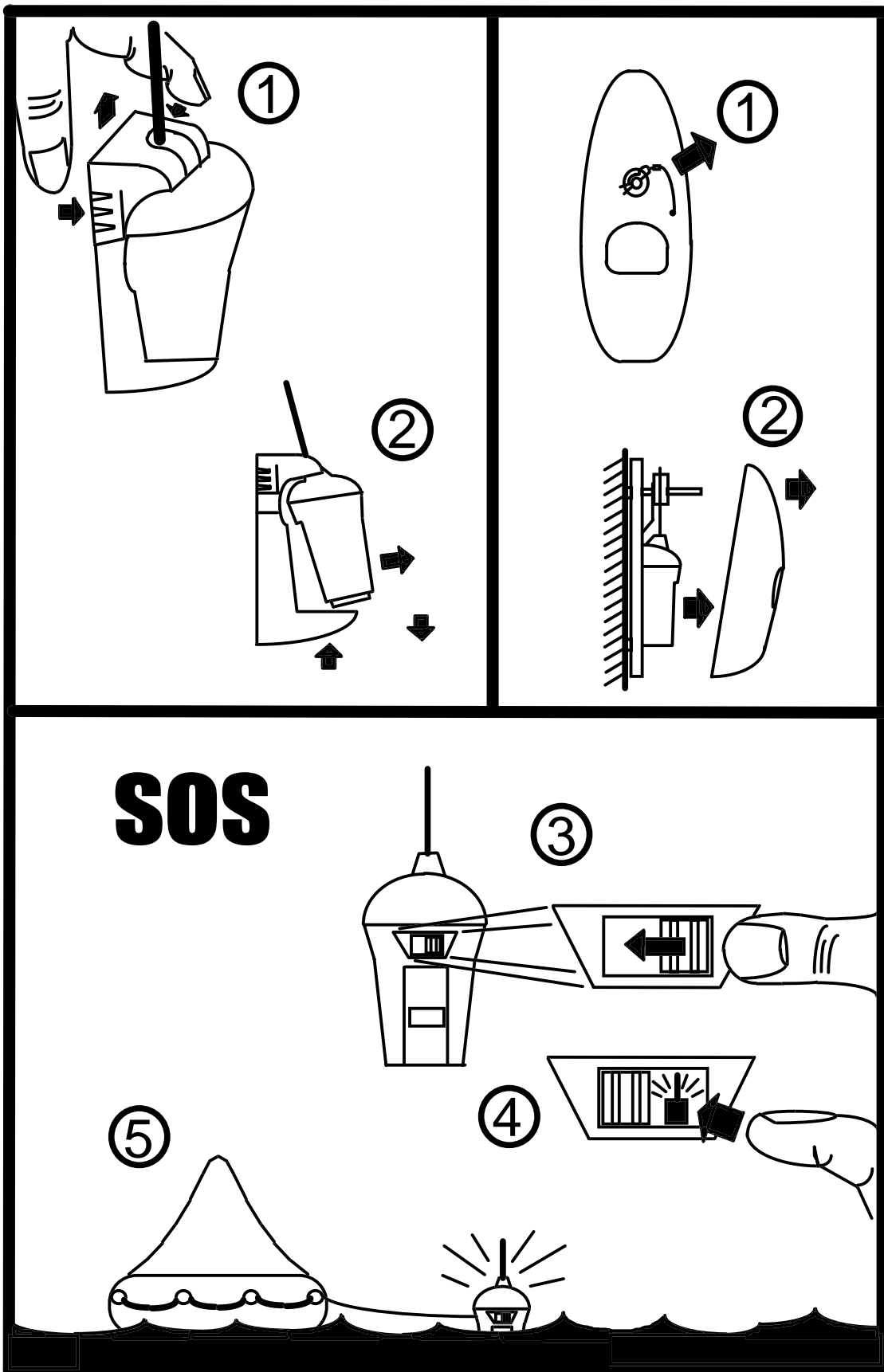


RESCUE 406 EPIRB

OWNERS MANUAL

Pains Wessex
Safety Systems



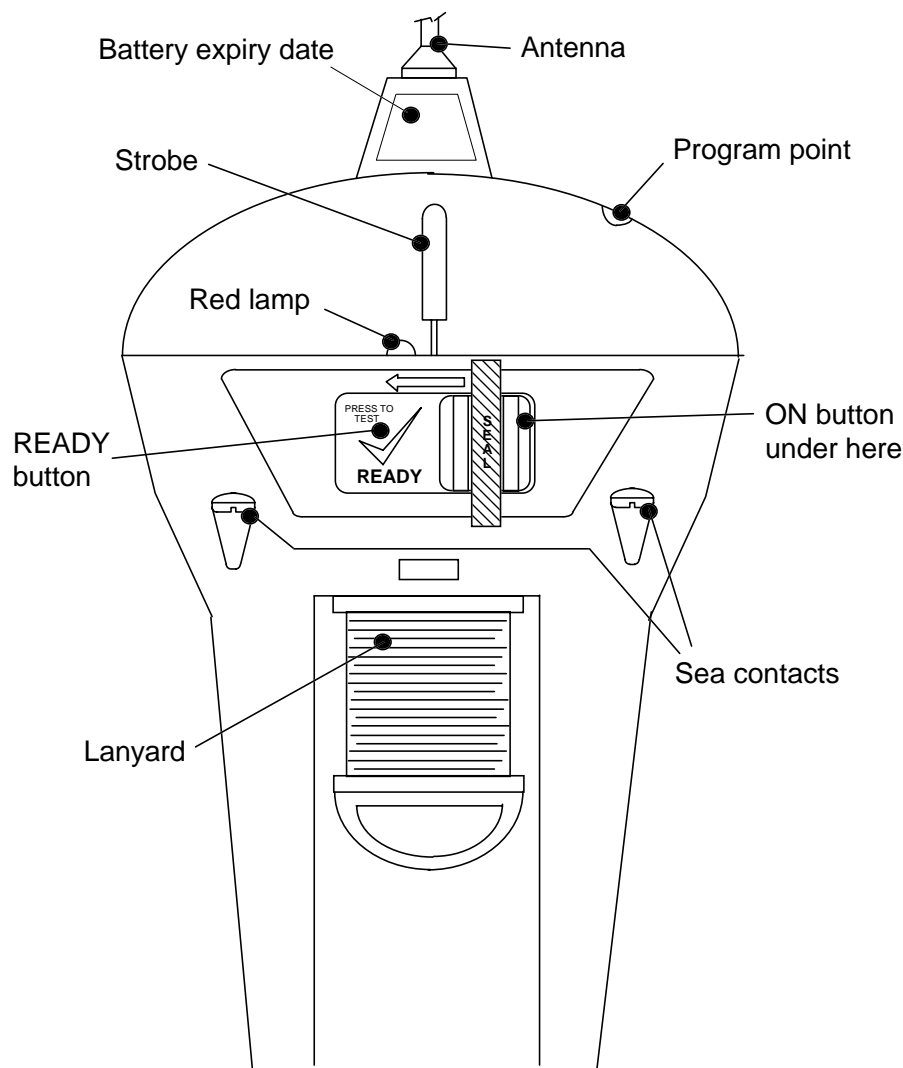
1. PURPOSE

An Emergency Position Indicating Radio Beacon (EPIRB) is used to alert search and rescue services in the event of an emergency. It does this by transmitting a coded message on the 406 MHz distress frequency. This message is relayed via satellite and earth station to the nearest rescue co-ordination centre.

The Rescue 406 works with the Cospas-Sarsat polar orbiting satellite system which provides true global coverage. The system has an alert delay of typically 45 minutes dependant on when the satellites come into view on the horizon.

The satellite can determine the position of your Rescue 406 to within 5km (3 miles) and the coded message identifies the exact vessel to which the Rescue 406 was registered. This information allows the rescue services to eliminate false alerts and launch an appropriate rescue.

The Rescue 406 also has a secondary distress transmitter. This transmits on 121.5 MHz and is used for “homing” purposes. When the rescue services get close, this allows them to direction find on the signal. To cater for searches at night, the Rescue 406 has a bright flashing light that aids final visual location.



2. DESCRIPTION

The Rescue 406 is a powerful self-contained distress transmitter. It is powered by a light weight Lithium battery that has a replacement interval of 5 years. An EPIRB is intended to be a one-shot device, once activated it can operate for 48 hours. It operates best while floating in water, but it can also be operated while onboard.

Referring to the previous figure, the key components of your Rescue 406 are...

Antenna	This is a flexible whip. It must be near vertical when operating. If the antenna gets bent, gently straighten it out.
Strobe light	This is the glass U-tube visible through the clear lens dome. When the Rescue 406 is activated it will flash every few seconds
Red lamp	Visible through the clear dome at the rear of the Rescue 406. This stays on or flashes to show you which mode you are in.
Program point	A dimple in the clear dome, through which your supplier can optically input the coded message unique to your Rescue 406. You <u>must</u> register the coded message with local authorities.
READY button	Press this key once to de-activate the Rescue 406. Hold it down to run the built-in self-test, which checks basic operation.
ON button	Press this key to manually activate the Rescue 406. The key is protected by a sliding door, which is fitted with a tamper seal.
Sea switch	The two screw heads below the keys are sea switch contacts. Submerge them in water to activate the EPIRB automatically.
Lanyard	Pull the lanyard spool down to free it. Use the cord to tether the Rescue 406 to a survival craft. <u>Never</u> tie the 406 to your vessel.

2.1 Wall bracket

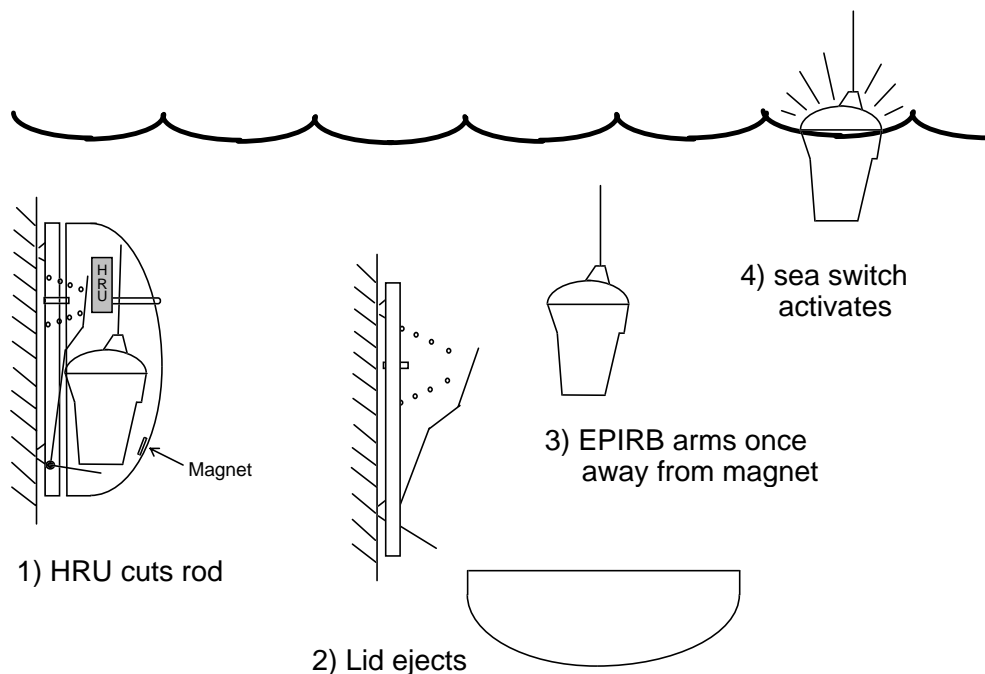
If you purchased the manually activated version (SOS406m), this is supplied with a wall mounting bracket (see section 6). The bracket is made from plastic so it will not rust. Its top section is sprung loaded, so one simple squeeze will quickly release the Rescue 406 allowing it to be carried to a liferaft. The wall bracket should be sited in plain view near an emergency exit. This bracket is more than just a stowage point, it contains a magnet which disarms the Rescue 406's sea switch. If you don't stow the Rescue 406 in its bracket, there is a risk of it activating if it gets wet.

2.2 Float-free enclosure

If you purchased the automatically activated version (SOS406a), also known as the "float-free" version, then your Rescue 406 is supplied in a plastic enclosure (see section 7). This is much more than just a protective housing, it contains a sprung loaded lever which automatically pushes the enclosure lid off and releases the Rescue 406 if your vessel sinks. This automatic ejection is controlled by a device called a Hydrostatic Release Unit (HRU). If the enclosure is submerged then before it reaches 4 metres (13 feet) deep the HRU cuts a plastic rod that holds back

the spring and the lid is ejected, releasing the EPIRB which floats to the surface and switches on automatically. The diagram below illustrates this...

- 1) As the vessel sinks, the enclosure fills with water. The HRU contains a blade which is released due to water pressure acting on a diaphragm. Before it reaches a depth of 4 metres, the HRU will operate and cut the plastic rod, releasing the coil spring.
- 2) The spring pushes the Rescue 406 and the enclosure lid outwards. As the lid pivots off it disengages from the screw head that helped hold it in place. The lid is weighted so it rolls over and falls away.
- 3) As the Rescue 406 floats away from the lid, it moves out of range of the magnet. Once away from the magnet its sea switch becomes armed.
- 4) The sea switch activates. The EPIRB then floats on the surface with its strobe light flashing. After 50 seconds it makes its first distress transmission.



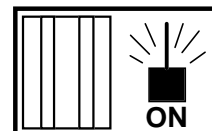
If you need to manually activate your Rescue 406, it can be freed from the enclosure simply by pulling out the R-shaped retaining pin and removing the lid.

2.3 Manual Rescue 406 in enclosure

Customers who need to mount their Rescue 406 in an exposed position can select the protective enclosure without an HRU fitted (SOS406c). This means that the Rescue 406 will **not** float free if your vessel sinks. This is known as a category 2 EPIRB. You can tell which enclosure you have by reading the category from the front of the enclosure...

Rescue 406a	Category 1	HRU fitted	Automatic float-free
Rescue 406c	Category 2	No HRU fitted	Will not float free

3. CONTROLS



3.1 ON button

This is located behind a sliding door to protect it from accidental activation. The sliding door has a tamper seal to show if the Rescue 406 has been activated before

The Rescue 406 can be manually activated by sliding the door to the left (breaking the seal) and then momentarily pressing the ON button.

When activated, the Rescue 406 will start to flash immediately. It will not make any distress transmissions for the first 50 seconds. This gives you a chance to turn it off, if you activated it accidentally. During the first 50 seconds the red lamp comes on continuously. When the red lamp starts to flash, the 50 seconds is over and distress transmissions have started.

3.2 READY button

This button de-activates the Rescue 406 and it can test it.



Ready Pressing and releasing this button quickly will de-activate the Rescue 406 and return it to its “ready” state. When the button is released the strobe and the red lamp will stop flashing.

Self-test Pressing and holding the ready button (for about 10 seconds) will allow the built-in self-test to run. When the button is held down the red lamp will come on for 4 seconds, then go off. During this time both the 121.5MHz homer and the 406MHz satellite transmitter make “safe” transmissions. If both of these test transmissions arrive at the antenna with sufficient power then the strobe light will flash 3 times to tell you that all is well. If the strobe light does not flash within 10 seconds then there is a fault and the ready button can be released.

3.3 Sea switch

It is important to realise that the only time the Rescue 406 is completely off is when it is fitted in its mounting bracket. As soon as you take it out of its bracket a magnetic switch activates and puts the Rescue 406 into its “ready” state. It will not drain the battery in this state, but it will turn on automatically if the sea switch contacts are bridged by water. The sea contacts are the two exposed screw heads beside the rear switches.

Although you can manually control the Rescue 406 with the READY and ON switches, the sea switch overrides any manual settings. For the manual switches to operate properly the Rescue 406 must be dry so that the sea switch is de-activated.

To ensure the sea switch operates properly in rough seas, it has a built-in time delay. It has to be wet for at least 2 seconds before it will activate and it has to be dry for at least 8 seconds before it will de-activate.

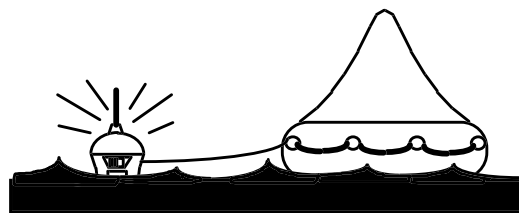
4. OPERATING PROCEDURE

An EPIRB is a piece of life saving equipment. Its sole purpose is to call for help.
It must only be used in situations of grave and imminent danger.
Misuse can involve a severe penalty.

4.1 Sinking

If you have a category 1 “float-free” enclosure (see marking on enclosure label), then if your vessel sinks, the Rescue 406 will automatically release itself from its enclosure before it reaches a depth of 4 metres. The Rescue 406 will float to the surface and start to operate because its sea switch is activated.

If possible, the Rescue 406 should be recovered and tied (using its lanyard) to one of the liferafts. An EPIRB is meant to mark survivors, not the accident scene. For best operation leave the Rescue 406 floating in the sea near the liferaft.



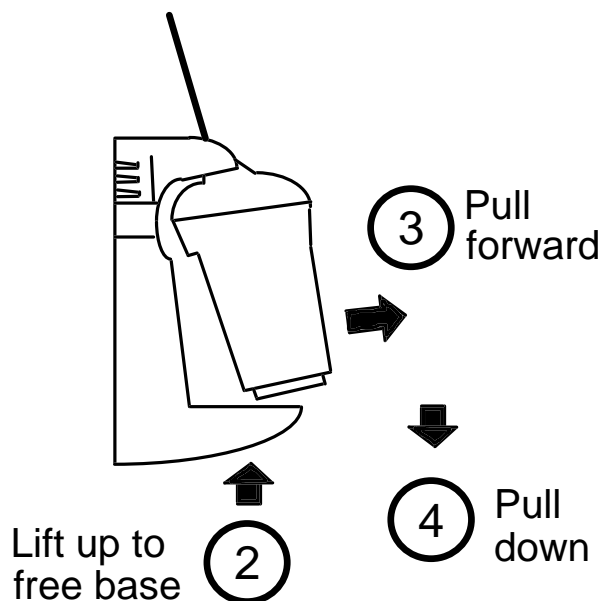
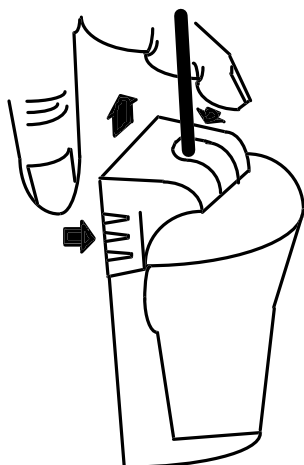
4.2 Abandon ship

If the vessel is sinking and there is time to fetch the EPIRB then this should always be done. Release the Rescue 406 from its mounting bracket as described in section 4.3 or 4.4 and carry it to one of the liferafts. Once the liferaft is in the water, uncoil the lanyard and tie it to the liferaft, then throw the Rescue 406 overboard so that it floats next to the liferaft, it will operate because its sea switch will activate.

4.3 Releasing Rescue 406 from a wall bracket

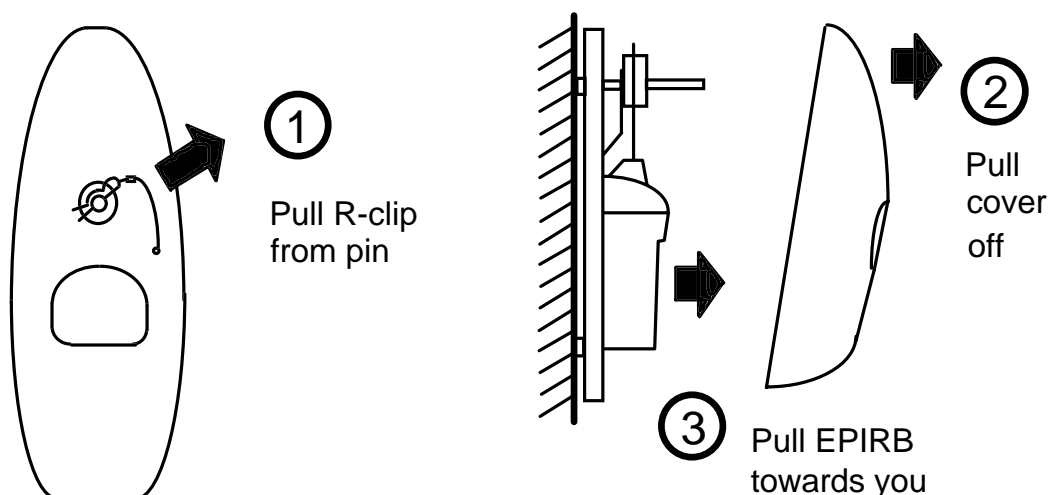
If you have a Rescue 406 fitted into a wall bracket then follow the instructions below to release it from the bracket...

- ① Squeeze top until it springs up



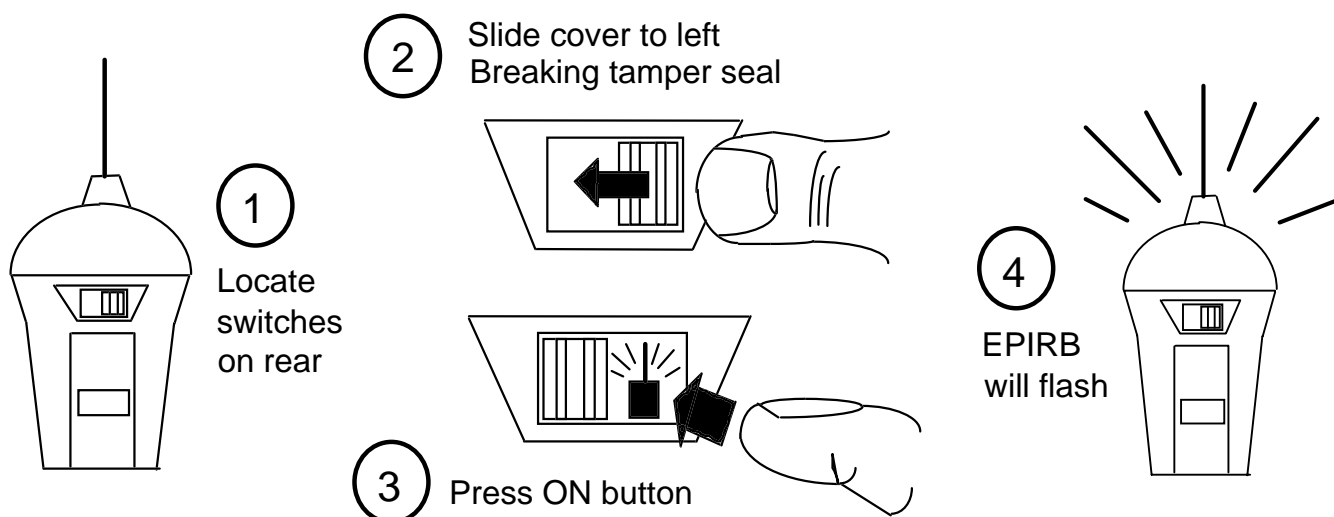
4.4 Releasing Rescue 406 from an enclosure

If your Rescue 406 is fitted inside a full enclosure then follow the instructions below to manually release it from its enclosure...



4.5 Manual activation

If the vessel is not sinking, but there is imminent danger, then remove the Rescue 406 from its bracket and manually activate it as shown below. Note that once activated it will flash immediately, but it will not transmit a distress call for 50 seconds. This gives you a chance to turn it off, if you activated it in error.



Once activated the Rescue 406 **must** have its antenna near upright and it must have a clear view of the sky for proper operation. Lying it on its side or placing it next to a metal wall will impair its range and may fail to alert the rescue services. Avoid handling the antenna, as this will also impair performance.

4.6 De-activation

If the Rescue 406 was activated by mistake or if the emergency ends then the Rescue 406 can be reset back to its “ready” state as follows...

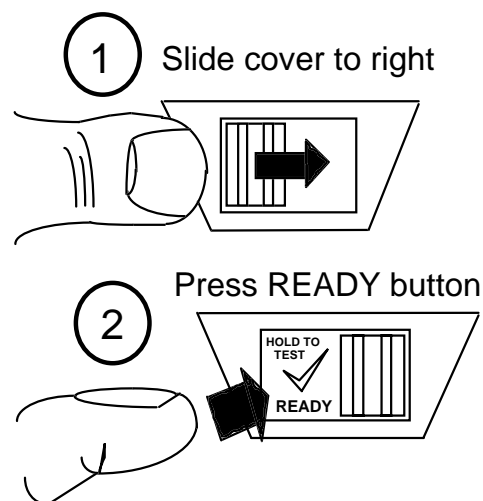
- **Remove EPIRB from any water and dry its sea switch contacts.**

Wait 8 seconds for sea switch to turn off.

If EPIRB is still flashing then it must have been turned on manually...

- **Slide the switch cover fully to the right.**
- **Press and release READY button.**

If EPIRB is still flashing then it has a fault.
Refer to section 5 on “False alarms”.

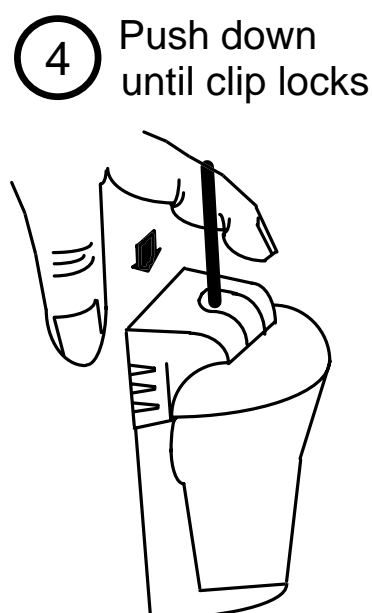
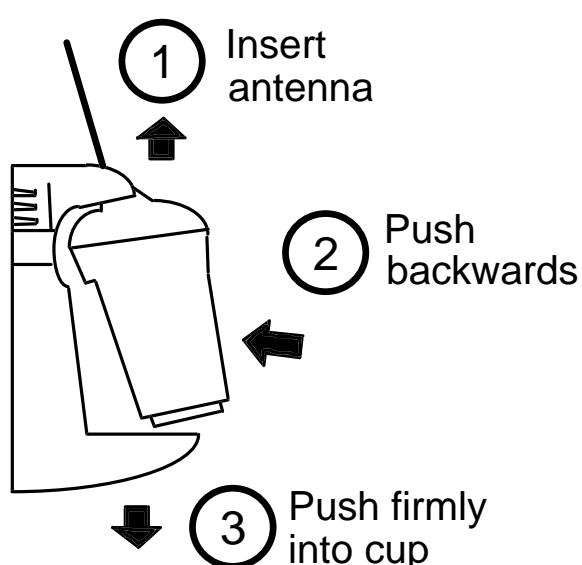


4.7 Battery condition

If your Rescue 406 has been activated for a cumulative period in excess of 2 hours then its battery will need replacing. This is necessary to ensure that the next time it gets used it will operate for the full 48 hours required by government regulations. See section 9.3 for battery replacement instructions.

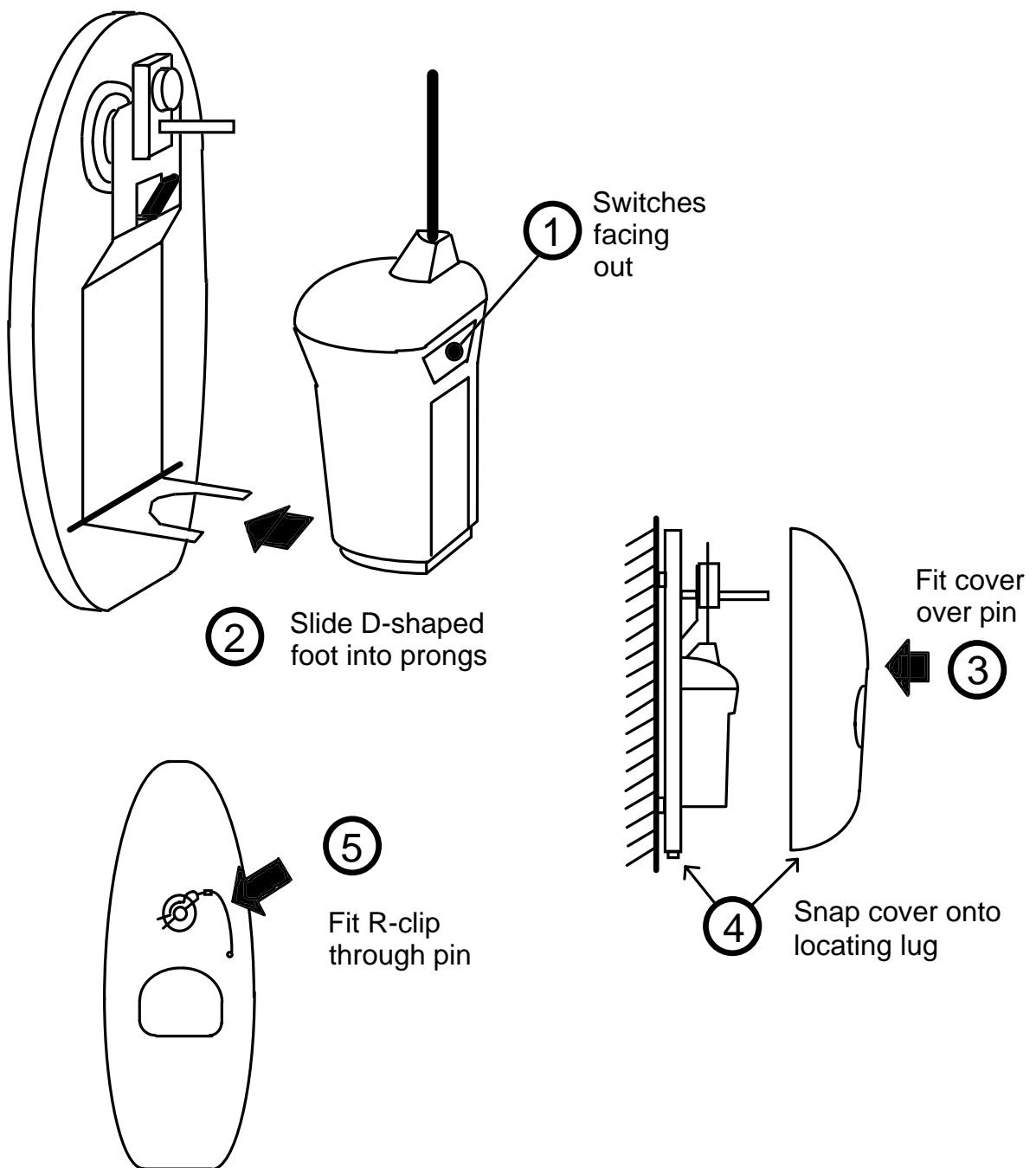
4.8 Re-fitting Rescue 406 into wall bracket

The Rescue 406 is now in its “ready” state, but its sea switch is still armed and will activate if it gets wet. To fully de-activate the Rescue 406 it must be returned to its mounting bracket, where a magnet hidden in the bracket will make the Rescue 406 safe. Follow the appropriate instructions below...



4.9 Re-fitting Rescue 406 into enclosure

- Offer Rescue 406 into backplate with switches facing outwards.
- Engage base of Rescue 406 into D shaped metal prongs.
- Antenna rests either to left or right of release pin.
- Check Rescue 406 is fully engaged in prongs and resting on foam pad.
- Refit cover by first locating release pin through hole in cover.
- Locate cover onto backplate, then snap down over locating lug.
- Refit R-clip through hole in end of release pin.



5. FALSE ALARMS

False alarms are a serious problem for the rescue services. About 90% of EPIRB initiated distress alerts turn out to be false alarms. If your EPIRB should cause a false alarm, follow the instructions below...

5.1 Stand down rescue services

It is most important that you contact the nearest search and rescue authorities and tell them it was a false alarm, so that they can stand down any rescue services. Use any means at your disposal to make contact. Often this can be by VHF radio to the local coastguard or mobile phone if you are within coastal range, but MF/HF DSC and Inmarsat A,B,C,M may also be used. Useful contacts are...

Country	Region	Telephone	What to report
USA	Atlantic / Gulf of Mexico	(212) 668 7055	EPIRB Unique ID (UIN) Date, time & duration Cause of activation Location when activated
	Pacific	(510) 437 3700	
	From any location	(800) 323 7233	
UK	From any location	01326 317 575	

5.2 De-activate the EPIRB

If the Rescue 406 was activated by mistake, then de-activation is simple...

- Remove the Rescue 406 from any water and dry its sea switch contacts.
- Wait about 8 seconds for the sea switch to de-activate.
- If Rescue 406 is still flashing then it may have been turned on manually...
- Slide the switch cover fully to the right.
- Press and **release** the READY button.
- The Rescue 406 should now stop flashing.
- Refit the Rescue 406 into its mounting bracket (correctly).

Modern EPIRBs have sea switches and it is not uncommon for the sea switch to activate in rough seas or heavy rain, simply because the EPIRB has been badly fitted in its mounting bracket. The Rescue 406 bracket has a hidden magnet to hold the Rescue 406 in an off state. If the Rescue 406 is wrongly fitted the magnet does not do its job and heavy seas may activate the sea switch. The simple cure is to ensure the Rescue 406 is correctly fitted as per section 4.8 or 4.9.

5.3 Dealing with a transmitting Rescue 406

In the unlikely event that your Rescue 406 develops a fault and will not turn off, then prevent its radio signal from reaching the satellite using one of the following methods...

- Remove antenna. Wrap Rescue 406 in metal foil and take it below decks.
- Remove antenna and place Rescue 406 in a metal container or locker.

Leave it in this condition for 3 days until its battery is dead. See section 9.4 for instructions on returning the Rescue 406 for servicing. Also see section 9.7.

6. WALL BRACKET INSTALLATION

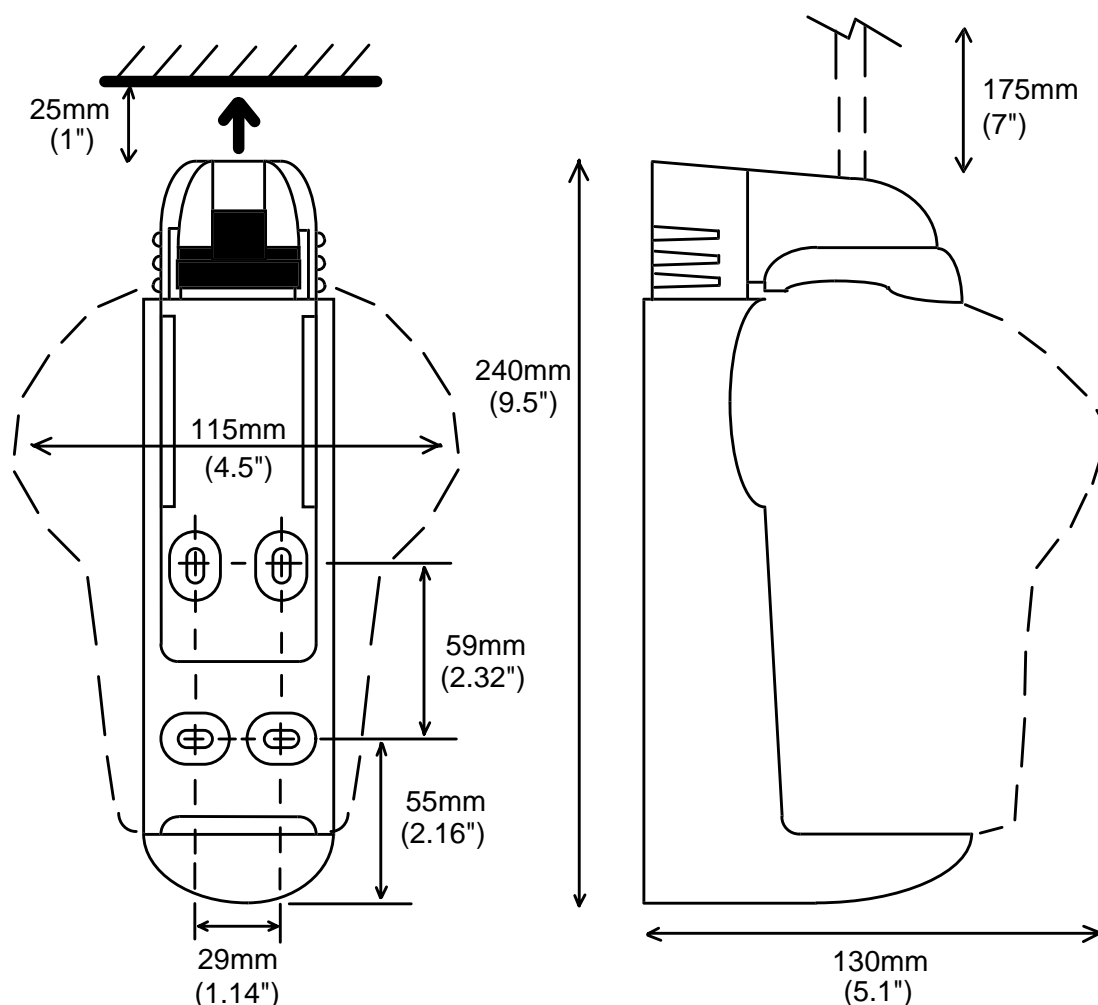
6.1 Siting

The wall bracket should ideally be sited in plain view near an emergency exit. When choosing a suitable mounting position you should also consider...

- Ease of access in an emergency.
- Mount at least 1 metre (3') from any compass equipment.
- Allow at least 25mm (1") above the bracket for it to spring open.
- Allow 18cm (7") for the antenna. Heavy bending of the antenna is bad.

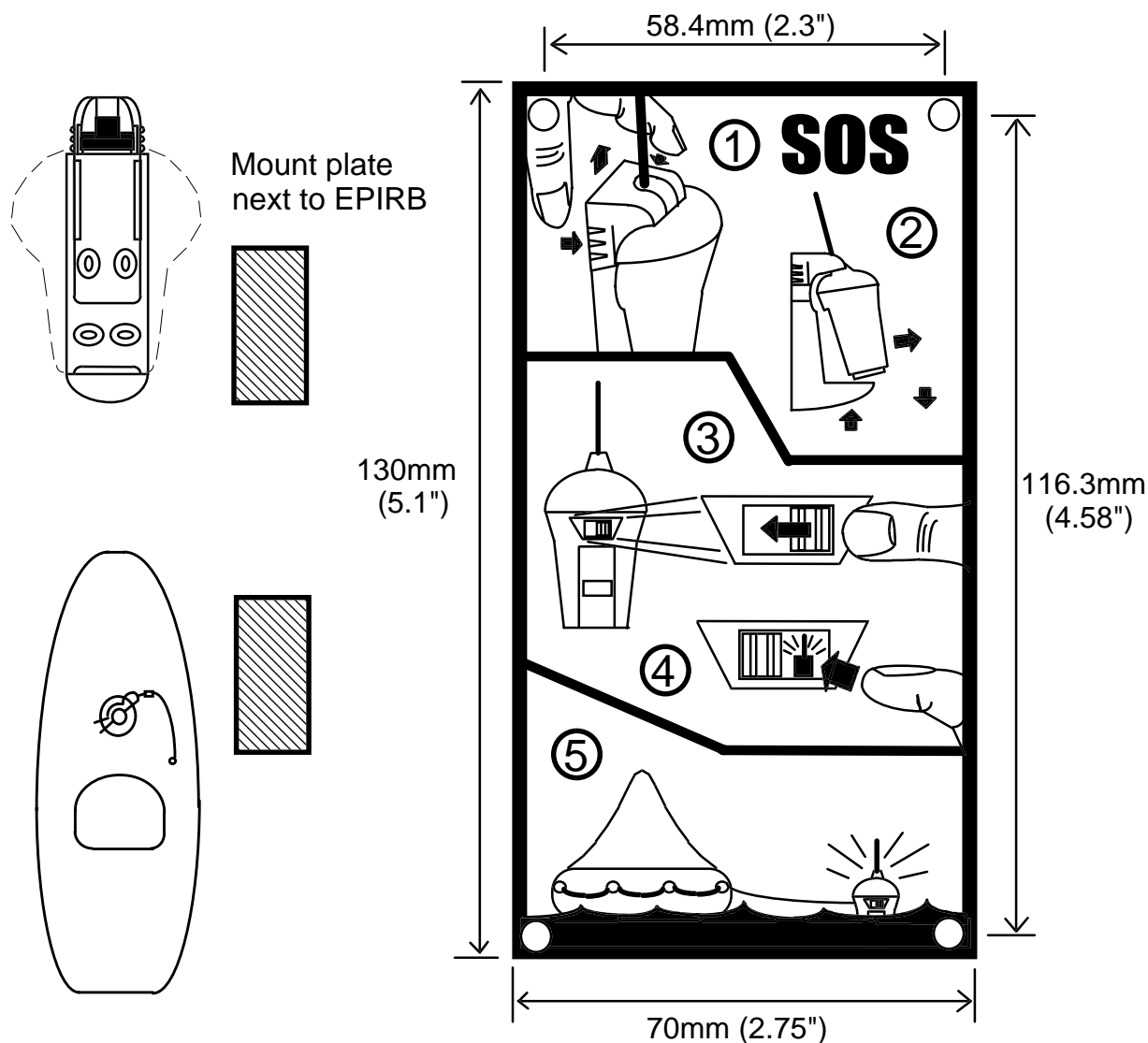
6.2 Mounting procedure

The wall bracket is supplied with a set of stainless steel fixings 25mm (1") in length. The bracket mounts against a flat surface using 4 fixing points. Offer the bracket into the chosen position and mark through the mounting slots. If you are using the nuts and bolts supplied, drill 6mm (1/4") holes in the centre of each mark. You will need a 4mm Allen key to tighten the bolts. If the rear of the mounting surface is inaccessible then use the self-tapping screws supplied and drill 3mm (1/8") holes. Always fit washers under the heads of the screws to avoid damage to the plastic.



6.3 Mounting instruction plate

The Rescue 406 is supplied with an instruction plate. This is a rigid plate with basic visual instructions for how to operate the Rescue 406 in an emergency. The plate varies slightly depending on whether you have a wall bracket or a full enclosure. The wall bracket version is illustrated below.



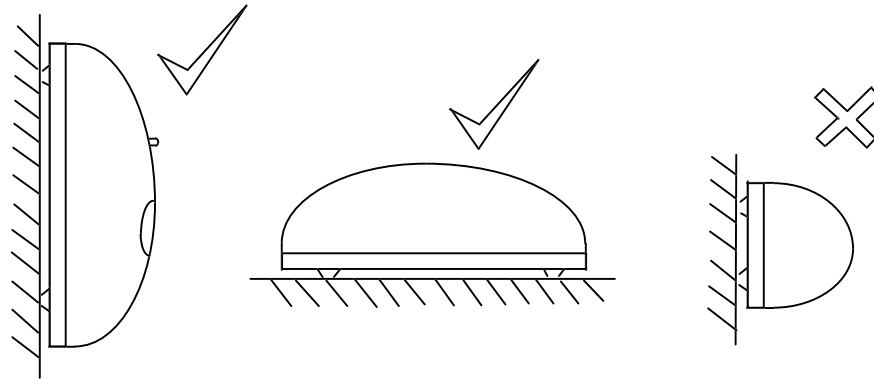
The instruction plate should be mounted next to the EPIRB so that it is easily visible in an emergency. Use the four self-tapping screws supplied to mount the plate. Mounting dimensions are shown in the diagram above, or you can use the plate itself as a drilling guide for the screws.

During vessel maintenance, ensure the plate does not get painted over or cleaned down with strong degreasing solvents.

7. ENCLOSURE INSTALLATION

7.1 Siting

The enclosure should be mounted upright against a vertical bulkhead. Alternately, it may be mounted horizontally on a flat surface, such as a cabin roof. No other orientations are recommended.



If you have a float-free Rescue 406 it is critical that you choose a position where the released EPIRB will **not get trapped by overhangs, rigging, aerials** etc, should the vessel ever sink. An expanse of flat surface is required to allow the enclosure lid to eject. Use the list below to choose a suitable mounting position...

- Mount on the outside of the vessel's structure.
- Mount close to the vessel's navigation position.
- Consider ease of access in an emergency.

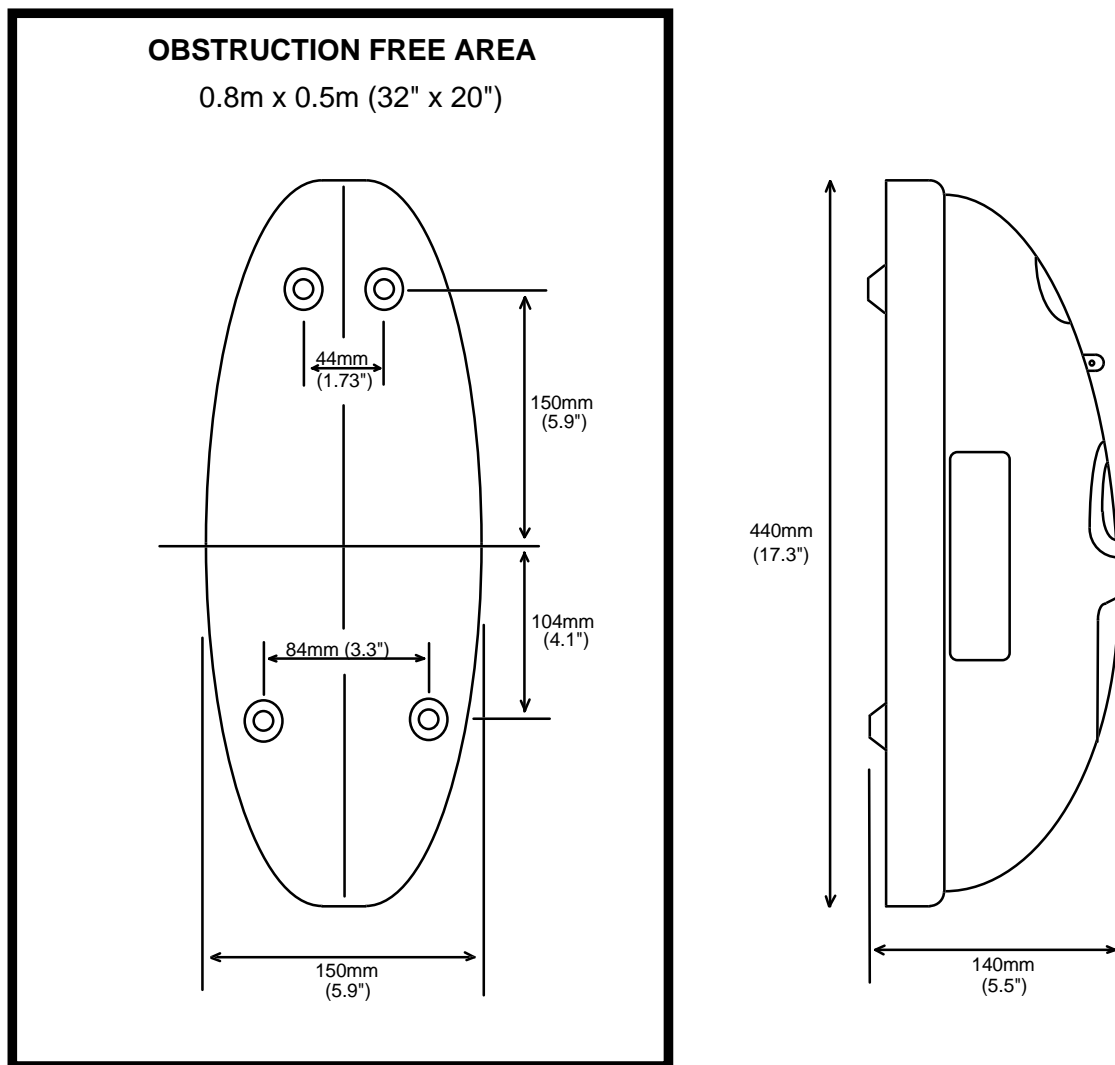
AVOID

- Positions with insufficient space for lid ejection and maintenance.
- Positions within 1m (3') of any compass equipment.
- Mounting within 2m (6') of any Radar antenna.
- Direct impact from waves
- Siting where damage is likely.
- Exhaust fumes, chemical and oil sources.

7.2 Mounting procedure

The enclosure mounts against a flat surface using 4 fixing points. See illustration for mounting dimensions, or use the backplate of the enclosure as a marking guide. To do this, pull out the R-shaped clip and remove the enclosure lid. Note how the Rescue 406 fits then remove it to somewhere dry (its sea switch is now armed).

Offer the back plate into the chosen position and mark through the mounting holes. The enclosure is supplied with a set of 25mm (1") stainless steel fixings. If you are using the nuts and bolts, drill 6mm (1/4") holes where you have marked. You will need a 4mm Allen key to tighten the bolts. If the rear of the mounting surface is inaccessible, use the self-tapping screws supplied. Always fit washers under heads of the screws to avoid damaging the plastic.



7.3 Mounting instruction plate

The Rescue 406 is supplied with a plate giving visual instructions on how to operate it in an emergency. Mount this next to your EPIRB as explained in section 6.3.

7.4 Marking HRU expiry

If you are installing a float-free Rescue 406 you **must** now mark the HRU expiry date. The HRU has a 2 year in-service life which starts as soon as it gets exposure to a marine environment. Hence the 2 years starts at installation and it is left to the customer to mark this date during installation. A date 2 years into the future should be marked on the HRU body and copied onto the label on the side of the enclosure. The HRU is marked by cutting out the corresponding dates on its label. The enclosure should be marked using the alpha-numeric stickers provided, then covering them with the clear sticky label provided (but see 7.5 first). The preferred date format is month and year, for example : JUN 2001.

7.5 Marking vessel name

In most countries it is usual to have your EPIRB programmed by your supplier with the vessel's existing "callsign" (see registration section below). Your supplier will then mark all the EPIRB labels accordingly. However, if your EPIRB was purchased in the USA, Canada or UK then your EPIRB will have all the necessary markings except for vessel name. In these countries it is left to the customer to mark the vessel name during installation.

The name must be marked on the rear of the Rescue 406 itself and also on the enclosure, if you have one. Use the alpha-numeric stickers provided to mark the vessel name (or its abbreviation) on the top line of the Rescue 406's rear label and again on the enclosure label. Protect the markings with a section of the clear sticky label provided.

You must register your EPIRB with the appropriate authorities.

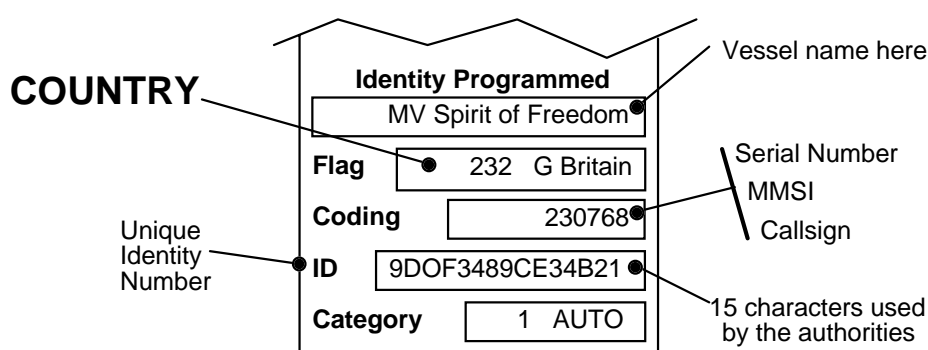
Failure to register may slow the rescue and lead to loss of life.

In the USA failure to register leads to monetary forfeiture.

8. REGISTRATION

8.1 Overview

Every EPIRB is pre-programmed with a unique identity before it reaches the customer. This is done by the manufacturer or in some cases the distributor. The identity includes a 3 digit country code. This is the country that takes responsibility for storing that particular EPIRB's registration details. In most cases this is the country to which the vessel is flagged. The country programmed into your Rescue 406 can be found from its rear "identity" label. You **must** register with this country.



When you activate your EPIRB in an emergency, the nearest maritime search and rescue coordination centre (MRCC) will receive the message and decode the country code (eg 232). They will then access the registration database for that country and expect to find details of your vessel, its radio equipment and who to contact. If they fail to find this information, this may slow down any rescue.

8.2 How to register

Three registration forms are provided, two are for future use and one must be completed now. The forms are all pre-printed with your EPIRB's identity, all you have to do is complete details of your vessel and provide some contact numbers. Wherever possible the forms are also pre-printed with the correct mailing address and a faxback number. If your form does not have a mailing address, contact your supplier. When you have completed the form, you can choose to fax it or mail it.

It is usual to receive confirmation when you register. In the USA you will also receive a "Decal" sticker which you must fit to the EPIRB itself. The Decal is proof of registration. Not having a Decal is an offence. Useful registration contacts are...

USA Sarsat Beacon Registration E/SP3, RM3320, FB-4 NOAA, 5200 Auth Road Suitland MD 20746-4304 Tel 1888 212 7283 Fax 301 568 8649	UK EPIRB Registry HM Coastguard (Southern) Pendennis Point, Castle Drive Falmouth TR11 4WZ Tel 01326 211569 Fax 01326 319264
---	--

8.3 Warranty form

Please complete the warranty form supplied and fax or mail it to McMurdo. Failure to do this may delay any future warranty claim.

8.4 Radio licence

An EPIRB is a radio transmitter and must therefore be added to your radio licence. If you have been allocated a radio callsign, then you already have a radio licence for your VHF or MF radio set. You should update your licence to include your EPIRB. For further details see your licence or use these contact numbers...

USA FCC Tel : 888 225 5322 Website : www.fcc.gov/Forms/Form506/506.pdf

UK Wray Castle, PO Box 5, Ambleside, Cumbria LA22 0BF. Tel : 01539 434662

8.5 Sale or transfer

EPIRBs registered in the USA, Canada, UK and Australia do not need to be re-programmed when transferred to a new vessel. Simply complete another registration card to inform the authorities of the transfer. Use one of the spare cards provided or contact McMurdo for a blank card. (See warranty section for address).

For most other countries, the EPIRB must be re-programmed with either the new vessel's Maritime Mobile Station Identity (MMSI) or its radio callsign, whichever is required by the country controlling the new vessel.

Since the EPIRB identity contains a country code, it follows that changing the flag state of the vessel also means the EPIRB must be re-programmed.

Programming can be carried out at McMurdo or any of our designated agents. For details of your nearest agent, either contact McMurdo using the details in the warranty section, or visit the McMurdo web site at www.mcmurdo.co.uk.

9. MAINTENANCE

9.1 Monthly self-test & inspection

As an important item of safety equipment, your Rescue 406 should be checked regularly. The Rescue 406 has a built-in test capability that can be used as a confidence check. This self-test confirms that the battery is healthy, that both of the distress transmitters are functional and that the strobe light is operational. The self-test should be performed **monthly**. It should be performed during the first 5 minutes of the hour, to minimise disturbance on the emergency channel.

If your Rescue 406 is in an enclosure it can be tested through the test window, without having to remove the Rescue 406 from the housing. If you have a bracket mounted Rescue 406 it will have to be removed from the bracket as described in section 4.3. The procedure for self-testing is as follows...

- On rear of Rescue 406 press and **hold** the READY button for 10 seconds.
- The red lamp will come on for 4 seconds to confirm test in progress.
- When the red lamp goes out, the strobe lamp **must flash** (3 times).
- If the strobe does not flash repeat the test then see section 9.4.

During these monthly checks you should take the opportunity to visually inspect the Rescue 406 and its mountings for deterioration or damage.

On the Rescue 406 itself check the following...

- 1) Inspect the Rescue 406 for any obvious damage.
- 2) Check there is no sign of water inside the unit.
- 3) Check that the lanyard is not tied to the vessel structure.
- 4) Check the battery is within its expiry date.

If you have a wall bracket...

- 5) Confirm the bracket top clip springs up when squeezed.
- 6) Check the Rescue 406 is correctly fitted and secure in its bracket.

If you have an enclosure...

- 7) Check the HRU is within its expiry date (category 1 only).
- 8) Confirm the cover can be manually removed with ease.
- 9) Ensure the Rescue 406 base is correctly fitted into the D-shaped prongs.

If the Rescue 406 or its mounting needs cleaning then this should be done using warm soapy water and a damp (not wet) cloth. Do not use detergents or solvents.

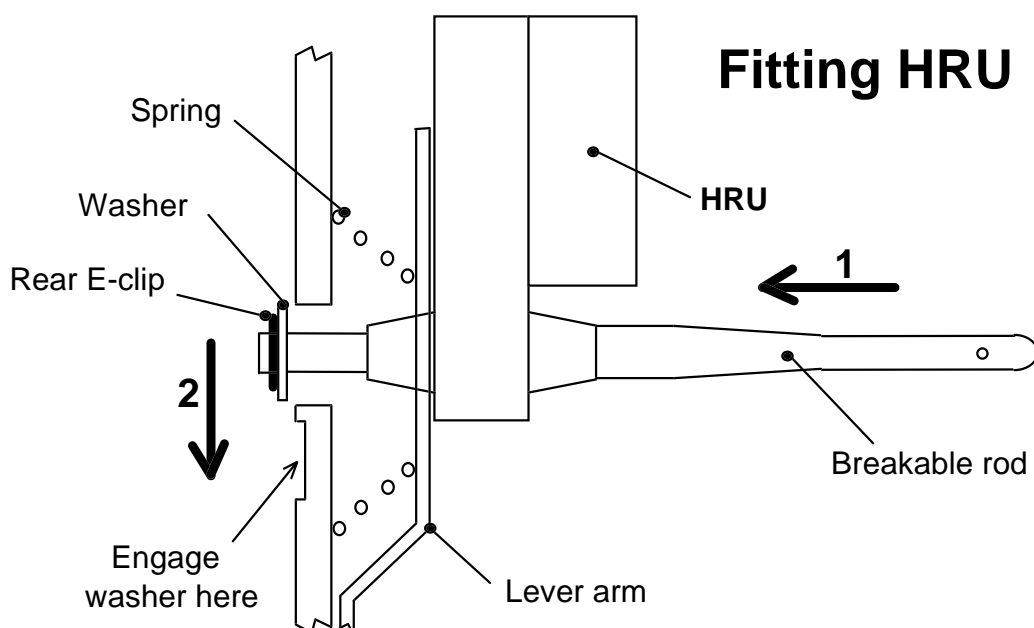
Do not paint the Rescue 406 or its mounting
Do not clean with detergents or solvents
During vessel cleansing or painting remove the Rescue 406 and its mounting

9.2 HRU replacement

If you have a Rescue 406 in an enclosure which is marked as category 1 then it contains a Hydrostatic Release Unit (HRU). This has a 2 year replacement interval. The HRU expiry date should be checked regularly. It is marked on the HRU itself and also on the enclosure side label.

When the HRU expires you can obtain a replacement at a local chandler, or direct from McMurdo at the address shown on the warranty page. McMurdo will supply an HRU kit (Part No. 82-210B) complete with breakable plastic rod, date labels and instruction sheet. At a chandler you should ask for a Pains Wessex "Breakthrough HRU with an EPIRB kit". The HRU replacement procedure is as follows...

- 1) On the enclosure, remove the R-clip and pull the cover slowly off.
- 2) Remove Rescue 406 and stow it in a dry place. **It will activate if wet.**
- 3) Hold back the metal lever arm to take up the force of the spring.
- 4) Push the HRU back then upwards, out of slot in the lever arm.
- 5) When the rear clip disengages slowly release the lever arm.
- 6) The HRU with its breakable rod can now be lifted free and replaced.
- 7) Using pliers, remove the rear E-clip and slide off the old HRU.
- 8) Fit the new HRU over the new rod, with its label facing outward.
- 9) Refit the washer and the rear E-clip. Ensure rod moves freely.
- 10) Mark the HRU with an expiry date 2 years into the future.
- 11) Slide the HRU into the slot in the lever arm and push lever arm back.
- 12) Engage rear washer into backplate by pushing back and sliding down.
- 13) Look under the spring and confirm that the washer is fully engaged.
- 14) Slide Rescue 406 into D-shaped foot on lever arm. Switches outward.
- 15) Refit cover by engaging hole over rod and then snapping into place.
- 16) Refit R-clip through top of rod.
- 17) On side of cover, remove old HRU expiry date and mark new date.



9.3 Battery replacement

The Rescue 406 uses a 9V Lithium Sulphur Dioxide battery pack, McMurdo type 82-140. Typically this will have to be replaced every 5 years. The exact battery expiry date is marked on the rear of the Rescue 406 lens dome and if you have a full enclosure it is also marked on the outside of the enclosure. The battery expiry date should be checked regularly. You will need to replace the battery when...

- The expiry date has been reached.
- The Rescue 406 has been used in an emergency situation.
- A false activation exceeds 2 hours of use.

The battery is a one shot device. It is not rechargeable or user replaceable. Battery replacement **must** be carried out by a McMurdo approved service agent. Lithium batteries have special disposal requirements. Never incinerate a Lithium battery. Never dispose of one at sea. Your service agent will deal with battery disposal.

9.4 Servicing

All servicing must be carried out by a McMurdo approved service agent. Always call your nearest agent and talk to their service department before returning suspect equipment. You can find your nearest service agent from...

- The McMurdo web site : <http://www.mcmurdo.co.uk>
- Contacting McMurdo direct (see warranty page).

9.5 Transportation

The Rescue 406 has no special transportation requirements. Its Lithium battery has been tested under the “transportation of dangerous goods” regulations and has been declared as non-hazardous for transportation purposes.

9.6 GMDSS inspections

If your vessel is subject to GMDSS regulations then you can expect to get regular visits from ship surveyors enforcing national legislation. They will check the expiry dates and activate the EPIRB to prove it really works and they will read the identity message stored inside the EPIRB to check that you have registered it properly. Leisure vessels are not subject to these inspections. However, in some countries passenger and fishing vessels are covered by the legislation.

9.7 Fully disabling a Rescue 406

In the unlikely event that your Rescue 406 refuses to turn off then it may have a fault. Procedures for dealing with a faulty Rescue 406 are covered in section 5 on false alarms and in simple terms you should do the following...

- De-activate the EPIRB as per section 5.2
- Suppress its signal by wrapping Rescue 406 in metal foil as section 5.3
- Leave for 3 days until the battery is used up.

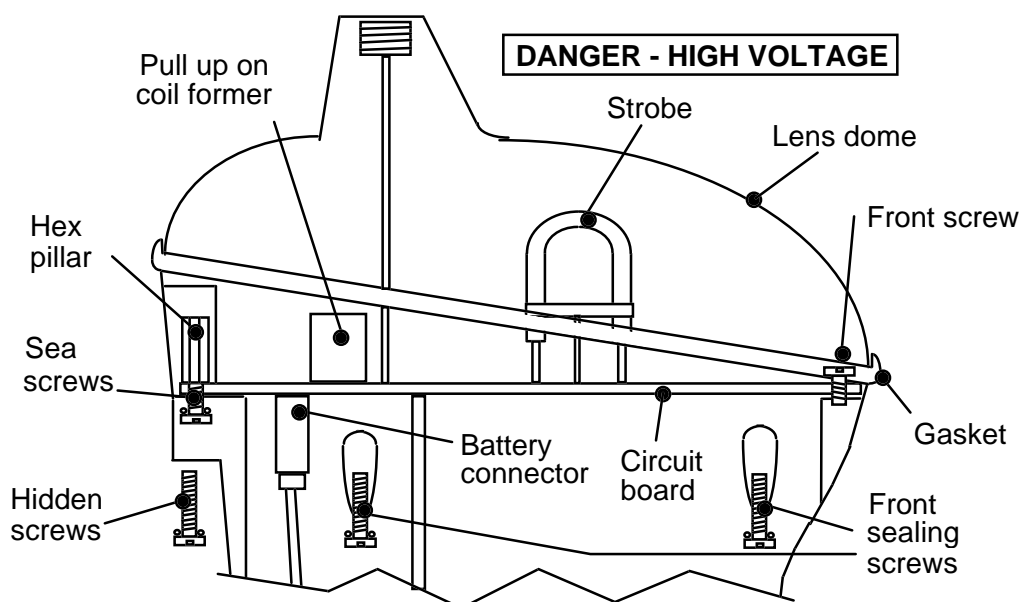
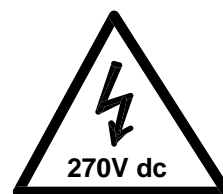
We do not recommend any other course of action. However, if it is absolutely necessary to fully disable a Rescue 406 (by unplugging its battery) proceed as follows. This is a dangerous task and should only be done by a qualified technician.

WARNING

Risk of electric shock

Proceed at your own risk, no liability accepted

- Take the Rescue 406 below decks into the dry.
- Locate a flat bladed screwdriver with a long reach.
- Unscrew and retain the front 4 sealing screws.
- Pull the lanyard out and remove the 2 hidden rear screws.
- Do **not** as yet remove the sea contact screws.
- Lift the lens dome off. Remove and retain the grey gasket.
- **Avoid touching the circuit board and the glass strobe tube.**
- Hold the hexagon shaped pillars and remove the sea screws.
- Use a cross-headed screwdriver to remove the front screw.
- Grip the white plastic coil former and lift the circuit board up 3cm (1").
- Using fingers, unplug the white 4-way battery connector.
- The flashing will now cease.
- Collect up all the parts and return them to your nearest service agent.



Technical specification

406 MHz Transmitter	Operating frequency	406.025 MHz +/- 5kHz
	Power output	5W typical
	Modulation	Phase (16K0GID)
121.5 MHz Homer	Operating frequency	121.5 MHz +/- 3.5kHz
	Power output	50mW radiated typical
	Modulation	Swept tone AM (3K20A3X)
Strobe light	Type	Xenon discharge tube
	Light output	0.75 Candela minimum
	Flash rate	23 flashes per minute
Battery	Type	Lithium Sulphur dioxide
	Operating life	48 hours minimum
	Shelf life	5 years typical in service
Environment	Operating temperature	-40°C to +55°C (class 1)
	Storage temperature	-50°C to +70°C
	Automatic release depth	4 metres max. (13 feet)
Physical	Weight	740 grammes (1.6 lb)
	Height of body	21 cm (8.2 inches)
	Length of antenna	18 cm (7 inches)
Approvals	Satellite system	Cospas-Sarsat T.001 / T.007
	Europe	ETS-300-066 Marine Equipment Directive
	USA	USCG / FCC approved FCC ID : KLS-82-001
	Worldwide	IEC1097-2
	Meets IMO regulations	A662(16) A694(17) A810(19)

This device complies with the GMDSS provisions of part 80 of the FCC rules.

WARRANTY

This product is covered by a 12 month non-transferable manufacturer's limited warranty commencing on the date of purchase. The warranty covers faulty materials and workmanship during manufacture, but excludes normal wear and tear, wilful damage, negligence, abnormal conditions and failure to follow manufacturer's instructions.

The manufacturer shall not be liable for any consequential loss or damage caused by a defective product. A copy of the full warranty conditions is available upon request. This warranty statement does not affect your statutory rights.

Claims under warranty should be directed to your local dealer with supporting proof of purchase. Technical advice and information on local dealers can be obtained from the address given below.

McMurdo Ltd

Rodney Road
Fratton
Portsmouth
Hampshire
United Kingdom
PO4 8SG

TEL +44 (0)1705 775044
FAX +44 (0)1705 819087
Email : sales@mcmurdo.co.uk

Record Serial No. (visible through dome) : _____

© McMurdo Ltd 1998

The Copyright on this manual is owned by McMurdo Ltd. This manual, or information from this manual may not be copied or otherwise transferred to third parties using any media, including electronic, without prior written permission of McMurdo Ltd.

McMurdo Ltd

Rodney Road
Fratton
Portsmouth
Hampshire
United Kingdom
PO4 8SG



A member of Chemring group PLC

82-163-004M issue 1