



# USER GUIDE

# CREW1 AIS MAN OVERBOARD BEACON



[www.seasofsolutions.com](http://www.seasofsolutions.com)  
sales@seasofsolutions.com

Specifications subject to change or improvement without notice

**Netwave Systems B.V.**  
Blauw-roodlaan 100,  
2718 SJ Zoetermeer,  
Netherlands

Phone: +31 (0) 8811 81500

Email: [customer.service@seasofsolutions.com](mailto:customer.service@seasofsolutions.com)

Website: [www.seasofsolutions.com](http://www.seasofsolutions.com)

Version: 1.1

## COPYRIGHT

© 2022 SEAS OF SOLUTIONS BV AND/OR ITS AFFILIATES. ALL RIGHTS ARE STRICTLY RESERVED.

The entire contents of this user instruction manual, including any future updates, revisions, and modifications, shall remain the property of Netwave Systems B.V. at all times. Unauthorised copies or reproduction of this manual, either in part or whole, in any form of print and electronic media, is prohibited. The contents herein can only be used for the intended purpose of this manual.

## DISCLAIMER

NETWAVE SYSTEMS reserves the right to change this specification at any time without notice and hereby specifically disclaims liability for any consequences of such action.

**WARNING:** An AIS MOB device is intended for use within the maritime environment where permitted by national administrations. When activated, it transmits a digital alert message to any vessel or shore station in radio range which is equipped with an AIS receiver. Deliberate misuse of the device could result in a penalty.

**WARNING:** Please carefully read the instructions and get familiar with the test and activation procedures before using the device.

**WARNING:** An AIS-MOB Man overboard device is only intended for short range signaling to an AIS receiver installed onboard your own vessel. It will not directly alert the emergency services or other vessels.

**WARNING:** An AIS MOB is designed for use with an AIS receiver and is not a substitute for a PLB or EPIRB.

**WARNING:** This equipment is not intended for routine tracking of persons or property. This includes routine tracking of divers.

**WARNING:** Report occurrences of accidental activation to your local coastguard.

**WARNING:** If self-test is performed more frequently than once a month, then battery life may be reduced.

**WARNING:** Radio Licensing. This product is a radio transmitter. Some administrations may require that the user holds a valid radio license to cover its ownership and use.

 **WARNING:** Contains a magnet, Prevention of false activation, store well away from other strong magnets.

- 1 -

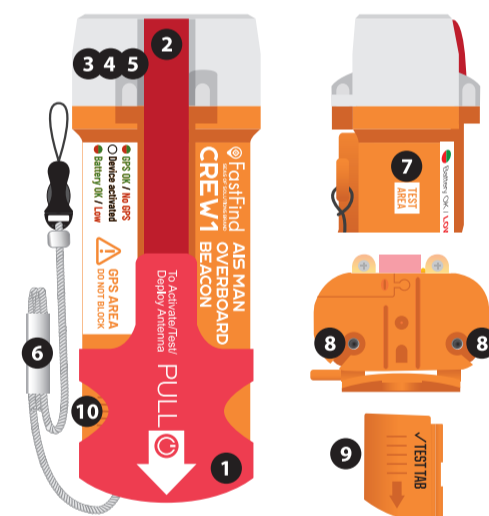
The FastFind Crew1 AIS Man Overboard (MOB) device is designed to be carried by individual crewmembers and used in the event of a Man Overboard situation or personal emergency. When activated it transmits an AIS MOB message containing your position and ID via AIS (Automatic Identification System). The transmission will be received by AIS equipped vessels within local radio range.

As the AIS MOB device includes an inbuilt GPS receiver, your current location is transmitted, dramatically reducing the time taken to locate and increasing rescue capability even in poor visibility. FastFind Crew1 also has a flashing white light to help rescuers pinpoint your precise location in the water.

The FastFind Crew1 is designed to be carried in the belt pouch provided. Alternatively, it can be fitted to lifejackets using the clip options supplied, ready to be activated in the event of a man overboard situation. After the lifejacket is inflated, pull the activation cord downwards, releasing the red cap and deploying the antenna. Transmissions will start shortly after, and the light will flash. Crew1 can also be stored in a standby mode, ready to automatically activate on contact with water.

## 1. Crew1 Overview

1. Antenna cap
2. Antenna
3. Battery LED (Green/Red)
4. Flashing LED
5. GPS LED (Green/Red)
6. Lanyard (to prevent loss of parts)
7. Self-Test zone
8. Water Sensor
9. Self-Test key, with magnet on the back side
10. Activation tab



- 2 -

## 2. Equipment in the Box

1. AIS MOB unit with belt clip
2. Belt carry pouch
3. Oral tube adaptor clip
4. User guide
5. Self-Test key



## 3. Installing Crew1 on a Lifejacket

### 1. Strap Clip

The Crew1 is supplied as standard with a webbing clip to attach the device to a lifejacket strap.



### 2. Oral Tube Clip

The Crew1 is delivered with an alternative clip which can be attached to the lifejacket's oral tube. The Clip is designed to be installed on the left or right of the oral tube and replaces the webbing clip all together.



- 3 -

## 4. Activating your Crew1

### Manual Activation

1. Pull off the red antenna cap to release the antenna.



Caution: when deploying antenna, be careful in its spring action to avoid eye injury.

2. Pull the activation tab off the Crew1 and the device will start transmitting alert messages immediately and the flashing light will operate.



### Water sensor Activation

1. Pull off the red antenna cap to release the antenna, leave the activation tab in situ, the device is now ready in standby mode.



Caution: when deploying antenna, be careful in its spring action to avoid eye injury.

2. When the water sensor embedded at the bottom side of the device is immersed in water for more than 3 seconds, the device will be activated and starts transmission.



- 4 -

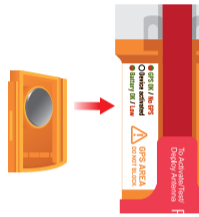
## Note:

- When activated, the flashing white light will flash SOS signal in Morse code format every minute.
- When activated, the device will transmit an AIS MOB ACTIVE message every minute with Lat/Lon position information. In case the GPS location cannot be updated due to weather conditions, the last obtained Lat/Log GPS position will be sent.
- Not all chart plotters with AIS show the correct ☒ icon as recommended by the IMO. As a minimum, they will show the same icon as used for other craft normally an ✓. The ID MMSI number dedicated for AIS MOB begins always with 972 which will differentiate AIS MOB from normal AIS targets.
- Ensure the Crew1 remains out of the water, as direct contact with water will reduce the transmission range and could cause difficulties in obtaining GPS coordinates.
- Ensure that the GPS "do not block" zone is not shielded or covered and is with a clear view of the sky.
- It is recommended that the Short Test is performed monthly. Return the Crew1 to a service centre for battery replacement if battery level is low.
- Confirm that the battery expiry date shown is in date for the duration of intended use.
- This product emits low levels of radio frequency energy during operation. Avoid handling the antenna once activated.
- Avoid cleaning the unit with chemical solvents as this may damage the case material.

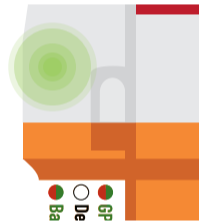
- 5 -

### 6.1 Battery life test

Start the battery life test by placing the magnet found on the back side of the test key on the "Test Area" label marking for one full second.

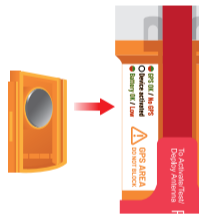


The flashing white light will flash once, and the audible beeper will beep once signifying the device has entered battery life test mode. The green LED will flash to indicate that the battery is okay. A red flash LED indicates low battery power, and battery needs to be replaced. The Crew1 will flash 3 times and beep once again to end the test.



### 6.2 Full Function and GPS Test

Take the Crew1 outside under a clear view to the sky. Start the test by using the magnet found on the back side of the test key, touch the magnet to the "Test Area" label marking. Just like the Battery Test, the white light will flash once, and the device will beep once. Hold the magnet next to the Test Area for 3 additional seconds until a second audible beep is heard, indicating the Crew1 has started the Full Function Test. The battery LED and GPS LED will commence to flash every 3 seconds to indicate the battery status and GPS locating status:



- 7 -

## 7. Specification

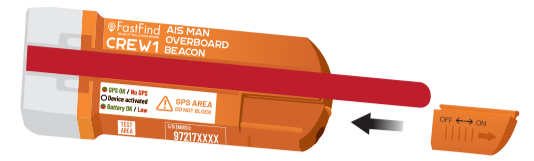
APPLICABLE STANDARDS		ENVIRONMENTAL	
IEC 60945	EN 303098 V2.2.1	Operating Temperature	-20°C~55°C
IEC 61108-1	IEN 50385: 2002	Storage Temperature	-30°C~70°C
EN 50383: 2010	EN 62311: 2008	Waterproof	IP67
EN 62368-1: 2014 + A11: 2017		Immersion Depth	Temporary 5m for 5 minutes
GPS PERFORMANCE		Compass Safe Distance	0.8m
Receiving Channels	72	GENERAL/PHYSICAL	
Frequency	L1, 1575.42 MHz	Model No.	Z620
Tracking Sensitivity	(-)163 dBm	Size (L x W x D)	129 x 52 x 40mm
Reacquisition	(-)159 dBm	Weight	160 g (main unit only)
Position Accuracy	< 2.0 m SBAS		
	< 2.5 m Autonomous		
VHF PERFORMANCE			
Frequency	AIS 1, 161.975MHz		
	AIS 2, 162.025 MHz		
Data Rate	9,600bps		
Tx Power	2W (1W EIRP)		
Bandwidth	25 KHz		
Modulation	GMSK		
Range	4nm typical with receiver antenna > 5m above sea level		
AIS Message Type	Message 1 (TXID, GPS position, SOG, COG)		
	Message 14 (MOB ACTIVE or MOB TEST)		
BATTERY			
Type	Lithium metal (non-rechargeable)		
Operating Time	36 hours at -10°C, typical		
Storage (battery life)	5 years, replacement due after emergency use		
ACTIVATION METHOD			
Manual activation or automatic activation with water sensor by immersion			

Note: Specifications are subject to change without prior notice.

- 9 -

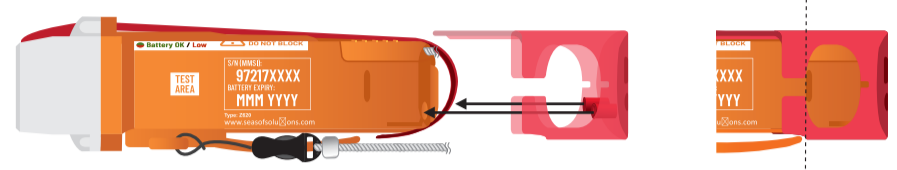
## 5. Turning off your Crew1

Insert the activation tab back in the unit and the transmission will cease. When the unit is activated by the water sensor, pull the activation tab off, and then reinsert the tab subsequently to turn off the transmission. Put the antenna back to its original position by wrapping around the unit and securing with the antenna cap.



### 5.1 Closing the red antenna cap

Align the red antenna cap with the unit, the longer side facing the front and the shorter side facing the back. Push the red antenna cap all the way until the antenna cap clip clicks fully home. Take care not to trap the lanyard cord under the side of the cap. The proper fitting of the red antenna cap ensures the water sensors are properly sealed from the elements and thus prevent the unit from being activated when wet.



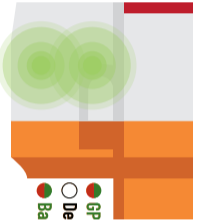
## 6. Testing your Crew1

The device is equipped with self-test capability to perform 2 different tests to ensure the beacon is working perfectly. The first is a battery life test to check the beacon's battery power. The second test is a GPS self-test that includes GPS activation and live test message transmission.

- 6 -

The green battery LED indicates that the battery is okay. If the battery LED flashes red, this indicates low battery power, and the battery needs to be replaced.

The green GPS OK LED indicates that a GPS fix is achieved, or a red GPS LED means that NO GPS position fix is obtained.



As soon as the GPS position fix is achieved, the device will send a MOB TEST message, which will be displayed with a ☒ icon on AIS systems within radio range. The Full Function Test will then terminate automatically sounding a beep, after 8 burst of test messages are successfully sent. When no valid GPS position fix is obtaining within 5 minutes, the Full Function Test is regarded as failed and will automatically terminate with a beep.

If the Full Function Test fails, move the Crew1 to a new outside location and make sure that the antenna is pointing towards the sky and the "GPS Area" label marking is not obstructed by hand or other objects. When the Full Function Test fails a second time, return the device to your service center.

### Note:

- You can interrupt the test mode any time by pulling off the activation tab and then re-inserting the tab. Please note, when in test mode, the device will not transmit a alert message.
- The MOB TEST message generated by a full function test will should appear on all chart plotters with AIS within local radio range in the form of a SRM (Safety Related Message). The message is "MOB TEST" with the device's ID MMSI number as sender's identity. Note: In case the MOB TEST message is not received, check the vessels AIS equipment and ensure AIS "SART TEST" is enabled.

- 8 -

## EC Declaration of Conformity

Hereby Netwave Systems B.V. declares that the Type Z620 (Crew1) is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Directive (RED) 2014/53/EU on radio and telecommunications terminal equipment. A copy of the Declaration of Conformity can be obtained on-line from: <https://www.seasofso-lutions.com/products/fastfind-crew1/>

### RF Exposure warning

Warning: This device generates and radiates RF electromagnetic energy and requires a Maximum Permissible Exposure radius of 20cm during operation.

### Battery

- The lithium metal battery in Crew1 should be replaced only by an Netwave Systems authorized service provider and must be recycled or disposed of separately from household waste. Never attempt to replace the Crew1 battery yourself.
- Do not recharge, puncture, deform, short-circuit the lithium batteries contained in the product or put it in fire.
- The small lithium metal batteries contained in the device can normally be carried on passenger aircraft in carry-on baggage as a personal item. Always check with air carrier for any additional restrictions.

### End of Life Statement

The symbol above means that your product and/or its battery shall be disposed of separately from household waste according to local laws and regulations.



Authorisation of use is required			
AT	HR	SE	EE
FI	PT	DE	LU
NL	CY	IT	UK(NI)
BE	HU	SI	EL
FR	RO	DK	LV
PL	CZ	LT	ES
BG	IE	SK	MT

- 10 -