

## 2 VHF Radios

### Links to applicable regulations

[46 CFR 28.245](#) – Communication equipment

[46 CFR 28.375](#) – Emergency source of power

[33 CFR 26.03](#) – Bridge to bridge regulations

### Checklist for this item

	2 VHF radios
	<ul style="list-style-type: none"><li>• 1 VHF radio capable of transmitting and receiving on the frequency or frequencies within the 156–162 MHz band necessary to communicate with a public coast station or U.S. Coast Guard station serving the area in which the vessel is operating.</li></ul>
	<ul style="list-style-type: none"><li>○ This radio must continually monitor channel 16 when not working on another frequency.</li></ul>
	<ul style="list-style-type: none"><li>• A second VHF radio is required and must be capable of transmitting and receiving on VHF FM channel 22A (157.1 MHz). (Required by the Bridge to Bridge Radiotelephone Act)</li></ul>
	<ul style="list-style-type: none"><li>• The FCC has determined that the “Watch” or “Scan” features of VHF radios do not meet requirements for monitoring the designated channels. Therefore, <b>two VHF radios are required.</b></li></ul>
	Ensure that both radios are able to transmit and receive.
	The radios must be connected to an emergency source of power should the ships power be lost.
	<ul style="list-style-type: none"><li>• capable of supplying all connected loads continuously for at least <b>three hours</b> be located outside the main machinery space.</li></ul>
	The principal operating position of the communication equipment must be at the operating station.
	Location of the equipment must be such as to:
	<ul style="list-style-type: none"><li>• Ensure safe operation</li></ul>
	<ul style="list-style-type: none"><li>• Facilitate repair</li></ul>
	<ul style="list-style-type: none"><li>• Protect against vibration, moisture, temperature, excessive current/voltage.</li></ul>
	<ul style="list-style-type: none"><li>• Minimize water intrusion from windows broken by heavy seas.</li></ul>

### Digital Selective Calling (DSC)

While not required by regulation, the Coast Guard strongly recommends that every F/V having a DSC-

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equipped radiotelephone obtain an Maritime Mobile Service Identity (MMSI) from the FCC and program it into their Direct Selective Calling (DSC) - equipped radiotelephone. Be sure to update the MMSI registration data if important vessel, owner or operator information changes.

Since 1999 the FCC (Federal Communications Commission) began requiring new fixed mount radiotelephones introduced in the U.S. to be equipped with DSC feature. DSC is part of a global upgrade in maritime distress communications. DSC radios allow fishermen to make ship-to-ship private calls and the DSC distress channel is currently being monitored by commercial ships. Minimally, DSC radios are equipped with single-button emergency transmission capability.

The new DSC radios have to be registered to work properly in emergency situations. They are also encoded with a unique nine digit FCC identification number that allows the ship-to-ship calling feature. This unique number the MMSI, is much like your cell phone number. Once the radio is registered with the FCC, that information and your boat's information is entered in the Coast Guard's national distress database.

The major advantage of the DSC radio is its ability to send an automatic "Mayday" that identifies the vessel and also, when connected to a GPS can send the vessel's location. The DSC radio will also continue sending the emergency signal if the skipper is disabled.

If your DSC radio is not programmed with a proper MMSI and not connected to a GPS, then the Coast Guard cannot effectively respond to a DSC distress alert sent from such a radio. As a result, search and rescue efforts may normally be suspended when:

- no communications with the distressed vessel can be established;
- no further information or means of contacting the vessel can be obtained from other sources; and,
- no position information is known.

Instructions for interconnecting the GPS receiver or chart plotter to the VHF radio may be found in the installation manual for both devices. Also available:

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- A [water resistant trailer hitch connector](#) available from most auto parts stores, may provide a means for disconnecting and removing the radio when frequent removal is necessary.
  - A [wiring guide](#) describing how popular GPS receivers and plotters can be properly interconnected to your VHF marine radio. You may also view this same [wiring guide in an Excel spreadsheet](#).
  - [NMEA's DSC-VHF Check List](#). Ensure there is no RS-232 / RS-422 mismatch when interconnecting these devices.
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### Voyage Termination Warning

Your vessels voyage can be terminated for failing to have functioning required radios. To avoid termination the vessel must have an alternate means of transmitting an emergency distress call.

Satellite communication capability with the system servicing the area in which the vessel is operating is acceptable as an alternative.

A cellular telephone capable of communicating with a public coast station or a U.S. Coast Guard station serving the area in which the vessel is operating is acceptable as an alternative.

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