

IMPORTANT NOTICE, FCC LICENSE REQUIRED FOR GMRS OPERATION

The GMRS1072N operates on GMRS (General Mobile Radio Service) frequencies which require an FCC (Federal Communications Commission) license. You must be licensed prior to operating on channels 1 - 7 or 15 - 22, which comprise the GMRS channels of the GMRS1072N. Serious penalties could result for unlicensed use of GMRS channels, in violation of FCC rules, as stipulated in the Communications Act's Sections 501 and 502 (amended).

You will be issued a call sign by the FCC which should be used for station identification when operating the radio on GMRS channels. You should also cooperate by engaging in permissible transmissions only, avoiding channel interference with other GMRS users, and being prudent with the length of their transmission time.

To obtain a license or ask questions about the license application, contact the FCC at 1-888-CALL FCC or go to the FCC's website:

<http://www.fcc.gov> and request form 605.

Exposure To Radio Frequency Energy

Your Bonso Electronics Ltd is designed to comply with the following national and international standards and guidelines regarding exposure of human being to radio frequency electromagnetic energy:

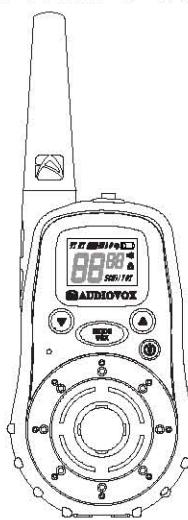
- United States Federal Communications Commission, Code of Federal Regulations: 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineer (IEEE) C95. 1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

To control your exposure and ensure compliance with the general population or uncontrolled environment exposure limits, transmit no more than 50% of the time.

The radio generates measurable RF energy exposure only when transmitting.



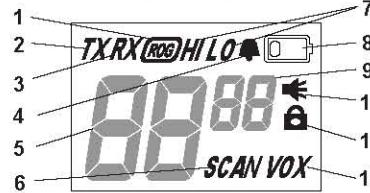
**General Mobile Radio Service (GMRS)
Model: GMRS1072N
Twin Pak**



Owner's Manual

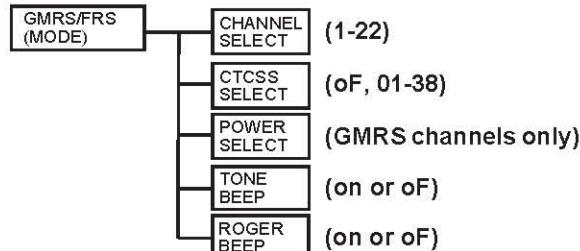
Customer Service
1-800-290-6650

Model GMRS1072N DISPLAY



- Roger Beep Tone Indicator:** This icon appears when the Roger Beep tone is on, and disappears when the tone is not in use.
- Transmit Indicator:** Icon appears when the unit is in the transmit mode (PTT button activated or VOX mode active).
- Receive Indicator:** This icon appears when the unit is receiving a transmission.
- Beep Tone Indicator:** Icon appears when beep button confirmation tone is selected; icon disappears when tone is off.
- Large Segment Display:** Indicates the channel number in use between 1 and 22.
- Scan Indicator:** This function allows the user to scan a channel every 0.5 second to search for a valid signal.
- Hi/Lo Indicators:** Appropriate icon appears when the transmit power is set to desired output power.
- Battery Level Indicator:** Icon indicates the battery charge level.
- Small Segment Display:** Indicates the CTCSS tone code (1-38) function is active for the main channel in use.
- Monitor Indicator:** Icon appears when the Monitor (M) button is pressed and the channel monitor function is activated.
- Key Lock Indicator:** Icon appears when the keypad is locked. This function disables keys such as channel up/down, SCAN and MODE.
- Voice Activated Transmission (VOX) Indicator:** This function allows hands-free conversation. The icon appears when the VOX mode is activated.

GMRS1072N OPERATIONAL MODES



NOTE: To differentiate between operating modes, look for HI or LO indication below the battery power level indicator when in GMRS mode. Refer to the appropriate section of this manual for detailed operating instructions for each mode. Channels 1 through 7 are shared GMRS/FRS. Channels 8 through 14 are FRS only, and channels 15 through 22 are GMRS only.

Controls:

Power On-Off/SCAN Button (13)

Press and hold the PWR on/off button for at least 2 seconds. You will hear a confirming melody to indicate the unit is on. To turn the unit off, press and hold the button for at least 2 seconds.

Adjusting the Volume (11, 10)

With the unit powered on, press the Up Channel/Volume Button (Δ) to increase volume and the Down Channel/Volume Button (∇) to decrease volume. The display will indicate the current volume level (U) followed by the number (0-7). As volume is increased upward, the unit will beep at each step, and vice-versa. When the minimum and maximum volume settings are reached, a unique tone will sound.

! CAUTION

SAFETY INFORMATION

Your wireless hand-held portable transceiver contains a low power transmitter. When the PTT button is pushed (or the VOX mode is enabled) it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices.

Important: To maintain compliance with the FCC's RF exposure guidelines hold the transmitter at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away. If you wear the handset on your body while using the headset accessory, use only the Audiovox supplied carry clip for this product and ensure that the antenna is at least 1 inch (2.5 centimeters) from your body when transmitting. Use only the supplied antenna. **Do not use your transceiver with a damaged antenna.** Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

Performance:

Your transceiver will only achieve its maximum operating range when communicating with other transceivers across open and flat areas or between elevated points. Normally occurring environmental factors such as buildings, trees, terrain and weather, or interference from other radio or electrical equipment, may have adverse effects on the transceiver's effective range. These are not indicative of a fault condition.

Avoid placing the GMRS1072 radio transceiver for prolonged periods of time in direct sunlight or temperatures below -4°F (-20°C) or above 140°F (60°C).

Place the rubber cover on jacks when not in use.

WARNINGS:

Battery Care

Never attempt to charge alkaline or dry cell batteries, as batteries may burst causing personal injury and damage to the product. If rechargeable batteries are used, such as Nickel Metal Hydride (NiMH), use only the supplied Audiovox-approved rechargeable batteries. Use of the Audiovox charger (also supplied) with other brands of batteries is not recommended, as battery charging times will vary with different brands. Refer to the Manufacturer's instructions for charging other brands of batteries.

Battery Disposal

In general, if handled improperly, batteries pose a risk of fire or burns. Do not disassemble, crush, puncture, short external contacts, or dispose of the batteries in fire or water. Dispose of the batteries in a environmentally safe manner and recycle whenever possible.

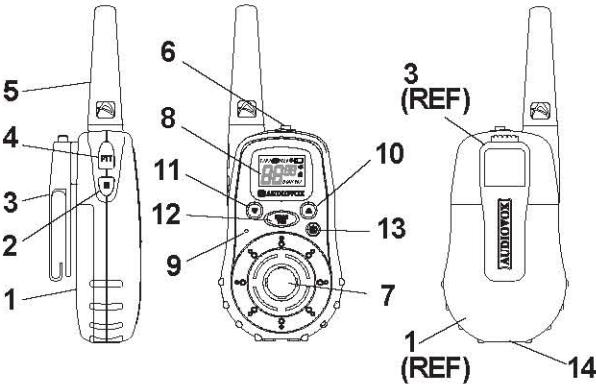
FCC WARNING

Replacement or substitution of transistors, diodes or other parts of a unique nature, with parts other than those recommended by the manufacturer, may cause a violation of the technical regulations of Part 15 of FCC Rules.

GMRS LICENSE:

USE OF THIS RADIO WITHIN THE UNITED STATES REQUIRES AN FCC GMRS LICENSE. AN INDIVIDUAL 18 YEARS OF AGE OR OLDER, WHO IS NOT A REPRESENTATIVE OF A FOREIGN GOVERNMENT, IS ELIGIBLE TO APPLY FOR A GMRS SYSTEM LICENSE. YOU WILL NEED TWO FORMS FROM THE FCC: FCC FORM 159, AND FCC FORM 605 (MAIN FORM AND SCHEDULE F). YOU CAN FIND THE FORMS ONLINE AT: [HTTP://WWW.FCC.GOV/FORMPAGE.HTML](http://WWW.FCC.GOV/FORMPAGE.HTML), OR CALL 1-800-418-3676.

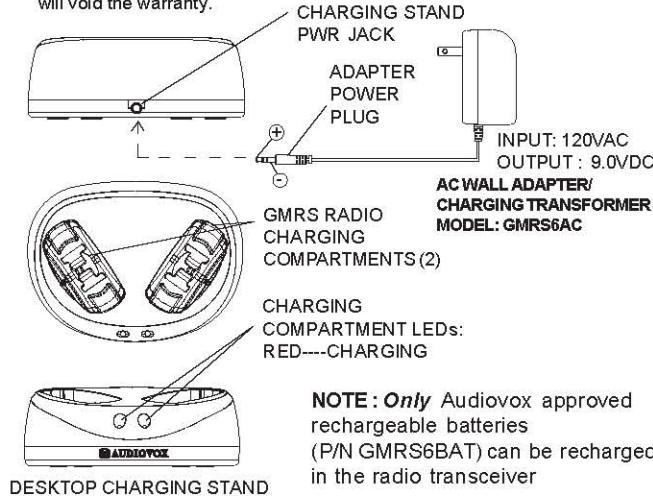
Model GMRS1072N (FCC License Required)



1. Battery Door	8. Liquid Crystal Display (LCD)
2. Monitor (M) Button	9. Built-in Microphone
3. Detachable Carry Clip	10. Up Channel/Volume Button
4. Push-To-Talk (PTT) Function Confirmation Button	11. Down Channel/Volume Button
5. Antenna	12. MODE/VOX Button
6. External Speaker(SPK)/Microphone (MIC)/CHG Jack	13. Power On/Off Scan Button
7. Built-in Speaker	14. Battery Charging Contacts

The following guidelines will improve performance and provide longer operating times for the GMRS1072N:

1. Do not mix old and new batteries.
2. The use of alkaline-type batteries is recommended to provide the longest operating time.
3. Do not mix alkaline, standard (carbon-zinc) or rechargeable batteries.
4. If the unit is not to be used for an extended period of time, remove the batteries. Old or leaking batteries can cause damage to the unit and will void the warranty.



NOTE: Only Audiovox approved rechargeable batteries (P/N GMRS6BAT) can be recharged in the radio transceiver

Equipment and Accessories Supplied

1. Radio (2)	GMRS1072N
2. Owner's Manual (1)	xxx-xxxx
3. Rechargeable Batteries (8)	NIMH, P/N GMRS6BAT
4. Dual Desk-Top Charger	GMRSxDS
5. AC Wall Adapter	GMRS6AC

Powering the transceiver:

Your GMRS1072N radio transceiver operates on four AAA Alkaline batteries. Alkaline batteries will provide slightly better performance than rechargeable batteries (purchased separately). Only Audiovox approved rechargeable batteries should be recharged in the radio transceiver using the supplied charging accessories. This will ensure optimum performance for the GMRS1072N. Battery charging time is typically 16 - 20 hours. Use of the Audiovox charging equipment with other brands of rechargeable batteries is not recommended as battery charging times will vary. Refer to the manufacturer's instructions for charging other brands of batteries.

Batteries

There are three methods of powering the GMRS1072N:

1. Alkaline Batteries.
2. Audiovox Rechargeable Ni-MH Batteries - (Rechargeable NiMH batteries and Charging Adapter included). Use only Audiovox approved rechargeable batteries and charging equipment when charging batteries internal to the unit.

NOTE: To extend battery life, avoid overcharging the batteries.

3. Various Brands of Rechargeable Batteries - Use of the Audiovox charger(s) with other brands of rechargeable batteries is not recommended, as battery charging times will vary with different brands of batteries. Refer to the manufacturer's instructions for charging other brands of batteries.

CLIP RELEASE TAB
CARRY CLIP
BATTERY COVER

COVER ARROW
POSITIVE TERMINALS

Installing the batteries:

Battery installation is made more convenient when the carry clip is either rotated left or right to the horizontal position, or is removed. Simply rotate the clip in either direction to the horizontal position. Be careful not to use excessive force. To remove the clip, press down on the release tab and pull the clip straight out from the radio body. Next, press down with the thumb at the embossed arrow, slide the battery cover down and lift it away from the compartment. Insert four AAA batteries (alternate positive ends (+) toward the top of the transceiver, starting left-to-right).

1. Using thumb, press down on battery cover at arrow and slide cover down.
2. Then lift cover at bottom to open. Remove cover.
3. Insert four AAA batteries (positive (+) end toward the top beginning at left side and alternating positive terminals as shown).

Monitor/Keylock Button (2)

This button is used to check activity on the current frequency before transmitting. Check activity by pressing the Monitor (M) Button longer than 2 seconds; the icon will appear on the display and you will hear static if frequency is clear. **Do not transmit if you hear conversation.** Hold down the Monitor Button again longer than 2 seconds and the icon will disappear from the display.

The monitor function will temporarily bypass the squelch setting and play all signals on a given channel. This feature is useful when communicating with other parties at extreme range. By pressing the monitor button momentarily, the keylock icon () will appear to confirm the functions MODE, SCAN and channel up/down buttons have been disabled.

Push To Talk (PTT) Button (4)

Pressing and holding this button will allow you to speak to any transceiver that is set to the same channel and privacy code setting as yours. Hold the transceiver approximately 1 to 2 inches from your face as you speak into the built in microphone (9). After you have finished speaking, release the PTT Button to allow reception of incoming signals. It is not possible to transmit and receive at the same time. Whenever the button is pressed, the transmit signal icon (TX) will appear in the upper left corner of the display. Releasing the button allows the unit to revert to standby mode. When receiving an incoming signal, the (RX) icon will appear. The PTT Button can also be used as a two-way call ringer. Pressing the button twice quickly will call another party on the same channel. The transmit icon (TX) will be displayed for 3 seconds and then disappear.

Up Channel/Volume Button (10)

In the standby mode, pressing this button will increment the listening volume. When in function edit mode this button will be used to adjust the unit's settings.

Down Channel/Volume Button (11)

In the standby mode, pressing this button will decrement the listening

volume. When in function edit mode this button will be used to adjust the unit's settings.

MODE/VOX Button (12)

This button is used to select various feature settings in the GMRS and FRS modes. When pressed and held for 3 seconds, the VOX mode is entered and the VOX icon appears on the display.

External Speaker (SPK)/Microphone (MIC)/CHG Jack (6)
This jack accepts both the supplied Audiovox earbud/microphone connector and the wall charging adapter. For additional optional equipment and accessories for the GMRS1072N, refer to page 7 and/or visit the Audiovox web site at www.audiovox.com.

Scan Button (13)

With the unit in standby mode, press the Power On/Off Button momentarily to enable or disable the scan function; SCAN will appear on the display.

Operating Modes and Features

GMRS/FRS Operation:

- Press and hold the Power On/Off button for 2 seconds to turn on power.
- Press the MODE button so the Channel number flashes.
- Select the desired channel with the Up (10) and Down (11) Buttons.
- When receiving a call, the (RX) icon appears to indicate an incoming call.
- Press and hold the PTT button (4) to transmit, then speak into the microphone clearly and slowly. The transmit icon (TX) appears on the display while the button is pressed.
- Release PTT Button (4) to receive.
- Communication can only be accomplished when the channel and CTCSS tone frequency of at least two parties are the same.
- The CTCSS subcode (01-38) will be displayed on the LCD panel if the CTCSS tone frequency function is enabled (not oF).

Channel Selection

In order to communicate with other GMRS/FRS units, both the transmitting and receiving party must be on the same frequency. The GMRS1072N has 22 channels (frequencies) indicated by the large digits on the LCD display panel. Channels 1 through 7 are the shared GMRS/FRS channels. Channels 8-14 are FRS only channels, while channels 15-22 are assigned GMRS only channels. If an FRS only channel (8-14) has been selected, the HI or LO icon will not be displayed on the LCD panel; otherwise, for channels 1-7 (GMRS/FRS) and 15-22 (GMRS only) the HI or LO icon will be displayed. Communication with Audiovox GMRS/FRS and compatible units is possible on these 22 channels. Before transmitting on the selected channel, press the Monitor (M) Button (2) to check the activity on that channel. If there is activity on the selected channel, change to another channel that is clear.

To change the channel:

- From GMRS/FRS standby mode, press the MODE button (12) once; the channel number flashes.
- Press the Up Button (10) briefly to move to the next higher main channel number.
- Press the Down Button (11) briefly to move to the next lower main channel number.
- Press the PTT button momentarily to confirm selection.

CTCSS Mode (Sub-Channel) Selection

The Coded Tone Controlled Squelch System (CTCSS) has 38 Sub-Frequencies. This feature allows you to utilize the coded squelch tones (01-38) within a main channel and enables you to communicate with another party on the same main channel using the same subcode. (This filters out unwanted transmissions from the same main channel). Since there are 38 CTCSS Sub-channels for each main channel, a different subcode may be selected for each of the 22 channels.

To change the CTCSS Sub-channel:

- From GMRS/FRS standby mode, press the MODE Button twice; a flashing **oF** or sub-channel number is displayed.
- Press the Up or Down button to select the desired sub-channel for use (01-38).
- Press the PTT button to confirm selection.

The CTCSS mode can be turned off by selecting the **oF** icon as the setting.

NOTE: To communicate with other GMRS/FRS units, they must be switched to the same channel and CTCSS subcode. To communicate with other GMRS units that do not have subcodes, switch your unit to the same channel with the subcode set to **oF**. The CTCSS subcodes do not prevent others from hearing your transmission. This will only allow you to ignore all traffic on a given channel not using the same subcode.

Transmit Power Selection Mode (GMRS Channels Only)

This feature permits selection of the transmitting power level to high or low when using channels 1-7 and 15-22. Using low power, the unit will have a lower transmit range, but battery life will be increased.

NOTE: You will find that for the majority of your needs, the low-power setting will provide adequate communications on all channels; there should seldom be any need to use high power, except in situations where you need absolute maximum range. Using low power will greatly extend battery life. We suggest you experiment with switching between low and high power.

To access the transmitter power selection function:

- From GMRS standby mode, press the MODE Button 3 times until the **Po** indication appears flashing on the display with a steady **HI** or **LO** indication.
- Press the Up or Down button to toggle between the High and Low selections.
- Press the PTT button to confirm selection.

The display will indicate the current setting in standby mode.

NOTES FOR GOOD COMMUNICATION

1. The GMRS1072N 22 channels are shared on a 'take turns' basis. This means other groups may be talking on any of the channels. A common code of ethics/courtesy is to switch to another vacant channel and not to attempt to talk over someone who is already using the channel you first selected.
2. The GMRS1072N has been designed to maximize performance and improve transmission range in the field. To avoid interference, it is recommended that you do not use the units closer than 5 feet apart.
3. For best transmission results, always keep your mouth about 2-3 inches from the microphone (9) and speak slowly in a normal voice.
4. To increase battery life, use the SCAN feature sparingly. This feature will reduce operating time considerably.

Warning

- Do not operate the transceiver unless you are licensed to do so.
- Remove the batteries from the transceiver if it is not expected to be used for long periods. This will eliminate the possibility of chemicals leaking from the batteries and corroding the transceiver.
- Avoid exposing the transceiver to water or extremes of temperature.
- Do not use this device in or near a mining facility, which uses remotely triggered explosives or in areas labeled "Blasting Area". Premature or accidental detonation may result.
- Do not attempt to modify or in any way increase the output of this transceiver. Its output is designed to meet the legal limits set by the FCC.
- Turn your transceiver off wherever posted notices restrict the use of radios or cellular telephones. Facilities such as hospitals may use equipment that is sensitive to RF energy.
- Turn your transceiver off on board aircraft when requested to do so.
- Do not place your radio in front of a vehicle's air-bag. If the air-bag deploys, it could propel the transceiver like a projectile causing bodily injury.

CHANNELCROSS REFERENCE FOR 14 AND 15 CHANNEL GMRS/FRS RADIO TO 22 CHANNEL GMRS/FRS RADIO

CHANNELCROSS REFERENCE FOR 15 CHANNEL GMRS/FRS RADIO TO 22 CHANNEL GMRS/FRS RADIO

15 CHANNEL GMRS	22 CHANNEL FRS/GMRS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
8	16
12	17
9	18
13	19
10	20
14	21
15	22

CHANNELCROSS REFERENCE FOR 14 CHANNEL FRS RADIO TO 22 CHANNEL GMRS/FRS RADIO

14 CHANNEL FRS	22 CHANNEL FRS/GMRS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22

NOTE

WHEN USING RADIOS PRODUCED BY OTHER MANUFACTURERS, COMPARE CHANNEL FREQUENCIES FOR COMPATIBILITY.

Key Tone

This feature allows the transceiver to sound a confirmation tone whenever the following keys are pressed: Monitor (M) Button, Up/Down Buttons, MODE Button or SCAN Button.

To turn the key tones on or off:

- From GMRS/FRS standby mode, press the MODE Button 4 times (5 times for FRS) until the Bell (bell) icon flashes, and on or off appears on the display.
- Press the Up or Down Button to toggle the key tone feature **On** or **Off**.
- Press the PTT button momentarily to confirm selection.

When the key tone feature is on, the Bell icon appears steady on the display, and the beep tones sound in response to button activation.

Roger Beep Tone

The Roger Beep is a tone which is automatically transmitted whenever the PTT button is released and the tone is enabled. This tone alerts the receiving party that the transmission has been terminated intentionally.

To enable and disable the Roger Beep tone:

- From GMRS standby mode, press the MODE Button 5 times (in FRS mode, 3 times) until the flashing Roger Beep icon (bell) appears with **On** or **off**.
- Press the Up or Down Button to select the tone on or off as desired.
- When enabled, the tone icon (bell) appears steady on the display.
- Press the PTT button momentarily to confirm selection.

Call Ringer Selection Mode

The transceiver provides a transmit call ring melody at the receiving unit to alert you to an incoming call.

To activate the call ringer melody:

- From GMRS/FRS standby mode, press the PTT button twice in quick succession; a call ring melody will sound at the receiving unit to alert the user to an incoming transmission, provided that unit is equipped with this capability and is set to the same channel.

Channel Scan Operation

This feature allows you to monitor all channels automatically for valid signals. While scanning, you can transmit and receive. When a signal is received, the scan is interrupted and will return to scan mode approximately 5 seconds after reception is terminated.

NOTE: While the SCAN mode is active, the MODE button is inoperative. In addition, the scan mode will reduce the overall battery life since the battery save function is overridden.

To enable the channel scan mode:

- From GMRS/FRS standby mode, momentarily press the Power On/Off Button; **SCAN** will appear on the LCD display.
- The radio will automatically display each channel (1-22) in ascending order to find an active main channel.
- When the unit doesn't find any signals and you want to transmit, press the PTT Button to return to primary channel operation. The transceiver will automatically resume scanning approximately 15 seconds after the communication is completed.
- If there is no activity and you want to leave the scan mode, press the Power On/Off button momentarily and the unit will return to normal operation; the **SCAN** icon will disappear from the LCD display.

Auto Key Lock Selection Mode

This feature prevents accidental channel change to the preferred settings of the unit. The Auto Key Lock function temporarily disables the MODE, Up/Down and SCAN Buttons.

To access the Auto Key Lock selection menu:

- From GMRS/FRS standby mode, press the Monitor Button momentarily to enable the Auto Key lock function; the unit will beep once and the lock (padlock) icon appears on the display.
- The Power, PTT, and Monitor Buttons are not effected.
- To unlock the Auto Key function, press the Monitor Button momentarily the unit beeps once and the lock icon (padlock) disappears from the display.

NOTE: If the unit is turned off while Key Lock is on, the Key Lock mode will still be in effect when the unit is again turned on.

VOX Enable Operation

This option enables you to have hands-free conversation. Your voice or nearby sound is detected and the radio transmits without the need to press the PTT button.

To enable VOX operation:

- From GMRS/FRS standby mode, press and hold the MODE button for 3 seconds, or until the **VOX** icon appears on the display.
- To terminate VOX operation, press and hold the MODE button for at least 3 seconds; the VOX indication will disappear.

Display Backlight Enable Operation

By pressing the MODE or Up/Down button momentarily, the LCD backlight is turned on; the LCD backlight will turn off automatically in about 5 seconds.

Battery Alert

When the battery icon (battery) blinks steadily on the LCD panel, recharge the unit or install fresh batteries.

Technical Specifications:

General

Frequency Range:

Channels 1 through 7 are shared with FRS radios.

Channels 8 through 14 are FRS only.

Channels 15 through 22 are GMRS only.

Refer to frequency chart on next page.

Refer to frequency chart on next page.