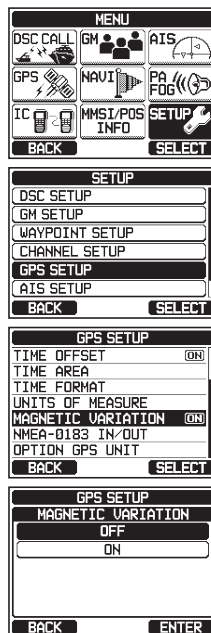


7.8.4 Changing COG to True or Magnetic

Allows the GPS COG (Course Over Ground) and the BRG from an AIS target to be selected to show in ON or OFF. Factory default is “OFF” however by following the steps below the COG can be changed to “ON”.

1. Press the **MENU** key to display “MENU”.
2. Rotate the **DIAL/ENT** knob to select “**SETUP**”, then press the **[SELECT]** soft key.
3. Rotate the **DIAL/ENT** knob to select “**GPS SETUP**”, then press the **[SELECT]** soft key.
4. Rotate the **DIAL/ENT** knob to select “**MAGNETIC VARIATION**”, then press the **[SELECT]** soft key.
5. Rotate the **DIAL/ENT** knob to select “**OFF**” or “**ON**”.
6. Press the **[ENTER]** soft key to store the selected setting.
7. Press the **CLEAR** key to return to radio operation.



NOTE

Setting to “ON” is effective only when the RMC sentences with magnetic data are input from external devices such as a GPS receiver (The SCU-31 inputs the RMC sentences, but does not input with magnetic data.).

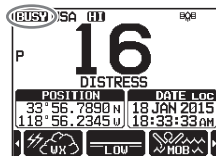
8 BASIC OPERATION

8.1 TURNING ON AND OFF THE TRANSCEIVER

1. After the transceiver has been installed, ensure that the power supply and antenna are properly connected.
2. Press and hold the  key to turn the radio on.
3. Press and hold the  key again to turn the radio off.

8.2 RECEPTION

1. Rotate the **SQL** knob fully counterclockwise. This state is known as “squelch off”.
2. Turn up the **VOL** knob until noise or audio from the speaker is at a comfortable level.
3. Rotate the **SQL** knob, clockwise until the random noise disappears. This state is known as the “squelch threshold”.
4. Rotate the **DIAL/ENT** knob or press the / key to select the desired channel. Refer to the channel chart on Pages 140 to 142 for available channels.
5. When a message is received, adjust the volume to the desired listening level. The “[**BUSY**]” indicator on the display indicates that communications are being received.

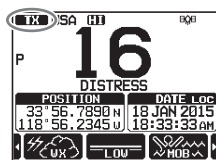


8.3 TRANSMISSION

1. Perform steps 1 through 4 of RECEPTION.
2. Before transmitting, monitor the channel to ensure it is clear.

THIS IS AN FCC REQUIREMENT!

3. Press the microphone's **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 microphone's **PTT** switch.



NOTE

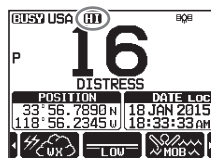
Position your mouth about 1/2" (1.5 cm) away from the microphone hole and speak in a normal voice.

8.3.1 Transmit Power

The TX output power of the **GX6000** is set to high level (25W) in factory default, and the “[HI]” indicator is displayed on the top part of the screen.

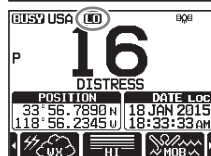
To switch the TX output power:

1. Press the ►/◄ key repeatedly until the [HI] or [LOW] soft key is displayed at the bottom of the screen.



2. Press the [HI] or [LOW] soft key to switch between HI (25W) or LO (1W) output power.

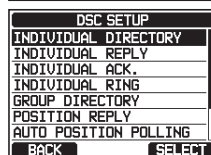
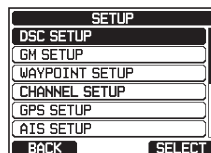
When the TX output power is set to “Low” while the transceiver is on channel 13 or 67, the output power will temporarily switch from “Low” to “High” power until the **PTT** switch of the microphone is released. This soft key is not function on transmit inhibited and low power only channels.



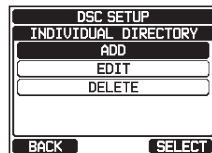
8.4 BASIC OPERATION OF THE MENU MODE

Using the menu mode, the various functions of the **GX6000** can be customized to match the method of use. You can select the items that you would like to adjust from the respective lists and enter or select the appropriate settings for the intended various operation.

1. Press the **MENU** key on the operation mode screen to display “MENU”.
2. Rotate the **DIAL/ENT** knob or press the ▲/▼/►/◄ key to select the menu item, then press the [SELECT] soft key or press the **DIAL/ENT** knob to display “MENU LIST”.
3. Rotate the **DIAL/ENT** knob or press the ▲/▼ key to select the item, then press the [SELECT] soft key or press the **DIAL/ENT** knob.
4. Rotate the **DIAL/ENT** knob or press the ▲/▼ key to select the item, then press the [SELECT] soft key or press the **DIAL/ENT** knob.



5. Rotate the **DIAL/ENT** knob or press the **▲/▼** key to select the desired setting.



6. Press the **[ENTER]** soft key to or press the **DIAL/ENT** knob store the selected setting.
7. Press the **CLEAR** key to return to radio operation.
(The display can also be returned to the previous screen by pressing the **[BACK]** soft key.)

The same operation process as the above is written as follows in this operation manual.

[MENU] → "SETUP" → "DSC SETUP" → "INDIVIDUAL DIRECTORY"

8.5 TRANSMIT TIME-OUT TIMER (TOT)

When the **PTT** switch on the microphone is held down, transmit time is limited to 5 minutes. This limits unintentional transmissions due to a stuck microphone. About 10 seconds before automatic transmitter shutdown, a warning beep will be heard from the speaker(s). The transceiver will 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.

NOTE

Once the transmitter is shut down by the TOT, transmission to the last channel is only allowed 10 seconds after the shutdown.

8.6 SIMPLEX/DUPLEX CHANNEL USE

Refer to the **VHF MARINE CHANNEL CHART** (Pages 140 to 142) for instructions on use of simplex and duplex channels.

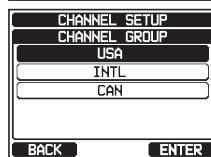
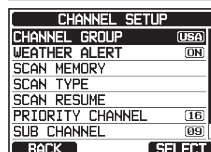
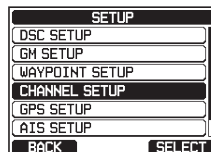
NOTE

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.

8.7 USA, INTERNATIONAL, AND CANADA MODE

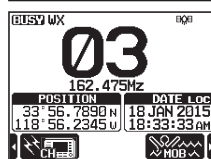
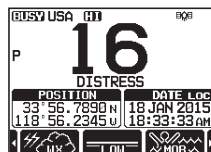
To change the channel group from USA to International or Canada:

1. Press the **MENU** key to display “MENU”.
2. Rotate the **DIAL/ENT** knob to select “**SETUP**”, then press the **[SELECT]** soft key.
3. Rotate the **DIAL/ENT** knob to select “**CHANNEL SETUP**”, then press the **[SELECT]** soft key.
4. Rotate the **DIAL/ENT** knob to select “**CHANNEL GROUP**”, then press the **[SELECT]** soft key.
5. Rotate the **DIAL/ENT** knob to select desired channel group “**USA**”, “**INTL**”, or “**CAN**”.
6. Press the **[ENTER]** soft key to store the selected setting.
7. Press the **CLEAR** key to return to radio operation.



8.8 NOAA WEATHER CHANNELS

1. To receive a NOAA weather channel, press the **►/◄** key repeatedly until the **[WX]** soft key is displayed at the bottom of the screen.
2. Press the **[WX]** soft key. The “**WX**” indicator appears on the top part of the screen.
3. Rotate the **DIAL/ENT** knob to select a different NOAA weather channel.
4. To exit from the NOAA weather channels, press the **[CH]** soft key. The transceiver returns to the channel it was on prior to a weather channel and the “**WX**” indicator disappears from the display.

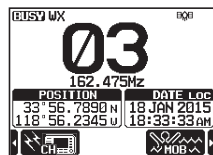


8.8.1 NOAA Weather Alert

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 NOAA weather channels.

The **GX6000** can receive weather alerts when monitoring a weather channel and, on the last selected weather channel during scanning modes or while on another working channel.

When an alert is received on a NOAA weather channel, scanning will stop and the transceiver will emit a loud beep to alert the user of a NOAA broadcast. Press any key to stop the alert. After stopping the beep sound, the weather alert reception confirmation screen will appear. Press **[OK]** to display a confirmation screen. The confirmation screen will ask you whether to move to the weather channel or return in the marine channel. Press **[YES]** to switch to the weather channel, and press **[NO]** to return to the marine channel.



To disable the weather alert function, refer to section “**16.2 WEATHER ALERT**”.

NOTE

If no key is pressed the alert will sound for 5 minutes and then the weather report will be received.

8.8.2 NOAA Weather Alert Testing

NOAA tests the alert system every Wednesday between 11AM and 1PM. To test the **GX6000**'s NOAA weather feature, setup as in section “**8.8.1 NOAA Weather Alert**” and confirm the alert is heard on Wednesdays between 11AM and 1PM local time.

8.9 MULTI WATCH (TO PRIORITY CHANNEL)

Multi watch is used to scan two or three channels for communications.

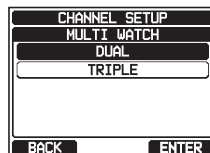
- In Dual Watch, a normal VHF channel and the priority channel are scanned alternately.
- In Triple Watch, a normal VHF channel, the priority channel, and the sub channel are scanned alternately.

When a signal is received on the normal channel the radio briefly switches between the normal channel and the priority channel to look for a transmission. If the radio receives communications on the priority channel the radio stops and listens to priority channel until communication ends and then starts dual or triple watch scan again.

8.9.1 Setting up the Multi Watch Operation

1.  → "SETUP" → "CHANNEL SETUP" → "MULTI WATCH"

2. Rotate the **DIAL/ENT** knob to select "**DUAL**" or "**TRIPLE**".
3. Press the **[ENTER]** soft key to store the selected setting.
4. Press the **[CLEAR]** key to return to radio operation.



8.9.2 Starting the Dual Watch

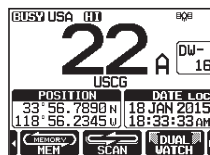
1. Adjust the **SQL** knob until the background noise disappears.
2. Rotate the **DIAL/ENT** knob to select a channel you wish to watch.
3. Press **►/◄** key repeatedly until the **[DUAL WATCH]** soft key is displayed at the bottom of the screen, press the **[DUAL WATCH]** soft key.

The radio will monitor the priority channel and the channel that was selected in step 2.

If a signal is received on the channel selected in step 2, the **GX6000** will dual watch to priority channel.

4. To stop dual watch, press the **[DUAL WATCH]** soft key again.

When selecting "**TRIPLE**" in the SETUP menu, **[TRIPLE WATCH]** will be displayed as the soft key instead of **[DUAL WATCH]**.



NOTE

The priority channel may be changed from CH16 (default) to another channel. Refer to section "**16.7 PRIORITY CHANNEL**".

8.10 SCANNING

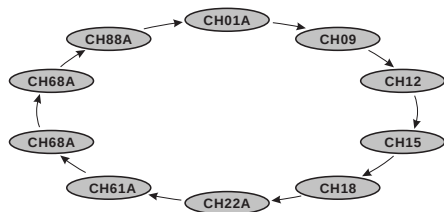
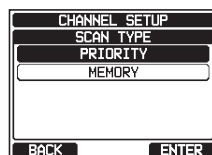
The **GX6000** will automatically scan channels programmed into the preset channel memory and also the scan channel memory, and the last selected weather channel.

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.

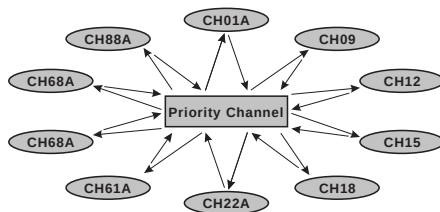
8.10.1 Selecting the Scan Type

1. **[MENU]** ➡ **"SETUP"** ➡ **"CHANNEL SETUP"** ➡ **"SCAN TYPE"**

2. Rotate the **DIAL/ENT** knob to select **"PRIORITY"** or **"MEMORY"**.
3. Press the **[ENTER]** soft key to store the selected setting.
4. Press the **[CLEAR]** key to return to radio operation.



Memory Scan (M-SCAN)

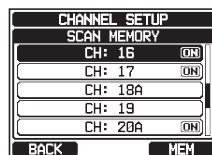


Priority Scan (P-SCAN)

8.10.2 Programming Scan Memory

1. **[MENU]** ➡ **"SETUP"** ➡ **"CHANNEL SETUP"** ➡ **"SCAN MEMORY"**

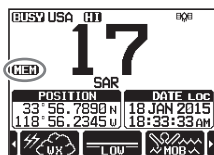
2. Rotate the **DIAL/ENT** knob to select a desired channel to be scanned, then press the **[MEM]** soft keys. **"ON"** icon will appear at the right side of the selected channel.



3. Repeat step 2 for all the desired channels to be scanned.
4. To REMOVE a channel from the list, select the channel then press the **[MEM]** soft key. **"ON"** icon of the selected channel will disappear.
5. When you have completed your selection, press the **CLEAR** key to return to radio operation.

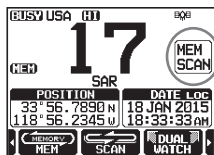
To check channels to be scanned, rotate the **DIAL/ENT** knob. The “[MEM]” icon will appear when the memory channel is displayed.

Note: When “SCAN MEMORY” is assigned to the soft key, the memory function switches between on and off every time you press the [MEM] soft key.



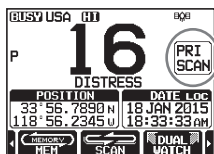
8.10.3 Memory Scanning (M-SCAN)

1. Set the scan type to “MEMORY” in the SETUP menu (refer to “8.10.1 Selecting the Scan Type”).
2. Adjust the **SQL** knob until the background noise disappears.
3. Press the ►/◄ key repeatedly, then press the [SCAN] soft key. “MEM SCAN” appears on the display. Scanning will proceed from the lowest to the highest programmed channel number and preset channel (described in the next section) and will stop on a channel when a transmission is received. The channel number will blink during reception.
4. To stop scanning, press the [SCAN] soft key, **16/S** or **CLEAR** key.



8.10.4 Priority Scanning (P-SCAN)

1. Set the scan type to “PRIORITY” in the SETUP menu (refer to “8.10.1 Selecting the Scan Type”).
2. Adjust the **SQL** knob until the background noise disappears.
3. Press the ►/◄ key repeatedly, then press the [SCAN] soft key. “PRI SCAN” appears on the display. Scanning will proceed between the memorized channels and preset channel (described in next section) and the priority channel. The priority channel will be scanned after each programmed channel.
4. To stop scanning, press the [SCAN] soft key, **16/S** or **CLEAR** key.



NOTE

In the default setting, Channel 16 is set as the priority channel. You may change the priority channel to the desired channel from Channel 16 on the SETUP menu. Refer to section “16.7 PRIORITY CHANNEL”.

8.11 PRESET CHANNELS: INSTANT ACCESS

10 preset channels can be programmed for instant access. Press the ►/◄ key repeatedly, then press the **[PRESET]** soft key. Pressing the **[PRESET]** key activates the user assigned channel bank. If the **[PRESET]** soft key is pressed and no channels have been assigned, alert beep will sound.

Before beginning the Instant Access operation, assign the “PRESET” command into one of the programmable keys, refer to section “15.8 SOFT KEYS”.

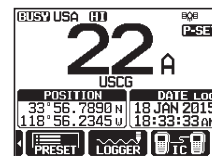
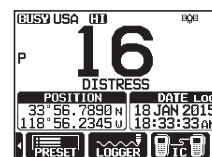
8.11.1 Programming

1. Rotate the **DIAL/ENT** knob to select the channel to be programmed.
2. Press the ►/◄ key repeatedly to indicate the function on the display, then press and hold the **[PRESET]** soft key until the “P-SET” icon and channel number are blinking.
3. Press the **[ADD]** soft key to program the channel into the preset channel memory. “**[P-SET]**” icon will appear.
4. Repeat steps 1 through 3 to program the desired channels into the preset channels. Up to 10 channels can be registered. If you attempt to register the 11th channel, error beep will sound.



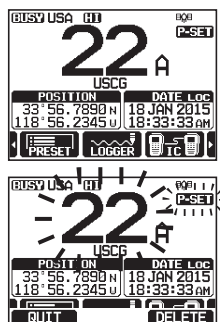
8.11.2 Operation

1. Press the ►/◄ key repeatedly, then press the **[PRESET]** soft key to recall the preset channel. The “**[P-SET]**” icon will appear on the display.
2. Rotate the **DIAL/ENT** knob to select the desired preset channel.
3. Press the **[PRESET]** soft key to return to the last selected channel. The “**[P-SET]**” icon will disappear from the display.



8.11.3 Deletion

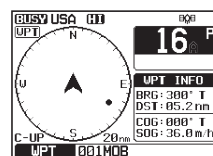
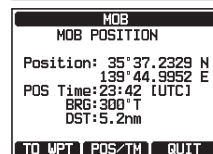
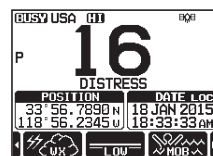
1. Press the ►/◄ key repeatedly, then press the **[PRESET]** soft key to recall the preset channel.
2. Rotate the **DIAL/ENT** knob to select the preset channel to be deleted.
3. Press and hold the **[PRESET]** soft key until the “**[P-SET]**” icon and channel number are blinking.
4. Press the **[DELETE]** soft key to delete the channel from the preset channel memory.
5. Repeat steps 2 through 4 to delete the desired channels from preset channels.
6. To exit from deleting the preset channels, press the **[QUIT]** soft key.



8.12 MOB OPERATION

The **GX6000** provides a feature to memorize the position information instantly in case of MOB (Man Over-Board).

1. Press the ►/◄ key repeatedly, then press the **[MOB]** soft key.
2. Press the **[TO WPT]** soft key to start the navigation to the displayed position. For details about the navigation, see section “**11 NAVIGATION**”.
To modify the displayed position information, press the **[POS/TM]** soft key. For details about the modification, see “**Editing a Waypoint**” on page 86.
3. To transmit a DSC distress message, lift the red spring loaded DISTRESS cover on the right side of the transceiver, then press and hold the **DISTRESS** key (see section “**10.2.1 Transmitting a DSC Distress Alert**” for details).



The nature of the distress call is automatically set to “MOB”.

8.13 PA/FOG OPERATION

The **GX6000** has two 25 W hailers built-in and can be used with any 4 Ohm PA horn. Standard Horizon offers two HAIL/PA horns, the **220SW** (5" round 30 Watt HAIL/PA horn) and the **240SW** (5" x 8" rectangular 40 Watt HAIL/PA horn). When the **GX6000** is in PA Hail mode the PA speaker listens back (acts as a microphone and provides two-way communications through the HAIL/PA horn to the main radio).

NOTE

When in the PA HAIL or FOG HORN mode, the **GX6000** will continue to receive DSC calls and communications on the last selected working channel prior to entering the PA HAIL or FOG HORN mode. Then the **GX6000** AIS page can also be accessed when in the PA HAIL or FOG HORN mode.

PA HAIL mode:

PA HAIL mode allows the transceiver to be used as a power hailer when an optional STANDARD HORIZON **220SW** or **240SW** HAIL/PA horn is installed. The PA Hail mode has a listen-back feature which provides two way communication through the HAIL/PA horn.

FOG HORN mode:

Automatic signaling is transmitted through the HAIL/PA horn. When the fog horn signal is not being outputted the **GX6000** listens back through the connected HAIL/PA horn.

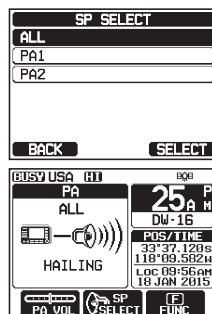
HORN mode:

Foghorn sound or siren sound can be transmitted through the HAIL/PA horn. When the fog horn signal is not being outputted the **GX6000** listens back through the connected HAIL/PA horn.

8.13.1 Operating the PA HAIL mode

1.  → "PA FOG" → "PUBLIC ADDRESS"

2. Rotate the **DIAL/ENT** knob to speaker select "ALL", "PA1" or "PA2", then press the **[SELECT]** soft key. Press the microphone's **PTT** switch to speak through the HAIL/PA speaker.
3. Press the **[PA VOL]** soft key, then rotate the **DIAL/ENT** knob to control the AF output level. Press the **[ENTER]** soft key. The AF output level can be set from 0 to 31.



- To listen back, rotate the **VOL** knob.
- Press the **CLEAR** key to return to radio operation.

8.13.2 Operating the FOG HORN mode

The user can select the type of horn from “Underway”, “Stop”, “Sail”, “Towing”, “Aground” and “Anchor”.

-  → “PA FOG” → “FOG HORN”

- Rotate the **DIAL/ENT** knob to select one of the six functions described above, then press the **[SELECT]** soft key.

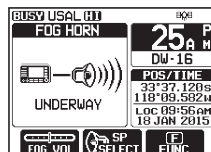
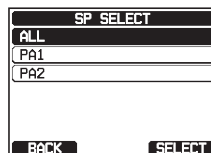
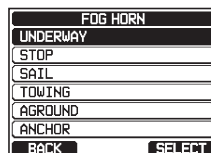
- Rotate the **DIAL/ENT** knob to speaker select “ALL”, “PA1” or “PA2”, then press the **[SELECT]** soft key.

- On the “**FOG HORN**” mode, while pressing the **[HORN]** soft key to activate the tone through the HAIL/PA speaker.

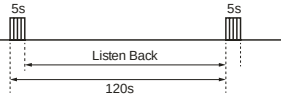
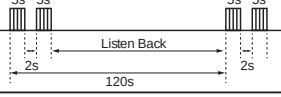
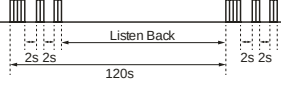
Press the **[FOG VOL]** soft key, then rotate the **DIAL/ENT** knob to control the AF output level.

Press the **[ENTER]** soft key. The AF output level can be set from 0 to 31.

- To listen back, rotate the **VOL** knob.
- Press the **CLEAR** key to return to radio operation.



8.13.3 Fog Signal Timing Chart

TYPE	PATTERN	USAGE
UNDERWAY	One 5-second blasts every 120 seconds. 	Motor vessel underway and making way.
STOP	Two 5-second blasts (separated by 2 seconds) every 120 seconds. 	Motor vessel underway but stopped (not making way).
SAIL	One 5-second blasts followed by two 1-second blasts (separated by 2 seconds) every 120 seconds. 	Sailing vessel underway, fishing vessel (underway or anchored), vessel not under command, a vessel restricted in her ability to maneuver (underway or at anchor), or a vessel towing or pushing another ahead.

8.14 INTERCOM OPERATION

The optional **SSM-70H (RAM4)** remote station microphone must be connected to perform intercom functions between the **GX6000** and the **SSM-70H (RAM4)**.

NOTE

When using the intercom function, connect one or two **SSM-70H (RAM4)** Remote Station Microphone to the **GX6000**.

8.14.1 Communication

1.  → "IC"

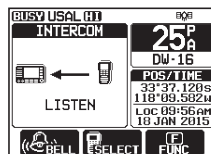
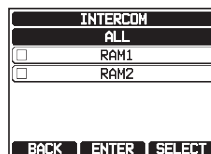
2. Rotate the **DIAL/ENT** knob to select the device to which you want to communicate, then press the **[SELECT]** soft key. The "✓" icon will appear at the left side of the selected station.

Note: When only one **SSM-70H (RAM4)** is connected to GX6000, continue to step 5.

3. Repeat step 2 for all the desired devices.
4. Press the **[ENTER]** soft key.
5. When the intercom mode is enabled, "INTERCOM" is displayed on the radio and **SSM-70H (RAM4)**.
6. Press the microphone's **PTT** switch on the radio. "Talk" will be shown on the display.

Note: A warning beep will be heard when the radio's **PTT** and **RAM4's PTT** switches are pushed at the same time.

7. Speak slowly and clearly into the microphone, hold the microphone about 1/2" (1.5 cm) away from your mouth.
8. When finished, release the **PTT** switch.
9. Press the **CLEAR** key to return to radio operation.



8.14.2 Calling

Pressing the **[BELL]** soft key when in intercom mode on either the radio or **RAM4** microphone will produce a calling beep to the other station.

8.15 VOICE SCRAMBLER

The voice scrambler function for the 4-code type (**CVS2500A** compatible) or the 32-code type (**FVP-42** compatible for Furuno Electric FM-4721) is available by configuring optional settings. Refer to the section "**16.13 SCRAMBLER SETUP**" to program the voice scrambler.