

## **'DSC 101A' by Ron Trossbach (updated May 2013)**

The use of Digital Selective Calling (DSC) in VHF and SSB radios is relatively new and not widely understood. This paper will give the reader a broad view of what DSC is and how it applies to recreational boats. Web site links and references are included for more detailed explanations.

DSC definitely has a place in small boat operations and is simple to install with potentially huge safety benefits. It is no longer necessary to read latitude and longitude numbers over the radio in emergencies or when exchanging position information with another boat. DSC does this automatically in less than one second.

DSC capability should already be in VHF and SSB radios built/sold in the US after June 17, 1999. Class D DSC fixed VHF radios purchased after March 2011 will have improved features including two channel CH 70 reception and test calling.

The physical hookup is relatively simple - two wires between any model radio and any model GPS. If the boat has a FCC Ship Station License a unique nine digit Mobile Maritime Service Identifier (MMSI) will be on the license. Boats not leaving the United States can obtain a free MMSI from several US boating organizations.

“The Coast Guard urges, in the strongest terms possible, that you take the time to interconnect your GPS and DSC-equipped radios. Doing so may save your life in a distress situation!” See <http://www.navcen.uscg.gov/?pageName=mtDsc>  
This USCG site also provides the background, history and description of how DSC fits into the Global Marine Distress and Safety System (GMDSS).

Boat U.S. Foundation has an online tutorial on Marine VHF titled 'Can You Hear Me?' which is an interactive run-down of everything a boater needs to know about using a marine VHF radio with Digital Selective Calling (DSC). The headline on this announcement is "Spending 35 Minutes Online Could Save Your Life". See <http://www.boatus.com/mmsi>. ICOM North America has a DSC Informational Video on Individual and Emergency Calls at <http://www.youtube.com/watch?v=JZOXtB1SoIs>

At a bare minimum, responsible boaters should be capable of sending a DSC Distress Call as well as taking the correct action when a DSC alarm sounds on their radio. DSC is in place and operating now, especially in US coastal area where RESCUE 21 is operational. This is a huge safety improvement that all boaters should understand and be prepared to use in case of emergency.

**MAKING A DSC DISTRESS/MAYDAY CALL.** This call is only made when personnel and/or property are in immediate danger and immediate assistance is requested. Press the Red Distress Button on your radio and hold it in for five seconds. Listen for a DSC Distress Acknowledgement. After it is received, or if it isn't acknowledged, shift to the VHF Distress, Safety and Calling Frequency (VHF Ch-16) or a SSB Safety and Hailing Frequency (2182, 4125, 6215, 8291, 12290 or 16420 kHz, USB) and issue a voice MAYDAY, following the format on the DSC Distress Communication Form.

Persons in distress can use any frequency/means to alert other mariners/persons ashore to their plight.

**IF YOU HEAR A DSC DISTRESS CALL.** Shut the radio alarm off by pressing any button on your radio. Write down the MMSI and position information showing on your radio display screen. Wait 3-5 minutes for an authority to answer the call. If no other station replies attempt to verbally relay the MMSI and position information to USCG. Contact the station in distress if no one else does and go to their rescue, if you are able to do so.

**IF YOU ACCIDENTALLY MAKE A DSC DISTRESS CALL.** Shut the call off. Get on the VHF Distress, Safety and Calling Frequency (VHF Ch-16) or SSB Safety and Hailing Frequency (4125 kHz, USB) and make an all stations announcement to cancel the DSC Distress Call.

**DSC DISTRESS COMMUNICATION (MAYDAY) FORM.** (See Below) A copy of this form should be filled out with boat description ahead of time and posted near each fixed DSC VHF Radio on board. This form can be filled out and used as a script when issuing voice MAYDAY Calls.

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# DSC DISTRESS COMMUNICATION FORM

Post this form by each permanently installed radio equipped with DSC

Fill in Items 5, 6, 11 and 13 prior to getting underway.

## **SPEAK SLOWLY – CLEARLY – CALMLY**

1. Make certain your radio and GPS are turned on and the radio is on High Power.
2. Send DSC Distress Call – **press Red Distress Button for 5 seconds.** Wait for a DSC Distress Acknowledgement then shift to VHF Ch 16 or SSB 4125 kHz (USB) for voice instructions.
3. If no DSC Acknowledgement is received Select **VHF Ch 16 or SSB 4125 kHz (USB)**
4. Press microphone button and say: **“MAYDAY - MAYDAY - MAYDAY”**
  
5. Say: **“This is (Your boat name, MMSI or Call Sign)”**
6. Repeat once: **“MAYDAY (Your boat name)”**
7. **Tell where you are:**
  - a. **Latitude and longitude** \_\_\_\_\_
  - b. **Navigation Aids or Landmarks nearby** \_\_\_\_\_
  - c. **Direction and distance to a Prominent Landmark** \_\_\_\_\_
8. **State the nature of your distress and the kind of assistance required:**  
\_\_\_\_\_
  
9. **Give the number of people aboard and condition of any injured** \_\_\_\_\_
10. **Estimate present seaworthiness of your boat.** \_\_\_\_\_
11. **If time allows - Briefly describe your boat:**
  - a. **Type – (Sail or Power)** \_\_\_\_\_
  - b. **Length in feet-** \_\_\_\_\_
  - c. **Hull color-** \_\_\_\_\_
  - d. **Trim color-** \_\_\_\_\_
  - e. **Masts-** \_\_\_\_\_
  - f. **Other Identifying Info-** \_\_\_\_\_
12. Say: **“I will be listening on Channel 16 or 4125 kHz Upper Sideband ”**
  
13. Say: **“This is (Your Boat Name, MMSI or Call Sign) OVER”**
14. Release microphone button and **Listen for an Answer.**
15. **Activate 406 MHz EPIRB** by following directions on Beacon Body. Ensure EPIRB remains vertical, antenna pointing upward. Take EPIRB to Survival Craft if abandoning ship.
16. If you do not receive an answer **Repeat Call beginning at Item 3.**
17. If no answer again **Check to see if radio is turned on and VHF is on CH 16, high power or shift SSB to higher emergency frequencies for communications with distant shore stations.**