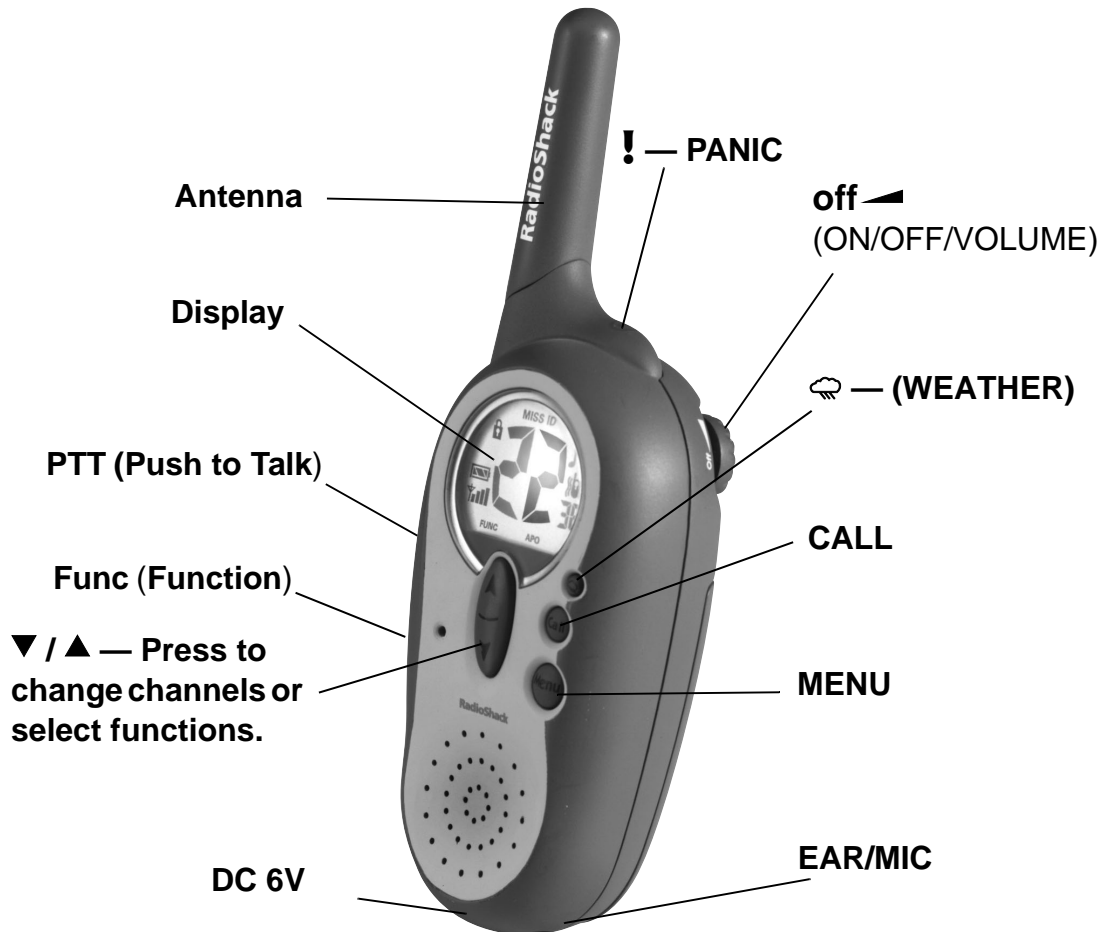


# 22 Ch GMRS/FRS Two-way Radios

OWNER'S MANUAL —  
Please read before using this equipment.

21-1904



## ! IMPORTANT !

If an icon appears at the end of a paragraph, go to the box on that page with the corresponding icon for pertinent information.

⚠ — Warning ! — Important ⚡ — Caution 📄 — Note

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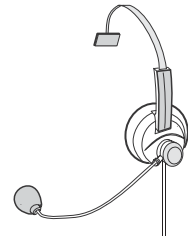
Thank you for purchasing the RadioShack 22 Ch GMRS/FRS Two-Way Radio. This is a lightweight, palm-sized radio, which provides short-range voice radio communication (up to five miles) to let families and groups keep in touch with each other on specific reserved channels.

Your radio has 22 channels and 38 different quiet codes, which you can use to talk with another person who has a GMRS or FRS radio set to the same frequency as your radio. Your radio also has auto-squelch, so you will not hear anything on a channel unless someone is transmitting nearby on the same channel.

You can connect an optional speaker/microphone and earphone to the radio (neither supplied, available at your local RadioShack store).

Your radio's display has a backlight that turns on for about five seconds when you press any key except **PTT**.

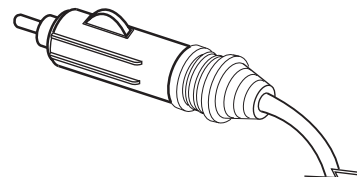
## OPTIONAL ACCESSORIES



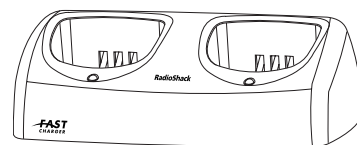
**Headset with Mic**



**Batteries**



**Cigarette-Lighter Adapter**



**21-1930 Fast Charger** – cuts charging time down to about one or two hours. Specifically for the 21-1902, 03, 04, and 05.

**Your radio also features:**

- **Channel Scan** — use to find other GMRS/FRS users.
- **Key Beep** — each time you press a key, except **PTT** or **FUNC**, the radio beeps once.
- **Vibrate** — vibrates for two seconds when receiving a signal if the radio has been idle for more than 30 seconds.
- **Voice Operated Transmission (VOX)** — enables standalone usage and works with a hands free accessory.
- **Automatic Power Off** — the radio automatically turns off when the radio is idle for 30, 60 or 90 minutes.
- **Hi/Lo power selection** — select the transmit power 0.5W or 1.5W for a GMRS channel.
- **Courtesy Tone** — at the end of transmission, the radio (receiver side) sounds a tone to confirm the end of transmission.
- **Caller ID**— in the transmitter you can select the receiver radio to receive a call. In receiver, the radio will receive the call that is


addressed to the radio and display the transmitter ID number on the LCD.

- **Panic** — if you have an emergency situation, press **!** and the radio generates an alarm.
- **Phase-lock Loop (PLL) Controlled Circuitry** — provides accurate and stable channel selection.

## POWERING THE RADIO

### USING BATTERIES

Your radio requires four AAA batteries (not supplied) for power. You can use alkaline, rechargeable nickel-cadmium (Ni-Cd) or nickel-metal hydride (Ni-MH) batteries. ☑

1. To turn off the radio, rotate **Off**  clockwise until it clicks.
2. Pull down on the battery compartment cover, and remove it from the compartment.
3. To use Ni-MH or Ni-Cd rechargeable batteries, set **CHARGE ON/OFF** inside the

### ☑ **Battery Notes** ☑

- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries, different types of batteries (alkaline or rechargeable), or rechargeable batteries of different capacities.
- Dispose of old batteries promptly and properly.
- Do not burn or bury batteries.
- If you do not plan to use the radios for a month or more, remove the batteries. Batteries can leak chemicals that can destroy electronic parts.


**⚠ WARNING ⚠**



- If you use non-rechargeable batteries, be sure to set **CHARGE ON/OFF** to **OFF**. Non-rechargeable batteries can get hot and explode if you try to recharge them.

battery compartment to **ON**. To use non-rechargeable batteries, set **CHARGE ON/OFF** to **OFF**. ⚠


4. Install four AAA batteries according to the polarity symbols (+ and -) marked inside the battery compartment.




5. Replace the cover and push the latch up until it clicks. Then rotate **Off**  counterclockwise until it clicks to turn on the radio.

 appears on the display to indicate how much battery power remains. When  flashes, replace alkaline batteries or recharge Ni-Cd or Ni-MH batteries.

## RECHARGING NI-CD OR NI-MH BATTERIES

The radio's **DC 6V** jack is for charging Ni-Cd or Ni-MH batteries and powering the radio. You can recharge Ni-Cd or Ni-MH batteries inside the radio at home or in your vehicle, using a 6V, 1000mA AC or DC adapter and a size H Adaptaplug™ connector. 

1. Rotate **Off**  clockwise until it clicks to turn off the radio.
2. Pull down the latch on the battery compartment cover, and remove the cover.
3. Set **CHARGE ON/OFF** to **ON**.
4. Place four Ni-Cd or Ni-MH batteries in the compartment according to the polarity symbols (+ and -) marked inside. Then replace the cover and push the latch up until it clicks.
5. Attach the Adaptaplug to the adapter so **TIP** reads positive (+).
6. Connect the Adaptaplug's other end to the radio's **DC 6V** jack and plug the adapter into a standard

### **CAUTION**

You must use a Class 2 power source that supplies regulated 6V DC (Not more than 6V) and delivers at least 600mA. Its center tip must be set to positive and its plug must fit the radio's **DC 6V** jack. Using an adapter that does not meet these specifications could damage the radio or the adapter.

### **NOTES**


- Complete charging takes about 14-16 hours with a standard AC or DC adapter. If you want to charge batteries faster, use an optional "smart charger" (Catalog number 21-1930).
- Ni-MH batteries take longer to charge than Ni-Cd batteries.
- The power duration for a fully charged Ni-MH battery is approximately 13 hours.
- You can charge the radio while it is on, but only if you connect it to a DC-DC regulated and filtered adapter.

AC outlet or vehicle's power source.

7. When charging is complete, unplug the AC or DC adapter from the power source, and disconnect it from the radio's **DC 6V** jack.

## OPERATION


### TURNING THE RADIOS ON/OFF AND ADJUSTING THE VOLUME

Rotate **Off**  to turn the radio on or off and adjust the volume.

#### **NOTES**

- Use of this radio outside the country in which it was intended to be distributed is subject to government regulations and may be prohibited.
- To save power, the radio automatically stops transmitting when you hold down **PTT** for about two minutes.

### TRANSMITTING

Hold down **PTT** to send a page to other FRS radios set to the same channel (and the same quiet code, if you selected one). **Tx** appears. Release **PTT** to stop transmission. 

### SELECTING A CHANNEL

Press **▲** or **▼** to select the desired channel. The selected channel number appears.



## FRS FREQUENCIES CHART

| Channel | Frequency (MHz) | Description               |
|---------|-----------------|---------------------------|
| 1       | 462.5625        | FRS 1/GMRS Interstitial   |
| 2       | 462.5875        | FRS 2/GMRS Interstitial 2 |
| 3       | 462.6125        | FRS 3/GMRS Interstitial 3 |
| 4       | 462.6375        | FRS 4/GMRS Interstitial 4 |
| 5       | 462.6625        | FRS 5/GMRS Interstitial 5 |
| 6       | 462.6875        | FRS 6/GMRS Interstitial 6 |
| 7       | 462.7125        | FRS 7/GMRS Interstitial 7 |
| 8       | 467.5625        | FRS 8                     |
| 9       | 467.5875        | FRS 9                     |
| 10      | 467.6125        | FRS 10                    |
| 11      | 467.6375        | FRS 11                    |
| 12      | 467.6625        | FRS 12                    |
| 13      | 467.6875        | FRS 13                    |
| 14      | 467.7125        | FRS 14                    |
| 15      | 462.5500        | GMRS Primary 1            |
| 16      | 462.5750        | GMRS Primary 2            |
| 17      | 462.6000        | GMRS Primary 3            |
| 18      | 462.6250        | GMRS Primary 4            |
| 19      | 462.6500        | GMRS Primary 5            |
| 20      | 462.6750        | GMRS Primary 6            |
| 21      | 462.7000        | GMRS Primary 7            |
| 22      | 462.7250        | GMRS Primary 8            |

## SELECTING QUIET CODES

Continuous Tone Coded Squelch System (CTCSS) codes, known as quiet codes, let you talk and listen to other radios set to the same channel and quiet code. This is like having a sub-channel within a channel, giving you greater communication flexibility. When you set a quiet code (there are 38 codes to choose from) and turn on this feature, you can communicate with anyone who has a radio set to the same channel and quiet code.

To select the desired quiet code, hold down **FUNC**. **FUNC** appears on the display. Repeatedly press or hold down ▲ or ▼ until you see the code number you want to use.

To turn off the quiet code feature, hold down **FUNC** and repeatedly press or hold down ▲ or ▼ at the same time until the quiet code number disappears.

## QUIET CODE CHART

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

## **NOTES**


### **Using Scan**

- The radio automatically scans through quiet codes while scanning through the channels. The quiet code feature automatically turns on when a signal is detected on a channel and quiet code, and turns off after the signal disappears.
- During scan, the radio will not receive Direct Call data.


### **Using Key Tone and Vibrate**

If you do not press a key after 20 seconds when you enter key tone and vibrate mode, VOX mode, APO mode, setting Hi/Lo transmitter power mode and courtesy tone mode, the radio will exit these modes without saving the setting.

## **USING SCAN**


To find the desired channel and quiet code, press and hold ▲ or ▼ to scan up and down. The radio automatically scans through the channels and pauses on each active channel. While scanning, press ▲ or ▼ to change the scanning direction. Press **PTT** to stop scanning. 




## **USING KEY LOCK**



To lock or unlock the keypad, hold down **FUNC** and press **PTT** to lock or unlock the keys.  appears when the keys are locked. When the keypad is locked, you can still transmit (press **PTT**), send a call (press **CALL**) or temporarily enable/disable Vox (press **PTT** when Vox level is 1–4).



## **USING KEY TONE AND VIBRATE**




You can set the radio so it sounds a tone when you press any key except **PTT** or **FUNC**.

You can also set the radio to vibrate. When the radio is idle for 30 seconds, the radio vibrates when it receives a signal. 


To turn on the key tone and vibrate feature, press **MENU** to activate the Menu function and press ▲ or ▼ until   and  appear. Press **PTT** to store the setting.

To turn off key tone and vibrate, press **MENU** to activate the Menu function and press ▲ or ▼ until   and **OFF** appear. Press **PTT** to store the setting.

To turn on the key tone and turn off the vibrate feature, press **MENU** to activate the Menu function and press ▲ or ▼ until  and  appear. Press **PTT** to store the setting.

To turn off the key tone and turn on the vibrate feature, press **MENU** to activate the Menu function and press ▲ or ▼ key until  and  appear. Press **PTT** to store the setting. 

## USING VOX

Vox operation allows you to transmit a voice message without pressing any key. To activate Vox, continuously press **MENU** until **VOX** appears. Press ▲ or ▼ to select the desired level (1– 4) (i.e. Lo–Hi sensitivity), or select **OFF** to turn Vox off. Press **PTT** to store the setting. Press **PTT** to turn VOX on or off. 

### **NOTES**

#### **Using Key Tone and Vibrate**

When you do not press a key after 20 seconds while in the Menu, the radio exits the Menu without saving your settings.

#### **Using VOX**

- When VOX is active, **VOX** flashes.
- If you have selected a Vox level, the radio's backlight turns on for about five seconds when you press **PTT**.
- You still can send a page to the other FRS radios in Vox mode when the keys are locked.

## USING APO

You can set the radio to automatically turn off when the radio is idle (no key is pressed and nothing is transmitted or received) for 30, 60 or 90 minutes. To turn APO (Automatic Power Off) on/off, continually press **MENU** until **APO** and **30**, **60**, **90** or **OFF** appears. Press **▲** or **▼** to select the desired amount of time or **OFF**. If you select **OFF**, the radio does not automatically turn off. Before the radio shuts off, it beeps and vibrates. To activate the radio, press any key. Make sure the radio is set to **ON** by setting the rotary switch to on. The radio beeps and vibrates when you turn it on.

## USING HI/LO




### TRANSMITTER POWER

You can set the radio transmit power to 0.5W or 1.5W. The transmit power of channels 8–14 is fixed at 0.5W only (FRS channel). To select 1.5W transmit power, make sure that the channel is not on channels 8–14 and then press **MENU** until **Lo** appears. If you select **OFF**, the radio transmit power is 1.5W; select **ON** to set the transmit power to 0.5W.


#### **NOTE**

You cannot make the power selection when the radio is set to an FRS channel (8-14).

## USING COURTESY TONE

You can set your radio so the person you are communicating with will hear a tone when you finish transmitting. To turn on the radio courtesy tone, press **MENU** repeatedly.  appears and **ON/OFF** flashes on the display. **ON** appears when the courtesy tone is on, and **OFF** appears when the courtesy tone is off. Press  or  to turn the courtesy tone on or off. Press **PTT** to store the setting.

## USING A HEADSET

You can make or answer calls with hands-free convenience using an optional headset with a  $\frac{3}{32}$ -inch plug (not supplied, available at your local RadioShack store). To connect a headset, insert the headset's plug into the **EAR/MIC** jack on the bottom of the radio. 

## USING THE WEATHER FUNCTION

Your radio can receive weather broadcasts from NOAA (The National Weather Service) when you turn on this function. There are ten NOAA channel frequencies to select from, all of which

### **NOTES**

- Do not change your headset's mode (VOX or PTT) while the radio is in use. Be sure to switch your radio off to reset it before switching between VOX and PTT.
- If you connect the headset with VOX turned off, the radio sets the VOX level to 4 when you turn the radio on. If VOX is on and set to another level when you connect the headset, the Vox level remain unchanged.

are common in both Canada and the USA. The radio monitors the selected weather channel for alerts and can announce the weather even when no alert signal is received. When the radio detects a WX Alert signal, the alarm sounds for about five seconds and **ALT** flashes on the display.

To turn on the weather broadcast, press ☁. **WX** and **ALT** appear on the display when the weather function is on. Press ▲ or ▼ to select the weather channel active in your area. To turn off this feature, press ☁ again.

### Setting the WX Alert

You can set your radio to monitor the weather broadcast while the radio is in the FRS/GMRS mode. In an emergency weather situation the radio will emit a warning tone, and **ALT** will flash on the display. After the radio has been idle for 15 seconds, the current FRS channel appears in the LCD, and the radio begins monitoring between the WX Alert and the current FRS channel.

To set the WX Alert, hold down ☁. **On / Off** flashes. Press ▼ or ▲ to select **On** or **Off**. Then press **PTT** to confirm setting. ✓

#### **NOTE**

If the radio is locked when an alert occurs, you can press **PTT** to cancel the warning tone.



# DIRECT CALL OPERATION

The Direct Call data includes the transmitter ID and receiver ID information. You can use the transmitter to select the receiver radio's ID number you want to call, and the receiver radio only receives the Direct Call data you select. The Direct Call data communication is based on the same Channel and CTCSS code setting. You cannot establish communication if the Channel and CTCSS code for both radios are not the same.

Direct Call data is sent when user presses **CALL**. The radio transmits Direct Call data to the desired radio.

At the same time, the other radio checks the receiving Direct Call data at the same Channel and CTCSS code. If the Call ID number matches its Home ID (Receiver ID number) or equivalent Group Call, then it recognizes that the call is addressed to this radio. As a result, the receiver will display the Sender ID number on the display and generate a call melody. There are five different call melodies to let the user determine who is transmitting a call

After Direct Call transmission is completed, the radio (transmitter and receiver) will change its CTCSS code setting to Private code for 15 seconds. The Private code is used to avoid interruption from the original Channel and CTCSS code. In the 15-second period, both radios can only transmit and receive voice messages at the original Channel with Private Code. Also, the ID icon on both radios flashes on the display to indicate this 15-second period. When conversation is made within this period, the 15-second time-out is extended for another 15 seconds. To exit the 15-second period, press **CALL** or wait for the 15-second time-out.

After a 15-second time out, both radios are restored to their original settings and the display reverts back to the display without Direct Call function.

On the other hand, if you do not press any key on the receiver after a Direct Call is received, the radio's display continues showing the received ID number and **MISS ID** (Missed ID) flashes until you press any key (except **FUNC**). Also, the radio generates a beep to remind you that there is an incoming call and it continues beeping once

every 10 minutes for a period 30 minutes. To stop the beeps, press any key except **FUNC**.

## SETTING HOME ID

Home ID data allows you to enter the ID number that will appear on the receiving radio as you communicate with it. You can select Home ID numbers 1–16.

1. Set the transmitter and receiver to the same channel (and same quiet code, if you select one).
2. Hold down **FUNC** and press **CALL** to enter Setting Home ID mode. Release all keys, and then press ▲ or ▼ to select your desired Home ID number.
3. Press **PTT** to store the setting. ✍

## SETTING DIRECT CALL

Direct Call data allows you to enter the receiver's radio ID number that you want to call. The radio's receiver only receives the Call when the Direct Call data is matched with its Home ID. You can select Direct Call number 1–16 or Group Call.

### ✍ NOTES ✍

- If you do not press a key within 20 seconds when setting the Home ID, the radio automatically exits Home ID without saving your settings.
- If Home ID is changed, the radio automatically resets the Direct Call number to Group Call.
- If you press ▲ or ▼ to change Direct Call number and the number is equal to the Home ID, the LCD will display the next Direct Call number in order to prevent any conflict of Home ID and Direct Call.

1. Hold down **CALL** until the Direct Call ID number flashes on the display. Press ▲ or ▼ to select the receiver's home ID number or Group option. (If you select receiver's Home ID number 1 –16, you can only send a page to one user or several users with the same ID home number.) If you select **GP**, you can send a page to all users.
  
2. Press **PTT** to store the setting.

## CALL MELODY

When you press **CALL** to send out the direct call data, a melody specific to the ID number sounds. Likewise, at the receiver side, a melody specific to the ID sounds as it receives the direct call data. See the following table for the melody and corresponding IDs.

| Call Melody No. ID | 1                    | 2             | 3             | 4              | 5               |
|--------------------|----------------------|---------------|---------------|----------------|-----------------|
| For Transmitter    | Call ID = Group Call | Call ID = 1~4 | Call ID = 5~8 | Call ID = 9~12 | Call ID = 13~16 |

| Call Melody<br>No. ID | 1             | 2                  | 3                  | 4                      | 5                       |
|-----------------------|---------------|--------------------|--------------------|------------------------|-------------------------|
| For Receiver          | Group<br>Call | Sender<br>ID = 1~4 | Sender<br>ID = 5~8 | Sender<br>ID =<br>9~12 | Sender<br>ID =<br>13~16 |

## USING PANIC

When an emergency occurs, you can set the radio to generate an alarm sound for safety. ☑

1. To activate the alarm sound, press and hold **PANIC**. Release **PANIC** when the warning tone sounds and the radio vibrates.
2. After the warning tone sounds and the radio vibrates (about two seconds), the radio generates an alarm sound.
3. To stop the alarm sound, press and hold **PANIC** until the alarm stops and **“STOP”** appears on the LCD.

### ☑ NOTES ☑

- You can activate the alarm even if the radio is turned off (rotary switch Off) or the battery is charging or the battery is low.
- During the alarm and vibration period, press **PANIC** once to stop the warning tone and vibration.

## USING THE SWIVEL-BELT CLIP

To attach the belt clip, insert the clip into the socket at the back of the radio until it clicks. To remove the belt clip, press the button at the tip of the clip and pull out the clip.

## USING AN OPTIONAL WRIST STRAP

You can attach an optional wrist strap (not supplied) to the radio. Slide the wrist strap's small loop under the bar on the tip of the radio. You might need to use a small screwdriver or straightened paper clip to do this. Then pull the strap's large loop through the small loop.

## CARE

Keep the radio dry; if it gets wet, wipe it dry immediately. Use and store the radio only in normal temperatures. Handle the radio carefully; do not drop it. Keep the radio away from dust and dirt, and wipe it with a damp cloth occasionally to keep it looking new.



### RESET

This radio has a rest function. If the radio does not respond normally to the controls, you may return the radio to its factory default settings by pressing **FUNC** and **POWER** simultaneously.

## SERVICE AND REPAIR

If your radio is not performing as it should, take it to your local RadioShack store for assistance. To locate your nearest RadioShack, use the store locator feature on RadioShack's website ([www.radioshack.com](http://www.radioshack.com)), or call 1-800-The Shack (843-7422) and follow the menu options. Modifying or tampering with the radio's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it.

## FCC INFORMATION

### FCC LICENSE REQUIRED

The Federal Communications Commission (FCC) requires you to have a GMR license before you operate this radio. To obtain a license, you must be at least 18 years of age, and cannot be a representative of a foreign government.

You must complete FCC Forms 605 and 159 (Fee Remittance Advice) and return them with the applicable fees

### **! IMPORTANT !** **FCC Information**

Do not open your radio to make any internal adjustments. Your radio is set up to transmit a regulated signal on one of 22 assigned frequencies. It is illegal to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by a qualified technician using the proper test equipment.

To be safe:

- Never open your radio's case.
- Never change or replace anything in your radio except the batteries.
- Your radio might cause TV or radio interference even when it is operating properly. To determine whether your radio is causing the interference, turn it off. (Continued)

## **! IMPORTANT !**

(Continued)

If the interference goes away, your radio is causing it.

Try to eliminate the interference by:

- Moving your radio away from the receiver.
- Calling your local RadioShack store for help.
- If you cannot eliminate the interference, the FCC requires that you stop using the radio.

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.



### **WARNING**



There is a penalty for any unlicensed operation of a GRMS radio.

and Payment/Fee Type Code (PAZR) to the FCC. To obtain the necessary forms, contact the FCC at:

*Federal Communications Commission  
Wireless Bureau Applications  
P.O. Box 358130  
Pittsburgh, PA 15251-5130  
1-888-CALLFCC (1-888-225-5322)*

To obtain instructions on filing form 605 electronically, go to:  
<http://www.fcc.gov.wtb/uls>.

This radio is intended for communications from base-to-mobile or mobile-to-mobile stations. Base-to-base communication is not permitted.

When you receive your license from the FCC, you are assigned a call sign. You must give your call sign at the end of every communication exchange or once every 15 minutes during a continuous communication.

The Personal Radio Steering Group (PRSG) is the national user-advocacy organization for the GMRS. The PRSG provides assistance with licensing and other information about the GMRS, including how to contact and communicate with other GMRS licensees. ⚠



*Personal Radio Steering Group  
P.O. Box 2851  
Ann Arbor, MI 48106  
[www.provide.net/prsg/](http://www.provide.net/prsg/)*

## **THE FCC WANTS YOU TO KNOW**

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:


 **CAUTION** 

To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter and antenna at least two inches from your face and speak in a normal voice, with the antenna pointed up and away from your face. If you wear the handset on your body while using the headset accessory, use only the supplied belt clip for this product. When transmitting, take it out of the belt to ensure the antenna is at least one inch (2.5cm) from your body.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your local RadioShack store or an experienced radio/TV technician for help.

## **SAFETY INFORMATION**

Your wireless handheld portable transceiver contains a low power transmitter. When the Push-To-Talk (PTT) button is pressed, it sends out radio frequency signals. The device is authorized to operate at a duty factor not to exceed fifty percent. In August 1996, the Federal Communications Commission adopted RF exposure guidelines with safety levels for handheld wireless devices. 

# SPECIFICATIONS

|                                  |                        |
|----------------------------------|------------------------|
| RX Frequency ....                | 462.5500 – 467.7125MHz |
| Channels .....                   | 22                     |
| Modulation type .....            | FM                     |
| Antenna impedance .....          | 50 Ohms                |
| Microphone .....                 | condenser type         |
| Sensitivity at 12dB Sinad .....  | 0.5 $\mu$ V            |
| Adjacent Channel Rejection ..... | 45dB                   |
| Audio Squelch.....               | Auto                   |
| Audio output power.....          | 200mW @ 8 Ohms         |
| Audio Distortion .....           | 5%                     |
| Emissions .....                  | more than 50dB         |
| RF Output Power (FRS) .          | 500mW @ 6V DC          |
| RF Output Power (GMRS)....       | 1.5W @6V DC            |
|                                  | (Harmonic)             |
| Power Supply .....               | 4 x AAA Alkaline       |
|                                  | (not supplied)         |
| Operation Temperature .....      | -4 to 122°F            |
|                                  | (-20° to 50°C)         |
| Dimensions (HWD) .....           | 116 × 60 × 35 mm       |
| Weight (without batteries) ..... | 130g                   |

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

### **Limited Ninety-Day Warranty**

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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