

# Your TV Is About to Go Digital – So Will Your EPIRB!

WESTHAMPTON, NY (By Vincent Pica, Division Commander, Division-18 (1SR) United States Coast Guard Auxiliary) -



Back in 2006, we wrote about the value and use of the Emergency Radio Position Indicating Beacon – EPIRB. The article was all about how price was coming down so survivability was going up. The key now is whether someone will hear you. This column is about that.

## Can You Hear Me Now?

When EPIRBs first became available to the civilian population, they transmitted first on 121.5 MHz and then on 243.0 MHz. This was certainly better than waving your arms at a passing plane, but technology improved and, with that, it became too costly to maintain 3 separate radio beacon systems once the far more effective 406 MHz beacon became the state of the art. Good-bye old technology, hello new. As a result, a recent communiqué from the Coast Guard was issued to remind commercial and recreational boaters that beginning Feb. 1, 2009, the Coast Guard and other search and rescue personnel will only receive distress alerts from digital 406-MHz Emergency Position Indicating Radio Beacons (EPIRBs). This is because satellites will no longer process analog signals transmitting on 121.5 or 243.0 MHz.

As a consequence, the US Coast Guard is urging mariners (and aviators) to upgrade their onboard analog equipment to include a digital 406-MHz EPIRB.

## Why??

Who wants to spend money in this environment? There had better be a good reason why and – in this case – there are several. First, the 406-MHz EPIRB's signal is 50 times more powerful than the 121.5 or 243.0 MHz beacons. This allows satellites to better detect its signal and provide a more accurate search area for rescue crews. The 121.5 MHz signal rendered a search area of 12 square miles within which you were bobbing in your life-jacket. That's 12 miles wide and 12 miles high. That's a lot of water. The 406-EPIRB reduces that 12 square mile search area to 1 square mile. Upgrade to a GPS-embedded 406-MHz EPIRB and the search area can shrink to about 100 yards.

Second, you'd be pinpointed within minutes, whereas an analog beacon may only result in being registered in an hour or more.

Additionally, the number of false alerts with digital beacons is significantly lower than with analog beacons. The digital nature allows the satellite's technology to distinguish between a radio beacon and some other transmitter on the same frequency. In the analog days, only about one in five alerts actually ended up coming from a beacon – rather than from ATMs, pizza ovens and stadium scoreboards. This high rate of false alarms lowered responsiveness ("cry wolf" effect), took resources away from real emergencies (since crews had to be dispatched to find out if the alarm was real or not), was very expensive and put the lives of responders at risk needlessly. Can you imagine what the fire department would do if 80% of the in-coming fire alarms were false...?

## Says Who..?

This is an international, coordinated effort. The decision to stop processing the analog 121.5 and 243

MHz signals was made by the International Copas-Sarsat Program with guidance from the United Nations.

## **What Do I Do?**

If you have an old EPIRB aboard, it is now a fancy paperweight. It is worse than having nothing aboard – its presence gives an absolutely false sense of security. If you pull that pin, no one will hear. They won't be ignoring you – they won't be hearing you. Time to make the same decision you made years ago when you bought it. Yeah, the price may be steep but there is no single source of technology that can transmit where you are, within 100 square yards, and within minutes, than the modern GPS-equipped EPIRB.

Also note that EPIRB owners are required by law to provide emergency contact information and a vessel description. This is done when you register your EPIRB beacon with the National Oceanic and Atmospheric Administration. You can do it online at <http://www.beaconregistration.noaa.gov> or by calling 1-888-212-SAVE. This information will be in the box when you bring the device home. It is there by law. The information provided helps to take the "search" out of search and rescue by allowing rescuers to quickly gather vital information which results in faster rescues and increased chances of survival. It also means accidental activation of an EPIRB may be resolved quickly with a phone call to the owner.

For more information on EPIRBs and the switchover from analog signal to digital signal, please visit <http://www.sarsat.noaa.gov/>.

BTW, if you are interested in being part of USCG Forces, email me at [JoinUSCGAux2008@aol.com](mailto:JoinUSCGAux2008@aol.com) or go direct to MaryJo Cruickshank, who is in charge of new members matters, at [FSO-PS@emcg.us](mailto:FSO-PS@emcg.us) and we will help you "get in this thing..."