

mcmurdo



# SMARTFIND A5 EPIRB User manual

## Safety notices



**WARNING:** An EPIRB is an emergency radio beacon.  
**Use only in situations of grave and imminent danger to life.**



**CAUTION:** False alerts endanger lives and cause disruption to Search and Rescue services. Deliberate misuse of the EPIRB could result in penalty.



**CAUTION:** Spring action antenna deployment; tilt the EPIRB away from your face when deploying the antenna.



**CAUTION:** Do not dismantle the EPIRB. Contains no user-serviceable parts.



**CAUTION:** Contains lithium batteries. Do not incinerate, puncture, deform, short-circuit or recharge.



**CAUTION:** Dispose of a used EPIRB in accordance with local waste disposal regulations. Refer to End of Life Statement.



**CAUTION:** Avoid using chemical solvents to clean the EPIRB as some solvents can damage the case material.



**CAUTION:** An EPIRB is a radio transmitter. Some administrations may require that the user holds a valid radio licence to cover its ownership and use.

### **Radio Frequency Exposure Warning**



**WARNING:** The EPIRB emits low levels of radio frequency radiation; avoid handling the antenna once activated.

## Registration

The EPIRB must be promptly registered with the appropriate National Authority. **Failure to register the EPIRB could delay a Search and Rescue (SAR) response and may be unlawful.**

Ownership details												
Vessel Name:												
Owner details:												
EPIRB Unique HEX ID;												

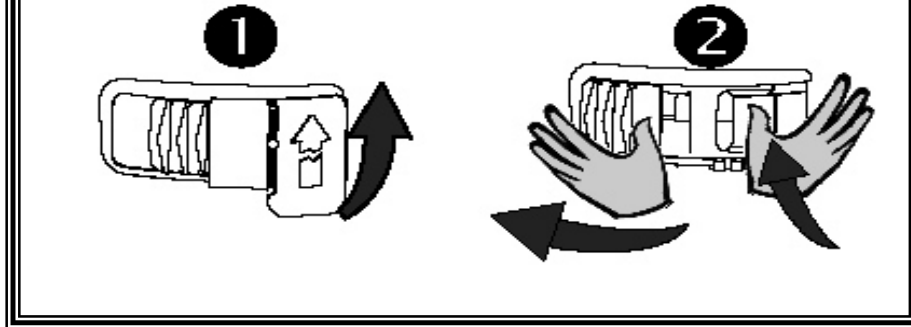
## Disclaimer

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# IN EMERGENCY

**Remove the EPIRB completely from its bracket**

**Pull the tear-off tab up, then press the activation button and slide the switch left**



**An EPIRB is an emergency device for use only in situations of grave and imminent danger to life. False alerts endanger lives. Help prevent them by understanding how to look after the EPIRB.**

## **Introduction**

Thank you for purchasing the Smartfind A5 Class 3 manually activated Emergency Position Indicating Radio Beacon (EPIRB). The Smartfind A5 EPIRB is primarily intended for use by NON-SOLAS vessels. When carrying a Smartfind A5 you enjoy the reassurance of a last resort safeguard against any life threatening incidents that may occur anywhere in the world. If you find yourself in a remote area without any other form of emergency communication, on sea or land, your Smartfind A5 can call for help.

Smartfind A5 will transmit a unique emergency message identifier via the Cospas-Sarsat satellite system which can determine your location anywhere on the earth's surface. In most cases the first emergency alert is received within 5 minutes of activation but depending on satellite coverage at the time, this can sometimes extend to 45 minutes. When the emergency alert message is received at a Rescue Co-ordination Centre (RCC) it is cross referenced using the unique identifier (often called Hex ID) against your registration details. Details of the alert are forwarded to the appropriate local Search and Rescue (SAR) teams. Keeping your registration details upto date is critical to ensuring a quick SAR response.

Smartfind A5 has a secondary 'homing' transmitter which allows SAR teams to direction-find or 'home' in on the EPIRB once they arrive on the scene. Smartfind A5 has a storage life of 7 years and once activated will continue to transmit emergency alerts for a minimum of 48 hours.

For further information visit Cospas-Sarsat on line at [www.cospas-sarsat.org](http://www.cospas-sarsat.org)

## **User registration**

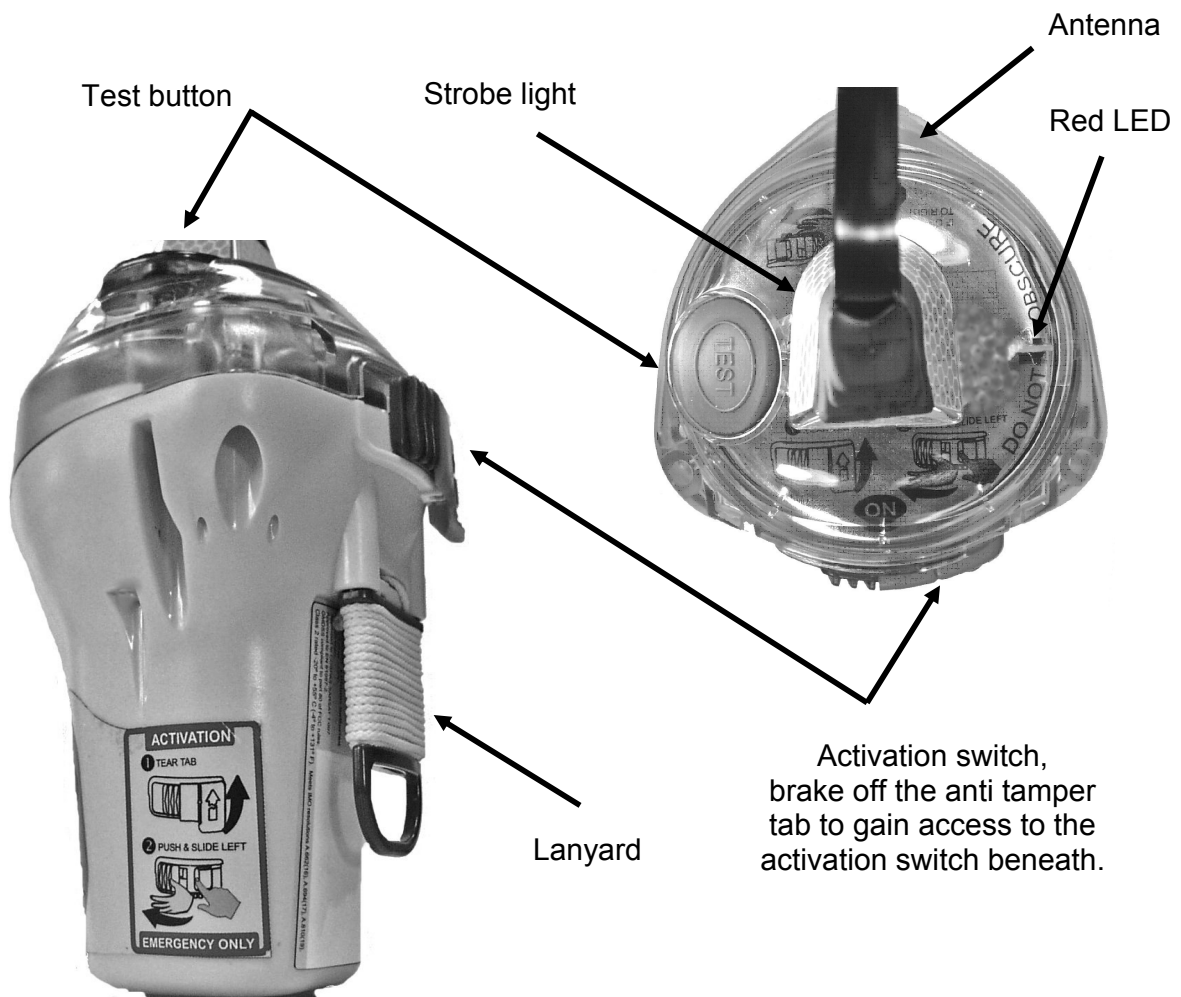
The EPIRB's unique identifier must be registered with the national authority indicated in the white area of the label on the rear of the EPIRB. Complete the user registration form included with your purchase and return it to the address indicated. Some authorities allow online registration; check the guidance notes printed on the registration form for further information. Refer to Annex 1. for details of specific user registration requirements applicable for Australia and New Zealand. Always ensure that any changes of registration or contact details are promptly notified.

## Overview

An EPIRB is intended to be a one-shot device, once activated it will transmit emergency alerts for at least 48 hours. The EPIRB will work best while floating in water, but can also be operated while on board a vessel, in a liferaft or on land (when placed on the ground).

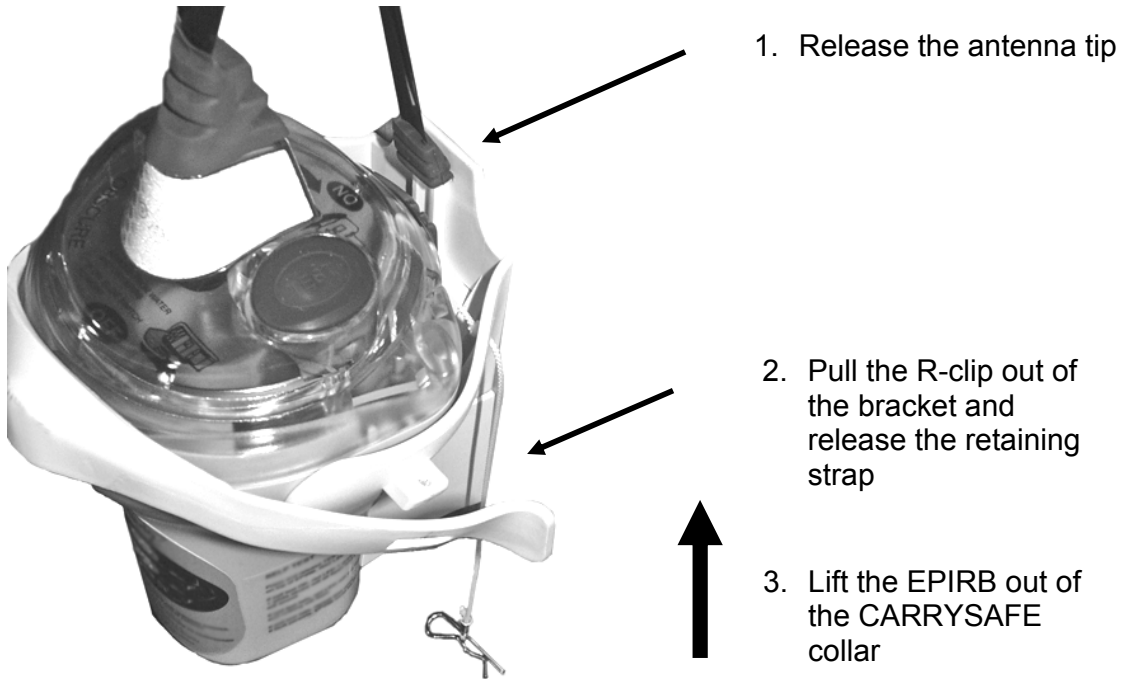
The key components of your EPIRB are:

- Antenna** Flexible whip, should be near vertical when operating.
- Strobe light** Flashing signal light, visible through the clear lens dome when the EPIRB is switched on.
- Red LED** Indicates the current operating status, visible through the clear lens dome.
- Activation switch** Protected by a tear off anti-tamper tab. Break the tab upwards, push the switch in and move it fully left to activate the EPIRB.
- Test button** Self test verifies the readiness of the EPIRB.
- Lanyard** Pull the lanyard spool down to free it. Use the cord to tether the EPIRB to a PFD or survival craft.



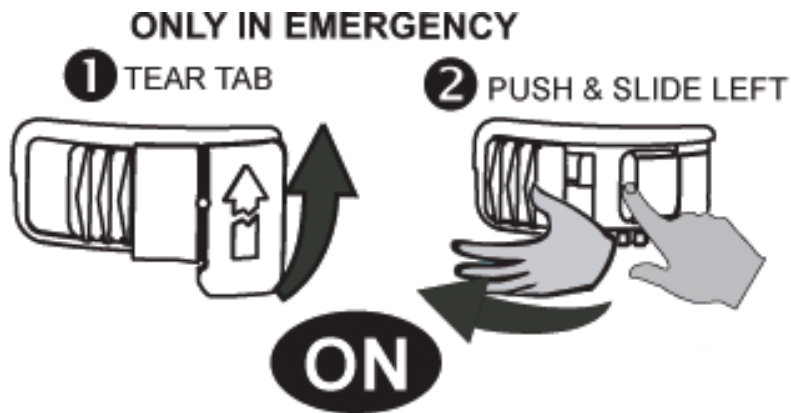
## Activation procedure

Remove the EPIRB completely from the CARRYSAFE collar to gain access to the rear facing activation switch.



## Activate the EPIRB (only in an emergency)

1. Break off the protective tab, pull it upwards
2. Push the switch catch in and move the switch fully to the left "ON" position



The antenna should be positioned as upright as possible with a clear view of the sky.

When the EPIRB is first switched ON the strobe light will start to flash immediately; the first alert transmission is made after 50 seconds. This short delay allows time to turn the switch back to the OFF position if the EPIRB was activated in error and before the first emergency alert transmission is sent.

- While the red LED remains ON continuously, the EPIRB is activated but has not yet made an emergency alert transmission.

### Strobe Light

The strobe light provides a visual means of locating the EPIRB. It will start flashing immediately after the Smartfind A5 is switched ON. Its flashing will pause for a short time when each 406 MHz alert transmission is sent, which is once every 50 seconds.

Strobe Light indication (EPIRB ON)



1 flash every 3 seconds, pause every 50 seconds

### Red LED

The red LED illuminates when the EPIRB is first switched ON and will start to flash slowly once the first transmissions are made.

121.5 MHz transmission is taking place whenever the Red LED is flashing alternately with the strobe light.

Every 50 seconds, the red LED will flash rapidly followed by a single long flash to indicate each 406 MHz transmission.

### Deactivation

Should the EPIRB be activated by mistake or if the emergency ends then the EPIRB can be turned OFF by moving the activation switch fully to the right. The strobe light will stop flashing and the red LED will go out.



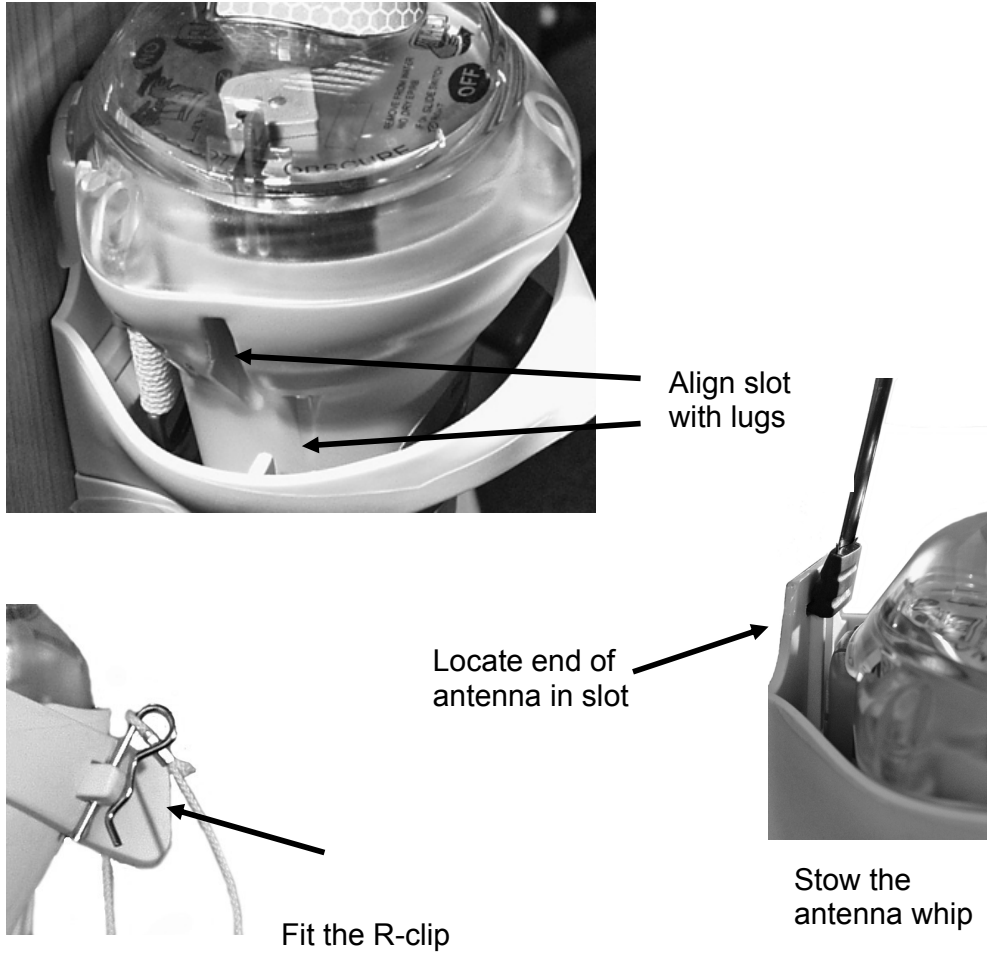
### Important

After EPIRB activation and as soon as practical the Smartfind A5 EPIRB should be taken to a service agent, who will fit a new switch anti tamper seal and check the battery condition. If the EPIRB has been used for more than 6 hours in total a set of fresh battery packs should be fitted to ensure the full 48 hour operational life is still available.

## Refitting into the bulkhead bracket

Hold the bracket collar open and drop the EPIRB in, the EPIRB body has side alignment slots to guide it into the locating lugs on each side of the bracket collar.

Hold the collar shut and fit the R-clip to secure the EPIRB. Fold over the antenna and locate the end moulding in the retaining slot.



## Self test



Self test button

The EPIRB has a built-in self test capability that will confirm when the battery is healthy, both distress transmitters are functional and that the strobe light is operational. It is recommended to self test the EPIRB **monthly**, more frequent self testing can put unnecessary drain on the battery. When self testing, a specially coded test transmission is sent that will not alert the authorities. A self test can be made while the EPIRB is still in the CARRYSAFE bracket. The self test should be carried out during the first 5 minutes of the hour so as to minimise any disturbance of the emergency channels.

1. Push and hold the TEST button down until the red LED indicator lights.
2. A successful self test will result in the red LED and strobe light flashing together a number of times.
3. The number of strobe light flashes indicates past battery usage;

<b>Accumulated Battery Use (hours)</b>	<b>Number of strobe light flashes</b>
0 to 4	3
4 to 6	2
More than 6	1

Once the self test has completed the EPIRB will switch off automatically.

A self test failure will result in NO strobe light flash and the red LED turning OFF.

### **Important**

Unnecessary self testing of the EPIRB can reduce the overall run time available in an emergency. Each self test draws a small amount of energy from the battery. On average, self testing of the EPIRB should be monthly and limited to a total of 84 times across the seven year battery storage life.

If the EPIRB has been activated for a cumulative period in excess of 6 hours (self testing and operation), then the battery must be replaced to ensure that in an emergency it will still operate for a minimum of 48 hours at -20 °C as required by International regulations.

If the EPIRB fails self test it should be immediately removed from service. Refer to the maintenance section for further information.



## Choosing the best location

The Smartfind A5 EPIRB will work best when under an unobstructed view of the sky.

**If it is not possible to pick a location with a totally unobstructed view of the sky, still do your best to maximise the sky view.**

Aboard vessel	Stand the EPIRB on the deck, choosing a position with the best sky view. Ensure that the wind does not knock the EPIRB over. <u>Never</u> secure the EPIRB lanyard to a vessel in danger of sinking.
Liferaft	Attach the securing lanyard to the liferaft or your clothing (to avoid loss of the EPIRB if you are thrown out of the liferaft). Activate and deploy the EPIRB into the water and let it float nearby on the end of the lanyard.  Operating the EPIRB inside a Liferaft or under a canopy can reduce its performance.
Lifejacket	Attach the securing lanyard cord between the EPIRB and clothing to avoid loss of the EPIRB. Activate and deploy the EPIRB into the water, allow it to float close by. Avoid holding or blocking the antennas' view of the sky.
On foot	If you must walk for help, ensure the antenna remains vertical after activating the EPIRB. Avoid holding or blocking the antennas' view of the sky.
Aircraft	An EPIRB is an additional carry-off safety device. As the EPIRB signal may be blocked by aircraft metalwork it is recommended to activate it after landing and away from any shadowing by the aircrafts' metalwork.
Vehicles	The EPIRB will not work well inside a vehicle due to metalwork shadowing. Exit the vehicle, activate the EPIRB, and place it on the roof, the hood, or on the ground away from the vehicle.
Land	Find the best sky view, place the EPIRB on the ground with the antenna pointing towards the sky and ensure wind does not knock the EPIRB over.



**CAUTION:** Do not stare directly into the strobe light of the operating EPIRB.

## Getting the best from your EPIRB

### Aboard ship:

#### DO:

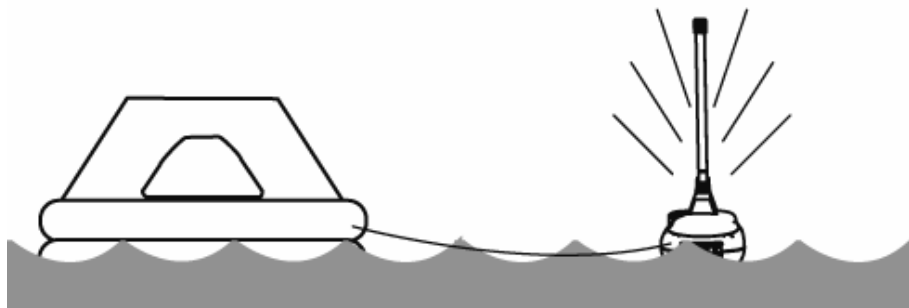
- Place the EPIRB in the open, clear of overhangs
- Keep the EPIRB upright (hold it if necessary)

#### DO NOT:

- Place the EPIRB close to large structures
- Lay the EPIRB on its side
- Place the EPIRB under cover
- Secure the EPIRB lanyard to the vessel



### In a liferaft:

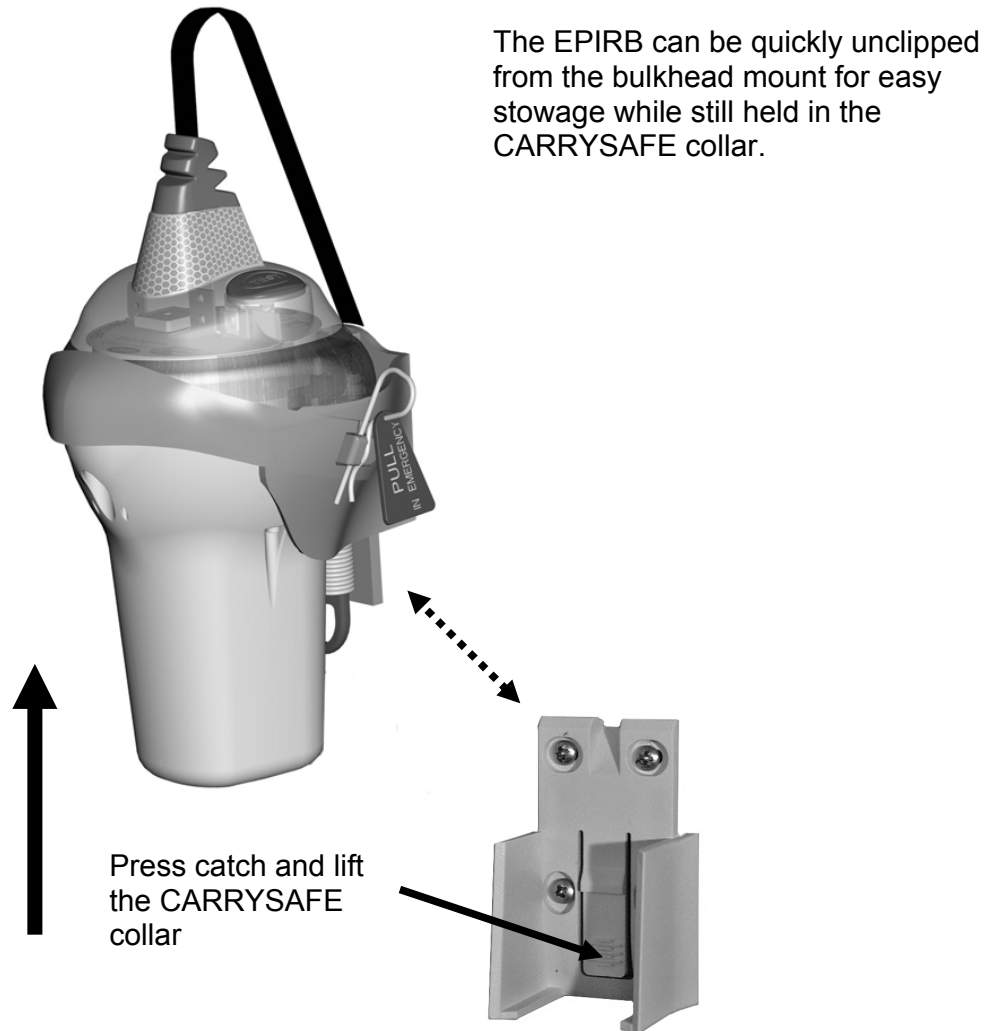


**It is recommend that the EPIRB should float in the sea tethered to the survival craft using the lanyard provided.**

## Bulkhead bracket installation

When permanently installing the EPIRB to a vessel, the bulkhead bracket should be securely fixed in an easily accessible location near to the main emergency exit.

The bulkhead bracket has two parts.



## Bulkhead bracket installation

When selecting a suitable mounting position consider:

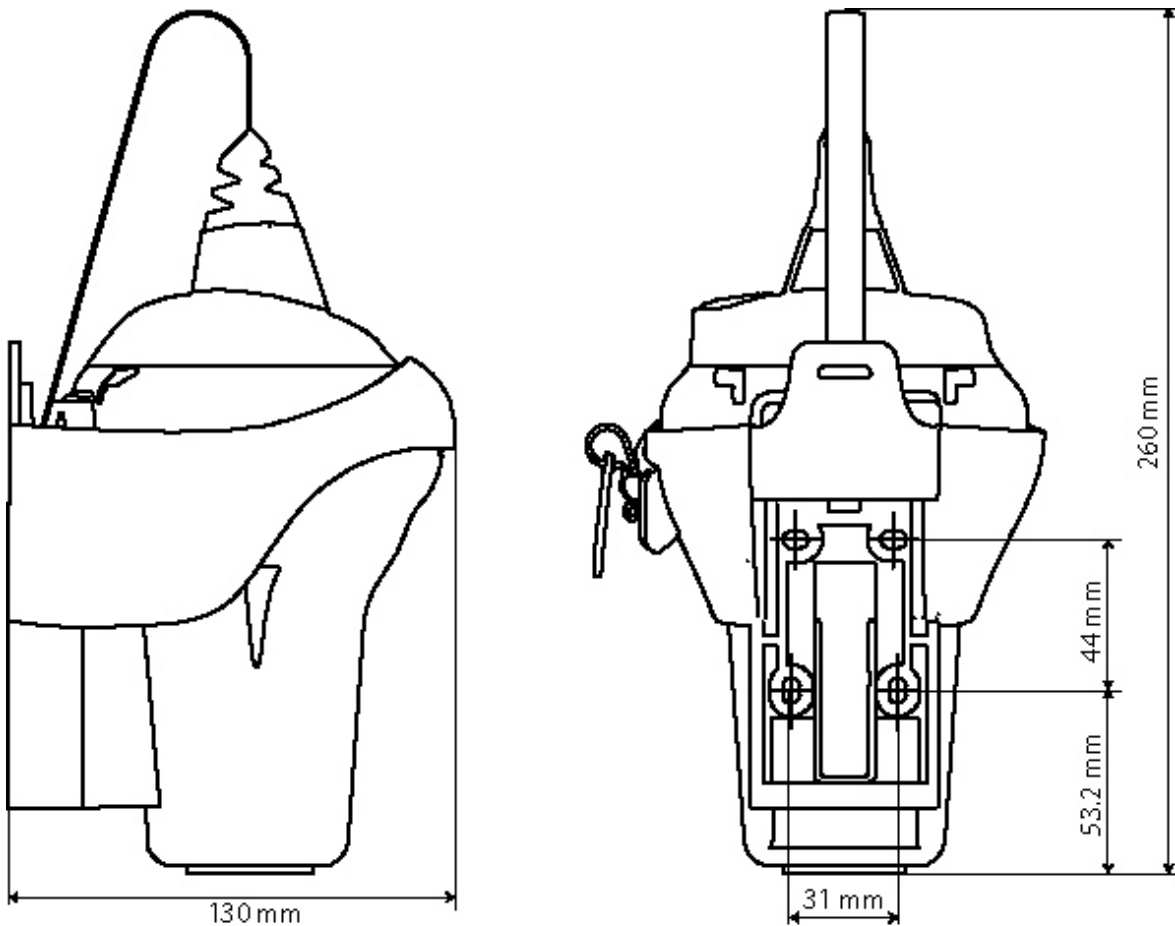
- Ease of access in an emergency.
- Position at least 1 metre from compass equipment and 50 cm from powerful magnets e.g. magnets found in loud speakers and radio equipment.
- Allow sufficient clearance above the EPIRB to allow for easy removal from the bulkhead bracket.

## Mounting procedure

The bulkhead bracket is designed to mount on a flat surface using four fixing points. Four stainless steel screws 25mm in length are included. Check that the rear side of the mounting surface is clear and that the fixing screws will not penetrate through into any other objects.

Offer the bracket into the chosen position and mark through the mounting slots using the bracket as a template.

Drill four 3mm (1/8") holes and securely screw the bracket in place.

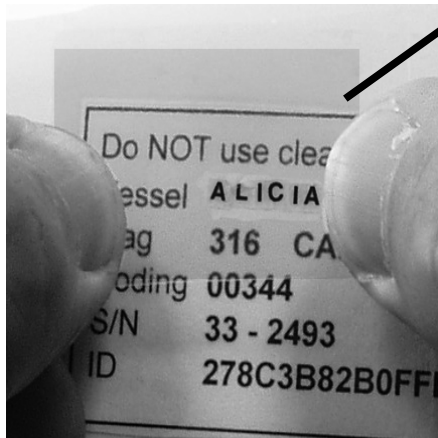
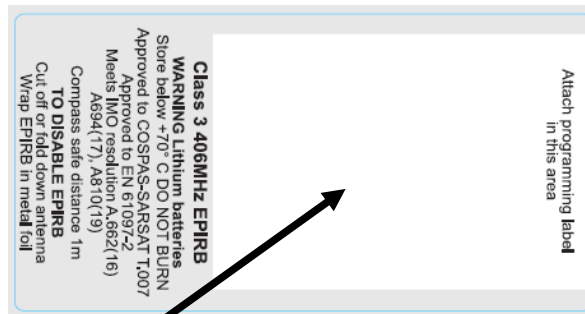
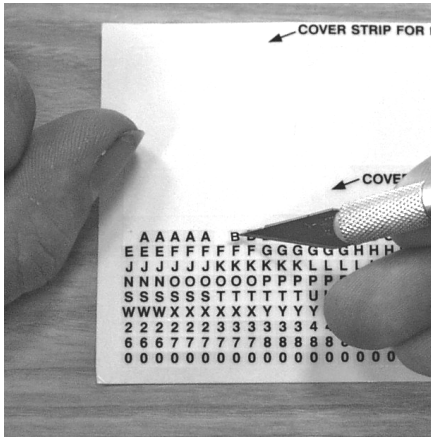


## Stowage options

The CARRYSAFE collar provides additional protection for the EPIRB if you intend to keep it in a carry off "safety ditch bag" or when transporting the EPIRB from place to place.

## Marking a vessel name

In case of loss and to aid in its quick recovery, we recommend marking the EPIRB with your vessel name and/or ownership details. A set of alpha-numeric “stick on” letters are provided, these can be stuck on the rear label area.



1. Pick off the required letters (a small knife blade works well).
2. Fix each letter to label area on the rear of the EPIRB.
3. Cover the letter text for protection using the clear label material also supplied.

## Dealing with a transmitting EPIRB

In the unlikely event that the EPIRB develops a fault and will not turn off, transmissions can be prevented from reaching the satellite by cutting off the antenna close to its base. The EPIRB should then be wrapped in metal foil or placed in a sealed metal container or steel locker.

**Take care when handling the antenna, refer to product safety warnings.**

- Contact the authorities to notify them of the false alert (see below).
- Leave the EPIRB for 3 days or until the battery has fully run down before having the EPIRB serviced.

## False alerts

If the EPIRB has been accidentally activated, or if rescue is effected before arrival of the rescue services:

- Switch off the EPIRB and notify the appropriate rescue services or authorities at the earliest possible time.
- Contact the rescue services, coastguard, or police by radio or telephone to advise them of the false alert.

You may be asked to provide the UIN (15 digit Hex ID number) of the EPIRB, date, time, duration, cause of activation and geographic location at the time you switched off the EPIRB.

## Routine maintenance

Self test the EPIRB monthly, check that the battery is in date and examine the outer case and bracket for any signs of damage. If required, clean the outer case with fresh water, wipe dry and examine the EPIRB and bracket for any damage.



CAUTION: Never use chemical solvents to clean the EPIRB or bracket.

### After activation

The anti tamper switch cover must be replaced by a service agent.



CAUTION: The battery may be run down and need replacement (see below).

### Inadvertent operation

The anti tamper switch cover must be replaced by a service agent and the remaining battery life checked (see below).

### Battery replacement

The exact battery expiry date is marked under the EPIRB lens dome.

The batteries must be replaced when:

- The expiry date has been reached **or**
- The EPIRB has been used in an emergency situation **or**
- A false activation exceeds 6 hours of use.

### Servicing

Service of the EPIRB should only be carried out by a McMurdo approved service agent. Keep the original packing material for reuse whenever the EPIRB is sent for battery replacement or service.

## Transportation

Passenger Aircraft;

This product contains small lithium metal batteries. The Smartfind A5 EPIRB can normally be taken on board a passenger aircraft as a personal item in carry-on hand baggage. McMurdo always recommends declaring the EPIRB to airline staff at check-in, in the same way you would for a laptop, PC or video camera.

As air cargo;

This product contains small lithium metal batteries. Due to the overall low level of lithium content the Smartfind A5 EPIRB is classed as “not restricted” as air cargo under IATA SP 188 – PI 970. Always check with the carrier concerned for any additional restrictions that could apply.

## Specifications

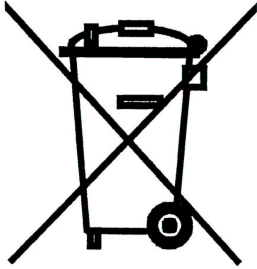
Part Number: 82-803A Smartfind A5 EPIRB retail pack

<b>EPIRB Type</b>	Class 3	Non float free
<b>Operation</b>	Manual activation	Switch, protected by anti tamper seal.
	Self test button	Checks transmitters, battery and strobe light
<b>406 MHz Transmitter</b>	Operating frequency	406.028 MHz $\pm$ 1 kHz
	Power output	5 W typical
	Modulation	Phase (16K0GID)
<b>121.5 MHz Homer</b>	Operating frequency	121.5 MHz $\pm$ 3.5 kHz
	Power output	50 mW radiated typical
	Modulation	Swept tone AM (3K20A3X)
<b>Strobe light</b>	Type	Two high intensity LEDs
	Light output	0.75 cd minimum
<b>Antenna</b>	Vertical	Whip
<b>Battery</b>	Type	Lithium metal
	Operating life	48 hours minimum
	Storage	7 years
	Replacement	By service centre
	Use	Logged by microcontroller
<b>Environment</b>	Operating temperature	-20 °C to +55 °C
	Storage temperature	-30 °C to +70 °C
	Waterproof	Immersion to 10m
	Buoyancy	Floats
	Exterior Finish	Highly visible yellow
<b>Physical</b>	Weight	770 grams
	Height of body	21 cm
	Length of antenna	18 cm
	Overall	39 cm
	Lanyard	5.5m, 40Kg breaking strain
<b>Fixing</b>	Two part Bulkhead bracket	Removable CARRYSAFE collar
<b>Standards applied</b>	Satellite system	Cospas-Sarsat T.001/T.007
	EPIRB	IEC 61097 -2, AS/NZS 4280.2

## End of Life Statement

At the end of the products useful life, it is vital that the battery is removed from the main body of the EPIRB to prevent false alerts. False alerts cause expensive disruption to Search and Rescue services and may endanger lives as a consequence.

### Safe disposal



Contains traces of lithium, may contain traces of lead and brominated flame retardants (BFRs), both in the housing material and circuit boards.

DO NOT INCINERATE

McMurdo strongly recommends that this EPIRB product is disposed of in a sensible and considerate manner. For example, do not simply discard the product in the domestic waste. Instead take it to a civil recycling facility, or contact McMurdo for further advice.



## Warranty Statement

McMurdo is a brand operated by Signature Industries Limited. Subject to the provisions set out below McMurdo warrants that this product will be free of defects in materials and workmanship for a period of five years from the date of purchase. McMurdo will not be liable to the buyer under the above warranty:-or any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to follow McMurdo's instructions (whether oral or in writing) including a failure to install properly and/or to use batteries recommended and/or supplied by McMurdo, misuse or alterations or repair of the product by persons other than McMurdo or an Approved Service Agent for parts, materials or equipment not manufactured by McMurdo in respect of which the buyer shall only be entitled to the benefit of any warranty or guarantee given by the manufacturer to McMurdo for the battery storage life which is specifically excluded from this warranty if the total price for the product has not been paid.

THE LIMITED WARRANTY STATED ABOVE IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. McMurdo will not be liable for indirect, special, incidental or consequential damages of any kind sustained from any cause. In no event shall McMurdo be liable for any breach of warranty or other claim in an amount exceeding the purchase price of the EPIRB. This warranty does not affect any statutory rights of the consumer.

In order to be valid, claims must be made under the above warranty in writing as soon as practicable after discovery of the defect or failure and within the warranty period referred to above. Proof of purchase will be required. The claim should be sent together with the product in question to the address set out below or to an Approved Service Agent. Following a valid warranty claim McMurdo shall be entitled to repair or replace the product (or part) in question free of charge, or at McMurdo's sole discretion to refund to the buyer the price of the product (or a proportional part of the price). McMurdo shall not be liable to a buyer who is not a consumer for any other loss or damage (whether indirect, special or consequential loss of profit or otherwise) costs, expenses or other claims for compensation which arise out of or in connection with this product. In the case of a consumer McMurdo shall only be liable where other loss or damage is foreseeable.

Nothing shall limit McMurdo's liability for death or personal injury caused by its negligence. This warranty is to be interpreted under English law. All enquiries relating to this warranty or Approved Service Agents should be sent to:

**McMurdo a Division of Signature Industries Limited, Silver Point, Airport Service Road, Portsmouth, Hampshire, PO3 5PB UK**

**Telephone: Int + 44 (0) 23 9262 3900 Fax: Int + 44 (0) 23 9262 3998**

**Web: [www.mcmurdo.co.uk](http://www.mcmurdo.co.uk) Email: [customerservice@mcmurdo.co.uk](mailto:customerservice@mcmurdo.co.uk)**



McMurdo products are sold in Australia by AMI Sales, for General Enquiries and Warranty/Service Support visit AMI on line ; Website – [www.amisales.com.au](http://www.amisales.com.au) or contact the nearest AMI Sales branch office.

### **Western Australia**

#### **AMI Sales**

107 Forsyth Street, O'Connor 6163

Ph: (08) 9331 0000

Fax: (08) 9314 2929

Email: [wa@amisales.com.au](mailto:wa@amisales.com.au)

### **New South Wales**

#### **AMI Sales**

Unit 1B, 408 Victoria Road, Gladesville 2111

Ph: (02) 9816 7100

Fax: (02) 9817 3755

Email: [nsw@amisales.com.au](mailto:nsw@amisales.com.au)

### **South Australia**

#### **AMI Sales**

12 Brock Street, Port Adelaide 5015

Ph: (08) 8341 2055

Fax: (08) 8341 1037

Email: [sa@amisales.com.au](mailto:sa@amisales.com.au)

### **Queensland**

#### **AMI Sales**

Unit 1, 14 Hopper Avenue, Yatala 4207

Ph: (07) 5540 6800

Fax: (07) 5546 7044

Email: [qld@amisales.com.au](mailto:qld@amisales.com.au)

## Annex 1. Registration information

### **Advice of EPIRB Purchase or Transfer.**

Registration of 406 MHz satellite EPIRBs with the EPIRB Registration Section of the national authority is mandatory because of the global alerting nature of the Cospas-Sarsat system. The information provided in the registration is used only for search and rescue purposes.

Fill in the owner registration card immediately upon completion of the sales transaction. Mail, fax or email the registration card to the national authority (refer below) immediately. Registration cards are also available on line. If the beacon is to enter service immediately, complete the registration card and fax or email the information to the relevant national authority.

If the beacon is being transferred to a new owner, the current owner is to inform the national authority by email, facsimile, letter or telephone of the name and address of the new owner.

The new owner of the beacon is required to provide the national authority with the information as shown on the registration card. This obligation transfers to all subsequent owners.'

The authorities will normally provide the registered user with a DECAL label which you are obliged to fit to the EPIRB body as 'proof of registration'.

### **User registration point of contact;**

**Australian** users address all correspondence to:

Beacon Registration Section, AusSAR  
Australian Maritime Safety Authority  
GPO Box 2181 Canberra City ACT 2601  
Fax: International +61 2 6230 6868 Local 1800 622 153  
Email: [ausbeacon@amsa.gov.au](mailto:ausbeacon@amsa.gov.au)  
Phone: +61 2 6279 5041 or 1800 406 406

**New Zealand** users address all correspondence to:

Rescue Co-ordination Centre New Zealand  
PO Box 30050, Lower Hutt 6009  
Fax: +64 4 914 8388  
Email: [406registry@maritimenz.govt.nz](mailto:406registry@maritimenz.govt.nz)  
Phone: +64 4 914 8383  
AFTN: NZWNYCYX  
Inmarsat-C: 582451200067

## **McMurdo**

**A Division of Signature Industries Ltd**

**Silver Point**

**Airport Service Road**

**Portsmouth PO3 5PB**

**United Kingdom**

**Phone: +44 (0)23 9262 3900**

**Fax: +44 (0)23 9262 3998**

**Email: [customerservice@mcmurdo.co.uk](mailto:customerservice@mcmurdo.co.uk)**

**Website: [www.mcmurdo.co.uk](http://www.mcmurdo.co.uk)**