

VHF RADIOS WITH DSC

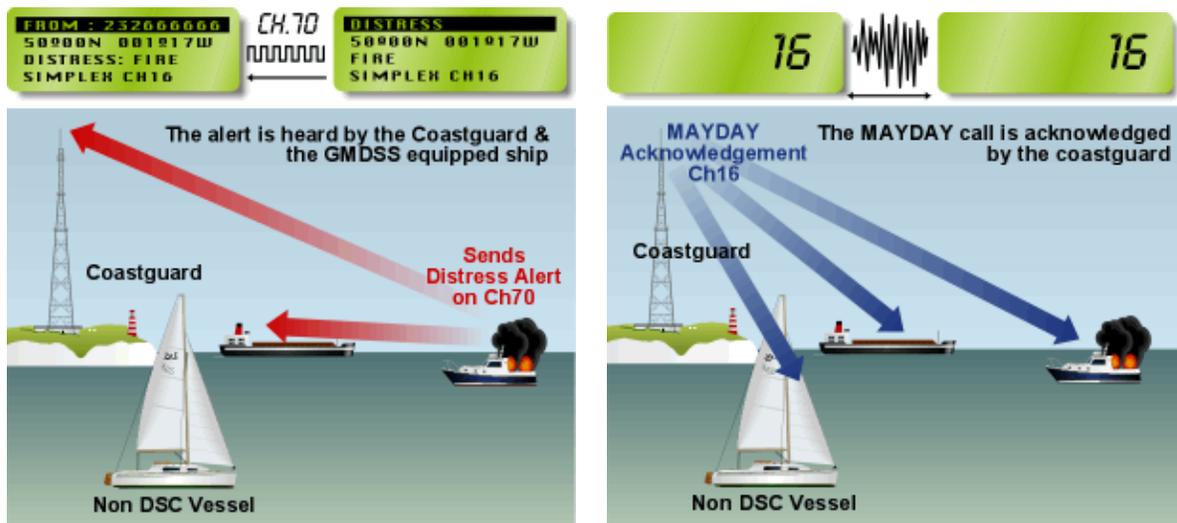
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Mac SER (Safety Equipment Regulations) require all boats to carry a permanently installed VHF Radio with DSC and GPS connectivity, (as well as a VHF handheld). These DSC/GPS radio capabilities are critical safety features, allowing boats to quickly and easily call for help if/when needed.

DSC (Digital Selective Calling) is an electronic digital communication capability included on all modern VHF marine radios. It allows digitally coded information to be transmitted (which can be very helpful in an emergency) along with traditional verbal radio calls; as well as enabling point-to-point radio calls.



The simplest component/feature of a VHF-DSC radio is the DISTRESS button. Simply pressing it, transmits an immediate distress call to other ships in range and the USCG along with your ship's ID and location. Then, follow-up broadcast notification and communication can transpire on VHF Ch 16 as shown below.



All fixed-mount VHF radios sold in the US after 1998 are required to have Digital Selective Calling (DSC) capability. As part of the Coast Guard's Rescue 21 system, properly installed and registered VHF-DSC radios allow a boat in distress to instantly transmit via a single button a "mayday" digital distress call to all VHF radios in range. This distress message can contain the identity of the ship in distress as well as its location. All commercial shipping monitors these calls, in addition to the USCG. This is the best, fastest way to summon help in many circumstances.

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EMERGENCY ALERTS

If/when a VHF-DSC distress is triggered, the transmitting radio will automatically broadcast an alert to all other DSC enabled boats in the area. Your receiving radio will sound an alert notification signal and display the alert screen. **Skippers should be sure all crew members are aware of the DSC alert signal sound and their specific radio's features**, including use of the Distress button. *For DSC alerts, it isn't fast having un-informed crew members searching the cabin in the middle of the night trying to locate where the loud "beeping" noise is coming from -- nor is it good seamanship when another vessel may be in distress.*

INSTALLATION

To be most effective, a VHF radio with DSC must be connected to a GPS receiver. Some newer radios have an integral GPS, but most require wiring to the boat's GPS or electronic system (Nav chart plotter). This allows the unit to transmit the lat/lon location of the boat along with the distress signal. A DSC radio that is not connected to the GPS unit will still transmit a distress signal, but without location. Thus, key time is lost while rescuers search for you. Connecting the GPS to the radio is usually fairly straight-forward -- consult your VHF manual or a marine electronics technician for help.

REGISTRATION

In addition to being properly installed, VHF-DSC radios must be registered. To do this, you need to obtain an MMSI (Maritime Mobile Service Identity) number. This MMSI number is permanently associated with the boat and can be obtained for free for US-registered boats from BoatUS:

<http://www.boatus.com/mmsi/>

The MMSI number acts like a "phone number" for your boat. It identifies your boat when a distress signal is activated. Additionally, it allows you to have an individual radio conversation with specific boats via dialing their MMSI number.

Once you obtain your MMSI number, you need to program it into the radio. Follow the instructions in your manual. If you have already obtained your MMSI number, take 5 minutes now to verify that the information listed is correct for your boat, such as contact information, boat name and description, and emergency contact person.

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Note, some radios/manufacturers have limitations on entering additional/updated MMSI numbers – for example if you move a radio between boats. Be sure to refer to your owners/setup manual, contact your manufacturer, and/or allow time for the radio to be sent in for a "reset" if necessary – and be sure you enter the MMSI correctly the first time.

The Mac Committee requires that all boats with DSC-capable radios obtain an MMSI number and then provide it to the Committee. This would enable us to contact an individual boat if required via VHF-DSC and also serves as a database for the USCG in the event of a distress.

Please take the time this boating season to make sure your VHF-DSC radio is properly connected to a functioning GPS. Also make sure you have obtained an MMSI number and programmed it into your radio.

If you have any questions, please contact us at safety@byc.com, macchair@byc.com, office@byc.com or through the BYC office @ 313-822-1853

Note: The purpose of this article is to highlight concepts for how you and your crew can race as safely as possible. As always, ultimate responsibility for the safety of the crew and the decision whether to race or to stop racing is that of the skipper (RRS4, MSR2). This email is meant as a courtesy only and you should always refer to the Notice of Race, Sailing Instructions and Safety Regulations, which govern the race.

Credits to Matt Gallagher and the Chicago Yacht Club for the original content of this Sailing Safety Series Article