

U.S. GMDSS TASK FORCE INFORMATION BULLETIN GMDSS FOR RECREATIONAL VESSELS USING VHF RADIO

Introduction

A marine VHF radio is the single most valuable radio for emergency situations. Thanks to the Global Maritime Distress and Safety System (GMDSS), recreational boaters may now take advantage of enhanced communication options available for VHF marine radios. While recreational boaters are not required to participate in GMDSS, for safety reasons they may want to upgrade to a VHF radio with Digital Selective Calling (DSC). DSC is primarily designed to serve boaters in an approximately 20-mile coastal zone, and in waterways shared by commercial and recreational vessels.

Advantages of Digital Selective Calling

A DSC-equipped VHF radio has all the features of your current VHF radio. In addition, it lets you participate in GMDSS and provides you with these convenient, safety-oriented features:

- * Includes a capability to send automatic distress alerts
- * Achieves greater range for distress alerts in the DSC mode
- * Automatically sends your vessel's identification as part of the distress alert
- * Automatically includes your vessel's position in the distress alert if connected to a GPS
- * Enables direct ship-to-ship calls avoiding channel 16 congestion
- * Automatically alerts to incoming calls including distress alerts and severe weather warnings

DSC enables a VHF radio to operate more automatically. It allows boaters to send a digital call directly to another DSC-equipped vessel or shore station. Channel 70 has been set aside as the VHF-DSC digital distress and calling channel. Once the DSC call has been confirmed, both parties switch to an agreed voice working channel.

DSC Radio Availability

There are many DSC-equipped VHF radios on the market. Since mid-1999, the FCC has required marine radio manufacturers to include a DSC capability to ensure a gradual transition to DSC. These radios are now widely used across the recreational market and most meet the Class D standard for functionality. Depending on the communications options you need, you will be able to choose from a variety of features in different price ranges. DSC technology is not required for hand-held VHF radios but is available in some models and is particularly attractive in models with integral GPS. Recreational boaters are not required to purchase or use DSC but should be aware of the added safety features it provides. Although the boating community has apparently taken up VHF Radio with DSC capability, the Task Force is concerned that some users have not registered their radios for the MMSI number required to enable the automatic features. An even greater concern is that relatively few users have connected a GPS navigation receiver. An accurate position automatically sent with a distress alert greatly enhances your

rescue! If you have trouble making the connection, you should get assistance from a service technician.

DSC Distress Calls

DSC makes calling for help a lot easier and faster. With the push of a button, your digital distress message containing your Maritime Mobile Service Identity (MMSI) number will be received by both shore stations and nearby DSC-equipped vessels. Digital signals have a greater range, which increases your chance of being heard. If you have a GPS or other GNSS (Global Navigation Satellite System) receiver, you should connect it to your DSC radio so that your position will automatically be included in your distress calls to the Coast Guard. Some DSC radios have a GPS card already installed by the manufacturer. Since DSC radios receiving distress alerts are automatically switched to VHF Channel 16 for subsequent distress communications, you should then monitor Channel 16 for replies and acknowledgments. Consult your manufacturer's Operating Manual for precise procedures.

Watch standing

DSC maintains a "quiet watch", meaning that you only receive distress and urgent "all ships" calls and calls meant for you. The Coast Guard monitors channel 16 in their continuous coastal network, known as Rescue 21, and has completed a major upgrade to the network to monitor DSC Channel 70 in the continental U.S. and the Great Lakes. The Coast Guard intends to continue to monitor voice Channel 16 indefinitely to assist vessels without DSC. Large ships subject to the Safety of Life at Sea (SOLAS) treaty have been guarding channel 70 since 1 February 1999 but also are required to maintain the watch on channel 16 to communicate with vessels not equipped with DSC. The FCC Rules require all users of VHF radios, including voluntary users, to keep the radio turned on and watching the appropriate channel at all times when underway and not working on another channel. For regular VHF radios, the watch should be on Channel 16; for VHF-DSC radios, the watch is on Channel 70.

Communicating with Other Vessels

Recreational boaters operating near commercial waterways should know that large ships also monitor Channel 13 for ship-to-ship safety communications. Therefore, if you are unable to hail a large ship on Channel 16, you may call on Channel 13 in a safety situation or make an "all ships" call on DSC. To make routine DSC calls to other vessels or shore stations you must know their identification (MMSI). Vessels equipped with electronic chart plotters and AIS will have those data available on the chart plotter screen.

Training and Licensing

Recreational vessels are not required to hold an operator's license to use VHF radios. They are permitted to use VHF-DSC on a voluntary basis but are not required to receive any formal training. Since DSC is still a relatively new technology and there is great potential to

inadvertently increase the workload of the search and rescue system through false alerts, it is important that you thoroughly review your radio's operating instructions. It is strongly recommended that users know how to cancel accidental alerts through their equipment or by contacting the U.S. Coast Guard. Boating safety courses that include VHF-DSC are available from the Coast Guard Auxiliary and the U.S. Power Squadrons. To find a boating safety course in your area, call 1-800-336-BOAT, check the BoatUS website www.boatus.com or the USPS website at www.usps.org.

DSC Registration

To use DSC, you must obtain a Maritime Mobile Service Identity (MMSI) number. The MMSI acts as your unique maritime "phone number" used by search and rescue authorities to identify you and by other boaters that wish to call you. When you obtain an MMSI, you will be asked for certain information about you and your boat including contact phone numbers ashore. This information is included in a national search and rescue database that the Coast Guard will use to locate and identify you in an emergency. All DSC radios are required by the FCC Rules to be registered. Registration for an MMSI number can be obtained by filing FCC form 605, an application for a radio station license, and paying the license fee. As station licenses are no longer required for vessels less than 65 feet long operating on VHF exclusively in U.S. waters, the FCC working with the Coast Guard and the organizations identified below, has authorized them to register and issue MMSI numbers to small vessels which do not require a Ship Station License. These organizations can make MMSI assignments online or by calling the toll-free number. There may be a fee for the service:

BoatUS MMSI@boatus.com or 1-800-563-1536

U.S. Power Squadrons www.usps.org/php/mmsi

Shine Micro <https://www.shinemicro.com/About-MMSI/> or 1-360-437-2503

VHF radio is the primary GMDSS system used by recreational boaters. Cellular phones are not part of GMDSS and the Coast Guard does not advocate their use as a substitute for a marine radio for safety purposes. Cellular transmissions are not monitored by the Coast Guard or heard by other vessels in the vicinity. When in distress, however, it is appropriate to use any means available to arrange for assistance. Recreational vessels operating with cell phone only, should record the phone number of the local Coast Guard station, know the approximate limits of offshore coverage of their cellular system, and take care to maintain charged batteries. The Coast Guard can be reached by dialing "911" and asking to be connected to the Coast Guard.

The GMDSS Task Force

This Information Bulletin has been prepared by the GMDSS Task Force, a U.S. Coast Guard sponsored group established to coordinate identify problems, implement solutions, and disseminate GMDSS information. The Task Force is soliciting feedback on problems encountered and invites responses from all concerned. Address responses to Bill Cairns, Task Force Director, c/o RTCM, 2200 Wilson Blvd Suite 102-109, Arlington VA 22201; by telephone (please leave a message) +1 703-527-2000; or email bcairns@rtcm.org. See also other Task

Force documents on the GMDSS portion of the Coast Guard website at www.navcen.uscg.gov/Task-Force-background. Reproduction and wide dissemination of this document is encouraged.

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