

EPIRB & PLB's

Why you shouldn't rely on them to protect lone workers.

EPIRBs are designed for marine use and are used in ships and boats and are designed to float upright using the water plane as a reflector to more efficiently get the signal to the satellite.

The differences between **EPIRBs** and **PLBs**. Personal Location Beacons work in exactly the same way as **EPIRBs** by sending a coded message on the 406 MHz distress frequency which is relayed via the Cospas-Sarsat global satellite system. An **EPIRB** is registered to a vessel, whereas a **PLB** is registered to a person.



Why shouldn't we rely EPIRB and PLB's to protect lone workers and what is the superior alternative?

EPIRBs and **PLB's** use the Inmarsat satellite system (need line of sight). Blackline G7X and Garmin InReach uses the far superior iridium satellite network.



- EPIRB's are NOT on the iridium sat network which is the most superior mostly due to it having NO black spots whatsoever, and it has forwarding technology. Best chance of an SOS getting sent and received.
- To confuse things further, another significant difference is that Inmarsat's satellites orbit the Equator, while Iridium satellites are moving around all over the place. This might not sound significant, but it does mean that with Inmarsat, the further you travel from the Equator, the more increasingly difficult it will become to achieve that all-important line of sight to the satellites. In equatorial regions Inmarsat's satellites will be very high in the sky, thus very easy to connect to; but the further north or south you travel, the lower the satellites will be in the sky, and thus the harder it will be to be confident of getting a clear line of sight to the satellites.

Moreover, as you approach the polar regions the Inmarsat satellites will be so low in the sky that it will not be possible to connect to them at all. Iridium gives you the only truly global coverage solution: With Iridium, the satellites will always be passing overhead, wherever you are in the world, so coverage is always assured, even at extreme latitudes

Continued overleaf.

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- With all of these systems, if you have a clear line of sight to any one of the satellites then you will be able to send and receive messages. If, however, your view to the satellite is obscured (by nearby buildings, trees, mountains etc.) then you will not get a signal at all, and you will not be able to use your EPIRB device. Therefore, because Inmarsat's satellites are in a fixed position, it means that if you can't "see" the satellite from where you are then you can't use your device - simple as. You will have to move yourself to a different location where a clear line of sight to the satellite is available. With Iridium, however, even if your view to the satellite is currently obscured it's only a matter of time (usually seconds) before the next one comes into view and your message will send.
- G7X and inReach devices keep trying to send the message/SOS until it's received by a satellite and give the worker confirmation it's been received. You do not get this with EPBIRBs and SPOT devices.
- G7X and inReach devices have two way communication and tracking. EPIRBs do not have this. So if a person simply goes missing with an EPIRB (unconscious and hasn't been able to activate his device), there is no way to log on and see where he is so you have no idea where to start looking.
- You cannot conduct monthly tests on your EPIRB's/PLB's to ensure they are working as these go through to Search and Rescue in the USA and then they contact the country of alert origin. We test every solution we monitor monthly direct with the end users. This means you are compliant (in testing your emergency systems), the worker gets to practise raising an SOS (vital) and we know everything is working how it should. You get a monthly report on this.

See this email from a client (using our recommended devices on the Iridium network) who had a Worksafe audit:

“ I thought I would send through some feedback on the back of an external audit we have recently been through. The reporting element of the Guardian Angel process was particularly appreciated, not only were we able to demonstrate robust controls regarding mitigating the risk around lone workers, but with consistent reports seamlessly being issued without fail, it gave us and the auditor clear evidence that we are managing these risks with what is now a well imbedded process working in tandem with Guardian Angel. Please pass on our thanks to the rest of your team. ”

Further reading

If you have the appetite to read a bit more, the experienced crew from outdoor gear lab have once again reviewed available devices in 2020. Garmin is again top of the game.

[Learn More](#)

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Shaun McIntosh | Regional Health & Safety Advisor