



Whenever you set out on an adventure, you always hope that things will go as smoothly as possible. But in case the worst happens and you find yourself in an emergency situation, a portable distress beacon is a reliable way to alert the authorities.

But how exactly do PLBs or Satellite Messengers work? Are they the same thing? How are they different? Well, we've done our research and put together the answers to some of the most frequently asked questions. So if you want to know more – keep on reading.

## What is a Personal Locator Beacon?

A personal locator beacon is designed to be used as a last resort when you have exhausted all other means of communication and you are in immediate and grave danger.

When we say grave danger, we mean a life or death situation. So running out of fuel, or getting lost on the trail doesn't warrant the use of a PLB. Nowadays, most of these devices are GPS enabled and send out an emergency distress signal, including your GPS coordinates, to the relevant rescue authority.

The distress signal sent out by a PLB is 406 MHz. This is a special frequency used just for search and rescue operations. This signal communicates with a network of international military satellites called COSPAS-SARSAT. This network is made up of American, Russian, Canadian, and French satellites.

When you activate your beacon, your GPS location and the unique code relevant to your beacon will be transmitted to a rescue coordination centre via satellite, then the nearest rescue services will be notified.



*PLBs are essential devices to take with you on your trips, just in case you need to be rescued.  
Image: Ocean Signal*

## What is a Satellite Messenger?

A satellite messenger uses commercial satellites, not the government-run satellite COSPAS-SARSAT system.

This also means that you will have to pay some sort of service plan or subscription fee. Keep in mind that a messenger device will give you more communication features compared to a PLB which you will only ever deploy if you are in grave and immediate danger.

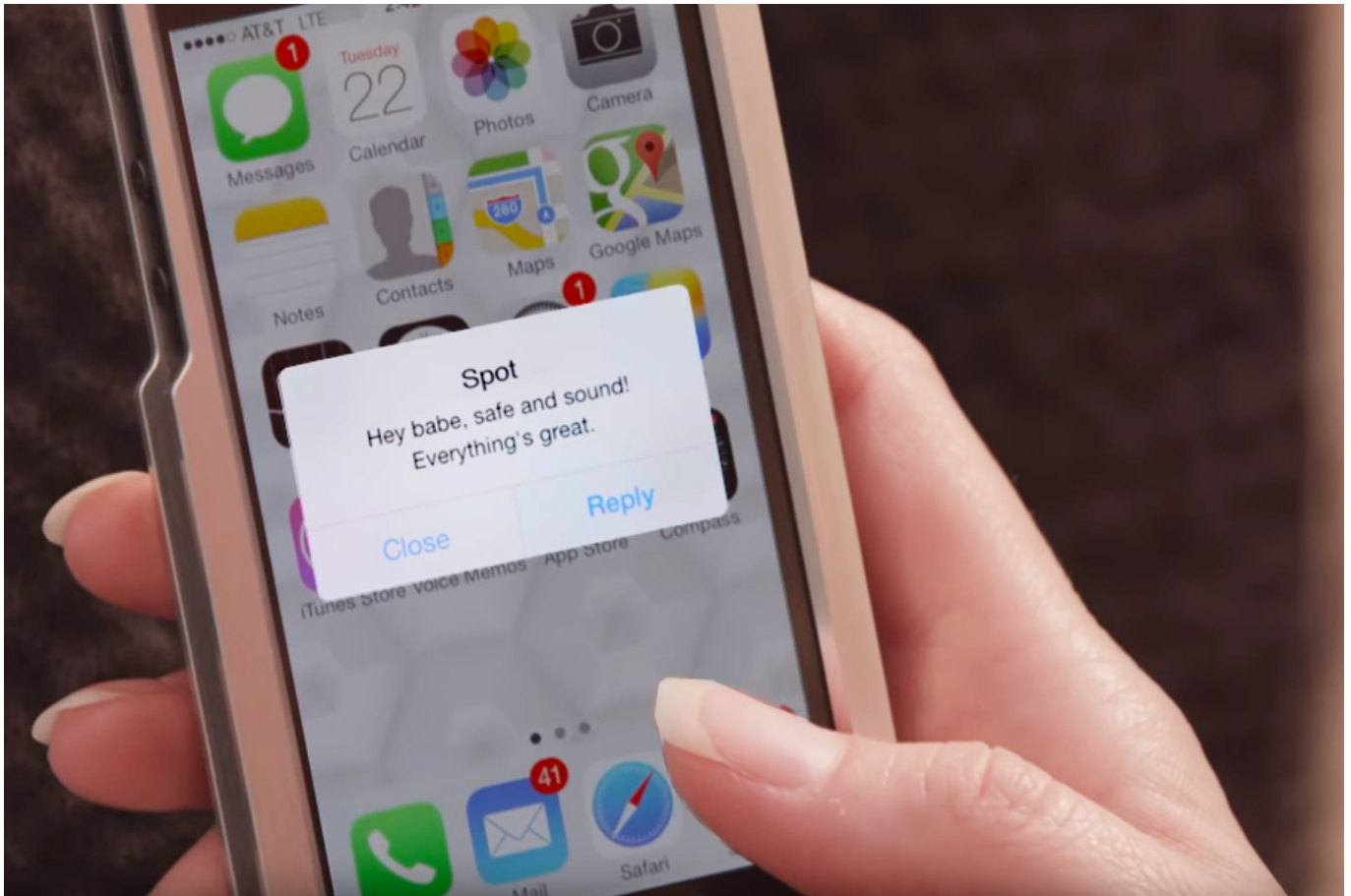
Satellite messengers like the SPOT allow you to communicate with your friends and family when you're out of range. You can program custom messages to let them know that you're okay, or that you need assistance but are not in serious danger. You can also show your tracking waypoints on your online account so your friends and family can monitor your progress.

In terms of sending your messages and location, the GPS on the SPOT sends your message and location to the communication satellites, which then goes to other satellite antennas which are then routed to the correct network.

if you need to be rescued, a messenger device sends your distress signal via a commercial satellite to a rescue centre which then relays the information back to the relevant authorities.



So there is an extra step in the rescue process if that makes sense.



*A Satellite Messenger can be pre-programmed with a message to send to your loved ones.  
Image: SPOT*

## **What is the difference between a PLB and an EPIRB?**

A PLB is designed to be carried on your person and to be used by an individual. Whereas an EPIRB is designed for marine use so it'll be registered to a boat or other vessel.

## **Do PLBs require subscription services?**

You don't have to pay any yearly subscription fees to use a PLB.





*PLBs do not come with any subscription fees included. Image: SPOT*

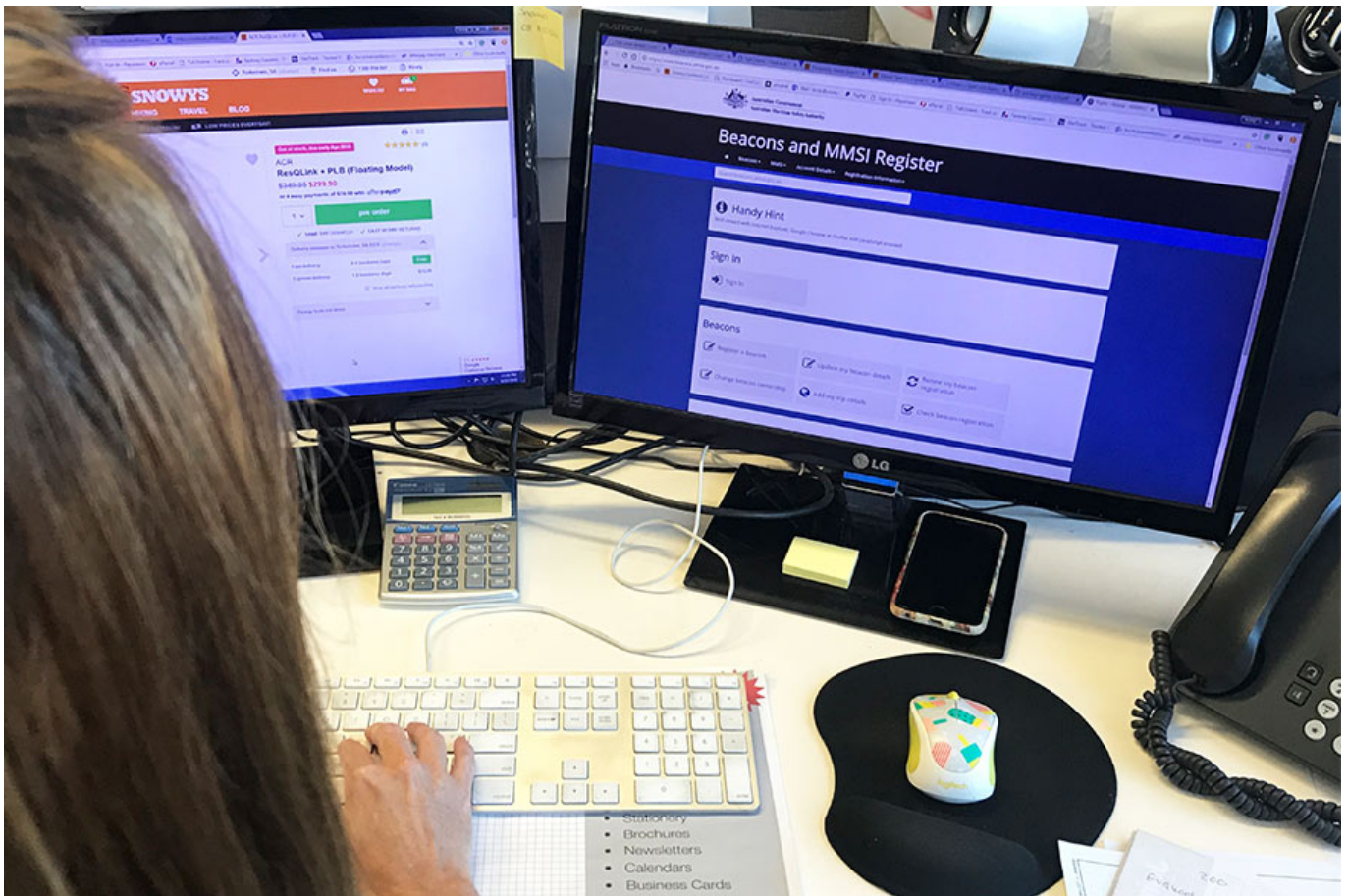
## **Does it matter if I buy it locally or overseas?**

The country you purchase your PLB in is the country the PLB is programmed for, which is why it's important to buy one locally. You won't be able to register it in Australia unless you get the manufacturer to reprogram it with the Australian country code. There also may be an issue with whether the unit meets the Australian standards and requirements if you purchase it overseas.

While it may be tempting to grab a bargain from an overseas seller, it's recommended by the [Australian Maritime Safety Authority](#) that you choose one that complies with Australian standards. You can also check out the list [here](#) of the PLBs that meet those Australian standards for reference.

## **How do I register my PLB?**

Your PLB will need to be registered in the country you intend to use it in, whether it be here or overseas. Registration is vital as your PLB will have a unique number. It's also important to update your details if they have changed, and your trip information so in the event of a rescue, it's easier for the emergency services to find you.



*You will need to register your details with the PLB that you purchase. Image: Erin Wescombe*

## **How long do the batteries last in a PLB before they expire?**

This depends on the battery type of the model that you have, it varies between about 6 -10 years.

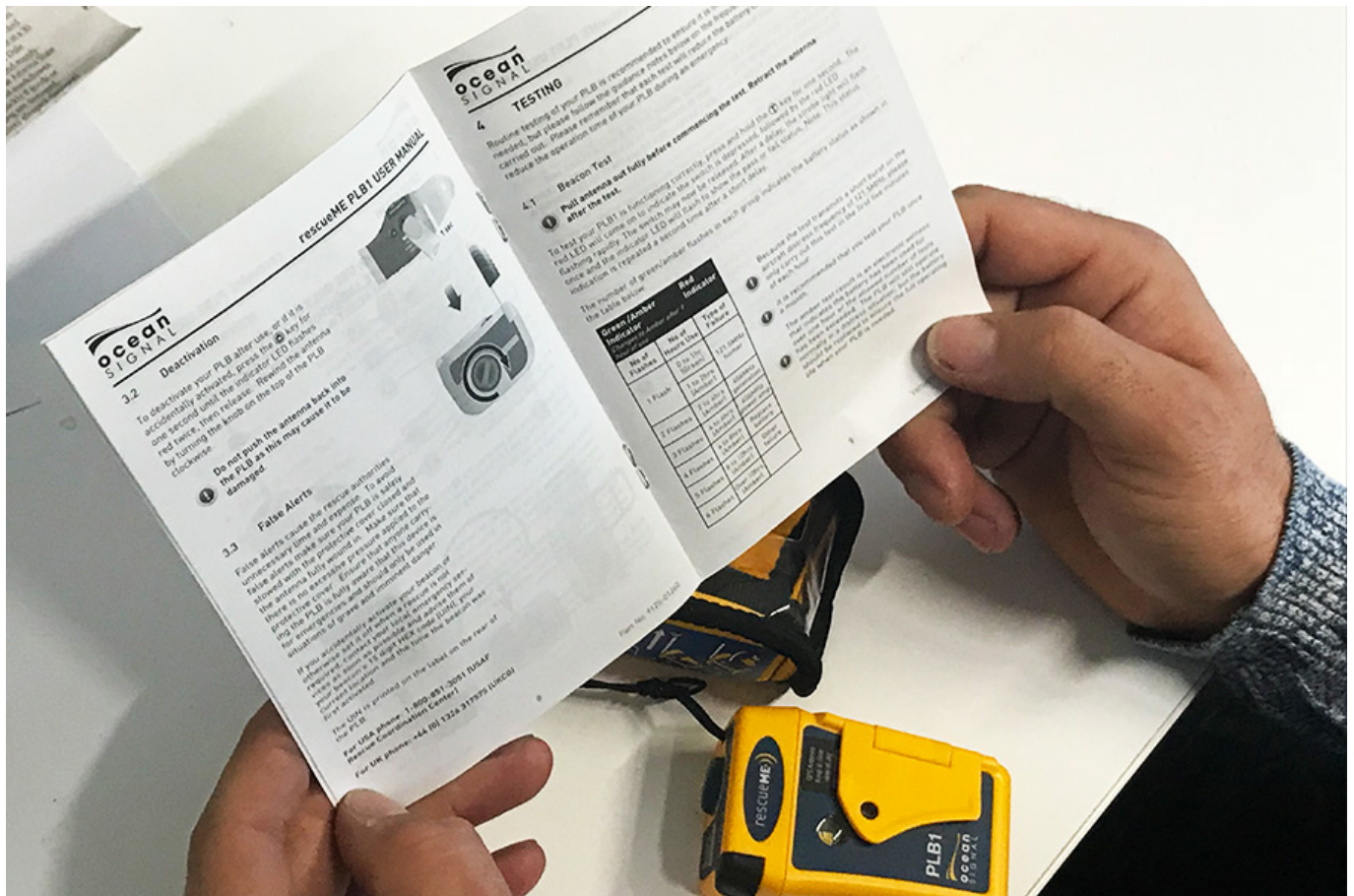
## **Can you replace the batteries in a PLB yourself once they expire?**

Generally, you will either have to get the battery replaced by an authorised battery replacement centre or send it back to the manufacturer when it's time to replace the battery.

In general, you will have to get the battery replaced after every single use (e.g. once activated). Even if you don't use it, you will need to replace it after and before the expiry date listed which varies depending on the model.

The price of replacing a battery will be different for each beacon, but to give you a ballpark figure, the KTI Safety Beacon costs approx \$150-160 AUD to replace at the time of writing this article.





You may need to test the battery, so check your manual thoroughly. Image: Erin Wescombe

## What about battery life on a Satellite Messenger?

These generally use Lithium-Ion batteries but that might vary depending on the brand. In terms of battery life, for example, the SPOT will last you about 13 days in SOS mode. So you will need to keep batteries on hand when you are out in the field to replace them if necessary.

You can see the full battery performance table with all the information [here on their website](#).

## Which PLBs can be used internationally?

Every PLB will use the same global frequency, so there won't be a problem with it operating across the globe.

But you will need to ensure that the relevant authorities can access your correct details so that you can be rescued quickly and efficiently.

You also need to check with the manufacturer's website for international use information and the relevant authority in the country you are visiting in case there are any restrictions.



*Ensure that the relevant authorities have your correct information in the event of a rescue.*

*Image: ACR*

## **Does my PLB need to float?**

It depends on where you intend to use your PLB. If you're going out on the water then that's a feature you will need.

If you're a hiker or cycle tourer, then it's unlikely that you'll need your beacon to float. So go by what makes sense for what you'll use it for.



*Some PLBs will come with a floatation pouch, such as the PLB1 from Ocean Signal. Image: Larry Chew*

## Summary of the main differences between a PLB and Satellite Messenger

- Messenger device has a yearly fee, PLBs do not come with any fees
- A PLB communicates with government-run satellites, a Messenger Device uses a private satellite network
- A Satellite Messenger has a check-in and an SOS button. You will be able to link your progress to an online page as well, whereas a PLB has just one rescue function.
- A PLB has a battery life of several years. You will have to replace the batteries in your Messenger Device frequently when in use.

I hope we've managed to answer everything you wanted to know about PLBs and Satellite Messengers, and that you're about to choose one confidently. In the meantime, make sure you stay safe when you're travelling off the beaten path.

**Have you ever had to use a PLB or Messenger Device to be rescued? Let us know**





**what your experience was.**