



User manual
Mobeye® i110

SW version 5.N

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Attention! Very important

This user manual contains important guidelines for the installation and usage of the Mobeye® i110. Please read these thoroughly before you start using the Mobeye®!

In case of damage caused by disregarding the guidelines, the warranty expires.

The user must regularly check the proper functioning of the Mobeye®. The manufacturer cannot be held liable for any damage caused by any incorrect use or incorrect functioning of the Mobeye®.

Safety guidelines

- The permitted ambient temperature during operation may not be exceeded (not lower than -10°C and not higher than 55°C).
- The device is intended for use in dry and clean places.
- Protect the device from moisture, heat and water splashing.
- The guidelines for the battery usage must be regarded.
- Do not expose the device to strong vibrations.
- Do not let it fall from height.
- Do not use in an environment where any inflammable gases, vapours or dust are present or could be present.
- Reparation of the device may only be carried out by people, trained for Mobeye® repair.
- In case the device must be repaired, only original replacement components may be used. The use of different parts may lead to damage of the Mobeye®.

Use in accordance with the regulation

The use of this device in accordance with the regulation is the generation of SMS text messages and telephone calls after detection of a motion by the motion detector or of a temperature that outreaches the programmed limits.

Other usages are not permitted.

Introduction

The Mobeye[®] is an easy to install alarm system that will notify you in case of a detection using the built-in GSM.

To use the Mobeye[®] you will need a SIM-card of any provider. Typical applications are the security of places without any power supply or the temporary security of objects.



The Mobeye[®] has the following features.

Alarm notifications after movement detection

In case of the detection of an intruder, the Mobeye[®] will send an SMS text message to your phone(s). The Mobeye[®] will also call the phone numbers in order to be sure the message is not missed. It is also possible to let the siren sound. After an alarm the Mobeye will be in standby status for about 5 minutes. Hereafter it is able to report new movements.

Alarm notifications after detection out of range temperature

It is possible to program a minimum and/or maximum temperature. The Mobeye will monitor the actual temperature and sends an alert as soon as the temperature reaches the limit.

Low battery message

The Mobeye[®] will send an SMS text message in case the batteries must be replaced. After this, you need to change the batteries as soon as possible. For some time the Mobeye[®] remains functioning as normal. Even when the Mobeye[®] is unset, it will measure the battery strength and send the message.

1. TO GET READY IN FOUR STEPS

To get started with the Mobeye[®] only four steps are needed.

1. Place the SIM card in the Mobeye[®].
Make sure this SIM card is not secured by a PIN code.
2. Place the four batteries.
3. Enter at least one phone number in the Mobeye[®].
4. Check the settings

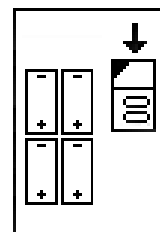
In this chapter these steps are explained.

1.1 STEP 1: SIM CARD

To use the Mobeye[®] a SIM card of any provider is needed. On this SIM card, the PIN code security needs to be disabled. If you have a SIM card with PIN code, you can disable this using any mobile phone and switch off the PIN code security. Please consult the manual of the used mobile phone for the procedure.

The SIM card needs to be placed before the batteries. When using a prepaid SIM card, take care of the remaining value. Apart from that it is wise to set a recurrent test message in the menu so the card will be used at least once a month.

- Open the back cover of the Mobeye[®]
- Place the SIM card in the holder. For opening/closing, shift the cover slightly.



1.2 STEP 2: PLACE THE BATTERIES

Place the four lithium 3,0 volt batteries (CR123). When replacing the batteries, all settings remain unchanged.

After placing the SIM card and the batteries, the Mobeye[®] will perform a self test during 1 minute. During the test, the light is red.

In case the light is flashing red, a problem with the SIM card is detected. A reason could be no SIM card was placed, or the PIN code security of the SIM card was not disabled.

Close the Mobeye[®] using the 4 screws.

1.3 STEP 3: PROGRAM THE PHONE NUMBERS

You need to program at least one phone number in the unit. This phone number is used to send the messages to.

- Enter your 4 digit user code (factory setting: "1111")
- Press "menu"
- Enter "01" (01 for the 1st phone number, 02 for the 2nd phone number)
- Press "OK"
- Enter the phone number (e.g. 0612345678)
- Press "OK"

The light turns green and a confirmation melody is played.

The Mobeye[®] is ready to use.

1.4 STEP 4: CHECK THE SETTINGS

The settings can be sent to the set telephone number as SMS text message. In this way you also check the correct working of the SIM card.

- Enter your 4 digit user code (factory setting: "1111")
- Press "menu"
- Enter "10"
- Press "OK"

Within ca. 30 seconds the set phone number will receive the list with settings.

2. SWITCHING THE MOTION DETECTOR ON/OFF

2.1 SWITCHING ON

To activate the Mobeye[®] motion detector with your personal user code.

- Enter your user code
- Press “OK”

The light turns red shortly and an indication tone is started. This repetitive tone will last during the exit delay of 60 seconds. As soon as the acoustic signal stops, the Mobeye[®] is active.

In case the user code is entered incorrectly 3 times, the indicator turns red and the Mobeye[®] will be blocked during 10 minutes.

2.2 SWITCHING OFF

To de-activate the Mobeye[®] motion detector with your personal user code.

- Enter your user code
- Press “OK”

The light switches to green and a confirmation melody is played.

3. MOBEYE SETTINGS

The Mobeye® settings can be added via the keypad and SMS text messages. First the method of programming is discussed, next the explanation of the settings.

3.1 CONFIGURATION

To change the settings, please follow the instructions:

- Enter your 4-digit personal code
- Press “menu” -> light turns green
- Enter the menu number belonging to the setting to be changed.
- Press “OK”
- Enter the new setting
- Press “OK”. The light switches off, a confirmation melody is played



In case of false entries, the light turns red and a short beep will sound. The menu can be left from any position, by twice pressing “OK”.

Following settings are possible:

Menu nr	Description	Options	Factory setting
00	Change user code	4 digit code	1111
01	Change 1 st tel.nr.	Tel. number (0 to delete)	-
02	Change 2 nd tel.nr.	Tel. number (0 to delete)	-
03	Sensor sensitivity	1,2	1 (high)
04	Entry delay	15, 30, 45 or 60	15 (sec.)
05	Interval test message	0-30 (days)	0 (no message)
07	Entry indication	0 (off), 1 (on), 2 (LED)	0
08	Siren	0 (off), 1 (on)	0
41	Change minimum temperature	000-050 (0 until 50°C) 110-101 (-10 until -1 °C) 999 = off	999
42	Change maximum temperature	000-050 (0 until 50°C) 110-101 (-10 until -1 °C) 999 = off	999
49	Correction factor temperature	01-09 (+1 to +9 °C) 11-19 (-1 to -9 °C) 00 (no correction)	00

3.2 USER CODE

The user code is the code for switching on/off the active status. In the active status the Mobeye® will detect movements. The user code is also needed to program the settings or activate the special functions. It is possible to change the user code to any 4-digit number.

In case the user code is entered incorrectly 3 times, the indicator turns red and the Mobeye® will be blocked during 10 minutes.

3.3 SMS RECOGNITION TEXT

It is possible to send an extra text in the SMS text messages, in order to recognize from which Mobeye® the message has been sent. The first part of the SMS text message will always contain standard text like ‘Mobeye alarm’, or ‘Test message OK’. The recognition text will be written after the standard text.

This text (max. 20 characters) can be programmed by sending an SMS to the Mobeye®.

Changing the recognition text cannot be done via the keypad, only via sending an SMS text message.

Switch the Mobeye® into the programming mode. In this mode the GSM module is switched on and is able to receive messages.

- Enter your 4-digit personal code. (factory setting: “1111”)
- Press “menu”
- Press “21” -> light turns green
- Press “OK”

The Mobeye® first prepares the programming mode. The light flashes red (interval ca. 1 sec). As soon as the light turns green, the Mobeye® is able to receive SMS-messages.

In order to program the extra message text, send an SMS in following structure:

- <user code>.name.xxxxxx.

Please regard the dots between and behind the commands, command 'name' in small letters!

Example: enter the text 'boat evergreen' (e.g. user code 1111)

- 1111 .name.boat evergreen.

You will hear two short beeps in case of a correct command.

Leave the menu by pressing "OK" twice.

3.4 TELEPHONE NUMBERS

The SMS alarm message and voice ('alarm signal') message can be sent to one or two telephone number. At least one telephone number must be entered in the Mobeye®. The test messages and low battery messages are sent to the first programmed telephone number.

3.5 ALARM TYPE

As factory default the Mobeye® will send an SMS text message and call to the set contact persons after an intruder or temperature alarm. It is possible to change this to only an SMS or only a call.

For this setting please choose between option 0, 1 or 2, as explained in the table.

MESSAGE	TYPE	Options		
		0	1	2
Intruder alarm	SMS	●	●	○
	Call	●	○	●
Temperature alarm	SMS	●	●	●
	Call	●	○	●
'Battery low' *	SMS	●	●	●
Test message *	SMS	●	●	●

*only to first contact person

3.6 THE SENSOR SENSITIVITY

The detectors' sensitivity can be changed to a high or low(er) value.

1= High

2 = Low

In the high sensitivity mode each detection will provoke an alarm. In the lower sensitivity mode the alarm will be provoked in case two detections are measured within a time frame of 15 seconds. This mode prevents false alarms in case of e.g. draught and is most suitable in case the sensor is directed towards an open space.

3.7 ENTRY DELAY

It is possible to choose from 4 entry delay times. The entry delay is the time between the moment of detection and the moment of sending the first SMS text message.

Take care: in case the GSM network has a low reach, the time can be longer in case the network connection was not established within the time of the entry delay.

3.8 ENTRY INDICATION

As factory setting there is no entry indication. It is possible to hear an indication beep during the entry delay. This can be used as a reminder that the Mobeye is in active mode. It is also possible to let the LED indicator flash a few times, just as indicator for the user.

3.9 SIREN

After the entry delay, the siren can sound during two minutes. At the same time the SMS text messages and telephone calls will be done. At soon as the Mobeye is switched off, the siren will stop. It is possible to test the loud alarm. During the test the siren will be heard until it is cancelled by <OK> <OK>. This test is also possible in case the Mobeye i110 is programmed as a silent alarm.

3.10 TEMPERATURE ALARM

The Mobeye[®] is able to send a temperature alarm as soon as the actual temperature reaches a programmed min. or max. level. This function can be used independently of the motion detection. As soon as the temperature is too high or too low, an SMS text message is sent, followed by a telephone call. As long as the out of range temperature remains, the report will be repeated hourly. Once the temperature is back to normal, the Mobeye[®] confirms this to you.

This function is active as soon as a temperature limit is programmed. By resetting the limits, the function becomes inactive.

3.11 ADJUSTING THE TEMPERATURE

The built-in temperature sensor may have a standard deviation of the actual temperature. In this case, the deviation will be similar at all temperatures. It is possible to correct the temperature deviation in the Mobeye i110. In the SMS setting summary, you see the reported temperature. If a correction is specified, it is processed in the displayed temperature; the correction factor itself is displayed separately.

Example: Mobeye temperature: 13 C. Actual temperature: 14 C. To correct this deviation, one degree should be added.

3.12 INTERVAL TEST MESSAGE

The Mobeye[®] can send test messages. Through these test reports you will be ascertained of the proper functioning of your Mobeye. You can set the interval between the reports indicate the number of days between reports. This is adjustable between 0 (no test reported) and 30 (monthly test message). Note: the interval of 1 day will result in a daily test message; the exact time between the messages will be about 24 hours.

The smaller the interval between the test reports, the shorter is the battery life. The test message only works if the system is on or a temperature limit is set.

4. ADVANCED OPTIONS

4.1 REQUEST SETTINGS

The settings can be sent to the set telephone number as SMS text message. In this way you also check the correct working of the SIM card.

- Enter your 4 digit user code (factory setting: "1111")
- Press "menu"
- Enter "10"
- Press "OK"

Within ca. 30 seconds the set phone number will receive the list with settings.

4.2 RESET TO FACTORY SETTINGS

It is possible to reset the Mobeye® to factory settings.

- Enter your 4 digit user code (factory setting: "1111")
- Press "menu"
- Enter "99"
- Press "OK"

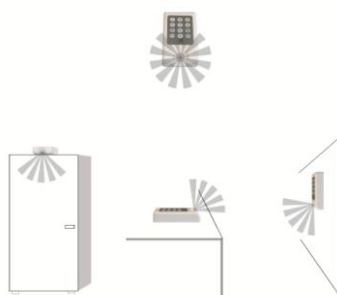
After several seconds a short confirmation tone is heard. The user code is also reset to 1111.

4.3 LEAVE THE MENU

The menu can be left from any position, by pressing "OK" twice.

4.4 POSITION OF MOBEYE

The built-in motion sensor has a 360° reach. The Mobeye® can be positioned both vertical as horizontal. It can be mounted to the wall, put down on its side in a cabinet, put down with its sensor upward or downward. In case you wish to hang the Mobeye®, the pre-punched holes can be opened, in order to hang it on crews.



In order to check the reach of the sensor, a sensor test can be executed.

- Enter your user code
- Press "menu"
- Press "11"
- Press "OK"
- A confirmation beep is heard. First the green light will be flashing. After about 30 seconds the light will be on continuously.

In this mode the sensor test can be done; each time the sensor detects a movement, a repeating beep will sound.

Leave the test by entering OK twice.

4.5 TEST GSM NETWORK STRENGTH

Before using the Mobeye® is it advised to test the GSM reach at the location.

- Enter your user code
- Press "menu"
- Press "12"
- Press "OK"

The Mobeye® now switches on the GSM modules and searches for all present networks. It also checks the network strength of the SIM card provider in the device. As soon as the GSM network is found, the light will turn green.

The GSM reach of the used SIM card can be read from the LED indicator:

LED	Description
Green during 30 seconds	Reach is good
Flashing green	Reach is bad
Red	No reach
Flashing red	No valid SIM card or Sim card is not pin code free

Besides, the telephone number at memory place 01 will receive an SMS text message, containing all existing GSM networks, sorted by provider. It also tells the strength per network.

This search function can take some minutes. In case you want to leave the function before it is ready, please press "OK" twice.

Warning

In case of a weak signal, the Mobeye® can still be used, but there is a risk that message cannot be sent or will be received with a delay. In case of no reach, it is advised to use a SIM card of a provider with a stronger network.

4.6 ALARM MONITORING CENTER

For some countries the Mobeye has been prepared to send the alarm and test message to an alarm monitoring center instead of to private telephone numbers. Please check the website or contact www.mobeye.eu to inquire for the actual status in your country.

5. ISSUE SOLVING

Error	Possible reason	Solution
Mobeye® cannot be switched on. You hear an error tone, the red light is turned on shortly.	No valid Telephone number was entered.	Enter a valid number.
The light is flashing during switching on.	No valid SIM card was entered or the SIM card was not made pin code free.	Check the SIM card.
It is impossible to change the settings. After entering your personal code, followed by menu, the error tone is played and the light turns red.	Mobeye is activated.	Switch off the Mobeye®.
No GSM reach during the GSM test	No network is available, belonging to the SIM cards provider.	Choose another network provider.
The light remains red.	You entered a false user code three times.	Wait 10 minutes and then re-enter the correct user code.
You do not receive a SMS with the settings.	Telephone number is not correct.	Re-program the telephone number Change the menunr.06 to '01'.
For other questions, please refer to the site www.mobeye.eu		

6. TECHNICAL DATA

- GSM: Tri Band EGSM 900/1800/1900 MHz compatible to the ETSI GSM Phase 2+ standard
- Output power:
Class 4 (2W @ 900 MHz)
Class 1 (1W @ 1800 and 1900 MHz)
- Temperature range: -10°C until +55°C
- Weight: ca. 275 gram incl. batteries
- Dimensions: 161 x 90 x 35 mm (LxWxH)
- Batteries: 4 x CR123 Lithium 3.0 V
- Power: 50 µA, short peaks of max. 2 A

Support

For support on technical problems regarding Mobeye® please contact info@mobeye.eu.

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Declaration of Conformity

Herewith we, Mobeye, declare that the product

Mobeye i-110

is in compliance with the essential requirements of the following European standards / EU Directives:

Directive 73/23/EEC (low voltage directive)

Directive IEC/EN 50130 Electromagnetic compatibility

Directive 1995/5/EC R&TTE (Radio & Telecommunications Terminal Equipment)

The conformity with the essential requirements of 1995/5/EC has been verified against:

ETSI EN 301 489-1 V1.5.1
ETSI EN 301 489-7 V1.2.1
ETSI EN 301 511 V9.0.2
CENELEC EN 60950:2001

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