

Guardian MOB Beacon Watch



121.5MHz Man Overboard Alarm Watch

User Manual

WARNINGS

Use the beacon function of the Guardian MOB Beacon Watch only in situations of grave and imminent danger.

The beacon function can only be used in conjunction with a suitable 121.5MHz receiver.

The beacon function is set at the factory to manual activation. For automatic activation, the beacon must be armed by the user. THIS FUNCTION WILL NOT WORK IN FRESH WATER.

This product contains a lithium battery. Do not puncture, incinerate or recharge. Dispose of safely.

Use of the beacon may require radio licences, depending on the country of use.

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1. Introduction

The Guardian MOB Beacon Watch is a full function alarm chronograph which incorporates an emergency distress transmitter. The transmitter may be activated automatically if the Watch is immersed in water; it may also be activated manually.

This product is designed to be worn in conditions where the user is at risk of falling into water and where it may be difficult to locate the person in the water visually. The beacon is used in conjunction with a receiver to generate an alarm; a direction finder is available to help locate the person in the water.

1.1 Man Overboard Operation

Once armed, the beacon will activate automatically when immersed in sea water, and will continue to transmit until disabled. Arming and disabling are detailed in the Features section. **In fresh water the beacon must be activated manually.**

The beacon cannot transmit effectively when underwater, and needs to be as high as possible for best signal range. Ideally, the user should hold up the arm wearing the watch, but this is impractical for long periods. It is recommended that the arm is rested on top of the lifejacket, as shown opposite.

1.2 Battery Life

The battery is designed to power this product for a period of 1 year.

When the battery is running low the LED flashes and the sounder beeps four times, repeating every minute. This warning normally indicates that the battery has reached the minimum level at which performance can be guaranteed; any further deterioration may jeopardise the performance of the beacon in an emergency.

Refer to Page 15 for information on testing the beacon to verify the alarm.

Refer to the Service section for information on replacing the battery.



Beacon transmitting in emergency

2. Beacon controls



2.1 Transmitter Control

The transmitter can be set into one of two modes:

Off

Transmitting - Permanently transmitting on full power

The activation system can be triggered by one of two methods:

Manually

Automatically, by immersion in water

2.2 ARMING & CONFIRM Button Control

2.2.1 Status Check

To check the armed status of the beacon, press and hold the ARMING button only.

ARMED

Continuously repeating 'beep-beep' with LED flashes

DISARMED

A single beep-beep with an accompanying LED flash

2.3.1 ARM (for automatic activation by immersion in water)

To set the Watch in ARMED mode:

Step 1: Press the CONFIRM button 3 times:

A single beep and LED flash confirms this step.

Step 2: Press the ARMING button once:

The acknowledgement is a double beep and LED flash.

Once armed the LED will flash once every minute or so to indicate that it is in ARM mode.

2.3.2 DISARM

To DISARM the Watch:

Step 1: Press the CONFIRM button 6 times:

A single beep and LED flash confirm this step.

Step 2: Press the ARMING button once:

The acknowledgement is a double beep and LED flash.

2.3.3 Water Sensor

The housing has 2 stainless steel sensors that are exposed on the outside of the main housing. For activation, the beacon must be submerged in water for at least 4 seconds. The Water Activation Sensor functions only when the beacon is in the ARMED mode.

NOTE: The beacon may activate automatically in extremely damp or wet conditions. If this occurs, use the beacon in Manual Transmit mode.

2.4 Transmit (Manually)

To start transmitting manually, press and hold both the ARMING and CONFIRM buttons for 3 seconds. The acknowledgement is a single beep. The LED flashes during the period of transmission.

To stop transmitting the Disable Transmitting sequence must be performed.

2.5 Disable Transmitting

To stop transmitting manually, press and hold both the ARMING and CONFIRM buttons for 6 seconds.

The acknowledgement is a single beep and LED flash.

2.6 Test Function

To test the transmitter function of the beacon, press and hold the CONFIRM button. After 3 seconds there is a single beep and a single LED flash to confirm the test mode, followed by transmission at low power. The internal sounder buzzes to indicate that the unit is transmitting. Once the CONFIRM button is released, the transmission ceases.

3. Watch Time Functions

The time functions use 4 external push buttons (Start, Reset, Mode and Light) for setting and adjustment. The following features are included:

- Hour, Minute, Seconds and Day of the Week
- Month and Date
- Chronograph 1/100 Second with Lap/Split Control
- Maximum chronograph count: 23 Hours 59 Minutes 59 Seconds
- Alarm
- Hourly Chime
- 12/24 Hour display at user's option

3.1 Normal Readout

- Pressing and holding START displays Month, Date and Day of Week
- Pressing and holding RESET displays Alarm Time
- Pressing MODE is reserved for changing functions, as described later
- Pressing LIGHT once turns on the backlight for 3 seconds

3.2 Alarm operation

When the alarm sounds, press RESET to silence it. Alternatively, press START to silence the alarm for 5 minutes (Snooze function).

3.3 Setting Sequence

3.3.1 Normal Time Setting

Press Mode 3 times to enter normal time setting mode. **TU** flag will flash.

Seconds will start flashing, press Start to set seconds to zero.

Press Reset once: Minutes flashing, press Start to advance.

Press Reset once: Hour flashing, press Start to advance (A is AM, P is PM and H is 24 hour format).

Press Reset once: Date flashing, press Start to advance.

Press Reset once: Month flashing, press Start to advance.

Press Start once: Day of Week flashing, press Start to advance.

Press Mode once: Setting completed, return to normal time readout.

3.3.2 Alarm Time Setting

Press Mode twice. **MO** flag will flash.

Alarm Time Hour flashing, press Start to advance.

Press Reset once, Alarm Time Min flashing, press Start to advance.

Press Mode once, setting is completed, return to normal time readout.

Arm the Alarm by pressing Start & Reset simultaneously; ALM flag will appear.

Disarm the Alarm by pressing Start & Reset simultaneously; ALM flag will disappear.

3.4 Hourly Chime

Chime is activated by pressing and holding Reset, then pressing Mode once; the **SU through SA** flags appear.

Deactivate Chime by pressing and holding Reset then pressing Mode once; the SU through SA flags disappear.

3.5 Chronograph

Press Mode once to enter Chronograph mode; the **SU, FR, SA** flags flash. Pressing the Start button starts and stops the time display; the time accumulates on successive starts. Reset sets the timer to 0:00:00. Note that the colon sign flashes whenever timing is running.

Whilst timing is running, pressing Reset puts the watch into Lap Time mode; the **SU, TH, SA** flags flash. This freezes the display whilst the timing continues in the background. Pressing Reset again updates the display; pressing Reset yet again freezes the display, and so on. The time is reset to 0:00:00 by pressing Start while the display is counting, and then pressing Reset.

To return to normal timekeeping, press Mode once.

4. Service

4.1 Battery change

It is not recommended to attempt to replace the product battery, as this is a task for a skilled specialist. It is advisable to return the product to McMurdo, or to take it to a McMurdo Service Agent.

A kit containing all necessary parts and instructions is available. **The product must be fully tested after battery replacement. It is essential that a pressure test is performed to ensure that the housing is waterproof, as otherwise the lifesaving capability of the beacon may be compromised.**

4.2 Safety

The battery contains Lithium. Do not incinerate, puncture or recharge this type of battery. Dispose of it safely in accordance with local regulations.

4.3 Spares

Battery/Gasket Kit	88-127
Strap Replacement Kit	88-126

5. Training Watch

The Training Watch is identical to the Guardian MOB Beacon Watch in operation, except that it transmits on 121.65MHz. As a consequence its signal cannot be received on normal distress alarm receivers, thus training exercises may be conducted without creating false alarms. The training watch is clearly identified by its strap markings.

NEVER WEAR THE TRAINING WATCH EXCEPT FOR TRAINING EXERCISES.

The MOB Emergency Receiver has a special listening mode designed for use in training exercises.

6. Battery reset

Under certain conditions, typically when the beacon has activated for short periods, the low battery alarm may sound although the battery does not need to be replaced.

If this is suspected, the battery alarm function should be reset by:

- 1 Press and hold the CONFIRM button
- 2 Press the ARMING button once
- 3 Release buttons. The unit will acknowledge with 5 beeps.
- 4 Immediately press the CONFIRM button twice. The unit will acknowledge with a LED flash.
- 5 Immediately press the ARMING button once. The unit will acknowledge with 4 beeps.
- 6 Confirm that the low battery alarm has been reset by monitoring the Beacon for 2 minutes.

If the alarm does not sound, the Beacon may be used as normal.

If the low battery alarm sounds at this time or subsequently, a new battery must be fitted.

McMurdo Limited Product Warranty

Subject to the provisions set out below McMurdo Limited warrants that this product will be free of defects in materials and workmanship for a period of 12 months from the date of purchase.

McMurdo Limited will not be liable to the buyer under the above warranty:-

- for any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to follow McMurdo Limited's instructions (whether oral or in writing) including a failure to install properly and/or to use batteries recommended and/or supplied by McMurdo Limited, misuse or alterations or repair of the product by persons other than McMurdo Limited or an Approved Service Agent;
- for parts, materials or equipment not manufactured by McMurdo Limited in respect of which the buyer shall only be entitled to the benefit of any warranty or guarantee given by the manufacturer to McMurdo Limited;
- for the battery storage life which is specifically excluded from this warranty;
- if the total price for the product has not been paid.

McMurdo Limited does not make any other promises or warranties (express, implied or statutory) about the product except where the product is sold to a consumer in which case the statutory rights of a consumer are not to be affected.

In order to be valid, claims must be made under the above warranty in writing as soon as practicable after discovery of the defect or failure and within the warranty period referred to. Following a valid warranty claim McMurdo Limited shall be entitled to repair or replace the product (or part) in question free of charge, or at McMurdo Limited's sole discretion to refund to the buyer the price of the product (or a proportional part of the price). McMurdo Limited shall not be liable to a buyer who is not a consumer for any other loss or damage (whether indirect, special or consequential loss of profit or otherwise) costs, expenses or other claims for compensation which arise out of or in connection with this product. In the case of a consumer McMurdo Limited shall only be liable where other loss or damage is foreseeable.

Nothing shall limit McMurdo Limited's liability for death or personal injury caused by its negligence.

This warranty is to be interpreted under English law.

All enquiries relating to this warranty or Approved Service Agents should be sent to:

McMurdo Limited

Silver Point, Airport Service Road, Hampshire, PO3 5PB, United Kingdom

Telephone: Int + 44 (0) 23 9262 3900

Fax: Int + 44 (0) 23 9262 3999

Web: www.mcmurdo.co.uk

Email: sales@mcmurdo.co.uk

Specification

See Page 14 for details
of the Training Watch

Chronograph watch - see text for functions

- ❖ Operational temperature range: -10°C to +60°C

121.5MHz beacon

Environmental

- ❖ Operational temperature range: -20°C to +55°C
- ❖ Water Pressure Rated: 50 metres or 5atm
- ❖ Weight inc. strap: 81grams

RF Transmitter

- ❖ Frequency: 121.5MHz
- ❖ Class of Emission: A3X
- ❖ RF Power: -25dBm
- ❖ Frequency error: +/- 3.5kHz
- ❖ Duty cycle: 100%
- ❖ Modulation type: Sweep downward from 1.5kHz to 650Hz
sweep repetition rate 2Hz
- ❖ Modulation duty cycle: 50%

Power

- ❖ Voltage: 3.2 Volts max.
- ❖ Current drain: 20uA Quiescent
110mA Transmitting

EU DECLARATION OF CONFORMITY

The following products essentially comply with the EU Directive (EMC) Radio Equipment and Telecommunications Terminal Equipment and administrative technical regulations applicable.

Equipment covered by this Declaration

Product Type : 1010 Wireless 915 MHz PAU

Model : McMurdo Pwr Wireless Groundwater Sensor
Design Engineering version of EML Technologies Ltd—GAD-0001-RJ2 Sensor

McMurdo Pwr Wireless SuperStar 915MHz Training Station
Design Engineering version of EML Technologies Ltd—GAD-0001-RJ2 Training Station

Identification of products

Manufacturer name : McMurdo Pwr Services Ltd, Hampshire, UK. EML Products is a company information system for you with a dedicated web-linking system to view the associated records to provide local printing of a Memorandum only. This equipment data page provides details to the Emergency Services and is not intended to be part of the public domain.

The following equipment complies referred to in Article 10(2) and detailed in Annex II of Directive 2014/53/EU, has been released with the manufacturer of the following product(s):

Technical Construction File submitted by EML Technologies Ltd

Name of Notified Body selected : BSM - Notified

Address of Notified Body : Holy Road, Farnborough, Hampshire, PO14 0LR

Business reference : EML 001 - 1000ARTS-001-000

Contact : EML@bsm.co.uk

Radio Test Data and standards used

Linked testing to CE Mark 1010111

Maximum EMI testing to EN61010

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These products comply with the essential requirements of Articles 3 (EMC), 4 (EMC) and 5 (EMC) of the Directive, but are not exempted with Article 3 (EMC) of the Directive.

We hereby declare that the products described above have been tested in accordance with the EMC Directive and have been found to comply with the EMC Directive. The following form of conformity will be signed by the products manufacturer (EML Technologies Ltd) and the manufacturer of the products (EML Technologies Ltd).

CE 0191

Signature of Notified Body

Signature :	
Name :	E. P. Notified
Title :	Technical Director
Date :	31/01/2014 20:14

ATTENTION

The attention of the supplier, purchaser, installer, or user is drawn to specific measures and instructions to use which must be observed when the product is taken into service to maintain compliance with the above directive. Details of these specific measures and instructions found are available on request, and are also contained in the product owner's manual.



EUROPEAN CONFORMITY AND DECLARATION
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