



GAIA4

Self-powered siren for wireless intrusion detection systems

090000097



IT08020000001624



FOREWORD

FOR THE INSTALLER:

Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

FOR THE USER:

Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...).

.....

This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in accordance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

Self-powered siren for wireless intrusion detection systems

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the componentry adopted is subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product. Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

EU DECLARATION OF CONFORMITY

Hereby, EL.MO. S.p.A. declares that the radio equipment GAIA4 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address: elmospa.com – registration is quick and easy.

DISPOSAL INSTRUCTIONS - USER INFORMATION



In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.

This product needs batteries for correct functioning. Exhausted batteries have to be delivered to dumping grounds authorized for battery collection. The materials used for this product are very harmful and polluting if dispersed in the environment.

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1. GENERAL INFORMATION

GAIA4 siren is an efficient acoustic alarm device. It is self-powered for outdoor use in wireless systems and its radio module has been designed to be connected to a HELIOS control unit, **or other compatible units**.

GAIA4 siren is housed in a low-profile NOVODUR housing. The cover has a built-in high-brightness, high-efficiency LED strobe. The styling can be customised by sticking a label with the installation company logo in the space at the front.

GAIA4 siren is powered by a lithium battery pack; it adopts a low-consumption receiving circuit.

The siren is triggered by a coded radio pulse sent by the unit (the code is assigned choosing among 2 billion combinations); an emergency timer, set to 1 minute, silences the siren if the control unit or the receiver are faulty. The siren is also equipped with a self-protection device: a microswitch will trigger the siren sounder and protect it against unwanted front cover opening and removal attempts.

The front strobe flashing is synchronised with the sounder activity. However, in order to inform the end-user about the status of the control unit, the siren will also show the following information:

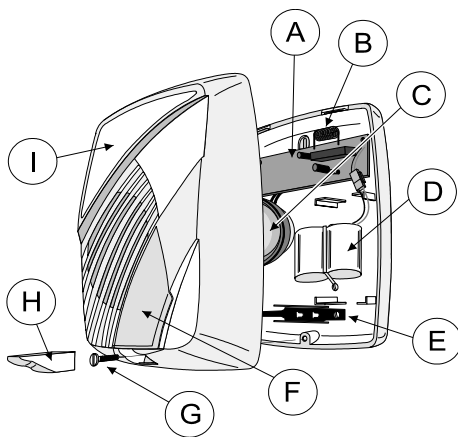
Control unit ARMED = three flashes **Control unit DISARMED** = steady light for about three seconds.

2. TECHNICAL FEATURES

Model:	GAIA4 (4th series)	Alarm duration:	1 min max (default).
Performance level:	2nd	Stand by time:	1 s at first power up and for configuration.
Protection class:	IP34	Siren disable time after Tamper closing:	2 minutes
Technology:	SMD	Strobe activity:	synchronised with alarm sounder, control unit operating status display
Horn type:	magneto-dynamic, 4 Ohm	Flashings:	Around 60/min
Nominal voltage:	7.2 V	Riceiver:	AM Module
Discharged battery threshold:	6.2 V	Operating frequency:	LPD devices European frequency
Minimum operating voltage:	4.5 V	Antenna:	High-performance helical antenna
Powered by:	7.2 V Lithium Battery Pack (LSH20)	Sensitivity:	-92 dB
Consumption:		Digital code:	1 valid code among 2 billion combinations (self-learning)
- idle mode:	150 μ A (avg)	Operating range:	150 m in open field (subject to operating conditions limits)
- alarm mode:	1 A (avg) @ 7.2 V	Protection circuits:	circuit against cover opening and removal attempts
Maximum transmitted power:	10 mW	Dimensions:	W253 x H290 x D85 mm.
Autonomy:	3 yrs with 1 alarm cycle/month and 4 unit arm-disarm event/day.	Weight:	1.2 Kg
Sound pressure:	102 dBA at 3 m @ 7.2V.	Environmental class:	IV (outdoor)
Sound type:	Two-tone type (1.2 KHz ÷ 1.8 KHz.).	Parts supplied:	Screws, dowels, LSH20 battery pack, technical manual
Triggering mode:	Digital code received by the built-in radio module.		
Alarm delays:	Command from unit: 1 s, Tamper opening: 300 ms.		



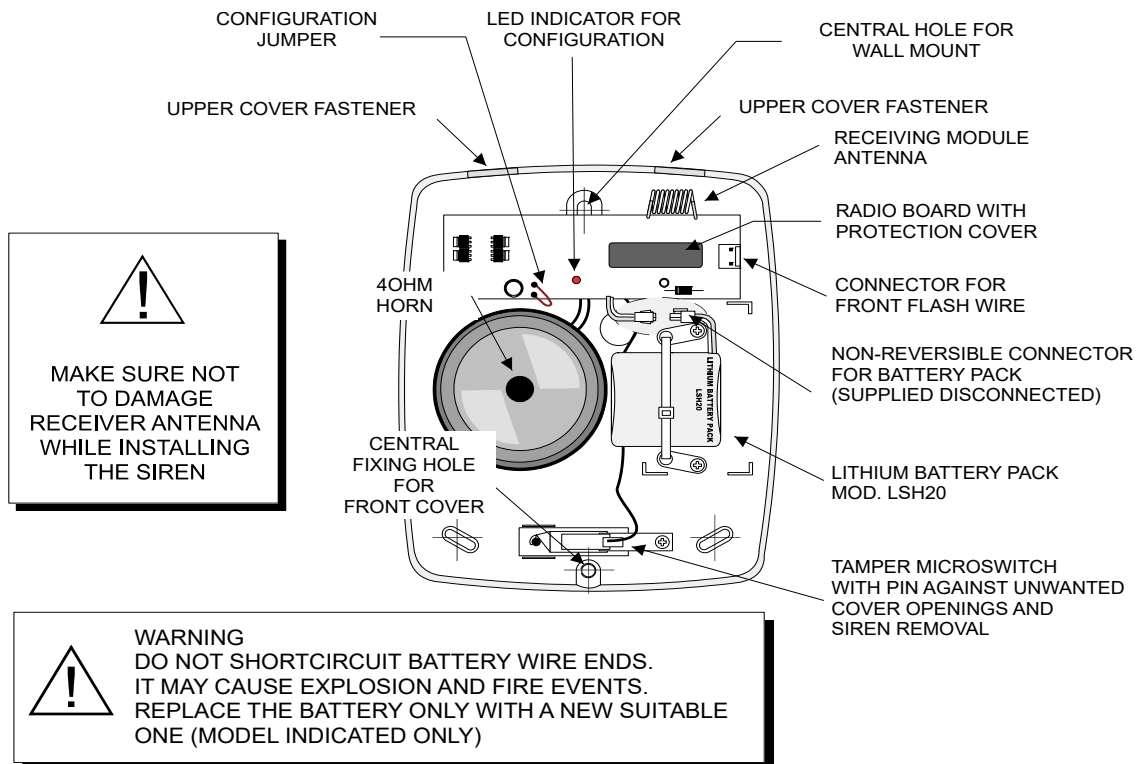
3. VIEW OF THE SIREN



- A = Electronic circuit
- B = Receiving circuit antenna
- C = 4 Ohm magneto-dynamic horn
- D = Battery pack with unlock device
- E = Microswitch against removal
- F = Front flashing circuit with high-brightness, high-efficiency LED strobe
- G = Front fixing screw
- H = Closing cap
- I = Front adhesive label

4. INTERNAL ELEMENTS POSITION

Siren internal view.



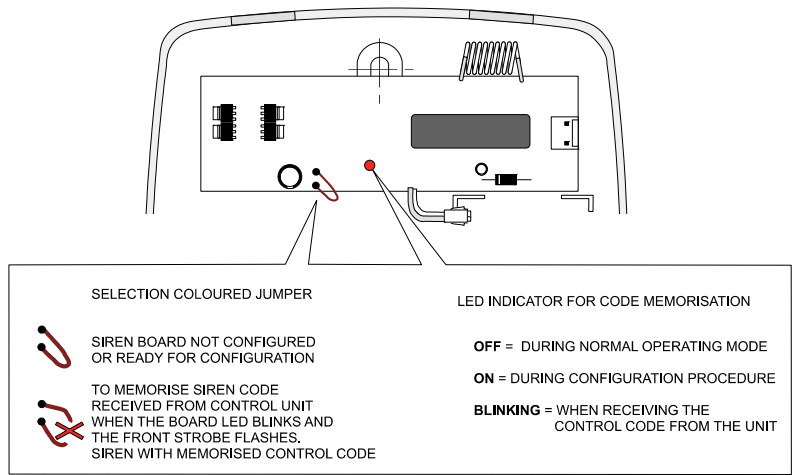
5. OPERATING MODE

5.1 Setup

In order to receive the siren code transmitted by the control unit, power the siren with the configuration jumper closed (default status). Siren configuration mode is signalled by the steady-lit flash.

The installer has to transmit a siren code using the control unit menu; when the siren receives the code, the siren strobe will start flashing quickly (2 flashes/sec).

The code received will be memorised when the configuration jumper is cut.



5.2 System test

Once the code received has been memorised (when configuration jumper is cut) the siren will enter System test mode indicated by the slow flashing of the siren strobe (1 flash every 4 s). During system test the siren horn is disabled but the strobe will signal the various statuses normally. Acoustic signals emitted by the siren will indicate whether the wireless siren has been correctly connected to the control unit.

5.2.1 Control unit to siren radio connection test

To verify control unit to siren radio connection in test mode, indicated by the strobe slow flashing, arm and disarm the siren and check the corresponding light indications. In system test mode, the siren can provide information about the signal received from the control unit: when arming and disarming, it will emit 1 to 3 beeps indicating the signal status:

- 1 beep = weak signal
- 2 beeps = good signal
- 3 beeps = excellent signal

5.3 Operating mode

The siren **will operate correctly two minutes after the tamper contact has been closed**. When entering correct operating mode, the siren will emit 4 beeps and the strobe will stop flashing. In normal operating mode, the siren horn is active and will sound upon local tamper event or command received from the control unit. In normal operating mode, beeps indicating the signal status will no longer be emitted.

NOTE: the siren will immediately be operating if you power it up with tamper contact closed. It will signal normal operating mode with 4 beeps.

5.4 Siren status reset

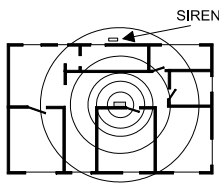
To reset siren status, disconnect it from power for 15 s minimum. When powered again, the siren will enter the operating mode according to configuration jumper and tamper contact condition:

- if configuration jumper is closed, it will enter *configuration (setup) mode*
- if configuration jumper and tamper contact are open, it will enter *system test mode*
- if configuration jumper is open and tamper contact is closed, it will enter *normal operating mode*



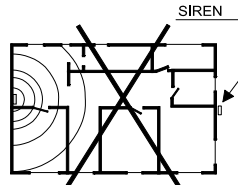
6. INSTALLATION

Installation situations:



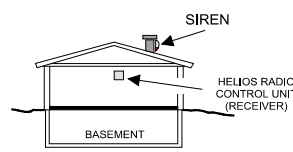
RIGHT

FIX THE WIRELESS CONTROL UNIT IN CENTRAL POSITION AND THE SIREN NEAR BY OUTDOOR



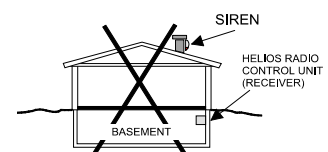
WRONG!

TRANSMITTERS ON THE OTHER SIDE OF THE HOUSE ARE TOO FAR. THE SIREN DOES NOT RECEIVE CONTROL UNIT'S COMMAND



RIGHT

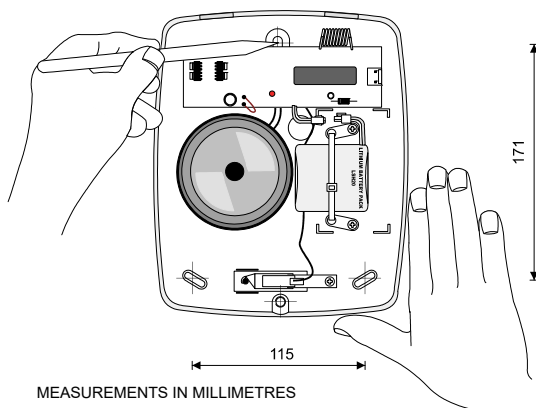
SECURE THE CONTROL UNIT (RECEIVER) AS HIGH AS POSSIBLE WITH RESPECT TO GROUND LEVEL



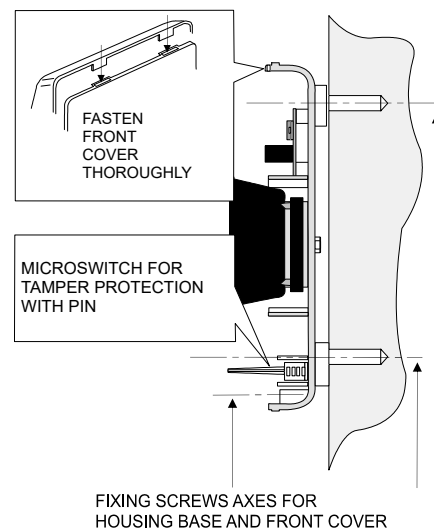
WRONG!

THE INDICATION IS REMARKABLY WEAKENED IF WIRELESS CONTROL UNIT (RECEIVER) IS PLACED UNDER GROUND'S LEVEL THE CONTROL UNIT DOES NOT RECEIVE INDICATIONS FROM DETECTORS. THE SIREN DOES NOT RECEIVE CONTROL PANEL'S COMMANDS

Siren position: front view.



Siren position: side view.



6.1 Recommended installation procedure

NOTE: siren horn will automatically be disabled during installation procedure. It will be enabled again when the siren enters normal operating mode.

1. Power up the siren with configuration jumper closed and place it near the control panel. The siren will beep once and the flash will be steady lit: this indicates that the siren is in configuration (setup) mode and waiting for a siren code from the control unit.
2. Using the relevant control unit menu, send a siren code. When the siren receives the code, the strobe will flash quickly (2 flash/second).
3. Cut the configuration jumper to memorise the code. The siren will now enter system test mode indicated by the slow flashing of the strobe (1 flash every 4 seconds).
4. Place the siren and check radio connection by arming and disarming it a few times and checking the corresponding light indications. When light indications stop, the siren will emit 1 to 3 beeps indicating signal status:

1 beep = weak signal

2 beeps = good signal

3 beeps = excellent signal

5. Wall mount the siren using the supplied screws and close the cover. The siren will enter normal operating mode 2 minutes after the cover has been closed. When the siren enters the correct operating mode, it will beep 4 times and light indications will stop.



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The information and product features herein are not binding and may be changed without prior notice.

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