

2006 GLSS SAFETY SEMINAR

EMERGENCY BEACONS

page 1 of 2

Definitions and Acronyms:

EPIRB - Emergency Position Indicating Radio Beacon - for boats

ELT - Emergency Locator Transmitters - for aircraft

PLB - Personal Locator Beacon - for people

COSPAS/SARSAT - Polar orbiting satellites

SARSAT - Search and Rescue Satellite-Aided Tracking (US)

COSPAS - Space System for Search of Distressed Vessels (Russian acronym)

GEOSAR - Geostationary satellites - fixed position

GMDSS - Global Maritime and Distress and Safety System

GPS - Global Positioning System

MHz - Megahertz, millions of cycles per second

NOAA - National Oceanic and Atmospheric Administration

USCG SAR - United States Coast Guard Sea and Air Rescue

Types of Emergency Position Indicating Rescue Beacon or Radio Beacon (EPIRB):

- ❑ 121.5/243 MHz EPIRB class A, B and S
 - ❑ 1980's technology with 0.1 Watt signal strength
 - ❑ Line of sight for both satellite and ground station to receive
 - ❑ Accuracy variance of location can be over 20 miles
 - ❑ 99.8% false alert signal rate requires a secondary confirmation prior to launching a rescue mission
 - ❑ NOAA will no longer respond to these signals by 2008/2009

NEW STYLE 406 EPIRB

- ❑ 406/121.5 MHz EPIRB
- ❑ 5 Watts for the 406 MHz signal and 0.25 Watts for the 121.5 MHz signal
- ❑ 406 MHz is used only for emergency signals, worldwide
- ❑ Signal is recognized by GMDSS
- ❑ Notification of alert is sent to the USCG SAR Rescue Coordination Center
- ❑ Can have internal or external feed GPS for positioning within 100 yards, 1 to 3 miles W/O GPS
- ❑ Category I - Float free with automatic actuation
- ❑ Category II - Manually activated

2006 GLSS SAFETY SEMINAR EMERGENCY BEACONS

page 2 of 2

Important 406 MHz considerations:

- ❑ Must be registered by owner with NOAA. Non-registered EPIRB will not be forwarded by the GEOSAR system
- ❑ No location can be determined except for GPS enabled units on GEOSAR
- ❑ 91.7% false alerts
- ❑ Depending on the satellite system that receives the signal - location or an alert may not be forwarded for one to two hours
- ❑ False alerts can result in a fine, especially if the unit is not registered
- ❑ 48 hour minimum transmit time battery
- ❑ Weighs a few pounds

PLB EPIRBS:

- ❑ All other 406/121.5 MHz items listed above apply except as noted
- ❑ Approved in the U.S. July 1, 2003
- ❑ All are category II
- ❑ Weigh 10 to 13 ounces
- ❑ Battery life is 24 hours
- ❑ Intended to be carried by a person, not on a boat
- ❑ Must be held or positioned with fragile antenna up and clear of the water

NOTE : Do not confuse a PLB with devices such as the ACR Mini B 300 personal floating EPIRB

IMPORTANT FOR ALL 406 EPIRBS:

- ❑ Must be registered with NOAA
- ❑ Must follow battery update schedule
- ❑ Must keep information on file up to date
- ❑ Must inform emergency contacts of your plans
- ❑ Periodic self test function use is encouraged by the Coast Guard
- ❑ Once activated in an emergency do NOT turn the unit off until rescued
- ❑ Cancellation of an alert - Turn off unit, immediately contact the USCG and inform them of the error