U.S. NATIONAL IMPLEMENTATION TASK FORCEN GMDSS 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 new Global Maritime Distress and Safety System (GMDSS), recreational boaters may now take advantage of enhanced communication options available for VHF marine radios. GMDSS is a major overhaul of the international rules governing safety radio equipment on large commercial ships. Essentially, it replaces Morse telegraphy with more advanced digital radio and satellite communication systems. 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 as part of the distress alert if connected to a GPS or Loran receiver
- * 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 several DSC-equipped VHF radios on the market. Since mid-1999, the FCC has required marine radio manufacturers to include a DSC capability in all new models. This will ensure a gradual transition to DSC. 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. For several years the FCC permitted DSC radios conforming to a minimum specification recommended by the RTCM SC-101 Committee but this has since been withdrawn. The Task Force recommends purchase of radios conforming to the Internal Class "D" standard as a better and more useful radio. Recreational boaters are not required to purchase or use DSC but should be aware of the added safety features it provides.

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 LORAN 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. It is always recommended that you utilize every means of

communication during an emergency situation. 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 acknowledgements. Consult your manufacturer's Operating Manual for precise procedures.

Watchstanding

DSC maintains a "quiet watch", meaning that you only receive distress and urgent "all ships" calls and calls meant for you. The Coast Guard presently monitors channel 16 in their continuous coastal network and is upgrading the network to also monitor DSC Channel 70 but the 'Rescue 21' upgrade will not be completed until about 2011. 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 be able to communicate with vessels without DSC. New FCC Rules changes 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 over 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).

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 a 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. Boating safety courses that include VHF-DSC are expected to be available in the future 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 or check the BoatUS website www.boatus.com. There is an excellent DSC tutorial on the BOATUS wesite at www.boatus.com/mmsi.

DSC Registration

To use DSC, you must obtain a Maritime Mobile Service Identity (MMSI) number. 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. An MMSI number can be obtained by filing FCC form 506, 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 companies identified below, has authorized these companies to issue MMSIs to small vessels which do not require a Ship Station License. These organizations can make MMSI assignments on line or by calling the toll free number and there is no fee for the service:

BoatUS www.boatus.com 1-800-395-2628 Sea Tow Service Int. www.seatow.com 1-800-4-SEATOW

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

Cellular Phones and Citizen's Band Radio

VHF radio is the primary GMDSS system used by recreational boaters. Citizen Band (CB) radio and cellular phones are not part of GMDSS and their use will not be changed. The Coast Guard does not advocate CB or cellular phones as a substitute for a marine radio for safety purposes. CB radio and cellular transmissions are not monitored by 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 and know the approximate limits of offshore coverage of the cellular system. The Coast Guard can be reached by dialing "911" and ask to be connected to the Coast Guard. The earlier code "*CG" is no longer used.

Other GMDSS Radio Systems

Larger ocean-going recreational vessels may obtain information on other safety systems and equipment that are approved for GMDSS, by requesting a copy of an Expanded Task Force Information Bulletin entitled "GMDSS and the Recreational Boater", which covers:

- * 406 Mhz Emergency Position Indicating Radio Beacons (EPIRBs)
- * Inmarsat maritime satellite communications systems
- * Marine Safety Information broadcasts including Navtex and SafetyNET
- * MF/HF Single Sideband Radios with DSC
- * Search and Rescue Transponders (SARTs)

THE GMDSS TASK FORCE

This Information Bulletin was originally approved on 21 April 1998 and updated on 16 May 2002 and 9 August 2006 by the National GMDSS Implementation Task Force, a U.S. Coast Guard sponsored group established to coordinate implementation problems, recommend their resolution, and disseminate GMDSS information. The Task Force is soliciting feedback on problems encountered and invites responses from all concerned. Address responses to Captain Jack Fuechsel, Task Force Executive Director, 1600 North Oak Street, #427, Arlington VA 22209; phone 703-527-0484; or email gmdss@comcast.net. See also other Task Force documents on the GMDSS portion of the Coast Guard website at www.navcen.uscg.gov/marcomms (click on GMDSS, then on GMDSS Task Force). Reproduction and wide dissemination of this document is encouraged.