

Marine VHF Radio: The Basics



What is a "Marine VHF Radio"?

Although not required in recreational boats under 65.5 feet long, a Very High Frequency (VHF) Marine Radio allows instant communication between your boat and other boats, marinas, bridges, and the United States Coast Guard (USCG). It is the primary means of communication on coastal waters and has many characteristics which make it preferable to a cell phone, CB Radio, or other means of communication. Most VHF Marine Radios also have instant access to NOAA weather forecasts, 24 hours a day.

Do I need a license?

If you are a recreational boater traveling within the United States, you do not need a license for a VHF Marine Radio.

If I have a radio do I have to listen to it all the time?

If you have the radio on, you must maintain a watch on VHF Channel 16. In USCG District I waters (northern New Jersey to Canada), urgent marine information broadcasts, such as storm warnings, are announced on Channel 16.

(NOTE: These instructions are based on USCG District 1 in which Channel 9 is the designated hailing channel.)

How do I operate it?

1. Make sure you are on the correct channel.
2. Adjust "Squelch" control as low as possible without hearing static or "white noise".
3. Push the button on the microphone to transmit (send).
4. Speak in a normal voice.
5. Take your finger OFF the button to hear the other person.

What is an Automatic Identification System?

- [Automatic Identification System Basics](#)
- [Additional Resources](#)

Which channels should I use?

- **CHANNEL 9:** The primary calling channel. (Establish contact on this channel and move to a "working channel" as soon as possible.)
- **CHANNEL 16:** Emergency and Distress calls only.
- **CHANNEL 22A:** Restricted to USCG use only. If you establish contact with the USCG on Channel 9 or 16, they may ask you to switch to Channel 22A. You may also hear an announcement on Channel 16 to switch to Channel 22A for important information.
- **CHANNEL 13:** Bridge to Bridge Communications between vessels. Also used to request bridge openings. Ships less than 65ft in length maintain a listening watch on this channel in US waters. This is a good channel to listen to in periods of poor visibility so that you can communicate with ferries, freighters, and other large vessels. (You must use the low power on your radio when broadcasting on Channel 13.)
- **CHANNELS 68, 69, 71, 72, 78A:** "Working Channels." The only channels available to non-commercial vessels for ship-to-ship and ship-to-shore communications. (Although you may have many other channels on your radio, each of them is restricted to specific uses.)

How do I use it?

The standard procedure for a non-emergency call such as calling another vessel, marina, or restaurant to ask where to tie up for dinner, is as follows:

1. Call the vessel, marina or restaurant on Channel 9 in the following manner.
2. Name of station being called, spoken three times.
3. The words "**THIS IS**", spoken once.
4. Name of your vessel spoken once.
5. The word "**OVER**".
6. Then you wait for the station being called to answer. Their answer should be in the same manner as your call.
7. Once answered you should suggest a specific working channel to carry on your conversation.

8. The word "**OVER**".
9. Wait for reply or confirmation from the station being called, switch to the working channel and repeat the process.
10. When done speaking and leaving a specific channel use the word " **OUT**" at the end.

An Example of a Non-Emergency Call

Calling Station: "Lobster Cage Marina, Lobster Cage Marina, Lobster Cage Marina, THIS IS the motor vessel Cat Lady. OVER."

Responding Station: "Cat Lady, Cat Lady, Cat Lady, This is Lobster Cage Marina. OVER."

Calling Station: "Please switch and listen to Channel 68. OVER."

Responding Station : "Switching Channel 68, OUT."

You would then switch to Channel 68 and call Lobster Cage Marina using the same procedure and conduct your business. All conversations whether on a hailing channel or a working channel should be kept short and to the point.

What about in an emergency situation like mayday?

"MAYDAY" is to be used ONLY in an emergency in which the boat and/or persons on board are in imminent danger of sinking or major injury or death. You may only have seconds to send a distress call. Here's what you do. Transmit in this order:

1. Tune your radio to Channel 16.
2. Distress signal "**MAYDAY**", (spoken three times).
3. The words "**THIS IS**", spoken once.
4. Name of vessel in distress (spoken three times).
5. Give position of vessel by latitude or longitude or by bearing (true or magnetic, state which) and distance to a well-known landmark such as a navigational aid or small island, or in any terms which will assist a responding station in locating the vessel in distress. Include any information on vessel movement such as course, speed and destination.
6. Provide nature of distress (sinking, fire etc.).
7. Indicate number of persons onboard.
8. Provide kind of assistance desired.
9. Any other information which might facilitate rescue, such as length or tonnage of vessel, number of persons needing medical attention, color hull, cabin, masts, etc.
10. The word "**OVER**".

Stay by the radio if possible. Even after the message has been received, the USCG can find you more

quickly if you can transmit a signal on which a rescue boat or aircraft can home in on.

An Example of a Mayday Call

- "MAYDAY - MAYDAY - MAYDAY - THIS IS BLUE DUCK - BLUE DUCK - BLUE DUCK - CAPE HENRY LIGHT BEARS 185 DEGREES MAGNETIC - DISTANCE 2 MILES STRUCK SUBMERGED OBJECT NEED PUMPS - MEDICAL ASSISTANCE AND TOW. THREE ADULTS, TWO CHILDREN ONBOARD. ONE PERSON COMPOUND FRACTURE OF ARM. ESTIMATE CAN REMAIN AFLOAT TWO HOURS. THIRTY TWO FOOT CABIN CRUISER - WHITE HULL - BLUE DECK HOUSE OVER".
- Repeat at intervals until an answer is received.
- For a potentially dangerous situation, which may or may not end up in a "MAYDAY", use "PAN-PAN, PAN-PAN, PAN-PAN" (pronounced *pahn pahn*). It is used when the safety of a vessel or person is in jeopardy.
- For important announcements that you want others to pay attention to, say "SECURITAY" (the French pronunciation of "Security"). For example to report a submerged log in a particular vicinity.

Avoid Using Cellular Phones!

Cellular phones may not be as effective as a VHF Marine Radio under certain circumstances.

Digital Selective Calling (DSC)

All new radios, and some older ones, have DSC capability. DSC radios are VHF radios, but they have an added benefit of sending an automatic DISTRESS alert (on Channel 70) to the USCG and other nearby DSC and VHF equipped vessels when activated. (Read your manual for specific features of your model.) To take full advantage of the DSC, be sure to obtain a free nine-digit Maritime Mobile Service Identity (MMSI) number and have it programmed into the unit before you transmit. You may obtain a free MMSI by contacting Boat US, SeaTow or the US Power Squadrons. Newer DSC capable radios also allow non-emergency facilitated boat to boat communications.

What do you do if you hear a distress call?

If you hear a distress message from a vessel and it is not answered, then you must answer. If you are reasonably sure that the distressed vessel is not in your vicinity, you should wait a short time for others to acknowledge.

How do I know if there are storm warnings?

The USCG announces storm warnings and other urgent marine information broadcasts on VHF Channel 16 before making the broadcasts on VHF Channel 22A. (Most VHF's also include the weather channels.)

How do I know if my radio is transmitting?

You can request a radio check. Do so on **Channel 9** or another working channel. Not on Channel 16.

Recommendations and Warnings

Turn your radio on and listen for a while to hear how other people use it.

- Always listen before you transmit to make sure you are not "stepping" on someone.
- Use plain English on the VHF. Do not use codes or "CB talk".
- Foul language and false distress signals are illegal. You can be prosecuted for either.
- Limit your conversations to 5 minutes or less. There may be other people who want to use the channel.
- Remember that everything you say can be heard by anyone who has a VHF radio.
- If you're speaking to someone who is within a few miles from you, try the LOW POWER button on your radio.
- If you issue a MAYDAY call, put everyone in life jackets first.