FIELD REFERENCE / PUBLICATION EXCERPT

Emergency Alerts and Radio at Sea

ORIGINAL PUBLICATION

A Boater’s Guide to the Federal Requirements for Recreational Boats

PUBLISHER

U.S. Coast Guard, Boating Safety Division

EDITION

November 2023

INCLUDED PAGES

Emergency Alert/Communications, pages 44 through 47, beginning at the original section heading.

Compiled for The Survival University. The credited publisher produced the original material.

Emergency Alert/Communications

SARSAT - How the System Works

EPIRBs and PLBs operate as part of a worldwide distress system. An international satellite constellation maintains a vigilant, global "listening" watch for satellite EPIRB distress signals. The National Oceanic and Atmospheric Administration (NOAA) operates satellites, ground stations, and an alert distribution system serving the United States and a large segment of the international community.

When activated, the satellite EPIRB transmits a distress signal with a beacon-unique identifying code. The system detects the signal, calculates an accurate distress position, checks the unique identifying code against the EPIRB registration database (vessel and point of contact information supplied by the owner) and routes the distress alert with registration information to the responsible U.S. Coast Guard (or international) Rescue Coordination Center (RCC).

406 MHz EPIRBs with GPS capability either internally or externally supplied positional information also provide an immediate GPS position in the information passed to the RCC, and geostationary satellites make detection almost immediate. If the EPIRB does not have the ability to provide a GPS position, the process to determine a position takes about one hour on average and almost always less than two hours.

Satellite EPIRBs also include a homing beacon and strobe to help rescue forces quickly locate the distress scene. Satellite beacons have significant coverage, with alerting timeliness, position accuracy, and signaling advantages over other devices. Before purchasing or using other than a 406MHz EPIRB, be sure you understand its capabilities and limitations.

Mount the EPIRB to float free, according to the manufacturer's instructions, if possible. Otherwise, make sure it is readily accessible. Register the EPIRB with NOAA, according to the instructions provided with the beacon or at the NOAA website: www.sarsat.noaa.gov. Registration is mandatory, improves response time, and reduces false alarms.

Radio Regulations

Most recreational vessels less than 65.6 feet (20 meters) in length are not required to carry a marine radio. Any vessel that carries a marine radio must follow the rules of the Federal Communications Commission (FCC).

Licensing

The FCC does not require most operators of recreational vessels to carry a radio or to have an individual license to operate VHF-FM marine radios, EPIRBs, or any type of radar. Operators must however follow the procedures and courtesies that are required of licensed operators specified in the FCC rules. You may use the name or registration number of your vessel to identify your ship station.

Recreational Vessels that may be required to be licensed:

- Power-driven driven vessels more than 65 feet (20 meters) in length.
- Any vessel, including a recreational vessel, on an international voyage.

Radio Listening Watch

Vessels not required to carry a marine radio for example, recreational vessels less than 65.6 feet (20 meters) in length, but which voluntarily carry a radio must maintain a watch on

Channel 16 (156.800 MHz) or VHF Channel 9 (156.450 MHz), the boater calling channel, whenever the radio is operating and not being used to communicate.

Boater Calling Channel (VHF Channel 9)

The Federal Communications Commission established VHF-FM channel 9 as a supplementary calling channel for noncommercial vessels (recreational boaters) at the request of the Coast Guard. A ship or shore unit wishing to call a boater would do so on channel 9, and anyone (boaters included) wishing to call a commercial ship or shore activity would continue to do so on channel 16. Recreational boaters would continue to call the Coast Guard and any commercial facility on channel 16. For a complete listing of VHF channels and frequencies visit the U.S. Coast Guard Navigation Center website at https://www.navcen.uscg.gov/us-vhf-channel-information .

Digital Selective Calling (DSC)

Digital Selective Calling (DSC) allows boaters to instantly send an automatically formatted distress alert to the Coast Guard or other rescue authority anywhere in the world. DSC also allows boaters to initiate or receive distress, urgency, safety, and routine radiotelephone calls to or from any similarly equipped vessel or shore station, without requiring either party to be near a radio loudspeaker.

DSC acts like the dial and bell of a telephone, allowing you to “direct dial” and “ring” other radios, or allowing others to “ring” you without having to listen to a speaker. New VHF and HF radiotelephones have DSC capability.

All DSC-equipped radios, and most GPS receivers, have a data interface connector. The interface allows most models of GPS to be successfully interconnected to DSC-capable radios, regardless of manufacture. The Coast Guard recommends that you interconnect your GPS and DSC-equipped radio. Doing so may save your life in an emergency situation.

Users of a VHF-FM marine radio equipped with Digital Selective Calling will also need to obtain a Maritime Mobile Service Identity (MMSI) number. Vessels not required to carry a marine radio (e.g., recreational boaters) that operate in U.S. waters can obtain an MMSI through approved organizations such as BOAT US (1-800-563-1536), the U.S. Power Squadrons/America’s Boating Club, and Shine Micro (primarily for AIS).

Sending a Distress Call

DSC MAYDAY: If your vessel is equipped with a DSC-capable radio and it is properly connected to a GPS receiver, and if you have obtained and registered an MMSI number, you need only press the red DSC Emergency Call Button for 5 seconds. Your vessel information and position will automatically be transmitted, including the nature of the distress (if entered), and you should receive a DSC reply. Upon receipt of this acknowledgement, your radio should automatically shift to Channel 16 to continue voice communications with rescue assets. If no

reply is received, switch the Channel 16 and use the VHF MAYDAY procedure. More information on Digital Selective Calling is available online at https://www.navcen.uscg.gov/dsc-distress.

VHF MAYDAY: Channel 16 is the primary radio channel for ships in distress. To make a distress call on marine VHF-FM tune to Channel 16:

1. Make sure radio is on and tuned to Channel 16.
2. Distress signal "MAYDAY" spoken three times.
3. The words "THIS IS" spoken once.
4. Name of vessel in distress spoken three times and the call sign or boat registration number, spoken once.
5. Repeat "MAYDAY" and name of vessel, spoken once.
6. Give the position of vessel by latitude or longitude or by bearing (true or magnetic, state which) and the distance to a well-known landmark, such as a navigational aid or small island, or in any terms that will assist a responding station in locating the vessel in distress. Include any information on vessel movement such as course, speed, and destination.
7. Number of persons onboard.
8. Nature of distress (e.g., sinking, fire).
9. Kind of assistance desired.
10. Any other information that might facilitate rescue, such as length or tonnage of vessel, number of persons needing medical attention, hull color, cabin, masks, etc.
11. The word "OVER".

Maritime Search and Rescue

To report Maritime Search and Rescue Emergencies, call the following numbers:
For the Great Lakes, Gulf and East Coasts: Atlantic Area Command Center: (757) 398-6700
For the Hawaiian, Alaskan and Pacific Coasts: Pacific Area Command Center: (510) 437-3701.

False Distress Alerts: It is unlawful to intentionally transmit a false distress alert or to unintentionally transmit a false distress alert without taking steps to cancel that alert. Boaters who transmit a false distress alert are required to immediately cancel the alert.

If you inadvertently transmit a false DSC alert:

1. Reset the equipment immediately.
2. Tune for radiotelephony on the associated distress and safety frequency in each band in which a false distress alert was transmitted.
3. Transmit a broadcast message to "All Stations" giving the ship's name, call sign, time the alert was transmitted and MMSI, and cancel the false alert on the distress and safety frequency in each band in which the false distress alert was transmitted.