

mBox⁹²⁰⁰



USER GUIDE

© 2023 Copyright Careium Sweden AB, Rev C

Careium Sweden AB, Jörgen Kocksgatan 1 B, 211 20 Malmö, Sweden

Corporate identification number: 556569-9740

TABLE OF CONTENTS

TABLE OF CONTENTS.....	3
SAFETY INFORMATION.....	5
Medical units.....	6
Important information.....	6
PACKING CONTENTS.....	7
Accessories and Sensors.....	7
FUNCTIONAL DESCRIPTION.....	8
Overview.....	9
mBox ⁹²⁰⁰ and the basic functions.....	9
A – Door alarm.....	10
A – Carpet alarm.....	10
B – Bed/chair alarm, 10 seconds.....	10
C – Bed/chair alarm, 15 minutes.....	10
D – Repeater.....	11
E – Radio receiver.....	11
F – Door open allowance.....	11
G – Door alarm with presence function.....	11
I – Radio pairing.....	12
J – Look out.....	12
Indicator lamp.....	13
Default reset.....	13
INSTALLATION.....	14
Removing protective strip from battery.....	14
Pairing the mBox with a carephone.....	14
A – Door alarm.....	15
A – Carpet alarm.....	16
B – Bed/chair alarm, 10 seconds.....	17
C – Bed/chair alarm, 15 minutes.....	17
D – Repeater.....	18
E – Radio receiver.....	18
F – Door alarm allowance.....	18

G – Door alarm, presence	19
I – Radio pairing	19
J – Look out	20
MAINTENANCE.....	21
Cleaning	21
Battery.....	21
TECHNICAL INFORMATION	22
mBox	22
Sensors.....	22
ENVIRONMENT	22
ENVIRONMENTAL INFORMATION	23
DECLARATION OF CONFORMITY.....	23

SAFETY INFORMATION



Always read and follow the safety information accompanied by this symbol.

- Always test the system according to the instructions before use and always test the product after adjustments have been made.
- The device is not always suitable for all users and should not be seen as a substitute for the caregiver's monitoring routines.
- The device is NOT intended for life-sustaining equipment, where any technical failure may result in serious injury or death.
- Check the unit regularly and replace if necessary.
- Users should pay particular attention to the potential for interference from other systems operating in the same or adjacent radio frequency bands.
- The compartment covers may be opened only by authorized persons in accordance with the instructions in the service manual.
- Battery replacement may be performed only by authorized persons in accordance with the instructions in the Maintenance section. Only use recommended battery type as stated in the Technical Data section.

CAUTION! Only use batteries, power supply and accessories that have been approved for use with this particular model. Connecting other accessories may be dangerous and may invalidate the type approval and guarantee.

- Only use recommended power supply as stated in the Technical Data section.
- The power supply can be used as a disconnecting device. The wall socket shall be installed near the equipment and shall be easily accessible.

IMPORTANT! This device use radio signals. This means that connection cannot be guaranteed in all circumstances.

Medical units

The use of equipment that transmits radio signals as a social alarm, can interfere with insufficiently protected medical equipment. Consult a doctor or the manufacturer of the equipment to determine if it has adequate protection against external radio signals, or if you have any questions.

To avoid potential interference, manufacturers of implanted medical devices recommend a minimum separation of 15 cm between a wireless device and the medical device.

If you have any reason to suspect that interference is taking place, turn off the device immediately. If you have any questions about using your wireless device with an implanted medical device, consult your health care provider.

Important information

All systems using radio and network communication are subject to interference beyond the user's control.

Products from Careium are designed to minimize the impact of such interference.

Nevertheless, the user must be aware that system components can be subjected to interference or other influences that may cause malfunction.

It is therefore important to regularly check that every part of the system works in all areas, especially radio communications. Contact your supplier immediately in case of any suspected malfunction.

Users should pay particular attention to the risk of disruption from products which communicate using the same or adjacent radio frequency bands.

For further information, please contact your supplier or refer to the service manual or the documentation at www.careium.com/support/.

PACKING CONTENTS

The packing contains:

- One mBox 9200 including mounted batteries.
- Screws for mounting the mBox on a wall, door frame etc.

Accessories and Sensors

Following accessories and sensors are available to purchase:

- Velcro tape (replacement for mounting screws), art.nr: 300 125
- AC adapter + cable, art.nr: 100 061 + 100 062
- Holder, art.nr: 300 014
- Magnetic contact, art.nr: 300 127
- Bed sensor, art.nr: 300 026
- Chair sensor, art.nr: 300 022
- Carpet sensor, art.nr: 300 015

FUNCTIONAL DESCRIPTION

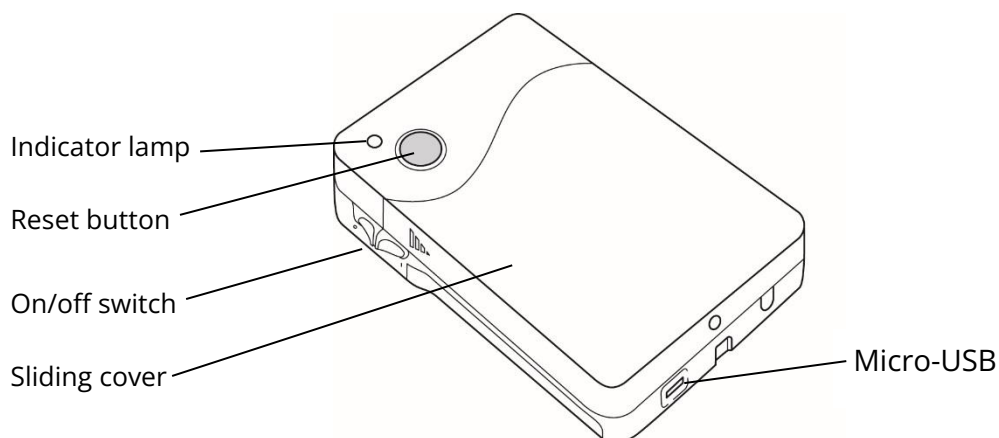
The mBox is a multibox that can be used for following functions:

- Door alarm
- Bed alarm
- Chair alarm
- Carpet alarm
- Door alarm allowance
- Look out
- By programming the unit, further functions can be activated or changed, contact your supplier for more information.

The mBox is compatible with:

- Doro Carephone
- Gloria+
- Grace+
- Sara
- CareIP
- CareIP Mobile
- CareMobile
- Eliza
- Eliza S

Overview

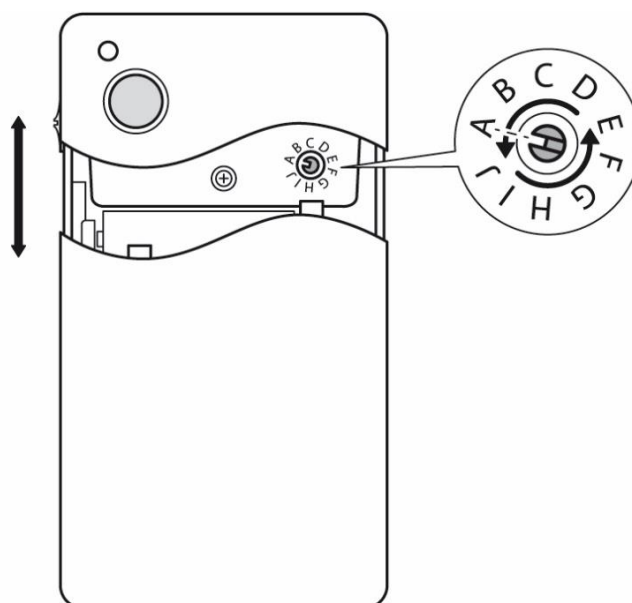


mBox ⁹²⁰⁰ and the basic functions

By opening the sliding cover to the first position access is given to the function selector with 10 optional setups.

Choose position, A-J, depending on how the unit shall be used. Use a suitable screwdriver for setting the knob in correct position.

See below for the preprogrammed positions used for mBox.



A – Door alarm

When the mBox is set to position A, the unit is, in combination with a magnetic contact*, working as door alarm.

A short push on the reset button gives following functions:

- Temporarily inactivates the alarm for passing through the door, mBox is mounted on your side of the door.
- Inactivates an alarm that will be sent within 10 seconds, mBox is mounted on the other side of the door.

* Magnetic contact is ordered separately.

A – Carpet alarm

When the mBox is set to position A, the unit is in combination with a carpet sensor* working as carpet alarm.

* Carpet sensor is ordered separately.

B – Bed/chair alarm, 10 seconds

When the mBox is set to position B, the unit is, in combination with a bed or chair sensor*, working as bed or chair alarm.

A short push on the reset button gives following functions:

- The alarm is activated by 30 seconds pressure on the sensor and an alarm is sent if the person is missing for more than 10 seconds after the activation.
- Absences less than 10 seconds activates no alarm.

* Bed or chair sensor is ordered separately.

C – Bed/chair alarm, 15 minutes

When the mBox is set to position C, the unit is working the same as it does in position B but is allowing 15 minutes absence before an alarm is sent.

D – Repeater

When the mBox is set to position D, the unit is working as a repeater of radio signals.

The following functions are available:

- Repeating all radio signals.
- Repeating only radio signals from paired radio transmitters.

E – Radio receiver

When the mBox is set to position E, the unit is working as a receiver of radio signals.

The following function is available:

- The output is activated when the mBox receives a radio signal from a paired radio transmitter.

F – Door open allowance

When the mBox is set to position F, the unit is working as a door alarm with door open allowance.

The following functions are available:

- An alarm will be sent if the client opens the door and doesn't close it within 15 minutes.
- A press on the reset button temporarily disable the alarm before or after the door is opened.

G – Door alarm with presence function

When the mBox is set to position G, the unit is working as a door alarm with support for presence marking. When entering the room the medical staff can mark their presence with the reset button and when they leave the room, they can reset the presence marking with the same button. This is used together with Nurse call system-5000.

If one should forget to reset the presence marking when leaving the room, the unit will automatically reset the presence marking after the adjustable time (default 12 hours).

I – Radio pairing

When the mBox is set to position I, the unit is in pairing mode. A radio transmitter can be paired with the mBox to unlock functions in mode D (repeater), E (radio receiver) and J (Look out).

The following functions are available:

- A short press on the reset button activates or deactivates the radio pairing mode.
- A long press, approx. 10 seconds, on the reset button deletes all paired radio transmitters.
- Up to 10 radio transmitters can be paired with the mBox at the same time.

J – Look out

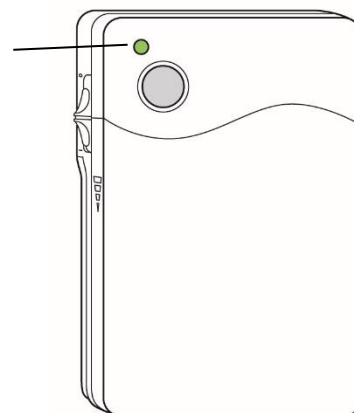
When the mBox is set to position J, the unit combined with a Motion, is working as a door alarm with look out function. The client is allowed to open the door and look out, but if the client doesn't return within 3 minutes an alarm is sent.

A short push on the reset button gives following functions:

- Temporarily inactivates the alarm for passing through the door, mBox is mounted on your side of the door.
- Inactivates an alarm that will be sent within 3 minutes, mBox is mounted on the other side of the door.

Indicator lamp

- **Green light:**
Confirmation of alarm indicates with a short green light.
- **Green, continuous light:**
Unit is using an external power supply.
The unit is in mode G with presence activated.
- **Green flashing light (every 6th second):**
The unit is being powered by batteries (default).
The unit is in mode G without presence activated.
- **Red light:**
During startup, the indicator lamp is lightning red.
During transmission of a radio message, the indicator lamp is lightning red.
- **Red flashing light (every 6th second):**
The unit is powered by internal batteries, low voltage level. Replacing the batteries is necessary.
- **Red fast flashing (every ½ second):**
Invalid status. Turn the function selector to a valid position.
- **Orange fast flashing:**
Change of position with the function selector, one blink.
- **Alternating green and red, twice per second:**
Unit is in pairing mode.



Default reset

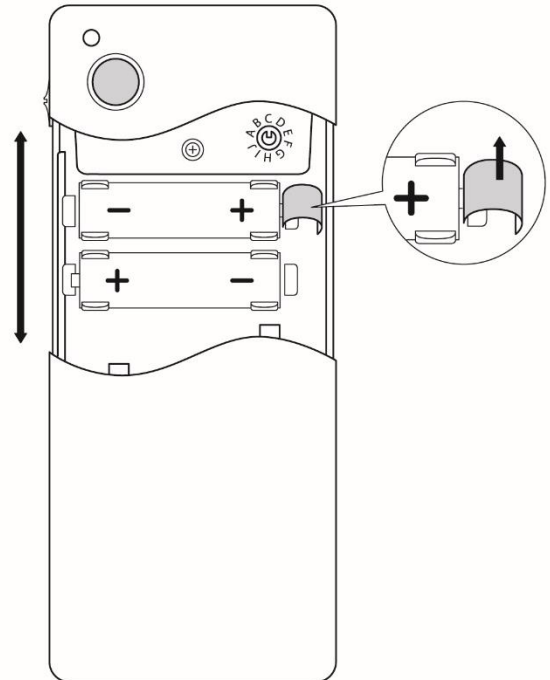
The mBox can be restored to the default settings.

1. Turn the function selector to the position H.
2. Press and hold the reset button for approx. 10 seconds until the indicator lamp flashes red once.
3. The default reset is completed, and the unit is restored to the default settings.

INSTALLATION

Removing protective strip from battery

The protective strip must be removed from the battery before the mBox is used for the first time.



Pairing the mBox with a carephone

The mBox can be connected to different sensors and can be paired to a Careium Carephone as described in the following sections for each selectable mode.

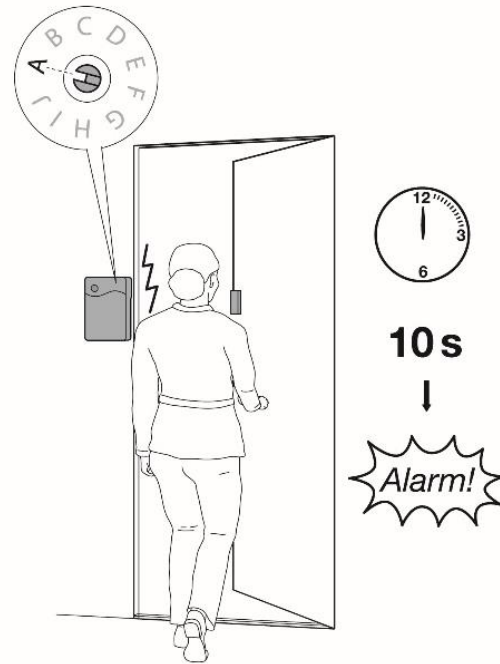
The mBox can also be connected to other social alarm systems, please refer to that systems documentation for the installation process.

A – Door alarm

Mount the mBox on the door frame using the supplied screw or adhesive Velcro*. The magnet must be mounted on the door with 5-10mm distance to the right long side. See the picture.

Connect the mBox to the Carephone as following:

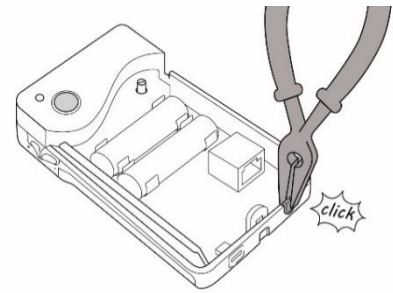
1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door and wait for 10 seconds, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.



* Velcro tape is ordered separately.

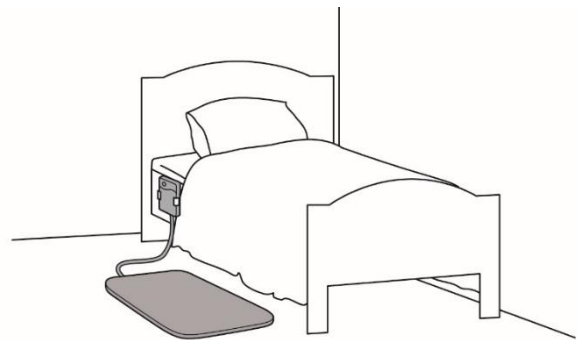
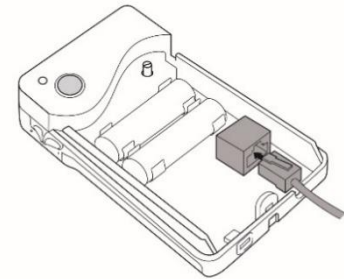
A – Carpet alarm

Open the sliding cover completely and remove the plastic cable cover in the bottom of the unit. Connect the carpet sensor to the connector on the mBox, feed out the cable thru the bottom of the unit and close the sliding cover. See the pictures.



Connect the mBox to the carephone as following:

1. Place the carpet sensor on the floor.
2. Press the green button on the carephone for about 4 seconds until a beep can be heard.
(For Eliza, press the radio pairing button found in the back panel.)
3. Step on the carpet, a melody can be heard from the carephone.
4. Confirm the activation by pressing the red button on the carephone. A confirmation melody is heard from the carephone.
5. The units are now connected, make a test alarm by stepping on the carpet to verify the function.



B – Bed/chair alarm, 10 seconds

Open the sliding cover completely and remove the plastic cable cover in the bottom of the unit. Connect the bed/chair sensor to the electrical connector on the mBox, feed out the cable through the bottom part of the unit and close the sliding cover.

Connect the mBox to the carephone as following:

1. a) Bed alarm – Place the sensor beneath the bed sheet in height of the shoulder blade.
b) Chair alarm – place the sensor on the seat cushion.
2. Sit or lie on the sensor for more than 30 seconds to activate the alarm function.
3. While sitting/lying on the sensor, press green button on the carephone for about 4 seconds until a beep can be heard.
(For Eliza, press the radio pairing button found in the back panel.)
4. Release the pressure from the sensor.
After about 10 seconds, a melody can be heard from the carephone
5. Confirm the activation by pressing the red button on the carephone. A confirmation melody is heard from the carephone.
6. The units are now connected, make a test alarm to verify the function.



C – Bed/chair alarm, 15 minutes

The mBox in position C is working the same way as in position B but is allowing 15 minutes absence before an alarm is sent.

To make the setup between the mBox and carephone time efficient and to avoid waiting for 15 minutes – follow the instructions for position B. When everything is ready, tested and working, change to position C for 15 minutes absence.

D – Repeater

Place the repeater between an area with low radio coverage and the carephone.

Pair a radio transmitter with the mBox to only repeat the radio messages from the paired unit. All radio messages are repeated if no radio transmitter is paired with the mBox.



Two or more repeaters shall not be placed in the same radio transmitter area.

E – Radio receiver

Place the mBox in an area with good coverage where the radio message shall be received.



One or more radio transmitters has to be paired with the mBox.

F – Door alarm allowance

The mBox in position F is working similar to position A but is allowing the door to be open for 15 minutes before an alarm is sent. No alarm is sent if the door is closed within the 15 minute time interval.

To make the setup between the mBox and carephone time efficient and to avoid waiting for 15 minutes – follow the instructions for position A. When everything is ready, tested and working, change to position A for 15 minutes door open allowance.

G – Door alarm, presence

Mount the mBox on the door frame using the supplied screw or adhesive Velcro*. The magnet must be mounted on the door with 5-10mm distance to the right long side.

Connect the mBox to the Carephone as following:

1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.

* Velcro tape is ordered separately.

I – Radio pairing

Up to 10 radio transmitters can be paired with the mBox. Paired radio transmitters are used together with the mBox in the modes D, E and J.

1. Press the reset button on the mBox.
2. Trigger an alarm from the radio transmitter.
3. Radio trigger is paired with the mBox.

J – Look out

A mBox paired with a Motion* work together as a door alarm with look out function.

Mount the mBox on the door frame using the supplied screw or adhesive Velcro*. The magnet must be mounted on the door with 5-10mm distance to the right long side.

Mount the Motion in a location where the client regularly pass through.

Step 1 – Pairing the mBox with the Motion:

1. Pair the Motion with the mBox, follow the instructions for mode I, radio pairing.

Step 2 – Connect the mBox to the Carephone:

1. Press the green button on the Carephone for about 4 seconds until a beep can be heard.
(For Eliza, press the radio pairing button found in the back panel.)
2. Open up the door and wait for 10 seconds, a melody can be heard from the Carephone.
3. Confirm the activation by pressing the red button on the Carephone. A confirmation melody is heard from the Carephone.
4. The units are now connected, make a test alarm by opening the door to verify the function.

* Velcro tape and Motion are ordered separately.

MAINTENANCE

Cleaning

All accessories from Careium can be cleaned with a slightly damp cloth. Do not use strong detergents or solvents.

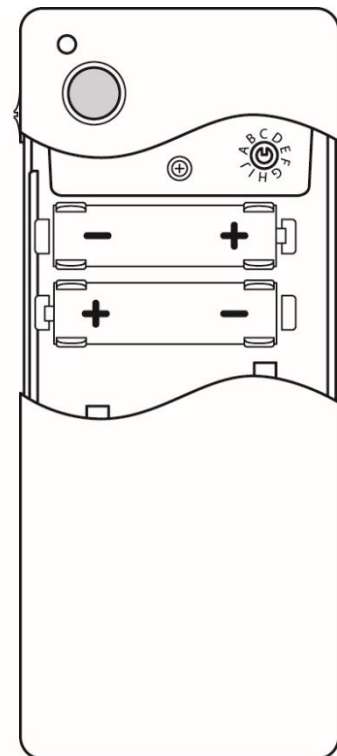
Battery

By opening the sliding cover to the second position, access is given to the batteries.

Use only Alkaline AA (LR06) batteries with good quality. When changing the batteries, take notice to the polarity of the batteries to avoid electrical damage.


The duration of the batteries depends on the quality, the amount of sent alarms and if additional programming has been done to the mBox.

Batteries mentioned above can be ordered from your supplier.



TECHNICAL INFORMATION

mBox

Article number:	300 154
Dimensions:	110 x 70 x 41/100 mm
Power supply:	2x 1.5V LR6/AA Alkaline batteries External power
Duration:	Up to 24 months running on batteries
Radio frequency:	869,2 MHz
Equipment class:	Class 1 radio equipment 

Sensors

	Bed sensor	Chair sensor	Carpet sensor
Min. weight	27 kg	27 kg	N/A
Size	755 x 255* (L x W mm)	375 x 177* (L x W mm)	715 x 390* (L x W mm)
Connection	Sensor contact	Sensor contact	Sensor contact
Warranty	6 months	6 months	12 months

* Excluding cable, contact and sensor cover.

ENVIRONMENT

Temperature:	+5 to +35 °C
Humidity:	0 to 75% relative humidity
Environment class:	I

ENVIRONMENTAL INFORMATION

This product complies with the requirements of the EU directive 2006/66/EC (Batteries) and 2012/19/EU (WEEE). These directives regulate the product liability for battery, electrical and electronic recycling with the purpose of increasing recycling and minimizing waste. The Eliza is marked with the “crossed out wheeled bin” logo, which indicates that it should be handed in for recycling.

The product can be returned free of charge to a recycling station that is connected, directly or via a recycling system, to Careium or to your distributor. For detailed instructions, please check with your distributor or visit our website, www.careium.com

Note! The WEEE information and recycling instructions applies to European Union member states only. For other countries please check local legislation or contact your distributor.

Manufactured in accordance with the EU directive, 2011/65/EU (RoHS2).

DECLARATION OF CONFORMITY

EU Declaration of conformity

Hereby, Careium Sweden AB declares that the radio equipment is in compliance with Directive 2014/53/EU and 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: www.careium.com/dofc

UK Declaration of Conformity

Hereby, Careium Sweden AB declares that the radio equipment is in compliance with the relevant UK legislation. The full text of the UK declaration of conformity is available at the following internet address: www.careium.com/dofc

