

### 1. PROGRAMMING OVERVIEW

#### 1.1 Process Description

The MAX-20MC is set at the factory for certain defaults, but in most cases, you will have to customize the system in accordance with your own particular requirements.

Additionally you will have to enroll ("teach") all wireless devices used in the system into the appropriate zones and memory locations of the control panel.

Three programming menus are available, as shown in Figure 1. The **Memory**, **Tamper** and **Supervision** indicators constitute the "MENU SELECT" display which helps you recognize the active menu at a single glance.

Menu Name	Menu Display
Transmitter Enrollment ( <b>Memory</b> LED lights)	
Zone Type Definition ( <b>Tamper</b> LED lights)	
System Parameters ( <b>Supervision</b> LED lights)	

Each menu is divided into PAGES, through which you move by clicking the [PAGE] button. The active page is identified by the appropriate flashing sequence of the PAGE indicator.

Page	Flashing Sequence of the PAGE indicator
0	No indication (LED does not light).
1	☀ — ☀ — ☀ .....
2	☀☀ — ☀☀ — ☀☀ .....
3	☀☀☀ — ☀☀☀ — ☀☀☀ .....
4	☀☀☀☀ — ☀☀☀☀ — ☀☀☀☀ .....

☀ = Flash; — = Pause

Each page has 10 memory locations, through which you move by clicking the [NEXT] button. The selected memory location is identified by lighting or flashing of the numbered "zone indicator".

#### 1.2 Entry into the LEARN Mode

Remove the front panel and hold it in one hand, taking care not to disconnect the cable from the socket on the printed circuit board. Set the LEARN / RUN jumper on the printed circuit board to LEARN. The LED just above the jumper will light steadily, and the buzzer will sound the "happy melody (- - - —)", indicating entry into the LEARN mode. Put the panel back, to regain easy view of the controls and indicators.



**Important!** Mount the Programming Template (provided with the equipment) on the front panel, by dressing it over the two buttons and the protruding part of the keyswitch.

#### 1.3 Selecting Menus

As a result of activating the LEARN mode (see Para. 1.2), the **Memory** LED lights, as shown in the top part of Figure 1, indicating that the transmitter enrollment menu is active.

You may now click [NEXT] once and start enrolling transmitters (see Section 2 for transmitter ID enrollment procedure). Passing through the 5 pages of this menu you will reach the **zone type definition** menu, identified by lighting of the **Tamper** LED, as shown in the middle part of Figure 1.

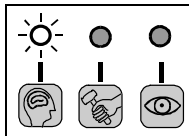
At this point, you may start defining zone types (see Section 3 for zone type definition procedure). Passing through the 2 pages of this menu you will reach the next (and last) menu - the **system parameters** menu - identified by lighting of the **Supervision** LED, as shown in the bottom part of Figure 1. You may start defining system parameters (see Section 4 for system parameters definition procedure).

To return to the **transmitter enrollment** menu (where you started), click the [PAGE] button once. The **Supervision** LED will extinguish and the **memory** LED will light instead, as shown in the top part of Figure 1.

This completes a quick tour of the programming routine. You may exit the LEARN mode at any stage by temporarily removing the front panel and setting the LEARN/RUN jumper back to RUN.

### 2. ENROLLING TRANSMITTER IDs

Activate the LEARN mode as instructed in Para. 1.2. The **Memory** LED will light, indicating that the transmitter enrollment menu is active, but no page has yet been selected.



**Be sure to familiarize yourself with the following basics before enrolling transmitters for the first time.**

The transmitter enrollment menu has 5 pages as follows:

- Page 0:** Enrolling wireless devices to zones 1-10
- Page 1:** Enrolling wireless devices to zones 11-20
- Page 2:** Enrolling Arm/Disarm transmitters
- Page 3:** Enrolling transmitters for AUX output control
- Page 4:** Enrolling wireless siren and strobe light

The transmitter enrollment menu has 5 Pages. The active page is identified by a flashing sequence of the PAGE indicator as demonstrated in Para. 1.1. above.

Page 0 is active by default once you activate the LEARN mode and click the [NEXT] button once. The other pages are then selected one by one, by clicking the [PAGE] button.

**Zone LED indications are interpreted as follows:**

Indication	Significance
Flashes slowly	Selected zone or memory location is available for enrolling a transmitter ID.
Flashes rapidly	Selected zone or memory location is occupied (contains a transmitter ID).
Lights steadily	Occupied zone or memory location (presently not selected but contains a transmitter ID).

**The buzzer sounds 3 kinds of beeping sequences:**

Sound	Significance
Happy Melody (- - - —)	Successful enrollment or statement that "the same transmitter ID is already enrolled in the selected zone/memory location".
Happy Melody twice (- - - — - - - —)	Statement that "this same transmitter ID is already enrolled in another zone/memory location".
Sad Melody (— — —)	Failure or "illegal operation".

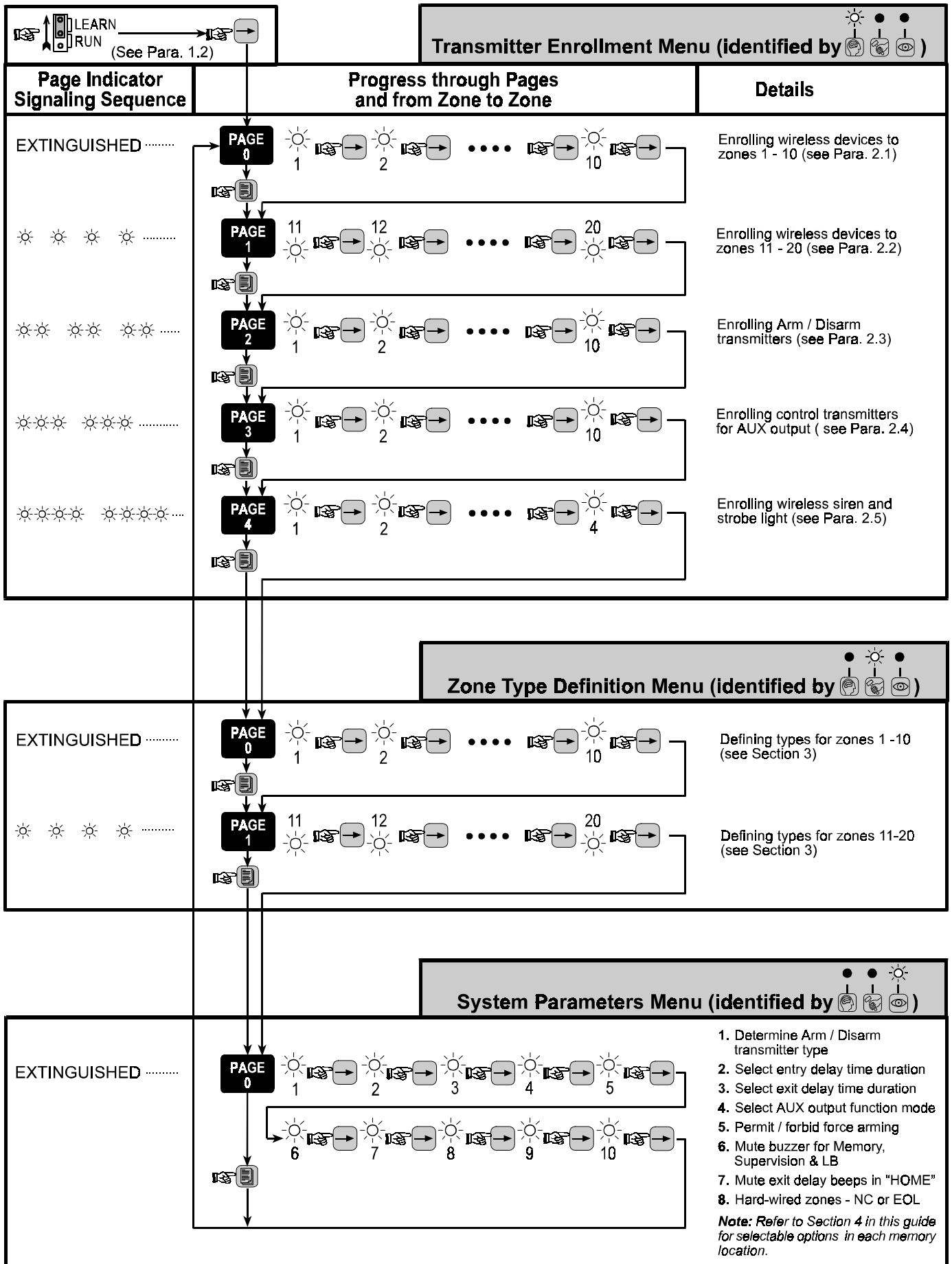






Figure 1. Programming Flow Chart

## 2.1 Going through Page 0 (zones 1-10)


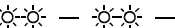

- After activating the LEARN mode, Click the [NEXT]  button to enter PAGE 0. If zone 1 is free, **Zone 1 LED will flash slowly**, indicating that the zone is ready for enrolling a transmitter ID.
- Initiate transmission from the wireless unit you wish to enroll in Zone 1. **Zone 1 LED will change to rapid flashing** and the buzzer will sound the "Happy Melody" (- - - —).
- To verify current enrollment, transmit again with the same transmitter. The happy melody should sound again.
- Click the [NEXT]  button once. **Zone 1 LED will change to steady lighting** and **Zone 2 LED will start flashing slowly**, indicating that **zone 2** is ready for transmitter enrollment.
- Repeat Step B above with the wireless unit you wish to assign to Zone 2. Then select the remaining zones one by one, up to the tenth, and enroll the transmitters as instructed in the previous steps. When done, proceed to Para. 2.2 below.

## 2.2 Going through Page 1 (zones 11-20)

- While still in PAGE 0, click the [PAGE]  button once. This will select **Page 1** of the transmitter enrollment menu. The **Page LED** will flash:  ..... If zone 11 is free, **Zone 1 LED will flash slowly**, indicating that **zone 11** is ready for transmitter enrollment.
- Enroll transmitters in zones **11 through 20** using the same method as in Para. 2.1 above. In this page, zone LEDs 1 to 10 represent zones 11 to 20, respectively. When done, proceed to Para. 2.3 below.

## 2.3 Going through Page 2 (Arm/Disarm)


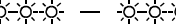
Page 2 allows you to enroll up to 10 Arm/Disarm transmitters by carrying out the following procedure:

- While still in Page 1, click the [PAGE]  button once. This will select **Page 2** of the transmitter enrollment menu. The **Page LED** will flash:  ..... and **Zone 1 LED will flash slowly**, indicating that the system is standing by for enrollment of the first **arm/disarm** transmitter.
- Initiate transmission from the first arm/disarm transmitter. Zone 1 LED will start flashing rapidly and the buzzer will sound the Happy Melody (- - - —).  
*Note: Single-button or keyfob transmitters may be enrolled. In case of a keyfob unit, it is enough to press one of its buttons - the IDs of the other buttons will be enrolled automatically, each for its own special task.*
- To verify current enrollment, transmit again with the same transmitter. The happy melody should sound again.
- Click the [NEXT]  button. **Zone 1 LED will change to steady lighting** and **Zone 2 LED will start flashing slowly**, indicating that the system is standing by for enrollment of the second **arm/disarm** transmitter.
- Initiate transmission from the second arm/disarm transmitter. Then select the remaining memory locations one by one, up to

the tenth, and enroll the transmitters as instructed in the previous steps. When done, proceed to Para. 2.4 below.




## 2.4 Going through Page 3 (AUX output)

Page 3 allows you to enroll up to 10 transmitters permitted to control the AUX output of the MAX-20MC.

- While still in Page 2, Click [PAGE]  once. This will select **Page 3** of the transmitter enrollment menu. The **Page LED** will flash:  ..... and **Zone 1 LED** will flash slowly, indicating that the system stands by for enrollment of the first transmitter for AUX output control.
- Continue in the same manner as in Steps B to E of Para. 2.3 above. Remember that you are now enrolling transmitters for AUX output control. When done, Proceed to Para. 2.5 below.




## 2.5 Going through Page 4 (remote devices)

The MAX-20MC can activate remote devices such as wireless siren or a wireless strobe light. Page 4 allows you to conduct a learning session in which the MAX-20MC and the remote wireless device (siren, strobe light etc.) will enroll each other's ID.



- While still in Page 3, click [PAGE]  button once. This will select **Page 4** of the transmitter enrollment menu. The **Page LED** will flash:  ..... and **Zone 1 LED** will flash slowly, indicating that the system is standing by for mutual enrollment of ID's between the siren and the MAX-20MC.
- Switch the wireless siren to the LEARN mode and wait until **Zone 1 LED** flashes rapidly and the happy melody sounds. Then switch the siren back to normal operation.
- Click the [NEXT]  button. Zone LED No. 1 will change to **steady lighting** and zone LED No. 2 will start **flashing slowly**, indicating that the system is standing by for mutual enrollment of ID's with the strobe light device.
- Switch the wireless strobe light to the LEARN mode and wait until **Zone 2 LED** flashes rapidly and the happy melody sounds. Then switch the strobe light back to normal operation.

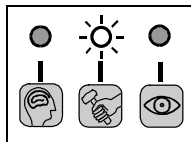
## 2.6 Deleting Transmitter IDs

The deleting procedure is the same for either one of the 5 pages in the transmitter enrollment menu. To delete a specific transmitter ID, proceed as follows:

- Activate the LEARN mode as instructed in Para. 1.2. The **Memory LED**  will light, indicating that the transmitter enrollment menu is active.
- Select the desired page by clicking [PAGE]  the necessary number of times (up to 4) and then click [NEXT]  the necessary number of times to select the desired zone LED.
- While the selected LED flashes rapidly, press both [PAGE] and [NEXT] simultaneously for two seconds. Upon successful deletion of the transmitter ID, the LED will change to slow flashing and the happy melody (- - - —) will sound.  
*Note: You may now enroll a new transmitter in the same memory location or exit the programming mode by setting the LEARN switch back to RUN.*

## 3. DEFINING ZONE TYPES

After entering the LEARN mode, advance by clicking the [PAGE]  button as many times as necessary until the **Tamper**  indicator lights, confirming that you have reached the Zone Type Definition menu.







The **Zone Type Definition** menu has 2 pages as follows:

**Page 0:** Defining types for zones 1-10

**Page 1:** Defining types for zones 11-20

- Any one of 8 possible definitions may be attributed to each zone.
- The selected zone is identified by the page indicator and the numbered zone indicator.

- The zone definition is expressed by the 3 data indicators  as shown in Table 3.1.
- Click [NEXT]  to move from zone to zone.
- Upon selecting a zone, the current zone definition will be displayed - you can interpret it by finding a match between what you see and one of the displays in Table 3.1.
- Click [NEXT]  + [PAGE]  simultaneously as many times as necessary until the desired definition for the selected zone is viewed in the data display (refer to Table 3.1).
- When done with PAGE 0, select PAGE 1 and define zones 11 to 20 as required. Note down your definitions in Table 3.2

**Table 3.1 Zone Type Definition Display**

Zone Type				Zone Type			
① Delayed, perimeter	●	●	●	④ Instant, perimeter	☀	●	●
① Delayed, interior	●	●	☀	⑤ Instant, interior	☀	●	☀
② Follower, perimeter	●	☀	●	⑥ 24-hour, audible	☀	☀	●
③ Follower, interior	●	☀	☀	⑦ 24-hour, silent	☀	☀	☀

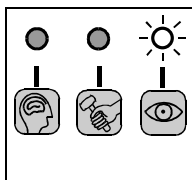
**Table 3.2 Factory Defaults and New Programming Record**

Zone No.	Default Zone Type	New Zone Type	Data Display			
1	⑥					
2	①					
3	④					
4	④					
5	④					
6	④					

7	④			
8	④			
9	④			
10	④			
11	④			
12	④			
13	④			
14	④			
15	④			
16	④			
17	④			
18	④			
19	④			
20	④			

## 4. DEFINING SYSTEM PARAMETERS

**Attention!** After entering the LEARN mode, advance by clicking the [PAGE] button as many times as necessary until the **Supervision** indicator lights, confirming that you have reached the **System Parameters** menu.



The system parameters menu has a single page - PAGE 0.

In this page you can select 8 memory locations, represented by zone indicators 1-8, in which you define the following system parameters:

LED	Parameter
Zone 1	Determine Arm/Disarm transmitter type
Zone 2	Select entry delay time duration
Zone 3	Select exit delay time duration
Zone 4	Select AUX output function mode
Zone 5	Permit / forbid force arming
Zone 6	Mute / activate buzzer for memory, supervision and low battery alerts (3 parameters in one memory location).
Zone 7	Mute / activate exit delay warning beeps in "HOME" arming.
Zone 8	Hard-wire zone E.O.L. or N.C. (3 zones in one memory location).

Upon entry into system parameters menu, **Zone 1** LED lights, indicating selection of the 1<sup>st</sup> memory location. You can shift to the following memory locations one by one by successive clicking of the [NEXT] button. The respective zone LED indicates, by lighting steadily, the currently selected memory location. When the 8th memory location is reached, clicking [NEXT] 3 times will re-select the 1<sup>st</sup> memory location.

Upon selection of a memory location, the 3 DATA indicators show the currently programmed value or function (see Paragraphs 4.1 through 4.8).

Advancing through available values or functions is accomplished by simultaneous clicking of the [NEXT] and [PAGE] + buttons. Each time you press both buttons, the next available value or function is selected, and the DATA display changes accordingly. When the last available option is reached, pressing both buttons again will re-select the first value or function.

Clicking [NEXT] will shift you to the next location and will save the value or function viewed last in the previous location.

### 4.1 Location No. 1 - Arm /Disarm

Location 1 is selected automatically once you enter the System Parameters menu - **Zone 1** LED will light. Verify that:

- The MENU DISPLAY is the correct one (see "Attention" at the beginning of Section 4)
- The Page LED does not flash
- The DATA DISPLAY indicates the function currently saved in the 1<sup>st</sup> memory location (see Table 4.1).

In this location you determine whether the transmitters used for arming/disarming are multi-button (keyfob) or single-button types (see User's Guide, Para. 1.8 for more details).

The DATA DISPLAY will indicate the function currently saved in the 1<sup>st</sup> memory location (see Table 4.1).

**Table 4.1 Selectable Functions in Memory Location No. 1**

Function				Default Plan	My Program
System armed/disarmed by keyfob transmitters	●	●	●	X	
System armed/disarmed using the toggle method	●	●	☀		

To select and display the other function, click [NEXT] + [PAGE] simultaneously. When done, proceed to Para. 4.2.

### 4.2 Location No. 2 - Entry Delay Length

Click [NEXT] to select the 2<sup>nd</sup> memory location - **Zone 2** LED will light. In this location you determine the length of the entry delay in zones defined as "delay-interior", "delay-perimeter", "follower-interior" and "follower-perimeter".

The DATA DISPLAY will indicate the value currently saved in the 2<sup>nd</sup> memory location (see Table 4.2).

**Table 4.2 Selectable Values in Memory Location No. 2**

Entry Delay				Default Plan	My Program
15 seconds	●	●	●		
30 seconds	●	●	☀		
60 seconds	●	☀	●	X	
90 seconds	●	☀	☀		
120 seconds	☀	●	●		

To select and display another value, click [NEXT] + [PAGE] repeatedly until you see the correct data display. When done, proceed to Para. 4.3.

### 4.3 Location No. 3 - Exit Delay Length

Click [NEXT] (→) to select the 3<sup>rd</sup> memory location - **Zone 3** LED will light. In this location you determine the length of the exit delay in zones defined as “delay-interior”, “delay-perimeter”, “follower-interior” and “follower-perimeter”.

The DATA DISPLAY will indicate the value currently saved in the 3<sup>rd</sup> memory location (see Table 4.3).

**Table 4.3** Selectable Values for Memory Location No. 3

Exit Delay		Default Plan	My Program
15 seconds	● ● ●		
30 seconds	● ● ☀		
60 seconds	● ☀ ●	X	
90 seconds	● ☀ ☀		
120 seconds	☀ ● ●		

To select and display another value, click [NEXT] (→) + [PAGE] (⏮) repeatedly until you see the correct data display. When done, proceed to Para. 4.4.

### 4.4 Location No. 4 - AUX Output Operating Mode

Click [NEXT] (→) to select the 4<sup>th</sup> memory location - **Zone 4** LED will light. In this location you determine the operating mode of the AUX open-collector output.

The DATA DISPLAY will indicate the mode currently saved in the 4<sup>th</sup> memory location (see Table 4.4).

**Table 4.4** Selectable Modes in Memory Location No. 4

AUX Output Mode		Default Plan	My Program
Toggled ON and OFF by valid code.	● ● ●		
Pulsed ON for 2 sec. by valid code.	● ● ☀		
Pulsed ON for 10 sec. by valid code	● ☀ ●	X	
Pulsed ON for 30 sec. by valid code	● ☀ ☀		

To select and display another AUX output mode, click [NEXT] (→) + [PAGE] (⏮) repeatedly until you see the correct data display. When done, proceed to Para. 4.5.

### 4.5 Location No. 5 - Force Arming Permit / Forbid

Click [NEXT] (→) to select the 5<sup>th</sup> memory location - **Zone 5** LED will light. In this location you determine whether force arming is forbidden or permitted (see User’s Guide, Para. 1.6 for details).

The DATA DISPLAY will indicate the function currently saved in the 5<sup>th</sup> memory location (see Table 4.5).

**Table 4.5** Selectable Functions in Memory Location No. 5

Force Arming		Default Plan	My Program
Forbidden	● ● ●	X	
Permitted	● ● ☀		

To select and display the other function, click [NEXT] (→) + [PAGE] (⏮) simultaneously. When done, proceed to Para. 4.6.

### 4.6 Location No. 6 - Buzzer Alerts

Click [NEXT] (→) to select the 6<sup>th</sup> memory location - **Zone 6** LED will light. This where you determine whether the buzzer will sound an alert for memory messages, supervision problems and low battery status.

The DATA DISPLAY will indicate the function currently saved in the 6<sup>th</sup> memory location (see Table 4.6).

**Table 4.6** Selectable Functions in Memory Location No. 6

Buzzer Beeps for:		Default Plan	My Program
None of the 3 events	● ● ●		
Memory message only	● ● ☀		
Supervision problem only	● ☀ ●		
Memory and supervision	● ☀ ☀		
Low-Battery only	☀ ● ●		
Memory and Low-Battery	☀ ● ☀		
Supervision and Low-Battery	☀ ☀ ●		
All 3 events	☀ ☀ ☀	X	

To select and display another function, click [NEXT] (→) + [PAGE] (⏮) repeatedly until you see the correct data display. When done, proceed to Para. 4.7.

### 4.7 Location No. 7 - Exit Delay Warning Beeps when Arming “HOME”

Click [NEXT] (→) to select the 7<sup>th</sup> memory location - **Zone 7** LED will light. This is where you determine whether the buzzer will beep during the exit delay when **HOME** arming takes place.

The DATA DISPLAY will indicate the function currently saved in the 7<sup>th</sup> memory location (see Table 4.7).

**Table 4.7** Selectable Functions in Memory Location No. 7

Exit Delay Beeping in HOME mode		Default Plan	My Program
Disabled	● ● ●	X	
Enabled	● ● ☀		

To select and display the other function, click [NEXT] (→) + [PAGE] (⏮) simultaneously. When done, proceed to Para. 4.8.

### 4.8 Location No. 8 - E.O.L. Zones

Click [NEXT] (→) to select the 8<sup>th</sup> memory location - **Zone 8** LED will light. This is where you define which of the 3 hard-wired zones will be an E.O.L. (End-of-Line) zone.

The DATA DISPLAY will indicate the zone definition currently saved in the 8<sup>th</sup> memory location (see Table 4.8).

**Table 4.8** Selectable Definitions in Memory Location No. 8

E.O.L. Zones		Default Plan	My Program
None	● ● ●		
Zone 1	● ● ☀		
Zone 2	● ☀ ●		
Zones 1 and 2	● ☀ ☀		
Zone 3	☀ ● ●		
Zones 1 and 3	☀ ● ☀		
Zones 2 and 3	☀ ☀ ●		
All 3 zones	☀ ☀ ☀	X	

**Note:** Zones not defined as E.O.L. will behave as regular N.C.

To select and display another definition, click [NEXT] (→) + [PAGE] (⏮) repeatedly until you see the correct data display. When done, you have two alternatives:

- Click [NEXT] (→) 3 times to skip the 9<sup>th</sup> and 10<sup>th</sup> memory locations (not used) and return to the 1<sup>st</sup> memory location.
- Exit the LEARN mode (set the LEARN/RUN jumper to RUN).

# APPENDIX A. Detector Deployment & Transmitter Assignments

## A1. Detector Deployment

Zone	Detector type	Location
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Zone	Detector type	Location
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

## A2. Arm/Disarm Transmitters

Tx #	Transmitter Description	Name of Holder
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

## A3. AUX Output Control Transmitters

Tx #	Transmitter Description	Name of Holder
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



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