

User's manual

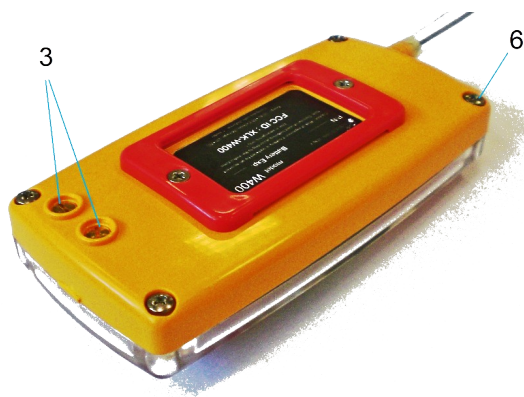
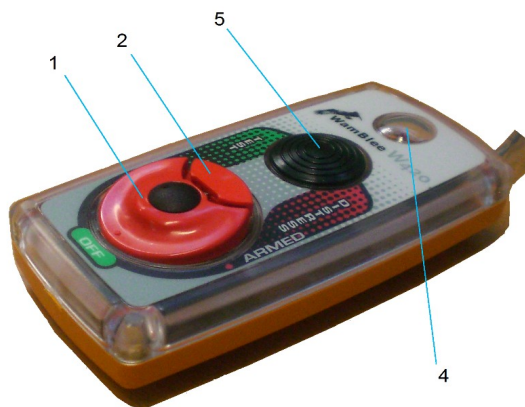
# **W420 W420EX**

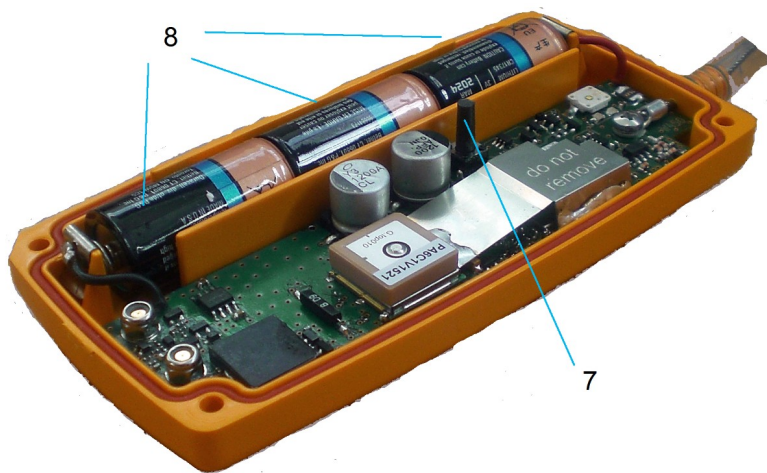
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**WamBlee**







### **Warning**

This device must only be used in situations of serious, imminent danger.

Deliberate use in a non-emergency situation may lead to prosecution.



Keep the device at least 1 meter away from magnetic sources and any devices sensitive to magnetic fields.



Change or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment (FCC 15.21).

The technical data, information and illustrations contained in this manual were believed to be correct at the time of print. Wamblee s.r.l. reserve the right to change specifications and other information contained in this manual as part of our continual improvement process.

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## Introduction

Congratulations and thank you for purchasing the W420/W420EX AIS MSLD, one of the most high-tech, reliable devices available on the market.

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The W420/W420EX AIS MSLD, when activated, is capable of transmitting an AIS signal, useful for locating people who are missing at sea.

As the owner of this radio device you are advised to:

- Read this manual.
- Activate your W420/W420EX ONLY in the event of an emergency.
- Prepare and check an emergency plan.
- Do not activate your W420/W420EX to check whether it is working properly: follow the test procedures described in this manual.

This product has been evaluated for compliance with the FCC RF exposure limits given in CFR 47 part 1.307(b) at a distance of greater than 2 cms.

## Technical specifications

Emission VHF channel	AIS 1 & 2
Emission power	+31 dBm typical, > +27 dBm
Modulation	GMSK, 16K0GXW
Message type	Type 1 (GPS, UTC, SOG, COG, UID) and type 14 (SART ACTIVE or SART TEST)
GPS module	Update position every minute
Light signalling	white LED, 70 mS flash repeated 20 times/minute
Antenna	Flexible wipe antenna with rubber protective sheath
Operating temperature	from -20°C to +55°C
Stowage temperature	from -30°C to +70°C
Battery supply	3 primary LiMnO <sub>2</sub> 2/3AA batteries(CR123) non hazardous
Battery replacement	5 year from installation
Operations and controls	Armed, manual activation, partially automatic, TEST function
Duration of operation(once activated)	At least 24 hours
Size	125 x 65 x 25 mm (L x W x H) (antenna excluded)
Weight	140 g
Standard applied and compliance	R&TTE Directive 99/05/EEC, EN61097-14, EN61108 part1,2 e 4, EN60945, ITU-R M.1371
Approval	 <b>1232</b>  <b>FCC ID : XLK-W420</b>
ATEX approval (for W420EX version)	 <b>II 3G EEx i IIC T6</b>

## Installation

The W420/W420EX device has been designed to be worn by the user.

The device can be installed directly on lifejacket using the mounting bracket and adhesive sticker to fix the antenna. The use of the AIS MSLD unit with the antenna around the neck or close to the body, dramatically reduce the coverage area and is not recommended.

For this type of installation please consult the life jacket manufacturer of our representative dealer.



The front part of the device (the one where the manual activation button is present) shall be positioned so that it always faces the sky; in this way the GPS module will acquire the shipwrecked position as quickly as possible

## Operation

**EN** Before wearing the device it is recommended that you proceed with a test of your W420/W420EX AIS MSLD to ensure it is working properly; test procedures are described in the 'Functional Test' section of the manual.

### How to “arm” your W420/W420EX AIS MSLD

To ensure that your device is ready for activation, the knob (1) must be set to the 'ARMED' position.

Press the push button (2) inwards to release the safety lock. Then, keeping the push button pressed, rotate the knob anticlockwise until it reaches the 'ARMED' position, then release the push button (2).

Your W420/W420EX is ready to be activated in the event of an emergency.



## Automatic activation

If your device accidentally falls in the water it will, on coming into contact with the water, start working within approximately 5-10 seconds. The 'water contact' sensors are located on the rear of your device (3) and must be externally accessible; keeping your W420/W420EX in a waterproof pocket or a zone inaccessible to water will prevent its activation.

Activation of your W420/W420EX AIS MSLD will be indicated by:

- A red light inside the flash lens (4)
- A beep emitted for two seconds at the moment of activation
- A white light flashing once every 4 seconds.

During this stage, your device W420/W420EX will transmit in the VHF band allocated to service international shipping a series of AIS SART ALERT messages.



### Manual activation

**EN** Should your W420/W420EX AIS MSLD fail to activate automatically you can proceed with manual activation. After checking that the knob (1) is in the 'ARMED' position, press the 'Test/Activation' push button (5). Once pressed your W420/W420EX device will be activated the same way as it is in automatic mode.



## Deactivation

To turning off your W420/W420EX it is necessary to rotate the knob (1) clockwise, repositioning it to 'OFF'.

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Press the push button (2) inwards to release the safety lock and then, continuing to hold the push button down, rotate the knob clockwise until the 'OFF' position is reached, then release the push button (2).

The device will be deactivated and stop emitting AIS SART ALERT messages.



## **Preventing accidental activation**

To avoid accidental activation of your product, we recommend:

- When not in use, store it in a dry environment
- When not in use, make sure the knob (1) is positioned in OFF
- In the case of obvious malfunctions, if possible remove the batteries

## **In case of accidental activation**

In the case of accidental activation involving transmission of AIS SART ALERT messages, the user should deactivate the W420/W420EX MSLD and notify the appropriate search and rescue authorities (e.g., U.S. Coast Guard or Rescue Coordination Centre serving the geographic area) at the earliest possible time.

## **Periodic checks and maintenance**

Our W420/W420EX AIS MSLD does not require special maintenance, it is only necessary to make a visual check (checking the integrity of the plastic case) every time you proceed with a periodic test or if there is a doubt about a possible plastic case damage and make a periodically functional check.

There are two kinds of tests; a SHORT test that consists in checking battery state and a LONG test that checks the operation of the GPS module. It is recommended to carry out a SHORT test once a month, and the LONG test is recommended on a yearly basis.

The execution of tests over the recommended schedule reduces the life time of the batteries.

## **Short test (only battery)**

- Make sure the knob (1) is in the 'TEST' position, then press the 'Test/Activation' pushbutton (5).
- Lighting of the red indicator light inside the flash lens (4) and buzzer tone for about two seconds.

- Flash lighting of the battery state green indicator inside the flash lens (4); during this phase release the pressure from the TEST pushbutton in order to carry out only the SHORT test.
- At the end of the test the red led should turn off indicating the that the test is finished.

Device status	Green indicator	Red indicator
Battery charged	3 flashes	On
Battery almost charged	2 flashes	On
Battery almost flat	1 flash	On
Battery needs changing	Off	Off

### Long test (GPS check)

The execution of the LONG test allows to check the operation of the GPS module within your W420 AIS MSLD device and allows to emit an AIS test message.

- Place the device in an open area free from obstacles, with the upper part (the one in which the manual activation button is present) facing the sky. This is to allow a quick acquisition of the position by the GPS module.
- Make sure the knob (1) is in the 'TEST' position, then press the 'Test/Activation' pushbutton (5).
- Lighting of the red indicator light inside the flash lens (4) and buzzer tone for about two seconds.
- Flash lighting of the battery state green indicator inside the flash lens (4); during this phase keep the pressure on the TEST pushbutton.
- After about 10 seconds from pressing the TEST pushbutton the red led will start flashing slowly (1 flash per second). Release the pressure from the TEST pushbutton.
- Your device will try to obtain the position in the next 5 minutes.

- If the position is acquired before five minutes, the flash will start and an AIS test transmission will be performed as confirmation to the fix found.
- If the position isn't acquired within 5 minutes the flash will start and an AIS test transmission – with the default parameters (ie without the position) - will be performed as confirmation of the fix reception failure.

### **ID code**

The ID code is reported on the external label on the back plane of your W420/W420EX AIS MSLD. This code is fixed in the device and cannot be changed by the user.

### **Compatibility with AIS Chart plotter system**

The W420/W420EX AIS MSLD works as an AIS SART unit. Please verify with the chart plotter or AIS receiver manufacturer that your AIS unit is able to properly receive the AIS message type 14 (AIS SART).

## Changing the batteries

The supplied batteries must be changed 5 years after their installation. Batteries must only be of the specific models approved by WamBlee; **of unapproved models may involve the malfunction or breakdown of the device.**

To change the batteries proceed as follows:

- Make sure the knob (1) is in the 'OFF' position.
- Use a suitable Phillips screwdriver to remove the 4 screws on the underside edges of the device (6).
- Remove the upper part of the case; if necessary tap the edge gently.
- Remove the three old batteries (8) and replace them with three new ones. Make sure they are installed the right way round (positive pole facing top of device).
- Press the push button (7) and check the test sequence as described in 'Periodic checks'.
- Re-close the upper lid, making sure the seal is inserted in its seat correctly and is not damaged. If you notice that the seal is damaged or see any infiltration of foreign matters inside the device replace the seal.
- Screw the 4 underside edge screws back in; tighten properly but not excessively.

The batteries should be disposed of properly and not thrown in the household trash. Check with authorized operators on proper disposal of used batteries indicating the chemical (Li-MnO<sub>2</sub>).

## **Approved batteries**

The batteries approved for your device unit are, at the time this handbook going to press, the following:

- VARTA CR2/3AH
- Duracell CR123A, DL123A
- Procell CR123
- Panasonic CR123

Please note that the new battery cell/pack shall be new or maximum not more of 2 Years old from date of manufacturing.

This list is continuously updated and can be consulted on the following website [www.wamblee.it](http://www.wamblee.it)

## **Shipping**

Within the delivery of the device, remove the internal batteries (see 'Changing the batteries') and ship the unit without the batteries using the original container or alternatively a carton after the apparatus with appropriately wrapped airball or bubblewrap.

## **Troubleshooting**

Should the device fail to pass the periodic check it will be necessary to send your W420/W420EX to our after-sales service, which will restore proper performance.

A list of after-sales centres authorised to carry out maintenance on your device can be consulted on our website:

[www.wamblee.it](http://www.wamblee.it)

## **Warranty**

Your unit is covered by a 5 year parts and labor warranty. (battery excluded). Wamblee s.r.l. warrants to the purchaser that the products conform to manufacturers specifications and that the products are free of defects on materials and workmanship for a period of one year from the date delivered to the customer/end user. In the event of a defect, due to faulty material, design or construction, the customer will return to Wamblee at the business address where we, or the manufacturer will undertake, at our choice, a repair or replacement.

Warranty covers all parts, materials and labor, provided that the product is returned to our works. Exclusions: damage caused by other than normal use and lack of basic, general care carried out in accordance with the instruction manuals.

Wamblee s.r.l. does not accept any responsibility or any claim for direct or indirect consequences of defects of the equipment, either during the guarantee period or at a later stage.

## **Disclaimer**

The Wamblee products are an aid to recovery only, it is the responsibility of the user/operator to ensure they are fully conversant with the operation of the equipment and the equipment is kept in full working order at all times combined with functionality and damage checks before and after each use.

Wamblee does not accept liability for loss of life or injury caused during any accident during which the equipment is being used, how so ever it arises. Wamblee Alerting Units/MSLDs are an 'Aid to rescue only', they do not guarantee your safety.

The Wamblee MSLDs will dramatically increase the chances of detection and location of a Man Over Board. Personal safety remains at all times the sole responsibility of the individual. It is the responsibility of the individual to inform their local Coast Guard, their senior personnel/crew members and or family of their intended location/destination and estimated duration of journey. It is also the responsibility of the individual to notify these people of the type of safety equipment they will be carrying. In the case of accidental activation the user should deactivate the unit and notify the appropriate Search And Rescue Authority.

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