Owner's Manual
Handheld Transceiver
VHF/FM Marine
HX220S
Hand-Phone 6
Horizon

Trouble Shooting
Specifications
Accessories
Operation
General Information

Contents:
1. INTRODUCTION

1.2 FCC/DOC INFORMATION

A Government-assigned Station License and call sign are required before you can transmit with this radio.

The following data pertaining to the radio are necessary to file your FCC or DOC application:

1. General Information

2. Controls and Indicators

3. FCC/DOC Information

4. Introduction

5. Accessories

6. EFPL/EFPLX Channel Use

7. Transmitting the Radio’s Memory

8. Weather Channels

9. USA, Canada, and International Mode

10. Initial Procedure

11. Optional Accessories

12. Transmitter

13. Receiver

14. Troubleshooting

Additional FCC and DOC data, including licensing requirements, assignments, radio procedures, maintenance, etc., are contained in a companion document titled Owners Manual.
Page 2

CONTROLS AND INDICATORS

2.1 CONTROLS

- POWER ON-OFF
- SWITCH/ VOLUME

Figure 1: Controls and Indicators

- RX/ TX LED
- BATTERY
- SPEAKER
- MICROPHONE
- DISPLAY
- TX/ BUSY LED
- PTT SWITCH
- CH16
- CH15
- SCAN
- WX
- M
- R/D
- RX/BUSY LED

NOTE: See section 4 of this manual for detailed operating instructions.
2.2 Indications

The following legend describes each indication on the display.

**Figure 2** shows all indications that can appear on the radio's LCD (Liquid Crystal Display).

<table>
<thead>
<tr>
<th>Exp</th>
<th>MEM</th>
<th>WX</th>
<th>HI</th>
<th>EXP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Exp**: Accesses expansion channel.
- **MEM**: Indicates a weather channel.
- **WX**: Indicates a special function.
- **HI**: High power. LO = Low power. Blank = a receive-only channel.
- **Exp**: Indicates that the channel in the radio's scan memory is in a receive-only channel.
- **HI**: High power. LO = Low power. Blank = a receive-only channel.

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**Supporting information**

- **Antenna**: Connects to the radio's external antenna.
- **Jack**: Connects to an external microphone or speaker.
- **Microphone**: Connects to an external microphone.
- **Release**: Connects to the radio's release button.
- **Battery**: Connects to the radio's battery pack.
- **Key Lock**: Locks the radio.
- **Exp**: Accesses expansion channel.
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4.3 USA, CANADA, AND INTERNATIONAL MODE

When a message is received, first tune to the desired station.

1. Press the desired channel.
2. Tune the receiver to the channel.

4.4 WATER CHANNELS

Important: The USA Conduct of Channels are indicated by the channel.

Press the desired channel to go to the channel.

1. Press the key to go to the channel.

4.5 SCANNING

Read the previous non-water channel.

1. Press the desired channel.
2. Press the key to go to the channel.
3. Press the key to go to the channel.

4.6 CLEARING THE RADIO'S MEMORY

To erase all channels from memory:

1. Turn the receiver off.
2. Press and hold the CLR key while turning the radio on.
3. Turn the receiver off.

To erase one channel from memory:

1. Turn the receiver off.
2. Press and hold the CLR key while turning the radio on.
3. Turn the receiver off.

4.7 TRANSMISSION

Press and hold the CLR key while turning the radio on.

1. Monitor the channel on which you wish to transmit, press to initiating transmit.
2. Monitor the channel on which you wish to transmit, press to initiating transmit.
3. Monitor the channel on which you wish to transmit, press to initiating transmit.
4. Monitor the channel on which you wish to transmit, press to initiating transmit.

5. ...
4.10 Simplex/Duplex Channel Use

You are hearing door or 2-way on channel 1 by channel 16

Your equipment seems to be working properly.

4.9 Halting Another Vessel

1. Press the CH 1 key.
2. Press the PTT switch and broadcast your emergency message.
3. If your vessel contacts you on channel 16, relay their message.

4.8 Emergency Channel 16

Any vessel that can transmit must wait for FOC before transmitting.

6. Before sending the FOC, you may wait for permission.

5. After sending the FOC, you may wait for permission.

4.7 Avoiding CMEC confusion and possible misunderstanding.

3. If the vessel is not in sight, you may wait for permission.

2. For communications over short distances, press the H/L key until H/L

4.1 EXPANSION CHANNELS

Without expansion channels, the receiver's frequency is locked on its own channel.

When expansion channels are activated, the receiver's frequency is locked on its own channel.

4.11 EXPANSION CHANNELS

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4.1.4.1 Reset Using the CLR Key

1. Turn the radio off.
2. Press and hold the CLR key.
3. Turn the radio on.
4. Release the CLR key.

Sometimes it may be necessary to clear programmed expansion characters from the display. This could affect the operation of the radio.

4.1.4.2 Resetting the Microprocessor

1. Press the CLR key and the battery pack.
2. Release the radio.
3. Lift the outer panel, position the reset/exit button, and press the CLR key again.
4. Release the CLR key.

To remove and reinstall the battery pack, perform the following:

4.1.3.1 Battery Removal/Installation

<table>
<thead>
<tr>
<th>Charging Time</th>
<th>Battery Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 20 hours</td>
<td>CP-02</td>
</tr>
<tr>
<td>15 to 14 hours</td>
<td>CP-03</td>
</tr>
<tr>
<td>8 to 14 hours</td>
<td>CP-04</td>
</tr>
<tr>
<td>6 to 14 hours</td>
<td>CP-05</td>
</tr>
<tr>
<td>15 to 20 hours</td>
<td>CP-06</td>
</tr>
<tr>
<td>15 to 14 hours</td>
<td>CP-07</td>
</tr>
</tbody>
</table>

4.1.2 Battery Charging Times

- CP-02: 15 to 20 hours
- CP-03: 15 to 14 hours
- CP-04: 8 to 14 hours
- CP-05: 6 to 14 hours
- CP-06: 15 to 20 hours
- CP-07: 15 to 14 hours