

New year phases out old technology

Story and photo by [Petty Officer 3rd Class Connie Terrell](#)

As the door closes on 2008 and the new year offers a new start, the Coast Guard is urging mariners and aviators to start the year off right and make the switch to a digital emergency beacon.

Beginning Feb. 1, 2009, the Coast Guard and other search and rescue personnel will only receive distress alerts broadcast using digital 406 MHz Emergency Position Indicating Radio Beacons. Search and rescue satellites will no longer process older model analog EPIRBs that only transmit on 121.5 or 243 MHz.

Because satellites will no longer receive analog transmissions, Rescue Coordination Centers will no longer receive transmissions from 121.5 EPIRBs, said Rick Arsenault, a search and rescue specialist at the First Coast Guard District Command Center in Boston.

The 406 EPIRB's signal is 50 times more powerful than the 121.5 beacon's, allowing satellites to better detect its signal and provide a more accurate search area for rescue crews.

"With 121.5 beacons, an initial position uncertainty can result in a 500 square mile search area," Arsenault said. "With a digital beacon, that initial search is reduced to 25 square miles."

Furthermore, a GPS-embedded 406 EPIRB can shrink a search area to about 100 yards and can also pinpoint the position of a distressed mariner within minutes.

Additionally, the number of false alerts with digital beacons is significantly lower than analog beacons.

Satellites are not capable of distinguishing between beacon and non-beacon sources using analog frequencies, making only about one in five alerts actually coming from a beacon. Many false alert signals come from ATMs, pizza ovens and stadium scoreboards.

With analog beacons, the only way to determine if an alert is an actual emergency is to send rescue crews to the area, which costs thousands of dollars, takes resources away from actual emergencies and puts the lives of responders at risk needlessly.



EPIRB owners are required by law to provide emergency contact information and a vessel description by registering their beacons with the [National Oceanic and Atmospheric Administration](#). This lets search and rescue personnel quickly confirm if a distress signal is real, and identify who and what type of boat or aircraft to look for. It also means accidental activation of an EPIRB may be resolved quickly with a phone call to the owner.

EPIRB registration needs to be accurate, complete and current, Arsenault said. When buying a used beacon, the new owner needs to register it with the new information.

“Otherwise we may be looking for the wrong boat and contact the wrong person if we receive a distress signal from the EPIRB,” said Arsenault.

EPIRB users can register their beacons in the U.S. 406 MHz Beacon Registration Database at: <http://www.beaconregistration.noaa.gov/> or by calling 1-888-212-SAVE. Beacon registrations must also be updated at least every two years or when information such as emergency contact phone numbers and other vital information changes. Registration information is only available to authorized search and rescue personnel.