

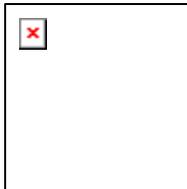
C. * COMMUNICATIONS ***EMERGENCY SITUATIONS****WHAT ARE THE MARINE
EMERGENCY CALLS**

The three spoken international signals are:

- **MAYDAY**-The distress signal MAYDAY is used to indicate a station is threatened by grave and imminent danger and requests *immediate assistance*.
- **PAN PAN**-The urgency signal PAN PAN is used when the safety of the ship or person is in *jeopardy*.
- **SECURITY**-The safety signal SECURITY is used for messages about the *safety* of navigation or *important* weather warnings.

NOAA WEATHER RADIO

NOAA Weather Radio broadcasts on 162.40, 162.475 and 162.55 MHz can usually be received 20-40 miles from the transmitting antenna site, depending on the terrain and the quality of the receiver used. Where transmitting antennas are on high ground, the range is somewhat greater, reaching 60 miles or more. The VHF-FM frequencies used for these broadcasts require narrow-band receivers. The National Weather Service recommends receivers having sensitivity of one microvolt or less and a quieting factor of 20 decibels.



Some receivers are equipped with a warning device that can be turned on by a tone signal controlled by the National Weather Service Office involved. All stations broadcast 24 hours per day.

NOAA WEATHER BROADCAST STATIONS

City	Station	Frequency
Dresden, ME	WXM-60	162.475/WX3
Ellsworth, ME	KEC-93	162.400/WX2
Portland, ME	KDO-95	162.550/WX1
Boston, MA	KHB-35	162.475/WX3
Hyannis, MA	KEC-73	162.550/WX1
Providence, RI	WXJ-39	162.400/WX2
New London, CT	KHB-47	162.550/WX1
Meriden, CT	WXJ-42	162.400/WX2
Riverhead, NY	WXM-80	162.475/WX3
New York, NY	KWO-35	162.550/WX1
Atlantic City, NJ	KHB-38	162.400/WX2

- Broadcast tapes are updated every 3 to 6 hours and amended as required. The broadcast contents vary, but in general contain the following information:
- Descriptions of the weather patterns.
- Regional and state forecasts with outlook for the third day.
- Marine warnings and forecasts for coastal waters.
- Weather observations from selected National Weather Service and Coast Guard stations.
- Radar summaries and reports.
- Local weather observation and forecast.
- Special bulletins and summaries concerning severe weather.
- Tide reports.
- Special Marine Safety Broadcasts - upon Coast Guard request.
- Special fisheries announcements.

**NATIONAL WEATHER SERVICE (NWS)
BROADCASTS**

Coastal Marine Warnings and Forecasts are issued for the following areas:

- Eastport, ME to Merrimack River, MA - out to 25 nm
- Merrimack River, MA to Block Is, RI-out to 25 nm
- Boston Harbor
- Buzzards Bay
- Cape Cod Bay
- Narragansett Bay
- Watch Hill, RI to Manasquan Inlet, NJ - out to 20 nm
- Long Island Sound to Montauk Point, NY
- Watch Hill, RI
- New York Harbor

Offshore Marine Warnings and Forecasts are issued for New England water bounded by the U.S./Canadian border, the 1000 fathom contour, and the Hudson Canyon for the following areas:

- Gulf of Maine
- Georges Bank
- South of New England

The latest offshore Warnings and Forecasts are broadcast via narrow band, direct printing NAVTEX from U.S. Coast Guard Communications Station-NMF, Marshfield, Massachusetts, on 518 KHz commencing at 0045 UTC and every 4 hours thereafter.

USCG Station NMF broadcasts maps of North Atlantic weather and sea state conditions and forecasts daily via

High Frequency radiofax. Broadcasts are transmitted simultaneously on 6340.5 kHz, 9110.0 kHz and 12,750.0 kHz in time blocks (UTC) 0230-0440, 0800-1030, 1430-1553, 1720-1801, and 1900-2230.

NWS MARINE PRODUCTS

Mariners utilizing National Weather Service (NWS) marine products (e.g., high seas, coastal and offshore forecasts; special mariners warnings; marine weather statements; and open lakes and near shore forecasts on the Great Lakes) are encouraged to provide evaluations of these same items. No one knows better how useful, accurate, and timely these products are than the people who go to sea.

MARINE WEATHER SERVICE CHARTS

Marine Weather Service Charts, published by the National Weather Service, are a series of 15 charts covering the waters of the United States and Puerto Rico. Each lists National Weather Service radio stations and office telephone numbers; commercial radio broadcast stations that broadcast marine weather information along with the schedules, and the location of visual storm warning display sites.

Price is \$1.25 each. The entire series, or individual charts, are available from:

**Distribution Division (N/AC33)
National Ocean Service
Riverdale, MD 20737**

Mariners are asked to comment on usefulness, reception, coverage adherence to schedules, clarity, accuracy, etc. through their local NWS office, through their local Port Meteorological Officer, or by writing directly to:

**NOAA/NWS, Marine and Applied Services Branch
SSMC2, 1325 East-West Highway
Silver Spring, MD 20910**

These comments will be used as a basis for broadcast priority and as a means to improve the value of the various products.

BROADCAST NOTICE TO MARINERS (BNM)

The Coast Guard is responsible for broadcasting information concerning Aids to Navigation maintained under the authority of the Commandant. Broadcasting is confined to information concerning new establishment, discontinuance, changes, or deficiencies in Aids to Navigation which shipping interests should receive without delay. Important information, such as marine obstructions, temporary changes in bridge clearance or operation of drawbridges, dredging

operations, shoaling, channel conditions, military exercises and hazards to navigation on inland or coastal waters will be broadcast if considered necessary for the safety of navigation.

Broadcast Notice to Mariners is not intended to be the source of chart and light list corrections, but rather to inform the mariner of the latest navigational information. The information contained in Broadcast Notice to Mariners that remain current will be included in the next published Local Notice to Mariners.

VHF-FM MARINE SAFETY BROADCAST STATIONS

The First Coast Guard District stations listed below announce all Broadcast Notice to Mariners. Initial call-up on 2182 kHz (SSB) and/or 156.8 MHz (Channel 16 VHF-FM) and request the mariner shift to either 2670 kHz (SSB) or 157.1 MHz (Channel 22 VHF-FM) where the complete broadcast text is read. These stations broadcast marine information and weather information upon receipt and on the following scheduled times and frequencies.

METHOD	UNIT/ EFFECTIVE AREA	TIMES (Z)
VHF	GRU SOUTHWEST HARBOR	
SSB	Canadian border to Port Clyde, ME	1135, 2335
VHF	GRU PORTLAND	
SSB	Marshall Pt to Great Boars Head, Hampton, NH	1105, 2305
VHF	GRU BOSTON	
SSB	Great Boars Head to Manomet Pt, Plymouth, MA	1035, 2235
VHF	GRU WOODS HOLE	
SSB	Manomet Point to Watch Hill, RI	1005, 2205
VHF	GRU LONG ISLAND SOUND	
SSB	Watch Hill to Port Chester, CT	1120, 2320
VHF	ACTIVITIES NEW YORK	
SSB	Port Chester to Midland Beach, Staten Island to Burlington, VT Midland Beach to Shrewsbury River, NJ	1050, 2250
VHF	GRU MORICHES	
SSB	Midland Beach to Montauk Light	0020, 1220

FCC LICENSES

SHIP RADIO STATIONS

On October 26, 1996, the FCC released a Report and Order in WT Docket No. 96-82, FCC 96-421, eliminating the individual licensing requirement for voluntary ships operating domestically which are not required by law to carry a radio. The paragraphs below describe how the new rules affect the maritime public.

WHO NEEDS A RADIO?

Although recreational vessels less than 20m (65.6 feet) in length are not required to have VHF radios, before you purchase anything else, make sure you have a VHF marine radio. If you plan to travel more than a few miles offshore, you should strongly consider purchasing an HF or single side band radiotelephone or mobile satellite telephone, an emergency position indicating radio beacon, or EPIRB, and a second VHF radio or cellular telephone as well. Mobile satellite telephones are becoming more common and more inexpensive. The mobile satellite will provide easier and clearer communications than the HF radiotelephone, but the HF radiotelephone will receive high seas marine weather warnings.

DO I NEED A RADIO LICENSE?

The Telecommunications Act of 1996 permits recreational boaters to have and use a VHF marine radio, EPIRB, and marine radar **without** having an FCC ship station license. Boaters traveling on international voyages, having an HF single sideband radiotelephone or marine satellite terminal, or required to carry a marine radio under any other regulation must still carry an FCC ship station license.

Those not exempted by the Telecommunications Act of 1996 must still have an FCC ship station license. A ship station license application is made on FCC Form 605, available from local FCC Field Offices, by writing to the **FCC, P.O. Box 1050, Gettysburg PA 17326**, or by calling the FCC Forms Distribution Center at **(202) 418-3676** or the toll-free number **(800) 418-FORM**. Forms can also be obtained from most marine electronics dealers.

Radios can be used immediately upon license application. The license is not transferable if a boat is sold or if the installed radio equipment is moved from one boat to another.

You do not need a license to operate a marine VHF radio, radar, or EPIRBs aboard voluntary ships operating domestically. The terms “voluntary” and “domestic” are defined below. Although a license is no longer required for these ships, you may still obtain a license (and call sign) by following the procedures outlined in Section IV of this Fact Sheet and writing “VOLUNTARY SHIP” in large letters across the top of the application form.

WHICH SHIPS ARE VOLUNTARY?

The term “voluntary ships” refers to ships that are not required by law to carry a radio. The following types of ships ARE NOT voluntary:

- Cargo ships over 300 gross tons navigating in the open sea;
- Ships certified by the U.S. Coast Guard to carry more than 6 passengers for hire in the open sea or tidewaters of the U.S.;
- Power driven ships over 20 meters in length on navigable waterways;
- Ships of more than 100 gross tons certified by the U.S. Coast Guard to carry at least one passenger on navigable waterways;
- Tow boats of more than 7.8 meters in length on navigable waterways; and,
- Un-inspected commercial fishing industry vessels required to carry a VHF radio.

WHAT IS DOMESTIC OPERATION?

Ships operating domestically do not travel to foreign ports or transmit radio communications to foreign stations. Sailing in international waters is permitted, so long as the previous conditions are met. If you travel to a foreign port (e.g., Canada, Mexico, Bahamas, British Virgin Islands) a license is required. Additionally, if you travel to a foreign port, you are required to have an operator permit as described in Section III of this Fact Sheet.

DO I NEED A PERMIT TO OPERATE A RADIO?

The FCC Restricted Radiotelephone Operator Permit is required for boaters having an HF radiotelephone, for boaters having a VHF transceiver and traveling in foreign waters, or where fitting of a marine radio is required by law (e.g. on boats 20m long or larger). Applications and information is available from local FCC Field Offices or by writing to the **FCC, P.O. Box 1050, Gettysburg PA 17326**.

If you plan to dock in a foreign port (e.g., Canada or the Bahamas) or if you communicate with foreign coast or ship stations, you must have a RESTRICTED RADIOTELEPHONE OPERATOR PERMIT (sometimes

referred to by boaters as an “individual license”) in addition to your ship radio station license. However, if (1) you merely plan to sail in domestic or international waters without docking in any foreign ports and without communicating with foreign coast stations, and (2) your radio operates only on VHF frequencies, you do not need an operator permit.

HOW DO I OBTAIN A SHIP RADIO STATION LICENSE?

Obtain FCC Forms on line at <http://www.fcc.gov/formpage.html>) and file it with the FCC. The FCC will mail the license to you and it will be valid for ten years. Don't forget to sign and date your application and include any applicable fees, otherwise it may be returned.

NOTE: A ship radio station license authorizes radio equipment aboard a ship, while the restricted radiotelephone operator permit authorizes a specific person to communicate with foreign stations or use certain radio equipment (e.g., MF/HF single sideband radio or satellite radio).

HOW DO I OBTAIN A RESTRICTED RADIOTELEPHONE OPERATOR PERMIT?

Obtain FCC Forms on line and file it with the FCC. You do not need to take a test to obtain this permit. The FCC will mail the permit to you and it will be valid for your lifetime. Don't forget to sign and date your application and include any applicable fees, otherwise it may be returned.

MAY I OPERATE A MARINE RADIO WHILE MY APPLICATIONS ARE BEING PROCESSED?

You may operate your marine radio after you have mailed your application(s) to the FCC so long as you fill out, detach, and retain the temporary operating authority attached to the application form. The temporary operating authority is valid for 90 days after you mail your application to the FCC and should be kept with your station records until you receive your license/permit through the mail.

HOW DO I MAKE CHANGES DURING MY LICENSE TERM?

If you change your mailing address, legal name, ship name, ship official number, or state registration number you must notify the FCC in writing. There is no fee required. No action is required when you add or replace a transmitter that

operates in the same frequency band. Send your written notice of change to: Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245.

HOW DO I RENEW MY LICENSE?

The FCC will send you a computer generated renewal application approximately 120 days prior to the expiration date of your license. If you do not receive this form within 30 days of the expiration date of your license, you should contact the FCC to determine the status of your license. If you send an application for renewal before your current license expires, you may continue to operate until the FCC acts on your application. You do not need a temporary permit but you should keep a copy of the renewal application you send the FCC. You must stop transmitting as soon as your license expires, unless you have already sent your renewal application to the FCC.

WHAT DO I DO IF MY LICENSE HAS EXPIRED?

If your station license has expired, you must apply for a NEW station license. There is NO grace period. You may use the temporary operating authority to operate your marine radio while your application is being processed.

SHOULD I RENEW MY LICENSE?

If you operate a marine VHF radio, radar, or EPIRBs aboard a voluntary ship operating domestically, you are not required to apply for a new license or renew your current license. Although a license is no longer required for these ships, you may still renew your license and retain your call sign.

Even though a station license may no longer be required, you must continue to follow the operating procedures for calling other stations, maintaining a safety watch, and relaying distress messages as specified in the FCC Rules. You may identify your ship station over the air using your FCC-issued call sign, the state registration number or official number of your ship, or the name of your ship.

MAY I USE MY RADIO ON MORE THAN ONE VESSEL?

If you can provide justification for the use of a single transmitter from two or more ships, a portable ship station license may be issued. This could authorize various types of marine radio equipment to be carried from ship to ship.

WHAT RADIO EQUIPMENT MAY I USE?

You do not need a license to use marine VHF radios, any type of EPIRB, any type of radar, GPS or LORAN receivers, depth finders, CB radio, or amateur radio (an amateur license is required). Ships that use MF/HF single side-band radio, satellite communications, or telegraphy must continue to be licensed by the FCC.

WHAT IF I HAVE A MARINE RADIO WITH DIGITAL SELECTIVE CALLING (DSC) CAPABILITY?

You must obtain a nine-digit maritime mobile service identity (MMSI) and have it programmed into the unit before you transmit. Prior to obtaining an MMSI, you will be asked to provide certain information about your ship. It is important that you obtain an MMSI because the U.S. Coast Guard uses this information to help speed search and rescue operations.

You may obtain an MMSI by filing FCC Form 506 with the FCC. The FCC is presently examining alternative ways to assign MMSI's (e.g., through private sector organizations). Before applying for an MMSI, you should contact the FCC at **(800) 322-1117** to find out the current procedure.

IF I HAVE A RADIO DO I HAVE TO LISTEN TO ALL THAT NOISE?

Even though you may not be required to carry a VHF radio, if you do (and you should) you must maintain a watch on channel 16 (156.800 MHz) whenever the radio is operating and not being used to communicate.

Recently a charter boat whose radio was not tuned to the proper channel missed a severe storm warning. By the time the captain learned of the storm, it was too late to return to shore. The ship sank and a couple of persons died. A yacht in trouble off the west coast of Mexico and far from help saw a passenger ship. What should have been a quick rescue almost turned to disaster when the passenger ship (improperly) had its radio off. The yacht was able to attract the ship's attention, however, and was rescued. Misunderstanding of passing intentions by approaching vessels and near collisions have repeatedly been averted by working radios tuned to the proper channel.

The International Telecommunications Union established three VHF marine radio channels recognized worldwide for safety purposes:

- Channel 16 (156.800 MHz) - Distress, safety and calling
- Channel 13 (156.650 MHz) - Intership navigation (bridge-to-bridge)

- Channel 70 (156.525 MHz) - Digital Selective Calling

THERE ARE SO MANY CHANNELS, HOW DO I KNOW WHICH TO USE?

Anyone (boaters included) wishing to call a commercial ship or shore activity would do so on channel 16. Recreational boaters may call the Coast Guard and any commercial facility on channel 16.

Channel 16 is the distress, safety and calling frequency. FCC regulations require boaters having VHF radios to maintain a watch on channel 16, whenever the radio is turned on and not communicating with another station.

Channel 16 is used for "hailing" (calling another vessel) only. Once you have contacted a vessel you should move your conversation to a "working channel". That is, one designated as "non-commercial" such as channel 68.

Another channel you should be aware of is channel 22A. This channel is reserved for the U.S. Coast Guard to relay marine information broadcasts. You may on occasion hear on channel 16 an announcement by the USCG telling all boaters that they have information that may be of importance to you. They would request that anyone wanting to listen to the information switch to channel 22A to hear the information.

The available channels are listed at the end of this chapter.

OKAY, SO I HAVE A RADIO, 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. You should call the vessel, marina or restaurant on channel 16 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 and call sign (if you have a station license) or boat registration number, 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 going to a 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.

An example might be:

Calling Station: "Safe Harbor Marina, Safe Harbor Marina, Safe Harbor Marina, THIS IS the motor vessel My Dream, WAI1234, OVER" (WAI should be spoken Whiskey, Alpha, India, wun, too, tree, fow er) If you think this sounds cool and very official you can view the phonetic alphabet at the end of this chapter.

Responding Station: "My Dream, My Dream, My Dream, THIS IS Safe Harbor Marina, WBC5678, OVER" (WBC should be spoken Whiskey, Bravo, Charlie, fife, six, seven, ait)

Calling Station: "Please switch and listen channel 68, OVER."

Responding Station: "Switching channel 68, OVER."

You would then switch to channel 68 and call Safe Harbor 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! MAYDAY?

You may only have seconds to send a distress call.

Here's what you do. Transmit, in this order:

1. If you have an HF radiotelephone tuned to 2182 kHz, send the radiotelephone alarm signal if one is available. If you have a VHF marine radio, tune it to channel 16. Unless you know you are outside VHF range of shore and ships, call on channel 16 first.
2. Distress signal "MAYDAY", spoken three times.
3. The words "THIS IS", spoken once.
4. Name of vessel in distress (spoken three times) and call sign or boat registration number, spoken once.
5. Repeat "MAYDAY" and name of vessel, spoken once.
6. Give position of vessel by latitude or longitude or by bearing (true or magnetic, state which) and distance to a well-know landmark such as a navigational aid or small is land, 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.

7. Nature of distress (sinking, fire etc.).
8. Kind of assistance desired.
9. Number of persons onboard.
10. Any other information which might facilitate rescue, such as length or tonnage of vessel, number of persons needing medical attention, color hull, cabin, masks, etc.
11. The word "OVER"

Stay by the radio if possible. Even after the message has been received, the Coast Guard can find you more quickly if you can transmit a signal on which a rescue boat or aircraft can home in.

An example of a Mayday call:

**MAYDAY-MAYDAY-MAYDAY
THIS IS LUCKY DUCK- LUCKY DUCK- LUCKY
DUCK WAI1234
MINOTS 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
LUCKY DUCK IS THIRTY TWO FOOT CABIN
CRUISER-WHITE HULL-BLUE DECK HOUSE
OVER**

Repeat at intervals until an answer is received.

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.

WHAT DO YOU DO IF YOU ARE OUT OF RANGE OF OTHER VESSELS, AND NO ONE RESPONDS TO YOUR DISTRESS CALL?

Tune your HF radiotelephone to an HF channel guarded by the Coast Guard, and repeat your mayday call. Activate your EPIRB.

HOW DO I KNOW IF THERE ARE STORM WARNINGS?

The Coast Guard announces storm warnings and other urgent marine information broadcasts on VHF channel

16 and 2182 kHz before making the broadcasts on VHF Channel 16 and 2670 kHz respectively.



WHAT ABOUT RADIO CHECKS, AND DO I KNOW MY RADIO IS WORKING?

Due to the amount of “chatter” on VHF channel 16, the Coast Guard does not conduct radio checks on this frequency is for call up and distress only. If your radio is not working properly, switch to a working channel and call for a radio check.

WHAT ABOUT MAYDAY RADIO CHECKS AND OTHER HOAXES?

A growing number of boaters unsuccessful in getting a radio check are calling MAYDAY to get a response. Every hoax, including MAYDAY radio checks, is subject to prosecution as a Class D felony under Title 14, Section 85 of the U.S. Code, liable for a \$5000 fine plus all costs the Coast Guard incurs as a result of the individual's action. Since hoaxes can lead to loss of life, the Coast Guard and Federal Communications Commission will work closely together, using, when necessary, FCC equipment capable of identifying the electronic signature of the offending radio.

WHAT HAPPENS IF THE COAST GUARD BOARDS MY SHIP?

On April 17, 1996, the U.S. Coast Guard suspended enforcement activities concerning FCC Radio Station Licenses carried aboard voluntary ships.

WHAT MUST I DO IF I SELL MY VESSEL?

If you sell your ship, you must send your SHIP STATION LICENSE, marked “cancel” to: Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245.

You cannot transfer your SHIP STATION LICENSE to another person or ship. The new owner cannot modify your license, but must apply for a NEW license. If you have a RESTRICTED RADIOTELEPHONE OPERATOR PERMIT, you should retain it for future use since it is authorized for your lifetime.

MAY I USE MY HAND-HELD MARINE VHF RADIO ON LAND?

You must have a special license, called a Marine Utility Station License, to operate a hand-held marine radio from land—a ship station license IS NOT sufficient. You may apply for this license by filing FCC Form 503 with the FCC. To be eligible for a marine utility station license, you must generally provide some sort of service to ships or have control over a bridge or waterway. Additionally, you must show a need to communicate using hand-held portable equipment from both a ship and from coast locations. Each unit must be capable of operation while being hand-carried by an individual. The station operates under the rules applicable to ship stations when the unit is aboard a ship, and under the rules applicable to private coast stations when the unit is on land.

HOW TO OPERATE YOUR MARINE VHF RADIO

WHAT TYPES OF MARINE VHF RADIOS ARE ACCEPTABLE?

The power output of your radio must not be more than 25 watts. You must also be able to lower the power of your radio to one watt or less. Your radio must be able to transmit on 156.8 MHz (Channel 16), 156.3 MHz (Channel 6) and at least one other channel. Your radio must be type accepted by the FCC. You can tell a type accepted radio by the FCC ID label on the radio. You may look at a list of type-accepted radios at any FCC field office or at FCC headquarters.



MAY I INSTALL AND SERVICE MY MARINE VHF RADIO BY MYSELF?

You may install your radio in your ship by yourself. All internal repairs or adjustments to your radio must be made by or under the supervision of an FCC-licensed technician holding at least a General Radiotelephone Operator License. It is recommended that the radio be inspected by the service person when installed.

WHAT MARINE VHF CHANNELS MAY I USE?

The marine VHF channels are divided into operational categories, based on the types of messages that are appropriate for each channel, and are available for the shared use of all boaters. You must choose a channel that is available for the type of message you want to send. Except where noted, channels are available for both ship-to-ship and ship-to-coast messages. A list of the marine VHF channels

and their designated uses are shown at the end of this chapter. The channels listed in the table are the only channels you may use, even if your radio has more channels available.

HOW DO I MAKE A CALL?

Monitor Channel 16. Whenever your radio is turned on (and not being used for messages), keep it tuned to Channel 16.

Power. Try one watt first if the station being called is within a few miles. If there is no answer, you may switch to higher power.

Calling coast stations. Call a coast station on its assigned channel. You may use Channel 16 when you do not know the assigned channel.

Calling other ships. Call other ships on Channel 16. You may call on ship-to-ship channels when you know that the ship is listening on both a ship-to-ship channel and Channel 16. NOTE: To do this the ship has to have two separate receivers.

Limits on calling. You must not call the same station for more than 30 seconds at a time. If you do not get a reply, wait at least two minutes before calling again. After three calling periods, wait at least 15 minutes before calling again.

Change channels. After contacting another station on Channel 16, change immediately to a channel that is available for the type of message you want to send.

Station identification. Identify in English, your station by your FCC call sign or ship name at the beginning and end of each message.

WHAT COMMUNICATIONS ARE PROHIBITED?

YOU MUST NOT TRANSMIT-

- False distress or emergency messages.
- Messages containing obscene, indecent, or profane words or meaning.
- General calls, signals, or messages, except in an emergency or if you are testing your radio (these are messages not addressed to a particular station), or when your ship is on land (for example, while the ship is on a trailer).

DO I HAVE TO KEEP A RADIO LOG?

You do not have to keep a radio log.

DO I NEED A COPY OF THE RULES?

Voluntary boaters are not required to keep a copy of the FCC's rules. Regardless of whether or not you have a copy of the rules, however, you are responsible for compliance. This Fact Sheet is furnished for your information and guidance. If you would like a copy of the rules, refer to Section VI of this Fact Sheet.

DO I HAVE TO MAKE MY SHIP STATION AVAILABLE FOR INSPECTION?

Your station and your station records (station license and operator license or permit, if required) must be shown when requested by an authorized FCC representative.

WHAT HAPPENS IF I VIOLATE THE RULES?

If it appears to the FCC that you have violated the Communications Act or the rules, the FCC may send you a written notice of the apparent violation. If the violation notice covers a technical radio standard, you must stop using your radio. You must not use your radio until you have had all the technical problems fixed. You may have to report the results of those tests to the FCC. The commercial operator who conducted the test must sign the results. If the FCC finds that you have willfully or repeatedly violated the Communications Act or the rules, your authorization to use the radio may be revoked and you may be fined or sent to prison.

HOW DO I CALL ANOTHER SHIP?

- Make sure your radio is on.
- Speak directly into the microphone in a normal tone of voice—clearly—distinctly.
- Select Channel 16 (156.8 MHz) and listen to make sure it is not being used.
- Press the microphone button and call the ship you wish to call. Say “[name of ship being called] THIS IS [your ship's name and call sign (if applicable)].
- Once contact is made on Channel 16, you must switch to a ship-to-ship channel. The ship-to-ship channels are listed in the chart on page 13 of this Fact Sheet.
- After communications are completed, each ship must give its call sign or ship name and switch to Channel 16.

HOW DO I PLACE A CALL THROUGH A PUBLIC COAST STATION?

Boaters may make and receive telephone calls to and from any telephone with access to the nationwide telephone network by utilizing the services of Public Coast Stations.

Calls can be made to other ships or telephones on land, sea, and in the air.

IMPORTANT: A ship owner who plans on using these services should register with the operator of the Public Coast Station through which he/she plans to operate. If a person is not registered with the Public Coast Station, then billing information must be given to the Coast Station operator each time a call is made, which results in additional time and effort.

MAKING SHIP TO SHORE CALLS

- Select the public correspondence channel desired.
- **LISTEN** to see if the channel is busy (i.e., speech, signaling tones, or busy signal).
- If not busy, say, for example, "Pleasure craft [name of ship] calling
- [Name of Public Coast Station] on Channel XX.
- If busy, wait until the channel clears or switch to another channel.
- When a coast station operator answers, say, "This is [name of ship and ship's phone or billing number if assigned] placing a call to [city and phone number desired]." Give the operator billing information. If billing information for your ship has not been registered, the operator will ask for additional identification for billing purposes.
- At completion of call say, "[Name of ship] OUT."

RECEIVING SHORE TO SHIP CALLS

To receive public Coast Station calls on VHF-FM frequencies, the receiver must be in operation on the proper channel. Coast stations will call on 156.8 MHz (channel 16) unless you have Ringer Service (which requires a second receiver).

SHIP TO SHIP CALLS

Contacts between ships are normally made directly but you can go through your coast station using the same procedure as ship to shore calls.

PLACING SHORE TO SHIP CALLS

Dial "0" for operator and ask for the "marine operator." It is necessary to know the name of the ship being called (not the owner's name) and its approximate location so the marine operator will know which coast station to place the call through. Other useful information is the channel generally monitored for receiving calls, the ringer number (if applica-

ble) and the Coast Station through which calls can generally be received.

FCC INFORMATION

FORMS

- FCC Forms Distribution Center **(800) 418-FORM (3676)**
- FCC Fax-On-Demand system—call **(202) 418-0177** from the handset of your fax machine. Follow the recorded instructions to have FCC Form 506 (document retrieval number 000506) or FCC Form 753 (document retrieval number 000753) sent directly to your fax machine.

FEES

- FCC Consumer Center **(888) 225-5322**

RULES

All details concerning radio service eligibility, application procedures, operating requirements, and equipment are not required to carry a copy of the rules.

Maritime Service Rules 47 C.F.R. Part 80 Operator License Rules 47 C.F.R. Part 13

The rules are available for a fee from the Government Printing Office at **(202) 512-1803**.

Voluntary ship operators who would like an abbreviated version of the rules, including all requirements for voluntary ships, may want to obtain a copy of the Radio Technical Commission for Maritime Service's publication titled "Marine Radiotelephone Users Handbook". The latest edition may be ordered from RTCM, P.O. Box 19087, Washington DC 20036.

FCC REGULATIONS-CHANNEL 16 VHF-FM

FCC Regulations prohibit radio checks with the Coast Guard on VHF-FM Channel 16, 156.8 MHz, except when conducted by FCC representatives, qualified radio technicians installing or repairing equipment, or when requested by the Coast Guard.

NAVTEX STATIONS

In the U.S., NAVTEX is presently operating from Boston, MA with a coverage radius of about 250 nm; from New Orleans, LA, with a coverage radius of about 450 nm; from Miami, FL, with a coverage radius of about 250 nm, and

from Portsmouth, VA, with a coverage radius of about 250 nm. The U.S. Coast Guard has reached its goal of completing installation at all 12 U.S. Coast Guard Communications Stations and remote sites. Now that installation is complete, NAVTEX coverage should be reasonably continuous to 100 nm off the U.S. East, Gulf and West coasts, including Puerto Rico, Southwest Alaska, Hawaii and Guam. NAVTEX is fully operational in the U.S., and the U.S. Coast Guard has phased out Morse code (MF) Broadcasts.

BRIDGE TO BRIDGE RADIOTELEPHONE REGULATIONS

Channel 13 (156.65 MHz) – This is the Bridge-to-Bridge Radiotelephone frequency. The Vessel Bridge-to-Bridge Radiotelephone Act is applicable on navigable waters of the United States inside the boundary lines established in 46 CFR 7. In all cases, the Act applies on waters subject to the Inland Rules. In some instances, the Act may apply all the way out to the three-mile limit, depending on where the boundary lines are located. In no instance does the Act apply beyond the three-mile limit.

In 1992, many changes were made to the Vessel Bridge-to-Bridge Radiotelephone Regulations. These changes were advertised in the Federal Register on April 21, 1992, (57 FR 14483) and have been published as changes to Navigation Rules; International-Inland. The following is a summary of the substantive changes:

- For power-driven vessels, the minimum size requirement for application of the regulations will change from 300 gross tons to 20 meters (65.5 feet) in length. This means that all power-driven vessels 20 meters in length or greater, passenger vessels of 100 gross tons or greater, towing vessels 26 feet in length or greater, and most dredges will be required to abide by these regulations.
- All vessels subject to the regulations must be capable of transmitting and receiving on VHF-FM channel 22A (157.1 MHz) the Coast Guard Marine Information Broadcast and Communications Channel. NOTE: Most VHF-FM Marine radios commercially available in the United States are already capable of transmitting and receiving on this channel.
- Vessels subject to these regulations, operating in a designated area on the lower Mississippi River and its approaches, must have equipment capable of transmitting and receiving on channel 67 VHF-FM (156.375 MHz) and are required to monitor this channel instead of channel 13.

In order to maintain an effective and continuous watch on the designated bridge-to-bridge channel (channel 13 or 67),

a second VHF-FM radio must be available to meet watch requirements on Channel 16 (156.8 MHz Distress, Safety and Calling channel) or a separately assigned Vessel Traffic Service (VTS) channel and to communicate on other required channels (e.g. channel 6 - Intership Safety) and channel 22A (Coast Guard Marine Information Broadcast and Communications Channel) or such other channels as required for the vessel's service (e.g. port operations channel or designated working channel). Any of the following combinations of equipment are acceptable to meet these requirements:

- Two multi-channel VHF-FM radios capable of transmitting and receiving on the bridge-to-bridge channel (channel 13 or 67), channel 16, channel 22A, and such other channel as required for the vessels service.
- One single channel VHF-FM radio capable of transmitting and receiving on channel 13 and 67 and a second multi-channel VHF-FM radio capable of transmitting and receiving on channel 16, 22A, and such other channels as required for the vessel's service.
- One multi-channel VHF-FM radio with two separate receivers capable of continuously monitoring VHF-FM channel 13 or 67 through one receiver and channel 16, or a separately assigned VTS channel, through the other receiver. A single VHF-FM radio capable of scanning, or sequential monitoring (often referred to as "dual watch" capability) will not satisfy this requirement.

NOTE: A portable (hand-held) radio may be used to meet the bridge-to-bridge requirements. However, this radio must be permanently associated with the vessel and it must have a connection for an external antenna (FCC regulations 47 CFR 80.1017). Foreign vessels entering into U.S. waters may use portable equipment, not permanently associated with the vessel, which is brought aboard by the pilot. However, foreign vessels transiting U.S. waters without a pilot on board must still meet the provisions above.

The following are some important provisions of the vessel bridge-to-bridge regulations:

- The operator, or whoever is designated to pilot the vessel, must maintain a listening watch on the designated frequency while underway on the navigable waters of the United States. The designated frequency is VHF-FM channel 13 (156.65 MHz) except on portions of the lower Mississippi River, where VHF-FM channel 67 is the designated frequency.
- The Bridge-to-Bridge VHF-FM maritime channel shall only be used to exchange navigational information or necessary tests.

- The person maintaining the listening watch must be able to communicate in English.

The use of channel 13 for other than information necessary for the safe navigation of vessels is strictly prohibited. Violations of the Bridge-to-Bridge Radiotelephone Act are subject to a civil penalty of not more than \$500.00. Additional information on Bridge-to-Bridge Radiotelephone regulations can be found in 33 CFR 26 and Navigation Rules International-inland COMDTINST M16672.2C. Technical information on telecommunications can be found in 47 CFR 80

CELLULAR TELEPHONE USE ABOARD VESSELS



Cellular telephones are fast becoming the land mobile communications link of choice throughout the United States. Their lowered cost, increased coverage, and ease of use have made them very popular. Cellular telephone coverage, however, is primarily optimized for the land areas, with limited cellular coverage offshore.

Cellular telephones have several limitations when compared to VHF-FM marine band radios. These include:

- Lower power. Cellular phones are limited to 3 watts output power. Installed marine VHF-FM transceivers have as much as 25 watts when put on the “high power” setting.
- Point-to-point communications. A call made on a cellular telephone “connects” one phone to another - no one else can (legally) monitor the call. If a cellular phone is used for distress, nearby vessels are unable to hear the distress call and render assistance.
- No communications with CG units. A distressed vessel calling the Coast Guard for assistance will be able to contact a shore unit (if within cellular range of the shore) but will not be able to communicate with a CG cutter or aircraft. The mariner would still need a VHF-FM radio to communicate with the cutter or aircraft for coordinating the rescue.
- No radio watches on cellular. The Coast Guard monitors Channel 16 VHF-FM through a system of overlapping transceiver sites. Calling on Channel 16 never results in a “busy signal” the way a telephone call might. The possibility also exists that the mariner could, in using cellular telephone, call the wrong CG unit, which could result in a delay in his being rescued.

THE BOTTOM LINE IS:

The Coast Guard, by law, is required to monitor Channel 16 VHF-FM 24 hours a day. Cellular phones are nice, but the mariner’s primary method of communication with the Coast Guard should continue to be VHF-FM radio.

DIGITAL SELECTIVE CALLING

Digital Selective Calling (DSC) is part of the international effort, called the Global Maritime Distress and Safety System (GMDSS), to apply new technology to marine distress communications. The GMDSS includes VHF-FM and high frequency (HF) DSC, the new 406 MHz Emergency Position Indicating Radiobeacons (EPIRB) and medium frequency navigational and meteorological warning text (NAVTEX) transmissions.

VHF-FM DSC uses Channel 70 as an alerting channel. DSC-equipped radios transmit and receive “packets” of information on Channel 70. These packets indicate the “calling” station, the “called” station, the “channel requested,” and even its location. Mariners using DSC can “dial” another vessel using its DSC “phone” number, and the radio on the called vessel will alert the vessel operator that there is an incoming call and display the caller’s identification. Both radios then automatically switch to a regular marine ship-to-ship channel (the “channel requested”) for the communications to take place. This eventually will relieve the mariner of maintaining a constant watch on a channel to hear another unit calling his vessel.

An emergency alerting feature enables the operator to transmit a distress signal that is received by all DSC-equipped radios within transmission range. This distressed “packet” contains the vessel’s identification, the nature of distress, and can indicate the vessel’s latitude and longitude if the DSC radio is connected to a navigational device such as a LORAN or GPS receiver. Commercial vessels are required to monitor VHF Ch 70 and can relay your distress to the nearest Coast Guard Group.

Additional features of DSC receivers include a scrollable directory for storage of other vessels’ DSC identification numbers, to enable the caller to scroll through until he sees the vessel he wants to call, and then initiating the call without having to “dial in” the number. A second feature includes another directory, which would contain shore side telephone numbers. Selection of one of these numbers would initiate a call to the local marine operator facility and automatically dial the shore side number, without having to go through the marine operator.

DSC is required aboard all commercial vessels constructed after 1 July 1995 and will be required on all existing commercial vessels after 1 July 1999. Use and carriage requirements for recreational and non-commercial vessels have not yet been determined.

U.S. VHF Marine Radio Channels and Frequencies

<i>Channel Number</i>	<i>Ship Transmit</i>	<i>Ship Receive</i>	<i>Use</i>
01A	156.050	156.050	Port Operations and Commercial. VTS in selected areas.
05A	156.250	156.250	Port Operations. VTS in Seattle
06	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
08	156.400	156.400	Commercial (Intership only)
09	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-bridge). Ships >noel in US waters.
14	156.700	156.700	Port Operations. VTS in selected areas.
15	--	156.750	Environmental (Receive only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.850	156.850	State Control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Government only
22A	157.100	157.100	Coast Guard Liaison and Maritime announced on channel 16.
23A	157.150	157.150	U.S. Government only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial. VTS in selected areas.
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for Bridge-to-bridge communications in lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial
80A	157.025	157.025	Commercial
81A	157.075	157.075	U.S. Government only - Environmental protection operations.
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Government only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87	157.375	161.975	Public Correspondence (Marine Operator)
88	157.425	162.025	Public Correspondence in selected areas only.
88A	157.425	157.425	Commercial, Intership only.

Frequencies are in MHz. Modulation is 16KF3E or 16KG3E.

Note that the letter "A" indicates simplex use of an international duplex channel, and that operations are different than international operations on that channel. Some VHF transceivers are equipped with an "International - U.S." switch for that purpose. "A" channels are generally only used in the United States, and use is normally not recognized or allowed outside the U.S.

Boaters should normally use channels listed as Non-Commercial. Channel 16 is used for calling other stations or for distress alerting. Channel 13 should be used to contact a ship when there is danger of collision. All ships of length 20m or greater are required to guard VHF channel 13, in addition to VHF channel 16, when operating within U.S. territorial waters. Users may be fined by the FCC for improper use of these channels.

The Phonetic Alphabet

The phonetic alphabet should be used for radio transmissions in plain language or in code.

A - Alpha

B - Bravo

C - Charlie

D - Delta

E - Echo

F - Fox-trot

G - Golf

H - Hotel

I - India

J - Juliet

K - Kilo

L - Lima

M - Mike

N - November

O - Oscar

P - Papa

Q - Quebec

R - Romeo

S - Sierra

T - Tango

U - Uniform

V - Victor

W - Whiskey

X - X-ray

Y - Yankee

Z - Zulu

If you need to spell out a word you should say, "*I spell*" after pronouncing the word and then spell it using the phonetic alphabet.

Numerals should be pronounced:

1 - wun

2 - too

3 - tree

4 - fow er

5 - fife

6 - six

7 - seven

8 - ait

9 - nin er

0 - zero