User can program his own 'follow me' phone numbers.
05. 12 User codes including 2 master user codes.
06. Quick arm.
07. 1 x programmable primary alarm output.
08. 1 x programmable auxiliary output.
09. 100 full history event memory (time and date stamped).
10. Auxiliary supply has electronic auto re-set fuse.
11. Communications progress monitor (keypad display).
12. Clone data to or from the panel with a simple inexpensive chip.
13. Duress opening and report.
14. Swinger shutdown zones.
15. Follower (hand over) zones.
16. Terminate immediately command for communications in progress.
17. Dynamic battery test and report.
18. Forced arming disable / enable with auto bypass.

The Keypad

The keypad communicates with the panel over a 4 wire bus. Data from the panel is displayed on the zone and status leds. 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 waits for valid data to be entered.

KEYPAD ENTRY	COMMAND
1#	Quick arm
71#	Chime mode On/Off
89#	Panel status recall
81#	Instant night arm
91#	Night (perimeter) arm with delays
99#	Force panel to answer call
99# + nnnnnnn	Panel dials nnnnnnn
[*+#]	Two key 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:1-12)	Add, change or remove a user code

Keypad Commands & Functions.

Quick Arm.

If this option is selected [Loc 192, Led 2] the panel may be armed by entering **1 #**.

Chime Mode.

Chime zones are enabled by keypad entry **7 1 #**. Chime zones only operate in the disarmed state and sound consecutive beeps at the keypad for 3 seconds when activated. Chime is temporarily disabled each time the panel is armed.

Panel Status recall.

Enter **8 9 #** to display current status events. The events displayed are listed below. Press any key to exit.

LED	MEANING
Led 1	NiteWatch panic was activated
Led 2	Two key panic was activated [*+#]
Led 3	Low battery
Led 4	Power (mains) failure
Led 5	Communications failure

Night Arm / Instant Arm.

Enter **8 1 #** to arm Night / Instant zones. The zones must first be selected at Loc.162.

Enter **9 1 #** to arm Night zones with exit and entry delays.

1. If 'Night' mode **9 1 #** is selected the panel allows an exit period [Loc. 150] 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 [loc. 168] before sounding an alarm.
2. If 'Instant' mode **8 1 #** is selected the panel arms instantly and alarms instantly.

Modem Off Hook.

The panel may be forced 'off hook' 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 n**, where 'n 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 once 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. 182, led 2 and reporting is selected at Loc. 118. Press **Star + Hash** [* + #] together to activate this function. Reset the panel by entering any 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.

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.

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 12]. To delete a user code follow exactly the same procedure as above but omit the 'new user code'. Finish with #.

Emergency Access to Program Mode.

If the master programming code is lost and the installer has not disabled this function at Loc. 192, 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.192 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 Z4110C 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

Z4110C has 2 possible master user codes. These codes are located in Locs. 80 and 84. Master user codes may be used to program the other 10 user codes. Master user codes and non-master user codes operate in exactly the same manner. All codes can arm, disarm and exclude zones.

Arming by Touch Tone Phone

The panel may be armed by sending 4 seconds of touch-tone * (star) after the 2 acknowledge beeps. **Note carefully:** *Some mobile (cell) phones do not send continuous tones when a key is held down and therefore can not arm the panel.* Most household phones are compatible. When armed remotely by touch-tone phone the panel transmits the exit warning beeper signal to the telephone line.

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.182 and 184.

Test Signal

Test signal timing is set at 24 hours. At Loc. 100 enter the time in 24Hr format that the first and subsequent test signals will be sent. Test signals will be sent every 24 hours thereafter. Examples: 11.30pm = 2330, 2.30am = 0230, 12 midnight = 2400,. To disable test reports enter 2500 at Loc. 100.

Swinger Shutdown.

The swinger shut down count is set to 4 activations. When this number of activations has occurred on one zone 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.

Alarm Output

The primary high power alarm output may be used as a current source for sounding a 12 volt siren speaker. **Do NOT accidentally short this output 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. 166 **must** also be selected as an entry zone at Loc. 164. The Alternate entry timer at Loc. 152 may also be used to set the night arm pre-alert. Night arming zones, which are also selected as 'Entry Zones', use the entry delay timer at Loc. 151 when the panel is armed in 'Delayed Arming Night Mode'. 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. 162 which is also selected as an alternate entry zone at Loc. 166 will sound the pre-alert beeper (Loc.168) for the programmed alternate entry timer setting at Loc. 152.

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 #

User Phone Number Entry [follow me].

Selecting this option will force 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 4 second 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
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.

Communications Progress Tracker

The hold down key **9** is used to initiate a test call and track the progress of the dialer. Communications progress is displayed by the keypad zone leds as each part of the call is completed. **The keypad beeps continuously throughout the monitoring process.** Press and hold down key **9**, a second beep is heard, *then* enter a master user code *then* **#**. The table below shows the monitoring process.

Example: [Hold-9] **1234 #**

Zone Led	Communications progress
1	Line seized
2	Dialing
3	Handshake received
4	Sending data
5	Data acknowledged

Note:

1. If there are multiple events in the queue the display will toggle between leds 4 & 5 until all data is acknowledged.
2. Two seconds after led 5 has lit, and if all data has been sent, the display will terminate.
3. Communications progress tracking is only available when calling a central station.
4. 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 **Enter** then **Enter**. The status led will light and you are now in 'Address Mode'. You may now enter an address [Location] number and press **Enter**. The status led will flash indicating that you are in 'Data Mode' and data may now be entered into this Location.

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.

Note carefully: Some locations may be programmed with a value 1 to 15 but only a single digit space is available. All values above 9 are Hex digits and may be programmed into a single digit location as follows: **To enter a Hex digit [10, 11, 12, 13, 14 or 15] press and hold down the 'Star' key [tens] and then press the second digit of the hex number. So to program a 14 press and hold the * (star) key and then press 4. The keypad will beep once when both keys are down and the panel accepts the hex digit 14.** Many of the timer locations are programmed in this way, eg. exit delay, entry delay etc.

Erasing a Memory Location

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

The Memory Map / Programming Locations

LOCATION	CONTENTS & FIELD SIZE	REMARKS	
0	Phone number list (40 digits)		
40	User 1 code (4 digits)		
44	User 2 code (4 digits)		
48	User 3 code (4 digits)		
52	User 4 code (4 digits)		
56	User 5 code (4 digits)		
60	User 6 code (4 digits)		
64	User 7 code (4 digits)		
68	User 8 code (4 digits)		
72	User 9 code (4 digits)		
76	User 10 code (4 digits)		
80	Master User 11 code (4 digits)	Default = 1 2 3 4	
84	Master User 12 code (4 digits)		
88	Installer code (4 digits)	Default = 0 0 0 0	
92	Account number (4 digits)		
96	Up/Down load password (4 digits)	Default = 5 5 5 5	
100	Test Reporting time (4 digits) in 24-hour format. An invalid entry, example. 2500 will disable test reports	Default = 2 5 0 0	
	Default =Contact ID. For 4+2 or Express enter codes. Delete locations (1+3) to delete reports.	Contact ID (Default)	4+2 or Express
104	Zone 1 alarm code + zone I/D (2 digits) Prefix 1	30	
106	Zone 2 alarm code + zone I/D (2 digits) Prefix 1	30	Ask
108	Zone 3 alarm code + zone I/D (2 digits) Prefix 1	30	your
110	Zone 4 alarm code + zone I/D (2 digits) Prefix 1	30	central
112	Zone 5 alarm code + zone I/D (2 digits) Prefix 1	33	station
114	Reserved		for
116	NiteWatch/Emergency code (2 digits) Prefix 1	20	these
118	2-key panic alarm code (2 digits) Prefix 1	20	codes
120	Low battery code (2 digits) Prefix 3	02	if you
122	Mains fail code (2 digits) Prefix 3	01	have
124	Communication fail code (2 digits) Prefix 3	54	selected
126	24 hour test code (2 digits) Prefix 6	02	a non
128	Battery restore code (2 digits) Prefix 3	02	Contact
130	Mains restore code (2 digits) Prefix 3	01	ID format
132	Duress code, contact-id only (2 digits) Prefix 1	21	
134	Zone restore code (1 digit)	7	
135	Zone bypass code (1 digit)	0	
136	Arming code (1 digit)	0	
137	Disarming code (1 digit)	1	
138	Disarming under duress code, non-contact-id (1 digit)	Not used	
139	Answer after n rings (1 to 15)	Default = 15	
140	Call attempts (Calls all numbers in the list)	Default = 6	
141	Call fail (anti-jam) time (10-150 seconds) n x 10	Default = 4 (40 secs)	

LOCATION	CONTENTS & FIELD SIZE	REMARKS
142 - 148	Reserved	
149	Alarm reset time (1-15 minutes)	Default = 5
150	Exit delay (10-150 seconds) 1 digit x 10	Default = 6
151	Entry delay (10-150 seconds) 1 digit x 10	Default = 1
152	Alternate or extended entry delay (10-150 seconds)	
153	Reserved	
154	Maximum user code # to report (1 = user 1, 4 = users 1 to 4, etc.)	Non-reporting user codes will not report duress opening!
155	Pager format space digit. Blank is * (star), or program digit required.	

The following locations are toggles. Press keypad digits to 'turn on' an option. Press the key again to turn off the option. **Led on indicates the option is selected.** Press # to confirm the selection and move to the next address.

LOCATION	CONTENTS & FIELD SIZE	REMARKS
156	Reserved	
158	Key-switch zones	
160	24 hour zones	
162	Night arming zones	
164	Entry zones	Default = 1
166	Alternate entry zones	
168	Pre-alert beep on entry zones	Default = 1
170	Zones to chime when disarmed	
172	Reserved	
174	Reserved	
176	Follower zones	
178	Zones to activate Alarm output.	Default = 1 2 3 4 5
180	Zones to activate Aux. output 1.	Default = none
182	Events to activate Alarm output. LED1 On: NiteWatch panic LED2 On: [*+#] panic LED3 On: Comms failure LED4 On: Keypad beeper mimic LED5 On: Open/close output	Default = 1 + 2
184	System events to activate Aux. output 1. (Use table in location 182)	Default = none
186	Output options LED1 On: Latch Alarm output Off: Timed Alarm output LED2 On: Latch Aux. output 1 Off: Timed Aux. output 1 LED3 On: Invert Alarm output LED4 On: Invert Aux. output 1 LED5 Reserved	Outputs set for latch turn on when they are activated and are released when system is disarmed
188	Dialing options LED1 On: Decadic (pulse) dialing Off: DTMF (tone) dialing LED2 Decadic ratio select On: 70/30 make break ratio Off: 60/40 make break ratio LED 3 On: Instant Night arming by NiteWatch Off: Delayed Night arming by NiteWatch	Default = DTMF
190	Dialer options LED1 On: Disable zone restore and bypass reports LED2 On: Follow-me mode enabled LED3 On: Remote phone arming enabled LED4 On: Answer-phone defeat	Default = none
192	Miscellaneous system switches LED1 On: Latch zone LED's when disarmed Off: Zone leds toggle on and off LED2 On: Enable quick-arm Off: Disable quick arm LED3 On: 1+3 power-up to program mode enabled Off: Power-up to program mode disabled LED4 On: Force arming enabled Off: Force arming disabled LED5 On: 60Hz mains Off: 50Hz mains	Default = LED's 2,3,4. Extreme Caution! ! ! If LED3 is turned off the panel can NOT be defaulted if the master programming code is lost.

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 188 turn on led 1. 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 strings' below].

Dialing and Reporting

Locations 0 – 39 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 [10, 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	Reserved
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
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. The telephone number, control digit (15), and protocol all form part of a continuous *dialing string*. 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 40 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 (see below).

Pagers

1. A ‘space’ [1+3] is required at the end of a Pager call [1 sequence]. Sending a message to a pager is not an exact art and requires some experimentation.
2. 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 40 - 84 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 12 user codes may be entered this way. Alternatively, if a Master User Code is entered at Location 80 or 84, then the following user code locations [Locs. 40 - 76] may be programmed using this Master Code.

Location 88 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 92 Account Number.

This is the 4 digit account number transmitted to the central station which identifies the panel. You MUST enter 4 digits.

Location 96 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 100 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. If an invalid time is entered this function is disabled.

Locations 104 – 138 Event Reporting Codes

These locations are used for all reporting codes. If the panel is to communicate in standard Contact ID format these locations are default pre-programmed ex-factory. 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.** Therefore, if the panel is to report only Zone alarms, the locations 114 – 138 should all be erased using the 1 + 3 erase keys. Once erased these functions will not report **in any format.** Zone restore reports may be disabled at Loc. 190 LED 1 on.

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
24Hr Test report	602	02

Communications - Programming

Location 139 Number of Rings before Panel Answers

Enter a value here in the range 1 to 15. This is the number of rings the panel will count before answering an incoming call. Erasing this location (**1+3**) will prevent the panel from answering incoming calls.

Location 140 Call Attempts before Communication Failure

Enter a value here in the range 1 to 15. This is number of times the panel will cycle through all the numbers in the phone number list. Note: If the phone number list has 3 phone numbers programmed, then programming a 4 here will force the panel to call each number 4 times (12 calls). ***If this location is erased the panel will not make any calls.***

Location 141 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 0 'kiss-off' before aborting the call.

Delays and Timers - Programming

Location 149 Primary and Aux. Alarm 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.

Location 150 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 151 Entry Delay

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

Location 152 Alternate Entry Path Delay / Night Arm Delay

- a. Enter a single digit. Zones selected as 'Alternate Entry Zones' at Loc. 166 **MUST** also be selected as Entry zones at Loc. 164 and will use this timer to time the alternate entry delay. Enter a value in the range 1 to 15 (as per Loc. 150).
 - b. If this timer is **NOT** used for option 'a.' it may be used as the pre-alert timer for delayed night arming (see 'Other Panel Functions').
-

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 158 Keyswitch Zones Select

Select zone[s] to act as keyswitch arming. Momentarily opening this zone will arm the panel. Zone 5 may be programmed as a keyswitch zone.

Location 160 24 Hour Zones Select

Select zones for 24 hour response. 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. 104-112. For Contact ID select the required reporting code from the table above, non Contact ID codes are specified by the central station. Zone 5 may be selected as a 24 hour zone if it has not been selected as a keyswitch zone.

Location 162 Night Arming Zones [or] Instant Perimeter Zones

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

Location 164 Entry Delay Zones Select

Select zones for entry delay. Zones selected here will use the primary entry delay timer at Loc. 151.

Location 166 Alternate Entry Zones Select

Select alternate entry zones. Zones selected here must also be selected at Loc. 164 if an alternative entry path and time are required. Enter an alternate entry delay time at Loc. 152.

Location 168 Pre-alert Zones Select

Select zones that will activate the keypad beeper during entry **and** (or) night arm pre-alert. Zones selected here must also be selected at Loc. 164 and 166.

Location 170 Chime Zones Select

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

Location 176 Follower Zones Select

Select follower zones. These zones will also act as entry zones if a zone selected at Loc. 164 or 166 is tripped first. If a zone selected at Loc. 164 or 166 is not tripped first then these zones will alarm without delay.

Alarm and Aux. Output 1 - Programming

Location 178 Zones to Activate Alarm Output

Select the zones that will activate the Alarm 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 180 Zones to Activate the Aux. Output 1

The same rules apply here as at Loc. 178 except that the Aux. 1 Output will be activated.

Location 182 System Events to Activate the Alarm Output

Led 1 On: NiteWatch panic.
Led 2 On: Two key panic. [* + #]
Led 3 On: Communications failure.
Led 4 On: Keypad beeper mimic
Led 5 On: Open/close output

Location 184 System Events to Activate Aux. Output 1

Same options as at Loc. 182.

Location 186 Output Options

Led 1 On: Latch Alarm Output when activated
Off: Reset Alarm Output after timeout
Led 2 On: Latch Aux. output 1 when activated
Off: Reset Aux. output 1 after timeout
Led 3 On: Alarm Output normally pulled to -ve (no alarm)
Off: Alarm Output normally floating (open circuit)
Led 4 On: Aux. Output 1 normally pulled to -ve (no alarm)
Off: Aux. Output 1 normally floating (open circuit)

System Settings - Programming

Location 188 Miscellaneous System Settings

Led 1 On: Decadic (pulse) dialing
Off: DTMF dialing
Led 2 On: 70/30 Decadic make break ratio
Off: 60/40 Decadic make break ratio
Led 3 On: Instant perimeter night arming by NiteWatch
Off: Delayed night arming by NiteWatch

Location 190 Miscellaneous System Settings

Led 1 On: Disable zone restore and bypass reports.
Off: Send zone restore and bypass reports
Led 2 On: User access to '**Follow me**' mode enabled.
Off: '**Follow me**' mode disabled
Led 3 On: Enable remote arming by touch tone phone
Off: Disable remote arming
Led 4 On: Answer phone defeat enabled [double call]
Off: Answer phone defeat disabled

Location 192 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 then **Enter**].
Off: Quick arm disabled.
- Led 3 On: **1+3** keys at power-up jump to programming mode [emergency access open].
Off: **1+3** command at power-up disabled [Caution: panel is locked]
- Led 4 On: Forced arming enabled
Off: Forced arming disabled
- Led 5 On: 60Hz Mains power
Off: 50Hz Mains power
-

Using the Follow Me Function (Home Dial)

If Follow Me is selected (Loc. 190 Led 2 ON) all non alarm reports should be deleted. Using the 1+3 command delete Loc's, 120 to 138 inclusive. If **only** zone alarms are required delete Loc's. 116 & 118. When programming is completed use the Hold-0 function to abort any calls which may be in the reporting queue (see Hold Down Commands).

NiteWatch Arming Station

Night Arming via a NiteWatch Arming Station may be:

- a. Delayed perimeter arming with pre-alert on all night arming zones.
- b. Instant perimeter arming with instant alarms.

To arm the panel in 'Delayed' mode from NiteWatch press the ARM button momentarily. NiteWatch beeps once and the ARMED led starts flashing. At the expiry of the programmed 'Exit' delay NiteWatch beeps 3 times and the ARMED led locks on. The panel is now armed in 'Delayed Night Arm' mode and all zones selected as 'night arming zones' will sound a pre-alert for the programmed entry delay (or alternate entry delay) period before activating the outputs. (see Other Panel Functions)

To arm the panel in 'Instant Night Arm' mode press and hold down the ARM key for 2 seconds. NiteWatch beeps and the ARMED led lights. The panel is now armed and will activate instantly if any of the zones selected as 'night arming zones' are violated.

If Instant night arming is the primary manner of NiteWatch arming, turn On LED 3 at Loc. 188. This option reverses the NiteWatch arming modes, ie. pressing the ARM button momentarily will Instant arm NiteWatch and holding down the ARM button will arm in Delayed mode.

Both of the above night arming modes is available at the keypad.

- a. **8 1 #** arms the panel in Instant perimeter mode.
- b. **9 1 #** arms the panel in delayed night arm mode.

Technical Specifications

AC Input16VAC from transformer (do NOT exceed)
Accessory Power13.8VDC. 500mA total drain.
Output 2.....Maximum 50mA Sink output.
Siren Output.....Maximum 0.6 Amps DC to non inductive load or
2 x Siren speakers with built in driver @ 300mA per siren.
Battery Capacity.....Max 7.0 A/H
Battery Fuse.....3 Amp fast blow.

Outputs: The Alarm Output and Aux. Output 1 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 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 inability of the alarm panel to accept incoming up/downloading calls and may also prevent the panel from making calls.

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.

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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