OPERATIONS MANUAL
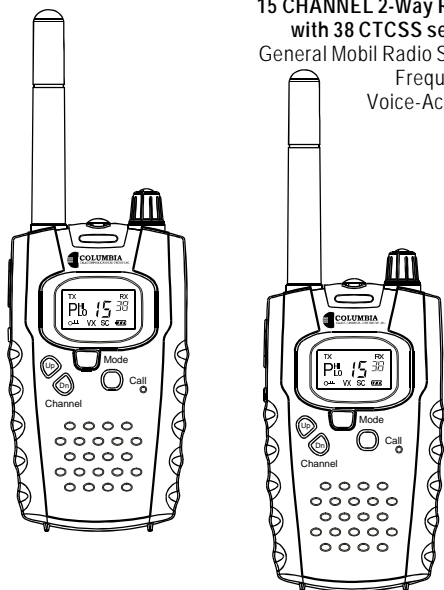
GM18

**15 CHANNEL 2-Way Radios
with 38 CTCSS security**
General Mobil Radio Service
Frequencies
Voice-Activated

COLUMBIA
TELECOMMUNICATIONS GROUP, INC.

Owner's Manual and Instructions

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, you should find the following items enclosed in the package:
- 15-channel GMRS unit - 2 pcs.
- Belt-Clip (attached)
- This Manual

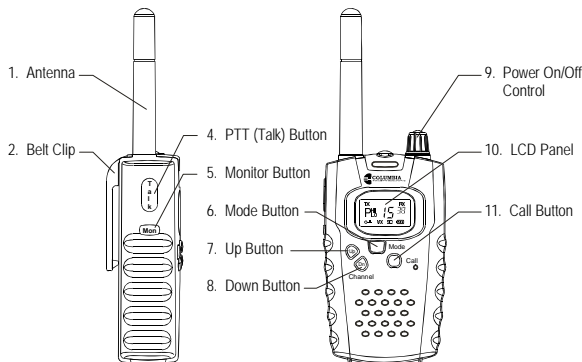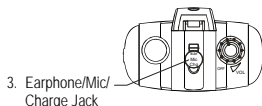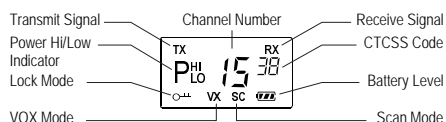Please check for these Items carefully. If any items are missing, call Columbia Telecommunications Customer support at 1-800-889-7434 between 9am and 5pm EST (Eastern Standard Time).

Controls and Displays
1. Antenna
2. Belt clip
3. Earphone / 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

Transmit Signal
Channel Number
Receive Signal
Power Hi/Low Indicator
CTCSS Code
Lock Mode
Battery Level
VOX Mode
Scan Mode

3. Earphone/Mic/ Charge Jack

1. Antenna

2. Belt Clip

4. PTT (Talk) Button
5. Monitor Button
6. Mode Button
7. Up Button
8. Down Button

9. Power On/Off Control
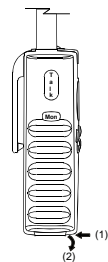10. LCD Panel
11. Call Button

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Battery Installation
Batteries are not installed with your GMRS 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.
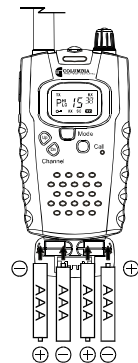• Replace the battery cover and slide the tab to lock.

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/150mA 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 5 to 6 hours to fully charge the batteries if they are at their lowest level.
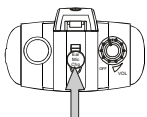
(1)
(2)

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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 right corner of the LCD panel on the unit. It looks like a battery with 3 vertical bars inside. These indicate the amount of power available. As the power is used, the bars will disappear.

Low Battery Indicator
When the batteries need to be changed, the battery meter icon will flash. To ensure uninterrupted communication, replace the batteries as soon as possible.

Note:
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.

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Turning your GMRS ON
Rotate the Power ON/OFF/Volume Control in a clockwise direction. 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 radio. There are 15 channels available to you, each with 38 interference elimination codes (CTCSS codes). You can either talk directly to others and hear their response, or you can call or page them with an audible tone.

In all cases, both units must be set to the same channels and CTCSS codes, or they will not communicate. If the CTCSS code feature is turned off, you will hear all transmissions on the channel (1-15) that you are tuned to.

The GMRS 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 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.

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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.

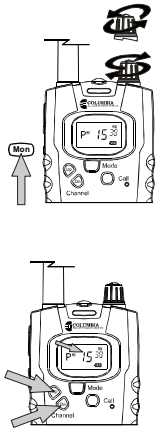### Adjusting the Speaker Volume
- Rotate the ON/OFF/Volume Control in a clockwise direction to increase the speaker volume.
- Rotate the ON/OFF/Volume Control in a counter-clockwise direction to decrease the speaker volume.
- Press and hold the **Mon** (monitor) button to confirm your speaker volume.

Channel selection
Your GMRS operates on one of fifteen preset channels. You can only talk to other radios that are set to the same channel as your unit. The Channel and Sub-Channel Table on pages 17-18 gives the frequencies on which your radio operates.

To change the channel:
- Press the **Up** button to move to a higher channel.

- Press the **Down** button to move to a lower channel.
- The channel changes from 1 to 15, or from 15 to 1.
- Press the **Talk** button to set the channel.

Interference Elimination Codes
(CTCSS - Continuous Tone Coded Squelch System)
These codes filter out unwanted conversation, static, and other interference on your channel, giving your communication more clarity.
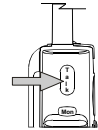
Both units must be set to the same channels and CTCSS codes, or they will not communicate. These codes will not prevent others from hearing your transmissions.

To change the code:
- Press the **Mode** button once. The small 2-digit channel number on the LCD panel will begin to flash.
- While the number is flashing, press the **Up** or **Down** buttons until you reach the desired code number.
- Press the **Talk** button to set the code.

To turn the codes off, and hear all activity on the channel, set the CTCSS code to zero (0).

Note: If another user on the same channel has a radio that doesn't have CTCSS codes, or has the CTCSS codes turned OFF, they will be able to hear your transmissions, even if you cannot hear them.

To speak directly to another Radio
- Make sure both units are ON and set to the same channel and CTCSS code.
- 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.

Note: In order for other people to receive your transmission, they must also be on the same channel and CTCSS sub-channel you are currently using. Refer to the "Changing Channels" section for more information.
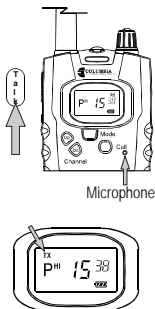
Range
Your GMRS unit has a range of up to 5 miles. This range can be decreased by certain atmospheric and environmental conditions at the time of your conversation.

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.
- Set both units to the same channel and CTCSS code.
- Press and release the **Call** button on the front of your radio.

The other unit will make a 3 second Call (Page tone. They can then respond to your Call by either:
- Pressing the **Talk** button and speaking into the radio, or
- Pressing the **Call** button, which activates a 3 second Call (Page) tone on your radio.

Automatic Squelch
Your GMRS 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.

To Lock the channel:
• Press the **Mode** button for 5 seconds until you hear a "beep "sound. The lock symbol - shaped like a key - will appear on the LCD panel.

To Unlock the channel:
• Press the **Mode** button for 5 seconds until you hear a "beep "sound again. The lock symbol in the LCD panel will disappear.

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Channel Scan
Channel Scan performs searches for active signals in an endless loop from 1 to 15.
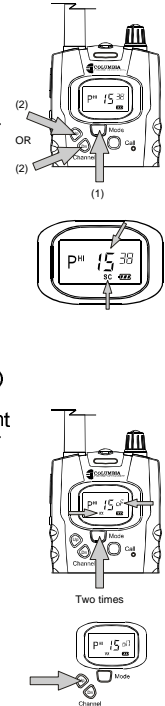
To scan:
• At the same time, press and release the **Mode** and the **Up** or **Down** button together to activate Channel Scan.
• The channel number on the LCD panel changes rapidly until an active signal is detected.
• When an active signal (one of the 15 channels) is detected, Channel Scan pauses 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 15 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.

VOX Selection
Once you set the VOX function, You can transmit without pressing the **Talk** button.
• Press the **Mode** button two times, the VX icon will flash on the LCD panel.
• Press **Up** button to turn the VOX feature ON, or press the **Down** button to turn the VOX feature OFF.
• In the VOX mode (ON), the VX icon will be displayed.

(2)
OR
(2)
(1)

Two times

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• Press the **Talk** button to confirm your selection and return to the normal mode.
• To confirm and shift to the next option, press the **Mode** button.

Note : In VOX mode, the radio will transmit a signal only when it is activated by your voice or other sound around you. VOX operation is not recommended if you plan to use your radio in a noisy or windy environment.
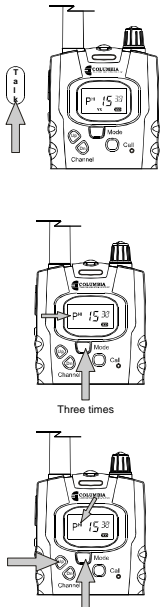
Transmit Power Selection Mode
This feature permits selection of the transmitting power level to high (2.0 watts) or low (0.5 watt). Using low power the unit will have a lower transmit range but battery life will be increased.

To access the Transmitter Power Select Mode:
• Press the **Mode** button three times, the **P** (Power icon) will flash on the LCD panel.
• While the **P** (Power icon) is flashing, press the **Up** button to select the **HI** Power level or press the **Down** button to select the **LO** Power level.
• Press the **Talk** or **Mode** button to confirm your selection and return to the normal mode.

Three times

External Speaker/Microphone Jacks
Your GMRS 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.

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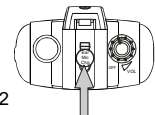• Insert the plug into the jack.

Customer Support
Thank you for purchasing the Columbia GMRS 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 unit without a copy 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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Channels Available	15 Channels
CTCSS Sub-channel	38 for each Channel
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	462.5750
9	462.6250
10	462.6750
11	462.5500
12	462.6000
13	462.6500
14	462.7000
15	462.7250

NOTE: *Channels 1 through 7 are shared with FRS radios. The maximum transmission range will vary depending on terrain and environment.*

SUB-CHANNEL TABLE

CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (Hz)
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2	0	No Tone

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.	• Rotate the ON/OFF/Volume control in a clockwise direction to increase Volume. • The receiving signal may be weak and/or out of range. • If this happens press the **Mon** (Monitor) button.
Cannot change CTCSS sub-channels.	• Channel Lock mode must be deactivated if the Lock symbol - shaped like a key - is displayed on the LCD panel. • To change CTCSS sub-channels, press the **Mode** button until the CTCSS sub-channel number flashes on the LCD panel. • Press the **Up** or **Down** buttons to change the CTCSS sub-channels. • Batteries may be weak.
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.

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

SAFETY INFORMATION
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.

CAUTION: 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 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 2 inches (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.