

**ONWA**<sup>®</sup>  
KS-33R

**KS-33R**  
**OPERATOR'S MANUAL**

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**AIS MOB**

**FC CE**

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## FOREWORD

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**The ONWA KS-33R is a personal AIS device. Lightweight & compact, it is designed to be carried by all crew members & can be mounted on a lifejacket.**

When triggered, the KS-33R AIS MOB transmits GPS position information to all AIS-equipped vessels and stations within range to assist fast recovery in distress situations. Each unit is encoded with a unique serialised ID to ensure all crew are recovered and accounted for. To further assist in recovery, the KS-33R also features an ultra-bright LED beacon and buzzer. The lithium power cell offers a minimum 24hr continuous operation and a 7 year battery storage life.

We would appreciate feedback from you.

Thank you for considering and purchasing ONWA.

# SPECIFICATION

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Standards:	EC 61097-14,60945(environmental/EMC), 61108 part 1, ITU-R M.1371
Waterproof:	IPX7
Operating temperature:	-20 to +55 °C (-4 to +131 °F)
Storage temperature:	-30 to +70 °C(-22 to +158 °F)
Battery type:	Lithium Manganese
Transmit duration:	24 hours
Battery life (storage):	7 years
Frequency:	161.975 & 162.025MHz
Power:	2W nominal
AIS Messages Transmitted:	Message 1 (UID, GPS position, SOG, COG, UTC) Message 14 (MOB ACTIVE or MOB TEST)
First Transmission:	After 3 seconds (No GPS)
Range:	4nm typical, with AIS receiver antenna > 5m above sea level
Unique ID Number:	Factory Programmed
GPS Type:	50 channel, ceramic patch antenna
GPS Position Update:	Every minute
Size (D x W x L):	24 x 50 x 130mm (0.93 x 1.96 x 5.08in)
Weight:	120g (4.23oz)

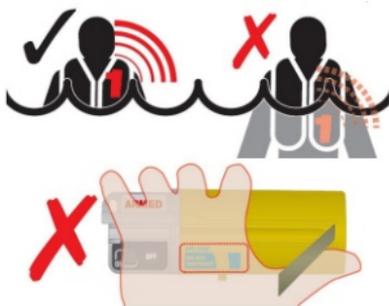
# OPERATION OVERVIEW

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## Safety Notices

Please take time to read this manual fully before using the KS-33R as it contains important information regarding the correct use and maintenance of the product.

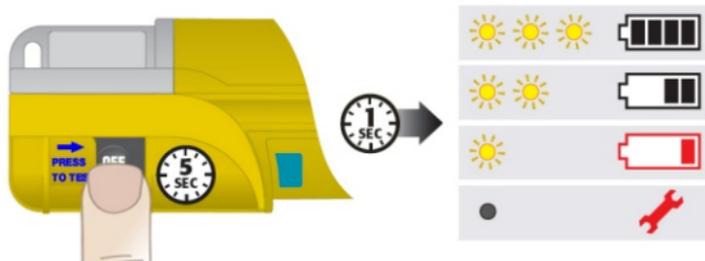
Ensure that the blue area marked “GPS Zone” is not obstructed or covered in any way and always has a clear view of the sky.



It is recommended that the Short Test is performed monthly. Return the KS-33R 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.

## Short Test

Quick system check and battery life test:

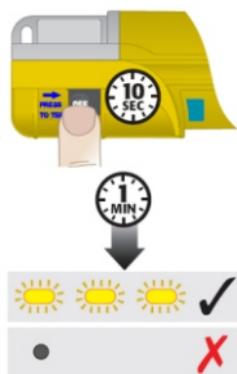


Press and hold [OFF] for 5 seconds then release 1 second, the LED light will twinkle 3 times indicated the battery is full, if twinkled twice, the battery is remaining 75%, if twinkled once, the battery is remaining 50%, if the LED lights do not twinkle, the battery is dead.

## Long Test

Full system check including GPS activation and live test message transmission.

- Requires a clear view of the sky.
- Ensure GPS Zone on unit is not obstructed.
- Perform away from busy sea areas where the test transmission could confuse other AIS users.
- Press and hold [OFF] for 10secs until 2sec long flash.
- Unit will flash every 1sec until GPS fix is achieved.
- After 1 minute a SART test message is sent, which will be visible to all AIS systems within range.
- At the end of the test, 3 long flashes indicates the test is successful. No flashes indicates the test has failed.
- If the Long Test fails, check the GPS Zone has a clear view of the sky and re-test. If the test fails a second time, return the unit to the service centre.



## Activation in case of emergency

Refer to the below figure :

Step 1 : Pull out the activation cap by the tab

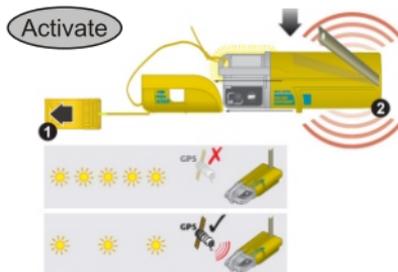
Step 2 : Let the antenna to pop up from the body of KS33R

At this time you can hear the beep sound and flashing light, that means your KS33R is activated.

Note :

Fast flashing GPS not yet been fixed

Slow flashing GPS is fixed



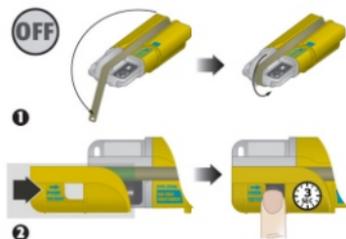
## Turn off and stop sending rescue signal

Refer to the below figure :

Step 1 : Fold the antenna back to position

Step 2 : Put back the activation cap

Step 3 : Press and hold [OFF] button for 3 seconds.



## Caution

### DO NOT ACTIVATE EXCEPT IN AN EMERGENCY

- This product is designed for use with an AIS receiver and is not a substitute for a PLB or EPIRB.
- This beacon 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.*

- Product and battery pack contain no user-serviceable parts. Do not dismantle
- Spring action antenna. Mount and deploy in such a way as to avoid eye injury
- Contains lithium batteries. Do not incinerate, puncture, deform, short-circuit or recharge
- Avoid cleaning the unit with chemical solvents as this may damage the case material.
- 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.
- This product emits low levels of radio frequency energy during operation. Avoid handling the antenna once activated.
- As AIS beacons are still very new, not all small-craft chart plotters with AIS show the correct SART icon as recommended by the IMO. As a minimum, they will show the same icon as used for other craft - normally an arrow.

In addition, user settings generally allow you to configure the display to show the MMSI number, which in AIS Beacons will always begin with 97. This will differentiate AIS Beacons (SARTs) from normal AIS targets. If in doubt, check with your plotter manufacturer how they display SARTs on screen.



**STAR icon**

## **Transportation**

- Product contains small lithium metal batteries.
- Passenger aircraft: Product can normally be carried on passenger aircraft in carry-on baggage as a personal item. It is recommended that you declare the device to airline staff at check-in, in the same way you would a laptop PC or video camera.
- Air cargo: Not restricted as air cargo under IATA code UN3091 PI970. Always check with carrier for additional restrictions.

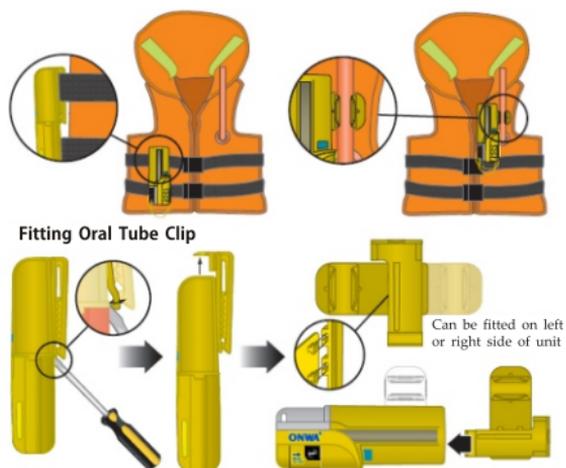
## **End of Life Statement**

- At the end of its life, the product must be disposed of according to local laws and regulations. Because the product contains a battery it must be disposed of separately from household waste.
- Do not incinerate, but take it to a recycling facility.

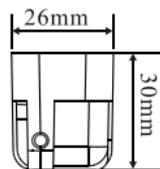
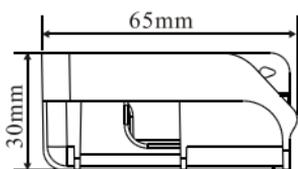
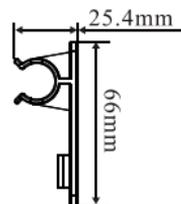
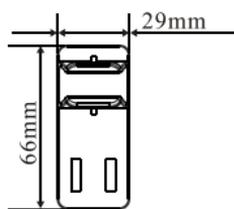
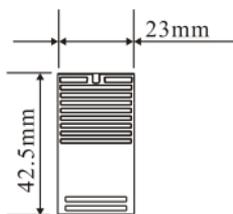
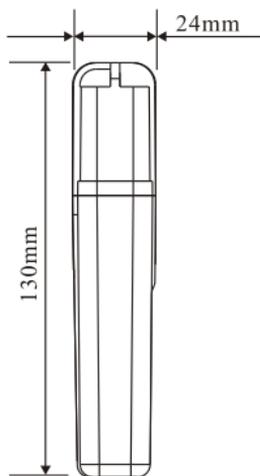
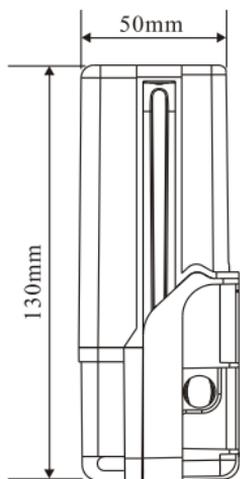
# INSTALLATION

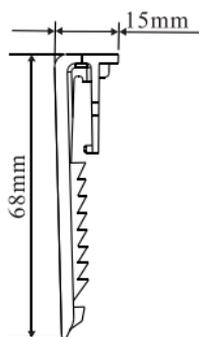
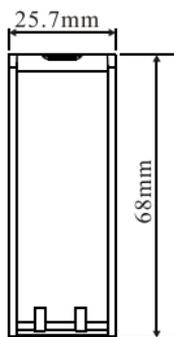
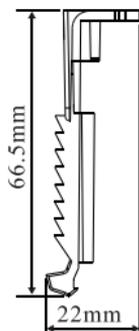
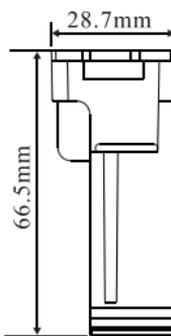
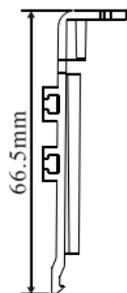
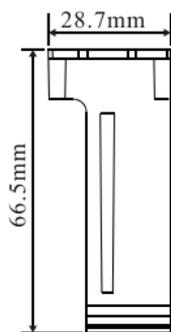
## Lifejacket Attachment

The KS-33R can be attached to the lifejacket using either the webbing clip or oral tube attachment.



# SIZE





## GLOSSARY

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ACA	(AIS) Regional Assignment Channel Assignment Message
ACK	Acknowledgement
ACS	(AIS) Channel management information source messages
AFSK	Auto frequency-shift keying
ALR	(AIS) Alarm Message
A to N	Aid to Navigation
AIS	Automatic Identification System
BIIT	Built In Integrity Testing
BNC	Bayonet fitting type Therefore connector
COG	Course over Ground
CR	Carriage Return
CS	Carrier Sense
CSTDMA	Carrier Sense Time Division Multiple Access
DC	Direct Current
DGNSS	Differential Global Navigation Satellite System
DSC	Digital Selective Calling
GLONASS	Global Navigation Satellite System
GNSS	Global Navigation Satellite System
GMSK	Gaussian Minimum Shift Keying
GPS	Global Positioning Satellite / System
HF	High Frequency
IMO	International Maritime Organization
IEC	International Electro technical Commission
LED	Light Emitting Diode
LF	Line Feed
LNA	Low-noise Amplifier
MF	Medium Frequency
MKD	Minimum Keypad and Display

MMSI	Maritime Mobile Service Identity
MPE	Maximum Permissible Exposure
NMEA	National Marine Electronics Association
PC	Personal Computer
PI	Presentation Interface
RF	Radio Frequency
RTCM	Radio Technical Commission for Maritime Services Commission
RX	Receive or Receiver
RFI	Radio Frequency Interference
SAR	Specific Absorption Rate
SELV	Separated Extra Low Voltage
SMS	Short Message System
SOG	Speed over Ground
SRM	Safety Related Message
TDMA	Time-division Multiple Access
TNC	Threaded type RF connector
TX	Transmit or Transmitter
UTC	Universal Time Co-ordinated
VDM	(AIS) VHF Data Link Messages
VDO	(AIS) VHF data link own vessel messages
VHF	Very High Frequency
VSWR	Voltage Standing Wave Ratio

