

# DRAFT

## MOBILARM V100

Owner's Manual



En

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## Quick Start Guide



- 1 Slide the **ARMING SWITCH** from **[OFF]** to the **[READY]** position to enable automatic water activation in a man overboard emergency.



- 2 Press and slide the **ARMING SWITCH** to the **[ON]** position for immediate activation.

- 3 Release the **FLEXIBLE ANTENNA** to maximise the transmission's alerting range.

- 4 Ensure the the top of the unit is not obscured or submerged so that the **GPS ANTENNA** can acquire and lock its position.



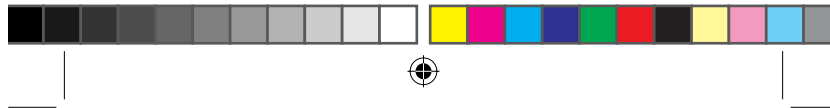
### ! Warning

- The Mobilarm V100 should only be used in an emergency. DELIBERATE MISUSE MAY INCUR A SEVERE PENALTY.

### ◆ Important

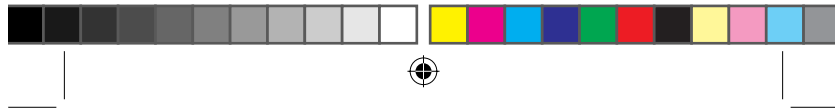
- Register your device with the relevant national maritime authorities for your region.
- Check that the battery is in date and perform a full test every 3 months.
- When the device is activated, position the **FLEXIBLE ANTENNA** vertically in as high a position as possible above the water.





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## Introduction

This owner's manual provides all the information required to operate and test the Mobilarm V100.

The following symbols are used to indicate important information. Always observe these instructions.

### ! **Warning**

Instructions that, if ignored, could result in death or serious personal injury caused by incorrect operation of the equipment. These must be observed for safe operation.

### ! **Caution**

Instructions that, if ignored, could result in personal injury or material damage caused by incorrect operation of the equipment. These must be observed for safe operation.

### ◆ **Important**

Instructions that must be observed for safe operation.

### □ **Note**

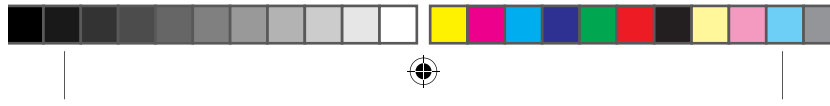
Advisory instructions.

### → **Bold Type (##)**

Indicates the page reference for related topics in other sections of this manual (where ## is the page number).

### Typographic conventions

- Words shown in bold uppercase letters in square brackets e.g. **[OFF]** refer to operational states of the device.
- Words shown in bold uppercase letters e.g. **WATER SENSORS** refer to operational features of the device.



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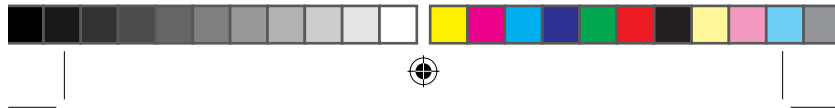
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### Safety Precautions

#### ! Warning

- The Mobilarm V100 should only be used in an emergency. DELIBERATE MISUSE MAY INCUR A SEVERE PENALTY.
- Keep the device away from strong magnetic fields (e.g. speakers) as this may inadvertently activate the device and cause a false alert.
- Do not dismantle the Mobilarm V100 as it contains no user-serviceable parts.
- The Mobilarm V100 emits radio frequency radiation when in use - avoid handling the **FLEXIBLE ANTENNA** at this time.
- The high intensity **STROBE** on the unit may cause discomfort if it is viewed for long periods so avoid staring directly at it when the device is active.

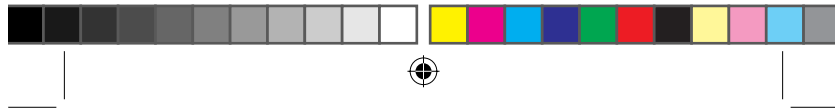
#### ! Caution

- Do not paint your Mobilarm V100 or clean it with detergents or solvents. Seals may be damaged by cleaning materials and affect the integrity of the device.
- If the device requires cleaning, ensure the **ARMING SWITCH** is in the **[OFF]** position so that it cannot be activated by contact with water and wipe with a damp cloth only.

### Regular Testing

The Mobilarm V100 should be tested once every 3 months. Testing the device more frequently is not recommended as additional tests may shorten the battery life.

#### → Testing the Mobilarm V100 (20)



### **Mobilarm V100 Registration**

Registering your ownership of a Mobilarm V100 with the relevant national maritime authority for your region is mandatory. Typically, this will be in the country of purchase.

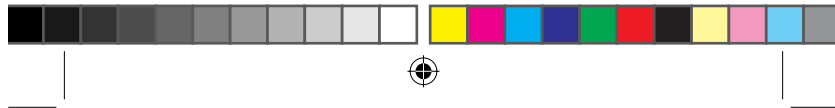
Fill out the registration form with your contact details and the MMSI (Maritime Mobile Service Identity) number located on the back of your device, and submit it to the relevant national maritime authority for your region.

#### **→ Registration and Configuration (30)**

### **Global Positioning System**

The Mobilarm V100 uses positional data derived from its internal **GPS ANTENNA** to define the location of the man overboard and is therefore only as accurate as the positional data it receives.

The GPS system is currently managed by the US Government who can alter its effective accuracy.



## Mobilarm V100 Overview

The Mobilarm V100 is a fully automated Maritime Survivor Locating Device (MSLD) designed specifically for the commercial marine environment to ensure a quick, effective rescue in a man overboard emergency.



The Mobilarm V100 uses the marine VHF radio band to automatically transmit a man overboard distress alert and

real-time coordinates of the person in the water to all VHF DSC or VHF radio equipped vessels within range, including the distressed mariner's vessel.

The design, size and weight of the Mobilarm V100 means it can be comfortably clipped onto webbing, life jacket or harness, or carried in a pocket. For the device to transmit the emergency message its antenna must be out of the water. The Mobilarm V100 should therefore be worn at chest height not at waist level.

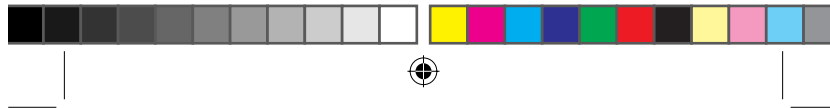
### Automatic Activation

The Mobilarm V100 is designed to be water-activated but it can also be manually activated.

### Automatic Distress Alert

Once activated, the Mobilarm V100 transmits a VHF DSC man overboard distress alert to automatically notify all vessels in the vicinity to the emergency.





The device acquires a GPS lock and transmits the distress alert again on DSC, providing identification and current longitude and latitude coordinates of the person in the water. The message is also broadcast on the emergency marine radio channel (e.g. channel16) in a synthesised voice.\*

The device transmits the man overboard distress message at regular intervals (according to its operational profile) to enable rescue teams to track the man overboard in the water.

The **STROBE** on the device is SOLAS compliant and assists visual homing on the person in the water. The Mobilarm V100 battery will support emergency transmission for a minimum of 12 hours under normal operating conditions.

#### **In-Water Tracking**

Some DSC radios are able to output a waypoint of the coordinates received in the Mobilarm V100 distress alert to a compatible GPS or chart plotter. This logs the casualty's first known position and updates it with subsequent alerts.

This provides a graphical representation of the location of the man overboard casualty in relation to the current position of the vessel receiving the alert, as well as distance and bearing information.

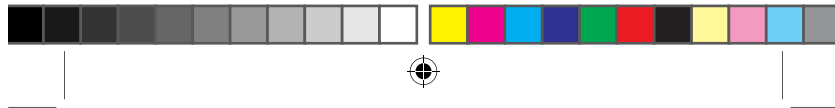
Refer to your radio owner's manual to determine whether your DSC radio is capable of sending NMEA0183-compatible data to your GPS or chart plotter. Ensure that your GPS or chart plotter is correctly configured to accept this data protocol.

#### **□ Note**

- The Mobilarm V100 uses positional data derived from its internal **GPS ANTENNA** to define the location of the man overboard and is therefore only as accurate as the positional data it receives.

\* profile dependent

## **Overview 9**



## How to Use the Mobilarm V100

### ! Warning

- The Mobilarm V100 should only be used in an emergency.  
DELIBERATE MISUSE MAY INCUR A SEVERE PENALTY.

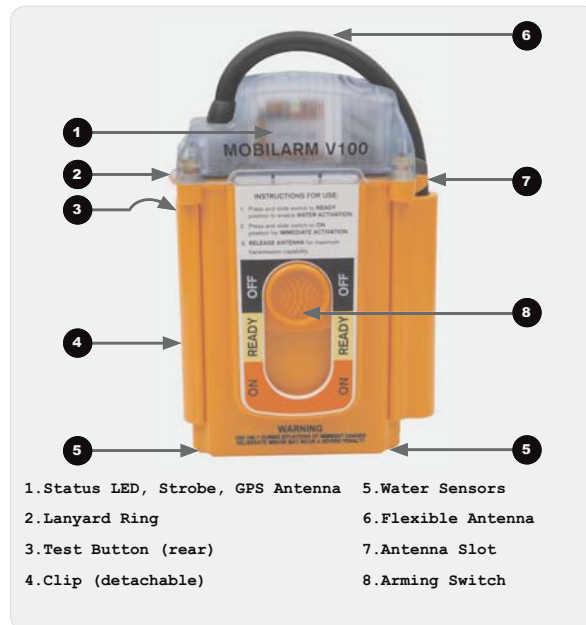
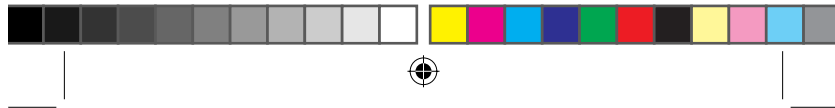


Diagram 1: Mobilarm V100 Features



### Attaching the Mobilarm V100

The Mobilarm V100 has a purpose-built **CLIP** for attaching the unit to webbing or straps on life jackets, harnesses or any other safety device. The **CLIP** also helps to secure the **FLEXIBLE ANTENNA** to the unit.

- 1 Attach the CLIP to the Mobilarm V100.**
  - 1) Slide the **CLIP** onto the unit until it locks firmly into place.
  - 2) Place the **FLEXIBLE ANTENNA** into the **ANTENNA SLOT**.
- 3 Thread the strap or webbing through the back of the CLIP.**

#### □ Note

The Mobilarm V100 can also be worn without the **CLIP** by using the supplied lanyard.

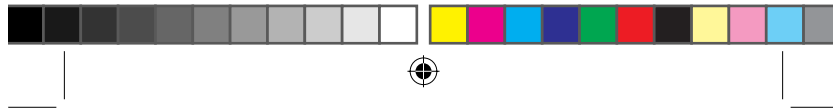
### Arming the Mobilarm V100 for Water Activation

- 1 Slide the ARMING SWITCH down from [OFF] to [READY].**

The Mobilarm V100 is now ready for use and will automatically activate if submerged in water for 5 seconds.



V100 Armed



### Water Activating the Mobilarm V100

With the **ARMING SWITCH** in the **[READY]** position, the **WATER SENSORS** on the base of the unit will automatically activate the Mobilarm V100 when it detects it has been submerged in water for 5 seconds.



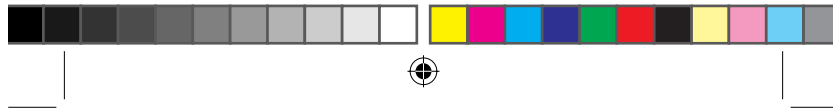
- The **STROBE** on the device begins to flash.
- The **STATUS LED** illuminates to indicate that the device is active.
- Audio alerts (beeps and automated messages) warn the user that the device has been activated.

This short warning period allows the user to deactivate the device if it has been inadvertently activated. The device then commences full emergency transmissions.

- The **STROBE** and **STATUS LED** start flashing.
- Audio alerts (beeps and automated messages) notify the user that the device is transmitting.

When the device is transmitting, the **FLEXIBLE ANTENNA** should be released to maximise the alerting range.

- **How to release the FLEXIBLE ANTENNA (14)**
- **Visual and Audio Indications when Activated (18)**
- **False Alarms (16)**



## Manually Activating the Mobilarm V100

- 1 Press and slide the **ARMING SWITCH** down to **[ON]**.

This can be performed when the **ARMING SWITCH** is in the **[OFF]** or **[READY]** position.

- The **STROBE** on the device begins to flash.
- The **STATUS LED** illuminates to indicate that the device is active.
- An automated message warns the user that the device has been activated.

This short warning period allows the user to deactivate the device if it has been inadvertently activated. The device then commences full emergency transmissions:

- The **STROBE** and **STATUS LED** start flashing
- Audio alerts (beeps and automated messages) notify the user that the device is transmitting.

When the device is transmitting, the **FLEXIBLE ANTENNA** should be released to maximise the alerting range.

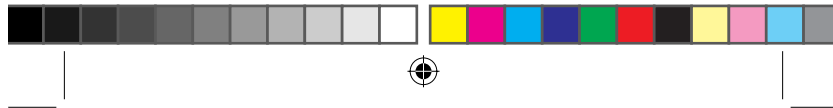
→ **How to release the FLEXIBLE ANTENNA (14)**

→ **Visual and Audio Indications when Activated (18)**

### ◆ Important

- Once activated, ensure the top of the unit is not obscured or submerged so that the **GPS ANTENNA** can acquire and lock its position.
- The operational profile programmed into the device determines the message content, interval and channels used to broadcast the emergency transmissions.

→ **Operational Profiles (32)**



### Releasing the Flexible Antenna

- 1 Pull the **FLEXIBLE ANTENNA** from the **ANTENNA SLOT** and extend it fully so that it is vertical.
- 2 Hold the device as high as possible during transmissions.

### Cancelling the Distress Alert

- 1 Press and slide the **ARMING SWITCH** upwards to **[OFF]**.

This will turn off the device and cancel any automatic repeats of the distress alert.

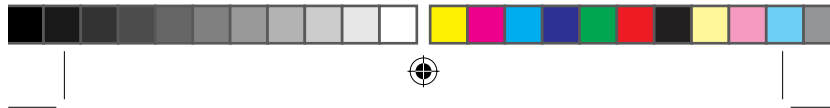
#### ◆ Important

- If the Mobilarm V100 was inadvertently activated and transmitted a distress alert, cancel the distress alert and notify the relevant national maritime authorities as soon as possible that the alert was a false alarm.

#### → False Alarms (16)



V100 Off



### **Cancelling the Distress Alert after Recovery of a Man Overboard**

Once the man overboard casualty has been recovered, deactivate the device and cancel the alert.

- 1 Immediately turn off the Mobilarm V100.**
  - 1) Press and slide the **ARMING SWITCH** upwards to **[OFF]**.

This will cancel any automatic repeats of the distress alert.

- 2 Using a VHF radio, broadcast an “all stations” voice message to cancel the alert.**

Broadcast this message on the emergency VHF marine channel in your region (channel 16 in most regions).

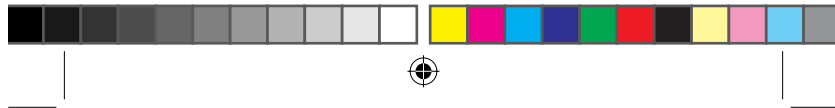
**► Example of message to cancel the distress alert**

ALL SHIPS ALL SHIPS ALL SHIPS  
THIS IS {vessel call sign repeated 3 times}  
CANCEL DISTRESS ALERT FROM {MMSI number}  
SURVIVOR RECOVERED

- 3 Contact the search and rescue authority in your region to advise that the casualty has been recovered.**

**□ Note**

- If you do not have access to a VHF marine radio, contact your search and rescue authority by telephone.



### False Alarms

The design of the Mobilarm V100 reduces the possibility of a distress alert being accidentally transmitted.

When the device is activated, the **STROBE** flashes, the device beeps and an automated message warns the user that the device has been turned on. This deliberate delay before transmission enables the user to turn off the device if it was accidentally activated.

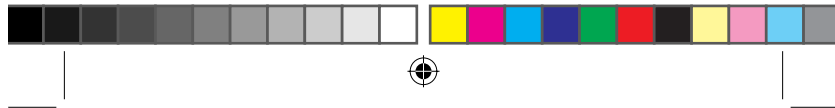
To help prevent false alarms:

- Keep the unit away from strong magnetic fields (e.g. speakers).
- Test the device regularly in accordance with the test procedures in this user manual.
- Keep the device away from young children.
- Educate older children in its use and the ramifications of false alarms.

If the Mobilarm V100 was inadvertently activated and transmitted a distress alert, cancel the distress alert and notify the relevant national maritime authorities as soon as possible that the alert was a false alarm.

#### → Cancelling a False Alarm (17)





## Cancelling a False Alarm

### 1 Immediately turn off the Mobilarm V100

- 1) Press and slide the **ARMING SWITCH** upwards to **[OFF]**.

This will cancel any automatic repeats of the distress alert.

### 2 Using a VHF radio, broadcast an “all stations” voice message to cancel the distress alert.

Broadcast this message on the emergency VHF marine channel in your region (channel 16 in most regions).

#### ► Example of message to cancel false alarm

ALL SHIPS ALL SHIPS ALL SHIPS

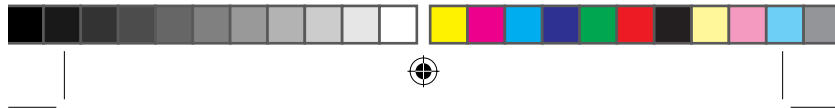
THIS IS {vessel call sign repeated 3 times}

CANCEL DISTRESS ALERT FROM {MMSI number}

### 3 Contact the search and rescue authority in your region to advise that you have cancelled the alert.

#### □ Note

- If you do not have access to a VHF marine radio, contact your search and rescue authority by telephone.
- There are no penalties for transmitting an accidental alert. You will not be prosecuted and search and rescue authorities will appreciate you contacting them to cancel it.



## Visual and Audio Indications when Activated

The Mobilarm V100 provides no visual or audio indications when it is armed, i.e. when the **ARMING SWITCH** is moved from **[OFF]** to **[READY]**.

When the device has been activated, the **STROBE**, **STATUS LED** and audio alerts (beeps and automated messages) notify the user that the device is active and transmitting, as shown in Table 1.

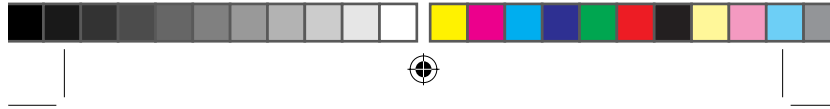
Audio alerts (beeps and automated messages) alert the user to raise the device as high as possible for each transmission, in order to maximise the alerting range.

### □ Note

- The colour of the **STATUS LED** indicates the following:
  - Green** - GPS position acquired and battery good.
  - Orange** - Device acquiring GPS position and battery good.
  - Red** - Battery low, less than 1 hour of operation remaining.



V100 Activated



	Audio Alert		Status LED	Strobe
	Beep	Automated Message Message Interval*		
Initial Water Activation Period	Short beeps prior to each automated message	"Emergency, Emergency, V100 water activated."	Orange or red flash every 5 seconds	Fast strobe flash for 2.5 seconds then once per second thereafter
Initial Manual Activation Period	Short beeps prior to each automated message	"Emergency, Emergency, V100 manually activated."	Orange or red flash every 5 seconds	Fast strobe flash for 2.5 seconds then once per second thereafter
VHF DSC Transmission Activated	Long beep prior to and two short beeps after VHF DSC message has been sent	"Sending emergency DSC message."	Green, orange or red flash every 5 seconds	Flashes once per second prior to and twice per second during VHF DSC message transmission
VHF Voice Transmission Activated	Long beep prior to and two short beeps after VHF voice message has been sent	"Sending emergency voice message."	Green, orange or red flash every 5 seconds	Flashes once per second prior to and twice per second during VHF voice message transmission
GPS Data Acquired	Long beep prior to message	"Position acquired. Position is ...."	Green or red flash every 5 seconds	Flashes once per second

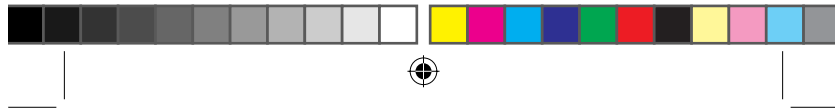
\* Profile dependent

**Table 1: Visual and Audio Indications when Activated**



**Visual and Audio Indications when Activated**





## Testing the Mobilarm V100

Regular testing will ensure that your Mobilarm V100 remains in good working order. The Mobilarm V100 should be tested once every 3 months. Testing the device more frequently is not recommended as additional tests may shorten the battery life.

The testing process includes a comprehensive series of checks that may take several minutes to complete, depending on the length of time required to obtain a GPS lock.

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### ! **Warning**

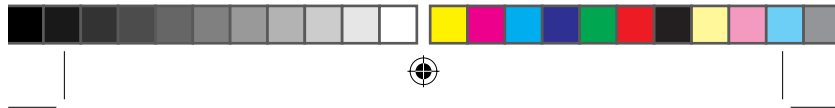
- If the Mobilarm V100 fails the initial self test or any test in the sequence, TAKE THE DEVICE OUT OF SERVICE IMMEDIATELY.
- DO NOT ignore a low battery warning as the device may not operate to full capacity in a man overboard emergency.

---

### ◆ **Important**

- Refer to the Troubleshooting section if any tests fail.

→ **Troubleshooting (36)**



### **Mobilarm V100 Test Options**

There are two test options to check operation of the Mobilarm V100.

- 1) Full Test (checks all functions).
- 2) Short test (checks a single function).

The full test requires access to water to test water activation. Perform the test outdoors so that the Mobilarm V100 has a clear view of the sky and can complete the GPS test.

The short test can be performed to check a particular function.

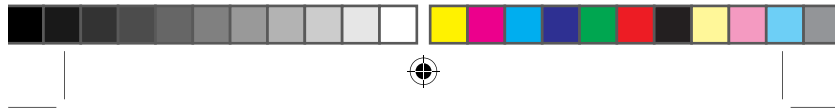
E.g. if a new radio is installed on a vessel, perform the VHF voice transmission test to make sure it is working correctly.

### **VHF DSC and VHF Voice Test Transmissions**

VHF DSC and VHF voice test messages are sent according to the operational profile programmed into the device.

E.g. If the operational profile is programmed to send VHF voice and VHF DSC transmissions in an emergency, then both types of transmission will be sent during the VHF tests.

Confirmation that VHF voice and VHF DSC test transmissions have been sent and received can be checked by monitoring the appropriate channels on the vessel's VHF radio during testing.



**Test Button**

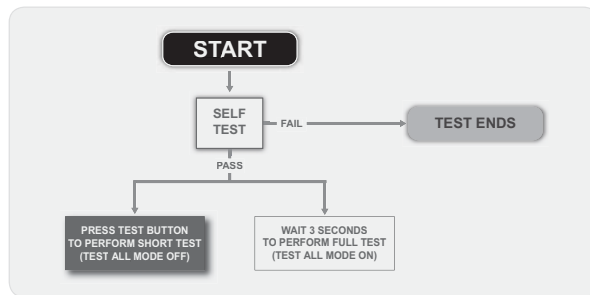
The **TEST BUTTON** is located on the rear of the Mobilarm V100 and is used to activate the full and short tests.



**Test Button**

**Mobilarm V100 Test Structure**

Refer to Diagram 2 for the Mobilarm V100 test structure.



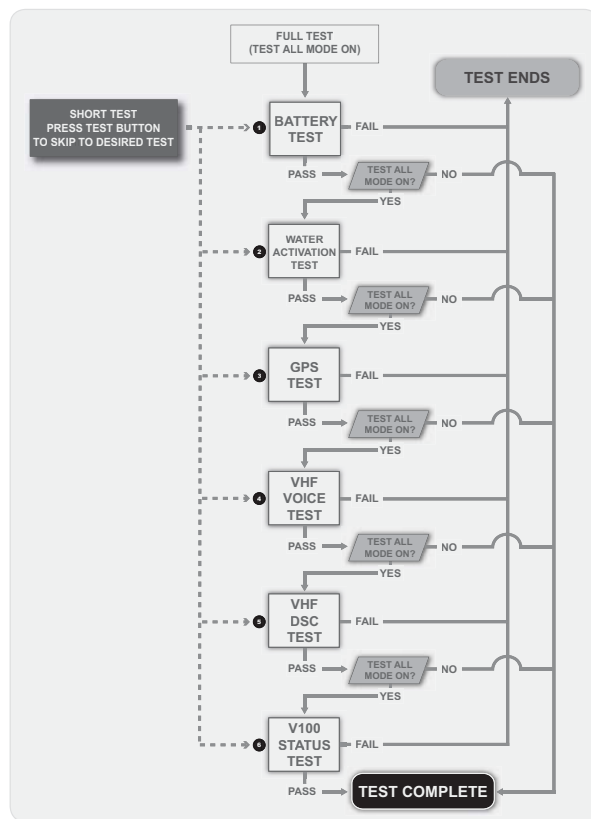
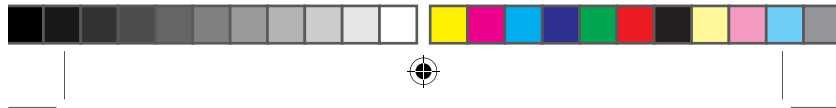
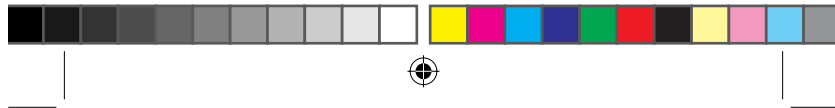


Diagram 2: Mobilarm V100 Test Structure



### Performing a Full Test

- 1 Ensure the **ARMING SWITCH** is in the **[OFF]** position.
- 2 Press and hold the black **TEST BUTTON** on the rear of the unit for 3 seconds.

This activates the test sequence.

- The **STROBE** flashes quickly for 1.5 seconds.

- 3 Listen for the automated message “V100 test menu, run all tests” followed by short beeps.

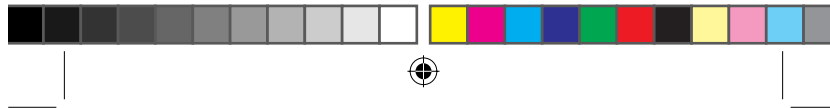
This indicates the test has commenced. The Mobilarm V100 will then run through the tests one by one.

- The **STATUS LED** cycles through green, orange and red.
- Audio alerts (beeps and automated messages) confirm that each new test has commenced.

- 4 Once the Mobilarm V100 has completed all the tests, the device will turn off.

→ **Table 2: Mobilarm V100 Test Indications (27)**





### Performing a Short Test

The short test only checks the selected function and will cease testing once it is complete.

- 1 Ensure the **ARMING SWITCH** is in the **[OFF]** position.
- 2 Press and hold the black **TEST BUTTON** on the rear of the unit for 3 seconds.

This activates the test sequence.

- The **STROBE** flashes quickly for 1.5 seconds.

- 3 Listen for the automated message “V100 test menu, run all tests” followed by a beep.
- 4 Press the **TEST BUTTON** within 2 seconds to navigate to the desired test.

Each button press will skip to the start of the next test in the sequence.

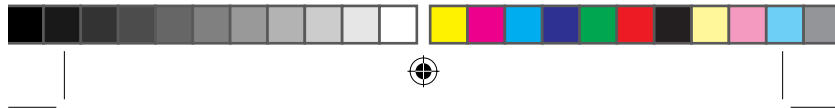
E.g. To perform the third test in the sequence, press the **TEST BUTTON** 3 times.

#### → Table 2: Mobilarm V100 Test Indications (27)

- 5 Once the Mobilarm V100 has completed the selected test, the device will turn off.

#### ! **Warning**

- Only performing short tests is not recommended because not all functions are tested and therefore may compromise the operational status and safety of the device.
- Perform a full test every 3 months to ensure that all functions of the Mobilarm V100 are operating normally.



### Test Indications

A complete list of the functions tested and the indications during the test procedure are shown in Table 2.

If the initial self test fails, or if any individual test fails, the device will cease testing.

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◆ **Important**

- Refer to the Troubleshooting section of this manual if any of the test phases fail.

→ **Troubleshooting (36)**

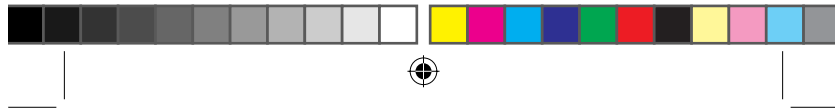




Test	Starting Message	Progress Message	Pass Test Result	Fail Test Result	Test Time-Out
1. Self Test and Battery Check	"Battery test"	n/a	"... years shelf life remaining"	Battery below minimum level. Return product for servicing - test ends..	n/a
2. Water Activation	"Water activation test"	"Waiting for water detection"	"Water detected"	No water detected - test ends.	15 seconds
3. GPS	"GPS test"	"Acquiring GPS lock - ensure V100 has clear view of the sky"	"Position acquired, position is ..."	No position acquired - test ends.	3 minutes
4. Voice transmission*	"Voice transmission test"	"Sending test voice message on VHF channel ..."	Hear transmission on vessel's VHF radio.	Transmission not heard on vessel's VHF radio - test ends.	n/a
5. DSC Transmission	"DSC transmission test"	"Sending test DSC message to ..."	Receive transmission on vessel's DSC radio.	Transmission not received on vessel's DSC radio - test ends.	n/a
6. V100 Status	"V100 Status"	"Model number ... Firmware version ... Regional setting ... Unit MMSI number... VHF test channel... DSC destination address ..."	n/a	Test ends.	n/a

\* profile dependent

Table 2: Mobilarm V100 Test Indications



## Service and Maintenance

The Mobilarm V100 is a robust product that is designed to operate in harsh marine conditions. However, careful handling of the device will help to ensure it operates as designed in an emergency.

- Avoid dropping the unit.
- Avoid leaving the unit unnecessarily in full sun where it may be exposed to excessively high temperatures.
- Inspect your Mobilarm V100 periodically for signs of wear and tear, visible cracks or other damage.

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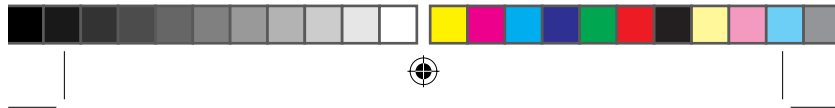
### ! Warning

- Cracks in seals or housings could allow moisture inside the unit, rendering it unreliable or unusable.
- If cracking is observed, or if it is possible that the unit has been damaged, please contact your authorised Mobilarm service agent for it to be assessed and replaced if required.

### Mobilarm V100 Battery

The Mobilarm V100 has a shelf life of 10 years and an operational life of 5 years, at which point the battery should be replaced or a new unit purchased.

A full test checks the battery and indicates how much battery life is remaining. If the battery test fails or the battery life is below the minimum accepted for safe use, immediately take the device out of service and contact your authorised Mobilarm service agent for a replacement.



### Annual Service Contract

Users in high demand environments should consider purchasing the Mobilarm V100 Annual Service Contract.

For a fixed annual fee, Mobilarm will check and replace as necessary all serviceable parts, pressure test and fully recertify the device. For full details go to [www.mobilarm.com](http://www.mobilarm.com) or contact your authorised Mobilarm service agent.

### Replacing Faulty or Damaged Units

If the Mobilarm V100 has failed a test phase, or the integrity of the device is in doubt, immediately take the device out of service and contact your authorised Mobilarm service agent for it to be assessed and replaced if required. Cleaning the Mobilarm V100

### Cleaning the Mobilarm V100

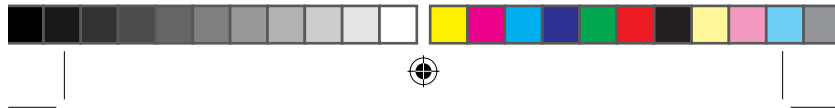
#### ! Caution

- Do not paint your Mobilarm V100 or clean it with detergents or solvents. Seals may be damaged by cleaning materials and affect the integrity of the device.
- If the device requires cleaning, ensure the **ARMING SWITCH** is in the **[OFF]** position so that it cannot be activated by contact with water and wipe with a damp cloth only.

### Further Support

Please consult the Troubleshooting and FAQ sections of this manual or speak to your authorised Mobilarm service agent for assistance with using and testing your Mobilarm V100.

Refer to the 'Support' section online at [www.mobilarm.com](http://www.mobilarm.com) for further technical information regarding the Mobilarm V100 and other Mobilarm products and services. Alternatively, email Mobilarm at [support@mobilarm.com](mailto:support@mobilarm.com) or call +61 (0)8 9315 3511 between 8:30am and 5:00pm WST (GMT + 08:00).



## Registration and Configuration

### Registering your Mobilarm V100

Registering your ownership of a Mobilarm V100 with the relevant national maritime authority for your region is mandatory. Typically, this will be in the country of purchase.

Fill out the registration form with your contact details and the MMSI (Maritime Mobile Service Identity) number located on the back of your device, and submit it to the relevant national maritime authority for your region.

The MMSI number and your contact details are stored in a national database. In the event that the device is activated, search and rescue authorities can access this important information to verify the distress alert and accelerate the rescue operation.



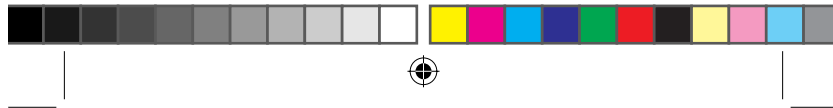
### MMSI Number Allocation



Allocation of MMSI numbers for the Mobilarm V100 varies from country to country. In most cases, the device will be pre-programmed with an MMSI number applicable to the region in which it is available for sale prior to purchase. This number is located on the back of the unit. Make a note of your MMSI number and keep it in a safe place.

Your authorised Mobilarm service agent can verify that the MMSI number is appropriate for your region.

If you need to change the MMSI number of your Mobilarm V100 (i.e. re-program it to the MMSI of your vessel), your authorised Mobilarm service agent can reconfigure this and any other settings on the device.



### Changing Contact Details or Ownership

It is the owner's responsibility to advise the relevant national maritime authority of any change of contact details or ownership of a Mobilarm V100. If ownership is being transferred, this obligation transfers to the new owner of the device.

#### ◆ Important

- If you move outside the region where your Mobilarm V100 was purchased, you may need to have the device reconfigured with a different operational profile to comply with regulatory authorities' requirements for that region. Check with your authorised Mobilarm service agent.

#### → Changing the Operational Profile for a Different Region (35)

##### ► What to do if you lose your Mobilarm V100

Inform the relevant national maritime authority for your region that the device has been lost.

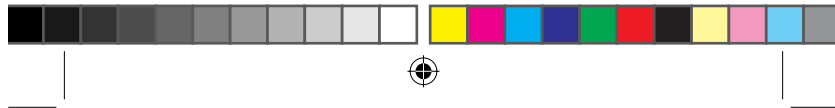
They will update the information registered on the national database.

##### ► What to do if your Mobilarm V100 is stolen

Report the theft to your local police and inform them of the device's MMSI number and registration details.

Inform the relevant national maritime authority for your region that the unit has been stolen and provide them with the police report details.

This will make returning the device to you more likely if the unit is found, or if someone attempts to sell it and/or register the device.



### Operational Profiles

The Mobilarm V100 is configured with an operational profile that complies with the regulatory requirements of the national maritime authority for your region. The operational profiles address differences relating to:

- Channels and frequencies of operation.
- Timing and destination of transmissions.
- Message type, category, interval and content.

The supported operational profiles and configured settings are outlined in Table 3.

### Checking the Operational Profile of your Mobilarm V100

Performing a short test will confirm the current operational profile configuration of the device.

- 1 Ensure the **ARMING SWITCH** is in the **[OFF]** position.
- 2 Press the **TEST BUTTON** on the back of the unit for 3 seconds.

This activates the test phase sequence.

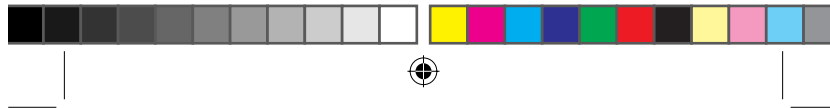
- The **STROBE** flashes quickly for 1.5 seconds.

- 3 Listen for the automated message “V100 test menu, run all tests” followed by a beep.
- 4 Press the **TEST BUTTON** six times.

This skips to the last test - V100 Status. The device will indicate the current settings configured to the device.

→ **Test Indications (26)**



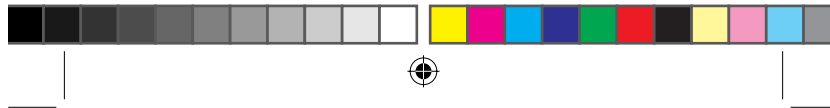


Feature (Value)	Operational Profile	
	AS/NZS	RTCM
<b>VHF DSC ALERT</b>		
<b>VHF DSC Transmission Delay (Seconds):</b>		
On automatic activation	20	20
On manual activation	20	20
<b>VHF DSC Message Type (1 or 2):</b>		
1. Distress - man overboard (126)	1	2
2. Distress - distress relay (120)		
<b>VHF DSC Message Category (1 to 3):</b>		
1. Urgency		
2. Safety	1	3
3. Routine - position send		
<b>VHF DSC Message Destination (1 to 3):</b>		
1. All ships		
2. Group	1	3
3. Single ship or station with unique MMSI		
<b>VHF DSC Transmission Interval (Minutes):</b>		
Phase 1 - from minute 0 to 30	5	5
Phase 2 - from minute 31 to end of battery life	10	10
<b>VHF VOICE ALERT</b>		
<b>VHF Voice Transmission Delay (Seconds):</b>		
On automatic activation	20	n/a
On manual activation	20	n/a
<b>VHF Voice Transmission</b>		
Message type (Mayday)	Yes	Not permitted
Channel (valid voice channel)	16	Not permitted
Language (1 to 6 - see Table 4)	1	Not permitted
<b>VHF Voice Transmission Interval (Minutes):</b>		
Phase 1 - from minute 0 to 30	5	Not permitted
Phase 2 - from minute 31 to end of battery life	10	Not permitted
<b>SELF TEST (1 or 2)</b>		
1. Full function test		
2. Full function test without VHF voice	1	2

n/a = not applicable

**Table 3: Mobilarm V100  
Operational Profiles**

**Registration and Configuration 33**



### VHF DSC and VHF Voice Transmission Intervals

The interval between each VHF DSC and VHF voice transmission is determined by the operational profile programmed into the Mobilarm V100. See Table 3.

### VHF Voice Transmission Language

The Mobilarm V100 supports different languages for the VHF Voice transmission as outlined in Table 4.

Option	Language
1	English
2	
3	
4	
5	
6	

Table 4: Language Table

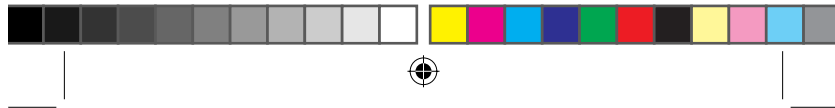
### VHF Voice Transmission Content\*

When activated, the Mobilarm V100 transmits a Mayday message. The content of the Mayday message sent depends on whether GPS positioning data has been acquired, as outlined in Table 5.

Message Type	Message Content
Mayday without GPS data	Mayday. Mayday. Mayday. This is {MMSI number}. Man Overboard emergency V100 automated alarm. Position to follow on channel {channel number}.
Mayday with GPS data	Mayday. Mayday. Mayday. This is {MMSI number}. Man overboard emergency V100 automated alarm. Position {Latitude/Longitude coordinates}. Man Overboard.

Table 5: VHF Message Content

\* profile dependent



### **Changing the Operational Profile for a Different Region**

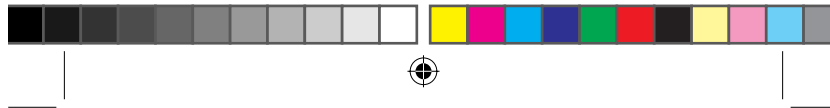
You will need to return your Mobilarm V100 to Mobilarm in order to reconfigure the device with a different operational profile. Contact your authorised Mobilarm service agent for assistance.

Your authorised Mobilarm service agent can also provide additional advice relating to any local licensing requirements for your country or region, or you can contact your National Communications Licensing Authority directly.



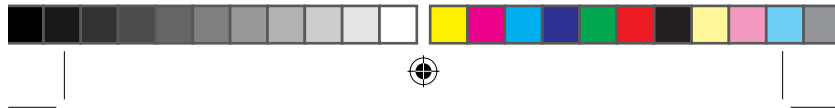
## Troubleshooting

Issue	Possible Cause	Solution
Strobe, status LED or speaker not operating as expected	Fault	Take out of service immediately and contact your authorised Mobilarm service agent for assessment
Self test failure	Fault	Take out of service immediately and contact your authorised Mobilarm service agent for assessment.
Battery test failure	Remaining battery life has dropped below the minimum acceptable level (a verbal warning will instruct the user to return the unit for servicing)	Take out of service immediately and contact your authorised Mobilarm service agent for replacement
Water activation test failure	Unit not immersed in water for long enough	Ensure base of unit is immersed in water for at least 5 seconds
	Water sensors blocked	Check that water sensors are clear from salt, grease or other foreign materials If problem persists, contact your authorised Mobilarm service agent for assessment
GPS acquisition test failure (timed out because the device was unable to obtain a GPS lock)	Test performed indoors or in covered area	Re-test outdoors with clear view of sky
	Poor weather conditions	Re-test when weather conditions have improved
	Natural interference from electromagnetic radiation such as solar flares or geomagnetic storms (these are predominantly found near poles of the Earth's magnetic fields)	Re-test after 1 hour to determine whether test failure was due to temporary signal interference If test failure persists and a second V100 is available, test the second device to confirm if failure is due to a fault with original device If testing still fails, contact your authorised Mobilarm service agent for assessment



Issue	Possible Cause	Solution
VHF DSC and/or voice transmission test failure	Receiving radio not turned on or tuned to incorrect channel	Ensure the radio(s) are turned on and tuned to the correct channel to receive VHF test transmissions in accordance with the operational profile of the V100  → <b>Table 3: Mobilarm V100 Operational Profiles (33)</b>
	Incorrect MMSI number of vessel's DSC radio programmed into V100	Confirm that the correct MMSI number has been programmed to the V100  If problem persists, contact your authorised Mobilarm service agent for assessment

**Table 6: Troubleshooting**



## Frequently Asked Questions

### Q: Where is the best place to wear a Mobilarm V100?

In order for the Mobilarm V100 to transmit the VHF distress alerts successfully, the **FLEXIBLE ANTENNA** must be out of the water. This means that the unit is best positioned high on the front of a person's body, ideally at chest height. The **WATER SENSORS** on the base of the unit must be submerged for at least 5 seconds to automatically activate the device, otherwise the device must be manually activated.

A Remote Water-Sensing Extension Kit (part number MOA-00202) is also available to extend the water sensing capability of the device. This allows a Mobilarm V100 to be worn or mounted higher from sea level to achieve a wider alerting range but still be water activated in an emergency.

The Mobilarm V100 is also available to purchase already embedded into a life jacket (see [www.mobilarm.com](http://www.mobilarm.com) for further details) which ensures that it is in the most effective position for water activation and emergency message transmission, while also assisting the casualty to remain afloat and face up in the water.

### Q: Is the Mobilarm V100 compatible with other safety or man overboard devices such as a life jacket or Jon buoy?

Yes. The Mobilarm V100 **CLIP** allows it to be attached to any strap or harness that can be threaded through the loops. The Mobilarm V100 is also available to purchase already embedded into a life jacket (see [www.mobilarm.com](http://www.mobilarm.com) for further details).

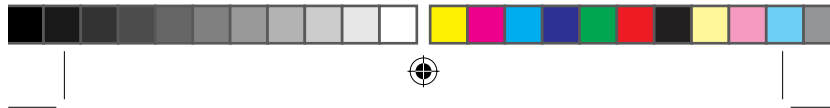
### Q: Can anyone replace the battery in a Mobilarm V100?

No. Battery servicing and/or replacement must only be carried out by an authorised Mobilarm service agent. Failure to do so may compromise the integrity of the product and will void the product warranty.

### Q: Can a Mobilarm V100 be re-used once it has been activated?

Perform a full test to check the state of the battery and how much battery life is remaining in the device. If the battery test phase fails or the battery life is below the minimum accepted for safe use, immediately take the device out of service and contact your authorised Mobilarm service agent for a replacement.

If the device passes the full test, then the device may remain in service. Remember to perform a full system test every 3 months to check that all functions are in proper working order and that the remaining battery life has not dropped below the minimum accepted for safe use.



**Q: Are there different antennae available to attach to the Mobilarm V100?**

Yes. A Long Range Dipole Antenna (part number MOA-00203) can be used instead of the existing antenna when using the Mobilarm V100 with a life jacket or survival suit.

**Q: What is the procedure if I change to a different vessel and want to continue using my Mobilarm V100?**

Check whether the area of operation of the new vessel is governed by different maritime regulations to your current area of operation because your Mobilarm V100 may need to be reprogrammed with a different operational profile in order to comply with those regulations.

If your Mobilarm V100 is programmed with the MMSI number of your current vessel then this must be reprogrammed to the MMSI number of the new vessel.

Contact your authorised Mobilarm service agent for assistance with reprogramming your device.

**Q: Is there any set-up required before the Mobilarm V100 will transmit GPS coordinates?**

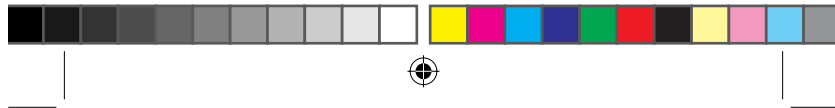
No. The Mobilarm V100 has an in-built 20-channel GPS receiver that will automatically acquire a GPS lock and transmit position coordinates in the DSC and voice distress alert.

Performing a full system test every 3 months will reassure you that the **GPS ANTENNA** is operating properly and can acquire GPS coordinates.

**Q: How do I configure my chart plotter so that an incoming Mobilarm V100 DSC distress alert logs a waypoint when a man overboard event occurs?**

Some DSC radios can output DSC and DSE messages via a NMEA connection. When the VHF DSC radio receives the distress alert it may be able to output a NMEA0183 sentence direct to a connected GPS or chart plotter and log a waypoint of the coordinates received in the distress alert. This will plot the casualty's first known position and track them in the water with every subsequent updated position received.

Refer to your radio owner's manual to determine whether your DSC radio is capable of sending NMEA0183-compatible data to your GPS or chart plotter and if so, ensure that your GPS or chart plotter is correctly configured to accept this data protocol.



**Q: How do I know that my Mobilarm V100 is transmitting the emergency messages?**

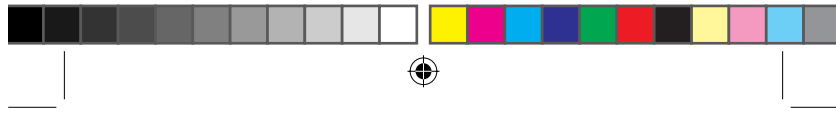
When the Mobilarm V100 has been activated, the **STROBE** starts to flash, the **STATUS LED** illuminates to indicate that the device is active and audio alerts (beeps and automated messages) warn the user that the device has been activated.

The device indicates it is transmitting a message with a long beep prior to each VHF voice or VHF DSC transmission.

The **STROBE** flashes twice per second during transmission and two short beeps after the message confirm the transmission has been sent.

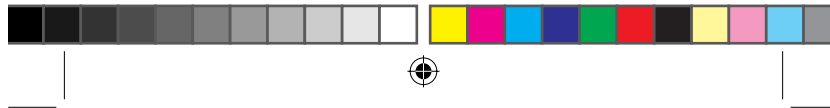






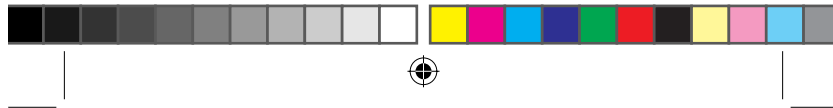
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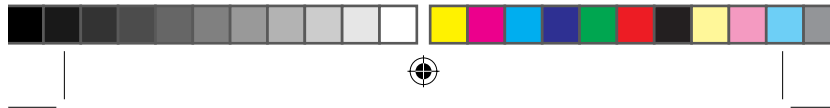
## Specifications

General	
Battery Type	3 x 3 Volt LiMnO <sub>2</sub> (Non HAZMAT) CR2 batteries
Battery Life	Minimum 12 hours at -10°C (14°F)
Battery Shelf Life at +20°C	10 years
Operating Temperature	-20° to +55°C (-4° to +131°F)
Stowage Temperature	-30° to +70°C (-22° to +158°F)
Dimensions	12x7.8x3cm (4.7x3x1.22in) excl. antenna and clip
Weight	153g (5.4oz) excl. antenna and clip
Case	Impact resistant and water resistant to 10m (33ft)
Durability	Tested as per IEC Standard 60945
Strobe Light	360° dispersion at 5 candelas. Flash rate 60 flashes p/minute.
Environmental Resistance	IP68 (10m for 5 mins)
Mounting Options	Includes clip for attachment for webbing, harness or personal floatation device (PFD)
Compass Safe Distance	0.3m (for minimal deflection)
Buoyancy	Positive buoyancy
Alerting Radius	2 to 10 nautical miles depending on sea state and height/altitude of receiving antenna
Limited Warranty	2 years (plus optional 3 year extended warranty)
GPS Receiver	
Channels	20 channel parallel
TTFF (Time to First Fix)	Usually within 45-60 seconds
Antenna	Solid state quadrafilair helix
GPS Sensitivity	Better than -160dBm



Antenna Power Output	
Antenna Type	Vertically polarized helix antenna
VHF DSC Tx Power Output	1 watt
VHF Voice Tx Power Output	1 watt
VHF Transmitter Package	
DSC Transmitter:	
Compliance	ITU-R M. 493-11 and ITU-R M. 451-9
Radio-Telephone Voice Transmitter:	
Compliance	IEC 60945

**Table 7: Mobilarm V100 Specifications**



## Certification and Compliance

### EC Declaration of Conformity

In accordance with EN#####

We, Mobilarm Limited, of 768 Canning Highway, Applcross 6153 Western Australia declare that the following equipment:

Model Name/No.	Equipment
MOA-00200	Mobilarm V100

Has been designed and manufactured to the following specifications:

Specification	Description

In accordance with the following Directives:

Directive	Description

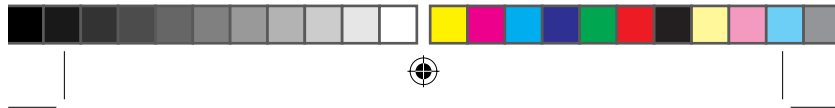
I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above mentioned specifications. The equipment complies with all essential requirements of the Directives.

Signed

Name

Position

Date



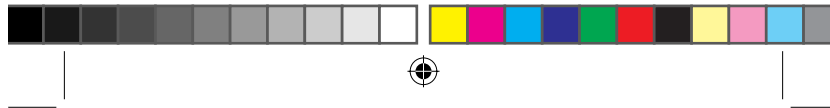
### FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference; and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

#### □ Note

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
- This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - 1) Reorient or relocate the receiving antenna;
  - 2) Increase the separation between the equipment and receiver; or
  - 3) Contact your authorised Mobilarm service agent for help.
- Do not make any changes or modifications to the equipment unless otherwise specified in this manual. If such changes or modifications should be made, you could be required to stop operation of the equipment. Any changes or modifications not expressly approved by Mobilarm Limited, could void the user's authority to operate this equipment.



### Certification and Compliance

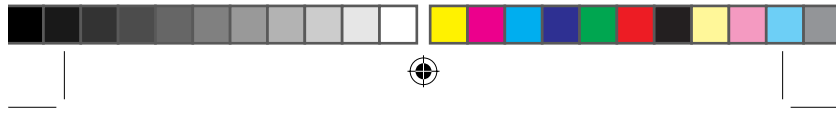
Certification (Pending)	
USA	FCC; USCG; RTCM standard 11901.0; ATEX
Australia	C <sup>1</sup> ; ACMA <sup>1</sup> ; IEC <sup>2</sup> /ATEX; AMSA
Europe	CE; IEC <sup>3</sup> /ATEX; WEEE
Compliance	
VHF DSC	Designed according to ITU-R M. 493-11 and ITU-R M. 451-9
Strobe Light	USCG SOLAS Lifejacket Light Requirement
GPS	Complies with IEC Standard 61108-1

<sup>1</sup> AS/NZS 4415.2:2003; Standard 2004; Standards Australia Committee RC/4 MSLD DSC Standards <sup>2</sup> <sup>3</sup> IEC Standard 61108-1 and 60945

**Table 8: Mobilarm V100  
Certification and Compliance**

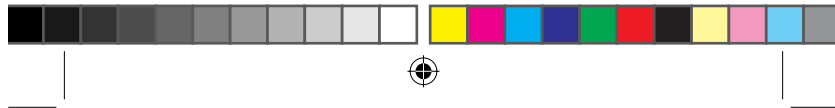
**Note**

- This device has not been authorized as required by the rules of the Federal Compliance Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.



**Certification and Compliance 47**



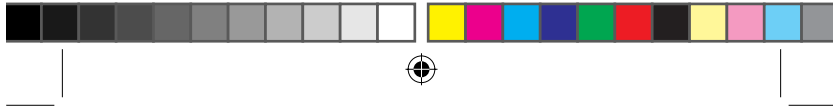


## Warranty

### Limited Warranty

1. MOBILARM warrants, to the original purchaser only, each Marine Employee Safety Monitoring Product ("Product") manufactured and/or supplied by MOBILARM against defects in materials and workmanship under normal use and service, and against non-conformity to its technical specifications for a period of 24 months from the date of purchase. Software products are warranted as per the End User License Agreement applicable to that software.
2. MOBILARM warrants Software products against failure of programming instructions due to defects in materials and workmanship when properly installed and used on the hardware designated by MOBILARM. MOBILARM cannot be responsible in any way for ancillary equipment, hardware or software not furnished by MOBILARM which is attached to or used in connection with MOBILARM's Products, or for the operation of the Product with any ancillary equipment, hardware or software and all such equipment, hardware or software is expressly excluded from this warranty. Mobilarm further warrants that Mobilarm owned standard Software will substantially conform to Specifications.
3. In the event of a defect, malfunction or failure of the Product during the warranty period, MOBILARM's liability for any breach of contract or any breach of express or implied warranties in connection with the sale of Products shall be limited solely to repair or replacement, at its option, of the Product or part(s) therein which, upon examination by MOBILARM, appear to be defective or not up to factory specifications. MOBILARM may, at its option, repair or replace parts or subassemblies with new or reconditioned parts and subassemblies. Parts thus repaired or replaced are warranted for the balance of the original applicable warranty.
4. MOBILARM will pay all labour to repair the product and replacement parts charges incurred in providing the warranty service except where purchaser abuse or other qualifying exceptions exist. The purchaser must pay any transportation expenses incurred in returning the Product to MOBILARM for service.
5. MOBILARM disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty. MOBILARM reserves the right to make changes or improvements in Products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured Products.
6. MOBILARM will not warrant installation, maintenance or service of the Products. In all instances, MOBILARM's liability for damages shall not exceed the purchase price of the defective Product.



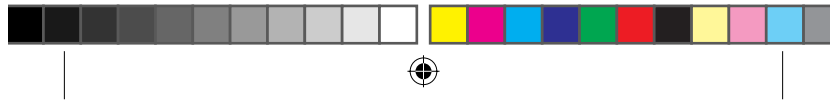


7. This limited warranty does not extend to any Product which has been subjected to misuse, neglect, accident, incorrect service repair or maintenance by anyone other than MOBILARM or its Authorized Service Agent(s), improper installation, unauthorised modification, loss or damage in transit, or subjected to use in violation of instructions furnished by MOBILARM, nor does this warranty extend to Products on which the serial number has been removed, defaced, or changed.
8. The implied warranties which the law imposes on the sale of this Product are expressly LIMITED, in duration, to the time period specified above. MOBILARM shall not be liable under any circumstances for consequential damages resulting from the use and operation of this Product, or from the breach of this LIMITED WARRANTY, any implied warranties, or any contract with MOBILARM.
9. IN CONNECTION WITH THE SALE OF ITS PRODUCTS, MOBILARM MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXCEPT AS EXPRESSLY SET FORTH HEREIN.
10. Some states and territories do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply. This warranty gives specific legal rights, and there may be other rights which may vary from state to state, or between territories.

### Exclusions

The law implies terms, conditions and warranties ('prescribed terms') into contracts for the supply of goods and services and prohibits the exclusion, restriction or modification of certain terms, conditions and warranties. Some prescribed terms permit a supplier to limit its liability for a breach of the prescribed terms, except as provided by prescribed terms:

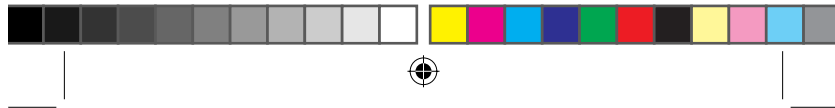
1. The liability of the seller in respect of a breach of a prescribed term relating to the products or any part of the products is limited at the option of the seller to the replacement or repair of the products part thereof or payment of the cost of repairing or replacing the products or any part of the products;
2. In these conditions the buyer does not have under any circumstances any cause of action against or right to claim or recover from the seller for, or in respect of, any loss or damage of any kind whatsoever, caused directly or indirectly by:
  - a. Any defect in material or workmanship of, or any other defect whatsoever in, or unsuitability for, any purpose of the products or any part of the products; or



- b. By default or negligence on the part of the seller or of any employee, contractor or agent of the seller or of any person for whom the seller has legal responsibility relating to the supply of, or otherwise concerning products or any part of the products. Mobilarm Limited is not liable to the buyer in contract or in tort arising out of, or in connection with, or relating to:
  - i. The performance of the products or any breach of these conditions; or
  - ii. Any fact, matter or thing relating to the products; or
  - iii. Any error (whether negligent or in breach of contract or not) in information supplied to the buyer or a user before or after the date of the purchaser's or user's use of the products.
- 3. Mobilarm Limited is not liable to the buyer in contract or in tort arising out of, or in connection with, or relating to:
  - a. The performance of the products or any breach of these conditions; or
  - b. Any fact, matter or thing relating to the products; or
  - c. Any error (whether negligent or in breach of contract or not) in information supplied to the buyer or a user before or after the date of the purchaser's or user's use of the products.
- 4. The total liability of Mobilarm Limited for loss or damage of every kind:
  - a. Whether arising pursuant to this agreement; or
  - b. Out of or in relation to the goods, their sale, delivery or the way they behave, in tort or contract or in any other cause of action;
  - c. Or in any other way whatsoever, is limited to:
    - i. The amount paid by the buyer to the seller under this agreement at the date when such liability arises; or
    - ii. The buyer indemnifies on a continuing basis on a fully indemnity basis Mobilarm Limited from and against any liability, loss, expense or demand for or arising from any false, misleading, deceptive or misdescriptive representation or statement made by the buyer in respect of the products, or their intended use to any person.
- 5. This indemnity survives termination of this agreement by either party for any reason.
- 6. The failure of any party to enforce the provisions of this agreement or to exercise any rights expressed in this agreement is not be a waiver of such provisions or rights and does not affect the enforcement of this agreement.

### Warranty Period

The standard warranty on Mobilarm Marine Employee Safety Monitoring Products is 24 (twenty four) months.



### Extended Warranty

An optional 3 year extended warranty (part number MOA-00201) can be purchased to extend the warranty period of a Mobilarm V100 to a total of 5 years.

Contact your authorised Mobilarm service agent to purchase the extended warranty. Alternatively, email [crewsafe@mobilarm.com](mailto:crewsafe@mobilarm.com) to contact the Mobilarm sales team or call +61 (0)8 9315 3511 between 8:30am and 5:00pm WST (GMT + 08:00).

### Disclaimer

The Mobilarm V100 is an emergency rescue transmission device that should only be activated as a last resort. Misuse or false activation is unlawful and irresponsible, and could result in prosecution or penalty.

The Mobilarm V100 should not be relied on as the only source of man overboard notification and the vessel owner, operator or master must exercise common prudence and good seamanship at all times. Use of the Mobilarm V100 in no way reduces liability of the vessel's master and crew who have the primary responsibility for safety on board.

No device is 100% fail safe nor can it guarantee safe rescue in an emergency. When activated, the Mobilarm V100 broadcasts a distress alert via the VHF radio band to all VHF DSC and VHF radio equipped vessels or stations within range but requires subsequent human interaction to acknowledge and respond to the distress alert.

Satellite GPS lock and in-water tracking is dependent on the extent of satellite system coverage and reception at the time and location of the emergency. The actual time and success of rescue is therefore dependent on all these contributing factors and as such, is outside the control of Mobilarm.

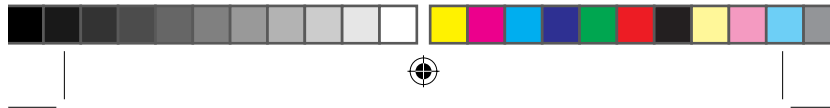
This owner's manual contains important information that must be adhered to for reliable use and operation of the product. It is the owner's sole responsibility to make the effort to read this manual and to ensure that the equipment's operation and limitations are understood.

Mobilarm reserves the right to change specifications, equipment, installation and maintenance instructions without notice as part of the company's policy of continuous product development and improvement.

### Warranty Registration

It is important to register your Mobilarm V100 by completing the enclosed warranty card or the online form. Failure to complete registration could delay any warranty claim.

To register online, go to [www.mobilarm.com](http://www.mobilarm.com) and select 'Product Registration' from the SUPPORT menu.

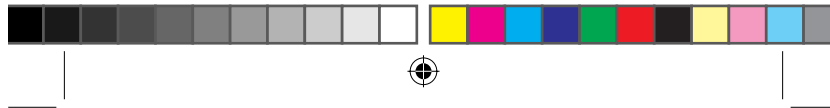


## Mobilarm Product Range

Mobilarm is the world's leading brand in electronic marine safety equipment that protect and save lives in the commercial marine environment. Mobilarm delivers crew monitoring safety systems and personal locating devices for employee protection on vessels and in marine-based facilities, which generate automatic and immediate alerts in incidents such as man overboard.

### Mobilarm V100

Part Number	Description
MOA-00200	Mobilarm V100 VPIRB
MOA-00201	3-Year Extended Warranty
MOA-00202	Remote Water-Sensing Extension Kit
MOA-0020?	Long Range Dipole Antenna
MOA-0020?	Mobilarm V100 PFD Premium
MOA-0020?	Mobilarm V100 PFD Standard
MOA-0020?	Mobilarm V100 EX
MOA-0020?	Mobilarm V100 Annual Service Contract



### Mobilarm Crewsafe

The safety and security platform that provides crew monitoring and paging, automatic and manual duress alarms, GPS track-back and full safety management from a single point of command.

The Crewsafe wireless sensor network can be expanded and customised to accommodate the unique requirements of each commercial environment, such as vessel or facility size, layout, construction materials and number of employees.

Contact your authorised Mobilarm service agent for more details, or go to [www.mobilarm.com](http://www.mobilarm.com) to find out more.

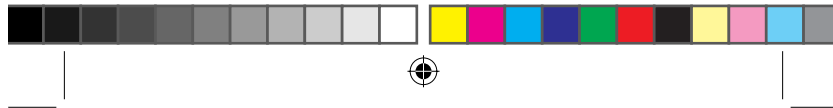
Part Number	Description
MOA-00170	Crewsafe Management System, 8.4" Touch-Screen
MOA-00140	Crewsafe Tag
MOA-00150	Crewsafe Power Dock
MOA-00120	Crewsafe Internal Router
MOA-00110	Crewsafe External Router
MOA-00130	Crewsafe Display Console
MOA-00160	Crewsafe Essentials (comprising 1 x Display Console, 1 x Power Dock, 2x Tags)



## Glossary

ACMA	Australian Communications and Media Authority
AMSA	Australian Maritime Safety Authority
Automatic Activation	The ability for the V100 to turn itself on upon 5-second contact with water
COSPAS-SARSAT	The international cooperative among the United States, Canada, Russia and France that operates the satellite monitoring system for 406 MHz EPIRBs
DSC	Digital Selective Calling – technology used to automate calling on terrestrial marine radio systems
DSE	Extended or additional position information included in a DSC message
EPIRB	Emergency Position Indicating Radio Beacon
FCC	Federal Communications Commission - United States governmental agency responsible for regulating products that transmit over the airwaves in the United States
GPS	Global Positioning System
IEC	International Electrotechnical Commission
ITU	International Telecommunications Union
KHz	Kilo Hertz. Measurement unit of radio frequency (1 thousand Hertz)
MHz	Mega Hertz. Measurement unit of radio frequency (1 million Hertz)
MAYDAY	Radio pro-word indicating a voice distress priority message
MMSI	Maritime Mobile Service Identity (DSC identity number)
MSLS (MSLD)	Marine Survivor Locating System (also MSLD, Marine Survivor Locating Device)
NMEA0183	Standardised protocol for data transmission developed by the National Marine Electronics Association that governs the type and sequence of information shared by navigational equipment
PLB	Personal Locator Beacon normally operating through the COSPAS-SARSAT system on 406 MHz, or 121.5 MHz
RTCM	Radio Technical Commission for Maritime Services





SAR	Search and Rescue
SOLAS	International convention for the Safety of Life At Sea. Applies to vessels of 300 GRT and over engaged on an international voyage
Strobe	Intense pulsing light for long distance location or signalling in poor visibility
USCG	United States Coast Guard
VHF	Very High Frequency radio band – 30 to 300 MHz
VPIRB	VHF Position Indicating Radio Beacon





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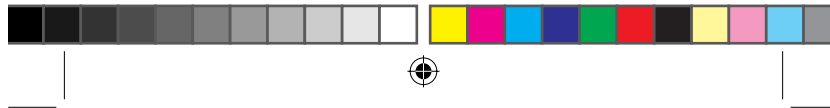
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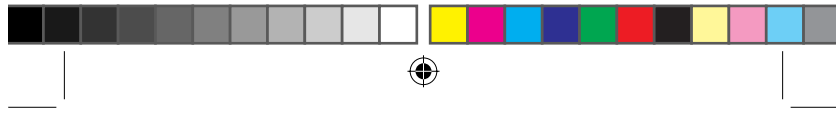
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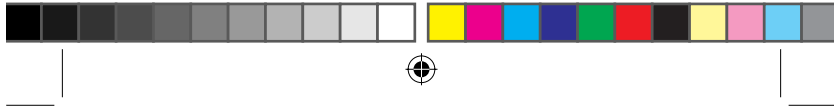
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[WWW.MOBILARM.COM](http://WWW.MOBILARM.COM)



MOBILARM LIMITED  
PO BOX 1533 APPLCROSS  
WESTERN AUSTRALIA 6953

TEL. +61 (0)8 9315 3511  
FAX. +61 (0)9315 3611



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