



**MOBILARM®**

ALWAYS ON WATCH

# **CREWSAFE V100**

## **MARITIME SURVIVOR LOCATING DEVICE**

User Manual



# Quick Operation 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 when the device is active to maximise the alerting range of the emergency transmission.
- 4 Do not cover or obscure the lens.



## ! Warning

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

## Before Using for the First Time

- Ensure the device is programmed with a User Maritime Mobile Service Identity (MMSI) number.
  - 1) Press and hold the Test Button for 3 seconds
  - 2) If you hear the words "MMSI Configuration" you must program a User MMSI number into the device. See User Manual for instructions.
  - 3) If you hear the words "Mobilarm V100 Test Menu" a User MMSI number has already been assigned to the device. Check this number is correct. See User Manual for instructions.
- Check the battery expiry date and test that the battery has at least 12 hours remaining.

## When the Device is Active

- Position the Flexible Antenna vertically in as high a position as possible above the water and do not handle it.
- Do not cover or obscure the lens so that the GPS antenna can acquire and lock its position.



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## Permitted Areas of Use

The Crewsafe V100 is a marine device only.

The Crewsafe V100 uses VHF marine band radio frequencies and in order to comply with differing regulatory requirements of national maritime and/or telecommunication licensing authorities regarding its use, the Crewsafe V100 is configured with a specific regional profile (identified by varying model numbers).

The regional profile addresses differences relating to channels and frequencies of operation, timing and destination of transmissions, and message type, category and content.

Refer to the 'Support' section at [www.mobilarm.com](http://www.mobilarm.com) for an up-to-date list of where each Crewsafe V100 model is approved for sale and use.

If you are using the Crewsafe V100 permanently in waters regulated by a different national maritime or licensing authority than for the countries listed, you may need to have your device reconfigured with a different regional profile that complies with the requirements for that region. Check with Mobilarm if you are unsure.

For advice, or to return your Crewsafe V100 for reconfiguration to a different regional profile, contact Mobilarm Support via email [support@mobilarm.com](mailto:support@mobilarm.com) or call +61 (0)8 9315 3511 between 8:30am and 5:00pm WST (GMT + 08:00).

## Introduction

This user manual provides all the information required to operate and test the Crewsafe 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 should 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 in regular letters with each word capitalised e.g. Water Sensors, refer to features of the device.

## Warnings and Safety Information

### ! Warning

- **The Crewsafe V100 is not a 406 PLB or EPIRB and its emergency transmission is not detected by orbiting satellites.** The Crewsafe V100 is a short range beacon that transmits an emergency message via VHF marine radio only.
- The Crewsafe 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) to avoid inadvertently activating the device.
- Do not dismantle the Crewsafe V100 as it contains no user-serviceable parts and this will void your warranty.
- The Crewsafe V100 emits radio frequency radiation when in use - avoid handling the Flexible Antenna at this time.
- Avoid staring directly at the high intensity Strobe as this may cause discomfort if viewed for long periods.

### ▲ Caution

- Do not paint your Crewsafe V100 or clean it with solvents or aggressive detergents. Some cleaning materials may damage the seals and affect the integrity of the device.
- If the device needs cleaning, ensure the Arming Switch is in the [OFF] position to avoid being activated by contact with water and wipe with a damp cloth and mild detergent only.

## Global Positioning System (GPS)

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

The GPS is managed by the United States Government who can alter its effective accuracy from time to time.

## Maritime Mobile Service Identity (MMSI)

An MMSI number is required for the Crewsafe V100 to operate.

Depending on the country of purchase, your Crewsafe V100 will either already have a User MMSI number assigned to it, or will need to be programmed with a User MMSI number appropriate to the region where it is to be used. In this case, you can apply for an MMSI number from the same agency in your country that issues radio or Ship Radio licences.

### Using your Crewsafe V100 for the First Time

It is important to carry out the following before using the Crewsafe V100 for the first time:

- 1) Ensure the device has been assigned a User MMSI number.
- 2) Program a Destination MMSI number into the device for VHF DSC transmission testing.
- 3) Perform a full system test.

#### → Setting Up your Crewsafe V100 (11)

### Crewsafe V100 Record of Ownership

While it may not be required to register your Crewsafe V100 with your national maritime authority, it is highly recommended that you log your ownership and the User MMSI number of the device with Mobilarm as this will provide a record of ownership if the unit is lost, and may assist search and rescue authorities in the event of an emergency.

### Regular Testing

The Crewsafe V100 battery should be tested once every 3 months and a full test performed once every 12 months. Testing the device more frequently is not recommended as additional tests may shorten the battery life.

#### → Testing the Crewsafe V100 (30)

# Crewsafe V100 Overview

The Crewsafe 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 Crewsafe 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 (Digital Selective Calling) or VHF radio equipped vessels within range, including the distressed mariner's parent vessel.

The Crewsafe V100 can be integrated with a lifejacket or Personal Flotation Device (PFD) for easy wearability. Alternatively, it can be clipped onto webbing, harness etc. or carried in a pocket.

For the device to transmit the emergency message its antenna must be out of the water, therefore the Crewsafe V100 should be worn at chest height, not at waist level.

## Automatic Activation

The Crewsafe V100 is designed to be water-activated but it can also be manually activated. The design of the Arming Switch prevents the device from being accidentally activated while being carried or in transit, and the Switch Lock locks the Arming Switch in the **[READY]** position if desired.

If the device is inadvertently activated, there is a deliberate warning period after automatic activation which enables the user to switch off the device before it begins to transmit the emergency distress call.

## Automatic Distress Alert

When activated, the Crewsafe V100 automatically transmits a VHF DSC man overboard distress alert which will be received by all vessels with VHF radio in range.\*

The device acquires a GPS lock and repeats the distress alert with the casualty's MMSI identity and current position. The message is also broadcast on the emergency marine radio channel (e.g. channel 16) in a synthesised voice.\*

The distress alert is repeated at regular intervals to update rescue teams with the casualty's current position. The Strobe light assists visual homing at night or in poor weather conditions. When properly maintained, the Crewsafe V100 will support emergency transmission for at least 12 hours under normal operating conditions.

*\*profile dependent*

## In-Water Tracking

Each Crewsafe V100 transmission includes the current latitude and longitude coordinates to provide up-to-date positioning information usually accurate to within 10 metres.

### ▷ Note

- The Crewsafe V100 uses positional data derived from its internal GPS Antenna and is therefore only as accurate as the positional data it receives.

Some marine radios are able to output a waypoint of the coordinates received to a compatible GPS or chart plotter which provides a graphical representation of the location of the man overboard casualty relative to the vessel receiving the alert, as well as distance and bearing information.

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

# Crewsafe V100 Features



# Setting Up your Crewsafe V100

Before using your Crewsafe V100 for the first time, you must:

- 1) Ensure the device has been assigned a User MMSI number.
- 2) Program the MMSI number of your vessel's VHF marine radio (the "Destination MMSI number") into your Crewsafe V100 for VHF DSC transmission testing.
- 3) Perform a full system test.

## Assigning a User MMSI Number to your Crewsafe V100

If you purchased your Crewsafe V100 in Australia or New Zealand, it will already have a unique User MMSI number assigned to it, which is stamped on the back of the unit. Make a note of your User MMSI number and keep it in a safe place.

If you purchased your Crewsafe V100 outside of Australia or New Zealand, you will need to apply for a User MMSI number and manually program it into your device. In this case, you can apply for an MMSI number from the same agency in your country that issues radio or Ship Radio licences.

### ➔ Programming a User MMSI Number into your Crewsafe V100 for the first time (12)

#### ◆ Important

- If you move permanently to a different region, you may need to apply for a new User MMSI number and have the device reconfigured to a different regional profile.
- Refer to the 'Support' section at [www.mobilarm.com](http://www.mobilarm.com) for further information.

## Programming a User MMSI Number into your Crewsafe V100 for the first time

If you purchased your Crewsafe V100 outside of Australia or New Zealand, you will need to manually program a User MMSI number into your device. **Do NOT program a different User MMSI number into a device purchased in Australia and New Zealand without prior consultation with Mobilarm.**

The User MMSI number only needs to be programmed once into your Crewsafe V100. Once the programming process is complete, the User MMSI number will be permanently saved in the Crewsafe V100 memory.

### ◆ Important

- A User MMSI number can be programmed into the device twice only. If you try to program the device with a new User MMSI number after the maximum number of entries has been reached, the device will beep continuously and not permit this action.
- If you need to change your User MMSI number more than this you will need to contact Mobilarm Support for advice. Therefore, take special care when programming your User MMSI number to ensure it is entered correctly.

- 1 Have ready the User MMSI number and some water.
- 2 Ensure the Arming Switch is in the **[OFF]** position.
- 3 Press and hold the Test Button for 3 seconds.

- The Strobe flashes quickly then stops and the device emits two short beeps.



V100 Test Button

- 4 Listen for the words “MMSI Configuration”.
- 5 Press and hold the Test Button until you hear the first digit of your User MMSI number (the count starts at zero through nine) and release the button after the correct digit is spoken.
- 6 Press and hold the Test Button again until you hear the next digit of your User MMSI number, then release the button.
- 7 Repeat step 6 until you have selected all nine digits of your User MMSI number in sequence.
- 8 When all nine digits have been selected, the device will repeat back the entire User MMSI number for verification and ask, “Do you want to save?”
- 9 If the correct User MMSI digits are read back, briefly submerge the Water Sensors. You should hear “(Beep) Saving User MMSI” and your User MMSI number will be permanently written to the Crewsafe V100.

If you do not submerge the Water Sensors within 5 seconds, programming will time out and the User MMSI number will not be saved.

- 10 Write the User MMSI number in the space provided on the label on the back of the device.

### ! Warning

- If you make a mistake during programming, release the Test Button and wait for programming to time out and exit the test menu (5 seconds). Any digits already selected will not be stored. To continue, restart at step 1.

## Changing the Crewsafe V100 User MMSI Number

### ◆ Important

- **Do NOT change the User MMSI number of a Crewsafe V100 purchased in Australia and New Zealand without prior consultation with Mobilarm.**
  - A User MMSI number can be programmed into the device twice only. If you attempt to program the device with a new User MMSI number after the maximum number of entries has been reached, the device will beep continuously and not permit this action.
  - If you need to change your User MMSI number more than this you will need to contact Mobilarm Support for advice. Therefore, take special care when programming your User MMSI number to ensure it is entered correctly.
- 1 Have ready the new User MMSI number and some water.
  - 2 Ensure the Arming Switch is in the [OFF] position.
  - 3 Press and hold the Test Button for 3 seconds.
    - The Strobe flashes quickly then stops and the device emits two short beeps.
  - 4 Listen for the words “Mobilarm V100 Test Menu” followed by a beep.



- 5 Press and hold the Test button. The Crewsafe V100 will read out, “Battery test”, “Water test”, “GPS test”, “VHF radio voice test”, “VHF radio DSC test” then “V100 status”. When you hear “V100 status” release the Test button.
- 6 The Crewsafe V100 will read out “Model number...”, “Firmware version...”, “Emergency voice channel 16”, “VHF test voice channel 67” then “User MMSI...”. When you hear the current User MMSI number read out, briefly submerge the Water Sensors in water.
- 7 Wait to hear “User MMSI Configuration” then remove the device from the water.
- 8 Press and hold the Test Button until you hear the first digit of the new User MMSI number (the count starts at zero through nine) and release the button after the correct digit is spoken.
- 9 Press and hold the Test Button again until you hear the next digit of the new User MMSI number, then release the button.
- 10 Repeat step 9 until you have selected all nine digits of the new User MMSI number in sequence.
- 11 When all nine digits have been selected, the device will repeat back the entire User MMSI number for verification and ask, “Do you want to save?”

**12** If the correct User MMSI digits are read back, briefly submerge the Water Sensors. You should hear "(Beep) Saving User MMSI". The new User MMSI number will be permanently written to the Crewsafe V100.

If you do not submerge the Water Sensors within 5 seconds, programming will time out and the new User MMSI number will not be saved.

**13** At the end of programming, write the new User MMSI number on the label on the back of the device.

**! Warning**

- If you make a mistake while programming, release the Test Button and wait for programming to time out and exit the test menu (5 seconds). Any digits already selected will not be stored. To continue, restart at step 1.
- If you make a mistake while selecting the last digit of the new User MMSI number, press the Test button to exit the test menu and repeat the programming instructions from step 5.

## Programming a Destination MMSI Number for VHF DSC Transmission Testing

In order to test the transmission and reception of the Crewsafe V100 VHF DSC distress call, it is recommended that you program the MMSI number of your vessel's VHF marine radio (the "Destination MMSI number") into the Crewsafe V100.

- 1** Have ready the new Destination MMSI number and some water.
- 2** Ensure the Arming Switch is in the **[OFF]** position.
- 3** Press and hold the Test Button for 3 seconds.
  - The Strobe flashes quickly then stops and the device emits two short beeps.
- 4** Listen for the words "Mobilarm V100 Test Menu" followed by a beep.
- 5** Press and hold the Test button. The Crewsafe V100 will read out: "Battery test", "Water test", "GPS test", "VHF radio voice test", "VHF radio DSC test", "V100 status" then "Destination MMSI test". When you hear "Destination MMSI test" release the Test button.
- 6** When you hear the current Destination MMSI number read out, briefly submerge the Water Sensors in water.
- 7** Wait to hear "Destination MMSI Configuration" then remove the device from the water.



- 8 Press and hold the Test Button until you hear the first digit of the new Destination MMSI number (the count starts from zero through nine) and release the button after the correct digit is spoken.
- 9 Press and hold the Test Button again until you hear the next digit of the new Destination MMSI number, then release the button.
- 10 Repeat step 9 until you have selected all nine digits of the new Destination MMSI number in sequence.
- 11 When all nine numbers have been selected, the device will repeat the Destination MMSI number for verification and ask, “Do you want to save?”
- 12 If the correct Destination MMSI digits are read back, briefly submerge the Water Sensors. You should hear “(Beep) Saving Destination MMSI” and the Destination MMSI number will be permanently written to the Crewsafe V100.

If you do not submerge the Water Sensors within 5 seconds, programming will time out and the new Destination MMSI number will not be saved.

#### ! **Warning**

- If you make a mistake during programming, release the Test Button and wait for programming to time out and exit the test menu (5 seconds). Any digits already selected will not be stored. To continue, restart at step 1.
- If you make a mistake while selecting the last digit of the new Destination MMSI number, press the Test button to exit the test menu and repeat the programming instructions from step 5.

## Checking your Crewsafe V100 MMSI Numbers

- 1 Ensure the Arming Switch is in the **[OFF]** position.
- 2 Press and hold the Test Button for 3 seconds.
  - The Strobe flashes quickly then stops and the device emits two short beeps.
- 3 Listen for “Mobilarm V100 Test Menu” followed by a beep.
- 4 Listen for “V100 Status”. The Crewsafe V100 will read out “Model number...”, “Firmware version...”, “Emergency voice channel 16”, “VHF voice test channel 67” and then the User MMSI number and Destination MMSI number.
- 5 Confirm both MMSI numbers match the stamp on the rear of the device (or the User MMSI number you previously programmed into the device) and the Destination MMSI number of your vessel’s VHF marine radio.



V100 Test Button

# Using the Crewsafe V100

## Integrating the Crewsafe V100 with a Lifejacket or Personal Flotation Device

The Crewsafe V100 may be integrated with various models of lifejacket or Personal Flotation Device (PFD). This assists in streamlining safety procedures, reduces snagging hazards and ensures the user is equipped with all the necessary kit in one unit to keep him or her afloat while providing detection, tracking and location capability in a man overboard event.



The Crewsafe V100 may be retro-fitted to existing lifejackets or fully integrated with new lifejackets. The V100 Remote Water Sensing Extension Kit and Long Wire Antenna (model dependent) are required in order to integrate your Crewsafe V100 with a lifejacket.

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

### ① Crewsafe V100 Switch Lock

Your Crewsafe V100 is supplied with a Switch Lock. This enables you to arm the Crewsafe V100 and lock the Arming Switch in the correct position for automatic water activation.

The Switch Lock will prevent any outside forces from inadvertently moving the switch to the [OFF] or [ON] position when in use.



Use the Switch Lock when your Crewsafe V100 is integrated with a lifejacket or PFD, carried in a lifejacket pocket, or whenever there is a risk that the Arming Switch may be dislodged from the [READY] position.

The device will continue to operate as normal with the Switch Lock in place, i.e. it will automatically activate if submerged in water for 5 seconds and commence full emergency transmissions after the initial warning period has passed.

### ◆ Important

- If you want to manually activate the Crewsafe V100 or deactivate the device when the Switch Lock is in use, the Switch Lock must be removed in order to access the Arming Switch.

## Attaching the Switch Lock to the Crewsafe V100

- 1 Slide the Arming Switch down from [OFF] to [READY].
- 2 Place the Switch Lock over the Arming Switch and press down firmly. Apply equal pressure at the top and bottom of the Switch Lock until it snaps into place.



## Removing the Switch Lock from the Crewsafe V100

- 1 Pull the top of the Switch Lock away from the device.
  - The clips holding it in place will disengage and release the Switch Lock.



## Attaching the Crewsafe V100

The Crewsafe V100 has a purpose-built Clip for attaching the unit to webbing, harnesses or any other safety device. The Clip also helps to secure the Flexible Antenna to the unit.

### 1 Attach the Clip to the Crewsafe V100.

- 1) Slide the Clip onto the unit until it locks firmly into place.
- 2) Place the Flexible Antenna into the Antenna Slot.

### 2 Thread the strap or webbing through the back of the Clip.

#### ▷ Note

- Attach the supplied lanyard to the Lanyard Ring and use it for additional securing to harness, lifevest, clothing etc. This will prevent the unit from being lost if it becomes dislodged from the Clip.



Attaching  
the clip

## Arming the Crewsafe V100 for Water Activation

- 1 Slide the Arming Switch down from **[OFF]** to **[READY]**.
- 2 Place the Switch Lock over the Arming Switch and press down firmly. Apply equal pressure at the top and bottom of the Switch Lock until it snaps into place.



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

When the device is water activated:

- The Strobe flashes, the Status LED illuminates and audio alerts (beeps and automated messages) warn the user that the device is active.

There is a short warning period before the first emergency transmission to allow the user to deactivate the device if it has been inadvertently activated.

If the device is not deactivated in this time, the Crewsafe V100 commences full emergency transmissions:

- The Strobe and Status LED flash.
- Audio alerts (beeps and automated messages) notify the user that the device is transmitting.

### 3 When the device is active, release the Flexible Antenna to maximise the alerting range.

- 1) Slide out the Flexible Antenna from the Antenna Slot and extend it fully so that it is vertical.

#### → False Alarms (27)

## Manually Activating the Crewsafe V100

- 1 Remove the Switch Lock from the Arming Switch if fitted.
  - 1) Pull the top of the Switch Lock away from the device.  
The clips holding it in place will disengage and release the Switch Lock.

- 2 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 flashes, the Status LED illuminates and an automated message warns the user that the device is active.

There is a short warning period before the first emergency transmission to allow the user to deactivate the device if it was inadvertently activated.

If the device is not deactivated in this time, the Crewsafe V100 commences full emergency transmissions:

- The Strobe and Status LED flash and audio alerts (beeps and automated messages) notify the user that the device is transmitting.

- 3 When the device is active, release the Flexible Antenna to maximise the alerting range.

- 1) Slide out the Flexible Antenna from the Antenna Slot and extend it fully so that it is vertical.

### ◆ Important

- Once activated, do not cover or obscure the lens so that the GPS Antenna can acquire and lock its position.



V100 On

## Deactivating the Crewsafe V100

- 1 Remove the Switch Lock from the Arming Switch if fitted.

- 1) Pull the top of the Switch Lock away from the device. The clips holding it in place will disengage and release the Switch Lock.

- 2 Press and slide the Arming Switch to **[OFF]**.

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

### ◆ Important

- If the Crewsafe V100 was inadvertently activated and transmitted a distress alert, deactivate the device and then broadcast an “all stations” voice message using VHF radio to cancel the distress alert.

### ➔ Cancelling the Distress Alert after Inadvertent Activation (27)



V100 Off

## Cancelling the Distress Alert after Recovery

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

### 1 Immediately turn off the Crewsafe V100.

- 1) Remove the Switch Lock from the Arming Switch if fitted.
- 2) 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 regional search and rescue authority 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.



V100 Off

## ① False Alarms

The design of the Crewsafe V100 minimises the risk 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 inadvertently activated.

To help prevent false alarms:

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

## Cancelling the Distress Alert after Inadvertent Activation

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If the Crewsafe V100 was inadvertently activated and transmitted a distress alert, cancel the distress alert and notify the regional search and rescue authority as soon as possible that the alert was a false alarm.

### 1 Immediately turn off the Crewsafe V100

- 1) Remove the Switch Lock from the Arming Switch if fitted.
- 2) 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 your regional search and rescue authority 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.

① **Visual and Audio Indications when Active**

The Crewsafe V100 provides no visual or audio indications when it is armed, i.e. when the Arming Switch is moved from **[OFF]** to **[READY]**, nor does it use any power from battery in this state.

When the device has been manually or water 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.

The audio alerts serve as a reminder to the user to raise the device as high as possible on each transmission in order to maximise the alerting range, and to reassure him or her that the device is transmitting.

The colour of the Status LED indicates the following:

**Orange** - Device acquiring GPS position and battery good

**Green** - GPS position acquired and battery good

**Red** - Battery low, less than 1 hour of operation remaining

	Audio Alert		Status LED/Strobe
	Automated Message	Message Interval	
Initial Water Activation Period	(Beep Beep Beep) "Water activation. Emergency. Emergency. Emergency."	Once prior to VHF transmissions commencing	Orange or red flash every 2 seconds, Strobe flashes
Initial Manual Activation Period	(Beep Beep Beep) "Emergency. Emergency. Emergency."	Once prior to VHF transmissions commencing	Orange or red flash every 2 seconds, Strobe flashes
VHF DSC Transmission Activated	(Beep) "V100 sending emergency DSC now."	Before each VHF DSC transmission	Solid orange/red LED during transmission, no Strobe during transmission
VHF Voice Transmission Activated	(Beep) "V100 sending emergency voice message now."	Before each VHF voice transmission	Solid orange/red LED during transmission, no Strobe during transmission
Acquiring GPS Data	(Beep) "GPS scanning."	-	Green, orange or red flash every 5 seconds, Strobe flashes
GPS Data Acquired	(Beep) "GPS position ..."	Repeated when GPS signal is lost and re-acquired.	Green LED when GPS acquired

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

# Testing the Crewsafe V100

Regular testing of your Crewsafe V100 functions will reassure you it is operating normally. The Crewsafe V100 battery should be tested once every 3 months and a full test performed when the device is first put into service and once every 12 months thereafter. 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.

Refer to the Troubleshooting section if any tests fail.

## → Troubleshooting (40)

### ! Warning

- If the Crewsafe V100 fails any test in the sequence, TAKE THE DEVICE OUT OF SERVICE IMMEDIATELY.
- If the battery test indicates less than 12 hours of battery life remaining, return the device to Mobilarm for battery replacement.
- DO NOT ignore a low battery warning as the device may not operate to full capacity in a man overboard emergency.

### Test Button

The Test Button is located on the rear of the device and is used to activate the full and single tests, and to program MMSI numbers.



## Crewsafe V100 Test Options

There are two ways to test operation of the Crewsafe V100.

- 1) Single test (checks the selected function only)
- 2) Full test (checks all functions).

The full test requires access to water to test water activation. Release the Flexible Antenna before commencing GPS or VHF transmission tests and perform the test outdoors so that the Crewsafe V100 has a clear view of the sky and can complete the GPS test.

The single test is used primarily to check the battery but can also be performed to check any single function of the device.

E.g. If a new radio is installed on a vessel, perform the VHF transmission test to check the V100 is working correctly.

## Testing VHF DSC and VHF Voice Transmissions

In order to test the transmission and reception of the Crewsafe V100 VHF DSC distress call, it is recommended that you program the MMSI number of your vessel's VHF marine radio (the "Destination MMSI number") into your Crewsafe V100.

Confirmation that VHF DSC and VHF voice test transmissions have been sent and received can be checked by monitoring the appropriate channels on the vessel's VHF radio during testing, channel 70 (156.525 MHz) for DSC and channel 67 (156.375 MHz) for voice test transmissions.

Channel 67 is an important working and safety channel. For this reason, only perform VHF voice transmission testing when out of range of other vessels to avoid any interference or disruption to other users.

## → Programming a Destination MMSI Number for VHF DSC Transmission Testing (17)

## Performing a Battery Test using the Single Test Function

The Crewsafe V100 battery should be tested once every 3 months. More frequent testing will consume additional battery capacity and shorten the product life.

### ! Warning

- If the battery test indicates less than 12 hours of battery life remaining, take the device out of service and return it for battery replacement.

### 1 Activate the Test feature.

- 1) Ensure the Arming Switch is in the **[OFF]** position.
- 2) Press and hold the Test Button for 3 seconds.

The Strobe flashes quickly then stops and the device emits two short beeps.

- 3) Listen for “Mobilarm V100 Test Menu” followed by a beep.

### 2 Press the Test Button once.

- 1) Listen for “Battery Test” followed by a beep.
- 2) The remaining battery life of the device is stated, i.e. “Battery One-Five hours”, meaning that the device will transmit emergency messages for 15 hours.

### 3 At the end of the battery test the device will turn off.



## Performing Other Tests using the Single Test Function

There are six single tests that can be performed. A single test only checks the selected function i.e. water activation, and will cease testing once it is complete.

**Table 2: Single Test Structure** provides a list of the single tests available with test progress, pass and fail indications.

### 1 Activate the Test feature.

- 1) Ensure the Arming Switch is in the **[OFF]** position.
- 2) Press and hold the Test Button for 3 seconds.
  - The Strobe flashes quickly then stops and the device emits two short beeps.
- 3) Listen for “Mobilarm V100 Test Menu” followed by a beep.

### 2 Press the Test Button the required number of times to skip to the start of the desired test in the sequence.

- 1) E.g. To perform the GPS test, press the Test Button 3 times.

### 3 Verify whether the test has passed or failed.

### 4 Once the test is complete, the device will turn off.

### ! Warning

- Performing single tests only may compromise the operational status and safety of the device because not all functions are tested.
- Perform a full test every 12 months to ensure that all functions of the Crewsafe V100 are operating normally.

## Performing a Full Test

### ◆ Important

If you have just purchased the Crewsafe V100 and are testing the device for the first time, ensure that the unit MMSI and calling MMSI numbers have been assigned to the device.

#### → Setting Up your Crewsafe V100 (11)

**Table 3: Full Test Structure** shows the full test sequence with test progress, pass and fail indications.

### 1 Activate the Test feature.

- 1) Ensure the Arming Switch is in the **[OFF]** position.
- 2) Press and hold the Test Button for 3 seconds.

- The Strobe flashes quickly then stops and the device emits two short beeps.

- 3) Listen for "Mobilarm V100 Test Menu" followed by a beep.

### 2 Listen for each test to be performed in turn and check whether the tests have passed or failed.

### 3 Once all the tests have been performed the device will turn off.

### ◆ Important

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

#### → Troubleshooting (40)



Test Phase	Progress Message	Pass Test Result	Fail Test Result	Timeout
<b>1. "Battery Test"</b>	"Battery ... hours"	More than 12 hours remaining.	Under 12 hours remaining.	None
<b>2. "Water Test"</b> (Requires water sensors to be immersed in water.)	"Water test armed" followed by "Water lost" until water detected.	"Water activation"	"Water test off"	1 minute
<b>3. "GPS Test"</b> (Requires clear view of sky outdoors.)	"GPS scanning" until GPS lock acquired. "GPS stopped" if test button pressed before timeout.	"GPS position ..."	"GPS test off"	3 minutes
<b>4. "VHF Radio Voice Test"</b> (Listen for transmission on VHF radio.)	Solid orange/red LED display during transmission (30 secs).	"Test test test. This is [User MMSI] V100 automated alarm. position to follow". battery ... hours. Test test test."	"V100 test mode off"	None
<b>5. "VHF Radio DSC Test"</b> (Watch for transmission on VHF DSC radio.)	Solid orange/red LED display during transmission (2 secs)	Valid position is indicated on VHF marine radio.	"V100 test mode off"	None
<b>6. "V100 Status"</b> (Provides device status information only.)	"Model number 'V100_AU: firmware version ...' emergency voice channel 16: VHF test voice channel 67: User MMSI ..."	All data heard.	"V100 test mode off"	None

**Table 2: Single Test Structure**

\* Positioning data included if available.

# Service and Maintenance

The Crewsafe V100 is a robust product that is designed to operate in harsh marine conditions. However, responsible 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 Crewsafe V100 periodically for signs of wear and tear, visible cracks or other damage.

## ! Warning

- Cracks in seals or housings could allow moisture inside the unit, rendering it unreliable or unusable.
- If cracking is observed or it is possible the unit has been damaged, immediately take the device out of service and contact Mobilarm for it to be assessed.

## Crewsafe V100 Battery

The Crewsafe V100 has a service life of 5 years, at which point the battery should be replaced or a new unit purchased.

Performing a battery test every 3 months indicates how much battery life is remaining. If the battery test fails or the remaining battery life is less than 12 hours, immediately take the device out of service and return it to Mobilarm for servicing.

It is possible to test the battery more frequently but this will consume additional battery capacity and shorten the product life to less than 5 years.

Test Phase	Progress Message	Pass Test Result	Fail Test Result	Timeout
1. "V100 Status" (Provides device status information only.)	"Model number V100_AU; firmware version ...; emergency voice channel 16; VHF test voice channel 67; User MMSI ...; Destination MMSI ..."	All data heard.	"V100 test mode off."	None
2. "Battery Test"	"Battery ... hours"	More than 12 hours remaining.	Under 12 hours remaining.	None
3. "Water Test" (Requires water sensors to be immersed in water.)	"Water test armed" followed by "Water lost" until water detected.	"Water activation"	"Water test off"	1 minute
4. "GPS Test" (Requires clear view of sky outdoors.)	"GPS scanning" until GPS lock acquired. "GPS stopped" if test button pressed before timeout.	"GPS position ..."	"GPS test off"	3 minutes
5. "VHF Radio Voice Test" (Listen for transmission on VHF radio.)	Solid orange/red LED display during transmission (30 secs).	"Test test test. This is [User MMSI] V100 automated alarm, GPS position ..., battery ... hours. Test test test."	"V100 test mode off"	None
6. "VHF Radio DSC Test" (Watch for transmission on VHF DSC radio.)	Solid orange/red LED display during transmission (2 secs).	Valid position is indicated on VHF marine radio.	"V100 test mode off"	None

Table 3 : Full Test Structure

## Replacing Faulty or Damaged Units

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

## Crewsafe V100 Annual Recertification Service

Users in high demand environments should consider a Crewsafe V100 Annual Recertification Service agreement.

For a fixed annual fee per unit, Mobilarm will check and replace as necessary all serviceable parts including the battery, check the integrity of the watertight seals using a pressure test and fully recertify the device for a further 12 months.

For full details go to [www.mobilarm.com](http://www.mobilarm.com) or contact your Mobilarm agent.

## Changing Contact Details or Record of Ownership

It is the owner's responsibility to advise Mobilarm of any change of contact details or ownership of a Crewsafe V100. If ownership is being transferred, this obligation transfers to the new owner of the device. If you are the new owner, you may need to assign a new User MMSI number to the device and assign your vessel's MMSI number (the "Destination MMSI number") for VHF DSC transmission testing.

### → Setting Up your Crewsafe V100 (11)

## Using the Crewsafe V100 in a Different Region

If you move outside the region where your Crewsafe V100 was purchased, you may need to have the device reconfigured with a different regional profile to comply with regulatory authorities' requirements for that region.

For further advice, or to return your Crewsafe V100 for reconfiguration to a different regional profile, contact 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).

## If you Lose your Crewsafe V100

If you lose your Crewsafe V100 or it is damaged beyond repair, contact 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).

## If your Crewsafe V100 is Stolen

- 1) Report the theft to your local police and give them the User MMSI number of your Crewsafe V100.
- 2) Contact Mobilarm to advise that the unit has been stolen and provide them with the police report details.

These measures will make returning the device to you more likely if the unit is found, or if someone attempts to log ownership the device with Mobilarm.

## Further Support

Please consult the Troubleshooting and FAQ sections of this manual or contact Mobilarm for assistance with using and testing your Crewsafe V100.

Refer to the 'Support' section online at [www.mobilarm.com](http://www.mobilarm.com) for further technical information regarding the Crewsafe 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).

# Troubleshooting

Issue	Possible Cause	Solution
Strobe, Status LED or audio alerts not operating as expected	Fault	Take out of service immediately and contact Mobilarm for assessment.
Test sequence fails to activate	Fault	Take out of service immediately and contact Mobilarm for assessment.
Battery test incomplete	Remaining battery life is less than 12 hours	Take out of service immediately and contact Mobilarm for battery replacement.
Water activation test failure (timed out - unable to detect water)	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 Mobilarm for assessment.
GPS acquisition test failure (timed out - device unable to obtain a GPS lock)	Test performed indoors or in covered area	Re-test outdoors with clear view of sky
	Flexible Antenna not fully extended.	Release the Flexible Antenna from the Antenna Slot and repeat the test.
	Natural interference from electromagnetic radiation such as solar flares or geomagnetic storms (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 Mobilarm for assessment.

Issue	Possible Cause	Solution
VHF voice transmission test failure (no voice transmission heard)	Receiving radio not turned on or tuned to incorrect channel	Ensure the radio is turned on and tuned to the correct channel. Perform the "V100 Status" test to confirm the radio setting matches the VHF test voice channel.
	VHF voice transmitter fault	Take out of service immediately and contact Mobilarm for assessment.
VHF DSC transmission test failure (no DSC message received)	Receiving radio not turned on or tuned to incorrect channel	Ensure the radio is turned on and tuned to the correct channel (channel 70).
	Incorrect Destination MMSI number (vessel's VHF marine radio MMSI number) programmed into device	Check the correct Destination MMSI number has been programmed into the device. Perform the "V100 Status" test to confirm the Destination MMSI number matches the vessel's VHF marine radio MMSI number.
	VHF DSC transmitter fault	Take out of service immediately and contact Mobilarm for assessment.
Device emits continuous beep when attempting to program a User MMSI number	Maximum number of MMSI programming entries has been reached	Contact Mobilarm for assistance

**Table 4: Troubleshooting**

# Frequently Asked Questions

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

In order for the Crewsafe 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 Crewsafe V100 to be worn or mounted higher above sea level to achieve a wider alerting range but still be water activated in an emergency.

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

Yes. The Crewsafe V100 Clip allows it to be attached to any strap or harness that can be threaded through the loops.

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

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

## **Q: Can a Crewsafe V100 be re-used if it has been activated?**

Possibly. Perform a full test to check all functions. If the battery test phase fails or the battery life is less than 12 hours, immediately take the device out of service and contact your Mobilarm 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 12 months and a battery test every 3 months to check that all functions are operating normally and that the remaining battery life is not less than 12 hours.

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

Yes. An embedded Long Wire Antenna (part number MOA-00203) can be used instead of the existing antenna when using the Crewsafe V100 with a lifejacket or survival suit.

## **Q: What is the procedure if I change to a different vessel and want to continue using my Crewsafe 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 Crewsafe V100 may need to be reprogrammed with a different regional profile and User MMSI number in order to comply with those regulations.

If you are operating within the same region, you should program the new vessel's MMSI number into the device. See "Programming a Destination MMSI Number for VHF DSC Transmission Testing" for further details.

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

No. The Crewsafe 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 so long as it has a clear view of the sky.

Performing a full system test every 12 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 Crewsafe V100 DSC distress alert logs a waypoint when a man overboard event occurs?**

Some marine 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 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 marine 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 Crewsafe V100 is transmitting?**

When the Crewsafe 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 before and after transmission, a message is heard from the speaker and two short beeps after the message confirm the transmission has been sent.

# Specifications

General	
Battery Type	3 x 3 Volt LiMnO <sub>2</sub> (Non HAZMAT) CR2 batteries
Operating Time	Minimum 12 hours emergency operation at -10°C (14°F) and longer in warmer conditions
Battery Service Life at +20°C	5 years
Operating Temperature	-20° to +55°C (-4° to +131°F)
Storage Temperature	-30° to +70°C (-22° to +158°F)
Dimensions	12 x 7.8 x 3cm (4.7 x 3 x 1.22in) excl. antenna/clip
Weight	153g (5.4oz) excl. antenna and clip
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 and lanyard for attachment to webbing, harness or lifejacket pocket/valise
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)	Typically 45 to 60 seconds
Antenna	Solid state quadrafilar helix
GPS Sensitivity	Acquisition -144dBm; Navigation tracking -159dBm

Antenna	
Antenna Type (Standard)	Vertically polarized helix antenna
VHF DSC Tx Power Output	1 watt (100 milliwatt during testing)
VHF Voice Tx Power Output	1 watt (100 milliwatt during testing)

**Table 5: Specifications**

## ▷ Note re Global Positioning System (GPS)

- The Crewsafe 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 United States Government who can alter its effective accuracy from time to time.

## Certification and Compliance

Certification	AS/NZS <sup>1</sup> C <sup>2</sup> ; ACMA <sup>1</sup> ; IEC <sup>2</sup> ; AMSA; RoHS
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; DSC Transmitter: ITU-R M. 493-11 and ITU-R M. 451-9; Radio-Telephone Voice Transmitter: IEC 60945

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

**Table 6: Certification and Compliance**

# 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 factory 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 products against failure 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 Firmware and Software will substantially conform to its factory 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 Authorised 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 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 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 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 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 Crewsafe V100 to a total of 5 years.

Contact Mobilarm or your Mobilarm 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 Crewsafe 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 Crewsafe 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 Crewsafe 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 Crewsafe 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 user 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 Crewsafe 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.

# Crewsafe Product Range

Mobilarm is one of the world's leading brands in electronic marine safety equipment that protects and saves lives in the commercial marine workplace.

The Crewsafe range of Maritime Survivor Locating Devices utilise the Global Positioning System (GPS) and VHF radio to transmit the casualty's precise position coordinates to maritime Search and Rescue teams and facilitate a fast and effective recovery of persons from the water.

## Crewsafe V100

Part Number	Description
MOA-00200	Crewsafe V100 (Australia/New Zealand only)
MOA-00250	Crewsafe V100 (International, excluding USA)
MOA-00251	Crewsafe V100 (France/Canada only)
MOA-00254	Crewsafe V100 (Portugal only)
MOA-00253	Crewsafe V100 (Spain only)
MOA-00252	Crewsafe V100 (USA only)
MOA-00201	3-Year Extended Warranty
MOA-00202	Crewsafe V100 Remote Water Sensing Extension Kit
MOA-00203	Crewsafe V100 Long Wire Antenna
MOA-00261	Annual Recertification Service Agreement - Advanced Exchange
MOA-00262	Annual Recertification Service Agreement - Premium
MOA-00263	Annual Recertification Service Agreement - Standard

Table 7: Crewsafe V100 Product Range

The Crewsafe V100 can be integrated with various models of lifejacket or Personal Flotation Device (PFD), including aviation and SOLAS-approved lifejackets.

The device may be retro-fitted to existing lifejackets or integrated with new lifejackets at point of manufacture. Depending on the model and whether or not it is auto-inflating, the style of integration may vary.

In all cases, the automatic activation feature of the Crewsafe V100 is maintained by means of a Remote Water Sensing Extension Kit. For some lifejacket models, an embedded Long Wire Antenna is also recommended to ensure effective transmission of the emergency distress alert.

Refer to [www.mobilarm.com](http://www.mobilarm.com) for more information or contact your Mobilarm agent or lifejacket supplier.



# 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

**Table 9: Glossary**

# Declaration of Conformity

## Declaration of Conformity with R&TTE Directive

The undersigned declares that the following equipment complies with the specifications of EC directive 1999/5/EC concerning Radio & Telecommunications Terminal Equipment (R&TTE).

Equipment included in this declaration

Name	Description	Part Number
V100	MARITIME SURVIVOR LOCATING DEVICE	100000100 TO 100000105
V100 ACCESSORY	EMBEDDED LONG WIRE ANTENNA	100000107
V100 ACCESSORY	WATER SENSE EXTENSION KIT	100000108

## Intended use of the product

V100 is a fully automated Maritime Survivor Locating Device (MSLD) that uses VHF radiotelephone with DSC for maritime communication of a man overboard event.

## Declaration

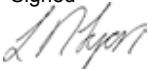
V100 conforms to the R&TTE directive with respect to:

EN 300 338-1 (2010-12)	IEC/EN 60945 (2002)
EN 300 698-2 V1.2.1 (2009-12)	RTCM 11901.0: 2004 (Amdt 1 and Amdt 2)
ETSI EN 301 843-1 v1.2.1 (2004-06)	

## Manufacturer

Mobilarm Limited 768 Canning Highway, Applecross 6153 Western Australia  
PO Box 1533 Applecross WA 6953

Signed



Lindsay Neal Lyon  
Chief Executive Officer

Applecross, 3 February 2011



V100 meets the requirements of EC directives for CE certification.

IC ID: 8850A-V100; FCC ID: SF5-00200

TRA Registered #: 0030049/10; Dealer #: 0029979/10

Technical documentation required by the conformity assessment procedure is kept at the Mobilarm head office:

768 Canning Highway, Applecross 6153 Western Australia.

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

**Mobilarm Limited**  
PO Box 1533 Applecross  
Western Australia 6953

Tel. +61 8 9315 3511  
Fax. +61 8 9315 3611



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