Guide

Multi Zone®

Multidirectional (180^0)
Outdoor/indoor intrusion detector

MAXIMUM Security

Alarm Systems & all types of detectors

www.maximum.co.il

Table of content

Congratulations

We thank you for choosing a product of **MAXIMUM Security (1984) Ltd.**
Basing on over 30 years experience in R&D and in production of advanced security systems, we are proud to introduce to you the finest Outdoor/ Indoor motion detector ever presented, aimed for military, industrial, commercial and residential security.

Please read all parts of this installation and operating manuals and follow the step-by-step instructions, in order to ensure proper operation and maximal use of all benefits of the detector.

Features

* Selectable horizontal detection angle - up to 180^0.

* Multi-Zone includes18 sensors:
  - 6 PIR sensors.
  - 3 Microwave sensors.
  - 8 Anti-masking sensors.
  - 1 Shock & Vibration sensor (option).

* The detector's features can be programmed by Remote Control (can be purchased separately).

* The detector can be programmed by means of:
  - The detector's built-in keyboard.
  - Remote Control (can be purchased separately).
  - External control panel (bus/ communication).

* Three different detection zones. For each zone you can program the following:
  - Detection range.
  - PIR and Microwave detection sensitivity.
  - Pulse Count.

* Motion detection of certain direction.

* 8 preset detection programs for selection.

* Relay activation time from 1 second to 99 minutes.

* Relay logics (N.C. / N.O.).

* Pet friendly.

* Option for tone effect upon each detection event.

* Automatic temperature and humidity compensation.

* Waterproof and resistant to bad weather conditions.

* Bracket Free (internal calibration).

Description

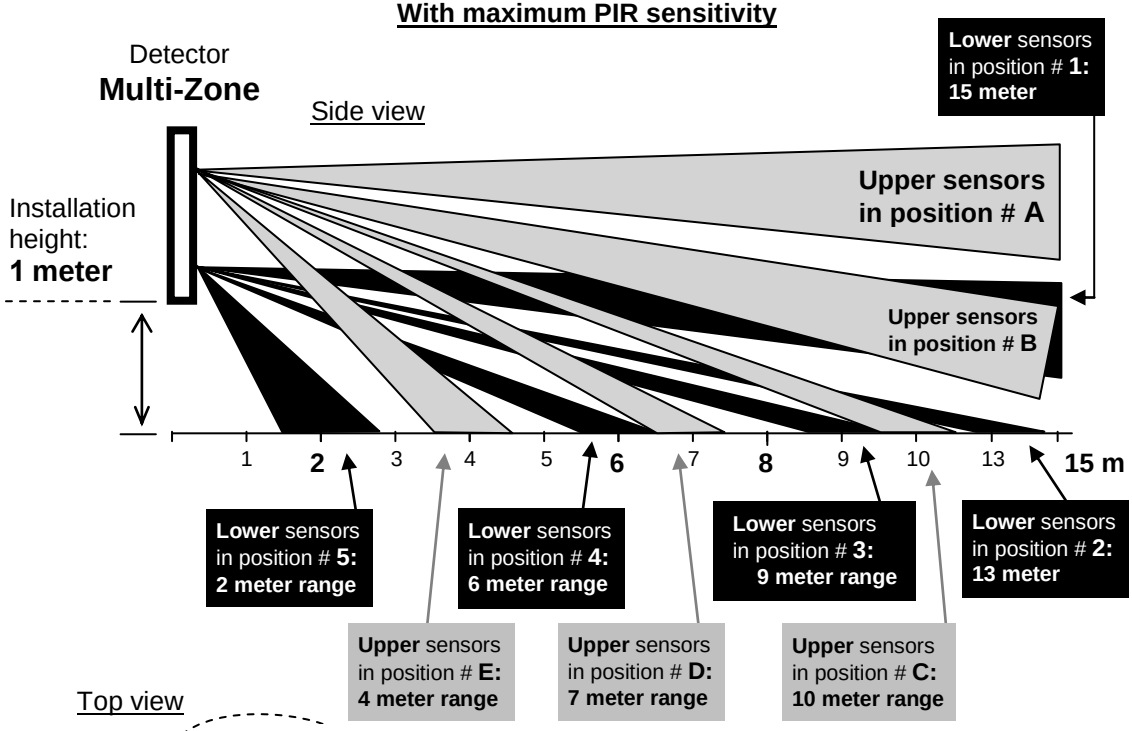
The detector’s name, "Multi-Zone", speaks of its unique character. This motion detector has six detection zones and unprecedented wide detection angle of up to 180^0.

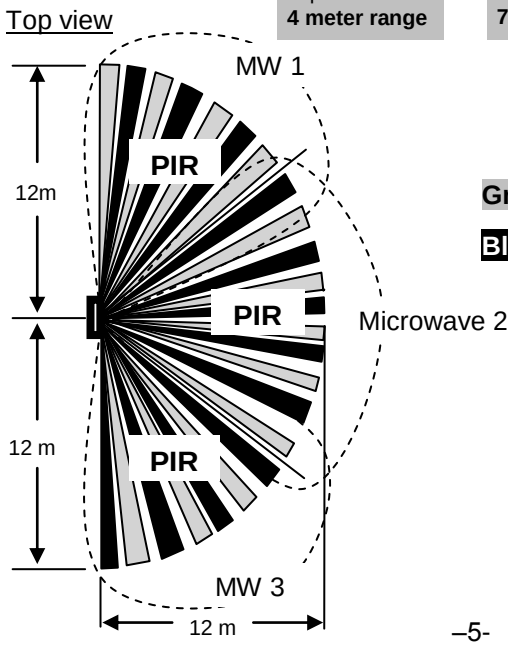
Multi-Zone is highly advanced and accurate. In addition its installation enables saving expenses for installation of several standard detectors with small angle and detection capability.

Detection Pattern

The display shows the vertical position of the PIR sensor groups. The letter indicates the position of the upper PIR sensor group, while the digit indicates the position of the lower PIR sensor group.

For 1 meter installation height
With maximum PIR sensitivity





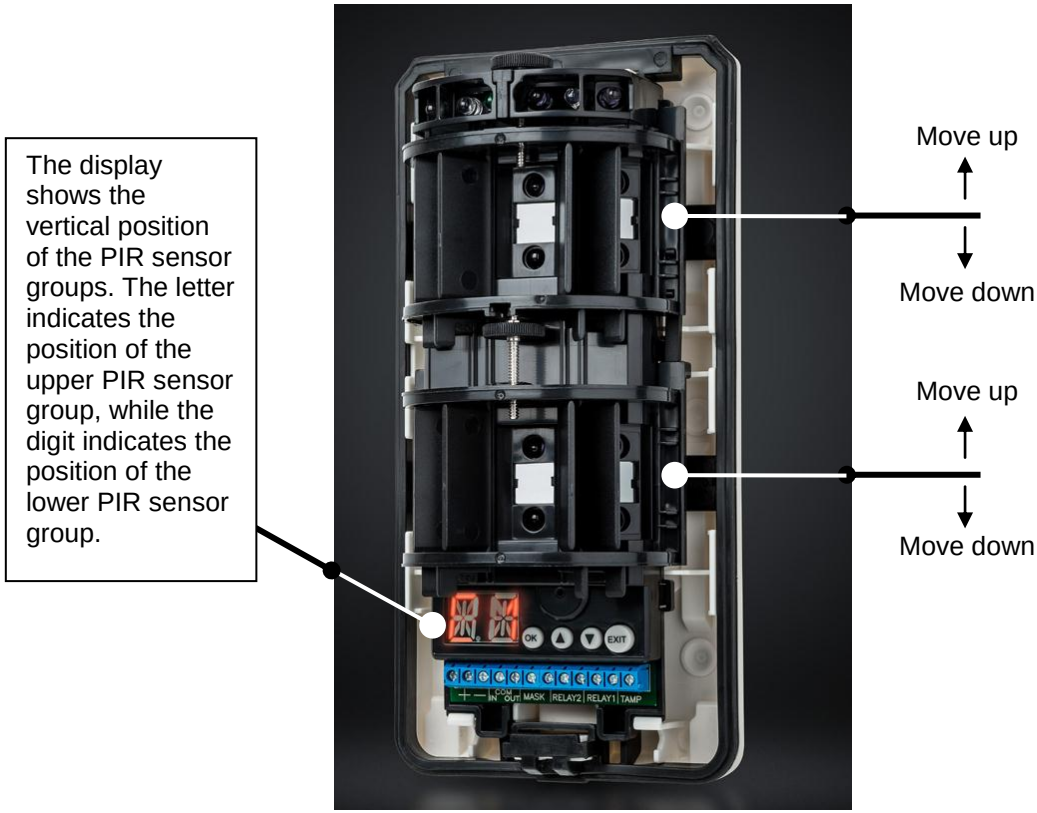
Grey = **Upper** PIR sensors

Black = **Lower** PIR sensors

My notes

Installation height consideration

The installation height is between 1 ~ 2 meters. The upper and lower PIR sensor groups must be moved up or down according to the installation height of the detector (refer to the table on the next page).



To achieve maximum detection range:

Move the **upper** PIR sensor group up or down according to the following table:

Installation **Height**	**Letter** indicated on the Scale
1.0 m	A
1.5 m	B
1.8 m	C

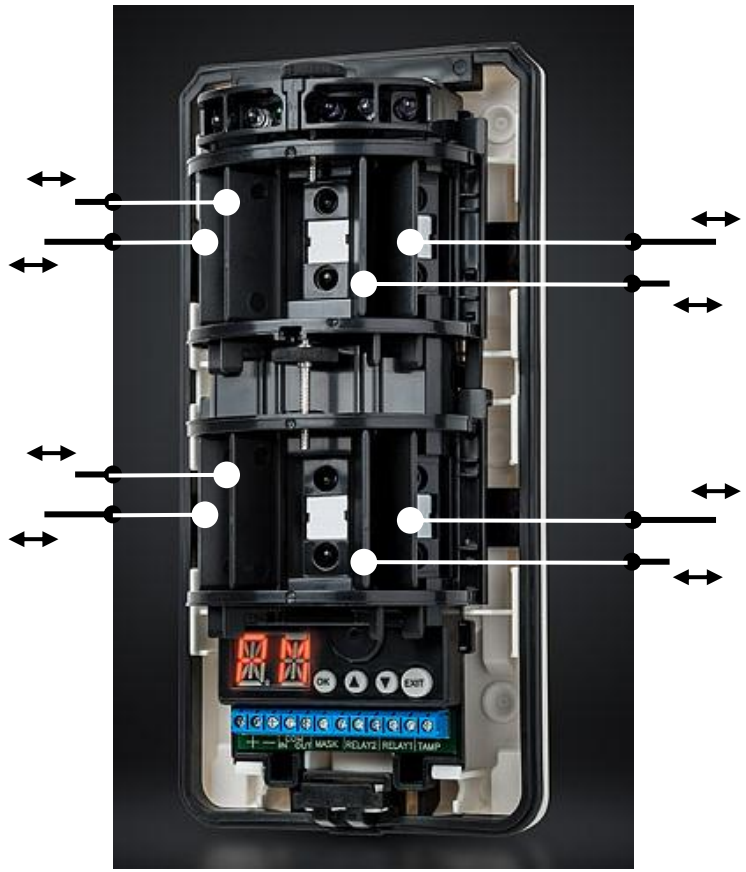
Move the **Lower** PIR sensor up or down according to the following table:

Installation **Height**	**Digit** indicated on the Scale
1.0 m	1
1.5 m	2
1.8 m	3

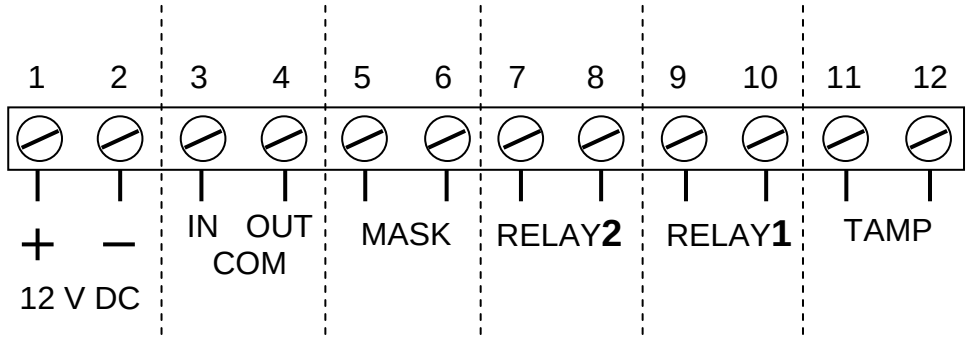
Limiting the detector's horizontal detection angle

Near each one of the six PIR sensors there are plates, which you may move (left and right) in order to limit the detector's horizontal detection angle.

The plates you my move, left and right, in order to limit the detector's horizontal detection angle.



Terminal Block Wiring



Terminal Block Wiring Specifications

Terminal No.	Mark on the PCB board	For
1+2	+ -	12 V DC input Power Supply
3+4	COM, IN, OUT	Data communication between the detector and the control panel.
5+6	MASK	Anti-masking relay.
7+8	RELAY 2	Secondary alarm relay that activates also in case of shock or vibration detection.
9+10	RELAY 1	Main alarm relay switching on upon movement detection.
11+12	TAMP	Tamper switch (located in rear and front case).

Upon connecting Multi-Zone to the power supply

Upon connecting Multi-Zone to the power supply, a 60 second countdown begins. When the countdown ends, 3 short tones will be heard indicating that the detector is now ready for work.
During the countdown, red, green and yellow LED indicators will blink one after another on the top of the detector. The display will provide information about the vertical location of the PIR sensors array (see information on page 7, 8, 12).
In case the power supply is low, red and green LEDs will blink shortly each second.

Operation timing of the relays and the LED indicators

Detection type	LED indication	Relay status
Alarm actual motion detection	**Red + Green + Yellow** blinking together	RELAY1 will switch on (default 2 sec.)
Infrared	**Red**	No relay will switch on
Microwave	**Yellow**	No relay will switch on
Anti-masking	**Green**	Once masking was detected, the green LED blinks. If masking persists for more than 50 seconds (default), the green LED will glow continuously, and the MASK relay will switch on for at least 2 seconds (default) and for as long as the masking exists
Shock & Vibration	**Green + Yellow** blinking together	RELAY2 will switch on (default 2 sec.)
Low source voltage	**Red + Green + Yellow** blinking together (shortly) every second	No change

Preparing the Anti-masking channel for operation (Study Procedure)

(Obligatory for proper anti-masking operation!!!)

To enable proper operation of the masking detection (anti-masking), it is necessary to allow the detector to automatically study and analyze the environmental conditions of its protected area. This is an obligatory action that should be performed by the installer, ensuring proper operation of the anti-masking channel!!!

The "Study Procedure" will start automatically after closing the detector's cover or receiving "Study" instruction from the Remote Control model RM-1.

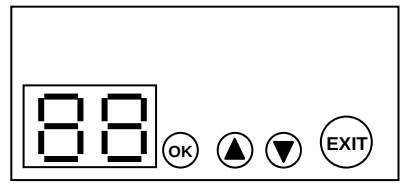
How to perform the Study Procedure

- The procedure shall not be executed when the detector is exposed to direct sun light.
- Close the detector's case.
- Keep at least 1 meter away from the detector's front part, until the study procedure is completed, approximately 1 minute.
- In the beginning of the study procedure, short tones will be heard, and red + green + yellow indicators will blink together on the top of the detector for 30 seconds. Then the green LED will glow constantly during entire Study Procedure which will take 30 seconds.
- At the end of the study procedure, three short tones will be heard, and all the LED indicators will blink fast for 2 seconds.

Important
If during the study procedure the detector's case is not properly closed (the tamper switch is not pressed), the anti-masking channel will not work and the study procedure will not be performed.

Programming

In this detector, unlike other detectors, all adjustments are done by programming which is more advanced, comfortable and accurate, by means of 4 keys and a display.



In the beginning, the detector's display shows the vertical location of the 3 upper PIR sensors and the lower 3 PIR sensors.

To enter programming mode, press **OK** key.
The display will show **PM** (**P**rogra**m**ming).

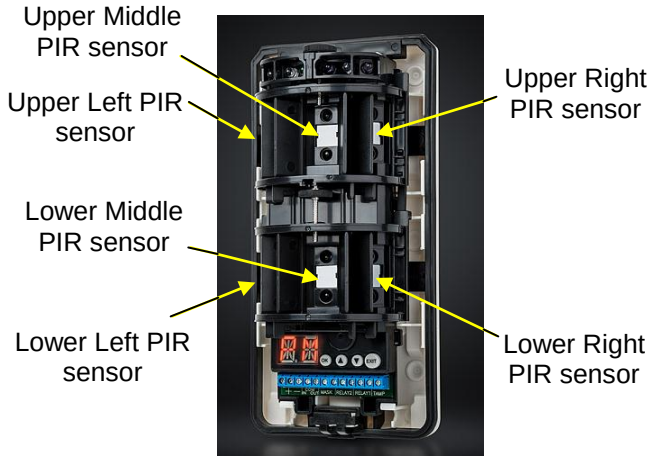
By means of keys ▼ ▲, select the detector's feature you wish to change/program. The programming table is represented on page 14-21.

To enter the menu of a requested feature, press **OK**.
To change feature values, use the keys ▼ ▲, and confirm by pressing **OK**.
To exit without change at any stage use the key **EXIT**.

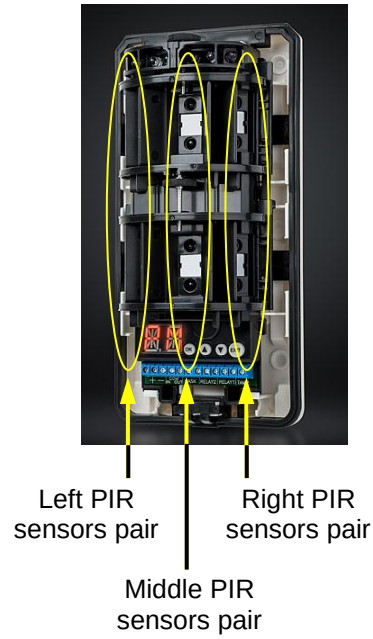
To activate/deactivate a feature which is not offered in the menu, press **OK** only each time.
Two decimal points will glow to confirm activation of the feature, and will be activated off to confirm deactivation (for example, W**.**T**.** feature is activated, WT feature is deactivated).

Definition of sensors and sensor groups

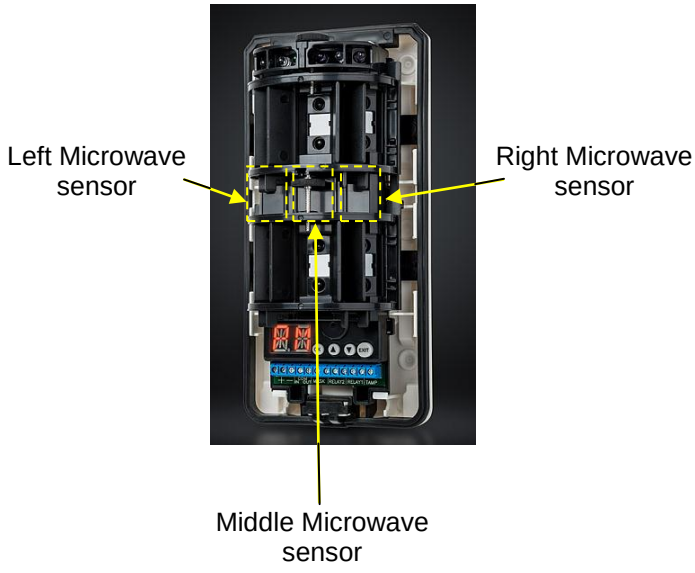
Location of the 6 PIR sensors



Location of the 3 PIR sensor pairs



Location of the 3 Microwave sensors



Programming Table

No.	Feature	Display	Description	Common characteristic
1	Highest detection sensitivity	M0	The detector is equipped with 8 preset detection programs for your choice, from the highest detection sensitivity (M0) to the lowest detection sensitivity (M7).	**8 preset detection programs for your choice**
2	Very High detection sensitivity	M1		
3	High detection sensitivity	M2		
4	Medium-plus detection sensitivity	M3		
5	Medium detection sensitivity	M4		
6	Low detection sensitivity	M5		
7	Very Low detection sensitivity	M6		
8	Lowest detection sensitivity	M7		
9	Assigning relay to each pair of PIR sensors. Configuration No. 1	M8	RELAY1 will be activated upon detection in the right pair of PIR sensors or upon anti-masking detection. RELAY2 will be activated upon detection in the middle pair of PIR sensors or upon anti-masking detection. MASK relay will be activated upon detection in the left pair of PIR sensors or upon Anti-masking detection.	**Assigning relay to each pair of PIR sensors. For test purposes.**
10	Assigning relay to each pair of PIR sensors. Configuration No. 2	M9	RELAY1 will be activated upon detection in the right pair of PIR. RELAY2 will be activated upon detection in the middle pair of PIR. MASK relay will be activated upon detection in the left pair of PIR. Upon anti-masking detection in any PIR pair, MASK relay will be	

			activated.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
11	LED indicators	WT	Enable/Disable LED indicators	**LED indicators**
12	Tone indication	BZ	Enable/Disable tone indication upon each detection event.	**Tone indication**
13	Shock & Vibration detection sensitivity	VB	Programming the Shock & Vibration detection sensitivity from 00 to 99 (00 = Disabled).	**Shock & Vibration detection sensitivity**
14	Left PIR sensors pair sensitivity and pulse count	P1	Programming the left PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was programmed with different value than lower PIR sensor (see paragraphs 37, 38 of this table). If you press **OK** once again, you can program now the pulse count (01 - 11).	**PIR sensors pair sensitivity and pulse count**
15	Middle PIR sensors pair sensitivity and pulse count	P2	Programming the Middle PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was programmed with different value than lower PIR sensor (see paragraphs 39, 40 of this table). If you press **OK** once again, you can program now the pulse count (01 - 11).	
16	Right PIR sensors pair sensitivity and pulse count	P3	Programming the Right PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was programmed with different value than	

			lower PIR sensor (see paragraphs 41, 42 of this table). If you press **OK** once again, you can program now the pulse count (01 - 11).	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
17	Left Microwave sensor detection sensitivity and Pulse Count	M ■ W	Programming the Left Microwave sensor detection sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 50).	**Microwave sensor detection sensitivity and Pulse Count**
18	Middle Microwave sensor detection sensitivity and Pulse Count	MW ■	Programming the Middle Microwave sensor detection sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 50).	
19	Right Microwave sensor detection sensitivity and Pulse Count	M ■ W ■	Programming the Right Microwave sensor detection sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 50).	
20	Anti-masking detection sensitivity and response time.	AM	Anti-masking detection sensitivity (00-10). If you press **OK** once again, you can program now the anti-masking response time (01 -99 test cycles, duration of each cycle is about 3 seconds).	**Anti-masking detection sensitivity and response time.**
21	RELAY1 activation time and logics (N.C. / N.O.)	R1	RELAY1 activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given	**RELAY activation time and logics (N.C. / N.O.)**

			time is in minutes otherwise it's in seconds. If you press **OK** once again, you can program now the relay and logic (N.C. / N.O.).	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
22	RELAY2 activation time and logics (N.C. / N.O.)	R2	RELAY2 activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds. If you press **OK** once again, you can program now the relay and logics (N.C. / N.O.). Note: this relay is activated also in case of shock & vibration detection.	
23	MASK relay activation time and logics (N.C. / N.O.)	R3	Note: this feature will be valid only if feature No. 9 or 10 from this list was activated. MASK relay activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds. If you press **OK** once again, you can program now the relay and logics (N.C. / N.O.).	
24	In order to activate the alarm, it is enough to receive detection only in the **Left** pair of PIR sensors.	F1	In order to activate the alarm, it is enough to receive detection only in the **Left** pair of PIR sensors.	**In order to activate the alarm, it is enough to receive detection only in one pair of PIR sensors.**
25	In order to activate the alarm, it is enough to receive	F2	In order to activate the alarm, it is enough to receive detection only in	

	detection only in the **Middle** pair of PIR sensors.		the **Middle** pair of PIR sensors.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
26	In order to activate the alarm, it is enough to receive detection only in the **Right** pair of PIR sensors.	F3	In order to activate the alarm, it is enough to receive detection only in the **Right** pair of PIR sensors.	
27	PIR movement detection direction Left → Middle	F4	In order to activate the alarm RELAY1, there should be a detection by the Left PIR sensors pair and then in the Middle PIR sensors pair	**Detection direction**
28	PIR movement detection direction Left ← Middle	F5	In order to activate the alarm RELAY1, there should be a detection by the Middle PIR sensors pair and then in the Left PIR sensors pair	
29	PIR movement detection direction Middle → Right	F6	In order to activate the alarm RELAY1, there should be a detection by the Middle PIR sensors pair and then in the Right PIR sensors pair	
30	PIR movement detection direction Right → Middle	F7	In order to activate the alarm RELAY1, there should be a detection by the Right PIR sensors pair and then in the Middle PIR sensors pair	
31	PIR movement detection direction Left → Middle → Right	F8	In order to activate the alarm RELAY1, there should be a detection by the Left PIR sensors pair, then in the Middle PIR sensors pair and then in the Right PIR sensors pair.	
32	PIR movement detection direction Right → Middle → Left	F9	In order to activate the alarm RELAY1, there should be a detection by the Right PIR sensors	

			pair, then in the Middle PIR sensors pair and then in the Left PIR sensors pair.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
33	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. LEFT → MIDDLE	T1	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Left** PIR sensors pair detection and **Middle** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	**Time limit between two PIR sensors pair detection events.**
34	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. LEFT ← MIDDLE	T2	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Middle** PIR sensors pair detection and **Left** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
35	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. MIDDLE → RIGHT	T3	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Middle** PIR sensors pair detection and **Right** PIR sensors	

			pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
36	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. MIDDLE ← RIGHT	T4	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Right** PIR sensors pair detection and **Middle** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
37	**Lower-left** PIR sensor sensitivity and pulse count	E1	Programming the **Lower-left** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	**PIR sensitivity and pulse count for each of six PIR sensors**
38	**Upper-left** PIR sensor sensitivity and pulse count	E2	Programming the **Upper-left** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	
39	**Lower-Middle** PIR sensor sensitivity and pulse count	E3	Programming the **Lower-Middle** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	
40	**Upper- Middle** PIR	E4	Programming the **Upper-**	

	sensor sensitivity and pulse count		**Middle** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
41	**Lower- Right** PIR sensor sensitivity and pulse count	E5	Programming the **Lower-Right** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	
42	**Upper- Right** PIR sensor sensitivity and pulse count	E6	Programming the **Upper-Right** PIR sensor sensitivity (00 to 63). If you press **OK** once again, you can program now the pulse count (01 - 11).	
43	Not in use	W1	For factory use only	**Not in use**
44	Not in use	W2	For factory use only	**Not in use**
45	Not in use	W3	For factory use only	**Not in use**
46	Enable/disable the detector to work with the Remote Control model RM-1	IR	Enable/disable the detector to work with the Remote Control model RM-1	**Enable/disable the detector to work with the Remote Control model RM-1**

The detector full functionality test

The test should be performed when detector case is closed and LED indicators are enabled (See page 15 paragraph 11).

The test procedure for human movement detection (Alarm):

- Walk in the protected area.
- Compulsory reaction of the detector:
  Upon each detection event, the alarm RELAY1 will be operated for 2 seconds (default time).
  The following LED indicators will blink simultaneously during those 2 seconds: Red + Green + Yellow.
  In case the buzzer is enabled, a tone will be heard during this time.

Test procedure for masking detection (Anti-masking):

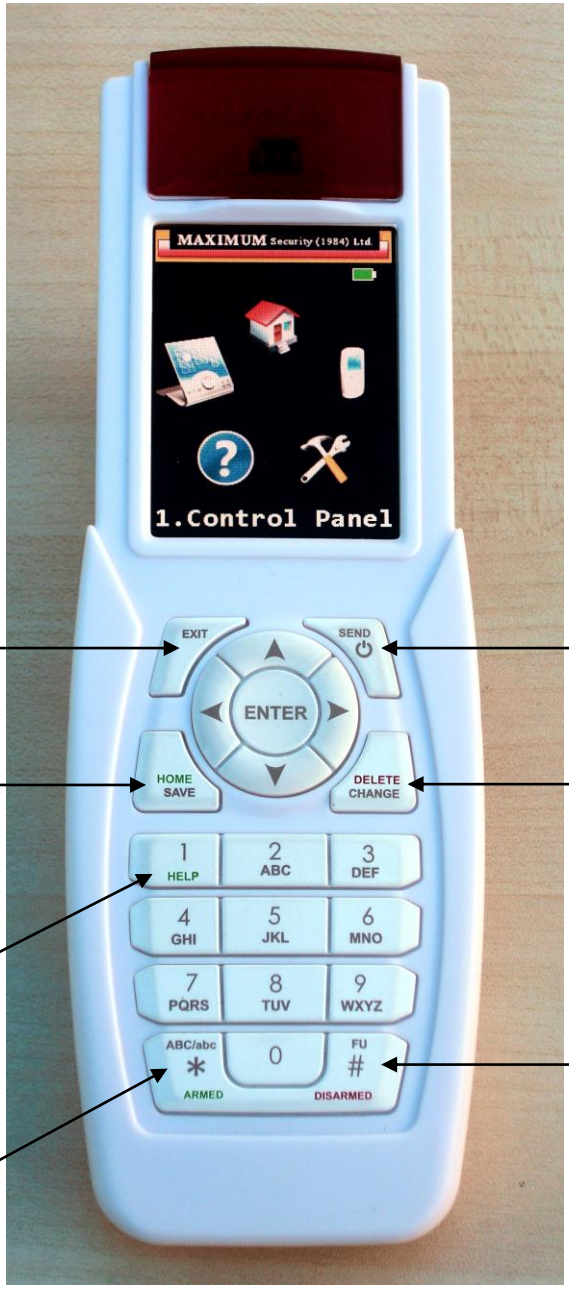
- Place a white piece of paper at a distance of about 10 cm from the front of the detector.
- Compulsory reaction of the detector:
  The Green LED will instantly blink continuously as long as the masking object exists.
  If the masking object exists for more than 90 seconds, the orange LED will glow continuously, and the "MASK" (Anti-masking) relay will be operated for at least 2 seconds and for as long as the masking exists.

Specifications

Power Supply	12V DC
Current drain	Standby 45 mA, Maximum 130 mA
Alarm relay contacts withstand (RELAY1, RELAY2)	15V, 30 mA
Resistance of anti-masking relay contacts (MASK)	15V, 30 mA
Resistance of tamper switch contacts	15V, 30 mA
Warm-up time	1 minute
Alarm relay activation time	2 seconds by default (programmable between 1 second to 99 minutes. See pages 16 paragraph 21).
Anti-masking relay (MASK) activation time	2 seconds at least and for as long as the masking exists.
Anti-masking response time	About 1 minute (Programmable from 1 to 99 cycles. Each cycle takes 3 seconds. See pages 16 paragraph 20).
Detection range	Horizontal angle – up to 180^0. Distance of up to 12 meters (See page 5-9).
Operating temperature	-37 to + 70^0C

Remote Control RM-1

Operating guide



EXIT

SEND

ON/OFF

SAVE

DELETE/CHANGE

HELP

Symbols
!"#$%&'
()*+,-./;

ABC / abc

INTRODUCTION

RM-1 is a remote control device that works with the Multi-Zone detector and other products of MAXIMUM Security (1984) Ltd.
RM-1 is an optional product and complementary accessory for Multi-Zone. It can be purchased separately.

This guide refers to the operation of RM-1 with the Multi-Zone detector only.

Below is a partial list (*) of features you can set/ program in the Multi-Zone detector by means of the **RM-1:**

1. PIR sensitivity and pulse count for each of six PIR sensors.
2. Microwave sensitivity and pulse count for each of the three Microwave sensors.
3. Movement direction to be detected by the detector.
4. Anti-masking sensitivity.
5. Activation time and the logics (N.C. / N.O.) of each of the three relays.
6. Time limit between two PIR sensors pair detection events.
7. LED indicators enabling/ disabling.
8. Enabling/ disabling of a tone heard upon each detection event.
9. Sensitivity of shock & vibration sensor.
10. **RM-1** Remote Control can display the detectors' technical status report and a report of detection history of each detector.

(*) All features that can be set/ programmed in the Multi-Zone detector by means of the **RM-1** Remote Control are described in details on pages 27-33.

Power ON/ OFF

The power button is located in the top right corner of the keyboard.
A short press will switch ON the Remote Control.
To switch OFF the Remote Control, press and hold the power button until it switches OFF (press for about 2 seconds).
Switching OFF would be possible only after you exit the menu to an upper level.
In order to extend the battery life, the Remote Control power will go OFF automatically if its keyboard is not in use for more than 3 minutes.

Navigation

There are 2 ways to enter any feature menu:
1. Use the arrows to select the required feature, then press ENTER.
2. Directly enter the number alongside the required feature.
   Do the same to set the value/ parameter once you are inside the feature menu.

Programming (assigning) a code to the detector

1 .Connect the power supply to the detector and wait 60 seconds for the detector to warm up.
During that time, a 60 second countdown begins in the detector's built-in display. When the countdown ends, 3 short tones will be heard to indicate that the detector is now ready for work.
During the countdown, red, green and yellow LED indicators will blink one after another on the top of the detector. At the end of procedure 3 short beeps will be heard.

2. Verify detector case is opened.

3. Verify feature number 46 (IR) is enabled in the detector (see the last feature of the above table on page 21. You should exit the programming menu before programming the code.

4. Switch ON the Remote Control and select:
DETECTORS → Multi-Zone → **NEW DEVICE**

5. ENTER CODE [- - - -] (Enter a 4 digit code you assign to the detector Do not use zero "0"!).

6. Aim the Remote Control towards the detector, then press **SEND** (the power key).

7. Once the code from the Remote Control is received by the Detector, the Remote Control screen will display **OK**.

Entering programming and programming execution

Remarks

1. All the features that can be set/ programmed in the Multi-Zone detector by means of the **RM-1** Remote Control are described in details on pages 28-34.
2. Once you program (change) any feature value, in most cases, you need to enter SAVE to validate the change you did.
3. In order to program the detector, its case must be closed.

1. Make sure the detector's case is closed and the anti-masking study procedure is completed.
2. Switch ON the Remote Control and select:
DETECTORS → Multi-Zone → **Exist Device**
3. ENTER CODE [**- - - -**] (Enter the 4 digit detector code you wish to handle. Do not use zero "0"!).
4. Press **ENTER**

5. Press READ DETECTOR if you want to extract the detector's parameter list to the Remote Control.
   Then, you will have 3 options:
   a. Save, under any name, the parameters in the Remote Control memory.
   b. Modify the parameters in the Remote Control and **SEND** them back to the detector in order to modify its setting.
   c. **SAVE**, under any name, the modified parameters in the Remote Control memory.

6. Press SAVED PROGRAM to load the list of saved programs (the programs you saved in the previous paragraph).
   Press any program title to display its list of parameters, after which you have 3 options:
   a. **SEND** the original parameters to the detector.
   b. Modify the parameters on the Remote Control and **SEND** them to the detector in order to modify its setting.
   c. **SAVE** the modified parameters under the same program name or under a different program name in the Remote Control memory.

7. Press Prog. Detector if you wish to display a list of all programmable detector features.
   Press any program title to display its list of parameters, after which you have 3 options:
   a. **SEND** the original parameters to the detector.
   b. Modify the parameters on the Remote Control and **SEND** them to the detector in order to modify its setting.
   c. **SAVE** the modified parameters under the same program name or under a different program name in the Remote Control memory.

8. Pressing Restrictions enables two options:
   a. Restrict the detector to read only mode – It means the detector's values (parameters) can be read off by the Remote Control without possibility to program the detector by means of the Remote Control.
   b. Delete a code assigned (programmed) to detector.
      In case you wish to re-program a code to the detector, you have to program (assign) again a code to the detector as described on page 26.

Programming the detector by the Remote Control

No.	Feature	Display	Description	Common characteristic
1	LED indicators	LEDS	Enable/disable LED indicators	**LED indicators**
2	Tone indication	BUZZER	Enable/disable tone indication upon each detection event.	**Tone indication**
3	Shock & vibration detection sensitivity	VIBRATION	Programming the shock & vibration detection sensitivity from 00 to 99 (00 = disabled).	**Shock & vibration detection sensitivity**
4	Left PIR sensors pair sensitivity and pulse count	PAIR1	Programming the Left PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was programmed with different value than lower PIR sensor (see paragraphs 37 and 38 of this table). You can program the pulse count as well (01 - 11).	**PIR sensors pair sensitivity and pulse count**
5	Middle PIR sensors pair sensitivity and pulse count	PAIR2	Programming the Middle PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was programmed with different value than lower PIR sensor (see paragraphs 39 and 40 of this table). You can program the pulse count as well (01 - 11).	
6	Right PIR sensors pair sensitivity and pulse count	PAIR3	Programming the Middle PIR sensors pair sensitivity (00 to 63). If the display shows "- -" it means that the upper PIR sensor was	

			programmed with different value than lower PIR sensor (see paragraphs 41 and 42 of this table). You can program the pulse count as well (01 - 11).	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
7	Left microwave sensor detection sensitivity and pulse count	MICROWAVE 1	Programming the Left Microwave sensor detection sensitivity (00 to 63). You can program the pulse count as well (01 - 50).	**Microwave sensor detection sensitivity and Pulse Count**
8	Middle microwave sensor detection sensitivity and Pulse Count	MICROWAVE 2	Programming the middle microwave sensor detection sensitivity (00 to 63). You can program the pulse count as well (01 - 50).	
9	Right microwave sensor detection sensitivity and pulse count	MICROWAVE 3	Programming the Right Microwave sensor detection sensitivity (00 to 63). You can program the pulse count as well (01 - 50).	
10	Anti-masking detection sensitivity and response time.	ANTI-MASK	Anti-masking detection sensitivity (00-10). You can program the Anti-masking response time as well (01 -99 test cycles, duration of each cycle is about 3 seconds).	**Anti-masking detection sensitivity and response time.**
11	RELAY1 activation time and logics (N.C. / N.O.)	RELAY 1	RELAY1 activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes otherwise it's in seconds.	**RELAY activation time and logics (N.C. / N.O.)**

			You can program the relay and logics as well (N.C. / N.O.).	
12	RELAY2 activation time and logics (N.C. / N.O.)	RELAY 2	RELAY2 activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes otherwise it's in seconds. You can program the relay and logics as well (N.C. / N.O.). Note: this relay is activated also in case of shock & vibration detection.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
13	MASK relay activation time and logics (N.C. / N.O.)	RELAY 3	Note: this feature will be valid only if feature No. 9 or 10 from this list was activated. MASK relay activation time (1-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes otherwise it's in seconds. You can program the relay and logics as well (N.C. / N.O.).	
14	In order to activate the alarm, it is enough to receive detection only in the **Left** pair of PIR sensors.	DETECT. TERM DIRECTION PAIR 1	In order to activate the alarm, it is enough to receive detection only in the **Left** pair of PIR sensors.	**In order to activate the alarm, it is enough to receive detection only in one pair of PIR sensors.**
14	In order to activate the alarm, it is enough to receive detection only in the **Middle** pair of PIR sensors.	DETECT. TERM DIRECTION PAIR 2	In order to activate the alarm, it is enough to receive detection only in the **Middle** pair of PIR sensors.	

14	In order to activate the alarm, it is enough to receive detection only in the **Right** pair of PIR sensors.	DETECT. TERM DIRECTION PAIR 3	In order to activate the alarm, it is enough to receive detection only in the **Right** pair of PIR sensors.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
14	PIR movement detection direction Left → Middle	DETECT. TERM DIRECTION PAIR 1- PAIR2	In order to activate the alarm RELAY1, there should be a detection by the Left PIR sensors pair and then in the Middle PIR sensors pair	**Detection direction**
14	PIR movement detection direction Left ← Middle	DETECT. TERM DIRECTION PAIR 2- PAIR1	In order to activate the alarm RELAY1, there should be a detection by the Middle PIR sensors pair and then in the Left PIR sensors pair	
14	PIR movement detection direction Middle → Right	DETECT. TERM DIRECTION PAIR 2- PAIR3	In order to activate the alarm RELAY1, there should be a detection by the Middle PIR sensors pair and then in the Right PIR sensors pair	
14	PIR movement detection direction Right → Middle	DETECT. TERM DIRECTION PAIR 3- PAIR2	In order to activate the alarm RELAY1, there should be a detection by the Right PIR sensors pair and then in the Middle PIR sensors pair	
14	PIR movement detection direction Left → Middle → Right	DETECT. TERM DIRECTION PAIR 1- PAIR2- PAIR3	In order to activate the alarm RELAY1, there should be a detection by the Left PIR sensors pair, then in the Middle PIR sensors pair and then in the Right PIR sensors pair.	
14	PIR movement detection direction Right → Middle → Left	DETECT. TERM DIRECTION PAIR 3- PAIR2- PAIR1	In order to activate the alarm RELAY1, there should be a detection by the Right PIR	

			sensors pair, then in the Middle PIR sensors pair and then in the Left PIR sensors pair.	
14	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. LEFT → MIDDLE	DETECT. TERM TIME PAIR1-PAIR2	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximal legal time between **Left** PIR sensors pair detection and **Middle** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	**Time limit between two PIR sensors pair detection events.**
No.	**Feature**	**Display**	**Description**	**Common characteristic**
14	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. LEFT ← MIDDLE	DETECT. TERM TIME PAIR2-PAIR1	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Middle** PIR sensors pair detection and **Left** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
14	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection.	DETECT. TERM TIME PAIR2-PAIR3	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can	

	MIDDLE → RIGHT		program the maximum legal time between **Middle** PIR sensors pair detection and **Right** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
14	Time limit between Left PIR sensors pair detection and Middle PIR sensors pair detection. MIDDLE ← RIGHT	DETECT. TERM TIME PAIR3- PAIR2	Between one detection event of PIR sensors pair and the following one there is a period of time. Here you can program the maximum legal time between **Right** PIR sensors pair detection and **Middle** PIR sensors pair detection. (00-99 Seconds or Minutes). When the two decimal points appear, the given time is in minutes, otherwise it's in seconds.	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
15	Sensitivity and pulse count of **Lower-left** PIR sensor	PIR 1	Programming sensitivity of the **Lower-left** PIR sensor (00 to 63). You can program the pulse count as well (01 - 11).	**PIR sensitivity and pulse count for each of the six PIR sensors**
16	Sensitivity and pulse count of **Upper-left** PIR sensor	PIR 2	Programming the **Upper-left** PIR sensor sensitivity (00 to 63). You can program the pulse count as well (01 - 11).	
17	Sensitivity and pulse count of	PIR 3	Programming the **Lower-Middle** PIR	

	Lower-Middle PIR sensor		sensor sensitivity (00 to 63). You can program the pulse count as well (01 - 11).	
18	Sensitivity and pulse count of **Upper- Middle** PIR sensor	PIR 4	Programming the **Upper- Middle** PIR sensor sensitivity (00 to 63). You can program the pulse count as well (01 - 11).	
19	Sensitivity and pulse count of **Lower- Right** PIR sensor	PIR 5	Programming the **Lower- Right** PIR sensor sensitivity (00 to 63). You can program the pulse count as well (01 - 11).	
20	Sensitivity and pulse count of **Upper- Right** PIR sensor	PIR 6	Programming the **Upper- Right** PIR sensor sensitivity (00 to 63). You can program the pulse count as well (01 - 11).	
No.	**Feature**	**Display**	**Description**	**Common characteristic**
21	Not in use	PIR WIDTH	For factory use only	**Not in use**
22	Reports	Reports	Receipt of technical status report of the detector including at least the following detection events: Alarm, Anti-masking, Low Voltage, Power Supply Level, When was the detector connected to the power in first time, How many times the detector was connected to the power, the temperature inside the detector (See page 35, 36).	**Reports**
23	A command to perform an Anti-masking study procedure	MASK LEARN	A command to perform an Anti-masking study procedure (See page 11, 12).	**A command to perform an Anti-masking study procedure**

Displaying the Multi-Zone detector's status reports at the Remote Control RM-1

There are two ways to access the detector's status report *(the option **Reports**)*:

a. Through the main screen (option No.5), where you will be able to review only the detector's status reports stored in the Remote Control memory.

b. Through the general programming list (option No. 22), where you will be able to read (draw) the detector's status report to the Remote Control and even to save it there. Here is the route to that programming list:
Detectors → Multi-Zone → Exist Device → Enter Device Code→…

Program Detector→**Reports** (Option No. 22).

Reading (drawing) the detector's status report to the Remote Control

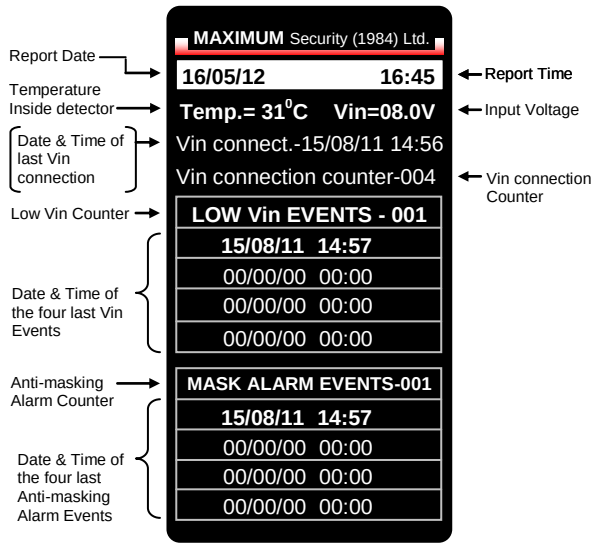
1. Make sure the detector's case is totally closed.

2. Press in the Remote Control:
Detectors→ Multi-Zone → Exist Device → Enter Device Code→

Program Detector → Reports → **Read Report** (option No. 22).

3. Now you will be requested to enter the Date & Time, and to confirm by pressing **ENTER**.

4. The Remote Control will display the information it reads from the detector. It will look like this:



- You can move in the report lines by using the arrow keys ↑ ↓

- If you press **ENTER** on a selected text, the text will be enlarged for your convenience.

Saving the detector's status report to the Remote Control memory

a. Press **SAVE.**

b. Enter a name.

c. Press **ENTER.**

Deleting the detector's status report from the Remote Control memory

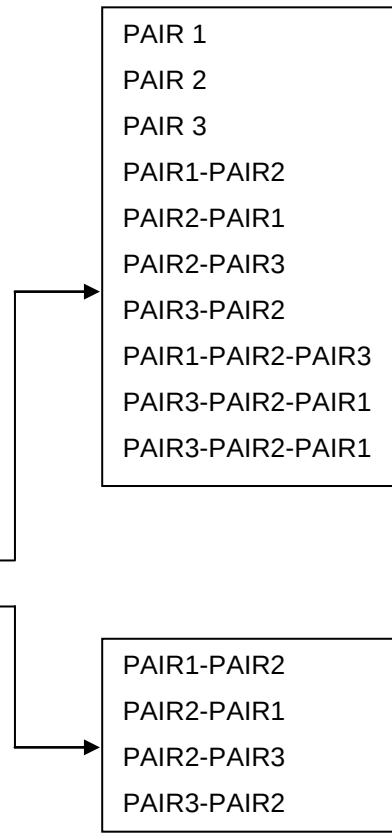
a. Select the report name**.**

b. Press **DELETE**.

c. Press **ENTER** to confirm.

Programming list as appears in the Remote Control

1. LEDS
2. BUZZER
3. VIBRATIONS
4. PAIR 1
5. PAIR 2
6. PAIR 3
7. MICROWAVE 1
8. MICROWAVE 2
9. MICROWAVE 3
10. ANTI-MASK
11. RELAY 1
12. RELAY 2
13. RELAY 3
14. DETECT. TERM
    1. DIRECTION
    2. TIME
15. PIR 1
16. PIR 2
17. PIR 3
18. PIR 4
19. PIR 5
20. PIR 6
21. PIR WIDTH
22. REPORTS
23. MASK LERN



Specifications of the Power Supply and batteries

Danger: Do not charge regular batteries which are not rechargeable batteries!!!

- Batteries type: 3 x AAA rechargeable batteries.
- Charger output: 5V, 1A DC.
- Operation duration: about 5 hours with 1000mA/HPR batteries.
- Plug polarity: Plus=Internal, Minus=External.

Certificate of warranty

MAXIMUM Electronics (1984) Security Ltd. thanks you for buying its products, which have proven their reliability and effectiveness over many years.
To ensure proper operation and functioning of the product and benefit from its features to the utmost, read the Installation & Operating instructions carefully and follow them step by step.

MAXIMUM Electronics Security (1984) Ltd. (hereinafter – the "Manufacturer") hereby warrantees/guarantees the products manufactured by it (hereinafter – "Product" or "Products") against defects in production or in materials discovered during their reasonable use and servicing, in accordance with the Manufacturer's instructions, recommendations and limitations and subject to the provisions of this Certificate of Warranty.
This Warranty is for a limited period of 12 months from the last day of the week and the year whose number is printed on the electronic card (PCB) and/or electronically encoded in one of the Product's components.

This Warranty is limited to the repair of a defective Product, or its replacement at the Manufacturer's option, during the Warranty period, subject to reasonable use and servicing in accordance with the Manufacturer's instructions, recommendations and limitations.

To realize the Warranty rights, the Product must be sent to the Manufacturer securely packaged and accompanied by a document describing the problem, with insurance and freight prepaid by the sender.

The Manufacturer's products boast a high standard of reliability, proven in tens of thousands of products over many years. The percentage of problems encountered in them is virtually nil, therefore a Product must be carefully checked (according to the operating instructions) before sending it to the Manufacturer for examination and/or servicing in the Warranty framework.

In the event that the installer and/or user and/or customer and/or operator of a Product (hereinafter – the "Customer") returned the Product to the Manufacturer on the grounds that it is defective and received in exchange from the Manufacturer a functional product, and upon examination the Manufacturer found that the returned Product was not defective – the Customer will be charged the Product's full value as consideration for the resources invested by the Manufacturer in its examination.

The Manufacturer shall in no case be liable for damage or loss (including monetary loss), whether direct, indirect, accidental, circumstantial or otherwise, entailed in the dismantling or reinstallation of the Product.

In case the Manufacturer decides to replace a returned Product that was found to be defective, the Customer hereby gives its consent to receiving – at no added cost – also a higher version of the Product.

This Warranty is not valid in the following cases: incorrect installation, installation and/or operation not in accordance with the Manufacturer's instructions, alteration, misuse, accident, sabotage, repair or servicing by someone other than the Manufacturer and/or Force majeure.

The Customer must take all necessary precautions to prevent and eliminate any discharge of static electricity or other interference that could affect the Product's functioning.

This Warranty is exclusive and explicit and replaces any other warranty, commitment or guarantee – whether written, oral or implied.
The Manufacturer will in no case be liable toward anyone for a breach of this Certificate of Warranty or of any of its foregoing provisions.
This Certificate of Warranty may not be altered, exchanged or expanded, and the Manufacturer does not authorize anyone to do so on its behalf – including any distributor, dealer, agent, representative or employee of the Manufacturer operating by its authority or on assignment from it.

This Warranty applies to the Product only!
Any other product, accessory or adjunct used together with the Product (including batteries) will be covered solely by its exclusive warranty, if such exists.

The Manufacturer shall in no case be liable for damage or loss, whether direct, indirect, accidental, circumstantial or otherwise, caused by the proper and/or improper functioning of the Product due to use of other products, accessories or adjuncts (including batteries) together with the Product.

The Manufacturer does not claim that the Product is immune to malicious neutralization, bypass, sabotage or deception, or that it will prevent in every case death or physical and/or mental injury due to burglary, robbery, fire or the like, or that the Product will provide in all cases adequate and/or suitable warning or protection.

The Customer understands that correct installation and maintenance, in accordance with the Manufacturer's instructions, recommendations and limitations, merely reduces the risk of failure to give warning in cases such as burglary, robbery and fire, but in no way ensures or guarantees that such cases will not occur or will not result in death or physical and/or mental injury and/or damage to property.

The Manufacturer shall in no case be liable for death or physical and/or mental injury and/or damage to property and/or loss of any kind, whether direct, indirect, accidental, circumstantial or otherwise, on the grounds that the Product did not operate/function properly and/or as expected and/or according to the description in its specification or in any other documentation.
The Manufacturer shall in no case be liable for damage or loss (including death or physical and/or mental injury and/or damage to property), whether direct, indirect, accidental, circumstantial or otherwise, caused through use of and/or reliance upon the Product.
In the event that the Manufacturer is held liable, directly, indirectly, circumstantially or otherwise, for any loss or damage according to the terms of this limited Warranty or otherwise (irrespective of its cause or origin), the maximum amount of the Manufacturer's warranty and/or guarantee shall not exceed in any case the Product's price, and it shall be payable as full and final consideration, and not as a penalty, and shall constitute the entire and sole compensation by the Manufacturer.

It is hereby clarified that the Warranty under this Certificate of Warranty does not cover anything not explicitly and specifically referred to herein.

It is hereby agreed that the Customer waives in advance any claim or contention against the Manufacturer.
Should the Customer and/or a person on his/her behalf nevertheless file suit against the Manufacturer, the Customer and/or that person in such case shall bear all their costs and the Manufacturer's costs arising therefrom, including lawyer's fees, and shall indemnify the Manufacturer for the full amount adjudicated against it in a decision, if any, rendered by any court or arbitrator.

Warning!
The Customer must make sure that the Product meets all his/her requirements, and he/she must comply fully with the installation and operating instructions and *inter alia* check the Product and the entire system at least once a week including under field conditions.
For various reasons (but not only those set out below), changes in environmental conditions and/or electric or electronic interference and/or malicious damage to the Product could cause the Product to function in an unforeseen manner.

The Customer must take all precautions to ensure his/her own safety and security and that of his/her property.

The Customer confirms that he/she read all the conditions of this Certificate of Warranty and he/she agrees thereto.
Installation and/or operation of the Product shall be deemed as the Customer's agreement to all the conditions of this Certificate of Warranty.

www.maximum.co.il