

Which EPIRB?

Jayne Toyne takes a look at the latest EPIRB models on the market



The emergency position indicating radio beacon (EPIRB) seems like an expensive little gadget to have clipped to a bulkhead in the hope it never gets used, but if you do intend to, or regularly do head out of sight of land then you really should have at least one on board.

If you find yourself in a situation of grave and imminent danger and are out of VHF range of a coastguard, then that EPIRB will suddenly feel like you have the last truffle in a box of toffees.

EPIRBs have been available to seafarers



ABOVE Vendée Globe racer Kevin Escoffier was saved by his EPIRB
LEFT Ocean Safety RescueMe EPIRB1 Cat 2

since the late 1970s, but they have changed considerably in the past five decades. The early beacons used a radio frequency of 121.5MHz, which was initially intended for downed aircraft. They have since moved over to 406MHz which is a radio signal readily detectable by satellites.

When activated, the EPIRB transmission is picked up by one of many low earth orbit satellites. The satellite pings the signal to a local earth station which then forwards it to a mission control centre. From here the rescue coordination centre

is notified and springs into action. With the latest EPIRBs, all of this can take just a few minutes. The search and rescue team follow the GPS track and Doppler signal from the beacon to locate you, to within an accuracy of around 100m.

Older EPIRBs without GPS work to an accuracy of about 12 miles, so if you do have an older model, it's certainly worth considering adding a newer GPS equipped model to your vessel.

Which model you have on your boat depends on your intended activity. Do you need a Category 2 manually deployed or a Cat 1 hydrostatic release EPIRB?

EPIRBs in action

Yachting World editor Helen Fretter explains how advanced sat comms, including an EPIRB, saved the life of Vendée Globe skipper Kevin Escoffier "I AM SINKING. THIS IS NOT A JOKE. MAYDAY"

At 1345 on Monday 30 November 2021, on a grey and lumpy South Atlantic 840 miles south-west of Cape Town, Kevin Escoffier was 3rd in the single-handed Vendée Globe when his boat, the IMOCA 60 *PRB*, suddenly and catastrophically broke up. Escoffier had time only to send a three line Whatsapp message to his shore team before all communication with the boat was lost. It would be 11 hours before anyone on land heard from him again.

Back in the French port of Les Sables d'Olonne, Vendée Globe race organisers got their first warning of a problem when *PRB*'s EPIRB was triggered. Assistant race director Hubert Lemonnier explained: "Right at the same time we got a message, and a call from the team confirming the distress.

"That's the worst case scenario, when MRCC call and say we have an EPIRB alert. Because it means that the skipper had no time, and no means of communication to liaise with us."



Escoffier waves back to Le Cam from a French Navy vessel

Almost immediately race control contacted Jean Le Cam, the closest skipper to *PRB*'s last known position around 20 miles away, and asked him to divert to assist.

Escoffier was able to inflate and climb into his liferaft but had no way of communicating. However, he wore a small personal AIS beacon in his pocket.

Two hours after getting the call to divert, Le Cam arrived at *PRB*'s last known location. The more accurate positioning of the personal AIS beacon at short range also helped pinpoint Escoffier and he was successfully transferred to Le Cam's vessel.

Read the full story at yachtingworld.com

What to look for in an EPIRB?

■ **Internal GPS** Nearly all of the best EPIRBs available on the market today will have an integrated GPS, but if you have an older model, some of these don't, which can mean they are much slower and less accurate at pinpointing your location

■ **User serviceable battery** You might like to consider a model which allows you to change the battery yourself. Service centres can be costly but do offer peace of mind in return for an increased cost.

■ **Auto activation** Some of the best EPIRBs can be automatically activated upon immersion, and some housings will automatically release the EPIRB to float free should it become submerged, this is mandatory for SOLAS vessels.

■ **Retractable Antenna** These prevent damage when stowed, but must be deployed to allow the beacon to reach its full range potential.

■ **Dual-Frequency** While all will transmit initially on 406MHz, some offer additional 121.5MHz for accurate search and rescue homing. Some models have an AIS transmitter for local position pinpointing instead.

■ **Registration:** Each EPIRB comes pre-programmed with a country code, so beware of buying EPIRBs online from other regions. UK sailors must register their EPIRB with the MCA.

Ocean Signal

Ocean Signal's probably the smallest in the market. It has a 12m range, a 48+ hour life, and 48+ hours of battery life. Being such a small model as a Cat 1, it will fit to some of the smallest spaces and will be a grab bag.

It also has a 6m range and an internal GPS antenna which will remember to ping



McMurdo AIS EPIRB

As well as 406MHz, it also transmits on 121.5MHz. The EPIRB also includes an AIS transmitter to broadcast your location information to other vessels in the area.

It has a 77-cm wavelength GPS constellation and a manual/automatic strobe light and an operating time of 48 hours.



Ocean Signal RescueME EPIRB1

Ocean Signal's EPIRB1 is probably the smallest on the market. It has a 10-year battery life, and 48+ hours operational life. Being such a compact model as a Cat 2 version, this will fit to some small bulkhead spaces and will slip easily into a grab bag.

It also has a 66-channel internal GPS and a retractable antenna which you must remember to pull out when

activating manually.

The Pro version of the EPIRB1 offers an automatic release housing.

- **Operational life:** 48+ hours
- **User replaceable battery** Yes
- **Battery life** 10 years
- **Auto activation** No
- **AIS** No
- **GPS** Yes
- **121MHz** Yes
- **Price** From: £380



ACR GlobalFix V4 406 GPS EPIRB

This EPIRB has an internal 66-channel GPS, and a user-replaceable battery pack. It has a high-visibility LED strobe light, floats, and can be automatically activated via Cat 1 hydrostatic release in housing or manually activated by Cat 2 manual mount.

It claims 48+ hours run time, and comes with a 5-year

warranty. The antenna deploys instantly on release.

- **Operational life** 48+ hours
- **User replaceable battery** Yes
- **Battery life** 10 years
- **Auto activation** Yes
- **AIS** No
- **GPS** Yes
- **121MHz** No
- **Price** £375



McMurdo SmartFind G8 AIS EPIRB

As well as 406MHz and 121.5MHz transmitters, this EPIRB also includes an AIS transmitter to give local vessels location information to increase the chance of rescue.

It has a 77-channel multi-constellation GNSS receiver, manual/automatic activation, strobe light and 48 hours operating time thanks to a

Lithium-ion battery that is good for 10 years.

- **Operational life** 48+ hours
- **User replaceable battery** No
- **Battery life** 10 years
- **Auto activation** Yes (Cat 1) No (Cat 2)
- **AIS** Yes
- **GPS** Yes
- **121MHz** Yes
- **Price** £721



GME MT600G GPS EPIRB

The MT403 EPIRB has a 66-channel GPS receiver, a high visibility strobe light and can be automatically or manually activated. It features a 10-year battery life and 6-year warranty is included.

Operational battery life is a minimum of 48 hours, there's a high intensity strobe light and a mounting bracket is included. The GME also offers a satellite

acquisition test function with GPS fix.

- **Operational life** 48+ hours
- **User replaceable battery** No
- **Battery life** 10 years
- **Auto activation** Yes (Cat 1) No (Cat 2)
- **AIS** No
- **GPS** Yes
- **121MHz** No
- **Price** From £554