

Omaha World feature on PLBs.

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Locator beacon can save a life

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LINCOLN - The drama that played out so tragically on Oregon's Mount Hood might have been avoided if the three climbers had taken along a personal locator beacon - the latest in search and rescue technology.

A cell phone signal from Kelly James, whose body was later recovered, indicated his location within a quarter-mile. A personal locator beacon would pinpoint the location within 100 meters, according to ACR Electronics of Fort Lauderdale, Fla., which has manufactured about two-thirds of the beacons registered during 2006.

Locator beacons have been used by operators of marine vessels and airplanes since 1982. But personal locator beacons were not allowed to be used by individuals on land in the United States - with the exception of Alaska - until July 2003.

Only Alaska residents were allowed to use the locator beacons in land-based activities during a test period that began in 1995. It is estimated that nearly 400 lives were saved by their use during that eight-year experiment. Unlike cell phones, which require service towers to relay signals, a beacon signal sent from anywhere on earth will be heard.

When a beacon is activated, it transmits radio signals via satellite on internationally recognized distress frequencies monitored by the National Oceanic and Atmospheric Administration (NOAA) and the Air Force Rescue Coordination Center.

The global satellite tracking system is a collection of seven Russian, Canadian, American and French satellites that are used to direct search and rescue operations.

ACR Electronics makes two TerraFix models. One can be connected to a hand-held global positioning system unit, which allows you to download your GPS coordinates. The other model has an internal GPS.

It takes about an hour for those who monitor beacon distress signals without GPS data to determine who you are and that you are in trouble, said Chris Wahler, ACR Electronics marketing director. The rescue effort starts with a search radius of about two nautical miles.

"We were able to add GPS data to the distress message a few years ago," Wahler said. "That enhancement reduced the one-hour time frame to 15 minutes and the two-nautical-mile search radius to about 100 meters."

Like a GPS unit, a personal locator beacon must be initiated in the open so it can transmit its distress message to a satellite. It can't be activated from inside a tent or a snow cave.

Some backcountry skiers carry avalanche transceivers that emit a signal that rescuers can use to locate someone even if he is buried in snow.

"But time is of the essence," said Mike Johnson, operations manager of Backwoods in Omaha. "Under most circumstances, you have only 30 minutes if you're caught in an avalanche."

The three climbers who likely died on Mount Hood probably did not carry personal locator beacons or avalanche transceivers because a cell phone was used.

"Although those three were very experienced and had done a great deal of climbing, they were average Joes. It takes a lot of money to buy high-end equipment like satellite phones, PLBs and transceivers. We don't sell things like that because the average climber or skier doesn't buy those things."

Cell phones aren't reliable for outdoorsmen in an emergency because coverage is seldom available in remote areas. Although Mount Hood is Oregon's tallest mountain at 11,237 feet, it is not in a remote area. A ski resort is on the mountain, and climbers often ascend the summit after riding a ski lift to 8,000 feet.

Unlike personal locator beacons, cell and satellite phones are not built to withstand the impact of a crash or a dunking in water. A beacon battery has a 10-year shelf life, will float and is waterproof. It will also transmit an emergency signal for a minimum of 24 hours. Contact the Omaha World-Herald newsroom. Copyright © 2006 Omaha World-Herald. All rights reserved. This material may not be published, broadcast, rewritten, displayed or distributed for any purpose without permission from the Omaha World-Herald.

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