0190009-1– Manual

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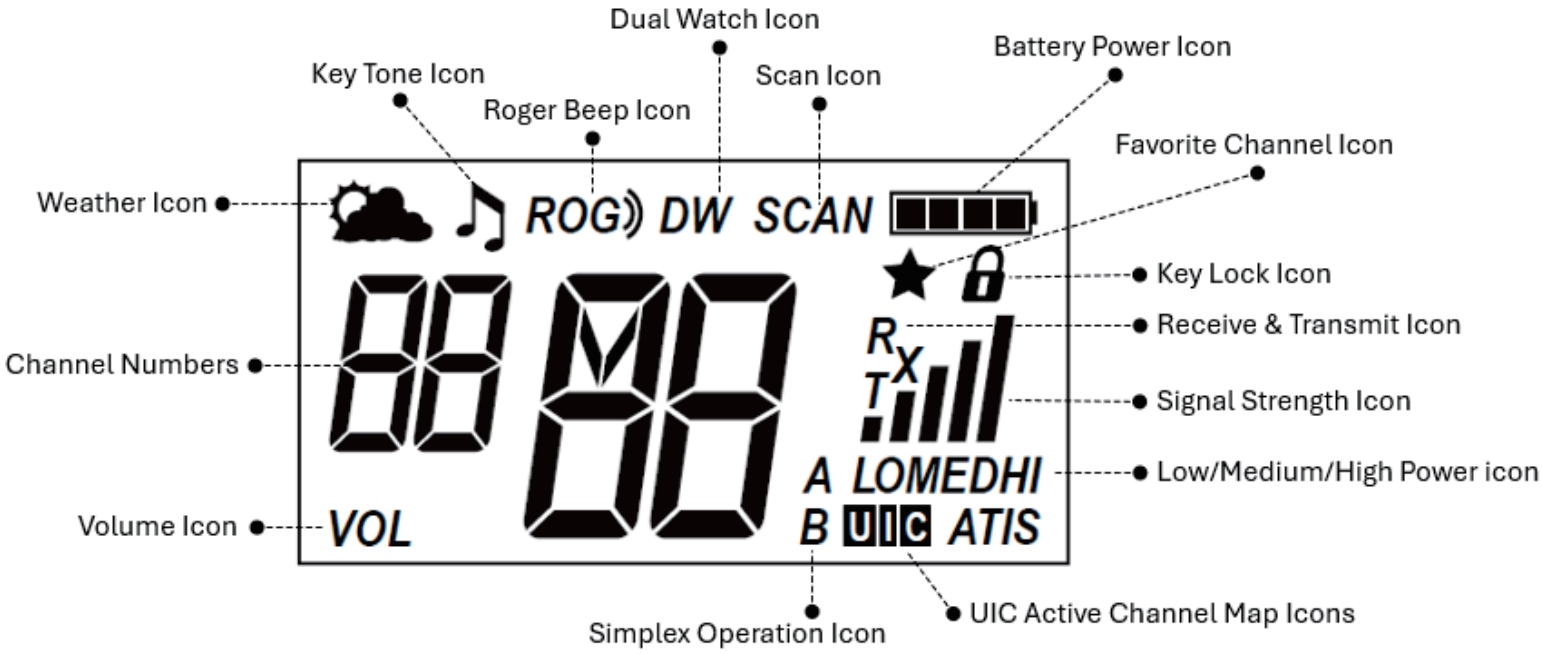
Radio Overview

FCC: TX:156.050-157.425MHz,RX:156.05-162.00MHz
IC: TX:156.025-157.425MHz.RX:156.05-162.00MHz



Product Features

Power Settings
Select 0.5 or 3 Watts of output power for near or distant calling.

USA/International/Canada Channels
Select 0.5, or 3 Watts of output power for near or distant calling.

All NOAA Weather Channels
Instant access to all National Weather channels, 24 hours a day

Floating and Waterproof
Radio can float if dropped in water and is IPX7 waterproof

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Radio can float if dropped in water and is IPX7 waterproof

All Channel Scan
Automatically scan through all channels

Instant Channel 16/9
Provides instant access to priority channel 16 and calling channel 9

Dual-Watch
Use to monitor two channels at once – Channel 16 and one user selected channel.

Roger Beep Tone
Use to monitor two channels at once – Channel 16 and one user selected channel.

Rechargeable batteries included
Recharge with any USB-C power cable

Favorite Channels
Save important channels to as favorites

Speaker Mic Jack
Allows for connection to the Cobra speaker mic accessory

Backlit Keypad
Backlit functional buttons for high visibility.

Important Safety Information

Before using your Cobra marine VHF radio, please read these general precautions and warnings.

Warning and Notice Statements

To make the most of this radio, it must be used properly. Please read the installation and operating instructions carefully before using the radio. Special attention must be paid to the **WARNING** and **NOTICE** statements in this manual.

WARNING
Statements identify conditions that could result in personal injury or loss of life.

NOTICE
Statements identify conditions that could cause damage to the radio or other equipment.

Safety Training Information

This Cobra Marine VHF radio complies with the following guidelines and standards regarding RF energy and electromagnetic energy levels as well as evaluation of those levels for human exposure.

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for human exposure to radio frequency electromagnetic fields.
- American National Standards Institute (C95.1-1992), IEEE Recommended Practice for the measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.
- American National Standards Institute (C95.3-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300GHz.
- Industry Canada RSS-102-Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands).

Important Safety Information

The following **Warnings** and **Notice** information on the following page will make you aware of RF exposure hazards and how to ensure you operate the radio within the FCC RF exposure limits established for the radio.

WARNINGS

Your radio generates electromagnetic RF (radio frequency) energy when it is transmitting. To ensure that you and those around you are not exposed to excessive amounts of that energy, **DO NOT** touch the antenna when transmitting. **KEEP** the radio at least two inches (5cm) away from yourself and others when transmitting.

DO NOT operate with more than a duty cycle of 5% transmit, 5% receive and 90% standby. The radio is transmitting when the **Talk** button is pressed and the transmit information shows on the LCD screen.

ALWAYS use only Cobra authorized accessories.

DO NOT operate the radio in an explosive atmosphere, near blasting sites, or in any area where signs are posted prohibiting radio transmissions.

NEVER place the transceiver or microphone/speaker where they might interfere with operation of your vessel or cause injury.

DO NOT allow children or anyone unfamiliar with proper procedures to operate the radio without supervision.

Failure to observe any of these warnings may cause you to exceed FCC RF exposure limits or create other dangerous conditions.

NOTICE
Your radio is waterproof only when the batteries are properly installed.

AVOID using or storing the radio at temperatures below -4˚F (-20˚C) or above 140˚F (60˚C).

KEEP your radio at least 3 ft (0.9 m) away from your vessel's magnetic navigation compass.

DO NOT attempt to service any internal parts yourself. Have any necessary service performed by a qualified technician.

This radio is supplied with NiMH (Nickel-Metal Hydride) rechargeable batteries.

- Use only the Cobra power cord to recharge NiMH batteries in the radio.
- Do not short circuit the batteries.
- When replacing the batteries, dispose of the old batteries properly. The NiMH batteries may explode if disposed of in a fire.
- Do not attempt to operate your radio while recharging the batteries.

Changes of modifications to your radio MAY VOID its compliance with FCC rules and make it illegal to use.

Recommendations for Marine Communication

The frequencies your radio uses are set aside to enhance safety afloat and for vessel navigation and operational messages over a range suitable for nearshore voyages. If the 0.5 Watt maximum output of your radio is not sufficient for the distances you travel from the coast, consider a higher powered handheld radio or installing a Cobra Marine fixed mount radio with up to 3 Watts of output power.

The U.S Coast Guard does not endorse cellular telephones as substitutes for marine radios. They generally cannot communicate with rescue vessels and, if you make a distress call on a mobile telephone, only the party you call will be able to hear you. Additionally, mobile telephones may have limited coverage over water and can be hard to locate. If you do not know where you are, the Coast Guard will have difficulty finding you if you are using a mobile telephone

However, cellular telephones can have a place on board where cellular coverage is available to allow social conversations and keep the marine frequencies uncluttered and available for their intended uses.

FCC Licensing Information

Cobra Marine VHF radios comply with the FCC requirements that regulate the Maritime Radio Service.

The radio operates on all currently allocated marine channels and is switchable for use according to USA, International or Canadian regulations. It features instant access to emergency Channel 16 and calling Channel 9 as well as NOAA All Hazards Radio.

Station License

A FCC ship station license is not required for any vessel traveling in U.S.A waters which uses a VHF marine radio, RADAR, or EPIRB, and which is not required to carry radio equipment. However, any vessel required to carry a marine radio on an international voyage, carrying an HF single side band radiotelephone, or carrying a marine satellite terminal must obtain a station license

International Station License

If your vessel will be entering the sovereign waters of a country other than the U.S.A or Canada, you should contact that country's communications regulatory authority for licensing information.

Radio Call Sign

Currently, the FCC does not require recreational boaters to have a license. The United States Coast Guard recommends that the boat's registration number and state of registry be used as a call sign and be clearly visible on the vessel.

Canadian Ship Station License

You need a Radio Operator's Certificate if your vessel is operated in Canadian waters. Radio Operator training and certification is available from the Canadian Power Squadron.

User Responsibility and Operating Locations

All users are responsible for observing domestic and foreign government regulations and are subject to severe penalties for violations. The VHF frequencies on your radio are reserved for marine use and require a special license to operate from land, including when your boat is on its trailer.

NOTE

This device complies with part 15 of the FCC Rules, Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning: Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra may cause a violation of the technical regulations of part 80 of the FCC Rules, or violation of type acceptance requirements of part 2 of the rules.

Included in this Package

- **Radio**
- **Belt Clip**
- **Wrist Strap**
- **(5) Rechargeable NiMH Batteries**
- **12V USB-C Cable**
- **Important Information Leaflet**

External Speaker/Microphone Jack

Your radio can be fitted with an optional External Speaker/Microphone (not included), freeing your hands for other tasks. Contact your local Cobra Marine dealer or visit Cobra.com to find out more about the marine speaker mic accessory.

To attach the external speaker/microphone:

1. Open the speaker/microphone tab on top of the radio.
2. Insert the plug into the speaker/microphone jack.

Warning

An improper connection of the speaker microphone can compromise the radio's waterproofness.

Batteries and Charging

The radio is shipped with (5) NiMH rechargeable batteries. While the radio can be used with other rechargeable batteries, for best results always use the Cobra provided AAA batteries.

Your radio will also operate with non-rechargeable AAA alkaline batteries. **Never charge the radio with non-rechargeable alkaline batteries.**

When your rechargeable batteries begin to discharge too quickly, it is time to install new batteries.

Installing the Batteries

Install the AAA batteries in the slots inside the battery compartment with the batteries orientated according to the correct polarity (+ & -)

Inserting and Removing Batteries

1. Slide the bottom locking latch to the Unlock position.
2. Press down on the locking lever to release the battery compartment cover
3. Insert the provided (5) rechargeable batteries in the orientation indicated on the inner battery compartment.
4. Re-insert the battery compartment cover to the back of the radio and press down to close with the locking lever.
5. Slide the bottom locking latch to the Locked position.

Initial Charge

The Cobra provided NiMH batteries may be charged in a car or boat using the supplied 12V power cord. The radio can also be charged with any standard USB-C power cord and AC wall adapter.

1. Insert the other end of the power cord into a 12V power source.
2. Observe that the red light on the power cord glows to indicate that power is present.
3. Allow the batteries sufficient time to charge before use.

WARNING
Only the rechargeable NiMH batteries can be recharged.

Battery Charge Levels

As you use your radio, the battery power icon will show the battery power remaining. When the battery icon begins to flash, it is time to recharge or change the batteries.

It is recommended to recharge your radio after every use in order to keep the battery fully charged.

Basic Radio Functions

Power Button (⏻)

To turn the radio on and off, press and hold the power button (⏻) for 2 seconds.

Volume Control

To change the volume on your radio, press the VOL key to open volume control. The radio will display the current volume level on the display.

- To increase the volume, press the **UP** arrow key.
- To decrease the volume, press the **DOWN** arrow key.

Press the VOL key again to save the selected volume level, or after 3 seconds of no input the radio will save the selected volume level and return to the standby screen.

Radio Speaker and Microphone

Press and hold the PTT button to transmit messages. Release the PTT button to stop transmitting. If the PTT button is pressed while the radio is on a receive only channel, a three-beep error signal will sound.

Squelch Control

This radio is equipped with an automatic squelch control. Squelch filters weak signals and radio frequency (RF) noise so you can hear the main signal clearly.

To receive weak signals, the automatic squelch can be turned Off (opened) by press and holding the MON key located on the left side of the radio. You will likely hear a lot of static and RF noise along with the weak signal.

Press and holding the MON button for up to five seconds will briefly open squelch. To hold squelch open for longer periods, press and hold the MON button for more than five seconds. Squelch will remain open until you press the MON button again.

Key Lock

You can use the key lock button to prevent accidental changes to your settings.

To Lock or Unlock radio buttons:
Press and hold the **Backlight/Key Lock** button for two seconds. The **Key Lock** icon will appear or disappear in the LCD. When **Key Lock** is on, pressing any of the buttons on the front of the radio will result in a three-beep error tone.

Both the **Backlight/Key Lock** button and the **PTT** button are still active when key lock has been enabled. You can **Receive (Rx)** or **Transmit (Tx)** a message with **Key Lock** On, but you cannot change the channel

Channel Up/Down Buttons

Your radio will Receive (Rx) and Transmit (Tx) VHF signals on the channel indicated on the LCD display. You can change the channel at any time using the **Channel Up/Down** buttons.

If the radio is in **Key Lock** mode, the channel will not change and the three beep error signal will sound.

Scan Button

Press and hold the DW/SC button to scan all channels. The SCAN icon will display on the LCD display while scan is in progress. Scanning begins at lower channels, and scans to higher channels before wrapping back around to the lowest channel. Press the **Channel Up/Down** arrow keys to change the scan direction.

To exit **scan** mode, press and hold the **DW/SC** button. The SCAN icon will disappear from the LCD and the radio will return to **Marine Standby** mode.

Dual-Watch Mode

Dual-Watch mode gives you one button access to monitor two important channels. Channel 16 is preprogrammed and will always be one of the monitored channels. The other channel can be any marine VHF channel of your choice.

<u>Using Dual-Watch</u>

1. In Marine standby mode, select the desired channel for Dual-Watch scanning.
2. Press the **DW** button. The DW icon will appear on the LCD display and the radio will scan channel 16 and the selected channel.
3. A signal on any one of the two channels will stop the scan for 10 seconds to allow you to listen to the traffic on that channel.
4. Press the **Channel Up/Down** arrow keys to manually resume scanning the **Dual-Watch** channels
5. To exit **Dual-Watch** mode, press the **DW** button again. The DW icon will disappear from the LCD and the radio will return to marine standby mode.

Favorite Channels

Your radio can store favorite channels for quick access by using the **Star** key.

<u>Saving a Favorite Channel</u>

1. Select the desired channel with the **Channel Up/Down** arrow keys.

2. Press and hold the **Star** button for 2 seconds. The display will show the star icon indicating that the channel has been saved as a favorite channel.
3. To remove a channel as a favorite channel, press and hold the **Star** button for 2 seconds on a current favorite channel. The display will stop showing the star icon to indicate that the channel has been removed as a favorite channel.

Scrolling Through Favorite Channels

- Press the **Star** button to cycle through the current favorited channels. When the highest favorite channel has been reached, the radio will loop back to the lowest saved favorite channel.

- If no channels have been saved as favorites, no action will be taken by the radio.

- At any point when scrolling through favorited channels, using the **Channel Up/Down** arrow keys will move to the next channel as normal.

High/Low (H-L) Power Button

Press the H-L button to cycle between 3W/0.5W transmit powelevels. The LCD will show which power level is in effect. Some channels are restricted for a maximum use of 3W.Your radio will automatically set the power to a lower power level when you select those channels

16+ Button

The 16+ button gives you quick access to Channel 16 and Channel 9 from any operational mode.

- Press the 16+ button to change to Channel 16.
- Press the 16+ button again to change to Channel 9.
- Press the 16+ button a third time to return to the last used marine standby channel.

NOAA Weather

NOAA provides continuous, around-the-clock broadcasts of the latest weather information. Taped weather messages run every four to six minutes and are revised every two or three hours, or as needed. The Coast Guard also announces weather and other safety warnings on Channel 16.

Weather (WX) Standby Mode

To enter the WX Standby mode, press and hold the H-L/WX button .When your radio is in **WX Alert Standby** mode, the following items will be displayed on the LCD display.

- The WX icon (cloud icon) will be displayed.
- The last used weather channel will be displayed.
- The bar graph will display received signal strength level.

Radio Setup Menu

1. Selecting a channel map
   - Press the **UP/DOWN** buttons to choose the desired channel map
   - Press and release the **Enter/Setup** button to move to next setup item
2. ROG Beep
   - Press the **UP/DOWN** buttons to set ROG beep on or off
     - When set to ON the ROG icon will display on the marine standby screen
   - Press and release the **Enter/Setup** button to move to the next setup item
3. Key Tone
   - Press the **UP/DOWN** buttons to set Key Tone on or off
     - When set to ON the Key Tone icon will display on the marine standby screen
   - Press and release the **Enter/Setup** button to exit setup and return to VHF standby

Standby, Receive and Transmit

Marine Standby and Receive (Rx) Mode

Marine Standby mode is the default mode for the radio whenever it is turned on. From this mode, you can change current settings with the different key functions that are active in Marine Standby mode. While in Marine Standby mode, the user will be able to transmit by pressing the Push to Talk (PTT) button. Users will hear messages on the selected channel(s) they are tuned to while in Marine Standby mode.

Transmit (Tx) Mode

Transmit (Tx) mode gives you the ability to interact with safety services, other vessels and shore stations. When you use this capability, be sure to follow the procedures and to observe the courtesies that govern its use, so everyone benefits. See the Appendix to help select the proper channel(s).

To Transmit a Message:

1. Check to see that your radio is set to a proper channel for the type of message you plan to send.
2. With the microphone about 2 inches from your mouth, press and hold the PTT button and speak into the microphone. The **Transmit** icon will appear on the LCD.
3. Release the PTT button when you are finished speaking. Your radio can only operate in either Transmit (Tx) or Receive (Rx) mode at any given time. You will not hear the response to your message unless the PTT button is released. If the battery power icon begins blinking on the LCD when the PTT is pressed, the radio will not transmit.

NOTE

If the **Talk** button is held down for five minutes, the radio will automatically sound a series of beeps and cease transmitting to prevent unwanted signal generation and battery drain. As soon as the **Talk** button is released, it can be pressed again to resume transmission.

VHF Marine Radio Procedures

Maintain Your Watch

Whenever your boat is underway, the radio must be turned On and be tuned to Channel 16 except when being used for messages.

Power

Try 0.5 watts first, if the station being called is within a few miles. If there is no answer, switch to 3watt and call again. You can go up to 3 watts of output power to increase your calling distance. Remember, the lower wattage outputs will conserve your battery and minimize interference to other users.

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 Vessels

Call other vessels on Channel 16 or on Channel 9. (Channel 9 is preferred for recreational vessel use.) You may also call on ship-to-ship channels when you know that the vessel is listening on a ship-to-ship channel.

Initial Calling on Channel 16 or 9

The use of Channel 16 is permitted for making initial contact (hailing) another vessel. The limits on calling must be followed. Be reminded, Channel 16's most important function is for Emergency Messages. If for some reason, Channel 16 is congested, the use of Channel 9, especially in U.S. waters, may be used as the initial contact (hailing) channel for non-emergency communication.

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 a calling channel, change immediately

to a channel which is available for the type of message you want to send.

Station Identification

Identify, in English, your station by your FCC call sign (if available), vessel name and the state registration number, at both the beginning and at the end of the message

Prohibited Communications

You **MUST NOT** transmit:

- False distress or emergency messages.
- Messages containing obscene, indecent or profane language.
- General calls, signals or messages (messages not addressed to a particular station) on Channel 16, except in an emergency or if you are testing your radio.
- When you are on land.

Voice Calling

You are required to listen to channel 16 while standing by. Channel 16 is the distress and safety channel used for establishing initial contact with another station and for emergency communication. The Coast Guard also monitors Channel 16 for safety purposes for everyone on the water.

NOTE

Channel 9 may be used by recreational vessels for general-purpose calling. This frequency should be used whenever possible to help relieve congestion on Channel 16. The Coast Guard generally does not make urgent marine information broadcasts or weather warnings on Channel 9. Boaters are still asked to "keep watch" on Channel 16 whenever the radio is turned on and not in use with another station.

To call another vessel or shore installation (e.g, lock or bridge tender):

- Make sure the radio is ON.
- Make sure you are in standby listening mode on Channel 16. Make sure channel 16 is not in use.
- When the channel is open (quiet), press the PTT button and call a vessel. Hold the radio several inches from your face and speak clearly and distinctly in a normal voice tone. Say "name or station being called," "This is [your vessel name or call sign]."
- Once contact is made, you must leave Channel 16 and go to another working channel.

For Example

The vessel Corsair is calling the vessel Vagabond:

Corsair: "Vagabond, this is Corsair. Over."

Vagabond: "Please switch and answer on Channel 68 (or any proper working channel). Over."

Corsair: "Switching to Channel 68. Over."

- If the other party does not respond, wait two minutes and repeat. You are permitted to attempt contact 3 times, two minutes apart. If you still have not made contact, wait 15 minutes before trying again.
- After communications are completed, each vessel must sign off with its call sign or vessel name and the word "out" and return to Channel 16

NOTE
For best sound quality at the station you are calling, hold the microphone on the front of the radio at least 2 in. (51 mm) from your mouth and slightly off to one side. Speak in a normal tone of voice.

NOTE
"Over and Out"
The most commonly misused procedure words are "over and out" within the same transmission. "Over" means you expect a reply. "Out" means you are finished and do not expect a reply.

Emergency Messages and Distress Procedure

The ability to summon assistance in an emergency is the primary reason to have a VHF marine radio. The marine environment can be unforgiving, and what may initially be a minor problem can rapidly develop into a situation beyond your control.
The Coast Guard monitors Channel 16, responds to all distress calls, and coordinates all search and rescue efforts. Depending on the availability of other capable vessels or commercial assistance operators in your vicinity, Coast Guard or Coast Guard Auxiliary craft may be dispatched.
In any event, communicate with the Coast Guard as soon as you experience difficulties and before your situation becomes an emergency. Use the emergency message procedures only after your situation has become grave or you are faced with a sudden danger threatening life or property and requiring immediate help. Use Channel 16 to communicate your emergency message. Make sure you transmit on high power.
If you are merely out of gas, do not send an emergency message. Drop your anchor and call a friend or marina to bring the fuel you need or to give you a to

Marine Emergency Signals

The three spoken international emergency signals are:

MAYDAY

The distress signal **MAYDAY** is used to indicate that 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 vessel or person is in jeopardy. (This signal is properly pronounced pahn pahn.)

SECURITE

The safety signal **SECURITE** is used for messages about the safety of navigation or important weather warnings. (This signal is properly pronounced see-cure-ee-tay.)

When using an international emergency signal, the appropriate signal is to be spoken three times prior to the message.

If You Hear a Distress Call

You must give any message beginning with one of these signals priority over any other messages. ALL stations MUST remain silent on Channel 16 for the duration of the emergency unless the message relates directly to the emergency.
If you hear a distress message from a vessel, stand by your radio. If it is not answered, YOU should answer. If the distressed vessel is not nearby, wait a short time for others who may be closer to acknowledge. Even if you cannot render direct assistance, you may be able to relay the message.

VHF Marine Channel Assignments

Three sets of VHF channels have been established for marine use in the U.S.A., Canada and the rest of the world (International). Most of the channels are the same for all three maps, but there are definite differences (see table on the following pages). Your radio has all three maps built into it and will operate correctly in whichever area you choose.
The following is a brief outline of the channel assignments in the U.S.A. Channel Map.

Channel Assignments (English)

Distress, Safety, and Calling

Channel 16

Getting the attention of another station (calling) or in emergencies (distress and safety).

Calling

Channel 9

General-purpose (non-emergency) calling by non-commercial vessels. Recreational boaters are urged to use this channel to reduce congestion on Channel 16

Intership Safety

Channel 6

Ship-to-ship safety messages and for search and rescue messages to Coast Guard ships and aircraft.

Coast Guard Liaison

Channel 22A

To talk to the Coast Guard, Canadian Coast Guard (non-emergency) after making contact on Channel 16.

Non-Commercial

Channels 67*, 68*, 69, 71, 72, 78A, 79A*, 80A*

Working channels for small vessels. Messages must be about needs of the vessel, such as fishing reports, berthing and rendezvous. Use Channel 72 only for ship-to-ship messages.

Commercial

Channels 1A, 7A, 8, 9, 10, 11, 18A, 19A, 63A, 67, 72, 79A, 80A, 88A*

Working channels for working ships only. Messages must be about business or needs of the ship. Use Channels 8, 67, 72 and 88A only for ship-to-ship messages.

Channel Assignments (English)

Public Correspondence (Marine Operator)

Channels 84, 85, 86, 87, 87A, 88*

For calls to marine operators at public coast stations. You can make and receive telephone calls through these stations.

Port Operations

Channels 1A*, 5A*, 12*, 14*, 20A, 63A*, 65A, 66A, 73, 74, 75, 76, 77*

Used for directing the movement of ships in or near ports, locks or waterways. Messages must be about operational handling, movement and safety of ships.

Navigational

Channels 13, 67

Channels are available to all vessels. Messages must be about navigation, including passing or meeting other vessels. These are also the main working channels for most locks and drawbridges. You must keep your messages short and power output at no more than 1 watt.

Maritime Control

Channel 17

For talking to vessels and coast stations operated by state or local governments. Messages must be about regulation and control, boating activities, or assistance.

Digital Selective Calling

Channel 70

This channel is set aside for distress, safety and general calling using only digital selective calling techniques. Voice communication is prohibited; your radio cannot transmit voice messages on this channel.

Weather

Channels Wx 1 Thru 10

Receive-only channels for NOAA and Canadian weather broadcasts. You cannot transmit on these channels.

NOTE

* These channels are restricted to the listed uses in certain parts of the country or for certain types of users only. Consult FCC rules or a knowledgeable radio operator before using them.

Speak slowly — clearly — calmly.

1. Make sure your radio is On.
2. Select Channel 16.
3. **Press Talk button and say:**
   "MAYDAY — MAYDAY — MAYDAY."
   (Or "PAN PAN— PAN PAN— PAN PAN,"
   or "SECURITE — SECURITE — SECURITE.")
4. **Say:**
   "THIS IS [your vessel name or call sign]," repeated three (3) times.
5. **Say:**
   "MAYDAY (or "PAN PAN" or "SECURITE")
   [your vessel name or call sign].
6. **Tell where you are:**
   (what navigational aids or landmarks are nearby).
7. State the nature of your distress.
8. State the kind of assistance needed.
9. Give number of persons aboard and conditions of any injured.
10. Estimate present seaworthiness of your vessel.
11. Briefly describe your vessel (length, type, color, hull).
12. **Say:**
    "I WILL BE LISTENING ON CHANNEL 16."
13. **End message by saying:**
    "THIS IS [your vessel name or call sign]. OVER."
14. Release **Talk** button and listen. Someone should answer.
    If not, repeat the call, beginning at step 3 above.

Keep the radio nearby. Even after your message has been received, the Coast Guard can find you more quickly if you can transmit a signal for a rescue boat to hone in on

Channel Number Número de canal	Channel Map Mapa de canales USA EE.UU.	Int'l nternac	Canada Canadá	Frequency Frecuencia Transmit Transm.	Receive Recepción	Power Limits Límites de potencia	Channel Use (English)
01		•	•	156.050	160.650	Canada	Public Correspondence (Marine Operator)
01A/1001	•			156.050	156.050		Port Operations and Commercial, VTS in selected areas
02		•	•	156.100	160.700		Public Correspondence (Marine Operator)
03		•	•	156.150	160.750		Public Correspondence (Marine Operator)
03A/1003				156.150	156.150		**Coast Guard Only**
04		•		156.200	160.800		Public Correspondence (Marine Operator), Port Operations, Ship Movement
04A/1004			•	156.200	156.200		**West Coast (Coast Guard Only);** East Coast (Commercial Fishing)
05		•		156.250	160.850		Public Correspondence (Marine Operator), Port Operations, Ship Movement
05A/1005	•		•	156.250	156.250		Port Operations, VTS in selected areas
06	•	•	•	156.300	156.300		Intership Safety
07		•		156.350	160.950		Public Correspondence (Marine Operator), Port Operations, Ship Movement
07A/1007	•		•	156.350	156.350		Commercial
08	•	•	•	156.400	156.400		Commercial (Intership Only)
09	•	•	•	156.450	156.450		Boater Calling Channel, Non-Commercial (Recreational)
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	1 Watt USA 1 vatio EE.UU.	Intership Navigation Safety (Bridge-to-Bridge). In U.S. waters, large vessels maintain a listening watch on this channel.

Channel Number Número de canal	Channel Map Mapa de canales USA EE.UU.	Int'l nternac	Canada Canadá	Frequency Frecuencia Transmit Transm.	Receive Recepción		Channel Use (English)
14	•	•	•	156.700	156.700		Port Operations, VTS in selected areas
15	•		•	Rx Only	156.750		Environmental (Receive Only).
15		•	•	156.750	156.750	1 Watt CAN 1 vatio Canadá	Canada (EPIRB Buoys Only); International (On-Board Communication)
16	•	•	•	156.800	156.800		**International Distress, Safety and Calling**
17	•	•	•	156.850	156.850	1 Watt CAN 1 vatio Canadá	State Controlled (U.S.A. Only)
18		•		156.900	161.500		Port Operations, Ship Movement
18A/1018	•		•	156.900	156.900		Commercial
19		•		156.950	161.550		Port Operations, Ship Movement
19A/1019	•		•	156.950	156.950		Commercial
1019		•		156.950	156.950		Port Operations
2019		•		161.550	161.550		Port Operations
20	•	•	•	157.000	161.600	1 Watt CAN 1 vatio Canadá	**Canada (Coast Guard Only);** International (Port Operations, Ship Movement)
20A/1020	•	•		157.000	157.000		Port Operations
2020		•		161.600	161.600		Port Operations
21		•		157.050	161.650		Port Operations, Ship Movement
21A/1021	•		•	157.050	157.050		**U.S. (Government Only); Canada (Coast Guard Only)**
21B/2021			•	RX only	161.650		**Coast Guard Only** – Weather Broadcasts
22		•		157.100	161.700		Port Operations, Ship Movement
22A/1022	•		•	157.100	157.100		U.S. and Canadian Coast Guard Liaison and Maritime Safety Information Broadcasts that are announced on Channel 16
23		•	•	157.150	161.750		Public Correspondence (Marine Operator)

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Channel Number Número de canal	Channel Map Mapa de canales USA EE.UU.	Int'l nternac	Canada Canadá	Frequency Frecuencia Transmit Transm.	Receive Recepción	Power Limits Límites de potencia	Channel Use (English)
23A/1023	•			157.150	157.150		**Coast Guard Only**
23B/2023			•	Rx Only	161.750		**Coast Guard Only** – Weather Broadcasts
24	•	•	•	157.200	161.800		Public Correspondence (Marine Operator)
25	•	•	•	157.250	161.850		Public Correspondence (Marine Operator)
25B/2025			•	RX only	161.850		**Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada**
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)
28B/2028			•	RX only	162.000		**Safety: Continuous Marine Broadcast (CMB) service by MCTS Canada**
60		•	•	156.025	160.625		Public Correspondence (Marine Operator)
61		•		156.075	160.675		Public Correspondence (Marine Operator) Port Operation, Ship Movement
61A/1061			•	156.075	156.075		**Canada (Coast Guard Only); West Coast (Coast Guard Only);** East Coast (Commercial Fishing)
62		•		156.125	160.725		Public Correspondence (Marine Operator), Port Operations, Ship Movement
62A/1062			•	156.125	156.125		**West Coast (Coast Guard Only);** East Coast (Commercial Fishing)
63		•		156.175	160.775		Public Correspondence (Marine Operator), Port Operations, Ship Movement
63A/1063	•		•	156.175	156.175		Port Operations and Commercial, VTS in selected areas, Canada Tow Boats-BCC
64		•	•	156.225	160.825		Public Correspondence (Marine Operator), Port Operations, Ship Movement
64A/1064			•	156.225	156.225		**U.S. (Government Only);** Canada (Commercial Fishing)
65		•		156.275	160.875		Public Correspondence (Marine Operator), Port Operations, Ship Movement
65A/1065	•		•	156.275	156.275		Port Operations

Channel Number Número de canal	Channel Map Mapa de canales USA EE.UU.	Int'l nternac	Canada Canadá	Frequency Frecuencia Transmit Transm.	Receive Recepción	Power Limits Límites de potencia	Channel Use (English)
66		•		156.325	160.925		Public Correspondence (Marine Operator), Port Operations, Ship Movement
66A/1066	•		•	156.325	156.325		Port Operations
67	•	•	•	156.375	156.375		U.S. (Commercial). Used for bridge-to-bridge communications in lower Mississippi River (Intership Only); Canada (Commercial Fishing), S&R
68	•	•	•	156.425	156.425		Non-Commercial (Recreational)
69	•	•	•	156.475	156.475		U.S. (Non-Commercial, Recreational); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)
70		•		RX only	156.525		**Digital Selective Calling (Voice communications not allowed)**
71	•	•	•	156.575	156.575	1 Watt USA	U.S. and Canada (Non-Commercial, Recreational); International (Port Operations, Ship Movement)
72	•	•	•	156.625	156.625		Non-Commercial (Intership Only)
73	•	•	•	156.675	156.675		U.S. (Port Operations); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)
74	•	•	•	156.725	156.725		U.S. (Port Operations); Canada (Commercial Fishing Only); International (Intership, Port Operations, Ship Movement)
75		•	•	156.775	156.775	1 Watt	Port Operations (Intership Only)
76		•	•	156.825	156.825	1 Watt	Port Operations (Intership Only)
77	•	•	•	156.875	156.875	1 Watt USA	Port Operations (Intership only). Restricted to communications with pilots for movement and docking of ships.

Channel Number Número de canal	Channel Map Mapa de canales USA EE.UU.	Int'l nternac	Canada Canadá	Frequency Frecuencia Transmit Transm.	Receive Recepción	Power Limits Límites de potencia	Channel Use (English)
78		•		156.925	161.525		Public Correspondence (Marine Operator)
78A/1078	•		•	156.925	156.925		Non-Commercial (Recreational)
1078		•		156.925	156.925		Port Operations
2078		•		161.525	161.525		Port Operations
79		•		156.975	161.575		Port Operations, Ship Movement
79A/1079	•		•	156.975	156.975		Commercial (Also Non-Commercial only in Great Lakes)
1079		•		156.975	156.975		Port Operations
2079		•		161.575	161.575		Port Operations
80		•		157.025	161.625		Port Operations, Ship Movement
80A/1080	•		•	157.025	157.025		Commercial (Also Non-Commercial only in Great Lakes)
81		•		157.075	161.675		Port Operations, Ship Movement
81A/1081	•		•	157.075	157.075		**U.S. (Government Only; Environmental Protection Operations)**
82		•		157.125	161.725		Public Correspondence (Marine Operator), Port Operation, Ship Movement
82A/1082	•		•	157.125	157.125		**U.S. (Government Only); Canada (Coast Guard Only)**
83		•		157.175	161.775		Port Operations, Ship Movement
83A/1083	•		•	157.175	157.175		**(Coast Guard Only)** **(Coast Guard Only)**
83B/2083			•	RX only	161.775		**Coast Guard Only** – Weather Broadcasts
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	157.375		Public Correspondence (Marine Operator)
88		•	•	157.425	157.425		U.S. (Commercial). Port Operations and VTS (International & Canada).
88A/1088	•			157.425	157.425		Commercial Intership only

VHF Marine Channel Assignments (English)

NOTE

Many of the plain-numbered channels, such as 01, 02 and 03, transmit and receive on different frequencies. This is termed duplex operation. Some other plain-numbered channels (Including 4 digit channels) and all of the A channels, such as 01A, 03A and 04A, transmit and receive on a single frequency, which is termed simplex operation. Your radio automatically adjusts to these conditions. This radio includes new four digit channels to be compliant with the latest and future regulations.

NOTE

All channels are preprogrammed at the factory according to international regulations and those of the FCC (U.S.A.) and Industry Canada (Canada). They cannot be altered by the user nor can modes of operation be changed between simplex and duplex.

WX Radio Channel	Frequency	Channel	Use
Channel 1 (US & Canada 39B)	162.550 MHz	1	NOAA / ECCC
Channel 2 (US & Canada 36B)	162.400 MHz	2	NOAA / ECCC
Channel 3 (US) & Canada 97B)	162.475 MHz	3	NOAA / ECCC
Channel 4 (US & Canada 96B)	162.425 MHz	4	NOAA / ECCC
Channel 5 (US & Canada 37B)	162.450 MHz	5	NOAA / ECCC
Channel 6 (US & Canada 38B)	162.500 MHz	6	NOAA / ECCC
Channel 7 (US & Canada 98B)	162.525 MHz	7	NOAA / ECCC
Channel 8 (Canada 21B) (CMB)	161.650 MHz	8	Canada
Channel 9 (Canada 83B) (CMB)	161.775 MHz	9	Canada
Channel 10 (Canada 113B)	163.275 MHz	10	NOAA
Channel 11 (Canada 23B) (CMB)	161.750 MHz	11	Continuous Marine Broadcast (CMB) service in French.
Channel 12 (Canada 28B) (CMB) (ASM 2)	162.000 MHz	12	Continuous Marine Broadcast (CMB) service in French., G2B Data

Note: This equipment has been tested and found to comply with the limits for a Class B digital device,pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

---Reorient or relocate the receiving antenna.

---Increase the separation between the equipment and receiver.

---Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

---Consult the dealer or an experienced radio/TV technician for help.

Hold the radio in a vertical position in front of face with the microphone (and the other parts ofthe radio, including the antenna) at least one inch(2.5cm) away from the nose. eeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.

when worn on the body, always place the radio in approved clip, holder, holster, case, or body harness for this product. Use of non-approved accessories may result in exposure levels,which exceed the Population/Uncontrolled environment RF exposure limits.

Use only manufacturer's name approved supplied or replacement antennas, batteries, and accessories. Use of non-manufacturer-name approved antennas,batteries, and accessories may exceed the FCC and IC RF exposure guidelines.

For a list approved accessories please consult your local dealer for information.

Users must be fully aware of the hazards of the exposure and able to exercise and able to exercise control over their RF exposure to qualify for the higher exposure

to qualify for the higher exposure limits.

Your wireless hand-held portable transceiver contains a low power transmitter. This product sends out radio frequency (RF) signals when the Push-to-Talk (PTT) button is pressed.

The device is authorized to operate at a duty factor not to exceed 50%.

Tenez la radio en position verticale devant le visage avec le microphone (et les autres parties du la radio, y compris lantenne) à au moins un pouce 2,5 cm) du nez. Garder le la radio à la distance appropriée est importante parce que les expositions RF diminuent avec la distance de Lantenne. Lantenne doit être tenue loin des yeux.

Lorsquil est porté sur le corps, placez toujours la radio dans un clip approuvé, un support, une bote, ou harnais de corps pour ce produit. Lutilisation daccessoires non approuvés peut entraner des niveaux dexposition, qui dépassent les limites dexposition aux RF pour la population/lenvironnement non contrôlé.

Utilisez uniquement les antennes fournies ou de remplacement approuvées par le nom du fabricant, les batteries et accessoires. Utilisation dantennes, de batteries et daccessoires non homologués par le fabricant peut dépasser les lignes directrices FCC et IC RF exposition.

Pour une liste daccessoires approuvés, veuillez consulter votre concessionnaire local pour obtenir des informations.

Les utilisateurs doivent être pleinement conscients des dangers de l’exposition et pouvoir exercer un contrôle sur leur Exposition aux RF pour se qualifier pour les limites dexposition plus élevées.

Votre émetteur-récepteur portable sans fil contient un émetteur à faible puissance. Ce produit envoie des signaux de radiofréquence (RF) lorsque le bouton Push-to-Talk (PTT) est appuyé.

Le dispositif est autorisé à fonctionner à un facteur de travail ne dépassant pas 50 %.