West Marine®

VHF200 VHF Radio

Owner's Manual

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Welcome!

Thank you for purchasing the West Marine VHF200. This product was designed and built for boaters to use in the harsh marine environment. With proper care this product should provide you with years of trouble-free operation.

Your satisfaction with this product is backed by the entire West Marine organization worldwide.

Remember:

- Safety and distress calls take priority over all others.
- You must monitor Channel 16 when you are not operating on another channel.
- False or fraudulent distress calls are prohibited under law.
- Information overheard but not intended for you cannot lawfully be used in any way.
- Indecent or profane language is prohibited.

Service:

In the event that the radio fails to perform, or needs servicing, please send directly to our Electronics Repair Center in Hollister, CA. Be sure to include your return mailing information and a detailed accounting of the problems experienced and/or the service requested.

West Marine
Electronics Repair Center
2395 Bert Court
Hollister, CA 95023

Radio Licenses:

1. Ship Station License

An FCC ship station license is no longer required for any vessel traveling in US waters which uses a VHF marine radio, RADAR, EPIRB, and which is not required to carry radio equipment. A license is necessary however for a DSC MMSI number, or for any vessel required to carry a marine radio on an international voyage, carrying a HF single side band radiotelephone or marine satellite terminal. For more information, see the FCC's Fact Sheet PR 5000 #14. FCC license forms, including applications for ship (506) and land station licenses can be downloaded via the Internet at www.fcc.gov/forms. To obtain a form from the FCC, call (888) 225-5322.

2. Radio Call Sign

Currently the FCC does not require recreational boaters to have a Ship Radio Station License. The USCG recommends that the boat's registration number and the state to be used.

3. Canadian Ship Station Licensing

You do not need a license if your vessel is not operated in sovereign waters of a country other than Canada or the USA. If you do need a license, contact their nearest field office or regional office or write:

Industry Canada
Radio Regulatory Branch
Attn: DOSP
300 Slater Street
Ottawa, Ontario
Canada, K1A OCA

LCD Description
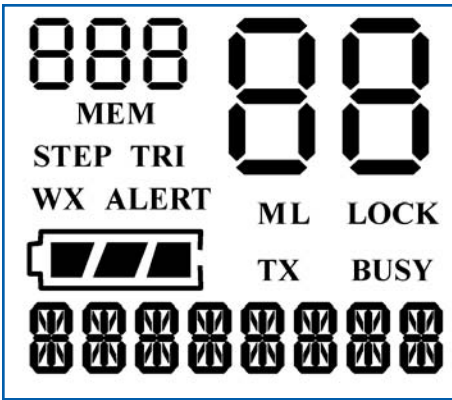
LCD Display

USA/INTERNATION-AL/CANADIAN (UIC) Mode display (page 5)

Channel Number display (page 4)

Battery Level display indicator (page 8)

Radio Status Display; shows long and short channel descriptions, warnings, and radio information (page 5)

MEM	Shown when channel is in scan memory (page 14)	**M**	Shown when medium transmit power is selected (page 7)
STEP	Shown when radio is in **STEP** mode (page 15)	**L**	Shown when low transmit power is selected (page 7)
TRI	Shown when Triple Watch has been selected (Page 12)	**LOCK**	Shown when keypad is locked (page 16)
WX	Shown when radio is in Weather (**WX**) Mode (page 9)	**TX**	Shown when transmitting (page 6)
ALERT	Shown when radio is in Weather Alert Mode (page 10)	**BUSY**	Shown when radio is receiving a signal (page 3)
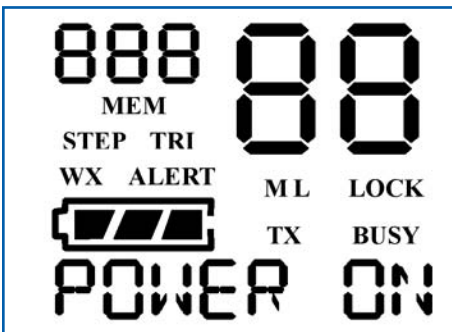
Fig. 1: Power On Display

1. Turning the Radio On

Turn the Power/Volume Knob clockwise until it clicks. The radio will power up in the same condition as it was last used. The last Channel Mode (**USA/INT/CAN**), Channel, TX Power, Key Lock, Squelch Level, etc. are restored. The Radio Status Display will show **POWER ON**. (Fig. 1)

2. Adjusting the Volume

Turn the Volume Knob clockwise to increase volume and counterclockwise to decrease volume.
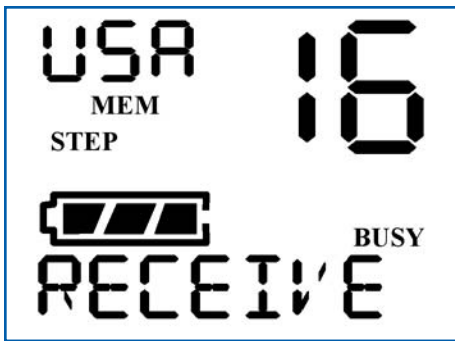
3. Receive Mode

Fig. 3a: Receive Display

When the radio receives a signal, the Radio Status Display will show the message **RECEIVE** (Fig. 3a) for three seconds before reverting to the channel description. The **BUSY** indicator will also be shown. This is an indication that you should not transmit until the **BUSY** indicator is not showing.

When the signal ceases the radio will display **STAND BY**. (Fig. 3b)

- After three seconds, the display returns to the channel name.

Fig. 3b: Stand By Display

4. Changing Channels

To change channels, press the ▲ or ▼ keys.

- If the ▲ or ▼ key is pressed for more than one second, the channel will change rapidly.
- The radio displays memory status and TX Power status of the channel as you change the channels. (Fig. 4)

Fig. 4: Channel number and memory status

Fig. 5: Current Channel, MAR OPER Display

Fig. 6a: Selecting USA Mode

Fig. 6b: Select International Mode

Fig. 6c: Select Canadian Mode

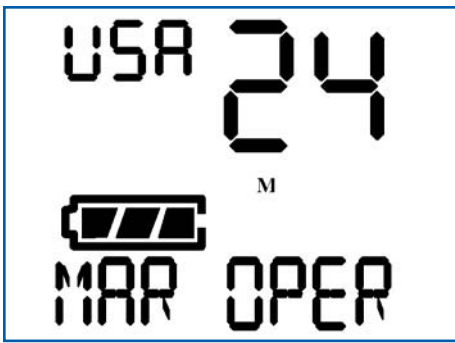# 5. Channel Descriptions

The Radio Status Display indicates the type of channel you have selected with both a long and a short description. (Fig. 5) The long description will scroll from right to left, and will be replaced by a shorter description that stays in the Radio Status Display. There is no universal agreement on how to describe each channel, and some channels have different purposes depending on where you're located in the US, but we've done our best to provide helpful information. See the appendix for a complete list of long and short channel descriptions (pp. 20-23)

- Channels used by recreational boaters for ship to ship conversations are listed as **NON-COMMERCIAL** in the description. Examples are Channels 68, 69, 71, and 72.

6. Changing Between USA, International, and Canadian Modes

Different areas of the world use different VHF frequencies, although the channel designation (1–88) may be the same. There are three modes: USA, International, and Canadian. Press and hold the **UIC** key for two seconds to change from USA to International to Canadian Modes in turn.

- When Country Mode is changed, Channel 16 is automatically selected, not the last channel used. (Fig. 6a–6c)
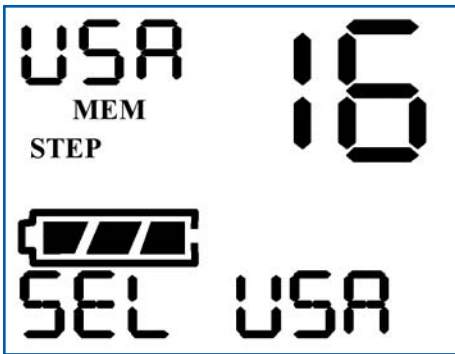- The Radio Status Display will verify your selection with **SEL USA, SEL INTERNATIONAL,** and **SEL CANADIAN**.
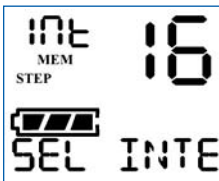
Fig. 7a: Squelch Level Setting Mode
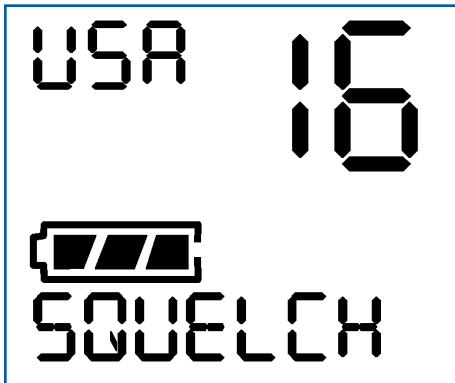
Fig. 7b: Squelch Level Changed display
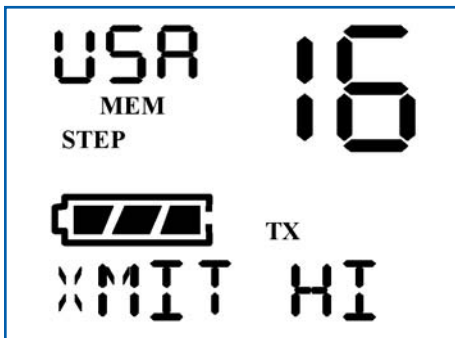
Fig. 8a: Transmitting at High Transmit Power

7. Adjusting the Squelch

The Squelch Control reduces the static and noise heard on the radio, but allows strong signals to be heard clearly. To adjust the squelch setting, press the **SQL/UIC** key quickly. The Radio Status Display will show **SQL - 0X**, where **X** is the current squelch setting. (Fig. 7a) Press the ▲ or ▼ keys to adjust the squelch setting from **00** to **08**. Higher settings allow only stronger signals will be heard, while lower settings allow weak signals to be received (and possibly annoying static). Generally, the squelch control should be set for the lowest setting that eliminates unwanted static.

- Level **00** allows all signals to be heard.
- After no buttons are pressed for 3 seconds, the radio will return to normal receiving mode and the Radio Status Display will show **SQUELCH LEVEL CHANGED**. (Fig. 7b)

8. Transmitting a Signal

To transmit a signal, press the Push-To-Talk (**PTT**) button on the left side of the radio. When **PTT** button is released, the radio returns to Receive Mode.

- As soon as the **PTT** key is pressed, the Radio Status Display will show the transmit power selected. (Fig. 8a)
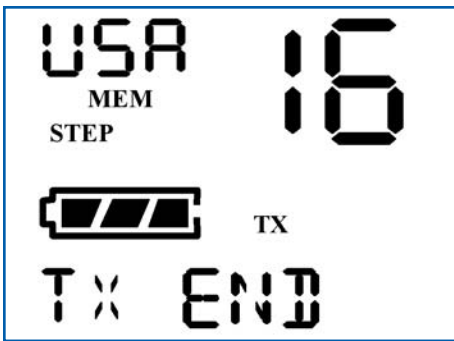
Fig. 8b: Transmission Ended Display

Blinking
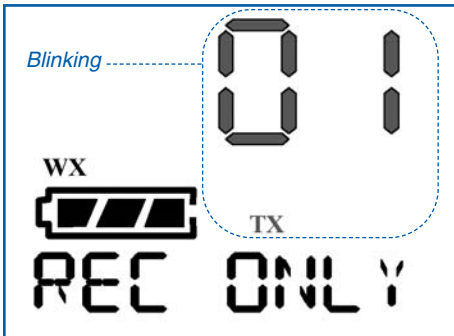
Fig. 8c: Message shown when trying to transmit on a receive-only channel
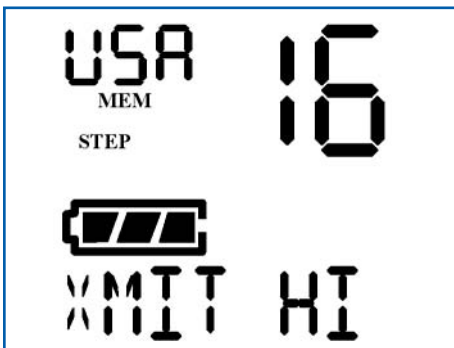
Fig. 9a: High Power Display

- When the **PTT** key is released, the Radio Status Display will show **TX END** (Fig. 8b)
- You cannot transmit on receive-only channels like the weather channels or Channels 15 and 70. If you try, an error tone will sound, the channel number and **TX** indicator will blink three times and the Radio Status Display will show **REC ONLY** (Fig 8c). After 3 seconds, the radio returns to the normal display, then goes back to the normal display.
- If the **PTT** button is pressed when the battery condition is low, the radio will send one last transmission, then it will sound the Error Beep Tone with **BAT LO** display. No further transmission will be allowed. See page 8.

9. Selecting the Transmit Power

By law, Marine VHF radios must be able to transmit at 1 watt power as well as the radio's maximum transmit power. The West Marine VHF200 radio actually has three transmit powers: 5 watts (**HI**), 1 watt (**MED**), and 0.5 watts (**LOW**).

The general rule is to use the lowest transmit power that results in clear communications with whomever you are communicating. At distances less than a mile, for example, 0.5 watts may result in clear and consistent communications, and will have the benefit of greatly extended battery life.

Pressing the **H/L** key will change the transmit power from 5 watts (**HI**) to 1 watt (**MED**) to 0.5 watts (**LOW**) and back to 5 watts with each press. The Radio Status Display will indicate the newly selected transmit power as follows:

- When High Power is selected, the bottom of the screen will Radio
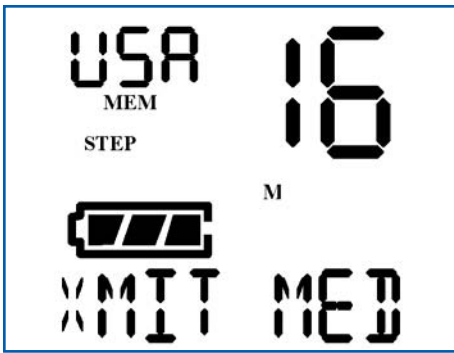
Fig. 9b: Medium Power Display
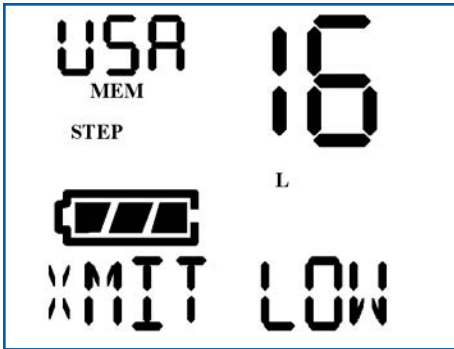
Fig. 9c: Low Power Display
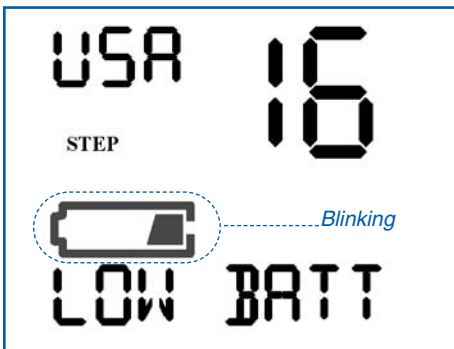
Fig. 10: Low Battery Warning Display

Status Display will show **XMIT HI** for three seconds. (Fig. 9a)

- When Medium Power is selected, the Radio Status Display will show **XMIT MED** for three seconds and the **M** indicator will show. (Fig. 9b)

- When Low Power is selected, the Radio Status Display will show **XMIT LOW** for three seconds and the **L** indicator will show. (Fig. 9c)

Certain channels are limited by law to 1 watt transmit power: **USA** Mode Channel 13, 17, 67, 77; **INT** Mode Channel 15, 17; **CAN** Mode Channel 13, 15, 17, 20, 66, 77. Therefore, the radio will automatically select 1 watt power when operating on these channels, and efforts to change the transmit power will result in the error tone.

- You cannot change the transmit power setting on channels which are receive-only channels: all weather channels; **USA** Mode Channel 15, 70; **INT** Mode Channel 70; **CAN** Mode Channel 70.

- Pressing the **H/L** key while scanning or while in the Weather Mode will result in the error tone and transmit power will not change.

10. Battery Level Display

The battery level is checked periodically and is shown using the Battery Level Indicator (1–3 bars). More bars indicate more battery capacity is left.

- When the battery capacity is very low, the low battery warning alarm will sound every 10 seconds, the low battery message **LOW BATT** will be shown on the Radio Status Display, and the battery indicator will blink. (Fig. 10)

- When the low battery warning message is displayed, the radio allows one final transmission but it will not allow further transmissions.
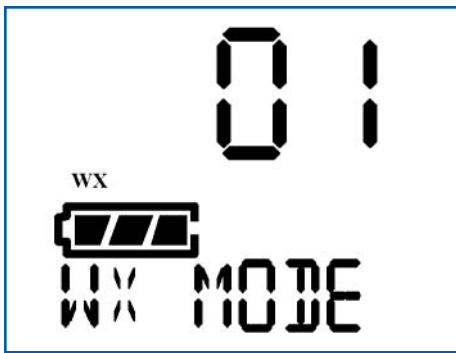
Fig. 11a: Weather Mode Display
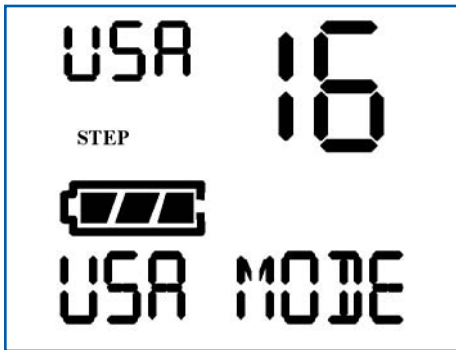
Fig. 11b: Marine Mode Display

11. Weather Mode

Virtually all areas of the US and many areas around the world are covered by VHF weather reports on one of 10 channels. These reports provide current conditions, forecasts, and warnings of dangerous weather 24 hours per day.

Press and release the **WX/ALERT** key to toggle between Weather and Marine Modes. In Weather Mode the Radio Status Display will show **WX MODE** for three seconds and the **WX** indicator will be shown. (Fig. 11a) When switching back to Marine Mode, the Radio Status Display will show **USA MODE** or **INT MODE** or **CAN MODE** for three seconds. (Fig. 11b)

- While in Weather Mode, use the ▲ or ▼ keys to select from ten weather channels. Most areas of the US are covered by Weather Channels 01, 02, and 03. The Radio Status Display will verify which channel you've selected (**WEATHER1**) as you change channels.

- If you press the **16/9/TRI** key while in weather Mode, the radio will change from the current weather channel to Channel 16, then to Channel 9, and then back to the weather channel. The **WX** indicator will flash, indicating that you are still in weather Mode, while listening to Channels 16 and 9.

- While in Weather Mode, the **MEM**, **UIC**, **SCAN**, **H/L** keys will not work. If they are pressed , the radio will sound an error tone.

Fig. 12a: Normal Channel Display

Fig. 12b: Weather Alert On
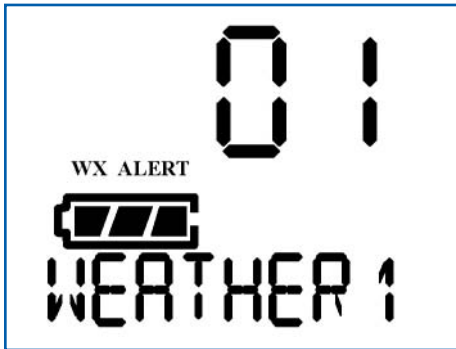
Fig. 12c: Weather Alert Display in Weather Mode

12. Weather Alert

Weather Alert is a safety function that allows the radio to monitor the local weather channel for NOAA Weather Alerts, while allowing you to listen to other channels.

To set or cancel the Weather Alert function, press and hold the **WX/ALERT** key. The display will switch from the current channel display (Fig. 12a) to the Weather Alert display for three seconds. The Radio Status Display will show **WX ALERT ON**. After three seconds, the display will switch back to the current channel display. (Fig. 12b)

While in Weather Alert Mode, the radio will check the last-used weather channel for alert tones every seven seconds. When an alert tone is detected, the radio will cancel the Alert option and change to the weather channel. It will also sound an alert detect alarm at maximum volume for 10 seconds.

- If you're using Weather Mode, and the Alert option is on, the radio will mute the speaker even though there is a signal, until an alert tone is detected. This allows you to be aware of alerts, but without having to listen to the weather continuously. (Fig. 12c)

- When an alert tone is detected, the Scan and Triple Watch functions are cancelled.
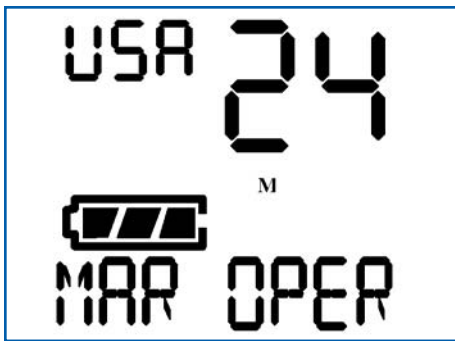
Fig. 13a: Current Channel, MAR OPER Display

Fig. 13b: Channel 16, DISTRESS Display
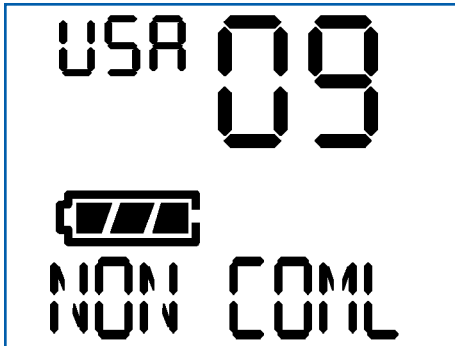
Fig. 13c: Channel 9, NON COML Display

13. 16/9 Operation

By pressing the **16/9/TRI** key briefly, the radio will change from Channel 16 to Channel 9 and back to the start channel. For example, if the start channel is Channel 24, pressing the **16/9/TRI** will change the channel from 24 to 16 to 9 and back to 24. (Fig. 13a–13c)

- If the **16/9/TRI** key is pressed in Weather Mode, Weather Mode is paused temporally and the radio will change from Channel 16 to Channel 09 to Weather Mode in turn. While Channel 16 and 09 are displayed, the **WX** icon will blink to indicate that Weather Mode is temporally paused.

- If the **16/9/TRI** key is pressed while scanning, scanning is paused temporarily and it changes from Scanning Mode to Channel 16 to Channel 09 to Scanning Mode in turn.

- If the **16/9/TRI** key is pressed in Triple Watch, Triple Watch operation is paused temporarily and it changes from Triple Watch to Channel 16 to Channel 09 and back to Triple Watch in turn.
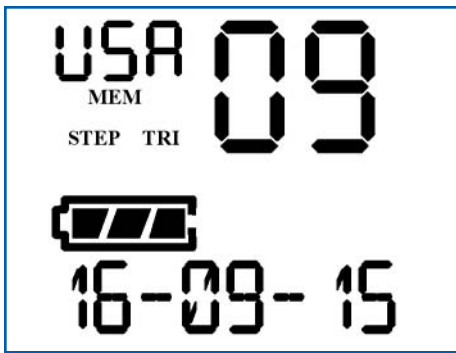
Fig. 14a: Triple Watch Display
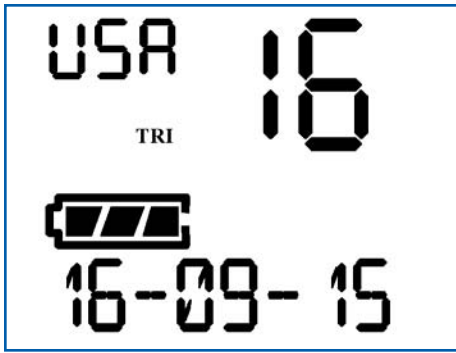
Fig. 14b: Triple Watch Display

14. Triple Watch

Triple Watch is a handy feature that lets you monitor a channel of interest to you, yet maintain a watch on Channels 9 and 16. Let's say you need to monitor Channel 15, the Environmental Channel, but don't want to miss important safety or distress messages on Channel 16. Simply select Channel 15 with the ▲ or ▼ keys, then press and hold the **16/9/TRI** key.

The **TRI** icon will be displayed. Every two seconds, the radio will quickly monitor Channels 16 and 9 before returning to your selected channel. The Radio Status Display will show the three channels being monitored. (Fig. 14a)

- If there is traffic on Channel 9, the radio will monitor Channel 9 until the signal stops while checking Channel 16 every two seconds. (Fig. 14a)
- If there is traffic on Channel 16, the radio will monitor Channel 16 until the signal stops. (Fig. 14b)
- Pressing the ▲ or ▼ keys in Triple Watch will increment or decrement the monitored channel.

15. Scanning Channels

Scanning allows you to monitor the traffic or conversations on several channels in quick succession. This can be helpful if you're trying to listing to fishing traffic on several channels, or need to monitor Race Committee traffic on Channels 68, 69, and 71.

As the radio detects traffic on any channel in its scan list, it will pause until three seconds after the last transmission, then continue scanning.

Before you can scan channels, you need to store two or more channels into the radio's scan memory.
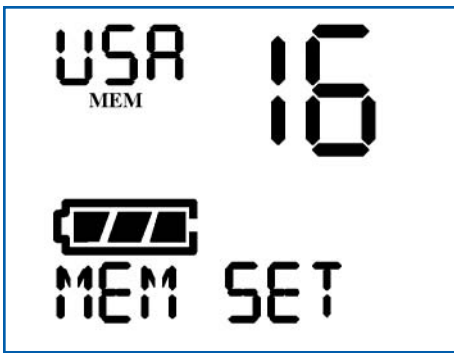
Fig. 15a: Channel 16 added to scan memory
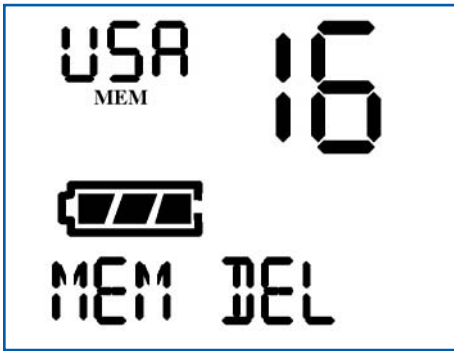
Fig. 15b: Channel 16 deleted from scan mem.
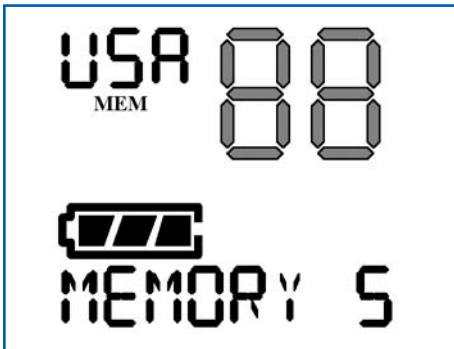
Fig. 15c: Memory Channel Scan Display

Entering and removing channels from memory

Use the ▲ or ▼ keys to select a channel to enter into scan memory. Pressing the **MEM** key will enter the channel into the scan memory (Fig 15a), and the Radio Status Display will show **MEM SET**. If the channel is currently in the scan memory, pressing the **MEM** key will remove it from the scan memory. (Fig. 15b) and the Radio Status Display will show **MEM DEL**.

• Pressing **MEM** in **WX** Mode doesn't store the Weather Channel in memory and will result in the error tone.

• Pressing the **MEM** key while scanning will result in the error tone.

Memory Scan Mode

Memory Scan Mode scans the memorized channels in ascending (or descending) order. To enter Memory Scan Mode, press the **SCAN** key briefly. (Fig. 15c) If Channels 6, 16, 22, 68, and 72 have been entered into memory, the scan sequence will go from Channel 6 to 16 to 22 to 68 to 72 to 6 to 16 and so on.

The Radio Status Display will show **MEMORY SCAN** followed by the list of channels in memory (in this case, Channels 6, 16, 22, 68, and 72).

Pressing the **SCAN** key briefly stops Memory Scan Mode, and returns the radio to the channel which was selected prior to Memory Scan. The Radio Status Display will show **SCAN STOP**.

Priority Scan Mode

Priority Scan Mode scans the memorized channels in ascending (or descending) order, but checks for traffic on Channel 16 between each memory channel. This makes it more likely that you'll be aware of important traffic on Channel 16.
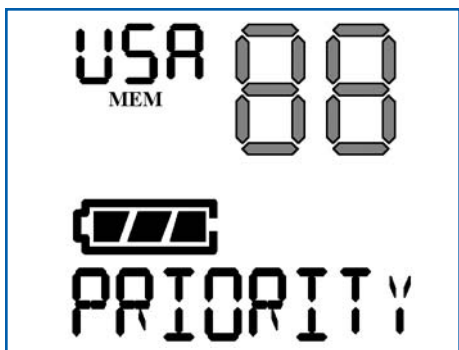
Fig. 15d: Priority Channel Scan Display

To enter Priority Scan Mode, press and hold the **SCAN** key for two seconds. If Channels 6, 22, and 68 are entered into memory, the scan sequence will go from Channel 6 to 16 to 22 to 16 to 68 to 16 to 6 to 16 and so on.

The Radio Status Display will show **PRIORITY SCAN** followed by the list of channels in memory; in this case, Channels 6, 16, 22, 68, and 72. (Fig. 15d)

Pressing the **SCAN** key stops Priority Scan Mode, and returns the radio to the channel which was selected prior to Priority Scan Mode. The Radio Status Display will show **SCAN STOP**.

Notes on Scanning

- You cannot scan channels while in Weather Mode.
- If you have not entered any channels into memory, the radio will sound the error tone when the SCAN key is pressed.
- If there is only one channel in memory, the radio will beep and change to the that channel.
- If the **PTT** key is pressed while in Scanning Mode, but while the radio is stopped to receive traffic, the radio will transmit on the current channel.
- If the **PTT** key is pressed while scanning and the radio is not stopped for traffic, the radio will transmit on the channel which was shown on the radio's display prior to pressing the **SCAN** key.
- You can change the order in which the channels are scanned by pressing the ▲ or ▼ keys while scanning.
- If the **16/9/TRI** key is pressed briefly, the radio will switch from Channel 16 to Channel 9 and back to Scan Mode in turn.
- Pressing the **WX** key while scanning will change to Weather Channel Mode.

- Pressing the **SQL/UIC** key briefly (less than one second) while scanning, will change to Squelch Change Mode. The LCD display will show the squelch level and will continue to scan.
- If **SQL/UIC** key is pressed for over two seconds while scanning, the radio will stop scanning and change to Change Country Mode. (page 5)
- If the **MEM** key or the **H/L** key is pressed while scanning, the radio will make an error tone and the key press will be ignored.

16. Step Mode

Marine radios offer a wide range of channels, but frequently there are only 5 to 10 of interest to most recreational boaters. Step Mode allows you to work with only those channels in scan memory while ignoring others.

Press and hold the **MEM/STEP** key to toggle the Step Mode on or off.

When Step Mode is on (**STEP** icon appears), press the ▲ or ▼ keys to select the scan memory channels.

- When Step Mode is selected, the Radio Status Display will show **STEP ON** for three seconds. (Fig. 16a)
- When the Step Mode is deselected, the Radio Status Display will show **STEP OFF** for three seconds. (Fig 16b) and the **STEP** indicator will turn off.

Note: Step Mode can be confusing if you're unaware that it is selected. If you can't seem to select the channels that you want, check for the **STEP** indicator on the display. Press and hold **MEM/STEP** to exit Step Mode.
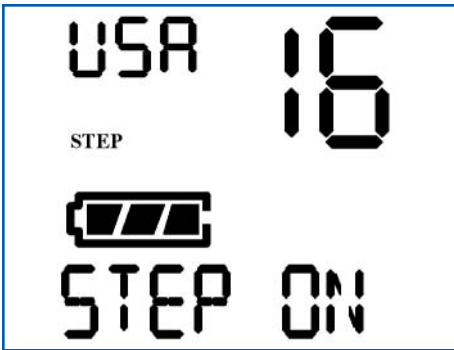
Fig. 16a: Step On Display
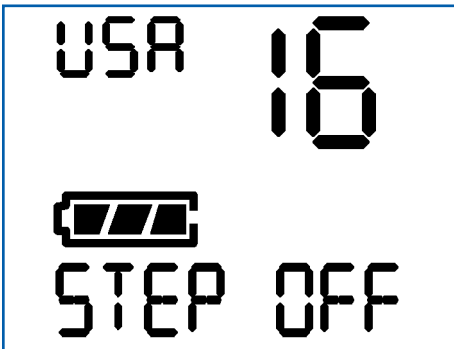
Fig. 16b: Step Off Display

Fig. 18: *Key Lock Display Display*

17. Keypad Lock

There may be times when you don't want to inadvertently press a key on the radio's keypad. In this case, you can select Keypad Lock by pressing the 🔒 key (below the **PTT** key on the left hand side) for two seconds. This will cause the keypad lock indicator two be shown, and the Radio Status Display will show **KEY LOCK ON**. (Fig. 18) While the keypad is locked, the keypad will not respond to key presses. Press the 🔒 key for another two seconds to unlock the keypad. This will extinguish the Lock indicator, and show **KEY LOCK OFF** on the Radio Status Display.

• When keys are locked, only the **PTT** key and 🔒 key function.
• Locking the keypad can be confusing. When the radio doesn't seem to be operating properly, see if the **LOCK** indicator is on.

18. Restore Factory Settings

To reset all of the customized settings to the original factory settings, hold the **16/9/TRI** key down while turning on the radio. Customized settings and channels stored in memory will be lost when factory settings are restored.

Factory Settings

Country Mode ……………………USA
Last Used Channel …………Channel 16
WX Mode ……………………Disabled
Last Used WX Channel ………………01
Key Lock ……………………Disabled
Triple Watch ……………………Disabled
WX Alert ……………………Disabled
STEP …………………………Disabled
TX Output Power ………………High
All Channel MEM …………Disabled
Squelch Level …………………………4
TOT time ……………………5 minutes
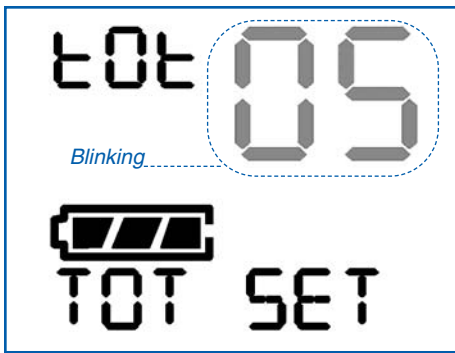
Fig. 19a: TOT Set Display
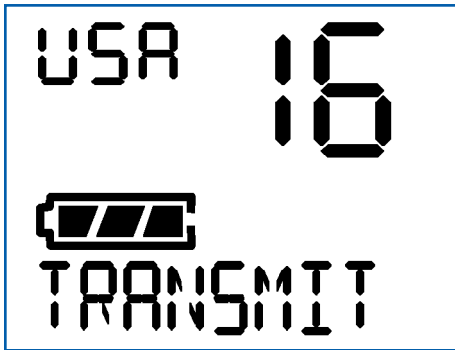
Fig. 19b: Transmit Time Exceeded display

19. Time out Transmit Setting

Nothing is more disruptive to Marine VHF communications than when some boater has his or her microphone **PTT** key pressed accidentally. The problem is that there is no way to notify him that the problem exists since the radio cannot receive traffic.

The VHF200 has a Time Out Transmit feature that allows you to set a maximum period of PTT key press time before the radio will revert to Receive Mode. This is set at the factory at five minutes, but you can enter any value from one to twenty minutes, or turn off the feature entirely.

To change the Time Out Transmit setting, press and hold the **MEM** key and turn the power on. Set the **TOT** time by pressing the ▲ or ▼ keys. (Fig. 20a)

- The **TOT** Range is 00, 01–20.
- 00=**TOT** off
- 01=1 minute
- 20=20 minutes

After setting the **TOT**, press the **PTT** button to save and exit to Receive Mode.

- If a transmission exceeds the **TOT** time, the radio will stop the transmission and return to Receive Mode. The message **TRANSMIT TIME EXCEEDED** will show in the Radio Status Display at the bottom of the screen. (Fig. 20b)

20. Display Back-Light

If any key is pressed, the display and keypad light will turn on and remain on for ten seconds after the last key press.

21. Battery Options for the VHF200

The VHF200 comes with both the BP200 NiMH (Nickel Metal Hydride) recharge-

able battery back as well as an BT200 alkaline battery tray. For most use, the BP200 battery pack will provide convenient, long life service, and will operate your radio for approximately 12 hours on a charge. The length of service depends largely on how much time you spend transmitting, and what transmit power you use.

Charging the BP200

A feature of the NiMH pack is that you can recharge at any time. The standard charger SC200 will completely recharge the BP200 battery pack in approximately 12 hours. If you need the radio prior to a full charge, you can remove it from the charger base at any state of charge. The BP200 will not be damaged by extended charge time.The best way to use the battery pack is to detach the battery pack after full charge

In SC200, when the radio and BP200 are placed in the SC200 charger base and power is present, the LED on the front of the charger base will be red.

The VHF200 also includes the DC200 Cigarette Lighter Cord. The DC200 can power the SC200 charger base from any cigarette lighter socket. The DC200 plugs into the charger base in the same socket as the AC power supply.

Use of the Optional RSC200 Rapid Smart Charger

For faster charging of the BP200 battery pack, the optional RSC200 Rapid Smart Charger can be used. It will completely recharge the BP200 in 90 minutes or less, depending on state of discharge. The RSC200 is a "smart charger" and will not damage the BP200 even if the radio is left in the charger base for long periods. The best way to use the battery pack is to detach the battery pack after full charge. The RSC200 can only be powered by AC current.

When the radio and BP200 are placed in the RSC200 charger base and power is present, the LED on the front of the charger base will be red if the power is on but the radio is being charged, or green if the radio is fully charged.

BT200 Alkaline Battery Pack

The BT200 alkaline battery pack can be used as a backup to the BP200 battery pack when charging may not be possible or convenient. It holds 6 AA batteries. When the alkaline batteries have discharged, dispose of them safely. They cannot be recharged using the supplied chargers.

Make sure to observe the polarity shown on the inside of the alkaline battery tray when installing the batteries.

Alkaline batteries have excellent shelf life when kept in a cool environment, but they can leak under certain circumstances. If you store your radio for extended periods, we recommend that you remove the alkaline battery tray from the radio.

22. Maintenance

- The VHF200 is designed to provide years of trouble free operation with virtually no maintenance. Follow these simple procedures to ensure that the VHF200 continues to deliver top performance.

- Rinse the VHF200 thoroughly with fresh water after exposure to salt water. Otherwise the radio's keys, switches, and controllers may become inoperable due to salt crystallization.

- Be Careful! The VHF200 employs JIS 7 waterproof construction (submersion to 1 m. depth for 30 min.). However, waterproofness cannot be guaranteed over time. Extreme shock (dropping, etc.) may crack the case or dislodge or damage the seals.

Additionally, wear or improper battery pack installation can damage the battery compartment seal.

- Keep your battery contacts clean! Wipe frequently. If visible corrosion appears, polish with an emery cloth or similar fine abrasive.

- Never transmit without an antenna attached to avoid damage to the radio.

- Avoid using or placing the VHF200 in areas with temperatures below -20ºC (-4ºF) or above +60ºC (+140ºF). Do not place in windshields, etc.

23. Troubleshooting Guide

Symptom:	The radio does not respond to key presses. The channel cannot be changed.
Probable Cause:	Key Lock is on.
Remedy:	Press the 🔒 key (on the left side of the case, below the PTT key) for three seconds to unlock the key pad.
Symptom:	You have arranged to communicate with another VHF radio user on a specific channel, and you can't hear them.
Probable Cause:	You and the other user are using different Country Codes.
Remedy:	Make sure that you are both using the same Country Mode (USA, International, or Canadian). Several channels have the same numeric designation, but are either on different frequencies or the channels are used for different purposes. Channel 16, the Distress, Safety, and Calling channel, is the same on all three bands.
Symptom:	You cannot change the transmit power setting.
Probable Cause:	You are on a channel which is limited to 1 watt transmit power (e.g. Ch. 13) or you are on a "receive only" channel (e.g. WX).
Remedy:	Change to an unrestricted TX/RX channel.
Symptom:	The SCAN key does not start the scan function.
Probable Cause 1:	No channels are in the scan memory.
Remedy 1:	Use the MEM key to enter desired channels into the scan memory.
Probable Cause 2:	Squelch is not adjusted correctly.
Remedy 2:	Adjust the squelch to the point that background noise just disappears.
Symptom:	Radio just does not seem to be operating correctly.
Probable Cause:	The radio has become "confused" by an unusual pattern of key presses.
Remedy:	Turn off the radio. Hold down the 16/9/TRI key while turning the radio on. This process will reset the radio to the original factory settings.
Symptom:	Radio will not power up.
Probable Cause:	The battery is exhausted.
Remedy:	Recharge the battery pack or use the BT200 alkaline battery tray with fresh alkaline batteries.
Symptom:	You can hear transmissions, but the other radio cannot hear you.
Probable Cause:	The transmit power is set to low.
Remedy:	Use the H/L key to select a higher transmit power setting.

USA Mode Frequency Chart

Ch.	Rx Freq	Tx Freq	Status	Name	Full Name
1	156.0500	156.0500	Simplex	VTS/COML	VESSEL TRAFFIC SYSTEM/COMMERCIAL
3	156.1500	156.1500	Simplex	CG ONLY	COAST GUARD,GOVT ONLY
5	156.2500	156.2500	Simplex	VTS/COML	VESSEL TRAFFIC SYSTEM/COMMERCIAL
6	156.3000	156.3000	Simplex	SAFETY	INTER-SHIP SAFETY
7	156.3500	156.3500	Simplex	COMMERCL	COMMERCIAL
8	156.4000	156.4000	Simplex	COMMERCL	COMMERCIAL
9	156.4500	156.4500	Simplex	NON COML	NON COMMERCIAL
10	156.5000	156.5000	Simplex	COMMERCL	COMMERCIAL
11	156.5500	156.5500	Simplex	VTS	VESSEL TRAFFIC SYSTEM
12	156.6000	156.6000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
13	156.6500	156.6500	Simplex, 1 W	BRG-BRG	BRIDGE TO BRIDGE
14	156.7000	156.7000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
15	156.7500	Inhibit	Receive Only	ENVIRON	ENVIRONMENTAL
16	156.8000	156.8000	Simplex	DISTRESS	DISTRESS,SAFETY,CALLING
17	156.8500	156.8500	Simplex, 1 W	GOVT	GOVT MARITIME CONTROL
18	156.9000	156.9000	Simplex	COMMERCL	COMMERCIAL
19	156.9500	156.9500	Simplex	COMMERCL	COMMERCIAL
20	157.0000	157.0000	Simplex	PORT OPR	PORT OPERATION
21	157.0500	157.0500	Simplex	CG ONLY	COAST GUARD ONLY
22	157.1000	157.1000	Simplex	CG	COAST GUARD
23	157.1500	157.1500	Simplex	CG ONLY	COAST GUARD ONLY
24	161.8000	157.2000	Duplex	MAR OPER	MARINE OPERATOR
25	161.8500	157.2500	Duplex	MAR OPER	MARINE OPERATOR
26	161.9000	157.3000	Duplex	MAR OPER	MARINE OPERATOR
27	161.9500	157.3500	Duplex	MAR OPER	MARINE OPERATOR
28	162.0000	157.4000	Duplex	MAR OPER	MARINE OPERATOR
61	156.0750	156.0750	Simplex	CG	COAST GUARD
63	156.1750	156.1750	Simplex	VTS	VESSEL TRAFFIC SYSTEM
64	156.2250	156.2250	Simplex	COMMERCL	COMMERCIAL
65	156.2750	156.2750	Simplex	PORT OPR	PORT OPERATION
66	156.3250	156.3250	Simplex	PORT OPR	PORT OPERATION
67	156.3750	156.3750	Simplex, 1 W	BRG-BRG	BRIDGE TO BRIDGE
68	156.4250	156.4250	Simplex	NON COML	NON COMMERCIAL
69	156.4750	156.4750	Simplex	NON COML	NON COMMERCIAL
70	156.5250	Inhibit	Receive Only	DSC	DIGITAL SELECTIVE CALLING
71	156.5750	156.5750	Simplex	NON COML	NON COMMERCIAL
72	156.6250	156.6250	Simplex	NON COML	NON COMMERCIAL (SHIP-SHIP)
73	156.6750	156.6750	Simplex	PORT OPR	PORT OPERATION
74	156.7250	156.7250	Simplex	PORT OPR	PORT OPERATION
77	156.8750	156.8750	Simplex, 1 W	PORT OPR	PORT OPERATION (SHIP-SHIP)
78	156.9250	156.9250	Simplex	NON COML	NON COMMERCIAL
79	156.9750	156.9750	Simplex	COMMERCL	COMMERCIAL
80	157.0250	157.0250	Simplex	COMMERCL	COMMERCIAL
81	157.0750	157.0750	Simplex	USCG	COAST GUARD
82	157.1250	157.1250	Simplex	USCG	COAST GUARD
83	157.1750	157.1750	Simplex	USCG	GOVERNMENT
84	161.8250	157.2250	Duplex	MAR OPER	MARINE OPERATOR
85	161.8750	157.2750	Duplex	MAR OPER	MARINE OPERATOR
86	161.9250	157.3250	Duplex	MAR OPER	MARINE OPERATOR
87	161.9750	157.3750	Duplex	MAR OPER	MARINE OPERATOR
88	157.4250	157.4250	Simplex	COMMERCL	COMMERCIAL (SHIP-SHIP)

International Mode Frequency Chart

Ch.	Rx Freq	Tx Freq	Status	Name	Full Name
1	160.6500	156.0500	Duplex	MAR OPER	MARINE OPERATOR
2	160.7000	156.1000	Duplex	MAR OPER	MARINE OPERATOR
3	160.7500	156.1500	Duplex	MAR OPER	MARINE OPERATOR
4	160.8000	156.2000	Duplex	MAR OPER	MARINE OPERATOR
5	160.8500	156.2500	Duplex	MAR OPER	MARINE OPERATOR
6	156.3000	156.3000	Simplex	SAFETY	INTER-SHIP SAFETY
7	160.9500	156.3500	Duplex	MAR OPER	MARINE OPERATOR
8	156.4000	156.4000	Simplex	COMMERCL	COMMERCIAL (SHIP-SHIP)
9	156.4500	156.4500	Simplex	CALLING	BOATER CALLING CHANNEL
10	156.5000	156.5000	Simplex	COMMERCL	COMMERCIAL
11	156.5500	156.5500	Simplex	VTS	VESSEL TRAFFIC SYSTEM
12	156.6000	156.6000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
13	156.6500	156.6500	Simplex	BRG-BRG	BRIDGE TO BRIDGE
14	156.7000	156.7000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
15	156.7500	156.7500	Simplex, 1 W	ENVIRON	ENVIRONMENTAL
16	156.8000	156.8000	Simplex	DISTRESS	DISTRESS,SAFETY,CALLING
17	156.8500	156.8500	Simplex, 1 W	GOVT	GOVT MARITIME CONTROL
18	161.5000	156.9000	Duplex	PORT OPR	PORT OPERATION
19	161.5500	156.9500	Duplex	COMMERCL	COMMERCIAL
20	161.6000	157.0000	Duplex	PORT OPR	PORT OPERATION
21	161.6500	157.0500	Duplex	PORT OPR	PORT OPERATION
22	161.7000	157.1000	Duplex	PORT OPR	PORT OPERATION
23	161.7500	157.1500	Duplex	MAR OPER	MARINE OPERATOR
24	161.8000	157.2000	Duplex	MAR OPER	MARINE OPERATOR
25	161.8500	157.2500	Duplex	MAR OPER	MARINE OPERATOR
26	161.9000	157.3000	Duplex	MAR OPER	MARINE OPERATOR
27	161.9500	157.3500	Duplex	MAR OPER	MARINE OPERATOR
28	162.0000	157.4000	Duplex	MAR OPER	MARINE OPERATOR
60	160.6250	156.0250	Duplex	MAR OPER	MARINE OPERATOR
61	160.6750	156.0750	Duplex	MAR OPER	MARINE OPERATOR
62	160.7250	156.1250	Duplex	MAR OPER	MARINE OPERATOR
63	160.7750	156.1750	Duplex	MAR OPER	MARINE OPERATOR
64	160.8250	156.2250	Duplex	MAR OPER	MARINE OPERATOR
65	160.8750	156.2750	Duplex	MAR OPER	MARINE OPERATOR
66	160.9250	156.3250	Duplex	MAR OPER	MARINE OPERATOR
67	156.3750	156.3750	Simplex	BRG-BRG	BRIDGE TO BRIDGE
68	156.4250	156.4250	Simplex	NON COML	NON COMMERCIAL
69	156.4750	156.4750	Simplex	NON COML	NON COMMERCIAL
70	156.5250	Inhibit	Receive Only	DSC	DIGITAL SELECTIVE CALLING
71	156.5750	156.5750	Simplex	NON COML	NON COMMERCIAL
72	156.6250	156.6250	Simplex	NON COML	NON COMMERCIAL
73	156.6750	156.6750	Simplex	PORT OPR	PORT OPERATION
74	156.7250	156.7250	Simplex	PORT OPR	PORT OPERATION
77	156.8750	156.8750	Simplex	PORT OPR	PORT OPERATION (SHIP-SHIP)
78	161.5250	156.9250	Duplex	PORT OPR	PORT OPERATION
79	161.5750	156.9750	Duplex	PORT OPR	PORT OPERATION
80	161.6250	157.0250	Duplex	PORT OPR	PORT OPERATION
81	161.6750	157.0750	Duplex	PORT OPR	PORT OPERATION
82	161.7250	157.1250	Duplex	PORT OPR	PORT OPERATION
83	161.7750	157.1750	Duplex	PORT OPR	PORT OPERATION
84	161.8250	157.2250	Duplex	MAR OPER	MARINE OPERATOR
85	161.8750	157.2750	Duplex	MAR OPER	MARINE OPERATOR
86	161.9250	157.3250	Duplex	MAR OPER	MARINE OPERATOR
87	161.9750	157.3750	Duplex	MAR OPER	MARINE OPERATOR
88	162.0250	157.4250	Duplex	MAR OPER	MARINE OPERATOR

Canadian Mode Frequency Chart

Ch.	Rx Freq	Tx Freq	Status	Name	Full Name
1	160.6500	156.0500	Duplex	MAR OPER	MARINE OPERATOR
2	160.7000	156.1000	Duplex	MAR OPER	MARINE OPERATOR
3	160.7500	156.1500	Duplex	MAR OPER	MARINE OPERATOR
4	156.2000	156.2000	Simplex	CCG	COAST GUARD
5	156.2500	156.2500	Simplex	VTS	VESSEL TRAFFIC SYSTEM
6	156.3000	156.3000	Simplex	SAFETY	INTER-SHIP SAFETY
7	156.3500	156.3500	Simplex	COMMERCL	COMMERCIAL
8	156.4000	156.4000	Simplex	COMMERCL	COMMERCIAL
9	156.4500	156.4500	Simplex	CALLING	BOATER CALLING CHANNEL
10	156.5000	156.5000	Simplex	COMMERCL	COMMERCIAL
11	156.5500	156.5500	Simplex	VTS	VESSEL TRAFFIC SYSTEM
12	156.6000	156.6000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
13	156.6500	156.6500	Simplex, 1 W	BRG-BRG	BRIDGE TO BRIDGE
14	156.7000	156.7000	Simplex	VTS	VESSEL TRAFFIC SYSTEM
15	156.7500	156.7500	Simplex, 1 W	ENVIRON	ENVIRONMENTAL
16	156.8000	156.8000	Simplex	DISTRESS	DISTRESS,SAFETY,CALLING
17	156.8500	156.8500	Simplex, 1 W	SAR	STATE CONTROL
18	156.9000	156.9000	Simplex	COMMERCL	COMMERCIAL
19	156.9500	156.9500	Simplex	CCG	CANADIAN COAST GUARD
20	161.6000	157.0000	Duplex, 1 W	PORT OPR	PORT OPERATION
21	157.0500	157.0500	Simplex	CCG	COAST GUARD
22	157.1000	157.1000	Simplex	CCG	COAST GUARD
23	161.7500	157.1500	Duplex	CCG	COAST GUARD
24	161.8000	157.2000	Duplex	MAR OPER	MARINE OPERATOR
25	161.8500	157.2500	Duplex	MAR OPER	MARINE OPERATOR
26	161.9000	157.3000	Duplex	MAR OPER	MARINE OPERATOR
27	161.9500	157.3500	Duplex	MAR OPER	MARINE OPERATOR
28	162.0000	157.4000	Duplex	MAR OPER	MARINE OPERATOR
60	160.6250	156.0250	Duplex	MAR OPER	MARINE OPERATOR
61	156.0750	156.0750	Simplex	CCG	COAST GUARD
62	156.1250	156.1250	Simplex	CCG	COAST GUARD
64	156.2250	156.2250	Simplex	MAR OPER	MARINE OPERATOR
65	156.2750	156.2750	Simplex	RESCUE	SEARCH AND RESCUE
66	156.3250	156.3250	Simplex, 1 W	PORT OPR	PORT OPERATION
67	156.3750	156.3750	Simplex	BRG-BRG	BRIDGE TO BRIDGE
68	156.4250	156.4250	Simplex	NON COML	NON COMMERCIAL
69	156.4750	156.4750	Simplex	NON COML	NON COMMERCIAL
70	156.5250	Inhibit	Receive Only	DSC	DIGITAL SELECTIVE CALLING
71	156.5750	156.5750	Simplex	NON COML	NON COMMERCIAL
72	156.6250	156.6250	Simplex	NON COML	NON COMMERCIAL
73	156.6750	156.6750	Simplex	PORT OPR	PORT OPERATION
74	156.7250	156.7250	Simplex	PORT OPR	PORT OPERATION
77	156.8750	156.8750	Simplex, 1 W	PORT OPR	PORT OPERATION
78	156.9250	156.9250	Simplex	SHP-SHP	INTER SHIP
79	156.9750	156.9750	Simplex	SHP-SHP	INTER SHIP
80	157.0250	157.0250	Simplex	SHP-SHP	INTER SHIP
81	157.0750	157.0750	Simplex	CCG	COAST GUARD
82	157.1250	157.1250	Simplex	CCG	COAST GUARD
83	157.1750	157.1750	Simplex	CCG	COAST GUARD
84	161.8250	157.2250	Duplex	MAR OPER	MARINE OPERATOR
85	161.8750	157.2750	Duplex	MAR OPER	MARINE OPERATOR
86	161.9250	157.3250	Duplex	MAR OPER	MARINE OPERATOR
87	161.9750	157.3750	Duplex	MAR OPER	MARINE OPERATOR
88	162.0250	157.4250	Duplex	MAR OPER	MARINE OPERATOR

WX Frequency Chart

Channel No.	(MHz)	Name
WX01	162.5500	WEATHER1
WX02	162.4000	WEATHER2
WX03	162.4750	WEATHER3
WX04	162.4250	WEATHER4
WX05	162.4500	WEATHER5
WX06	162.5000	WEATHER6
WX07	162.5250	WEATHER7
WX08	161.6500	WEATHER8
WX09	161.7750	WEATHER9
WX10	163.2750	WEATHR10

Accessories

Model	Description	Order #
SWIV200	Swivel Belt Clip with Button and Mounting Screw	3895638
SC200	12 Hr. Std. Charger with Bucket and AC power supply	3895463
DC200	DC Cigarette Lighter power supply for Std. Charger	3895554
CLIP200	Fixed Belt Clip with Mounting Screws	3895687
BT200	Alkaline Battery Tray	3895562
BP200	Nickel Metal Hydride Rechargeable Battery Pack	3895497
ANT200	Flexible Rubber Antenna	3895547

Optional Rapid Smart Charger:

RSC200	90 Min. Rapid Smart Charger with AC power supply	3895489

West Marine VHF 200 Radio Specifications

Dimensions

Operating Voltage	7.2Vdc
Battery Capacity	1350mAH Ni-mH

Transmitter

Frequency Range	156.025-157.425
Output Power	5W /1W/ 0.5
Spurious Emission	65@5W/ 55@1W
AF Distortion	< 5%
Max Deviation	< 5KHz
Frequency Stability	< 5ppm
FM Hum & Noise	> 40dB
Microphone Type	Condenser
Adjacent Channel Power	> 70dBc
Current Drain	1.5A / 0.7A

Receiver

Frequency Range	56.050-163.275
Sensitivity	0.2uV
Adjacent Channel Selectivity	> 70dBc
Intermodulation Distortion	> 65dBc
Spurious Response	> 70dBc
AF Output	0.5W
Speaker Impedance	8 Ohm

> **Performance specifications are nominal value, unless otherwise indicated, and are subject to change without notice.**

Warning: Your West Marine VHF200 generates RF electromagnetic energy when transmitting. This radio was designed to meet the FCC's rules and regulations for the maximum permissible exposure to radio frequency energy. This design was tested and found to be compliant to the strict requirements established by the FCC.

This radio was designed for and is classified as "Occupational Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is not intended for use by the "General Population" in an uncontrolled environment. It's use is restricted to work related operations only where the radio operator must have the knowledge to control his or her exposure conditions for satisfying the higher exposure limit allowed for Occupational Users.

Caution: It is up to the user to properly operate this transmitter to ensure safe operation. Please adhere to the following to ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits:

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer to use with this radio.
- DO NOT transmit for more than 50% of the total radio use time. Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator" is displayed on the screen. You can cause the radio to transmit by pressing the "PTT" switch.
- ALWAYS maintain at least a 1-inch (2.5 cm) separation distance between your body (including the face and eyes) and any surface of the radio.
- NEVER allow the antenna to touch the human body or to come within 1 inch when the transmitter is active.
- NEVER allow children to operate the radio without adult supervision and the knowledge of the following safety guidelines.

This radio is approved for use with the specific belt-clip tested for body-worn SAR compliance. Other belt clips or body-worn accessories may not comply and should be avoided.

Notice: 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:

— 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 marine electronics technician for help.

24. Emergency Communications

One of the most important reasons to have a VHF radio on board your boat is so you can make distress calls to rescue agencies like the US Coast Guard, State Boating Authorities, County Sheriffs, and towing organizations. There are three acknowledged levels of severity when making an emergency call, and it's important to know what to do if you should have to make an emergency call, and what to do if you hear one.

An excellent source for information on marine communications is <u>Chapman Piloting, Seamanship, and Small Boat Handling</u>. We recommend that you consult Chapman's for more information, and also consult the web at one of the following web sites:

www.boatingsafety.com

www.boatsafe.com/nauticalknowhow/radio.htm

Mayday for Distress Communications

Mayday calls are only for when your vessel or crew face "grave and imminent danger, and immediate help is required". Therefore, you should not transmit a Mayday call unless you're likely to lose a life or your boat.

Procedure for making a Distress Call:

Select Channel 16 and high transmit power.

Transmit as follows:

1. "Mayday, Mayday, Mayday".
2. "This is (Name of Vessel)". Repeat three times.
3. "(Your call sign or other indication of the vessel)". Repeat three times.
4. "Located at (your position)". The position can be in latitude and longitude, or can be in reference to a known object. Be specific. "Near a Red buoy" or "South of the Lighthouse" is too easy to misinterpret.
5. State "(The nature of the distress and assistance required.)". Examples: taking on water, medical emergency, fire, dismasting, aground in surf.
6. State "(Any other information which might facilitate the rescue)". Examples: # of adults and children on board, other communications devices, life raft on board, color of vessel, size of vessel, # of injuries, type of help or equipment needed.

After making a Mayday call, allow the Coast Guard, other rescue agencies, or other boaters to contact you. If you don't hear from anyone in a minute, repeat your message.

Pan Pan for Urgency Messages

Since Mayday calls are only for "grave and imminent danger", what should you say if you're aground, or lost, or running low on fuel? Ordinary calls for assistance can use the urgency signal "Pan Pan" (pronounced pon pon).

Procedure for making an Urgency Call:

Select Channel 16 and high transmit power.

Transmit as follows:

1. "Pan-Pan, Pan-Pan, Pan-Pan".
2. "This is (Name of Vessel)".
3. "(Your call sign or other indication of the vessel)".
4. "Located at (your position)". The position can be in latitude and longitude, or can be in reference to a known object. Be specific. "Near a Red buoy" or "South of the Lighthouse" is too easy to misinterpret.
5. State "(The nature of the distress and assistance required.)". Examples: aground, require medical assistance, lost, out of fuel, engine problems.

Since these calls do not normally require immediate response, it's common to make contact with a rescue agency or another boat and shift to a working frequency like Channel 6 (Intership Safety Channel) or Channel 22 (Coast Guard Working Channel).

Boat to Boat Calls

When calling another boater, here are some tips to keep in mind:

1. Monitor Channel 16 for traffic before you begin to transmit. This is especially important if there is an emergency in your area, and Channel 16 is being used for emergency communications.
2. Keep your communication on Channel 16 as brief as possible. It's a party line; only one boat in your area can use it at a time.
3. If Channel 16 is clear, say "Osprey" (Name of other vessel), "this is Mildew (name of your vessel). Over." First say their boat name, then say your boat name.
4. They should respond "Mildew, this is Osprey. Switch to Channel 68. Over."
5. You respond "This is Mildew, switching to Channel 68. Out."

Both operators would then change to Channel 68 (or one of the other ship to ship channels like 9, 69, 71, 72, or 78) and continue their conversation, assuming the channel was free. When the conversation is complete, both boats would switch back to monitoring Channel 16.

You can also monitor a channel other than Channel 16 for traffic related to fishing, a boat regatta, or other event. Dual or Triple Watch will be helpful, since they allow you to hear hailing calls on Channel 16, while listening to conversations that interest you.

Three-Year Limited Warranty

IMPORTANT: Evidence of original purchase, such as the original receipt, a cancelled check, or a credit card receipt is required for warranty service.

WARRANTOR: WEST MARINE PRODUCTS, INC. ("WEST MARINE")

ELEMENTS OF WARRANTY: WEST MARINE warrants for three years, to the original retail owner and user, this product to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WARRANTY DURATION: This warranty to the original retail owner and user shall terminate and be of no further effect 36 months after the date of original retail sale (battery pack warranty duration is 12 months or one year). The warranty is invalid if the Product is (A) damaged or not maintained as reasonable or necessary, (B) modified, altered, or used as part of any conversion kits, subassemblies, or any configurations not sold by WEST MARINE, (C) improperly installed or programmed, (D) serviced or repaired by someone other than an authorized WEST MARINE service center, as provided below, for a defect or malfunction covered by this warranty, (E) used in any conjunction with equipment or parts or as part of any system or subsystem not manufactured by WEST MARINE, or (F) installed or programmed by anyone other than as detailed by the Owner's Manual for this product. THIS WARRANTY IS NON-TRANSFERRABLE.

STATEMENT OF REMEDY: In the event that the product does not conform to this warranty at any time while this warranty is in effect, warrantor will either, at its option, repair or replace the defective unit and return it to you without charge for parts, service, or any other cost (except shipping and handling) incurred by warrantor or its representatives in connection with the performance of this warranty. Warrantor, at its option, may replace the unit with a new or refurbished unit. THE LIMITED WARRANTY SET FORTH ABOVE IS THE SOLE AND ENTIRE WARRANTY PERTAINING TO THE PRODUCT AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES OF ANY NATURE WHATSOEVER, WHETHER EXPRESS, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights, which vary form state to state. This warranty is void outside the United States of America.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: If, after following the instructions in Owner's Manual you are certain that the Product is defective, pack the Product carefully (preferably in its original packaging). The product should include all parts and accessories originally packaged with the Product, include evidence of original purchase and a note describing the defect that has caused you to return it. The Product should be shipped freight prepaid, by traceable means, to WEST MARINE's Authorized Service Center at:

West Marine Authorized Service Center
2395 Bert Court
Hollister, CA 95023