

TT Systems U.S. Limited Warranty

1. What does the limited warranty cover?

TT Systems LLC warrants that the PMG-3015 sold by TTSystems within the continental limits of the United States, Hawaii and Alaska are free from defects in materials and workmanship under normal use for one year. This warranty is only applicable to the original purchaser of the PMG-3015, when accompanied by a sales purchase and the name of the company from which it was purchased. This warranty is in lieu of expressed or implied, including any implied warranty of merchantability or fitness, and of any other obligation on the part of TT Systems.

2. What will TT Systems do when I send in my unit?

At our discretion, repair or replace the PMG-3015.

3. How do I send my unit, in or out of warranty?

- Properly pack your unit. Include any cables and accessories that were originally provided with the product. We recommend using the original carton and packing materials.
- Include in the package a copy of the sales receipt or other evidence of date of original purchase (if the unit was purchased within the last year).
- Print your name, address and phone number, along with a description of the problem, and include this in the package.
- Include payment for any service or repair not covered by the warranty, as determined by TT Systems. Contact a customer service representative at 1-800-592-1336 or tech@ttsystems.com to find out what payment is necessary.
- Ship the unit via UPS insured or equivalent to:

TT Systems LLC
4 Executive Plaza
Yonkers NY 10701

- If you have not received your returned unit within 3-4 weeks, you may call 1-914-968-2100 regarding the status of your return.

4. What doesn't the warranty cover?

- Damage from misuse, neglect, or acts of nature (lightning, floods, power surges, etc).
- Products that may have been repaired or altered by persons not expressly approved by TT Systems.
- Products purchased outside the USA.
- Products purchased more than 12 months from the current date.
- Products which are not accompanied by a valid proof of purchase.

5. The legal information:

- There is no informal dispute settlement mechanism available.
- This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
- Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusions or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you.
- TT Systems shall not be liable for any special or consequential damages or for loss or expense directly or indirectly arising from use of the products or in inability to use them either separately or in combination with other equipment or product accessories or from any other cause.
- TT Systems reserves the right to make changes in the design of the PMG-3015 and to make additions or improvements to the PMG-3015 without incurring any obligation to modify any PMG-3015 previously sold.

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FCC NOTICE

The FCC requires that you be advised of certain requirements involving the use of this device. 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 residential installation. This device uses and can generate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that the 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 unit off and on), the user is encouraged 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.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC INFORMATION: 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. Privacy of communications may not be ensured when using this equipment.

FCC WARNING: This equipment generates or uses radio frequency energy. Changes or modifications not expressly approved in writing may cause harmful interference and void the user's authority to operate this equipment.

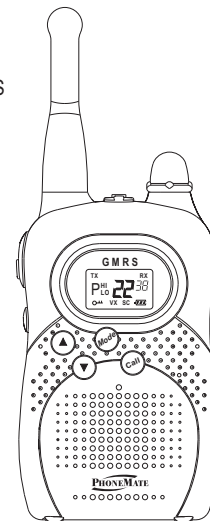
SAFETY INFORMATION: Your wireless hand-held portable transceiver contains a low power transmitter. When the PUSH TO TALK (PTT) button is pushed it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications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



TWO-WAY FAMILY RADIOS

MODEL 3015

OWNER'S MANUAL INSTALLATION AND OPERATING INSTRUCTIONS



CONGRATULATIONS! You now own a **top-quality Bell Equipment product** - thoroughly tested to be certain it meets our own **exacting quality control and standards.**

Please take a few moments to review the following **important information** before using these items.

Thank You!

FRS PRODUCT DESCRIPTION

Family Radio Service (FRS) is the newest generation in personal two-way communications. FRS radios operate in a license-free radio band (no FCC license is needed for FRS operation), on any of the 14 license-free channels.

The FRS3015 is a lightweight, compact two-way radio that can be used up to about two miles with family or friends at parks, shopping malls, sporting events, concerts--any indoor or outdoor activity!

The FRS3015 is compatible with other two-way radios using the FRS frequency band (operating in the frequency range from 462.5625MHz to 462.7125MHz and from 467.5625MHz to 467.7125MHz).

The FRS3015 is a 22-channel UHF two-way radio, featuring a multi-functional LCD panel (which indicates the current channel and various radio status icons). Other features also include electronic volume control and battery save circuitry.

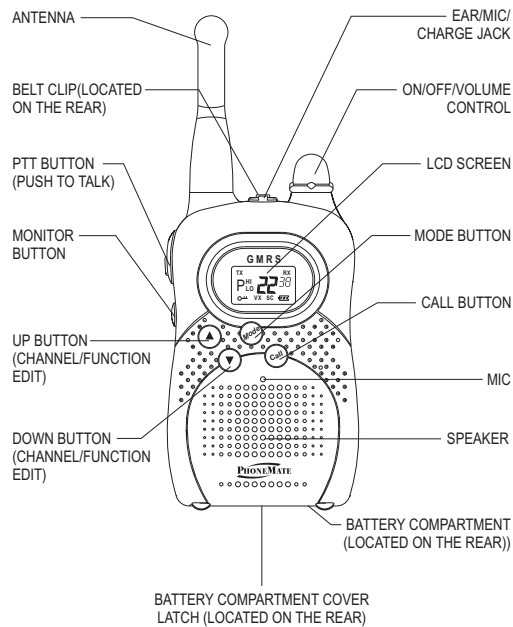
Please read this user's manual thoroughly to get the most out of your FRS3015 two-way radio.

CAUTION: To maintain compliance with the FCC's RF exposure guidelines hold the transmitter and ANTENNA at least 1 inch (2.5 cm) 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 supplied belt clip for this product and when transmitting, take it out of the belt to ensure that the ANTENNA is at least 1 inch (2.5 cm) from your body.

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

NOTE: The maximum transmission range will vary depending on terrain and environment. Range will be greater in open fields, while the range is shorter within and around buildings or large structures.

RADIO FEATURES



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INSTALLATION

Removing the Belt Clip

To remove the clip from the unit, push up on the belt clip while pulling the belt clip tab.

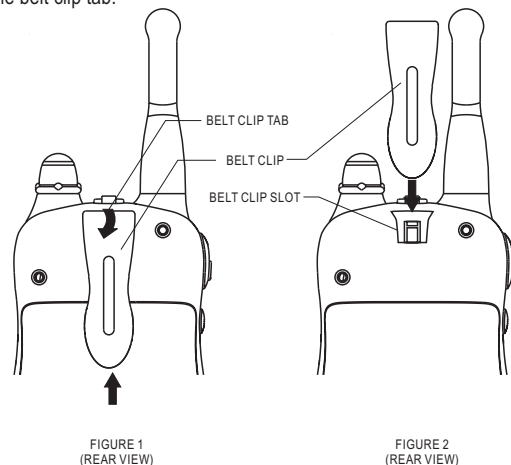


FIGURE 1
(REAR VIEW)

FIGURE 2
(REAR VIEW)

Installing the Belt Clip

1. Insert the BELT CLIP hooks into the matching slots as shown in Figure 2.
2. Slide the BELT CLIP down, a "click" indicates the BELT CLIP is locked into position.

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DESCRIPTION

ANTENNA

BELT CLIP

LCD (Liquid Crystal Display) Screen - Displays current channel selection and other radio status symbols.

PTT (PUSH TO TALK) button - Press to transmit.

MONITOR **M button** - Press to tune in and hold onto weak signals.

UP **▲ /DOWN **▼** buttons** - Press to change channels and select FUNCTION in every editing mode.

CHARGE TERMINAL

BATTERY COMPARTMENT COVER LATCH - Secures BATTERY COVER.

EARPHONE & MIC (MICROPHONE) JACK

ON/OFF/VOLUME CONTROL - Rotate to turn your unit ON/OFF and to adjust the VOLUME CONTROL level.

MODE button - Allows you to shift into FUNCTION editing mode.

CALL button - Press to transmit CALL Tones.

CHARGE JACK

MIC - MICROPHONE

SPEAKER

BATTERY COMPARTMENT - Houses four(4) "AAA" alkaline or Ni-MH rechargeable batteries (a Ni-MH rechargeable battery pack is included with the package).

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Battery Installation

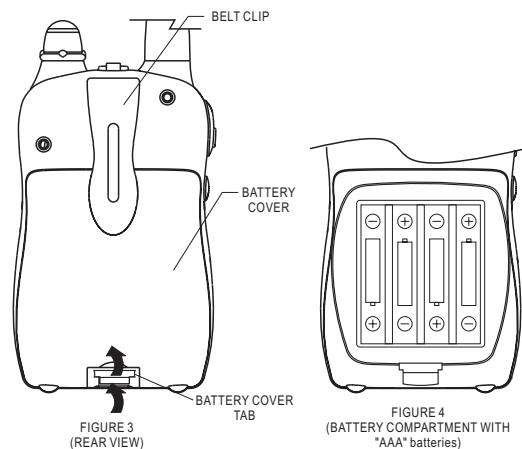


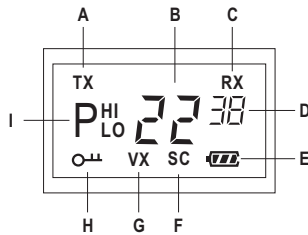
FIGURE 3
(REAR VIEW)

FIGURE 4
(BATTERY COMPARTMENT WITH
"AAA" batteries)

1. Remove the BELT CLIP. (Refer to "Removing the Belt Clip" section.)
2. Remove the BATTERY COVER from the BATTERY COMPARTMENT. See Figure 3.
3. Install four (4) "AAA" alkaline batteries (not included) or Ni-Cd rechargeable batteries (not included) following the polarities as shown in Figure 4.
4. Reinstall the BATTERY COVER and return the BELT CLIP into position. (Refer to "Installing the Belt Clip" section.)

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LCD SCREEN



A. TX	- Displayed when transmitting a signal.
B. 22	- CHANNEL NUMBER. Changes from 1 to 22 as selected by user.
C. RX	- Displayed when receiving a signal.
D. 38	- CTCSS code. Changes from 1 to 38 as selected by user.
E.	- Displays the current BATTERY LEVEL charge.
F. SC	- Displayed during the CHANNEL SCAN mode.
G. VX	- Displays during the VOX mode.
H.	- Displays when the LOCK mode is activated.
I. P HI/LO	- POWER HI/LOW indicator. Appropriate icon appears when the transmit power is set to desired output level.

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OPERATION

Changing the CTCSS SUB-CHANNELS

The FRS/GMRS has 38 available CTCSS sub-channels. To change channels:

1. Press the **(MODE)** button once, the CTCSS sub-channel 0 will flash on the LCD Screen.
2. While the CTCSS sub-channel is flashing:
 - Press the UP **(▲)** button to move to a higher sub-channel.
 - Press the DOWN **(▼)** button to move to a lower sub-channel.
 - The sub-channel changes from 0 to 38, or from 38 to 0.
3. Press the **(PTT)** button to confirm your selection and return to the NORMAL mode.
4. To confirm and shift to the next option, press the **(MODE)** button.

NOTE: To communicate with other FRS/GMRS units, both units must be switched to the same channel and CTCSS sub-channel.

VOX Selection

The FRS/GMRS is capable of voice activated (VOX) transmission. 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.

1. Press the **(MODE)** button twice, the VX icon will flash on the LCD Screen.
2. Press the UP **(▲)** button to turn the VOX feature ON, or press the DOWN **(▼)** button to turn the VOX feature OFF.
3. In the VOX mode, the VX icon will be displayed.
4. To confirm your selection and return to the NORMAL mode, press the **(PTT)** button.
5. To confirm and shift to the next option, press the **(MODE)** button.

NOTE: To save power, the unit will not turn ON the LCD Screen light when in the VOX mode.

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GETTING STARTED

Turning the Unit ON

Rotate the ON/OFF/VOLUME CONTROL in a clockwise direction. The unit will "beep" and the LCD Screen will display 25 then the current channel.

Turning the Unit OFF

Rotate the ON/OFF/VOLUME CONTROL in a counter-clockwise direction. The LCD Screen will turn blank.

Adjusting 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 MONITOR **(M)** button to confirm your SPEAKER Volume.

Receiving a Signal

The unit is continuously in the RECEIVE mode when the unit is ON and not transmitting. When you receive a signal on the current channel, the RX icon is displayed. (See "LCD Screen" for details.)

Transmitting a Signal

1. Check the channel activity by pressing and holding the MONITOR **(M)** button. You'll hear static if the channel is unoccupied. Don't TRANSMIT if someone is talking on the channel. Press and hold the **(PTT)** button to TRANSMIT. The TX icon is displayed. Hold the unit in a vertical position with the MICROPHONE 2 to 3 inches from the mouth.
2. While holding the **(PTT)** button, speak into the unit using a normal tone of voice.
3. Release the **(PTT)** button when you have finished transmitting.

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.

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OPERATION

TRANSMIT POWER SELECTION Mode

This feature permits selection of the transmitting power level to high (2.0 watts) or low (0.5 watt). When using low power the unit will have a lower transmit range but battery life will be increased.

To access the TRANSMITTER POWER SELECTION function:

1. Press the **(MODE)** button thrice, the P (POWER) icon will flash on the LCD Screen.
2. While the P (POWER) icon is flashing:
 - Press the UP **(▲)** button to select the HI POWER level.
 - Press the DOWN **(▼)** button to select the LO POWER level.
3. Press the **(PTT)** button to confirm your selection and return to the NORMAL mode.
4. To confirm and shift to the next option, press the **(MODE)** button.

NOTE: This FRS/GMRS unit allows you to select the POWER level from high (HI) to low (LO) when using channels 1 through 7 and 15 through 22 only; channels 8 through 14 are automatically set to power low (LO) since the power level is only 0.5 watt.

CHANNEL SCAN

CHANNEL SCAN performs searches for active signals in an endless loop from 1 to 22.

1. 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 Screen changes rapidly until an active signal is detected.
2. When an active signal (one of 22 channels) is detected, CHANNEL SCAN pauses keeping the active signal broadcasted.
3. Press the **(PTT)** button to communicate through the active signal channel and CHANNEL SCAN is deactivated.
4. When an active signal (one of 22 channels) 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 **(MODE)** button to deactivate CHANNEL SCAN mode.

NOTE: This FRS/GMRS unit allows you to communicate with standard FRS models by using channels 1 through 14.

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OPERATION

Battery Charge Level/Low Battery Indication

- The BATTERY CHARGE LEVEL is indicated by the number of squares present inside the BATTERY icon on the LCD Screen.
- When the BATTERY CHARGE LEVEL is low, the BATTERY icon will flash to indicate that the batteries need to be replaced.
- Do not charge this unit using an AC/DC ADAPTER with regular "AAA" alkaline batteries included. Only use the optional AC/DC ADAPTER with "AAA" Ni-MH rechargeable batteries (an adapter and a Ni-MH rechargeable BATTERY PACK is included).**

To Charge the FRS/GMRS

To use this FRS/GMRS with an AC/DC ADAPTER (included) and recharging cable BATTERY PACK (included) do the following:

- Plug the 7.5 V DC / 150 mA ADAPTER into the CHARGE JACK on the side of the FRS/GMRS and turn it ON by rotating the ON/OFF VOLUME CONTROL in a clockwise direction.
- The battery icon will flash while the indicator bar is scrolling.

NOTE: Takes approximately 5 to 6 hours to fully charge the batteries if they are at their lowest level.

Sending Call Tones

You can use Call Tones to alert the other user to identify yourself. You can also use Call Tones to signal the beginning or the end of a transmission.

- Press and release the **CALL** button.
- Your Call Tones will transmit to nearby receivers set to the same channel.

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SPECIFICATIONS

Channels Available	22 Channels
CTCSS Sub-channel	38 for each Channel
Output Power (TX)	FRS/GMRS 0.100 W

CHANNEL TABLE

CHANNEL NUMBER	FREQUENCY (MHz)	POWER (Watts)	CHANNEL NUMBER	FREQUENCY (MHz)	POWER (Watts)
1	462.5625	0.100	12	467.6625	0.100
2	462.5675	0.100	13	467.6675	0.100
3	462.6125	0.100	14	467.7125	0.100
4	462.6375	0.100	15	462.5500	0.100
5	462.6625	0.100	16	462.5750	0.100
6	462.6875	0.100	17	462.6000	0.100
7	462.7125	0.100	18	462.6250	0.100
8	467.5625	0.100	19	462.6500	0.100
9	467.5875	0.100	20	462.6750	0.100
10	467.6125	0.100	21	462.7000	0.100
11	467.6375	0.100	22	462.7250	0.100

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SPECIFICATIONS

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 Tones

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TROUBLESHOOTING

SYMPTOM	SOLUTION
No power.	<ul style="list-style-type: none"> Check the battery. Ensure the all the batteries are inserted properly. Be sure the battery is fully charged. Replace alkaline batteries with "AAA" alkaline or Ni-MH rechargeable batteries.
Reception is weak.	<ul style="list-style-type: none"> Rotate the ON/OFF VOLUME CONTROL in a clockwise direction to increase VOLUME. Be sure the frequency is properly selected to avoid interference. Be sure the speaker is properly adjusted to the volume.
Cannot change CTCSS sub-channels.	<ul style="list-style-type: none"> BUTTON LOCK is on and it is not locked. If the BUTTON LOCK icon (key) is displayed on the LCD Screen. To change CTCSS sub-channels, press the CALL button and if the CTCSS sub-channel number is not displayed on the LCD Screen. Press the UP CALL or DOWN CALL buttons to change the CTCSS sub-channel. Sub-channel is properly selected.
Range is limited.	<ul style="list-style-type: none"> Batteries are low or weak. Plug the unit into a battery pack if the BATTERY CHARGE LEVEL indicator is low. The maximum range will vary depending on the terrain and weather conditions. Open the antenna for the best reception, while the antenna is in the closed position, the range will be reduced and the antenna may limit the range significantly. Moving the radio closer to the body, such as in a pocket or shirt, will decrease the range of the radio.
Sound distortion problems.	<ul style="list-style-type: none"> If you are experiencing a periodic distortion of voice, 2 to 3 seconds away from the MICROPHONE. If you are experiencing low volume, the VOLUME is set too low. Check the antenna. Rotate the antenna and if the antenna is not properly adjusted. Replace the antenna. Check the antenna with the manufacturer. Take away from 2-5 inches in clear unobstructed area.

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