

Digital Selective Calling for Recreational Boats

What is Digital Selective Calling (DSC)? DSC is an automated calling system that is part of the Global Maritime Distress and Safety System (GMDSS). GMDSS is a major overhaul of the international system governing safety radio equipment on commercial ships to improve safety on the high seas. DSC provides automated distress calls and limited automation of ship-to-ship and ship-to-shore radio traffic. Since February 1999, full compliance with the GMDSS requirements has been mandatory for vessels subject to the Safety of Life at Sea (SOLAS) Convention, which includes all U.S. ships of 300 gross tons or more and some passenger ships carrying passengers for hire. Recreational boats not engaged in trade are not required to carry GMDSS equipment.

On 1 February 1999, the voice watchkeeping requirement on 2182 kHz (the medium frequency band, used by vessels at sea) officially ceased for shore stations and SOLAS ships. By 2005, the voice listening watch on VHF channel 16 for vessels at sea may be terminated, as well. It may become difficult to establish communications between compulsorily outfitted vessels and non-DSC equipped craft in an emergency situation. Although the U.S. Coast Guard has stated that there are no plans to do so, the possibility exists that it may eliminate voice watchkeeping on channel 16 in the future. It would be to their advantage to do so. Distress calls from DSC radios carry a unique identifier that makes them traceable. The CG should not get many hoax Mayday calls from DSC radios.

The U.S. Coast Guard is not expected to be able to monitor automated VHF distress calls until about 2006. However, these calls can be heard by commercial vessels, which are required to monitor VHF channel 70. MariTEL, operator of coast radio stations in the U.S., expects to have DSC capability available beginning in limited areas in 2001. MariTEL will be able to monitor, and pass to the USCG, DSC distress signals transmitted within approximately 50 miles of the U.S. coast line in those areas.

How does DSC affect recreational boaters?

Small craft are strongly urged to upgrade to the new standard to take the search out of search and rescue. Imagine calling a tow truck and saying I am in need of a tow in Arkansas. How about a city, an intersection, and a description of the vehicle? DSC can do that for you on the water automatically. Anyone boating near commercial traffic or traveling more than a few miles from shore with a DSC radio installed will benefit from:

- One touch distress signaling (Mayday calls) that transmits your identity to search and rescue authorities. When interfaced with GPS or Loran, the transmitter's position and time of fix will be sent to the Coast Guard and all DSC-equipped vessels within range (about 20 nm). Your chances of rescue are significantly increased, especially at night or in inclement weather.
- Continuously sending the distress signal even if the captain becomes incapacitated
- Digital call-up directly to another DSC-equipped vessel or shore station, much like a person-to-person telephone call.
- Call waiting features.

DSC will allow recreational boaters to hail other boats automatically and be switched to a working voice channel. When your boat is hailed, the radio will sound an alert tone. You will no longer have to listen intently to routine traffic because hails to your vessel will sound more like a telephone ringing!

Features incorporated in DSC:

- VHF channel 70 is reserved for these digital transmissions. If you have an older non-DSC radio that is channel 70 equipped, it is illegal to use channel 70.
- Radios (other than hand-held) submitted to the FCC for type acceptance after June 1999 must have DSC Mayday capability, so as DSC radios phase in, fewer recreational boaters will be monitoring channel 16. If your boat is not equipped with a DSC radio, you will run the risk of delayed response to an emergency on board.

What equipment is recommended for the recreational boater?

To take advantage of GMDSS, you must obtain a VHF-FM radio that incorporates DSC. To use automated distress calling, your transmitter must have a unique identity, a Maritime Mobile Service Identity (MMSI), that is registered with the search and rescue database. During an emergency, pushing a button will automatically transmit a May Day call which includes the MMSI number (and location if the radio is linked to a Loran or GPS receiver) to every DSC radio within range. When the US Coast Guard receives a distress alert with the unique MMSI number, it will use the information on file (emergency contact number, type of vessel, etc.) to mount a more effective rescue effort.

The FCC will only issue an MMSI to vessels that have marine radio station licenses (\$120 for ten years). BoatU.S. is authorized to issue MMSI numbers to vessels with DSC capable radios, but which are not required to have a radio station license. An MMSI can be obtained from BoatU.S. at no charge. Contact BoatU.S. by e-mail at mmsi@boat.us, call 800-563-1536, or on-line at www.boat.us. Click on the Boating Safety button, then select "VHF/DSC MMSI REGISTRATION." The "About" link at the on-line registration page will produce an explanation of DSC and distress alerts.

For more information on GMDSS visit:

<http://www.navcen.uscg.gov/marcomms/gmdss/> (note .gov may change to .mil)