



## **Model X32X**

Two Way Wristwatch Radio  
with 38 Privacy Codes

# instruction manual



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## **Power of Attorney**

**Date : Mar/10, 2004**

**Federal Communication Commission  
Authorization and Evaluation Division  
7435 Oskland Mills Road  
Columbia, MD 21046**

### **To Whom It May Concern:**

We the undersigned, hereby authorize TIMCO ENGINEERING, INC. on our behalf, to apply to the FEDERAL COMMUNICATIONS COMMISSION on our equipment. Any and all acts carried out by TIMCO ENGINEERING, INC. on our behalf shall have the same effect as acts of our own. This authorization expires on

## **Safety Information For GMRS UNIT**

**Your wireless handheld portable transceiver contains a low power transmitter.**

**When the Push-to Talk(PTT) button is pushed it sends out radio frequency (RF) signals. This device is authorized to operate at a duty factor not to exceed 50%.**

**In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices.**

**Important Note:** To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter and antenna at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away from the face.

**If you wear the handset on your body while using the headset accessory, use only the manufacturers supplied belt 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. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.**

**THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.**

**OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:**

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND**
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIRED OPERATION.**

## SPECIAL FEATURES

### CONGRATULATIONS!

Congratulations on your selection of X32X COMMUNICATOR. With proper care and adherence to the set-up and user instructions in this Owner's Manual, this unit will provide you with years of trouble-free service.

The X32X is the newest generation in personal two-way communications. It's a lightweight, compact two-way communication device that can be used to stay connected with family or friends at parks, shopping malls, sporting events, concerts – virtually any indoor or outdoor activity.

Here are some of its excellent features:

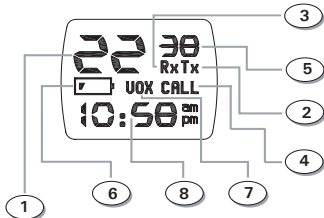
- *Wristwatch-Style with Adjustable Band*
- *22 FRS/GMRS Channels*
- *38 CTCSS Codes*
- *Roger Beep Tone*
- *Up to 1.5 Mile Range*
- *Auto Squelch*
- *Auto Battery Saving*
- *Internal VOX*
- *Channel Scan*
- *12 Hour AM/PM Wristwatch*
- *Backlit LCD Screen*
- *Lithium Ion Battery Power Source*

**Read this Owner's Manual carefully to get the most out of your TWO-WAY WRISTWATCH COMMUNICATOR.**

#### NOTE

Maximum range varies based on terrain and environment. It will generally be greater in open fields and shorter within and around buildings or large structures. Bear in mind, this unit may not ensure privacy of communication.



## COMMUNICATOR CONTROLS

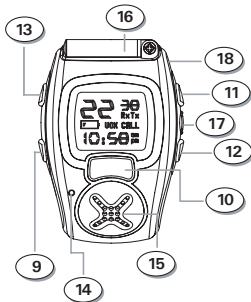


### LCD SCREEN

1. Channel Number (1~22) – Changes from 1-22 as selected by user.
2. Transmit Indicator (TX) – Indicates unit is transmitting a signal.
3. Receive Indicator (RX) – Indicates unit is receiving a transmission.
4. CALL Tone Transmission (CALL) – Indicates the unit is paging.
5. CTCSS Code Number (oF~38) – Changes from oF-38 as selected by user.
6. Battery Level indicator - Indicates the battery is low or the battery is charging.
7. VOX – Displays during VOX mode.
8. 12-Hour Time (12:00)

### BUTTONS and CONTROLS

9. POWER/MENU (Multi Function Button) – Press and hold to turn unit ON/OFF. A quick, single press accesses the Menu and Watch mode.
10. TALK (Multi Function Button) – Press and hold to transmit voice communication. Press twice quickly to transmit CALL tone.
11. UP  Button – Adjusts volume level (default), and makes channel and watch adjustments in MENU mode.
12. DOWN  Button – Adjusts volume level (default), and makes channel and watch adjustments in MENU mode.
13. SCAN Button – Press to enter CHANNEL SCAN mode.
14. MIC – Built-in microphone.
15. SPEAKER – Built-in speaker.
16. ANTENNA.
17. HEADSET/ CHARGER (BATTERY CHARGE) JACK.
18. BATTERY COMPARTMENT COVER LATCH.



## FCC NOTICE

This device complies with Part 15 of the FCC Regulations. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

**IMPORTANT:** Changes or modifications to this unit could void your right to operate this unit. Your COMMUNICATOR is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the COMMUNICATOR to exceed those limitations. Any adjustment to your COMMUNICATOR must be made by qualified technicians.

### **SAFETY INFORMATION**

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- Never open your COMMUNICATOR's case.
- Never change or replace anything in your COMMUNICATOR except the battery.

Your COMMUNICATOR may interfere with TVs or radios, even when operating properly. To determine whether your COMMUNICATOR is causing interference, simply turn it off. If the interference ends, your COMMUNICATOR is causing it. Try to eliminate interference by moving your COMMUNICATOR away from the receiver. If you cannot eliminate interference completely, the FCC requires that you terminate COMMUNICATOR use.

**Electromagnetic Interference/Compatibility:** Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

- Turn your unit OFF in any facilities where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.
- Turn your unit OFF when on board an aircraft when instructed to do so. Any use of the unit must be in accordance with airline regulations or crew instructions.

**Hazardous Environments:** Do not operate the COMMUNICATOR in hazardous environments, explosion or fire may result. Do not operate the COMMUNICATOR near unshielded electrical blasting caps. Under certain conditions, COMMUNICATORS can interfere with blasting operations and may cause an explosion. Turn your COMMUNICATOR to the OFF position to prevent accidental transmission when in a blasting area or in areas posted: "Turn off two-way radios." Construction crews often use remote control RF devices to set off explosives.

### **SAFETY INFORMATION**

**NOTE:** Areas with potentially explosive atmospheres are often, but not always, clearly marked. They include fueling areas such as below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

Your wireless hand-held portable transceiver contains a low power transmitter. When the TALK button is pushed it sends out radio frequency (RF) signals. This device is authorized to operate at a duty factor not to exceed 50%.

In August 1996, The Federal Communications Commission (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 and ANTENNA at least 2 inches (5 centimeters) from your face and speak in a normal voice, with the ANTENNA pointed away from the face.

Use only the supplied ANTENNA. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **CARE AND MAINTENANCE**

To clean your COMMUNICATOR, use a soft cloth dampened with water. Do not use cleaners or solvents; they can harm the body of the unit and leak inside, causing permanent damage. Use a dry, lint-free cloth to clean the battery contacts. Do not submerge the unit in water. If the unit gets wet, turn it off and remove the battery immediately. Dry the BATTERY COMPARTMENT with a soft cloth to minimize potential water damage. Leave the BATTERY COMPARTMENT COVER off overnight to ensure complete drying. Do not use the COMMUNICATOR until the unit is completely dry.

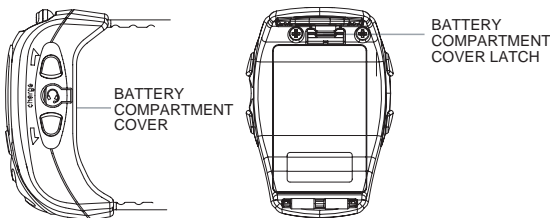
## GETTING STARTED

### Battery Installation:

Your **COMMUNICATOR** is powered by a **Lithium-Ion BATTERY** (included). To install and replace the **BATTERY**:

1. Release the **BATTERY COMPARTMENT COVER LATCH** located on the rear side of the unit, and remove the **BATTERY COMPARTMENT COVER**.
2. Install the **Lithium-Ion BATTERY** into the **BATTERY COMPARTMENT**. Be certain to follow the correct orientation in the compartment. A battery installed incorrectly can prevent the unit from operating.
3. Replace the **BATTERY COMPARTMENT COVER** and lock the **BATTERY COMPARTMENT COVER LATCH** into position.

**NOTE:** *If you install/replace the **BATTERY** and the **LCD Screen** remains blank for more than 3 seconds, press and hold the **POWER/MENU** button for 1 second to start **WATCH** mode.*



### CAUTION

To reduce the risk of personal injury, use only the battery listed in the Owner's Manual. The **COMMUNICATOR** has a built in **POWER SAVER** feature for maximum battery life. But when the **COMMUNICATOR** is not being used, conserve battery power by pressing the **POWER/MENU** button to turn **OFF** the unit. Remove the **BATTERY** if the unit will not be used for a long period of time.



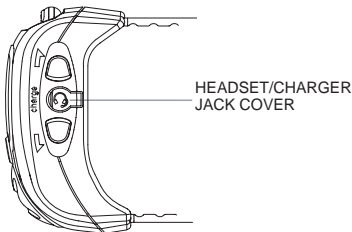
## GETTING STARTED

### Charging the BATTERY:

Your COMMUNICATOR comes with an A/C ADAPTER CHARGER to charge your Lithium-Ion BATTERY. To charge the BATTERY:

1. Lift the HEADSET/CHARGER JACK COVER located on the side of your COMMUNICATOR.
2. Connect the A/C ADAPTER CHARGER into an A/C wall outlet.
3. Insert the A/C ADAPTER CHARGER into the HEADSET/CHARGER JACK. During charging, the LOW BATTERY LEVEL icon will appear on the LCD Screen, and will disappear once the BATTERY is fully charged.

**NOTE:** Charge the BATTERY for approximately 12 hours before initial use.



#### NOTE

The COMMUNICATOR comes with internal battery protection; however, during long-term storage, it is strongly recommended that you recharge the BATTERY every 6 months or remove the BATTERY if the unit will not be used for a long period of time.



### Battery Level and Low Battery Operation

The Low Battery Level icon will appear on the LCD Screen when the COMMUNICATOR detects that the BATTERY LEVEL is low.

The COMMUNICATOR LOW BATTERY LEVEL icon will blink when a low BATTERY level is detected while in COMMUNICATOR mode and/or WATCH mode. When the COMMUNICATOR is in COMMUNICATOR mode and the BATTERY LEVEL is low, the icon will blink for approximately five (5) minutes and then the COMMUNICATOR will automatically change to WATCH mode. The COMMUNICATOR BATTERY should be recharged at this time, however, the COMMUNICATOR will continue to function in WATCH mode for 1 hour. If the LCD Screen goes blank, the COMMUNICATOR will not operate until the BATTERY has been recharged for 12 hours.

If you change the BATTERY with a fully charged spare battery, instead of charging the BATTERY in the COMMUNICATOR, and the LCD SCREEN remains blank for more than 3 seconds, you will need to press and hold the POWER/MENU button for 1 second to start WATCH mode.

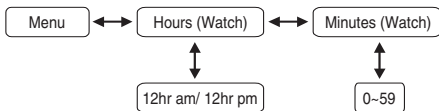
## OPERATION

1. Installing the BATTERY turns-on the COMMUNICATOR and activates WATCH mode.
2. Enter COMMUNICATOR mode by pressing and holding the POWER/MENU button for 3 seconds. To exit COMMUNICATOR mode, press the POWER/MENU button for 3 seconds.
3. Check for the LOW BATTERY LEVEL icon on the LCD Screen.
4. Adjust the Speaker Volume to a comfortable level by pressing the UP  or DOWN  button (default).

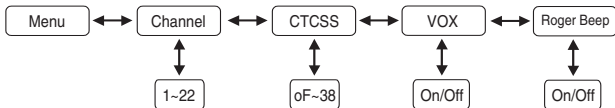
### Navigating through the Menu

Use the POWER/MENU button to access the advanced features of the COMMUNICATOR.  
(See pages 8-14 for programming instructions.)

#### 1.) Watch Mode (Default)







#### 2.) Communicator Mode



### **WATCH Mode:**

**The COMMUNICATOR functions as a digital watch while in this mode.**

1. Install the BATTERY and the COMMUNICATOR's LCD Screen will display the time in the WATCH mode.
2. Press the POWER/MENU button until a "beep" is heard and the displayed hour will "flash". Press the UP  or DOWN  button to scroll the hour and the "AM" or "PM" designator to the desired settings.
3. Press the POWER/MENU button momentarily (for no longer than 1 second) and a "beep" will be heard and the minute digits will "flash". Press the UP  or DOWN  button to scroll to the desired minute setting on the COMMUNICATOR's LCD Screen.
4. Press the POWER/MENU button a third time to exit the TIME SETTING mode, or the unit will automatically return to WATCH mode if no buttons have been pressed for 10 seconds.

**NOTE:** When the LOW BATTERY LEVEL icon is blinking in WATCH mode, the buttons will not function until the BATTERY is charging or has been recharged.

### COMMUNICATOR Mode:





The **COMMUNICATOR** functions as a two-way communication device while in this mode.

1. Press the POWER/MENU button for 3 seconds and a short "beep" followed by a long "beep" will be heard, the COMMUNICATOR's LCD Screen will quickly display all of the COMMUNICATOR's status icons, and the COMMUNICATOR will enter COMMUNICATOR mode and display the current channel.
2. Press the POWER/MENU button momentarily to enter the MENU mode.
3. Press the POWER/MENU button briefly (for no longer than 1 second) to enter into CHANNEL CHANGE, CTCSS CODE CHANGE, VOX, ROGER BEEP, and STANDBY/RECEIVE modes in due order. A short "beep" will be heard after every press of the POWER/MENU button. Refer to the "Changing Channels" and "VOX" sections for more information.
4. Press the TALK button to exit the MENU mode at any time, or the unit will automatically return to STANDBY mode if no buttons have been pressed for 10 seconds.

**NOTE:** In order for other people to receive your transmission, they must be on the same channel and CTCSS Code you are currently using. Refer to the "Changing Channels" and "Changing CTCSS Code" section for more information.

### Setting the Time (TIME SETTING mode):



To change the **COMMUNICATOR's** time settings while in **WATCH** mode:

1. Press the POWER/MENU button until a "beep" is heard and the displayed hour will "flash". Press the UP  or DOWN  button repeatedly (or hold the button to scroll) to increase or decrease the hour and "AM" or "PM" designator to the desired settings.
2. Press the POWER/MENU button momentarily (for no longer than 1 second) and a "beep" will be heard and the minute digits will "flash". Press the UP  or DOWN  button repeatedly (or hold the button to scroll) to increase or decrease the minute setting on the COMMUNICATOR's LCD Screen.
3. Press the POWER/MENU button a third time to exit the TIME SETTING mode, or the unit will automatically return to WATCH mode if no buttons have been pressed for 10 seconds.

**NOTE:** When the LOW BATTERY LEVEL icon is blinking in WATCH mode, the buttons will not function until the BATTERY is charging or has been recharged.



### Changing Channels:

**The COMMUNICATOR has 22 channels for communicating with others. To change the COMMUNICATOR's channels while in COMMUNICATOR mode:**

1. Enter COMMUNICATOR mode by pressing the POWER/MENU button for 3 seconds and a short "beep" followed by a long "beep" will be heard, the COMMUNICATOR's LCD Screen will quickly display all of the COMMUNICATOR's status icons, and the COMMUNICATOR will enter COMMUNICATOR mode and display the current channel.
2. Press the POWER/MENU button momentarily (for no longer than 1 second) to enter the MENU mode. You will hear a "beep" and the channel number will "flash" on the LCD Screen.
3. Press the UP  or DOWN  button repeatedly (or hold the button to scroll) to increase or decrease the channel number on the COMMUNICATOR's LCD Screen, and a short "beep" will be heard with each channel change.
4. Press the POWER/MENU button again to enter the CTCSS Code mode (refer to the "CTCSS CODE" section below for more information) or press the TALK button to exit to STANDBY mode.
5. Press the POWER/MENU button again to enter the VOX mode (refer to the "VOX" section for more information) or press the TALK button to exit to STANDBY mode.
6. Press the POWER/MENU button again to enter the ROGER BEEP mode (refer to the "ROGER BEEP" section for more information) or press the TALK button to exit to STANDBY mode.
7. Press the TALK button to exit the MENU mode at any time, or the unit will automatically return to STANDBY mode if no buttons have been pressed for 10 seconds.

### Changing CTCSS CODE:



**The COMMUNICATOR has 38 CTCSS CODES available. The selected CTCSS Code may be different for each channel. To change the CTCSS Code while in COMMUNICATOR mode:**



1. Press the POWER/MENU button twice and the CTCSS CODE icon will flash.
2. Press the UP  or DOWN  button repeatedly (or hold the button to scroll) to increase or decrease the CTCSS CODE number on the COMMUNICATOR's LCD Screen, and a short "beep" will be heard with each code change.
3. Press the TALK button to exit the MENU mode at any time, or the unit will automatically return to STANDBY mode if no buttons have been pressed for 10 seconds.

## OPERATION

**NOTE:** Selecting the “**oF**” CTCSS CODE will disable the CTCSS feature. In order for other people to receive your transmission, they must be on the same channel and CTCSS CODE you are currently using.

### Adjusting Speaker Volume (STANDBY/RECEIVE Mode):



1. Press the UP  button to increase the Speaker Volume.
2. Press the DOWN  button to decrease the Speaker Volume.
3. The Speaker Volume is indicated by the number displayed on the upper right-hand side of the LCD Screen.

**NOTE:** The Volume level settings of 0 to 7 indicate the Speaker Volume on the LCD Screen. The default Speaker Volume level is 4. The Volume level setting will not appear on the LCD Screen unless the UP  and DOWN  button is pressed while in Communicator Mode. The Volume Level setting will be displayed as:



### CHANNEL SCAN:

The **COMMUNICATOR** has 22 channels for communicating with others. **CHANNEL SCAN** mode performs searches for active signals in an endless loop on the **COMMUNICATOR**'s channels while in **COMMUNICATOR** mode.

1. Press and release the SCAN button (located on the side of the **COMMUNICATOR**), a short "beep" will be heard, and the channel number on the **COMMUNICATOR** LCD Screen will change rapidly until an active signal (channel) is detected.
2. When an active signal (one of 22 channels) is detected **CHANNEL SCAN** pauses, keeping the active signal broadcasted 4~5 seconds before resuming **CHANNEL SCAN**.
3. Press the TALK button to communicate through the active signal channel.
4. When an active signal is detected, but another channel is desired, press the UP  or DOWN  button to bypass the current channel and continue to search for another active channel.
5. Press the SCAN button to deactivate **CHANNEL SCAN** mode.

### Transmitting and Receiving a Signal:

The **COMMUNICATOR** is continuously in **RECEIVE/STANDBY** mode when the unit is on, in **COMMUNICATOR** mode, and not transmitting. Changing the position of the **COMMUNICATOR** (or its **ANTENNA**) may increase the quality and range of the **COMMUNICATOR**'s transmitted or received signals.

1. Press and hold the **TALK** button to **TRANSMIT** and the **TX** icon will appear on the LCD Screen (see "LCD Screen" for details).
2. Hold the **COMMUNICATOR** about 2~3 inches (5 to 7.5 cm) from the mouth, and speak in a normal tone of voice. Pause momentarily (after pressing the **TALK** button) before speaking to avoid cutting off the first part of the transmission.
3. Release the **TALK** button when finished transmitting to return to **RECEIVE** mode.
4. Receipt of an incoming transmission will be indicated by the appearance of the **RX** icon on LCD Screen.

### Sending a CALL TONE:



Use a **CALL TONE** to alert the other user when attempting to contact them or use a **CALL TONE** to signal the beginning or the end of a transmission. Make sure the **ANTENNA** is pointing upright to get optimal transmission.

1. Press and quickly release the **TALK** button twice, the **TX** and **CALL** icons will be displayed on the LCD Screen and a **CALL TONE** will be transmitted for 3~5 seconds.
2. The **COMMUNICATOR** will return to **STANDBY** mode after completing the **CALL TONE** transmission.

**NOTE:** All two-way communicators currently using the same channel and CTCSS Code as the **COMMUNICATOR** sending the **CALL TONE** will receive a **CALL TONE**.

### Voice Operated Transmission (VOX):



The **COMMUNICATOR** is equipped with an adjustable **VOICE OPERATED TRANSMITTER (VOX)**, which enables the user to enter the **TRANSMIT** mode without pressing the **TALK** button. While in **VOX** mode, the **COMMUNICATOR** can be activated to transmit a signal by speaking into the **MICROPHONE** or by receiving other sounds in the environment. **VOX** operation is not recommended in a noisy or windy environment.

1. Press the **POWER/MENU** button three times and the **VOX** icon will flash on the LCD Screen.
2. Press the **UP**  or **DOWN**  button to turn the **VOX** feature **ON** or **OFF**. When the **VOX** feature is **ON**, the **VOX** icon will be displayed on the LCD Screen.
3. Press the **TALK** button to return to **RECEIVE/STANDBY** mode.



### **Roger Beep Tone Feature:**

The COMMUNICATOR is equipped with an adjustable ROGER BEEP TONE feature, which enables the user to send a Beep Tone after every press of the TALK Button. This will notify any receiving unit that the transmission has ended.

1. Press the POWER/MENU button four times and the “rb” icon will appear on the LCD Screen.
2. Press the UP  or DOWN  button to turn the ROGER BEEP feature ON or OFF. .
3. Press the TALK button to return to RECEIVE/STANDBY mode.

### **Auto Squelch Feature:**




The COMMUNICATOR has an automatic squelch system that automatically eliminates weak transmissions and unwanted noise due to terrain conditions and range limitations.

### **Automatic Power Save Feature:**

The COMMUNICATOR has a unique circuit that extends battery life. If the COMMUNICATOR does not detect a transmission within 5 seconds, it automatically switches to POWER SAVE mode. The COMMUNICATOR can still receive transmissions in this mode.

### **Backlit LCD Screen:**

The COMMUNICATOR's LCD Screen will automatically light up for 5 seconds with the press of any button.

PROBLEM	SOLUTION
No power	<ul style="list-style-type: none"><li>• Check the BATTERY. Ensure that the battery is installed properly.</li><li>• BATTERY may be weak.</li><li>• Recharge your BATTERY by using the A/C ADAPTER CHARGER.</li><li>• The BATTERY may be damaged. Replace old BATTERY with a new Lithium-Ion BATTERY.</li></ul>
Weak Reception	<ul style="list-style-type: none"><li>• Press the UP  button to increase VOLUME.</li><li>• The receiving signal may be weak and/or out of range.</li><li>• Check the ANTENNA position. For optimum performance make sure the ANTENNA is pointing upright.</li></ul>
Cannot change channels	<ul style="list-style-type: none"><li>• To change channels, press the POWER/MENU button until the channel number flashes on the LCD Screen.</li><li>• Press the UP  or DOWN  button to change channels.</li><li>• BATTERY may be weak.</li></ul>

PROBLEM	SOLUTION
Range is limited	<ul style="list-style-type: none"><li>• BATTERY may be weak.</li><li>• Recharge BATTERY if the BATTERY LEVEL indicator is low.</li><li>• Range varies depending on terrain and environment.</li><li>• Open fields provide maximum range; steel/concrete structures, heavy foliage, and operation in buildings and in vehicles may significantly limit range.</li><li>• Check the ANTENNA position. For optimum performance make sure the ANTENNA is pointing upright.</li></ul>
Sound distortion	<ul style="list-style-type: none"><li>• When transmitting, hold the MICROPHONE 2 to 3 inches (5 to 7.5 cm) from mouth and speak normally.</li><li>• When receiving, lower volume to a comfortable level.</li><li>• Communicators must be at least 10 feet apart; increase your distance.</li><li>• Communicators are too far apart. Obstacles interfere with transmission. Talk range is up to 1.5 miles in clear unobstructed conditions.</li></ul>

## SPECIFICATIONS

Channels Available	22 FRS/GMRS Channels and 38 CTCSS Codes
Operating Frequency	UHF 462.5500 - 467.7125 MHz
Power Source	3.7v Lithium-Ion Battery (XB10)
Output Power (TX)	0.3W ERP maximum
Battery Life	Varies per user
Range	About 1.5 Miles

### Channel (MHz) and CTCSS Code (Hz) Frequency Chart

Channels 1 thru 14 transmit on FRS frequencies.

Channels 15 thru 22 transmit on GMRS frequencies.

Ch.	Frequency	Ch.	Frequency	Ch.	Frequency	Ch.	Frequency
1	462.5625	7	462.7125	13	467.6875	19	462.6500
2	462.5875	8	467.5625	14	467.7125	20*	462.6750
3	462.6125	9	467.5875	15	462.5500	21	462.7000
4	462.6375	10	467.6125	16	462.5750	22	462.7250
5	462.6625	11	467.6375	17	462.6000		
6	462.6875	12	467.6625	18	462.6250		

Code	Freq.	Code	Freq.	Code	Freq.	Code	Freq.	Code	Freq.
1	67.0	9	91.5	17	118.8	25	156.7	33	210.7
2	71.9	10	94.8	18	123.0	26	162.2	34	218.1
3	74.4	11	97.4	19	127.3	27	167.9	35	225.7
4	77.0	12	100.0	20	131.8	28	173.8	36	233.6
5	79.7	13	103.5	21	136.5	29	179.9	37	241.8
6	82.5	14	107.2	22	141.3	30	186.2	38	250.3
7	85.4	15	110.9	23	146.2	31	192.8		
8	88.5	16	114.8	24	151.4	32	203.5		

### Note:

1. \* GMRS emergency channel 462.6750MHz.
2. The maximum transmission range will vary depending on the terrain and environment.

## CARE AND MAINTENANCE

### **Damaged ANTENNA:**

Do not use any COMMUNICATOR that has a damaged ANTENNA. If a damaged ANTENNA comes in contact with the skin, a minor burn may occur.

### **Important BATTERY Information:**

Only use the battery indicated in this manual. Using another type of battery may substantially reduce operating time.

- If you don't plan on using your COMMUNICATOR for a month or more, be sure to remove the BATTERY because it may leak and damage the COMMUNICATOR.
- Dispose of the BATTERY in the proper manner, according to the federal, state, and local regulations that apply to your area.
- The BATTERY may leak electrolyte if any of the following occurs: if it is mixed with other battery types, if it is inserted incorrectly, if the battery is not replaced, if it is disposed of in a fire, or if an attempt is made to charge a battery not intended to be charged.
- Discard a leaking battery immediately. A leaking battery can cause skin burns or other personal injury.

## **FCC Licensing Information:**

Channels 1 thru 14 transmit on FRS frequencies.

Channels 15 thru 22 transmit on GMRS frequencies.

*Operation on GMRS frequencies requires a license from the federal Communications Commission (FCC).*

**If you intend to use GMRS channels, information regarding an application for your license can be obtained as follows:**

**Website – <http://wireless.fcc.gov/prs/genmb1.html>**

**Tel.: 1-800-418-3676**

## **GMRS LICENSING INFORMATION**

Before any station transmits on any channel authorized in the GMRS from any point within or over the territorial limits of any area where radio services are regulated by the FCC, the responsible party must obtain a license for a GMRS system. An individual 18 years of age or older, who is not a representative of a foreign government is eligible to apply for a GMRS license. Application for a GMRS system license is made on FCC Form 605 and you can obtain a copy from the FCC's Web site: <http://www.fcc.gov/formpage.html> or by calling the FCC's Forms Distribution Center 1-800-418-FORM (3676), or from the fax-on-demand by dialing (202) 418-0177. There is a filing fee. For information on fees, see the FCC's Web site: <http://www.fcc.gov/csinfo/feeinfo.html>