OPERATIONS MANUAL

GMRS-1

22 CHANNEL 2-Way Radio
GMRS/FRS Frequencies

COLUMBIA
TELECOMMUNICATIONS GROUP, INC.
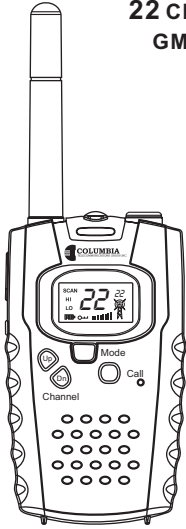
Owner's Manual and Instructions

⚠ CAUTONS

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.HTWL ,OR CALL 1-800-418-3676.

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, DO NOT TRANSMIT.

The GMRS-1 supplied belt clip is for storage purposes ONLY. Use only the supplied antenna.

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

Normal Position :Hold the transmitter approximately 1" from your face and speak in a normal voice, with the antenna pointed up .

MODIFICATIONS OR CHANGES NOT EXPRESSLY APPROVED BY COLUMBIA TELECOMMUNICATIONS, INC. COULD VOID THE USER`S AUTHORITY TO OPERATE THE EQUIPMENT.

SAFETY TRAINING INFORMATION

Safety Information For GMRS UNIT
Your wireless handheld 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 therefore exposure guidelines with safety levels for handheld wireless devices.

To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use ,always adhere to the following guidelines:

DO NOT operate the radio without a proper antenna attached , as this may damage the radio and also cause you to exceed FCC RF exposure limits . A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.

DO NOT transmit for more than 50% of total radio use time (50% duty cycle) Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.
ALWAYS use authorized accessories antennas, batteries, belt clips, speaker/mic, etc). Use of unauthorized accessories can cause the FCC Therefore exposure compliance requirements to be exceeded.
ALWAYS keep the antenna at least 2.5cm (1 inch) away from the body when transmitting ,If you wear the handset on your body while using the headset accessory, DO NOT TRANSMIT. The GMRS-1 supplied belt clip is for storage purposes ONLY. This is to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5cm(2 inches) from the mouth, and slightly off to one side.

FCC WARNINGS

ADJUSTMENT: REPLACEMENT or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Columbia, may cause a violation of the technical regulations of part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules.

NOTE: 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.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following condition: this device must accept any interference received, including interference that may cause undesired operation.

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, or call 1-800-418-3676.

CONTENTS

INTRODUCTION

Included In Your Package
When you unpack your GMRS/FRS, you should find the following items enclosed in the package:
• 22-channel GMRS/FRS unit - 1 pc.
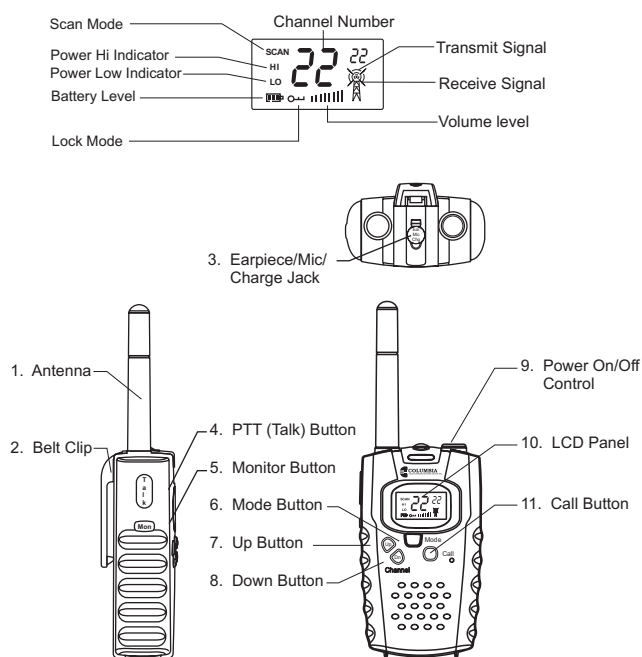• Belt-Clip (attached)
• This Manual

Please check for these Items carefully. If any items are missing, call Columbia Telecommunications Customer support at 1-800-889-7434 between 9am and 5pm EST (Eastern Standard Time).

Controls and Displays
1. Antenna
2. Belt clip
3. Earpiece / Mic / Charge jack
4. PTT(Talk Button)
5. Monitor Button
6. Mode Button
7. Up Button (Change Channel)
8. Down Button (Change Channel)
9. Power On/Off Control
10. LCD Panel
11. Call Button

OPERATIONS MANUAL

GMRS-1
22 CHANNEL 2-Way Radios
General Mobil Radio Service
Frequencies

COLUMBIA

Owner's Manual
and Instructions

COMPONENT GUIDE

Scan Mode

Channel Number

Power Hi Indicator
Power Low Indicator

SCAN
HI
LO

Transmit Signal

Receive Signal

Battery Level

Lock Mode

Volume level

3. Earpiece/Mic/
Charge Jack

1. Antenna

9. Power On/Off
Control

2. Belt Clip

4. PTT (Talk) Button

10. LCD Panel

5. Monitor Button

6. Mode Button

11. Call Button

7. Up Button

8. Down Button

SETTING UP YOUR GMRS/FRS RADIO

Battery Installation
Batteries are not installed with your GMRS/FRS 2-way radio. To use the radio, you must install 4˝AAA˝ size batteries (not included).

Caution: Incorrect positioning of the batteries can damage both the batteries and the unit.

To install the batteries:
• Slide the lock tab on the bottom of the unit (1) and pull the battery door to open (2).
• Insert four AAA type batteries (not included). Position the batteries according to the polarity markings on the plastic.
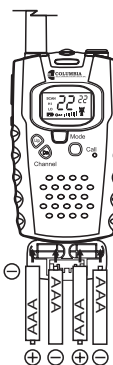• Replace the battery cover and slide the tab to lock.

Connecting the Adaptor
To use the unit with an AC/DC adaptor (not included) and rechargeable batteries (not included), insert the round connector (OD 2.5 mm) of the 7.5 V DC/200mA AC/DC adaptor (not included) into the Ear/Mic/Chg jack on top of the unit.

Note:
The unit should be turned OFF in order to charge the batteries properly. If the unit is turned ON and placed for charging, the charge current is too low for the battery to charge up as the unit is still using power. There is no charge indicator during charging at OFF mode. It takes approximately 6 to 7 hours to fully charge the batteries if they are at their lowest level.
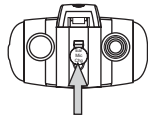
WARNING
DO NOT CHARGE THIS UNIT USING AN AC/DC ADAPTOR WITH REGULAR ″AAA″ ALKALINE BATTERIES INSTALLED. USE ONLY THE AC/DC ADAPTOR (NOT INCLUDED) WITH ″AAA″ RECHARGEABLE BATTERIES (NOT INCLUDED).

• Do not mix old and new batteries.
• Do not mix alkaline, standard (carbon-zinc), or rechargeable batteries.

Battery Meter
The battery meter is located in the bottom left corner of the LCD display panel on the unit. It looks like a battery with vertical bar inside. As the power is used up, the bar will disappear.

Low Battery Indicator
When the batteries need to be changed, the battery vertical bar inside will disappear. To ensure uninterrupted communication, replace the batteries as soon as possible.

Note:
Always use alkaline batteries for replacements. If you store your radio for long periods of time, always remove the batteries. Batteries may corrode and leak when left unused over long periods of time, and permanently damage your radio.

DO NOT PUT BATTERIES INTO FIRE OR EXPOSE TO HIGH HEAT. THEY MAY EXPLODE.

Turning your GMRS/FRS ON
Push & **hold** the Power button for **at least 2 seconds** to turn the GMRS/FRS radio ON or OFF. The unit will beep, the LCD panel will display information about your radio, and the panel will be illuminated by a green light for several seconds.

Communication
You can communicate two ways with your new GMRS/FRS radio. There are 22 channels available to you, You can either talk directly to others and hear their response, or you can call or page them with an audible tone.

The GMRS/FRS radios can only communicate when either the Talk button (for speech), or the Call button (for paging) is pressed. The unit can only receive when both buttons are fully released.

Receiving Communications
When your GMRS/FRS unit is turned ON and is not being used to transmit voice communication or pages, it is always in the listening mode.

You cannot receive any transmissions when the **Talk** or **Call** buttons are pressed, even if you aren`t saying anything. Pressing these buttons automatically overrides and turns off the receive mode.

When you are using the unit in conversation, you MUST release the **Talk** and/or **Call** buttons to hear the responses of the other

people. Failure to do so will keep your unit in transmission mode, preventing you from hearing other units.

Respond Prompt Tone
When the person talking to you from another radio finishes speaking and releases his Talk button, you will hear a tone from your unit. This means that the other radio is now in receive mode, and you can begin your transmission.

Adjusting the Speaker Volume
The Up and Dn(DOWN) Buttons control the volume, change channels, codes and program the GMRS/FRS.
• Press the **UP** button to increase volume.
• Press the **DN** button to decrease volume.
• The LCD displays the volume level by the number of bars on the screen.

Channel selection
Your GMRS/FRS operates on one of twenty two preset channels. You can only talk to other radios that are set to the same channel as your unit. The Channel Table on pages 20 gives the frequencies on which your radio operates.

• Press the **MODE** (Channel Set) button.
• The large 2-digit channel number on the display panel will begin to flash.
• While the number is flashing, press the **UP** or **DN** buttons until you reach the desired channel.
• Press the **Talk** button to set the channel.
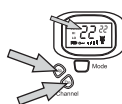
To speak directly to another Radio
• Make sure both units are ON.
• Turn the volume up to an audible level.
• Press and hold the Talk button on the left side of the unit. The transmit signal (TX icon) on the LCD panel will appear.
• While pressing on the Talk button, speak into the microphone with your mouth 2 to 3 inches from the unit.
• When you finish speaking, release the Talk button immediately to hear the response.
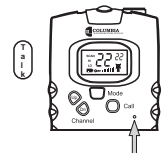
Microphone

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

Range
Your GMRS/FRS unit has a range of up to 5 miles. This range can be decreased by certain atmospheric and environmental conditions at the time of your conversation.

Some conditions that affect range are:
• Buildings
• Dense trees or foliage
• Hilly or mountainous terrain

The best range will be in flat, open terrain, without obstructions. Using the Mon (monitor) button to override the automatic squelch will help extend the range to the maximum limits.

Your range is also dependent on the battery condition of the radio, the type of terrain where

you are located, and the strength of the signal from the transmitting radio.

Calling (Paging) Another Radio
You can use Call (Page) tones to alert the other user when you are attempting to contact with them. You can also use Call (Page) tones to signal the beginning or the end of a transmission.

To send a Page, or Call
- Make sure both units are ON.
- Turn the volume up to an audible level.
- Press and release the **Call** button on the front of your radio.

The other unit will make a 2 second Call (Page tone. They can then respond to your Call by either:
- Pressing the **Talk** button and speaking into the radio.
- Pressing the **Call** button, which activates a 2 second Call (Page) tone on your radio.

When Call-Ring number is setted to Call-Ring Off *CR OF*, press call key will send the default Call-Ring tone number 1 to another radio, but the GMRS/FRS you held will not sound.

Setting Call-Ring Tone
Press the MODE button 2 time, the GMRS/FRS will enter to Call-Ring Setting mode, LCD will display *CR 1* press **UP** or **DN** button to change the Call-Ring number (5 different tones) or Call Off, the different Call-Ring tone can heard during changing . When Call-Ring number is setted to Call-Ring Off *CR OF*, press **Call** key will send the default Call-Ring tone number 1 to another radio, but the GMRS/FRS you held will not sound.

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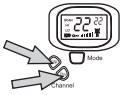
Key Tone ON/OFF
This feature allows the radio to sound a confirmation beep tone whenever keys are pressed.

To turn the key tones on or off,
1. Press the **Mode** Button 3 times until the (*tO on*) icon is flashing on the LCD screen.
2. Press the **UP** or **DN** button to enable (″ *ON* ″ will appear on the LCD) or disable(″ *OF* ″ will appear on the LCD screen)the key tone feature.
3. To exit from the selecting mode, press the **Mode** button 4 times, or simply press the **TALK** button once.
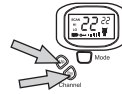
Roger Beep ON/OFF
The Roger Beep is a tone which is automatically tran-smitter whenever the TALK button is released, This lets the other person know that you are done transmitting your message.

To enable or disable the Roger Beep Tone. *rO on* icon
1. Press the **Mode** Button 4 times until the ( ) icon is flashing on the LCD screen.
2. Press the **UP** or **DN** button to enable (″ *ON* ″ will appear Beep Tone feature or disable (″ *OF* ″will appear on the LCD the Roger beef tone.
3. To exit from the Roger Beep Tone feature, press the **Mode** button 3 times, or simply press the **TALK** button.

Transmit Power Hi / Low
GMRS-1 selects transmitting power level to Hi (2W) or Low (0.5W)

1. Press the **Mode** Button 5 times and the Power (*PO*) icon and level (*H/L*) will appear on the LCD screen . Using low power , the unit will have a lower transmit range but battery life will be increased .

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2. Select Hi (*HI*) or Low (*LO*) by pressing the **UP** or **DN** button.
3. Exit from the Transmit power selection mode by pressing the **Mode** or pressing the **TALK** button.
 Note: On FRS frequencies (8-14CH),the power goes into 0.5W automatically . FCC requires that the transmitting power for FRS channel (8-14CH) must be less than 0.5W.

Dual Channel Monitor
This feature allows you to monitor two channels at the same time. While in dual channel monitor ,the unit will continuously monitor both the primary and secondary channel. When an active signal is found, the cover sation will be heard 5 seconds after communication is completed, the unit will resume scanning the two channels. Pressing the TALK button during a received transmission will set the unit to transmit on the same channel. Pressing the TALK button when no signal is received will set the unit to transmit on the primary channel.

To set the Dual Chanel Monitor
1. Press the **Mode** Button 6 times until the (*8 oo*) icon is flashing.
2. Select the desired channel by pressing the **UP** or **DN** button.
3. Press the **TALK** button or the Mode Button 1 time to exit from the selecting mode.

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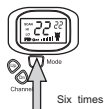
4. Press and hold Mode button for 3 times to cancel the dual Channel monitor .

External Speaker/Microphone Charge Jacks
Your GMRS/FRS radio can be used with an optional external microphone and speaker, usually sold together in an ear bud/mic combination. The jack is located under the protective rubber cover on the top of the unit.

To attach external speaker/microphone headsets or ear bud/mic.
- Lift the rubber flap on the top of the unit to expose the jack.
- Insert the plug into the jack.

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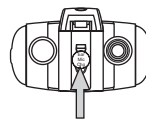
SPECIAL FEATURES

Automatic Squelch
Your GMRS/FRS is equipped with automatic squelch circuitry, which filters out weak transmissions and unwanted noise. These signals may be picked up as background static, and are usually caused by terrain conditions, or if you have reached the limit of your range.

Monitor
This feature turns OFF the Automatic Squelch feature, either momentarily or continuously. This allows your unit to receive all signals to it`s maximum range, but it may pick up static signals as well. You can set the speaker volume by the noise of the static.

Momentary monitor feature activation:
• Press the **Mon** button for up to 2 seconds. The RX icon on the LCD panel will appear.
• Release the button to restore the automatic squelch.

Continuous monitor feature activation:
• Press the **Mon** button for more than 3 seconds until you hear a ″ beep″ sound and release it. The RX icon on the LCD panel will appear.
• To restore automatic squelch, press and release the **Mon** button again.

Channel Lock
This feature locks the channel adjustment buttons on the front of the unit so that the channel cannot be changed accidentally.

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To Lock the channel:
• Press and hold **Mode** and **UP** button for 3 seconds until you a″ beep″ sound. The lock symbol shaped like a key - will appear on the LCD panel.

To Unlock the channel:
• Press and hold **Mode** and **UP** button for 3 seconds until you hear a ″beep″ sound again. The lock symbol in the LCD panel will disappear.

Channel Scan
Channel Scan performs searches for active signals in an endless loop from 1 to 22.

To scan:
• At the same time, press **Mode** and **DN** buttons
• The channel number on the LCD panel changes rapidly until an active signal is detected.
• When an active signal (one of the 22 channels) is detected, Channel Scan pauses keeping the active signal broadcasted.
• Press the **Talk** button to communicate through the active signal channel and channel scan is deactivated.
• When an active signal (one of 22 channels) is detected, but another channel is desired, press **UP** or **DN** button to bypass the current channel and continue to search for another active channel.
• To stop the scanning operation, press the **Mode** button.

Two times

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CUSTOMER SUPPORT

Customer Support
Thank you for purchasing the Columbia GMRS/FRS 2-Way Radio. This is a high-quality communications device that can give you many years of reliable service. Please read these instructions carefully.

Should you encounter any problems with the product or not understand its many features, please refer to this owner`s manual. If after referring to the manual, you still need help, call Customer Service at 1-800-889-7434 between 9am and 5pm EST (Eastern Standard Time).

Service
For your own protection, retain your original sales receipt indicating the date and place where you purchased this product. We will not be able to service your GMRS/FRS unit without atopy of this receipt.

Also, as previously suggested, retain all packing materials In case you should need to ship your unit for servicing. This product is covered by a ONE YEAR LIMITED WARRANTY.

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SPECIFICATIONS

Channels Available	22 Channels
Output Power (TX)	2.0 W (High) / 0.5W (Low)
Range	About 5 Miles (High) / 2 Miles (Low)

CHANNEL TABLE

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

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TROUBLESHOOTING

SYMPTOM	SOLUTION
No power.	• Check batteries. Ensure that the batteries are installed properly. • The batteries may be weak. • Replace old batteries with four (4) new "AAA" alkaline or rechargeable batteries.
Reception is weak.	• The receiving signal may be weak and/or out of range. • If this happens press the **Mon (**Monitor) button.
Range is limited.	• Batteries may be weak. • Replace with new batteries if the BATTERY CHARGE LEVEL indicator is low. • The maximum range will vary depending on terrain and environment. • Open fields provide the maximum range, while steel/concrete structures, heavy foliage and use in buildings and in vehicles may limit the range significantly. • Wearing the radio close to the body, such as in a pocket or on a belt, will decrease range; change the location of the radio.
Sound distortion problems.	• If you are transmitting, speak in a normal tone of voice, 2 to 3 inches away from the microphone. • If you are receiving, lower the Volume to a comfortable level. • Radios too close. Radios must be at least 5 feet apart; increase your distance. • Radios too far apart. Obstacles interfere with transmission. Talk range is from 2-5 miles in clear unobstructed conditions.

WARRANTY

COLUMBIA TELECOMMUNICATIONS warrants this unit to be free from defects in material and/or workmanship for a 1-year period beginning with the date of purchase. This warranty does not cover second-hand ownership or products that are purchased for sale or lease to another. This warranty does not cover damage resulting from acts of God, lightning accident, misuse, improper installation or operation, or unauthorized repair or alteration.

If this unit should become defective within the first 30 days from purchase, return it to the retailer where obtained (with all of the original packing materials and parts) for an over-the-counter exchange. If this unit becomes defective after the first 30 days but within one year of purchase, we will replace it with a new or reconditioned unit of the same or similar style. The replacement unit will be warranted for a period of 90 days or the remainder of the original one year period, whichever is longer.

To obtain warranty service on your COLUMBIA TELECOMMUNICATIONS equipment, you must provide proof of date of purchase. We strongly recommend that you keep your sales receipt and all of the packing materials in order to take advantage of your products limited warranty. Include all accessories and owners manual when returning to an authorized service center (listed below.) Do not forget to include your name and return address (print please), a brief description of the defect, a $10.00 check (for shipping and handling) and a copy or your sales receipt.

There are no expressed warranties except as listed above. COLUMBIA TELECOMMUNICATIONS will not be liable for incidental or consequential damages resulting from the use of this product, or resulting from misuse contrary to this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you. This warranty gives you specific and legal rights and you may also have other rights which vary from state to state.

Please use the shipping address below for the authorized Warranty Service center:

COLUMBIA TELECOMMUNICATIONS INC.
174 Milbar Blvd.
Farmingdale, NY 11735