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EPIRBs, PPIRBs and GPIRBs – What!?

Many of us have heard of satellite systems hailing the USCG when a boater pulls the chord, pin, string, wire – pick one. A signal goes up from the boater's device to a satellite (in the old days it went up to planes that were, hopefully, flying by) and down to the Coast Guard's Rescue Coordination Center. This would start the "rescue clock starts now" clock at that point. The device is called an Emergency Position Indicating Radio Beacon – an EPIRB (said "ee"-purr-b).

Back in the day

The old model EPIRBs transmitted on dual frequencies of 121.5 and 243 megahertz (MHZ). This was hopefully picked up by passing planes and satellites. It could take four to six hours for someone or something to pass overhead before it reached the USCG. Also, the footprint that you were within could be as much as 12 square nautical miles. That is a square that is 12nm long and 12nm miles wide. That is a lot of water to cover. On the USCG website, it says that the 121.5/243MHZ devices are "no longer recommended."

The State of the Art

Interestingly, the 121.5MHZ frequency is favored for radio direction finding (RDF). So the newest EPIRBs now transmit simultaneously on 406MHZ and 121.5MHZ. The 406 reduces the footprint to one square nautical mile. And the 406MHZ is heard by satellites all over the world and, within an hour, the USCG RCC will have commenced coming to your aid. And the rescuers will also be looking for your EPIRB's 121.5MHZ signal with their RDF gear. In heavy seas, that may very well be the difference between passing right by you while you are in the trough – or knowing that you are just over the next wave.

Also, EPIRBs are classified by whether they will deploy automatically (Category I) or you have to "pull the pin" (Category II.) I am of two minds. I have a CAT-I on my own vessel but I am hoping that I get the chance to grab it before it floats free and starts signaling for help. I want them to find me – not it!

However, you can conjure up circumstances (knocked out in a capsize?) where you are in no shape to pull any pin and the EPIRB is at least drifting along with the boat, beeping and flashing away. So, you tend to plan around worst case.

But what are GPIRBs and PPIRBs? A "GPIRB" (gee-purr-b) is an EPIRB with a GPS signaler

built-in. It has all the functionality of the EPIRB but it also sends a GPS lat/lon. The search square in now roughly 30 ft by 30 ft. Unless you are trying to hide from the rescue team, they will find you. A "PPIRB" (pea-purr-b) is a Personal EPIRB. You wear it on your person. It also has the built-in GPS. When you attain a coxswain rating in the USCG Auxiliary (the person responsible for the boat, the crew and the mission), the USCG gives you a PPIRB. "Even if you go hiking, take this with you. If you get lost, we've got too much invested in you not to come get you!"

The basic criterion between the EPIRB, GPIRB and PPIRB is price. Smaller search area equals higher price. Smaller size (carry it on your person) equals higher price again. Prices range, based on a quick internet search, from $200 to $1000.

What to Do?

Do you need one if you never leave the bays and creeks Out East? Frankly, no. How about going out to the Canyons for shark? You could be anywhere on a 100nm rhumb line from Moriches Inlet to the Canyons. You are out of radio range and, unless you have a GPS aboard, you don't know your lat/lon within miles.

Think about it, bunky.

When you buy one, you will register all your details with NOAA, which maintains the global database. Keep that data up to date and one day you may find a red and white helicopter hovering over you.

BTW, if you are interested in being part of USCG Forces, email me at JoinUSCGAux@aol.com or go direct to the D1SR Human Resources department, who are in charge of new members matters, at DSO-HR and we will help you "get in this thing…"