



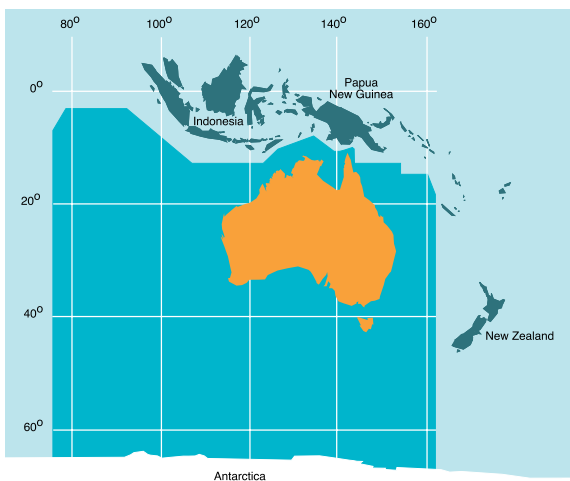
Australian Government

Australian Maritime Safety Authority



# SEARCH AND RESCUE IN AUSTRALIA

Australia has an internationally respected search and rescue (SAR) service. Under international treaties, Australia is responsible for covering one of the largest areas in the world – about one tenth of the earth’s surface – some 53 million square kilometres of the Indian, Pacific and Southern Oceans, and across the Australian continent and Antarctica.



The responsibility for search and rescue response in Australia is shared by SAR Authorities at both the Federal and State levels. These authorities are responsible for the coordination of search and rescue over a vast area made up of continental Australia and our maritime approaches and their responsibilities are shared in accordance with the National Search and Rescue Plan. The Australian SAR Authorities are the Australian Maritime Safety Authority (AMSA), the Australian Defence Force and the police services of each of the States and Territories.

# AMSA's RESCUE COORDINATION CENTRE

Australia's search and rescue response arrangements are led by the Australian Maritime Safety Authority's (AMSA) Rescue Coordination Centre - Australia (RCC Australia). RCC Australia operates 24 hours a day from AMSA's Head Office in Canberra as a component of AMSA's Emergency Response Centre (ERC), and is responsible for the national coordination of both maritime and aviation search and rescue. RCC Australia is also responsible for the management and operation of the Australian ground segment of the Cospas-Sarsat distress beacon detection system.

As part of its role, RCC Australia coordinates medical evacuations, broadcasts maritime safety information, operates the Australian Ship Reporting System (AUSREP) and runs the national search and rescue training school.

## OUR PEOPLE

RCC Australia is staffed by search and rescue specialists with backgrounds from the merchant marine, defence force, civil aviation and police services. They have all received specialist training in search and rescue and liaise closely with search and rescue responders around Australia and overseas during incidents.



# OUR RESOURCES

## Dedicated Search and Rescue Aircraft

AMSA operates dedicated search and rescue aircraft from strategic locations around Australia. These Dornier 328 turbo-prop aircraft are equipped with the latest search and rescue technology including Forward Looking Infrared (FLIR), surface search radar, satellite communications and direction finding equipment to detect and home in on emergency beacon transmissions and radio distress calls. Life rafts, high capacity water pumps and other emergency equipment can be deployed from the aircraft to those in distress.



## Contracted Assets

In addition to AMSA's dedicated SAR aircraft, RCC Australia maintains a database of fixed-wing and rotary wing aircraft available for search and rescue and can call on a host of specialist SAR agencies, assets and government organisations to carry out operations.



## Emergency Towage Vessels

AMSA also operates an emergency towage capability on a needs basis from strategic locations around the Australian coastline. These emergency towage vessels are used primarily in the event of a shipping casualty.

## DISTRESS ALERTS

Traditionally, Australia's SAR authorities have been alerted to emergency incidents through emergency radio distress calls ('Mayday' or 'Pan Pan' broadcasts), flare sightings, calls from concerned friends or relatives, or the more formal overdue ship/aircraft reports.

A distress alert will set off a painstaking evaluation of many variables such as aircraft endurance, terrain, weather, wind, currents, survival equipment carried and, of course, the skipper or pilot's experience and likely intentions. The RCC staff and police use specialised modelling applications to assist in locating persons in distress where their position is not immediately available.

# SAR PROCEDURES

Upon receiving a distress beacon signal or being notified of a missing civil aircraft or seagoing vessel, RCC Australia will take action to establish the safety of the aircraft, vessel, vehicle, or person at the source of the signal. This action may include:

- coordinating a search and rescue operation with assistance from organisations as appropriate, such as the defence forces, trained aviation organisations, emergency medical helicopters, state police services, state emergency services, the Australian Communications and Media Authority (ACMA), airlines, the general aviation industry, volunteer marine rescue groups, the Bureau of Meteorology, the shipping industry and fishing cooperatives;
- providing assistance to other search and rescue organisations; or
- passing coordination to the appropriate state or territory police organisation to conduct search and rescue operations within their jurisdiction.

# DISTRESS BEACONS

Satellite detected distress beacons have greatly enhanced the ability of SAR authorities to locate persons in distress. They have helped to save thousands of lives in the past 20 years.

406MHz distress beacons come in three main forms, each suited to particular purposes:

- **Emergency Locator Transmitters (ELTs)**, are used by aviators and are mounted permanently in the aircraft.
- **Personal Locator Beacons (PLBs)**, which are portable and carried on the person. PLBs are also widely used by aviators, bushwalkers, hikers, four wheel drivers, sailors and persons working in a remote environment.
- **Emergency Position Indicating Radio Beacon (EPIRBs)** are designed to be carried by vessels in the marine environment. An EPIRB is designed to float in the water with its antenna pointing upwards, is fitted with a flashing strobe light to assist search assets locating you in darkness and has a lanyard to secure it whilst it floats, it is also designed to transmit for at least 48hours continuously.

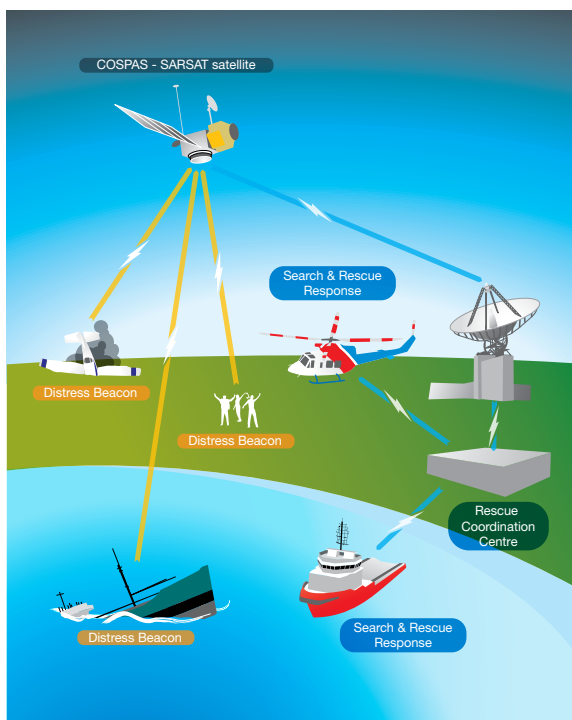
*Carrying a registered EPIRB is mandatory when proceeding more than two nautical miles from shore.*

Visit [www.amsa.gov.au/beacons](http://www.amsa.gov.au/beacons) for more information.



# HOW BEACONS OPERATE

Signals from distress beacons are detected by the international Cospas-Sarsat satellite system. As the satellites pass overhead, signals are detected and relayed back to RCC Australia through ground receiver stations located at Albany, Western Australia, Bundaberg, Queensland, and Wellington in New Zealand.



## Accuracy of Detection

Digital 406 MHz distress beacons are able to be detected within minutes, and can indicate your position to within a search radius of five kilometres, and down to 120 metres or less if it has a built-in Global Positioning System (GPS). This capability reduces the time required to get an accurate fix on the beacon position, thus enhancing the speed and effectiveness of search and rescue operations

***AMSA recommends GPS-enabled distress beacons.***

Significantly, each 406 MHz distress beacon transmits a unique identity code that, when registered free of charge with AMSA, can be cross-referenced with RCC Australia databases for confirmation of who is in distress; what type of vessel, aircraft or vehicle rescue authorities need to look for; and identify emergency contacts who can provide vital additional information. To register your 406 MHz distress beacon; to update your registration details; to notify of sold, lost, stolen or destroyed distress beacons; or for more information visit [www.amsa.gov.au/beacons](http://www.amsa.gov.au/beacons).

***Since 1 February 2010, 121.5 MHz EPIRBs and PLBs are no longer licenced for use as distress alerting devices. Old analogue beacons should be disposed of correctly and free of charge, at your nearest Battery World store. For further information regarding carriage and registration regulations in your State or Territory, check with your Commonwealth, State or Territory authority.***

## **INADVERTENT ACTIVATIONS**

If or when a beacon has been inadvertently activated, RCC Australia should be advised immediately on the relevant 24 hour emergency contact numbers – 1800 641 792 (maritime) or 1800 815 257 (aviation). If this activation is discovered whilst at sea, RCC Australia must be informed by the most rapid means of communication. This advice is important because it prevents RCC Australia initiating unnecessary search and rescue action.

***There is no penalty for reporting inadvertent activations of distress beacons.***

## DISTRESS BEACON DISPOSAL

Distress beacons must be disposed of responsibly in case they accidentally activate and trigger a false alarm. Individuals are able to dispose of their unwanted beacons through *Battery World*.

***Do not dispose of unwanted beacons in general waste as it will end up in landfill and could be activated inadvertently.***

## SAFETY EQUIPMENT



While satellites and satellite-compatible distress beacons have significantly improved the effectiveness of search and rescue operations, the system is not a substitute for carrying an appropriate marine or aviation radio.

Depending on the circumstances, your initial distress alert should still be made by radio if possible. You should activate your distress beacon only if radio or telephone contact cannot be made or when told to do so by a rescue authority.

Likewise, pilots and offshore mariners should never rely solely on any single safety or navigation system. They should always carry appropriate charts and safety equipment, be aware of changing weather, and operate within the limits of their own capability and the capability of their boat or aircraft.

You can help yourself and those you are responsible for by following basic rules, being prepared, and if the worst should happen, by using the right safety equipment and communications technology.

## **IMPORTANT CONTACTS**

### **Rescue Coordination Centre – Australia:**

Australian Maritime Safety Authority

GPO Box 2181

Canberra ACT 2601

P: 1800 641 792 (Maritime)

P: 1800 815 257 (Aviation)

### **406 MHz distress beacon information:**

P: 1800 406 406

F: 1800 406 329

### **General inquiries:**

P: 02 6279 5000

F: 02 6279 5858

[www.amsa.gov.au](http://www.amsa.gov.au)

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[www.amsa.gov.au](http://www.amsa.gov.au)