



USER MANUAL

V1.4

Global Safety & Security Solutions Oy
www.globalsafety.fi

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1 – FEATURES AND TECHNICAL INFORMATION

1.1 Description of operations

mimas Lite+ is a personal safety device that functions over the GSM-network. The device is designed for enhancing personal safety. With **mimas** Lite+ it is possible to send an alarm message to for example a guard center and/or relatives and friends with just a push of a button. The device also includes a microphone and a speaker for voice communication.

mimas Lite+ suits everyone from lone workers such as guards and clerks to children and senior citizens. It is easy to use and reliable.

1.2 Functioning during alarm

mimas Lite+ sends information to predefined receivers with SMS when the push button is pressed or when the integrated movement detector indicates an alarm. If the GSM-network has a temporary service break or the signal strength is too low preventing the device from sending the information immediately **mimas** Lite+ continues pushing the messages and calls as long as the connection to the network is recovered or the battery empty.

After sending the alarm message **mimas** Lite+ makes an alarm call to a predefined number (alarm call number 1). If the call is not answered or if the line is open for less than 10 seconds* the device attempts to call another predefined number (alarm call number 2). If this call is, again, left unanswered or the line is open for less than 10 seconds **mimas** Lite+ starts to repeat the call routine. Both numbers are called a maximum of 15 times. If after this the call is yet left unanswered the device quits attempting to call and resets the alarm. The alarm call cannot be hung up from **mimas** Lite+ but only from the receivers end. The alarm call is active only 10 minutes during alarm, after which the connection is automatically hung up.

** The 10 second minimum requirement is set to prevent accidental answer-hang-up sequences (receivers mobile phone is in a pocket, fingering errors etc.).*

1.3 Technical specifications

Type	mimas Lite+
Version	1.14
GSM	Siemens MC55 900/1800 dual-band GSM
Buttons	- call button - ON/OFF
Indicator light	dual-colour led (green / red)
Antenna	dual-band 900/1800, integrated in enclosure
Data transmission	SMS, voice call, GSM-data
Battery	1300mAh LiPo
Enclosure	ABS-plastic,
Temperature range	-20...+50°C
Delivery package	mimas Lite+ battery user manual
Manufacturer	Global Safety & Security Solutions Oy www.globalsafety.fi
Restrictions	This product has not been designed, intended, inspected or approved to be used in any life support related use or any other critical application

1.4 Restrictions

All rights to this manual are reserved and owned solely by Global Safety & Security Solutions Oy (GSSS). All information furnished herein by GSSS is believed to be accurate and reliable. However no responsibility is assumed for the accuracy and use of this document, or any possible unintentionally made damages or unforeseen direct or indirect expenses or damages, loss of business profit, income or any other gain or assumed savings that are caused by the use of this device according to these instructions.

GSSS reserves the right to change the technical specifications or functions of its products without any written announcement.

This product has not been designed, intended, inspected or approved to be used in any life support related use or any other critical application!

GSSS will not bear any responsibilities of failures in the device if as a result of misuse of the instructions, incorrect or careless use of the device, or if the device is used to any other purpose or application than it is designed for, or if the device has been exposed to humidity, dust, extreme temperatures or environment conditions or fast change of these conditions, corrosion or oxidation, or the device has been under the influence of other chemical products, or any liquid or food has been pour onto the device, or if the device has been altered or connected to other devices, or opened or prepared with spare parts that are not approved by the manufacturer, or if the device has been installed incorrectly. Or if the failure has been caused because the device has been influenced by events out of the control of GSSS, including, but not limited to deficiencies in consumer goods that have limited operating time, such as batteries or damages of antennas.

NOTE! This device is not allowed to be used in any other purpose or application than it is designed for.

This device utilizes the GSM-standard for cellular technology and it is under same rules and regulations than mobile phones. These devices send and receive radio frequency energy. RF energy may cause some malfunctioning in some electronic equipment. Please check the laws and regulations on the use of cellular devices in the area where you use this device and check that the device will not cause any harmful consequences to other electronic devices. Do not allow children to play with the device. Children could hurt themselves or others or make unnecessary calls that increase your phone bills.

GSSS will not bare any responsibilities of the functionality of the device, if by any changes done or to be done to mobile networks by a third party, not depended on GSSS, or by any changes to SIM card versions, the functionality of the device will change, becomes difficult and/or will cease, even within the guarantee period of the device.

If the device for some reason or other, can not achieve connection to GSM network, GSSS will not bare any possible direct or indirect expenses caused by this failure.

To avoid interfering with explosive operations turn the device OFF if a blasting area or other potentially explosive atmosphere occur.

There is a lithium ion or lithium polymer rechargeable battery used in the device. Batteries are charged with a large amount of energy and if incorrectly used they can create danger. There is a double protection used in the **mimas** Lite+ – devices. Both the battery and the device include safety circuit, which will prevent a danger situation, if the device is used properly according to the instructions. When handling the battery, following procedures must be obeyed:

- the battery can only be charged with original charger
- do not heat the battery or mechanically strain the it by bending, twisting, shaking, pressing or squeezing
- do not place the battery in a direct sunlight or in a microwave or close to a fire
- do not expose to high temperature
- do not short circuit the battery and do not remove the battery connectors
- use only the original batteries approved by **mimas** Lite+ - manufacturer
- do not charge the battery in below zero temperatures
- do not try to repair damaged battery, change it to a new one

The manufacturer does not bare any responsibility of any damages caused by a misuse of above instructions. Used lithium batteries should be disposed by following the instructions of local authorities, using specially appointed locations and/or recycling.

The warranty of the device will cease to exist, if the device is used against these instructions or if the device is opened and/or dissemble. Opening the battery location cover is allowed.

Copying, altering and distribution of any part of this document are forbidden without written permission from the manufacturer.

1.5 Warranty and maintenance

There is a limited manufacturer's warranty and general service terms for these devices. These terms can be acquired from manufacturer.

2. GETTING STARTED

Before installation and use of the device, check restrictions (1.4 – Restrictions).

2.1 SIM-card

mimas Lite+ requires a SIM-card in order to function. Basically any service provider's SIM-card works, but there are certain limitations and recommendations:

REQUIREMENTS / RECOMMENDATIONS:

- + SMS and voice communication (minimum requirement)
- + secret number (prevents unnecessary calls to the device, optional)
- + prevention of advertisement SMS (prevents unnecessary SMS', optional)
- + GSM-data -feature* (enables quick support service, optional)
- + balance limiter (to prevent unreasonable phone bills caused by misuse)

FEATURES NOT RECOMMENDED:

- prepaid SIM-cards (limited operating time)
- call diversion or caller indication prevention

**GSM-data feature is not the same as GPRS. GSM-data means traditional 9600bps data service. For more information, contact your service provider.*

The SIM-card must be cleared from all numbers and messages. PIN-code query must also be turned off. Instructions to these procedures can be found from your mobile phone's manual. For more information contact your retailer.

2.2 Buttons

2.2.1 On / Off

mimas Lite+ starts up by pressing the button gently for approximately 2s with the help of a pencil or a small screwdriver. The device indicates the start with a short tone.

mimas Lite+ can also be shut off by pressing this button. The device indicates this procedure with three short signal tones.

The on/off button is designed so that the user would not accidentally turn the device off (when carried in a pocket for example).



2.2.2 Alarm

When the "ALARM" -button is pressed, the indicator LED lights red and the device gives a signal tone. **mimas** Lite+ sends an alarm message to predefined numbers (see 4.1 Phone numbers).

If an alarm call number is assigned to the "ALARM" button, the device also makes a phone call after sending the messages (see 4.1 –Phone numbers).

The red indicator light stays on until the alarm messages have been sent and possible voice call has ended.



2.3 Indicator lights

mimas Lite+ has a two-colour led to indicate the current state of the device.

When **mimas** Lite+ is turned on it connects to the GSM-network. During this process the indicator light blinks green rapidly. When battery is low the indicator light blinks red. In this case, please, charge the device when possible. When charging the device the indicator light rapidly blinks green. When battery is full and charging has ended the indicator light is turned off.

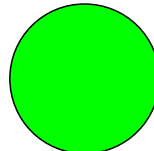
GREEN

Blinking rapidly:

- During startup
- Charging (when charger connected)

Blinking slowly:

- Normal state (connected to GSM-network)



RED

Blinking rapidly:

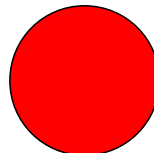
- Alarm button pushed

Static:

- Alarm in process

Blinking slowly:

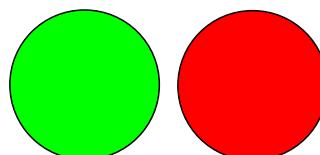
- Battery low



GREEN + RED

Blinking slowly:

- Not connected to network

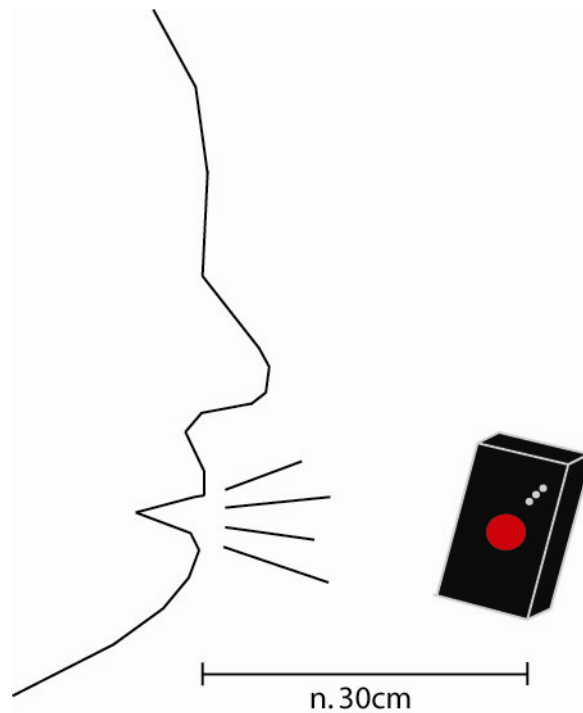


2.4 Voice communication

mimas Lite+ has a microphone and a speaker for voice communication. If the alarm call number(s) are set (see 4.1.3 – Alarm call), the device automatically activates a two-way audio communication during alarm.

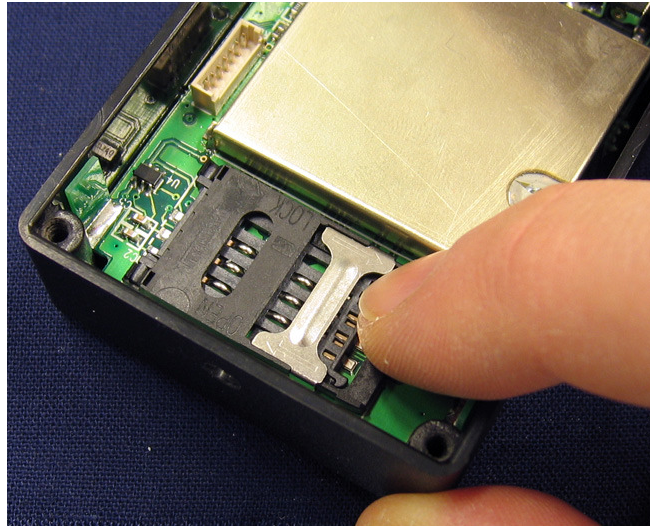
The best place for the device during voice communication is straight in front of the user, approximately 30 centimeters from his/her face. A significant deterioration in the volume occurs if **mimas** Lite+ is placed in a pocket or belt case.

The volume of the speaker and gain level of the microphone can be adjusted (see 4.5 – General settings).



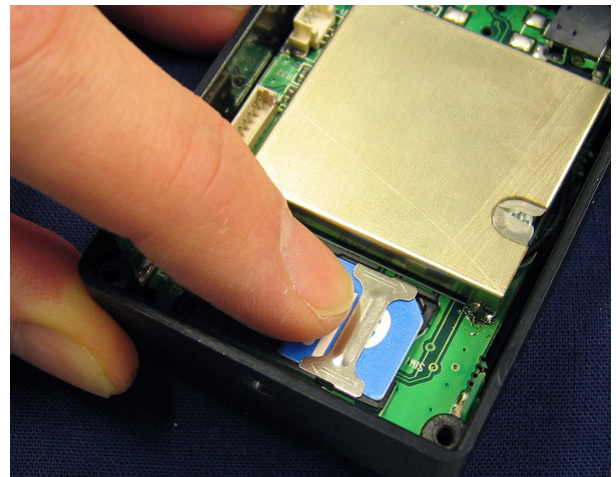
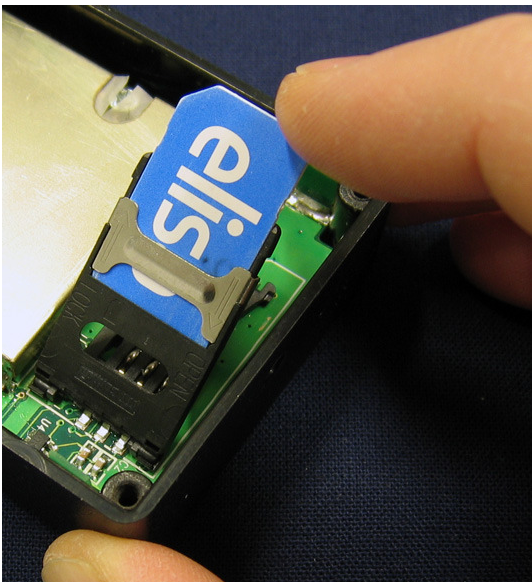
3. START-UP

3.1 Installing a SIM-card



1. Open the four screws holding the battery cover.

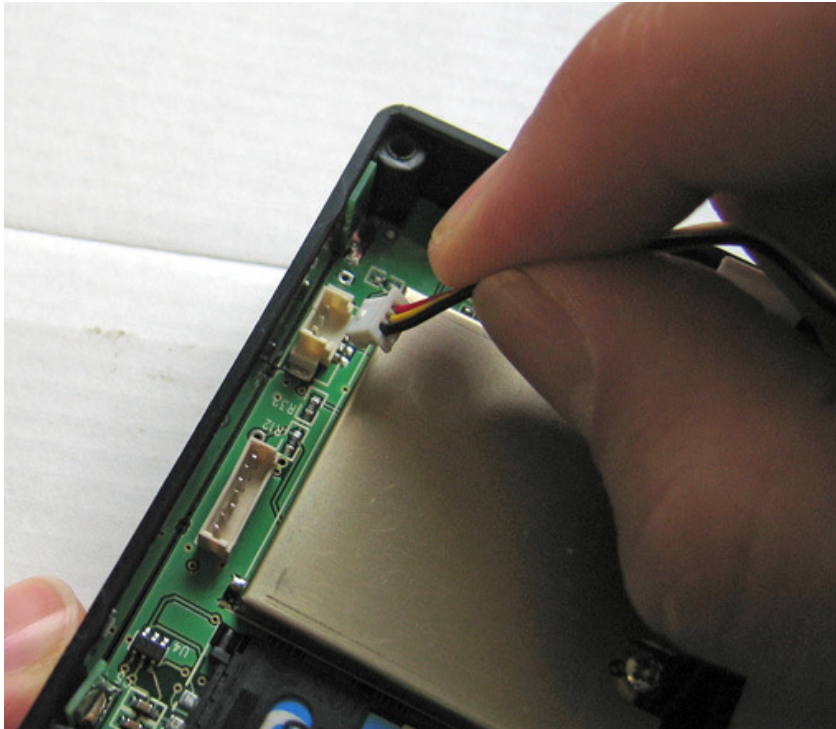
2. Open the SIM-card reader by pushing the metal clamp gently according the markings on the clamp and lift the holder up.



3. Place the SIM-card as presented in the picture (notice the direction of the bevelling!).

4. Close the holder by lowering it down and gently pushing the metal clamp.

3.2 Installing the battery



Connect the battery as presented in the picture. The connector has a very small lock guide that prevents from installing the connector backwards.

The device gives a short tone when the battery is connected. Push the connector to the bottom and make sure that it is firmly in place. Close the battery cover.

4.3 Starting up the device

Before the start up please charge the battery (see 5 –Battery and charger).

1. Start up the device by pushing the "ON/OFF" button for approximately 2 seconds until the device plays a tone. The indicator light starts to blink green and shortly thereafter green and red. Wait for the light to blink green slowly.
2. After the indicator light is stabled to slowly blinking green, make a phone call to the device from the phone and the number you wish to have alarm message to be sent to in the future. The device beeps and hangs up indicating that the caller's number is saved to the device's memory.
3. The device is now ready for use. You can test the device by pressing the alarm-button. The device sends a SMS with the text "Alarm!" to the receiving phone.

4. SETTINGS

When any settings are made, the device has to be active for it to receive the commands. **mimas** Lite+ confirms every setting change by sending a confirmation SMS. The settings can only be done one setting at a time, meaning that putting several commands in one message is not possible.

In commands that have multiple parameters (e.g. (100=....) basic settings) all parameters must be included in the message also if only one parameter is changed. NOTE! THE BRACKETS MUST BE INCLUDED IN THE MESSAGE! Follow the examples carefully. **mimas** Lite+ recognizes only the part inside the brackets as a command.

4.1 Phone numbers

Phone numbers are set to **mimas** Lite+ by sending them via SMS. When any settings are made the device has to be active for it to receive the commands. **mimas** Lite+ confirms every setting change by sending a confirmation SMS. All numbers must be set in international format*.

4.1.1 Call Center

Call Center (CC) is the number from where **mimas** Lite+ can be fully controlled. From CC it is allowed to make changes to settings, queries and receive alarm messages. The Call Center's number is saved into **mimas** Lite+ during start-up by making a call to the device (see 3.3). The number can be changed by sending it via SMS.

Setting format:

(90=+358xxxxxxxxx)

xxxxxxxx = desired phone number

Example: **(90=+358502345678)**

** In international format the first number after the land code is left out. If the number to be saved is 0401231234 the international format is +358401231234 (+358 is Finland's land code).*

4.1.2 Users

Users are only allowed to receive messages from **mimas** Lite+. No changes to settings are allowed.

Setting format:

(91=+358xxxxxxxx) ; user 1

(92=+358xxxxxxxx) ; user 2

(93=+358xxxxxxxx) ; user 3

(94=+358xxxxxxxx) ; user 4

(95=+358xxxxxxxx) ; user 5

xxxxxxxx = desired phone number

Example: (93=+358502345678)

4.1.3 Alarm call can make an alarm call after sending the alarm messages

mimas Lite+. Two different alarm call numbers can be defined and they can be the same as any previously set number (e.g. user 3). If both alarm call numbers are defined, the device tries to call them in order until either one picks up. The numbers can be left undefined in which case only alarm messages will be sent in the event of an alarm.

Setting format:

(96=+358xxxxxxxx) ;alarm call 1

(97=+358xxxxxxxx) ;alarm call 2

xxxxxxxx = desired phone number

Example: (97=+358502345678)

4.1.4 Status reports

This is the number to which **mimas** Lite+ sends "armed" / "disarmed" and "battery low" messages (see 4.5 -General settings). The number can be the same as any of the previously set (e.g. User 4).

Setting format:

(98=+358xxxxxxxx)

xxxxxxxx = desired phone number

Example: (98=+358502345678)

4.1.5 Removing numbers

A single phone number can be removed from the memory of the device by sending only +358 instead of the whole number (settings 90-98).

Example: (91=+358)

4.2 Alarm button sensitivity

The sensitivity of the "ALARM" button can be changed. The bottom value is 0,2 seconds. One number in sensitivity value equals to 0,1 seconds in real life (e.g. factory setting 08 means that the device reacts to approximately one second push (bottom value 0,2 + 0,8 set value)).

Setting format:

(01=xx)

xx = desired sensitivity value 02...99

Example: **(01=16)**

4.3 OK-message

When this feature is activated **mimas** Lite+ sends an "OK" -message with battery level information to Call Center (see 4.1 -Phone numbers). This feature can be used to monitor the state of the device and to make sure that the battery level is ok.

Setting format:

(02=x,y)

x = interval of sending (0...999 hours).

y = this value determines how long (0...9 minutes) **mimas** Lite+ is kept active after a wake up from a power save mode (see 4.6 – Power save settings). In power save mode the device is not connected to GSM-network and thus is not able to receive any commands. This value gives the user time to make settings to the device when the OK-message is received. This setting only affects the **mimas** Lite+ when power save mode is used.

Example: **(02=24,3)**

With these settings **mimas** Lite+ sends an "OK" message once a day. If the power save mode is used the device stays active for three minutes after sending the OK message.

Example of a OK message: "OK, 72%"

4.4 Alarm message text

When the "ALARM" button is pressed on **mimas** Lite+, the device sends this message to predefined receivers.

Setting format:

(81=desired alarm text)

NOTE! The maximum length of the text is 32 characters (including spaces).

Example: **(81=Alice needs help!!!)**

4.5 General settings

Setting format:

(100=a,b,c,d,e,f)

a = a notification is sent every time **mimas** Lite+ is turned on or off (0=no, 1=yes)

b = give a signal tone when the alarm button is pressed (0=no, 1=yes). If the signal tone is left out **mimas** Lite+ makes a silent alarm and the only indication of the alarm is the indicator light blinking red.

c = blink the green indicator light when **mimas** Lite+ is turned on (0=no, 1=yes)

d = "battery low" message is sent when battery level is under 30% (0=no, 1=yes)

e = microphone amplification (1...7)

f = speaker volume (0...4)

Example: **(100=0,1,1,0,5,3)**

The microphone and speaker levels are dependent on each other. If the microphone amplification is set to maximum value (7), it automatically reduces the volume of the speaker regardless of its setting. The factory settings for these parameters are 4 for the microphone amplification and 3 for the speaker volume. These are the recommended values for two-way communication. When these settings are tested one must take into consideration the distance between the device and user (see 2.4 – Voice communication).

4.6 Power save settings

mimas Lite+ can be set to function in a power save mode thus extending battery life significantly. When the device is in power save mode it is not connected to GSM. A press of the "ALARM" button wakes up the device. In power save mode **mimas** Lite+ cannot receive any queries or settings but they are processed the next time the device becomes active. This setting causes some delay to the sending of the alarm (approximately 20 seconds) so the overall time for receiving the alarm message is approximately 25-35 seconds. This setting is not preferred for security applications where immediate alarm message sending is crucial.

Setting format:

(101=x)

x = activate power save mode (0=no, 1=yes)

Example: **(101=0)**

4.7 Motion detector settings

mimas Lite+ has an integrated motion detector with versatile features.

4.7.1 Controlling the power save mode with motion detector

The integrated motion detector can be used to optimize the power consumption of **mimas** Lite+. When the device is left unmoved for a preset time (hibernation delay) **mimas** Lite+ turns off the GSM and enters the power save mode. While in power save mode, the device reacts to alarm button push normally, but it takes a little longer to send the alarm message (approx. 35 seconds). When movement is detected again (sensitivity) **mimas** Lite+ activates itself and continues working normally.

Note! The power save setting (see. 5.6) must be activated in order for the abovementioned feature to work. This way the motion detector takes control on the power saving features.

Setting format:

(03=a,bb,cc)

a = Power save mode activated (0=no, 1=yes).

b = Sensitivity (0 - 99 seconds). This determines how long a continuous movement is actually interpreted as movement and activates the device.

c = Hibernation delay (0 - 99 seconds).

Example: **(03=1,15,15)**

4.7.2 Movement detection

The motion detector can be used to report if **mimas** Lite+ is moved. When movement is detected the device sends an SMS to indicate this.

When motion detection is activated, the user has a predefined amount of time to lay the device still. When the device is moved again, the user has the same amount of time to disable the movement detection to avoid an alarm.

Setting format:

(04=a,bb,cc)

a = Enable / disable movement detection (0=disable, 1=enable).

b = Sensitivity (0 - 99 seconds). This determines how long a continuous movement is actually interpreted as movement and activates the device.

c = Entry- / exit delay (0 - 99 seconds).

Example: **(04=1,10,15)** ; Enable movement detection, entry- / exit delay 15 seconds, 10 second continuous movement is interpreted as actual movement.

Example: **(04=0,10,15)** ; Disable movement detection.

After **mimas** Lite+ has detected movement and made an alarm the device disables movement detection. The movement detection can be enabled again by either reconfiguring the parameter or by powering the device off and on again.

4.7.3 Immobility detection

The movement detector can be configured to detect a carrier's immobility. When **mimas** Lite+ is immobile for a preset time it gives a warning tone. This tone is repeated for another preset time. If the device is moved during this time the warning tone is turned off. If however the user does not react during the "pre-alarm" sequence, the device sends an alarm.

Setting format:
(05=a,bb,cc,dd)

a = Immobility detection (0=disabled, 1=enabled).

b = Sensitivity (0 - 99 seconds). This determines how long a continuous movement is actually interpreted as movement.

c = Pre-alarm delay (0 - 999 seconds). This determines how long **mimas** Lite+ must be immobile until the warning tone is given.

d = Alarm delay (0 - 999 seconds). This determines how long the warning tone is repeated until the actual alarm is sent.

Example: **(03=1,3,15,30)**

In this setting the immobility detection is enabled. Continuous movement that lasts over three seconds is interpreted as movement. If **mimas** Lite+ stops for over three seconds and stays stopped for 15 seconds the device gives a warning tone. The warning tone is repeated for 30 seconds, after which **mimas** Lite+ sends an alarm if the device is not moved.

After **mimas** Lite+ has detected immobility and made an alarm the device disables movement detection. The immobility detection can be enabled again by either reconfiguring the parameter or by cycling power on the device.

4.7.4 Combining the features of the motion detector

The abovementioned movement detector features can be combined, for example, by enabling the power save mode and movement detection.

4.8 Factory settings

General settings

- (01=8) Sensitivity of the ALARM button (2..99)
(02=0,3) Ok –message with battery level information, function not activated
(03=0,0,0) Controlling the power save mode with motion detector, function not activated
(04=0,0,0) Movement detection with motion detector, function not activated
(05=0,0,0,0) Immobility detection, function not activated
(70=0) Device Id, no device identification number

Alarm message text

- (81= kutsunappia painettu)

Text can be modified as desired, see. 4.4 – Alarm message text

Phone numbers, users

- (91=+358...) number 1
(92=+358...) number 2

—

- (95=+358...) number 5

No numbers stored. Users are only allowed to receive messages

Phone numbers, alarm call

- (96=+358...) alarm call 1
(97=+358...) alarm call 2

No numbers stored. Users will receive alarm calls and also messages

Status report

- (98=+358...) number

No number stored. Receives standard messages “armed” / “disarmed” and “battery low”.

General settings

- (100= 1,1,1,1,3,4) Sends notifications when device is tuned on/off,
gives a signal tone when the alarm button is pressed,
the green indicator light blinks when the device is turned on,
“battery low” message is sent when battery level is under 30%
microfone amplification,
speaker volume

- (101=0) Power save mode is off

5. BATTERY & CHARGER

5.1 Charging

Connect the power supply to the charger. Connect the power supply to a wall socket. **mimas** Lite+ indicates the start of charging process by a short tone and by blinking the green led rapidly.



Typical charging time for the battery is approximately two hours and is limited to maximum of three hours. The battery achieves its best charging capacity after about ten full depletion and charging sequences.

5.2 Battery level indications

When the battery is low the indicator led blinks red and the device gives a short “beep” tone in even intervals. After this indication **mimas** Lite+ stays fully functional for several hours.

When the battery is empty the device sends an SMS to inform this and then turns itself off.

Battery duration depends on the usage of the device. In normal usage (where the device is fully active) the battery lasts approximately 5-7 days.

6. DECLARATION OF CONFORMITY

DECLARATION of CONFORMITY

In Accordance with
2004/108/EC Directive
of European Parliament and of the Council of 15 December 2004 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

Manufacturer Global Safety & Security Solutions Oy
Address Tarttilantie 266
 FI-03400 VIHTI
 FINLAND

Product type : mimas Lite+
Trade marks : mimas Lite+
Product description: Personal Safety Device
Technical Construction File: mimas Lite+

We, the manufacturer of the above mentioned products, hereby declare that these products conform to the essential requirements of the European Union directive 2004/108/EC. This Declaration of Conformity is based on using the Harmonized European Standards and relevant Articles of the RTTE-directive:

GSM certificate EGT302663 of 13.1.2009
Article 3.1a : Protection of the health and Safety (EN60950-1:2001 + A11:2004)
Test report: 3-5351-1-1/07 of 18.12.2007
Article 3.1b :EMC (EN301489-1: v1.6.1 and EN301489-7 v1.3.1)
Test report: 2-20722858a/07 of 03.12.2007
Article 3.2 : Effective use of Radio Spectrum (EN301511: v9.0.2)
Test report: 1-821/06T08;1-899/08T01

Standard EN301489-1: v1.4.1 and EN301489-7: v1.2.1.; EMC Test Report number T06-036-EMC of 20.4.2006, Natlabs Oy, Hyvinkää and
EN60950-1:2001 Safety report T06-036B-ELSA of 10.5.2006, Natlabs Oy, Hyvinkää

Nummela on the 1st of March 2008



Harri Paananen
President & CEO
Global Safety & Security Solutions Oy