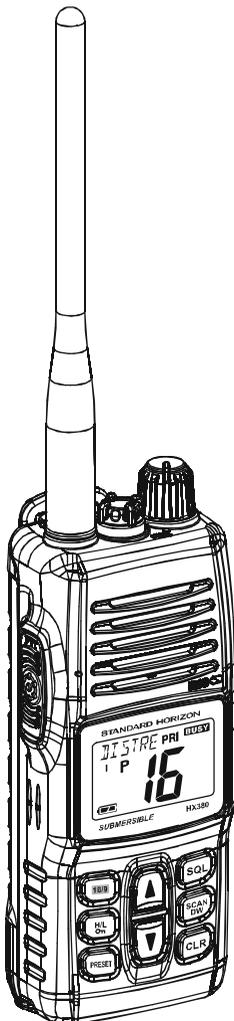


STANDARD HORIZON

HX380

VHF FM Marine Transceiver

Owner's Manual



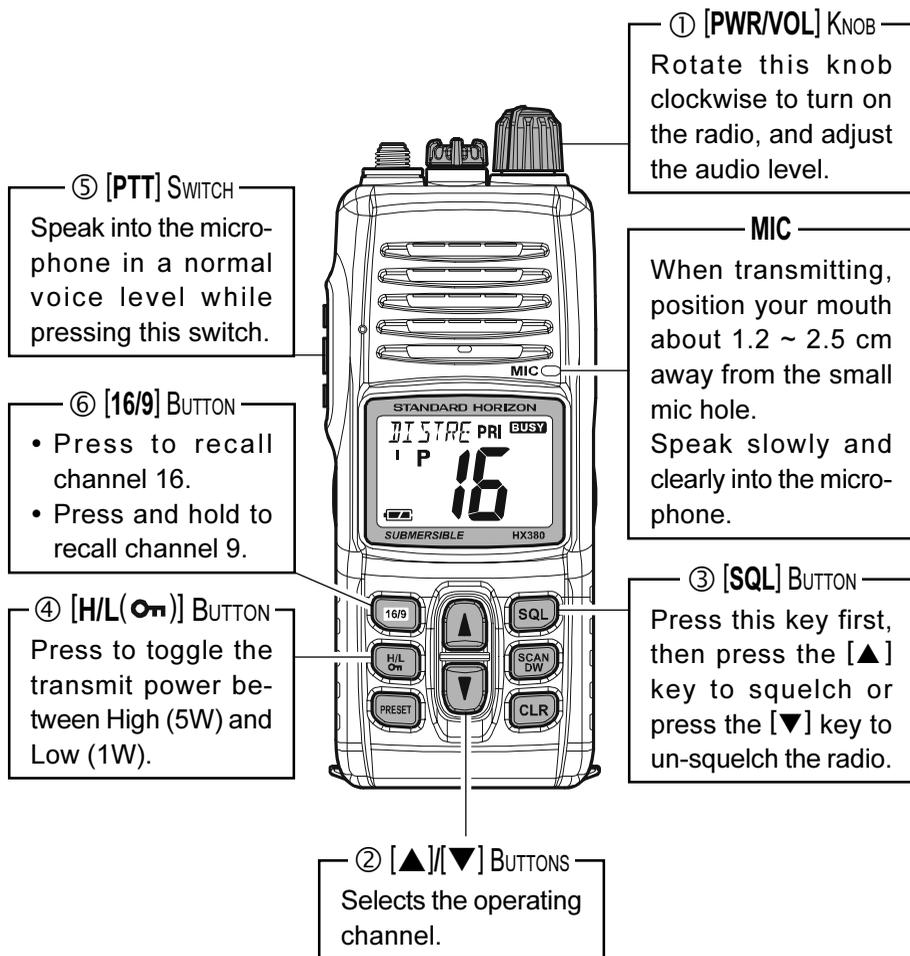
VERTEX STANDARD CO., LTD.

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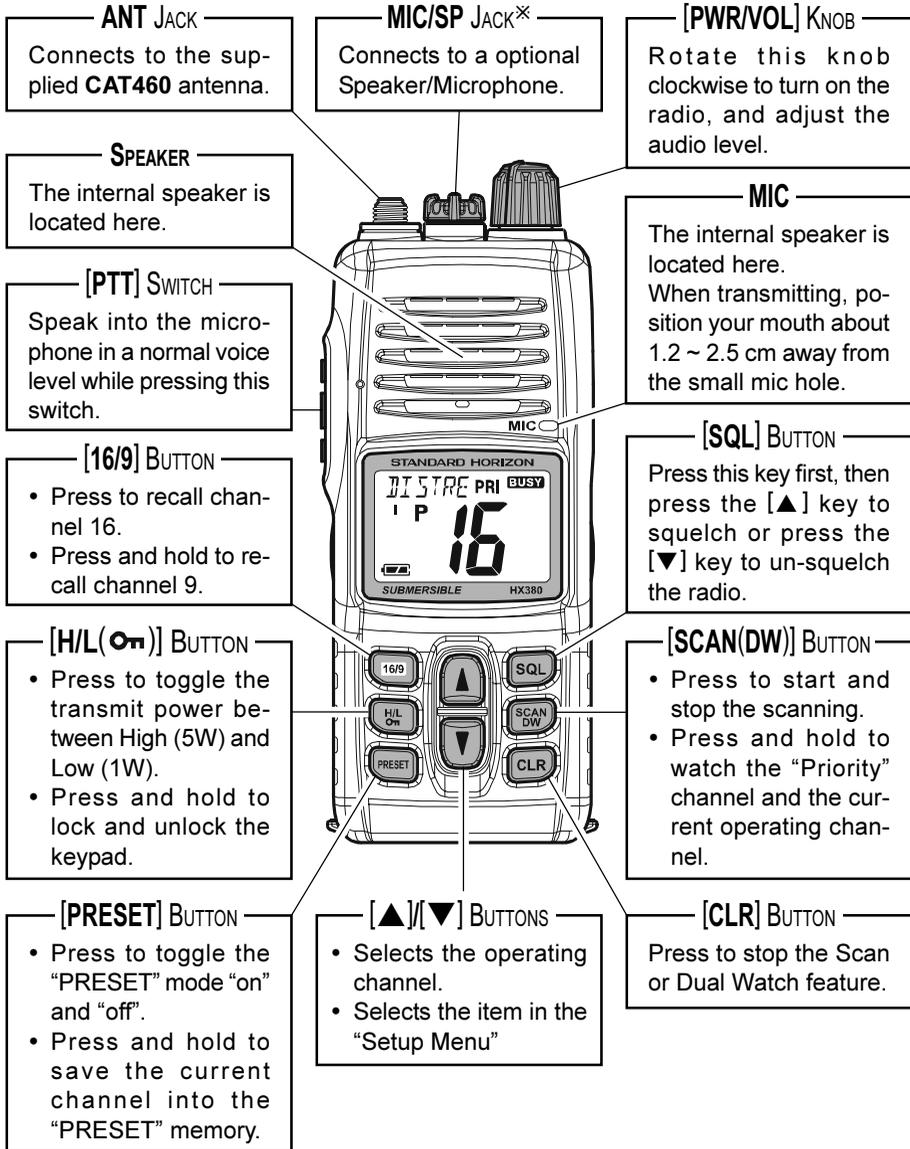
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QUICK REFERENCE GUIDE

This transceiver is equipped with the E2O (Easy-To-Operate) system. You can do the basic operation in numerical order of the illustration below.



QUICK REFERENCE GUIDE



※: Water resistance of the transceiver is assured only when the battery pack is attached to the transceiver and MIC/SP cap is installed in the MIC/SP jack.

1. GENERAL INFORMATION

1.1 INTRODUCTION

Congratulations on your purchase of the **HX380**! Whether this is your first portable marine VHF transceiver, or if you have other STANDARD HORIZON equipment, the STANDARD HORIZON organization is committed to ensuring your enjoyment of this high performance transceiver, which should provide you with many years of satisfying communications even in the harshest of environments. STANDARD HORIZON technical support personnel stands behind every product sold, and we invite you to contact us should you require technical advice or assistance.

The **HX380** is a Submersible 5-Watt portable two way marine transceiver with the capability to be programmed with 40 LMR (Land Mobile Radio) channels with CTCSS or DCS signalling by a dealer. The transceiver has all allocated International, Canadian, or USA channels. It has emergency channel 16 which can be immediately selected from any channel by pressing the [16/9] key.

The **HX380** includes the following features: 10 PRESET channels for enabling the instant access, Memory Scanning, Priority Scanning, Battery Saver, easy-to-read large LCD display, EEPROM memory back-up, Battery Life displayed on the LCD, and a transmit Time-Out Timer (TOT).

The **HX380** transmitter provides a full 5 Watt of transmit power and also is selectable to 1 Watt to assist the user in ensuring maximum battery life.

We appreciate your purchase of the **HX380**, and encourage you to read this manual thoroughly, so as to learn and fully understand the capabilities of the **HX380**.

1.2 RF EXPOSURE SAFETY STATEMENT

Your wireless handheld portable transceiver contains a low power transmitter. When the Push-to-Talk (PTT) button is pushed, the transceiver sends out radio frequency (RF) signals.

This device is authorized to operate at a duty factor not to exceed 50% (this corresponds to 50% transmission time and 50% reception time).

This transmitter and its antenna must maintain a separation distance of at least 2.5 centimeters from your face. Speak in a normal voice, with the antenna pointed up and away from the face at the required separation distance.

Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the transmitter.

2. ACCESSORIES

2.1 PACKING LIST

When the package containing the transceiver is first opened, please check it for the following contents:

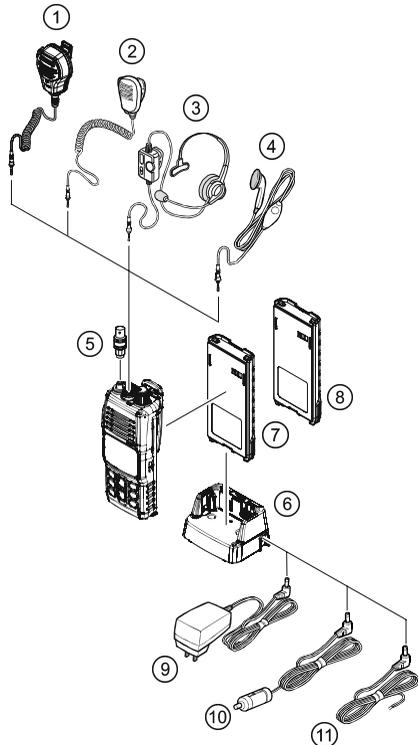
- **HX380** Transceiver
- **CAT460** Antenna
- **FNB-V105LI** 7.4 V, 1650 mAh Li-Ion Battery Pack
- **CD-48** Charger Cradle for **HX380**
- **NC-90C** 230VAC Wall Charger for **CD-48**
- Belt Clip
- Owner's Manual
- Warranty Card

2.2 OPTIONS

- ① **MH-73A4B** Speaker/Microphone
- ② **MH-57A4B** Mini Speaker/Microphone
- ③ **VC-24** VOX Headset
- ④ **VC-27** Earpiece/Microphone
- ⑤ **CN-3** Radio-to-Ship's Antenna Adapter
- ⑥ **CD-48** Charger Cradle
- ⑦ **FNB-V105LI** 7.4 V, 1650 mAh Li-Ion Battery Pack
- ⑧ **FBA-40** Alkaline Battery Case
- ⑨ **NC-90B/C/U*** AC Wall Charger for the **FNB-V105LI**
- ⑩ **E-DC-19A** DC Cable with 12 V Cigarette Lighter Plug
- ⑪ **E-DC-6** DC Cable; plug and wire only

※: "B" suffix is for use with 120 VAC (Type-A plug), "C" suffix is for use with 230 VAC (Type-C plug), and "U" suffix is for use with 230 VAC (Type-BF plug).

Note: Before operating the **HX380** for the first time, it is recommended that the battery be charged. Please see section "4.2.3 BATTERY CHARGING" for details.



3. ABOUT THIS RADIO

3.1 ABOUT THE VHF MARINE BAND

The radio frequencies used in the VHF marine band lie between 156 and 162 MHz. The marine VHF band provides communications over distances that are essentially “Line of sight” Actual transmission range depends much more on antenna type, gain and height than on the power output of the transmitter. On a fixed mount 25 W radio transmission expected distances can be greater than 15 miles, for a portable 5 W radio transmission the expected distance can be greater than 5 miles in “Line of sight”.

The user of a Marine VHF radio is subject to severe fines if the radio is used on land. The reasoning for this is you may be near an inland waterway, or propagation anomalies may cause your transmission to be heard in a waterway. If this occurs, depending upon the marine VHF channel on which you are transmitting, you could interfere with a search and rescue case, or contribute to a collision between passing ships. For VHF Marine channel assignments refer to page 30 section 9.

3.2 ABOUT THE LMR CHANNELS

The **HX380** is capable of being programmed with 40 LMR (Land Mobile Radio) channels by a dealer. The frequency range is 137 to 174MHz which may be setup for 25 kHz (wide) or 12.5 kHz (narrow) channel stepping with CTCSS and DCS signaling. Contact your dealer for further details.

3.3 ABOUT WATER RESISTANCE

Water resistance of the transceiver is assured only when the battery pack is attached to the transceiver and **MIC/SP** cap is installed in the **MIC/SP** jack.

3.4 EMERGENCY (CHANNEL 16 USE)

Channel 16 is known as the Hail and Distress Channel. An emergency may be defined as a threat to life or property. In such instances, be sure the transceiver is on and set to “Channel 16”. Then use the following procedure:

1. Press the **PTT** (Push-To-Talk) switch and say “**Mayday, Mayday, Mayday**. This is _____, _____, _____” (your vessel’s name).
2. Then repeat once: “**Mayday, _____**” (your vessel’s name).
3. Now report your position in latitude/longitude, or by giving a true or magnetic bearing (state which) to a well-known landmark such as a navigation aid or geographic feature such as an island or harbor entry.
4. Explain the nature of your distress (sinking, collision, aground, fire, heart attack, life-threatening injury, etc.).
5. State the kind of assistance your desire (pumps, medical aid, etc.).

6. Report the number of persons aboard and condition of any injured.
7. Estimate the present seaworthiness and condition of your vessel.
8. Give your vessel's description: length, design (power or sail), color and other distinguishing marks. The total transmission should not exceed 1 minute.
9. End the message by saying "**OVER**". Release the **PTT** switch and listen.
10. If there is no answer, repeat the above procedure. If there is still no response, try another channel.

3.5 CALLING ANOTHER VESSEL (CHANNEL 16 OR 9)

Channel 16 may be used for initial contact (hailing) with another vessel.

However, its most important use is for emergency messages. This channel must be monitored at all times except when actually using another channel.

It is monitored by the U.S. and Canadian Coast Guards and by other vessels. Use of channel 16 for hailing must be limited to initial contact only. Calling should not exceed 30 seconds, but may be repeated 3 times at 2-minute intervals. In areas of heavy radio traffic, congestion on channel 16 resulting from its use as a hailing channel can be reduced significantly in U.S. waters by using Channel 9 as the initial contact (hailing) channel for non-emergency communications. Here, also, calling time should not exceed 30 seconds but may be repeated 3 times at 2-minute intervals.

Prior to making contact with another vessel, refer to the channel charts in this manual, and select an appropriate channel for communications after initial contact. For example, Channels 68 and 69 of the U.S. VHF Charts are some of the channels available to non-commercial (recreational) boaters. Monitor your desired channel in advance to make sure you will not be interrupting other traffic, and then go back to either channel 16 or 9 for your initial contact.

When the hailing channel (16 or 9) is clear, state the name of the other vessel you wish to call and then "**this is**" followed by the name of your vessel and your Station License (Call Sign). When the other vessel returns your call, immediately request another channel by saying "**go to**", the number of the other channel, and "**over**". Then switch to the new channel. When the new channel is not busy, call the other vessel.

After a transmission, say "**over**", and release the **PTT** (Push-To-Talk) switch. When all communication with the other vessel is completed, end the last transmission by stating your Call Sign and the word "**out**". Note that it is not necessary to state your Call Sign with each transmission, only at the beginning and end of the contact.

Remember to return to Channel 16 when not using another channel. Some radios automatically monitor Channel 16 even when set to other channels or when scanning.

3.6 OPERATING ON CHANNEL 13

Channel 13 is used at docks, bridges and for maneuvering in port. Messages on this channel must concern navigation only, such as meeting and passing in restricted waters. In emergencies and when approaching blind river bends, High power is allowed. Pressing the [H/L()] key will change the power output from Low Power (1 Watt) to High (5 Watts). When you change from this channel then return to it, low power will be automatically selected.

3.7 OPERATING ON CHANNEL 67

When channel 67 is used for navigational bridge-to-bridge traffic between ships, Normal, High or Medium power may be used temporarily (in the USA band) by pressing the [H/L()] key. When you select this channel again, the transceiver will revert to low power.

3.8 SIMPLEX/DUPLEX CHANNEL USE

Refer to the VHF MARINE CHANNEL CHART (page 31) for instructions on use of simplex and duplex channels.

NOTE

All channels are factory-programmed in accordance with International, Industry Canada, and FCC (USA) regulations. The mode of operation cannot be altered from simplex to duplex or vice-versa. Simplex (ship to ship) or duplex (marine operator) mode is automatically activated, depending on the channel and whether the International, Canadian or USA operating band is selected.

4. GETTING STARTED

4.1 RADIO CARE

CAUTION

Before following the instructions below, insure the battery pack is in place and firmly tightened. Care must be taken if the radio was dropped and a close inspection may be needed to insure the radio case and gaskets are in adequate condition.

Clean the radio with fresh water after exposure to salt water by rinsing the radio under a sink faucet or by dunking the radio in a bucket of fresh water. After washing, use a soft cloth and thoroughly dry all parts of the radio. This is to keep the rubber switches and speaker grill clean and in top operating condition.

CAUTION

There is rare case that water is in between the radio and battery pack. In this case, the radio and battery pack keep the submersible performance individually. Remove the battery pack from the radio, then clean the radio and battery pack individually by a procedures described above.

4.2 BATTERIES AND CHARGERS

If the radio has never been used, or its charge is depleted, it may be charged by connecting the **CD-48** Charger Cradle with the **NC-90C** battery charger, as shown in the illustration. If 12V DC power is available, the optional **E-DC-19A** DC Cable with 12 V Cigarette Lighter Plug or the optional **E-DC-6** DC Cable may be used for charging the battery. The **NC-90C**, **E-DC-19A**, and **E-DC-6** will charge a completely discharged **FNB-V105LI** battery pack in approximately 7 hours.

The **FNB-V105LI** is a high performance Li-Ion battery providing high capacity in a compact package.

CAUTION

To avoid risk of explosion and injury, **FNB-V105LI** battery pack should only be removed, charged or recharged in non-hazardous environments.

4.2.1 BATTERY SAFETY

Battery packs for your transceiver contain Li-Ion batteries. This type of battery stores a charge powerful enough to be dangerous if misused or abused, especially when removed from the transceiver. Please observe the following precautions:

DO NOT SHORT BATTERY PACK TERMINALS: Shorting the terminals that power the transceiver can cause sparks, severe overheating, burns, and battery cell damage. If the short is of sufficient duration, it is possible to melt battery components. Do not place a loose battery pack on or near metal surfaces or objects such as paper clips, keys, tools, etc. When the battery pack is installed on the transceiver, the terminals that transfer current to the transceiver are not exposed. The terminals that are exposed on the battery pack when it is mounted on the transceiver are charging terminals only and do not constitute a hazard.

DO NOT INCINERATE: Do not dispose of any battery in a fire or incinerator. The heat of fire may cause battery cells to explode and/or release dangerous gases.

Battery Maintenance

For safe and proper battery use, please observe the following:

- Battery packs should be charged only in non-hazardous environments;
- Use only STANDARD HORIZON-approved batteries;
- Use only a STANDARD HORIZON approved charger. The use of any other charger may cause permanent damage to the battery.
- Follow charging instructions provided with the chargers.
- Keep the battery contacts clean and dry.

Battery Storage

Store the batteries in a cool place to maximize storage life. Since batteries are subject to self-discharge, avoid high storage temperatures that cause large self-discharge rates. After extended storage, a full recharge is recommended.

Battery Recycling

**DO NOT PLACE USED BATTERIES IN YOUR REGULAR TRASH!
LI-ION BATTERIES MUST BE COLLECTED, RECYCLED OR DISPOSED
OF IN AN ENVIRONMENTALLY SOUND MANNER.**

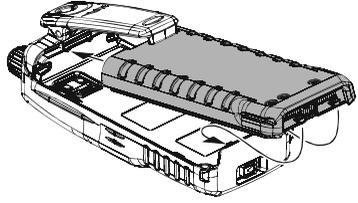
The incineration, land filling or mixing of Li-Ion batteries with the municipal solid waste stream is PROHIBITED BY LAW in most areas.

Return batteries to an approved Li-Ion battery recycler. This may be where you purchased the battery.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling and disposal of Li-Ion batteries.

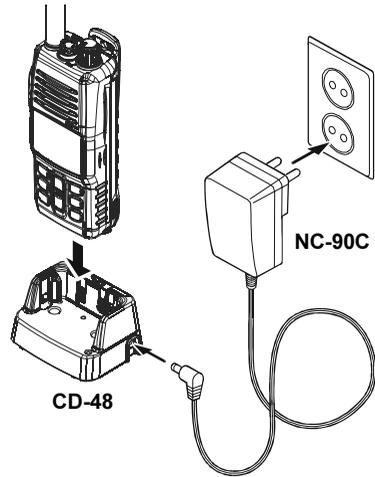
4.2.2 BATTERY INSTALLATION/REMOVAL

- ❑ To install the battery pack, hold the transceiver with your left hand, so your palm is over the speaker and your thumb is on the top of the belt clip. Insert the battery pack into the battery compartment on the back of the radio while tilting the Belt Clip outward, then push the bottom side of the battery pack until the battery pack locks with the Battery Pack Latch.
- ❑ To remove the battery, turn the radio off. Slide the Battery Pack Latch on the bottom of the radio, then slide the battery downward and out from the radio while holding the Belt Clip.



4.2.3 BATTERY CHARGING

1. Turn the transceiver off.
2. Insert the DC plug from the **NC-90C** into the DC jack on the **CD-48** side panel, then plug the **NC-90C** into the AC line outlet.
3. Insert the **HX380** (with the battery pack) into the **CD-48**; the antenna should be at the left side when viewing the charger from the front.
4. If the **HX380** is inserted correctly, the Red “**CHARGING**” indicator will glow. A fully-discharged pack will be charged completely in approximately 7 hours.
5. When charging is completed, the red LED indicator will change to green. Remove the transceiver from the **CD-48**, and unplug the **NC-90C** from the AC line outlet.



CAUTION

The **CD-48** is NOT designed to be waterproof. Do not attempt to charge in water hazardous locations.

NOTE

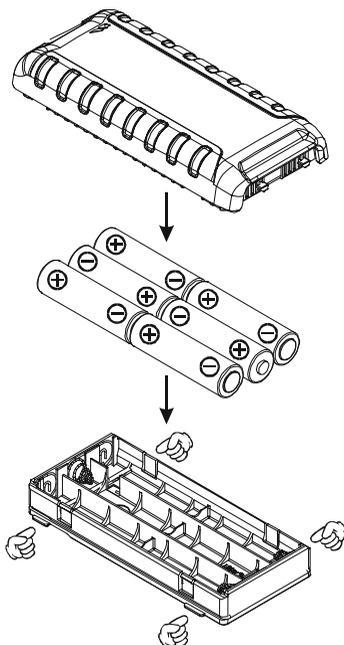
The **CD-48** is only designed for the charging of the **HX380**'s battery, and is not suitable for other purposes. The **CD-48** may contribute noise to TV and radio reception in the immediate vicinity, so we do not recommend its use adjacent to such device.

4.3 INSTALLATION OF OPTION

4.3.1 FBA-40 ALKALINE BATTERY CASE

FBA-40 is a battery case that holds six AA size Alkaline batteries and is used with the **HX380** transceiver. When the **FBA-40** is installed into the **HX380** the radio can withstand immersion in water up to 3.3ft for 30 minutes.

1. On the **FBA-40**, remove the battery case cover. Due to the battery case water proof characteristics, it may be difficult to remove the battery case cover, put a coin to the edge of the battery compartment (👉) then pry open the battery case cover.
2. Slide the six AA size Alkaline batteries into the **FBA-40** Battery Case with the Negative (-) side of the batteries touching the spring connections inside the **FBA-40** Battery Case.
3. Attach the battery cover to the **FBA-40** Battery Case while being careful so that o-ring is not twisted.
4. Insert the **FBA-40** Battery Case into the battery compartment on the back of the **HX380** transceiver while tilting the Belt Clip outward, then push the bottom side of the **FBA-40** Battery Case until the Battery Case locks with the Battery Pack Latch.

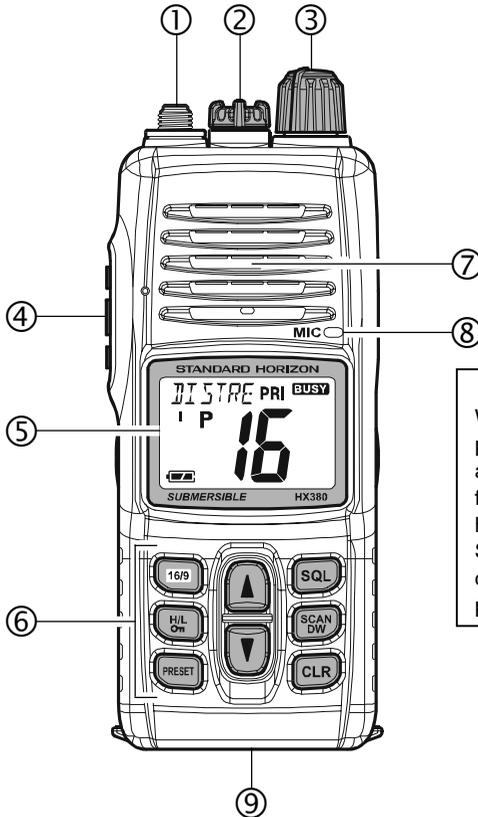


5. CONTROLS AND INDICATORS

5.1 CONTROLS AND SWITCHES

NOTE

This section defines each control of the transceiver. For detailed operating instructions, refer to section “**6 BASIC OPERATION**”. Refer to illustrations for the location of the following controls, switches, and connections.



NOTE

When transmitting, position your mouth about 1 ~ 2 cm away from the small mic hole. Speak slowly and clearly into the microphone.

① **ANT Jack (Top Panel)**

The supplied **CAT460** flexible antenna is attached here.

② **MIC/SP Jack (Top Panel)**

The jack accepts the optional **MH-73A4B** Speaker/Microphone, **MH-57A4B** Mini Speaker/Microphone, **VC-24** VOX Headset, or **VC-27** Earpiece/Microphone. When this jack is used, the internal speaker and microphone are disabled.

- ③ **POWER Switch / VOLUME Control (VOL)**
Turns the transceiver on and off as well as adjusts the audio volume level. Turn this knob clockwise to turn the radio on and increase the speakers audio volume.
Turn fully counter-clockwise to turn the radio off.
- ④ **PTT (PUSH-TO-TALK) Switch**
When pushed activates the transmitter.
- ⑤ **LCD Display**
This display shows current operating conditions. Refer to page 17 for details.
- ⑥ **Keypad**
[16/9] Key
Pressing this key immediately recalls channel 16 from any channel location. Holding down this key recalls channel 9. Pressing this key again reverts to the previous selected working channel.
Secondary use:
When the [16/9] key is held and the [CLR] key is pressed, the radio will change the marine band between the International, Canadian, and USA channels.
- [H/L (🔊)] Key**
Press this key to toggle the transmitter output power between “High” (5 Watts) and “Low” (1 Watt) power. When the “Low” power is selected, the “🔊” icon will appear at the right of the channel indication of the display. This key does not function on the “Transmission Inhibited” and “Low power only” channels.
Secondary use:
Hold down this key to lock the keypad (except the [SQL], [H/L (🔊)] and PTT keys) so that they are not accidentally changed. The “🔊” icon will appear at the right of the channel indication of the display, to indicate that the functions are locked. Hold down this key until the “🔊” icon disappears to unlock the radio.
- [PRESET] Key**
Press this key to recall the user preset memories (shown as memory channel number “0” - “9” on the display). Press the [▼] or [▲] key to select the desired preset channel.
Press and hold this key for two seconds to memorize the selected channel into the preset memory channel.

[▲(UP)] Key

Press the key momentarily to increase the channel one step. Hold the key down to increase the channel continuously.

Secondary use:

Used to adjust the squelch threshold level up after the [SQL] key is pressed.

[▼(DOWN)] Key

Press the key momentarily to decrease the channel one step. Hold the key down to decrease the channel continuously.

Secondary use:

Used to adjust the squelch threshold level down after the [SQL] key is pressed.

[SQL] Key

Press this key to activate the squelch adjusting mode. Press the [▼] or [▲] key to adjust the squelch threshold level.

Press and hold this key for two seconds to open the squelch, allowing you to monitor the operating channel. Release the key to resume normal (quiet) monitoring.

[SCAN(DW)] Key

Starts scanning and priority scanning of programmed channels.

Secondary use:

Press and hold the [SCAN(DW)] key for two seconds to activate the Dual Watch feature.

[CLR] Key

Press to stop the Scan, Priority Scan, or Dual Watch feature.

Secondary use:

When the [16/9] key is held and the [CLR] key is pressed, the radio will change the marine band between the International, Canadian, and USA channels.

⑦ Speaker

The internal speaker is located here.

⑧ Microphone

The internal microphone is located here.

When transmitting, position your mouth about 1 ~ 2 cm away from the small mic hole. Speak slowly and clearly into the microphone.

⑨ Battery Pack Lock (Bottom side)

Slide the Battery Pack Lock to the “◀” position for battery removal.

5.2 LCD INDICATORS

- ① Alpha/numeric “Tag” display
Indicates the current channel name or current operating mode.

- ② “PRI” Indicator
This indicator shows the channel is in the “Priority” Channel.

- ③ “BUSY” Indicator
This indicator appears when a signal is being received.

- ④ “U/I/C” Indicator
These indicators show the “band” of operation for the particular channel. “U” indicates the USA band; “I” indicates the International band; and “C” indicates the Canadian band.

- ⑤ “P” Indicator
This indicator shows the channel is in the “PRESET” Channel.

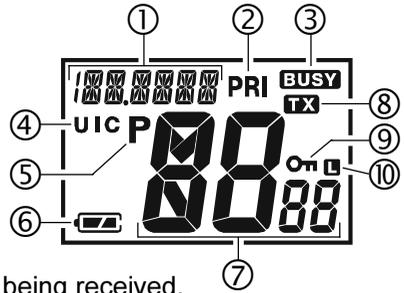
- ⑥ “” Battery Indicator
“”: Full battery
“”: Lower battery
“”: Battery is very low
“ (Blinking)”: Prepare to charge the battery

- ⑦ Channel Display
The operating channel is shown on the LCD in both the transmission and reception modes.

- ⑧ “” Indicator
This indicator appears during transmission.

- ⑨ “” Indicator
When the “” icon is shown on the LCD, all keys are disabled except for the PTT, [SQL], and [H/L()] keys.

- ⑩ “” Indicators
This indicator shows when the TX output power is “Low” (1 Watt) power.



6. BASIC OPERATION

6.1 INITIAL SETUP

1. Install the battery pack on the transceiver (see section “4.2.2 BATTERY INSTALLATION/REMOVAL”).
2. Install the antenna onto the transceiver; hold the bottom end of the antenna, then screw it onto the mating connector on the transceiver until it is snug. Do not over-tighten.

6.2 RECEPTION

1. Turn the **VOL** knob clockwise to turn the transceiver on.
The battery voltage will appear briefly at the upper left corner on the display, then the channel name will appear.
2. Press the [**SQL**] key to activate the squelch adjusting mode (The “SQL LVL” notation will appear). Press the [**▼**] key until the “**BUSY**” indicator will appear on the display, then press the [**SQL**] key again.
3. Turn up the **VOL** knob until the noise or audio from the speaker is at a comfortable level.
4. Press the [**SQL**] key, then press the [**▲**] key until the random noise disappears. This state is known as the “Squelch Threshold”.
5. Press the [**▼**] or [**▲**] key to select the desired channel. Refer to the channel chart on page 31 for available channels.
6. When a signal is received, adjust the **VOL** knob to the desired listening level. The “**BUSY**” indicator in the LCD is displayed indicating that the channel is being used.



6.3 TRANSMISSION

1. Perform “6.2 RECEPTION” discussion above.
2. Before transmitting, monitor the channel and make sure it is clear.
3. For communications over short distances, press the [**H/L**(**L**)] key to select the Low power (1 watt: “**L**” icon appears).

Note: Transmitting on Low power prolongs battery life. Low power should be selected whenever possible.



4. If using Low power is not effective, select High power (5 watts: “**L**” icon disappears) by pressing the [H/L(**L**)] key.
5. When receiving a signal, wait until the incoming signal stops before transmitting. The transceiver cannot transmit and receive simultaneously.
6. Press the **PTT** (Push-To-Talk) switch to transmit. During transmission, the “**TX**” indicator will appear on the display.
7. Position your mouth about 1 ~ 2 cm away from the mic hole. Speak slowly and clearly into the microphone.
8. When the transmission is finished, release the **PTT** switch.



6.3.1 TRANSMIT TIME - OUT TIMER (TOT)

While the **PTT** switch is held down, transmission time is limited to 5 minutes. This prevents prolonged (unintentional) transmissions. About 10 seconds before automatic transmitter shutdown, a warning beep will sound from the speaker. The transceiver automatically switches to the receiving mode, even if the **PTT** switch is held down. Before transmitting again, the **PTT** switch must first be released, then wait 10 seconds and then pressed again. This Time-Out-Timer (TOT) prevents a continuous transmission that would result from an accidentally stuck **PTT** switch.

NOTE

The **PTT** switch is ignored for 10 seconds after the transceiver automatically switches to the receiving mode by the TOT feature.

6.4 INTERNATIONAL, CANADIAN, AND USA CHANNELS

1. To change from International to Canadian or US Marine Channels, hold down the [16/9] key and press the [CLR] key. The band will change from International, to Canadian, and to USA with each press.
2. “**I**” appears for the International band, “**C**” appears for the Canadian band, and “**U**” appears on the LCD for the USA band
3. Refer to the marine channel charts in section 9 “**VHF MARINE CHANNEL ASSIGNMENTS**” for allocated channels.



“INTERNATIONAL” BAND



“CANADIAN” BAND



“USA” BAND

6.5 KEYPAD LOCKING

In order to prevent accidental channel change, the **HX380**'s keypad may be locked out.

1. Hold down the [H/L()] key to lock the keypad (except the **PTT**, [SQL], and [H/L()] keys) so that they are not accidentally changed. The "" icon will appear next to the channel number on the display, indicating that the functions are locked.



2. Hold down the [H/L()] key until the "" icon disappears to unlock the radio.

6.6 PRESET CHANNELS (0 ~ 9): INSTANT ACCESS

Ten user assigned channels can be programmed for instant access. Pressing the [PRESET] key activates the user assigned channel bank.

6.6.1 PROGRAMMING

1. Select the desired channel to be assigned into the Preset channel bank using the [▼] or [▲] key.
2. Press and hold the [PRESET] key until the channel number blinks. The "P" icon and Preset channel number will blink together, then release the [PRESET] key.
3. Press the [▼] or [▲] key to select the desired Preset channel ("0" ~ "9"). If you see the "Underbar" between the current channel number and the Preset channel number, it means that the Preset channel currently has no data written on it (i.e. the channel is "free").



4. Press the [PRESET] key to program the current channel into the Preset channel bank.
5. Repeat steps 3 and 4 to program the other channel into the Preset Channels, if desired.
6. To delete a Preset Channel, select the Preset Channel Number to be deleted using the [▼] or [▲] key, then press and hold the [PRESET] key until the Preset Channel Number is removed from the display.

6.6.2 OPERATION

1. Press the [PRESET] key to change the transceiver to the Preset channel mode. The "P" icon and Preset channel number will appear on the display.
2. Press the [▼] or [▲] key to select the desired Preset Channels ("0" through "9").



3. To exit from the Preset channel mode, press the [PRESET] key. The trans-

ceiver will revert to the channel you were prior to switching to the Preset channel mode.

6.7 MEMORY SCAN

The HX380 is factory default setting is to scan channels stored in Preset memory bank. You may change the scan range to the all marine channels instead of the Preset channels via the Menu ("Set") Mode. Refer to Menu Mode Item "**SCAN TYPE**" on page 26 for details.

When an incoming signal is detected on one of the channels during scan, the radio will pause on that channel, allowing you to listen to the incoming transmission. The radio will automatically start scanning again after the transmission stops.

1. Press the [**PRESET**] key to change the transceiver to the Preset channel mode.
2. Press the [**SCAN(DW)**] key briefly to start scanning. The scan proceeds from the lowest to the highest programmed Preset channel and stops scanning when a transmission is received. Scanning will resume when the incoming signal disappears at the end of the transmission. The "MSCAN" notation will appear at the upper left corner of the display during scanning.
3. To stop the scan, press the [**SCAN(DW)**] key briefly.



6.8 PRIORITY SCAN

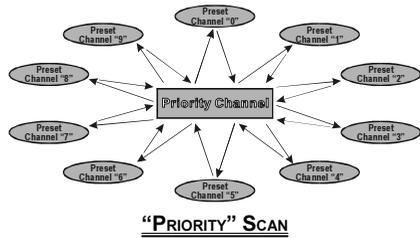
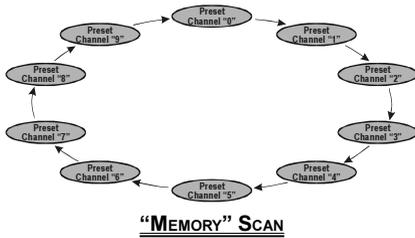
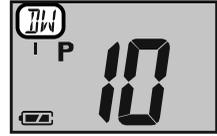
The Priority Scan is similar to the Memory Scan. However, the Priority Scan scan the Preset memory channels and the Priority channel. The following channels can be set as the Priority channel: CH16, CH9, and one of the Preset channel (default setting is CH16).

1. To set the priority channel, hold down the [**16/9**] key and press the [**H/L**] key. The channel will change from 16 to 09 with each press of the [**H/L**] key. When the [**16/9**] key is released the displayed channel will be set as the priority channel (the "PRI" icon will appear at the above of the channel number).
2. For priority scanning, press the [**PRESET**] key to change the transceiver to the Preset channel mode, then press the [**SCAN(DW)**] key briefly to start the normal (memory) scanning. Hold down the [**SCAN(DW)**] key. Scanning will proceed between the Preset channels and the priority channel. The priority channel will be scanned af-



ter each Preset channel. The “PSCAN” notation will appear at the upper left corner of the display during scanning.

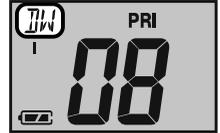
- When the transceiver stops and listens to the signal of a Preset channel, the radio will “Dual Watch” (described next chapter) between this channel and the priority channel. This allows the radio to be able to receive calls on the priority channel even when the radio is receiving on another channel.
- To stop the Priority scanning, press the [SCAN(DW)] key briefly.



6.9 DUAL WATCH

The Dual Watch feature allows the radio watch the current channel and the Priority channel.

1. To set the Priority channel, hold down the [16/9] key and press the [H/L(☉)] key, described previously in section 6.8 sentence 1.
2. Select the desired channel using the [▼] or [▲] key.
3. Press and hold the [SCAN(DW)] key for two seconds to activate the Dual Watch feature. A “DW” notation will appear at the upper left corner of the display when the Dual Watch feature is activated.
4. When a transmission is received on the “Priority” channel, the radio receives the “Priority Channel” until the incoming signal disappears.
5. When the radio receives a transmission on the working channel, the radio will Dual watch between the working channel and Priority channel.
6. The Dual Watch feature will resume when the incoming signal disappears at the end of the transmission.
7. To stop the Dual Watch feature and return to normal operation, press the [SCAN(DW)] key briefly.



NOTE

You may change the Dual Watch feature to “Tri” Watch via the Menu (“Set”) Mode. The “Tri” Watch feature watches the activity of the CH16, CH9, and the current channel. A “TW 16/9” notation will appear at the upper left corner of the display when the Tri” Watch feature is activated. Refer to Menu Mode Item “**DUAL WATCH MODE**” on page 25 for details.

7. MENU (“SET”) MODE

The **HX380**'s Menu Mode allows a number of the **HX380** operating parameters to be custom-configured for your operating requirements.

The Menu Mode is easy to activate and set, using the following procedure:

1. Turn the transceiver off by rotating the **VOL** knob fully counter-clockwise.
2. Hold down the [**SQL**] key, and then turn on the transceiver while still holding down the [**SQL**] key.
3. The Menu item will scroll at the upper left corner of the display and its current status or value will appear on the display.
4. Press the [**▼**] or [**▲**] key to select the Menu item to be adjusted.
5. Press the [**SQL**] key to enable adjustment of the selected Menu item. The current status or value will blink.
6. Press the [**▼**] or [**▲**] key to select the desired status or value of the Menu item.
7. After completing your adjustment, press the [**CLR**] key to save the new setting.
8. If you wish to change other Menu item, repeat steps 4 to 7 above.
9. Press the [**H/L**(**On**)] key to exit to normal operation.

BEEP LEVEL

Function: Enable/Disable the Keypad beeper.

Available Values: HI / Lo / oFF

Default: HI



LAMP MODE

Function: Selects the Lamp illumination method for the LCD/Keypad.

Available Values: KEY / Cnt (Continuous) / oFF

Default: KEY



KEY: Illuminates the LCD/Keypad for 5 seconds when any key is pressed.

Cnt (Continuous): Illuminates the LCD/Keypad continuously.

oFF: Turns off the backlight for the LCD and keys.

SCAN LAMP

Function: Enables/Disables the Scan Lamp while scanner is paused.

Available Values: on / oFF

Default: on



DUAL WATCH MODE

Function: Selects dual or tri-watch as desired.

Available Values: t- (Tri Watch) / d- (Dual Watch)

Default: d- (Dual Watch)

t- (Tri Watch): The radio watches the activity of the CH16, CH9, and the current channel.

d- (Dual Watch): The radio watches the the activity of the current channel and the Priority channel.



DIMMER MODE

Function: Selects the display brightness level.

Available Values: 0 / 1 / 2 / 3

Default: 3



DUAL WATCH DISPLAY

Function: Selects the display mode while Dual Watch scanning.

Available Values: nor (Normal) / SPC (Special)

Default: nor (Normal)

When this menu is set to “Normal”, the channel numbers during dual watch will be shown scrolling on the display. When “Special” is selected the channel numbers on the display do not change unless a call was received. The channel shown is the last channel that was received. This is a handy feature if you cannot look at the radio the moment a transmission was received.



SCAN DISPLAY

Function: Selects display mode while scanning.

Available Values: nor (Normal) / SPC (Special)

Default: nor (Normal)

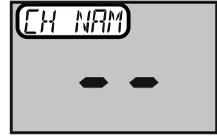
When this menu is set to “Normal”, the channel numbers during dual watch will be shown scrolling on the display.

When “Special” is selected the channel numbers on the display do not change unless a call was received. The channel shown is the last channel that was received. This is a handy feature if you cannot look at the radio the moment a transmission was received.



CH NAME

Function: Changes the channel name shown on the display.



To change the channel name:

1. Select the channel on which you wish to change the name *before* recalling this Menu item.
2. Turn the transceiver off.
3. Hold down the **[SQL]** key, then turn on the transceiver while still holding down the **[SQL]** key.
4. Press the **[▲]** or **[▼]** key to select this Menu item "CH NAME".
5. Press the **[SQL]** key. The current channel name will appear at the upper left corner of the display.
6. Press the **[▲]** or **[▼]** key to select the first character (letter, number, or symbol) in the name you wish to change, then press the **[SQL]** key to move to the next character.
7. Repeat step 6 as many times as necessary to complete the name tag (up to 12 characters).
8. After completing your adjustment, press the **[CLR]** key to save the new setting.
9. Press the **[H/L (On)]** key to exit to normal operation.

SCAN TYPE

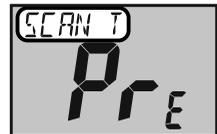
Function: Selects the Scan range.

Available Values: PrE (PRESET Channel) / ALL (All Channel)

Default: PrE (PRESET Channel)

PrE (PRESET Channel): The radio scans the Preset channel only.

ALL (All Channel): The radio scans the all Marine channels.



8. MAINTENANCE

8.1 GENERAL

The inherent quality of the solid-state components in STANDARD HORIZON radios will provide many years of continuous use. Take the following precautions to prevent damage to the radio.

- To prevent corrosion of electrical contacts and keep the water resistance, keep the microphone connected or the jack covered at all times.
- Never key the transmitter unless an antenna or suitable dummy load is connected to the antenna receptacle.
- Ensure that the input voltage does not exceed the value specified in your Owner's Manual.
- Use only STANDARD HORIZON-approved accessories and replacement parts.

8.2 REPLACEMENT PARTS

Occasionally an owner needs a replacement part. These can be ordered from STANDARD HORIZON / Vertex Standard authorized dealers.

Commonly requested parts, and their part numbers are listed below.

- **CAT460** Antenna: Q3000176
- **VOL** Knob: RA1193900
- **MIC/SP** Rubber Cap: RA1194200
- **MIC/SP** Plastic Cap: RA108700B
- Belt Clip: RA060190A

8.3 TROUBLESHOOTING CHART

SYMPTOM	PROBABLE CAUSE	REMEDY
The [SCAN(DW)] key does not start the scan.	No channels memorized.	Use the [PRESET] key to enter desired channels into the Preset memory.
	Squelch is not adjusted.	Adjust the squelch to threshold or to the point where noise just disappears. Further adjustment of the squelch control may eliminate incoming signals.
Cannot select between USA, INTL, or Canadian bands.	Proper operation not followed.	HOLD down the [16/9] key and press the [CLR] key.
Speaker audio is not heard when the [SQL] key is press and held.	Low battery.	Charge battery. Refer to section 4.2.3 of this manual.
	Audio volume level is too low.	Turn the VOL knob clockwise.
Some keys do not operate.	Key Lock is on.	Turn the Key Lock off. Refer to section 6.5 of this manual.
Cannot select keylock function.	Proper operation not followed.	Hold down the [HL (On)] key for 2 seconds.
Charging indicator on CD-48 does not illuminate.	Defective battery FNB-V105LI.	Contact your Standard Horizon dealer.

9. VHF MARINE CHANNEL ASSIGNMENTS

Tables on the following pages list the VHF Marine Channel assignments for U.S.A. and International use. Below are listed some data about the charts.

1. VTS. Where indicated, these channels are part of the U.S. Coast Guard's Vessel Traffic System.
2. Alpha channel numbers, that is, channel numbers followed by the letter A (such as Channel 07**A**) are **simplex** channels on the U.S.A. or Canadian channel assignments whose counterparts in the International assignments are **duplex** channels. International channels do not use "alpha" numbers. If you call the Coast Guard on Channel 16, they will sometimes ask you to "**go to channel 22 Alpha**." This is a channel assigned to U.S.A., and Canadian Coast Guards for handling distress and other calls. If your radio is set for **International** operation you will go to Channel 22 instead of 22**A**, and will not be able to communicate with the Coast Guard. To use Channel 22**A**, your radio must be set for **USA** or **Canada** operation, usually by a U/I/C (USA/International/Canada) control or combination of controls. Channel 22 (without an "A") is an **International** duplex channel for port operations. Some radios indicate an "A" adjacent to the alpha channels on the display; on others "alpha" is not indicated but the proper channel is selected based on the U/I/C setting.
3. Bridge-to-Bridge channels (for example, Channel 13) are for use by bridge operators on inter-coastal waterways and rivers. It is also used by marine vessels in the vicinity of these bridges for navigation and for communicating with the bridge operators. Note that a limit of 1 Watt is specified for these channels.
4. The **S/D** column on the chart indicates either S (simplex) or D (duplex). **Simplex** means transmitting and receiving on the same frequency. Only one party at a time can talk, unlike a telephone. Be sure to say "**over**" and release your microphone push-to-talk switch at the end of each transmission. **Duplex** operation involves the use of one frequency for transmitting and a separate frequency for receiving. On channels specified as duplex on the charts, correct mode of operation is established automatically by your radio when you select a channel; you cannot change the mode. And you still must release the push-to-talk switch after each transmission in order to listen to the radio.
5. Channels normally used by recreational boaters are those that include the term "non-commercial" in the **Channel Use** column of the chart. Some of these are shared with other users and some are used only in certain geographic regions.
6. Marine vessels equipped with VHF radios are required to monitor Channel 16.

VHF MARINE CHANNEL CHART							
CH	U	C	I	S/D	TX	RX	CHANNEL USE
01		X	X	D	156.050	160.650	Public Correspondence (Marine Operator)
01A	X			S	156.050		Port Operation and Commercial. VTS in selected areas
02		X	X	D	156.100	160.700	Public Correspondence (Marine Operator)
03		X	X	D	156.150	160.750	Public Correspondence (Marine Operator)
03A	X			S	156.150		U.S. Government Only, Coast Guard
04			X	D	156.200	160.800	Public Correspondence (Marine Operator), Port operation, ship movement
04A		X		S	156.200		Pacific coast: Coast Guard, East Coast: Commercial fishing
05			X	D	156.250	160.850	Public Correspondence (Marine Operator), Port operation, ship movement
05A	X	X		S	156.250		Port operation. VTS in Seattle
06	X	X	X	S	156.300		Inter-ship Safety
07			X	D	156.350	160.950	Public Correspondence (Marine Operator), Port operation, ship movement
07A	X	X		S	156.350		Commercial
08	X	X	X	S	156.400		Commercial (Inter-ship only)
09	X	X	X	S	156.450		Boater Calling channel, Commercial & Non-commercial (Recreational)
10	X	X	X	S	156.500		Commercial
11	X	X	X	S	156.550		Commercial. VTS in selected areas.
12	X	X	X	S	156.600		Port operation. VTS in selected areas.
13	X	X	X	S	156.650		Inter-ship Navigation Safety (Bridge-to-bridge)
14	X	X	X	S	156.700		Port operation. VTS in selected areas.
15	X			S	---	156.750	Environmental (Receive only)
15		X	X	S	156.750		Commercial, non-commercial, ship movement (1 W)
16	X	X	X	S	156.800		International Distress, Safety and Calling
17	X	X	X	S	156.850		State Controlled (1 W)
18			X	D	156.900	161.500	Port operation, ship movement
18A	X	X		S	156.900		Commercial
19			X	D	156.950	161.550	Port operation, ship movement
19A	X			S	156.950		US: Commercial
19A		X		S	156.950		Coast Guard
20	X	X	X	D	157.000	161.600	Canadian Coast Guard Only, International: port operations and shipment
20A	X			S	157.000		Port operation
21			X	D	157.050	161.650	Port operation, ship movement
21A	X	X		S	157.050		U.S. Government Only, Canadian Coast Guard
22			X	D	157.100	161.700	Port operation, ship movement
22A	X	X		S	157.100		US and Canadian Coast Guard Liaison and Maritime Safety Information Broadcasts announced on channel 16
23		X	X	D	157.150	161.750	Public Correspondence (Marine Operator)
23A	X			S	157.150		U.S. Government Only
24	X	X	X	D	157.200	161.800	Public Correspondence (Marine Operator)
25	X	X	X	D	157.250	161.850	Public Correspondence (Marine Operator)
26	X	X	X	D	157.300	161.900	Public Correspondence (Marine Operator)
27	X	X	X	D	157.350	161.950	Public Correspondence (Marine Operator)
28	X	X	X	D	157.400	162.000	Public Correspondence (Marine Operator)

VHF MARINE CHANNEL CHART							
CH	U	C	I	S/D	TX	RX	CHANNEL USE
60		X	X	D	156.025	160.625	Public Correspondence (Marine Operator)
61			X	D	156.075	160.675	Public Correspondence (Marine Operator), Port operation, ship movement
61A	X	X		S	156.075		Public Coast: Coast Guard; East Coast: commercial fishing only
62			X	D	156.125	160.725	Public Correspondence (Marine Operator), Port operation, ship movement
62A		X		S	156.125		Public Coast: Coast Guard; East Coast: commercial fishing only
63			X	D	156.175	160.775	Public Correspondence (Marine Operator), Port operation, ship movement
63A	X	X		S	156.175		Port Operation and Commercial. VTS in selected areas.
64		X	X	D	156.225	160.825	Public Correspondence (Marine Operator), Port operation, ship movement
64A	X	X		S	156.225		Public Correspondence (Marine Operator), Port operation, ship movement
65			X	D	156.275	160.875	Public Correspondence (Marine Operator), Port operation, ship movement
65A	X	X		S	156.275		Port Operations
66			X	D	156.325	160.925	Public Correspondence (Marine Operator), Port operation, ship movement
66A	X	X		S	156.325		Port Operations
67	X	X	X	S	156.375		US: Commercial. Used for Bridge-to-bridge com- muni-cations in lower Mississippi River. Inter-ship only, Canada: Commercial fishing, S&R
68	X	X	X	S	156.425		Non-commercial (Recreational)
69	X	X	X	S	156.475		US: Non-commercial (Recreational), Canada: Commercial fishing only, International: Inter-ship, Port operations and Ship movement
70	X	X	X	S	156.525		Digital selective calling (voice communications not allowed)
71	X	X	X	S	156.575		US, Canada: Non-commercial (Recreational), International: Port operations and Ship movement
72	X	X	X	S	156.625		Non-commercial (Inter-ship only)
73	X	X	X	S	156.675		US: Port Operations, Canada: Commercial fish ing only, International: Inter-ship, Port operations and Ship movement
74	X	X	X	S	156.725		US: Port Operations, Canada: Commercial fishing only, International: Inter-ship, Port operations and Ship movement
75	X	X	X	S	156.775		Port Operations (Inter-ship only) (1W)
76	X	X	X	S	156.825		Port Operations (Inter-ship only) (1W)
77	X	X		S	156.875		Port Operations (Inter-ship only) (1W)
77			X	S	156.875		Port Operations (Inter-ship only)
78			X	D	156.925	161.525	Public Correspondence (Marine Operator), Port operation, ship-movement
78A	X	X		S	156.925		Non-commercial (Recreational)
79			X	D	156.975	161.575	Port operation and Ship movement
79A	X	X		S	156.975		Commercial

VHF MARINE CHANNEL CHART							
CH	U	C	I	S/D	TX	RX	CHANNEL USE
80			X	D	157.025	161.625	Port operation, ship movement
80A	X	X		S	157.025		Commercial
81			X	D	157.075	161.675	Port operation, ship movement
81A	X			S	157.075		U.S. Government Only - Environmental protection operations.
81A		X		S	157.075		Canadian Coast Guard Only
82			X	D	157.125	161.725	Public Correspondence (Marine Operator), Port operation, ship movement
82A	X	X		S	157.125		U.S. Government Only, Canadian Coast Guard Only
83		X		D	157.175	161.775	Canadian Coast Guard Only
83			X	D	157.175	161.775	Public Correspondence (Marine Operator)
83A	X	X		S	157.175		U.S. Government Only, Canadian Coast Guard Only
84	X	X	X	D	157.225	161.825	Public Correspondence (Marine Operator)
85	X	X	X	D	157.275	161.875	Public Correspondence (Marine Operator)
86	X	X	X	D	157.325	161.925	Public Correspondence (Marine Operator)
87		X	X	S	157.375		Port operation, ship movement
87A	X			S	157.375		Public Correspondence (Marine Operator)
88		X	X	S	157.425		Port operation, ship movement
88A	X			S	157.425		Commercial, Inter-ship Only

NOTE: Simplex channels, 3A, 21A, 23A, 61A, 64A, 81A, 82A and 83A CANNOT be lawfully used by the general public in U.S.A. waters.

10. SPECIFICATIONS

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

10.1 GENERAL

Frequency Ranges:	156.025 MHz - 162.000 MHz (Marine Band) 134.000 MHz - 174.000 MHz (LMR Band)
Channel Spacing:	25 kHz / 12.5 kHz
Frequency Stability:	±2.5 ppm (–30 °C to +60 °C)
Emission Type:	16K0G3E (Marine Band) 16K0F3E (LMR Band: Wide) 8K50F3E (LMR Band: Narrow)
Antenna Impedance:	50 Ω
Supply Voltage:	7.4V DC, Negative Ground (Battery Terminal)
Current Consumption:	320 mA (Receive, Typical at AF MAX.) 50 mA (Standby) 1.6 A / 0.8 A (TX: 5 W / 1W)
Operating Temperature:	–30 °C to +60 °C
Case Size (W x H x D):	57 x 133 x 33 mm (w/o knob & antenna)
Weight (Approx.):	320 g (w/FNB-V105LI, Belt Clip, & Antenna)

10.2 TRANSMITTER

RF Power Output:	5 W / 1 W (@7.4 V)
Modulation Type:	Variable Reactance
Maximum Deviation:	±5.0 kHz (Wide) / ±2.5 kHz (Narrow)
Spurious Emission:	–36 dBm (<1 GHz), –30 dBm (>1 GHz)
Microphone Impedance:	2 kΩ

10.3 RECEIVER

Circuit Type:	Double-Conversion Superheterodyne
Intermediate Frequencies:	1st: 67.65 MHz, 2nd: 450 kHz
Adjacent Channel Selectivity:	70 dB typical (Wide), 60 dB typical (Narrow)
Intermodulation:	68 dB typical
Sensitivity (LMR Band):	-6 dB μ V (0.25 μ V) for 12 dB SINAD
Selectivity (Wide):	12 kHz / 25 kHz (-6 dB / -60 dB)
Selectivity (Narrow):	6 kHz / 18 kHz (-6 dB / -60 dB)
AF Output (Internal SP):	700 mW @16 Ω for 10 % THD (@7.4 V)
AF Output (External SP):	350 mW @8 Ω for 10 % THD (@7.4 V)

Measured in accordance with TIA/EIA-603.



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