Submersible
One-Button DSC Distress Call Automatically Sends Latitude & Longitude and Vessel ID
Noise Canceling “Clear Voice” Microphone
Latitude & Longitude Shown On Display When Connected To GPS
Programmable Scan & Priority Ch16 Scan
NOAA Weather Alert
Backlit LCD & Keys
# TABLE OF CONTENTS

FCC NOTICE ............................................................................................................. 1

1 GENERAL INFORMATION .............................................................................. 2
   1.1 INTRODUCTION ..................................................................................... 2
   1.2 FCC/ INDUSTRY CANADA INFORMATION ........................................... 3

2 ACCESSORIES ............................................................................................... 4
   2.1 PACKING LIST ........................................................................................ 4
   2.2 OPTIONS ................................................................................................. 4

3 CONTROLS AND INDICATORS ..................................................................... 5
   3.1 CONTROLS AND CONNECTIONS ......................................................... 5

4 INSTALLATION ............................................................................................... 9
   4.1 LOCATION .............................................................................................. 9
   4.2 ELECTRICAL CONNECTIONS ............................................................... 9
   4.3 ACCESSORY CABLE ........................................................................... 10
   4.4 CMB16 FLUSH MOUNT INSTALLATION ............................................. 11

5 BASIC OPERATION ...................................................................................... 12
   5.1 RECEPTION .......................................................................................... 12
   5.2 TRANSMISSION ................................................................................... 12
   5.3 TRANSMIT TIME - OUT TIMER (TOT) ................................................. 13
   5.4 SIMPLEX/DUPLEX CHANNEL USE ..................................................... 13
   5.5 USA, CANADA, AND INTERNATIONAL MODE ................................... 13
   5.6 NOAA WEATHER CHANNELS ............................................................. 14
   5.7 NOAA WEATHER ALERT ..................................................................... 14
   5.8 MEMORY SCANNING ........................................................................... 15
   5.9 CH16 PRIORITY SCANNING (PRI-SCAN) ........................................... 15
   5.10 POSITION INDICATION ........................................................................ 16
   5.11 RESETTING THE TRANSCEIVER’S MICROPROCESSOR .................... 16

6 DIGITAL SELECTIVE CALLING ................................................................... 17
   6.1 GENERAL .............................................................................................. 17
      6.1.1 Digital Selective Calling (DSC) ..................................................... 17
      6.1.2 Marine Mobile Service Identity (MMSI) ....................................... 17
   6.2 SENDING A DISTRESS CALL .............................................................. 18
   6.3 SENDING AN INDIVIDUAL CALL ......................................................... 19
   6.4 SENDING AN ALL SHIPS CALL ........................................................... 20
   6.5 DSC STANDBY ..................................................................................... 21
   6.6 CALL WAITING DIRECTORY ............................................................... 21
      6.6.1 Operation of Distress Call Waiting .............................................. 22
      6.6.2 Operation of Individual Call Waiting .......................................... 22
6.7 RECEIVING DSC CALLS ................................................................. 23
6.7.1 Receiving a distress call ......................................................... 23
6.7.2 Receiving a distress relay call ............................................... 23
6.7.3 Receiving an all ships call ...................................................... 24
6.7.4 Receiving a geographical area call ........................................... 24
6.7.5 Receiving an individual call .................................................... 24

7. DSC / RADIO SETUP MODE ....................................................... 25
7.1 SETUP ....................................................................................... 25
7.2 LAMP ADJUSTING ................................................................. 25
7.3 LCD CONTRAST ...................................................................... 25
7.4 INDIVIDUAL DIRECTORY SETUP (DSC) ................................. 26
7.5 KEY BEEP (ON OR OFF) ......................................................... 27
7.6 TIME OFFSET ......................................................................... 27
7.7 USER MMSID INPUT ............................................................... 28
7.8 DSC SCAN .............................................................................. 29

8 MAINTENANCE ........................................................................... 30
8.1 REPLACEMENT PARTS ......................................................... 30
8.2 TROUBLESHOOTING CHART .................................................. 31

9 SPECIFICATIONS ...................................................................... 32
9.1 GENERAL .............................................................................. 32
9.2 TRANSMITTER ................................................................. 32
9.3 RECEIVER ............................................................................. 32
FCC NOTICE

NOTICE

Unauthorized changes or modifications to this equipment may void compliance with FCC Rules. Any change or modification must be approved in writing by STANDARD HORIZON a division of VERTEX STANDARD.

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:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.
1 GENERAL INFORMATION

1.1 INTRODUCTION

Congratulations on your purchase of the INTREPID LE! Whether this is your first 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 stand behind every product we sell, and we invite you to contact us should you require technical advice or assistance.

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

The INTREPID LE is a fixed mount two-way VHF marine transceiver designed for use in the frequency range of 156.025 to 163.275 MHz. The INTREPID LE requires 13.8V ± 20% for operation and has a switchable output power of 1 watt or 25 watts. The transceiver has 173 channels: 163 marine and 10 weather. The 163 marine channels are switchable to comply with USA, International, or Canadian regulations. It has an emergency channel 16 which can be immediately selected from any channel by pressing the 16/9 key. Weather channels can also be accessed immediately by pressing the WX key.

The INTREPID LE capable of RTCM SC101 DSC (Digital Selective Calling) operation. DSC operations include: Distress call with Latitude and Longitude when connected to a GPS, Urgency, Safety, Routine and Individual call types.

Other features of the transceiver include: Memory Scanning, Priority Scanning, NOAA Weather Alert, Clear Voice Noise Cancelling Mic, easy-to-read large LCD display, Low voltage warning, and a transmit Time-Out Timer (TOT).
1.2 FCC/INDUSTRY CANADA INFORMATION

The following data pertaining to the transceiver is necessary to fill out the license application.

Type Acceptance ................................................................. FCC Part 80
Output Power ................................................................. 1 Watt (low) and 25 Watts (high)
Emission ................................................................. 16K0G3E, 16K0G2B (for DSC)
Frequency Range ....................................................... 156.025 to 157.425 MHz
FCC Type Number .......................................................... APV09981
Industry Canada Type Approval ........................................ 363822202AVC

Additional FCC and Industry Canada data, including licensing requirements, are contained in the companion document titled OWNER’S MANUAL SUPPLEMENT. The document also contains charts for VHF channel assignments, transceiver procedures, maintenance, factory service information, and warranty data.
2 ACCESSORIES

2.1 PACKING LIST

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

- GX1265S INTREPID LE Transceiver (White/Black)
- CMP349WL/CMP349BL (White/Black Microphone attached to the transceiver) and hanger kit
- Mounting Bracket and hardware
- Spare Fuse (6 A, 250 V )
- Owner’s Manual
- Owner’s Manual Supplement
- Accessory Cable
- Power Cord

2.2 OPTIONS

CMB16 ................................................................. Flush-Mount Bracket
101S ................................................................. Mini Extension Speaker
201S ................................................................. Extension Speaker
201SZ ............................................................ Flush Mount Extension Speaker
3 CONTROLS AND INDICATORS

NOTE

This section defines each control of the transceiver. See Figure 1 for location of controls. For detailed operating instructions refer to chapter 4 of this manual.

3.1 CONTROLS AND CONNECTIONS

1 POWER SWITCH/VOLUME CONTROL

Turns the transceiver on and off as well as adjusts the audio volume. To turn the transceiver on press and hold this knob until the LCD turns on. To turn it off, press and hold this knob until the LCD turns off. When the power is turned on, the transceiver is set to the last selected channel.

Secondary Use

When the transceiver is turned on while the SCAN and WX keys are held down, the internal microprocessor is reset. This clears the memory and all user-programmed settings, such as scan memory, assignments. This condition is known as the default condition, the same as when shipped from the factory. For a list of these defaults, see the section on Resetting the Transceiver’s Microprocessor.

NOTE

Resetting the microprocessor will not erase DSC MMSI and Directory Call Waiting information.

2 SQUELCH CONTROL (SQL)

Sets the point at which random noise on the channel does not activate the audio circuits but a received signal does. This point is called the squelch threshold. Further adjustment of the squelch control will degrade reception of wanted transmissions.

3 KEY PAD

16/9 Key

Immediately recalls channel 16 from any channel location. Holding down this key recalls channel 9.

Secondary use

Please see secondary use for the WX key.
Figure 1. Controls and Connectors
WX Key
Immediately recalls the previously selected NOAA weather channel from any channel location.

**Secondary use**
1. Holding down the **16/9** key while pressing the **WX** key changes the mode from USA to International or Canadian.
2. Holding down the **WX** and **SCAN** key while turning the power on resets the microprocessor and erases scan channels from memory. This clears the memory and establishes the factory-set defaults. For a list of these defaults, see the section on Resetting the Transceiver’s Microprocessor.

SCAN Key
1. Starts and stops scanning of programmed channels.
2. If held while the **UP** or **DOWN** key is pressed, the radio will show the channels in scan memory. This function will not work if the unit is scanning.

**Secondary use**
Press and hold the **SCAN** key to add the selected channel into the transceiver’s scan memory. To delete the channel from scan memory, press and hold the **SCAN** key until the MEM disappears from the LCD.

DISTRESS Key
To send a distress call see section 6.2, (Sending a Distress Call).

CALL/SET Key
The **CALL/SET** key functions as the enter key.

**Secondary use**
Press the **CALL/SET** key to access the DSC OPERATION menu. The following DSC functions can be accessed from the DSC OPERATION menu; INDIVIDUAL, ALL SHIPS, STANDBY, and CALL WAIT.
Press and hold the **CALL/SET** key to access the SETUP menu. The following functions can be accessed in the SETUP menu; LAMP ADJUST, CONTRAST, INDIV DIR, KEY BEEP, TIME SET, USER MMSI.

H/L Key
Toggles between high and low power. When the **H/L** key is pressed while the transceiver is on channel 13 or 67, the power will temporarily switch from LO to HI power until the PTT is pressed. The **H/L** key does not function on transmit inhibited and low power only channels.

UP and DOWN Keys
The **UP** and **DOWN** keys are used to select a desired channel and to select items in the DSC OPERATION and SETUP menus. The **UP** or **DOWN** key on the microphone can also be used to select channels.
POS key
Press the POS key, when connected to a GPS receiver, to displays position data (LAT/LON) on the LCD.

4 ACCESSORY CONNECTION CABLE
Connects the radio to a GPS and an external speaker.

5 DC INPUT CABLE
Connects the radio to a DC power supply of 13.8V ± 20%.

6 ANTENNA JACK
Connects an antenna to the transceiver. Use a marine VHF antenna with an impedance of 50 ohms.

7 PTT (Push-To-Talk) SWITCH
Keys the transmitter when the transceiver is in radio mode.

8 CLEAR VOICE NOISE-CANCELING MICROPHONE
Transmits the voice message with reduction of background noise when talking into the oval slit at the top of the mic.

9 UP ▲ and DOWN ▼ KEYS
The UP ▲ and DOWN ▼ function the same as the UP and DOWN keys on the front panel of the transceiver.

10 16/9 Key
Pressing the 16/9 key immediately recalls channel 16 from any location. Press and hold the 16/9 key to recall channel 9.
4 INSTALLATION

4.1 LOCATION
The radio can be mounted at any angle. Choose a mounting location that:
• is far enough from any compass to avoid any deviation in compass reading due to the speaker magnet
• provides accessibility to the front panel controls
• allows connection to a power source and an antenna
• has nearby space for installation of a microphone hanger
• allows the antenna to be mounted at least 3 feet from radio

4.2 ELECTRICAL CONNECTIONS

CAUTION
Reverse polarity connections will damage the radio!

Connect the power cord and antenna to the radio. Antenna and Power Supply connections are as follows (see Figure 2):

1. Mount the antenna at least 3 feet away from the radio. At the rear of the radio, connect the antenna cable. It must have a PL259 connector. RG-8/U coaxial cable must be used if the antenna is 25 feet or more from the radio. RG58 cable can be used for distances less than 25 feet.

Figure 2. General Installation
2. Connect the red power wire to a 13.8 VDC ± 20% power source. Connect the black power wire to a negative ground.
3. If an optional remote extension speaker is to be used, refer to section 4.3 for connections.
4. It is advisable to have a Certified Marine Technician check the power output and the standing wave ratio of the antenna after installation.

### 4.3 ACCESSORY CABLE

**NOTE**

Some GPS receivers do not have a NMEA(-) wire, in this case the accessory cables Green wire on the transceiver is connected to the battery ground of the GPS.

#### Cable pin number and signal

<table>
<thead>
<tr>
<th>Pin number</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>External speaker (+)</td>
</tr>
<tr>
<td>2</td>
<td>External speaker (−)</td>
</tr>
<tr>
<td>3</td>
<td>NMEA IN (+)</td>
</tr>
<tr>
<td>4</td>
<td>NMEA IN (−)</td>
</tr>
</tbody>
</table>

(Radio side)

When connecting the external speaker or GPS navigation receiver, strip off about 1 inch (2 cm) of the specified wire’s insulation.

**NOTE**

Never short wires. This may lead to malfunctions.
4.4 CMB16 FLUSH MOUNT INSTALLATION

1. Make a rectangular template for the flush mount measuring 2 1/8" H x 5 3/4" W.
2. Use the template to mark the location where the rectangular hole is to be cut. Confirm the space behind the dash or panel is deep enough to accommodate the transceiver (at least 6 inches deep). There should be at least 1/2 inch between the transceiver’s heatsink and any wiring, cables or structures.
3. Cut out the rectangular hole and insert the transceiver.
4. Fasten the brackets to the sides of the transceiver with the lock washer nut combination, so that the mounting screw base faces the mounting surface (see Figure 3).
5. Turn the adjusting screw to adjust the tension so that the transceiver is tight against the mounting surface.

Figure 3. CMB16 Flush Mount Installation
5.1 RECEPTION

1. After the transceiver has been installed, ensure that the power supply and antenna are properly connected.
2. Press and hold the VOL/PWR knob until the radio turns on.
3. Turn the SQL knob fully counterclockwise. This state is known as “squelch off”.
4. Turn up the volume until noise or audio from the speaker is at a comfortable level.
5. Turn the SQL knob clockwise until the random noise just disappears. This state is known as the “squelch threshold.”
6. Press the UP or DOWN key to select the desired channel. Refer to the channel chart in the OWNER’S MANUAL SUPPLEMENT for available channels.
7. When a message is received, adjust the volume to the desired listening level. The “BUSY” indicator in the LCD is displayed indicating that the channel is being used.

5.2 TRANSMISSION

1. Perform steps 1 through 6 of RECEPTION.
2. Before transmitting, monitor the channel and ensure it is clear. THIS IS AN FCC REQUIREMENT!
3. Press the PTT (push-to-talk) switch. The TX indicator on the LCD is displayed.
4. Speak slowly and clearly into the microphone.
5. When the transmission is finished, release the PTT switch.
6. Refer to the OWNER’S MANUAL SUPPLEMENT for standard transceiver operating procedures.

NOTE

This is a noise-canceling microphone. It should be positioned within 1 inch (2 cm) and when talking into the oval slit at the top of the mic from the mouth for optimum performance.
5.3 TRANSMIT TIME - OUT TIMER (TOT)
When the PTT switch on the microphone is held down, transmit time is limited to 5 minutes. This prevents unintentional transmissions. About 10 seconds before automatic transmitter shutdown, a warning beep will be heard from the speaker(s). The transceiver will then automatically go to receive mode, even if the PTT switch is continually held down. Before transmitting again, the PTT switch must first be released and then pressed again.

5.4 SIMPLEX/DUPLEX CHANNEL USE
Refer to the OWNER’S MANUAL SUPPLEMENT for instructions on use of simplex and duplex channels.

NOTE

All channels are factory-programmed in accordance with FCC (USA), Industry Canada (Canada), and International regulations. Mode of operation cannot be altered from simplex to duplex or vice-versa.

5.5 USA, CANADA, AND INTERNATIONAL MODE
1. To change the modes, hold the 16/9 key and press the WX key. The mode changes from USA to International to Canadian with each press of the WX key.
2. USA will be displayed on the LCD for USA mode, INTL will be displayed for International mode, and CAN will be displayed for Canadian mode.
3. Refer to the OWNERS MANUAL SUPPLEMENT for allocated channels in each mode.
5.6 NOAA WEATHER CHANNELS

1. To receive a weather channel, press the WX key from any channel. The transceiver will go to the last selected weather channel.
2. Press the UP or DOWN key on the transceiver or microphone to select a different weather channel.
3. To exit from the weather channels, press the WX key. The transceiver returns to the channel it was on prior to a weather channel.

5.7 NOAA WEATHER ALERT

In the event of extreme weather disturbances, such as storms and hurricanes, the NOAA (National Oceanic and Atmospheric Administration) sends a weather alert accompanied by a 1050 Hz tone and subsequent weather report on one of the weather channels. The transceiver is capable of receiving this alert if the following is performed:

1. Program weather channels into the transceiver’s memory for scanning. Follow the same procedure as for regular channels under Section 5.8.
2. Press the SCAN key once to start memory scanning or hold down the SCAN key during memory scanning to start priority scanning.
3. The programmed weather channels will be scanned along with the regular-programmed channels. However, scanning will not stop on a normal weather broadcast unless a NOAA alert is received.
4. When an alert is received on a weather channel, scanning will stop and the transceiver will emit a loud beep to alert the user of a NOAA broadcast.
5. Press the WX key to stop the alert tone and receive the weather report.

NOTE

If the WX key is not pressed the alert tone will be emitted for 5 minutes and then the weather report will be received.
### 5.8 MEMORY SCANNING

**NOTE**

- During scanning, the dot matrix area of the LCD will show MEM-SCAN or PRI-SCAN depending on the scan mode selected.
- The channel number shown is the last channel that a transmission was received on.

1. Adjust the SQL knob just until background noise disappears.
2. Select a desired channel to be scanned using the **UP** or **DOWN** key. Press and hold down the **SCAN** key until MEM appears in the LCD to program the channel into the transceiver’s memory.
3. Repeat step 2 for all the desired channels to be scanned.
4. To DELETE a channel from the transceiver’s memory, press and hold down the **SCAN** key again until MEM disappears in the LCD.
5. To start scanning, press the **SCAN** key. Scanning will proceed from the lowest to the highest programmed channel number and will stop on a channel when a transmission is received.
6. To stop scanning, press the **SCAN**, **16/9**, **WX**, or **PTT** key.

### 5.9 CH16 PRIORITY SCANNING (PRI-SCAN)

1. The priority channel is set to channel 16.
2. For priority scanning, hold down the **SCAN** key until PRI-SCAN appears in the LCD during memory scanning. Scanning will proceed between the memorized channels and the priority channel. The priority channel will be scanned after each programmed channel.

---

MEM CH. ── CH16 ── MEM CH. ── CH16
5.10 POSITION INDICATION

The transceiver has the ability to display the time and date as well as the vessel’s position (LAT/LON), if connected to a GPS receiver.

1. Press the POS key to display position information.

2. To hide the position information, press the POS key.

NOTE

- The TIME OFFSET should be set to local time in the DSC/RADIO setup mode when the radio is connected the GPS navigation receiver. To adjust TIME OFFSET to your local time, refer to section 7.6 TIME OFFSET.

5.11 RESETTING THE TRANSCEIVER’S MICROPROCESSOR

Resetting the microprocessor restores the initial, factory supplied conditions in the transceiver. These are called the default conditions. To reset the microprocessor, first turn the transceiver off. Then while pressing the WX and SCAN keys, turn the transceiver on. The default conditions are:

- No channels in SCAN memory.
- Channel 16 will be selected when the transceiver is turned on.
- WX channel 01 will be recalled when the WX key is pressed.

NOTE

Resetting the microprocessor will not erase DSC MMSI and Directory Call Waiting information.
6 DIGITAL SELECTIVE CALLING

6.1 GENERAL

6.1.1 Digital Selective Calling (DSC)
Digital Selective Calling is a semi-automated method of establishing a radio call, it has been designated by the International Maritime Organization (IMO) as an international standard for establishing VHF, MF and HF radio calls. It has also been designated as part of the Global Maritime Distress and Safety System (GMDSS). It is planned that DSC will eventually replace aural watches on distress frequencies and will be used to announce routine and urgent maritime safety information broadcasts.

This new service will allow mariners to instantly send a distress call with GPS position (when connected to the transceiver) to the US Coast Guard and other vessel within range of the transmission. DSC will also allow mariners to initiate or receive distress, urgency, safety and routine calls to or from another vessel equipped with a DSC transceiver.

6.1.2 Marine Mobile Service Identity (MMSI)

What is an MMSI?
An MMSI is a nine digit number used on Marine Transceiver capable of using Digital Selective Calling (DSC). This number is used like a telephone number to selectively call other vessels. Refer to section 7.7 (USER MMSI INPUT).

How can I obtain a MMSI assignment?
Currently, the only way to obtain an MMSI is to apply for a Ship Station License, or an amendment to a ship station license, regardless of whether the license is otherwise required. These procedures are currently under review by both the FCC and US Coast Guard.

WARNING
This radio is designed to generate a digital maritime distress and safety call to facilitate search and rescue. To be effective as a safety device, this equipment must be used only within communication range of a shore-based VHF marine channel 70 distress and safety watch system. The range of signal may vary but under normal conditions should be approximately 20 nautical miles.
6.2 SENDING A DISTRESS CALL

The distress call automatically includes the vessel’s DSC MMSI and Lat/Lon position. Refer to section 7.7, USER MMSI INPUT. The vessel’s position can be sent only if the transceiver is properly connected to an operating navigation receiver.

1. Remove the cover and press the DISTRESS key. The distress call menu will appear on the LCD.
   Press and hold the DISTRESS key until the distress signal is sent (see step 2)

2. When the distress signal is sent, the dot-matrix area of the LCD will be as shown in the illustration on the left.
   After the message has been sent, the Distress Alarm will sound.

3. The transceiver shadow-watches for a transmission between CH16 and CH70 until an acknowledgment signal is received. “DISTRESS” and “WAITING” will appear on the LCD.

4. If no acknowledgment is received, the distress call is repeated in 4 minute intervals until an acknowledgment is received.

5. To cancel, press the DOWN key to select CANCEL after pressing the DISTRESS key. Then, press the CALL/SET key or turn off the radio.

6. When a distress acknowledgment is received, a distress alarm sounds and channel 16 is automatically selected.

7. To cancel the alarm, press any key.

NOTE

When a GPS receiver with NMEA output is connected, the vessel’s position is automatically transmitted with the distress call.
6.3 SENDING AN INDIVIDUAL CALL

To send an individual call, see section 7.4 INDIVIDUAL DIRECTORY SETUP. The individual call function allows you to transmit a DSC signal to a specific party only, prompting communication on a voice channel.

1. Select the traffic channel for voice communication.

2. Press the CALL/SET key.
   The DSC CALLING menu will appear.

3. Press the UP or DOWN key to select INDIVIDUAL. (To cancel, select EXIT with the UP or DOWN key or press the 16/9 key.)

4. Press the CALL/SET key.
   The transceiver will beep, and the individual directory will appear.

5. Press the UP or DOWN key to select the individual you want to contact.

6. Press the CALL/SET key to transmit the individual DSC signal.

7. After INDIVIDUAL CALL is transmitted, the transceiver will wait 8 seconds for the acknowledgment. If the reply signal is not received, then the transceiver will transmit again.

8. After the second INDIVIDUAL CALL is transmitted, if the reply signal is not received, the dot matrix area of the LCD will display “>SEND” to prompt the user to send the call again or exit the mode.

9. When an individual call acknowledgment “able to comply” is received, the established channel is automatically selected and an alarm sounds.
10. When an individual call acknowledgment with “unable to comply” is received, the established channel is automatically selected.

11. To cancel, select EXIT using the DOWN key and press the CALL/SET key.
This procedure can be also canceled as follows; Press the CALL/SET key or 16/9 key.

6.4 SENDING AN ALL SHIPS CALL
The All Ships Call function allows contact to be established with other vessel stations without having their ID in the individual calling directory. Also, priority for the call can be designated as Urgency, Safety or Routine.

1. Perform this step only for a Routine call.
   Select the traffic channel (for voice communication).

2. Press the CALL/SET key. The DSC CALLING menu will appear.

3. Press the UP or DOWN key to select ALL SHIP.

4. Press the CALL/SET key.
   To cancel this, press the UP or DOWN key to select EXIT.

5. Press the UP or DOWN key to select the nature of call (URGENCY, SAFETY or ROUTINE).

6. Press the CALL/SET key to transmit the all ships DSC signal.

7. After Urgency or Safety All ships Call is transmitted the transceiver will switch to Channel 16. The user should wait a few minutes before transmitting the ALL Ships Call information. For a Routine call the transceiver will switch to the channel (example channel 21).
6.5 DSC STANDBY

The DSC Standby function allows the transceiver to reply to DSC calls with the UNATTENDED message and log the calls for return at a more convenient time. When set to the DSC Standby mode, voice traffic may still be monitored on any selected channel.

1. Press the CALL/SET key.
   The DSC CALLING menu will appear.

2. Press the UP or DOWN key to select the STANDBY mode.

3. Press the CALL/SET key.

4. When an individual DSC call is received, the radio will respond with the UNATTENDED message when an operator cannot answer to the caller.
   The DSC call will be logged into the radio's call waiting directory.

5. To cancel this, press the 16/9 key.

6.6 CALL WAITING DIRECTORY

The DSC Call Waiting directory logs 10 received distress calls, and logs 20 individual calls that are received and not answered within 5 minutes or while the radio is set on the DSC Standby function. Calls will be logged while busy with other communications as long as the transmitter is not keyed at the time of the call. If the call is answered within 5 minutes the call will not be logged. When a call is logged, a message will appear.

NOTE

When a DISTRESS CALL is received, this call will be logged on the distress call waiting directory.
6.6.1 Operation of Distress Call Waiting

1. Press the CALL/SET key. The DSC CALLING menu will appear.

2. Press the UP or DOWN key to select CALL WAIT.

3. Press the CALL/SET key.

4. Press the UP or DOWN key to select the DISTRESS.

5. Press the CALL/SET key to display the log data which was received last.

6. Press the UP or DOWN key to select another logged call

7. To exit from Distress Call Waiting, press the CALL/SET key and select EXIT. Then press the CALL/SET key again.

6.6.2 Operation of Individual Call Waiting

1. Press the CALL/SET key. The DSC CALLING menu will appear.

2. Press the UP or DOWN key to select CALL WAIT.

3. Press the CALL/SET key.

4. Press the UP or DOWN key to select INDIVIDUAL.

5. Press the CALL/SET key to enter the individual log.
6. Press the **UP** or **DOWN** key to select the name.

7. Press the **CALL/SET** key to display the logged call.

8. Press the **CALL/SET** key to resend the INDIVIDUAL CALL.

9. To exit from Individual Call Waiting, select EXIT and press the **CALL/SET** key.

10. Press the UP or DOWN key to select another logged call or to select EXIT.

11. Press the **CALL/SET** key to access next logged call or EXIT.

### 6.7 RECEIVING DSC CALLS

Several types of DSC transmissions can be received. The required action depends on the particular DSC type as outlined in the following examples.

**NOTE**

When the radio receives on a working channel or transmits on a working channel, DSC calls will not be received.

When the radio receives DSC CALLS, turn the DSC SCAN on in SETUP menu or set the working channel on the channel 70.

#### 6.7.1 Receiving a distress call

1. A distress call is received. An emergency alarm sounds.
   Then channel 16 is automatically selected.

2. Press any key to stop the alarm.

3. If the received distress data does not include the position data, the LCD will show the display on the left.

**NOTE**

You must continue monitoring channel 16 as a coast station may require assistance in any rescue attempt.

#### 6.7.2 Receiving a distress relay call

1. A distress relay call is received. An emergency alarm sounds.
   Then channel 16 is automatically selected.

2. Press any key to stop the alarm.
NOTE
You must continue monitoring channel 16 as a coast station may require assistance in any rescue attempt.

6.7.3 Receiving an all ships call

1. An all ships call is received. An emergency alarm sounds. Then channel 16 is automatically selected.

2. Press any key to stop the alarm.

3. Monitor channel 16 or traffic channel until the URGENCY communication has completed.

6.7.4 Receiving a geographical area call

1. A geographical call is received. An emergency alarm sounds (different from DISTRESS). Then the requested channel from the other ship is automatically selected.

2. Press any key to stop the alarm.

3. Monitor the traffic channel for an announcement from the calling ship.

NOTE
This feature is only available when a GPS or LORAN receiver is connected.

6.7.5 Receiving an individual call

When receiving an individual call, an acknowledgment must be sent back to the calling station.

1. An individual call is received. A calling alarm sounds. Then the requested channel from the calling station is automatically selected.

2. Press any key to stop the alarm.

3. Monitor the selected channel for an announcement from the calling ship.
7. DSC / RADIO SETUP MODE

7.1 SETUP

1. Press and hold down the CALL/SET key until the SETUP menu appears.

2. To select the items, press the UP or DOWN key.

7.2 LAMP ADJUSTING

1. Select LAMP ADJUST in the SETUP menu with the UP or DOWN key.

2. Press the CALL/SET key.
   The lamp adjusting menu will appear.

3. Press the UP or DOWN key to select the desired level.
   When DARK is selected, the lamp is extinguished.
   When BRIGHT is selected, the lamp is brightest.

4. Press the CALL/SET key to store the selected level.
   The LCD will return to the SETUP menu.

7.3 LCD CONTRAST

1. Select CONTRAST in the SETUP menu with the UP or DOWN key.

2. Press the CALL/SET key.
   The contrast setting menu will appear. The contrast level can be set from 1 to 7.

3. Press the UP or DOWN key to select the desired level.
   (Example: 5 is selected)
   The contrast is stronger as the selected level increases.

4. Press the CALL/SET key to store the selected level.
   The LCD will return to the SETUP menu.
7.4 INDIVIDUAL DIRECTORY SETUP (DSC)

1. Press and hold the CALL/SET key until the SETUP menu is displayed.

2. Select INDIVI DIR by using the UP or DOWN key.

3. Press the CALL/SET key to enter the individual directory.

4. Press the UP or DOWN key to set the desired address number. The address number can be set from 01 to 30.

5. Press the CALL/SET key to store the address number.

6. Press the UP or DOWN key to scroll through the alphabet.

7. Press the CALL/SET key to enter the desired letter and move the cursor one space to the right. Repeat procedure until the name is complete. The name can consist of up to eleven characters, if you do not use all eleven character press the CALL/SET key to move to the next space. This method can be used to enter a blank space in the name.

8. After the eleventh letter or space has been entered, press the CALL/SET key to advance to the MMSID (Maritime Mobile Service Identity) number entry.

9. Press the UP or DOWN key to scroll through the numbers, 0-9. To enter the desired number and move one space to the right press the CALL/SET key. Repeat procedure until all nine spaces of MMSID number are entered.

10. After entering the MMSID number press and hold the CALL/SET key until the screen prompts you to select NEXT or EXIT.
11. To enter another individual address select NEXT with the **UP** or **DOWN** key and press the **CALL/SET** key. Repeat steps 4 through 10.

12. To exit the individual directory setup, select EXIT with the **UP** or **DOWN** key and press the **CALL/SET** key.

**NOTE**

Selecting NEXT or EXIT will automatically save the name and MMSID number into memory.

### 7.5 KEY BEEP (ON or OFF)

1. Select KEY BEEP in the SETUP menu with the **UP** or **DOWN** key.

![Menu]  

2. Press the **CALL/SET** key. The key beeps setting menu will appear.

3. Press the **UP** or **DOWN** key to select ON or OFF.

4. Press the **CALL/SET** key to set the key beep condition. The LCD will return to the SETUP menu.

**NOTE**

Emergency alarm and beeps for DSC operation cannot be turned OFF.

### 7.6 TIME OFFSET

Sets the time difference between local time and UTC. Time is displayed when position (LAT/LON) is displayed by pressing the **POS** key.

![Menu]  

1. Select TIME SET in the SETUP menu with the **UP** or **DOWN** key.
2. Press the **CALL/SET** key. The time offset menu appears.

3. Press the **UP** or **DOWN** key to select time offset from UTC. See Figure 4 to find your offset time from UTC. If 00:00 is assigned, the time is the same as UTC (Universal Time Coordinated) or GMT (Greenwich Mean Time).

4. Press the **CALL/SET** key to store the time offset. The LCD will return to the SETUP menu.

![Offset time table](image)

**Figure 4. Offset time table**

### 7.7 USER MMSID INPUT

1. Select the USER MMSID in the SETUP menu with the **UP** or **DOWN** key.

2. Press the **CALL/SET** key. The user MMSID menu will appear, and the first space will blink.
3. Press the **UP** or **DOWN** key to set the number (0 to 9).

4. Press the **CALL/SET** key to store the set number. The blinking number is stored, and the next space will blink.

5. Repeat steps 3 and 4 to set all 9 digits of your MMSID.

6. When the last number of your MMSID is in place, press and hold down the **CALL/SET** key to store your MMSID.

**NOTE**

User MMSID can be input only twice. If the user tries to input MMSID more than twice, the radio will show the display on the right. If the user needs to change the MMSID more than twice, the transceiver will have to be sent to Factory Service. Refer to the Owner’s Manual Supplement for address.

### 7.8 DSC SCAN

1. Select DSC SCAN in the SETUP menu with the **UP** or **DOWN** key.

2. Press the **CALL/SET** key. The DSC SCAN setting menu will appear.

3. Press the **UP** or **DOWN** key to select ON or OFF.

4. Press the **CALL/SET** key to set the DSC SCAN condition. The LCD will return to the SETUP menu.
8 MAINTENANCE

The inherent quality of the solid-state components used in this transceiver will provide many years of continuous use. Taking the following precautions will prevent damage to the transceiver.

* Never key the microphone unless an antenna or suitable dummy load is connected to the transceiver.
* Ensure that the supply voltage to the transceiver does not exceed 16 VDC or fall below 11 VDC.

In the unlikely event of serious problems, please contact your STANDARD HORIZON Dealer or our repair facility. Address and phone numbers for this facility, as well as warranty information, are contained in your Owner’s Manual Supplement.

8.1 REPLACEMENT PARTS

Occasionally an owner needs a replacement mounting bracket or knob. These can be ordered from our Parts Department by writing or calling:

STANDARD HORIZON, a division of VERTEX STANDARD.
17210 Edwards Rd., Cerritos, CA 90703, U.S.A.
(562)404-2700

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

Microphone, White (CMP349WL) .............................. MP51000420
Microphone, Black (CMP349BL) .............................. MP51000430
Standard Mounting Bracket, White ............................ 444X160030
Standard Mounting Bracket, Black ......................... 444X160130
Standard Mounting Bracket Knob, White ................. 444X154030
Standard Mounting Bracket Knob, Black ................. 444X154130
Volume Control Knob ................................................. 444X154500
Squelch Control Knob ............................................... 444X154500
Accessory Cable ....................................................... ZD00600090
Distress Key Cover ................................................... 444X053012
Power Cord .............................................................. ZC01300010
Mic Hanger, White ..................................................... 277X155020
Mic Hanger, Black ..................................................... 277X155120
## 8.2 TROUBLESHOOTING CHART

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>PROBABLE CAUSE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving station report</td>
<td>Noise canceling Mic</td>
<td>The INTREPID LE is equipped with a noise canceling mic, pls refer to NOTE on page 12 of this manual.</td>
</tr>
<tr>
<td>Transceiver fails to power up.</td>
<td>No DC voltage to the transceiver, or blown fuse.</td>
<td>Press and hold the Power switch/Volume control knob until the transceiver turns on. Check the power cable for DC voltage, or replace the fuse (6A 250V).</td>
</tr>
<tr>
<td>Transceiver blows fuse when connected to power supply.</td>
<td>Reversed power wires.</td>
<td>Make sure the red wire is connected to the positive battery post and the black wire is connected to the negative. If the fuse still blows, contact your STANDARD HORIZON Dealer.</td>
</tr>
<tr>
<td>Popping or whining noise from the speaker while engine runs.</td>
<td>Engine noise.</td>
<td>Reroute the DC power cables away from the engine. Add noise suppressor on power cable. Change to resistive spark plug wires and/or add an alternator whine filter.</td>
</tr>
<tr>
<td>Sound is not emitted from the external speaker.</td>
<td>External cable</td>
<td>Check the polarity of the connected external cable.</td>
</tr>
<tr>
<td>Receiving stations report low transmit power, even with transceiver set to HI power.</td>
<td>Antenna.</td>
<td>Have the antenna checked or test the transceiver with another antenna. If the problem persists, contact your STANDARD HORIZON Dealer for servicing.</td>
</tr>
<tr>
<td>“HI BATTERY” or “LOW BATTERY” is blinking when the power is turned on.</td>
<td>The power supply voltage is too high or too low.</td>
<td>Confirm that the connected power supply voltage is not 24 volts or lower than 9 volts. Confirm that the generator has not malfunctioned.</td>
</tr>
<tr>
<td>Your position is not displayed.</td>
<td>External cable.</td>
<td>Check the polarity of the connected external cable.</td>
</tr>
<tr>
<td></td>
<td>Setting of the GPS navigation receiver.</td>
<td>Check the output signal format of the GPS navigation receiver. This radio requires NMEA0183 format with GLL sentence as an output signal.</td>
</tr>
</tbody>
</table>
9 SPECIFICATIONS

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

9.1 GENERAL

Channels ........................................... All USA, International and Canadian
Input Voltage .......................................... 13.8 VDC +/-20%
Current Drain
Standby .......................................................... 0.5A
Receive .......................................................... 1.5A
Transmit ...................................................... 6A (Hi); 1.7A (Lo)
Dimensions .................................................. 2.76" H x 6.46" W x 7.13" D
(70 H x 164 W x 181 D mm)
Flush-Mount Dimensions ............................ 2" H x 5-5/8" W x 5-1/4" D
(51 H x 143 W x 133 D mm)
Weight .......................................................... 2.13 Lb. (0.97 kg)

9.2 TRANSMITTER

Frequency Range ........................................ 156.025 to 157.425 MHz
RF Output .................................................... 25 W (Hi); 1 W (Lo)
Conducted Spurious Emissions ...................... 80 dB (Hi); 60 dB (Lo)
Audio Response .......................... within +1/-3 of a 6 dB/octave pre-emphasis characteristic at 300 to 3000 Hz
Audio Distortion .......................................................... 5 %
Modulation .................................................. 16K0G3E, for DSC 16K0G2B
Frequency Stability (-20° to +50°C) .................... +/- 0.0005%
FM Hum and Noise ............................................... 50 dB

9.3 RECEIVER

Frequency Range ........................................ 156.050 to 163.275 MHz
Sensitivity:
20 dB Quieting .............................................. 0.40 µV
12 dB SINAD .................................................. 0.30 µV
Squelch Sensitivity (Threshold) ......................... 0.13 µV
Modulation Acceptance Bandwidth ..................... ± 7.5 kHz
Selectivity:
Spurious and Image Rejection .......................... - 70 dB
Intermodulation and Rejection at 12 dB SINAD .......... - 70 dB
Audio Output .................................................. 4 W
Audio Response .......................... within + 1/–3 of a 6 dB/octave de-emphasis characteristic at 300 to 3000 Hz
Frequency Stability (-20° to +50°C) ..................... ±0.0005 %
Channel Spacing ................................................ 25 kHz
DSC Format .................................................. RTCM SC101