

Personal locator beacon: A new safety tool

On July 1, 406 MHz Personal Locator Beacons (PLBs) became legal in the US. The Federal Communications Commission (FCC) OK'd them for use by individuals, such as fishermen, boaters, hikers, and hunters, after several years of negotiations involving the Coast Guard, Air Force, National Oceanic and Atmospheric Administration (NOAA), Federal Aviation Administration, FCC, and others.

PLBs are similar to the EPIRBs carried on many fishing vessels. It was the automatic distress signal of the EPIRB on board the 46' Candy B II that let the Coast Guard know an accident happened. 50 miles south of Nantucket on Oct. 10 and triggered a four-day search for the four crewmen aboard the scalloper.

Similarly, when activated by a person in distress, a 406 MHz PLB signals one or more satellites in low-Earth orbit and/or

geosynchronous orbit. These satellites then relay the signal to a local terminal. From there, it alerts a control center where personnel check with the PLB registration at NOAA and then, if warranted, dispatch rescue teams.

406 MHz

According to the Equipped to Survive Foundation, an independent reviewer of safety and survival equipment, the new 406 MHz PLBs are packed with valuable features.

These include: a wide 70°N latitude to 70°S latitude coverage; position location within three nautical miles (nm); and an initial survivor search area of 25 nm.

PLBs that contain an integrated GPS also transmit a signal that will pinpoint the exact latitude and longitude of an individual. Spending an extra \$100-\$150 for the built-in GPS would probably be

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worth it, especially where water temperature, prevalence of storms, or other hazardous conditions would make a quick rescue imperative.

For both the US and Russian 406 MHz satellites, the average PLB signal detection time is about 45 minutes. These units will add a substantial measure of safety for those who fish alone and clearly will be of great assistance to the search and rescue (SAR) process for the Coast Guard and other SAR units.

A special note of warning: The current 121.5 MHz frequency is being phased out. If you purchase an EPIRB or a PLB, be sure it operates at 406 MHz.

Cell phone vs. PLB

Some fishermen take their cell phones on board as their emergency call system. However, the cell-phone network is typically a microwave, land-based system. Microwave networks may not be set up to transmit across large spans of water such as a bay.

Inland, hunters, bikers, and hikers may find a cell phone useful in an emergency, but most people have experienced breaks in the cell phone coverage despite what the network maps show.

Clearly, a PLB is superior for prompt, sure signaling of distress either at sea or on land.

Compact size

Several companies in the US and elsewhere are now selling PLBs. Lighter units weigh in at around eight ounces and are more expensive than heavier, 17-ounce units.

As for size, PLBs are about 5"-7" tall and are generally under 4" wide — the perfect size for a jacket pocket or holster.

The price for a very serviceable unit ranges from under \$500 to around \$1,200. Some within that price range include an integrated GPS.

After purchase, the unit and its unique digital code must be registered. In August, NOAA activated an online registration web site to make the task easy.

More information on PLBs and the COSPAS-SARSAT system can be found on a variety of web sites including: <www.equipped.com>; <www.sarsat.noaa.gov>; <http://poes.gsfc.nasa.gov/sar/sar.htm>; and <www.theepirbstore.com>.

FISH SAFE:

- The holidays are coming. Consider purchasing a 406 MHz PLB for a fisherman, kayaker, or any loved one who ventures into the ocean or the backcountry.

406 MHz Personal Locator Beacons (PLB) were approved for sale in the US in July. One model that's available is the GyPSI™ by ACR Electronics Inc. Location can be pinpointed to within 2.3 miles of the GyPSI™ PLB, or within .057 miles if a GPS unit is connected to the PLB. Designed to be worn or carried while at sea, this PLB measures roughly 4" by 6.5" by 2" thick (about the size of a paperback book) and will fit easily in a jacket pocket. It's powered by a 5-year lithium battery and is capable of continual transmission for over 24 hours.

ACR Electronics Inc. photo

The Pressure Is On Board.

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