

## FRS PRODUCT DESCRIPTION

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

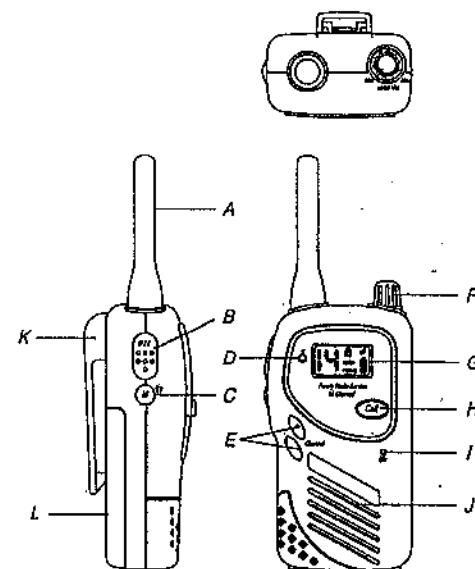
The FRS are compatible with other two-way radios using the FRS frequency band (operating in the frequency range from 462.5625 MHz-462.7125 MHz, and from 467.5625 MHz-467.7125 MHz).

The FRS is a 14-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 rotary volume control and battery save circuitry.

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

**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/around buildings or large structures.

## FUNCTION CONTROLS DIAGRAM



## DESCRIPTION

- A. Antenna
- B. PTT (Push To Talk) Button – Used for transmitting (making a call).
- C. M(Monitor) Button – Permits the radio to monitor weak signals and illuminates the LCD panel to show your current status.
- D. TX LED Indicators – This indicator lights red when transmitting a call and lights green when receiving a call.
- E. UP and DN Buttons – Used for changing channels and programming the FRS
- F. PWR/VOL Knob – Turn this knob clockwise to turn ON and increase the volume level. Turn counter-clockwise to decrease the volume level and turn power OFF.
- G. LCD (Liquid Crystal Display) Panel - A multi-function display, which shows channel and other radio status/icons.
- H. Call Button – Sends a tone to other radios that are tuned in on the same channel.
- I. Mic – Microphone.
- J. Speaker
- K. Belt Clip – For your convenience, a belt clip is included to secure the radio to a belt or any other convenient location.
- L. Battery Compartment – Houses four "AAA" alkaline type batteries (not included).

## INSTALLATION

### Battery Installation

Note : Prior to removing the battery cover, remove the belt clip ( see page “ Removing The Belt Clip”).

1. Remove the battery cover by pressing and sliding it down from the unit.
2. Install four "AAA" alkaline batteries (not included), following the polarities as shown on Figure 1.
3. Replace the battery cover.

### Notes:

- The FRS has a built-in power saver for maximum battery life. But when the FRS is not being used, to conserve battery power, turn the PWR/VOL knob to the OFF position.
- Remove the batteries if the unit will not be used for a long period of time.

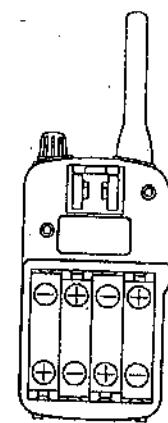


Figure 1

### Installing the Belt Clip

1. Slide the belt clip into the belt clip slot as shown on Figure 2.
2. Ensure you hear a click to indicate that it is securely in place.

### Removing the Belt Clip

1. Pull the belt clip tab away from the unit, as shown on Figure 3.
2. While pulling the belt clip latch, push up on the belt clip to remove it from the unit.

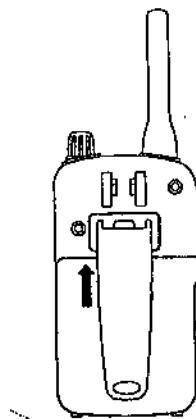


Figure 2

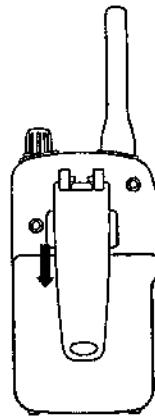
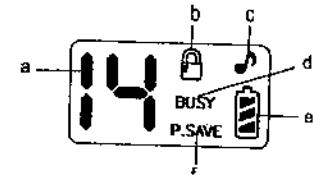


Figure 3

### **LCD PANEL DISPLAY**

- a. Main channel indicator
- b. Lock indicator
- c. Talk Confirmation tone indicator
- d. Busy mode indicator
- e. Battery capacity level indicator
- f. Power Save Mode indicator



### **OPERATION**

#### Turning the Unit ON

Turn the PWR/VOL knob clockwise. The unit will beep and the LCD panel will briefly display a self-test screen.

#### Turning the Unit OFF

Turn the PWR/VOL knob counter-clockwise fully until you hear a click. The LCD panel will turn blank.

### Adjusting the Speaker Volume

- Turn the PWR/VOL knob clockwise to increase volume.
- Rotate the PWR/VOL knob counter-clockwise to decrease volume.

### Receiving a Call

The unit is continuously on receiving mode when the unit is ON. When you receive a call on the current channel you are using, the TX LED will light up green.

### Transmitting a Call

1. Push and hold the PTT button to transmit. The TX LED will light up red.
2. While holding the PTT button, speak in a normal voice about 2 to 3 inches away from the microphone.
3. Release the PTT button when you have finished transmitting.

### Selecting Channels

The FRS has 14 available channels. To change channels :

- Press the UP button to increase the channel number.
- Press the DN button to decrease the channel number.

Notes: Refer to the "FRS Channel Table" section of this manual for detailed frequency listings.

### MONITOR

You can use the M (Monitor) button feature to activate the back light and listen in for weak signals in the current channel.

- Press the M (Monitor) button to activate the back light in the LCD display.
- Press the M (Monitor) button for at least 1 second for temporary monitoring.
- Press and hold the M (Monitor) button for at least six seconds for continuous monitoring. You will hear two beeps when the feature is activated.
- To deactivate the monitoring feature press the M (Monitor) button.

### Battery Level / Low Battery Indication

- The LCD panel displays the battery power level according to the number of squares inside the battery symbol.
- When the battery level is low, the battery symbol will flash to indicate that the batteries need to be changed.

### Power Saver

The FRS has an automatic power saving mode. After 6 seconds of no RX signal the P symbol appears on the LCD panel, power save is activated.

### Call Tones

You can use the Call Tone to alert the other user or to identify yourself.  
*To send a Call Tone:*

- Press the CALL button
- The FRS automatically sends a Call Tone to the receiving party(ies) who are on the same channel you are on.

### Beep Tone

This feature allows you to activate or deactivate the beeps emitted when you press the UP and DN button, CALL button, or the M (Monitor) button.

### Talk Confirmation (ROGER) Tone

This feature emits an audible tone when you release the PTT button. This alerts the other party that you are finished talking and they can reply if desired.

*To activate the Roger Tone:*

- Press and hold the CALL button.
- Press the UP or DN button to select ON or OFF
- Press the PTT button to confirm selection or press the CALL button to cancel selection.

### **SPECIFICATIONS**

OUTPUT POWER (TX)	0.5W (FCC Maximum)
BATTERY LIFE (Alkaline Battery)	24 Hours (typical)

### **FRS CHANNEL TABLE**

CHN #	FREQ (MHz)	CHN #	FREQ (MHz)
1	462.5625	8	467.5625
2	462.5875	9	467.5875
3	462.6125	10	467.6125
4	462.6375	11	467.6375
5	462.6625	12	467.6625
6	462.6875	13	467.6875
7	462.7125	14	467.7125

## 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.

**Warning:** Adjustment to this unit or replacement of any transmitter component (crystal, semiconductor, etc.) to this unit could result in a violation 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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
4. Consult the dealer or an experienced radio/TV technician for help.

## 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.

**IMPORTANT:** To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter and antenna at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away from the face. If you wear the handset on your body while using the headset accessory, use only the 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 centimeters) from your body.

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