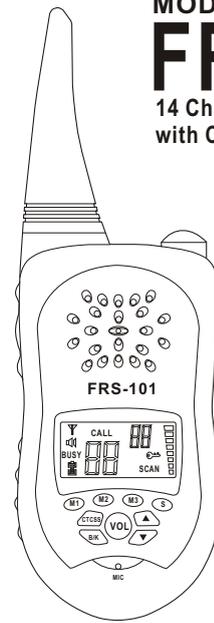


USER'S MANUAL

MODEL:
FRS101
14 Channel 2Way Radios
with CTCSS security



**BEFORE OPERATING THIS PRODUCT
PLEASE READ THESE INSTRUCTIONS CAREFULLY
KEEP FOR YOUR REFERENCE**

Made in China

PRODUCT DESCRIPTION

The FRS101 Radio is the newest generation in personal two-way communications. The FRS101 Radio operates in a license-free radio band (no FCC license is needed for its operation), on any of the 14 license-free channels.

The FRS101 is a lightweight, compact two-way communication device that can be used to communicate with family or friends at parks, shopping malls, sporting events, concerts-any indoor or outdoor activity!

The FRS101 is compatible with other brands utilizing the same frequency band (operating in the frequency range from 462.5625MHz to 467.7125MHz).

The FRS101 has 14-CHANNELS, featuring a multi-functional LCD Screen (which displays the current channel and various status icons).

Other features include ELECTRONIC VOLUME CONTROL and BATTERY SAVE CIRCUITRY.

Please read this User's Manual carefully to get the most out of your TWO-WAY RADIO.

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

This unit may not ensure privacy of communication.

Included in Your Package

When you unpack your FRS radio, you should find the following items enclosed in the package:

- 1 14-channel FRS unit
- 1 Belt Clip
- This manual

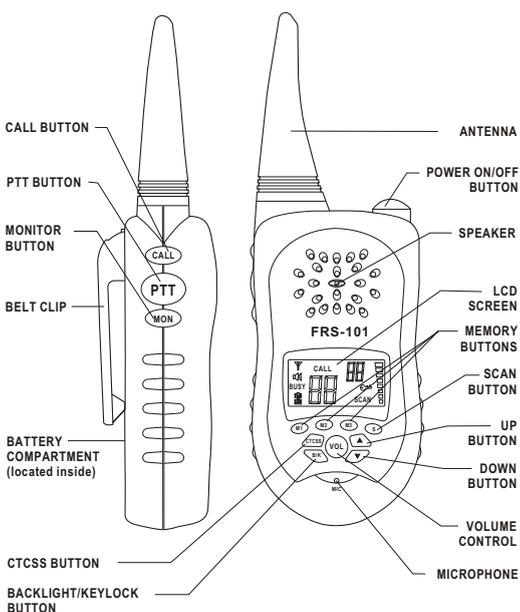
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SPECIAL FEATURES



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SPECIAL FEATURES

BELT CLIP

EAR/MIC/CHARGER JACK - When the earphone is connected into this jack the voice of the speaker will shift to the earphone.

CALL button - Press to transmit CALL Tones.

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

UP ▲ /DOWN ▼ buttons - Press to change channels

MONITOR (MON) button - Press to tune in and hold onto weak signals.

MIC - MICROPHONE

SPEAKER

ANTENNA

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

POWER button - Press and hold the POWER button to turn your unit ON/OFF.

VOL Button - Press to increase or decrease the volume level.

S Button - Used to activate/deactivate CHANNEL SCAN.

CTCSS Button - Used to activate the CTCSS tone adjustment mode

B/K Button -Used to turn on or off the backlight.

M1 M2 M3 Button - Press to store and re-call memory setting

BATTERY COMPARTMENT - Houses three(3) "AAA" alkaline or Ni-MH rechargeable batteries

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Setting Up Your FRS Radio

WARNING

DO NOT CHARGE THIS UNIT USING AN AC/DC ADAPTER WITH REGULAR "AAA" ALKALINE BATTERIES INSTALLED. ONLY USE THE AC/DC ADAPTER WITH "AAA" NI-MH RECHARGEABLE BATTERIES. (BATTERIES NOT INCLUDED)

BATTERY INSTALLATION

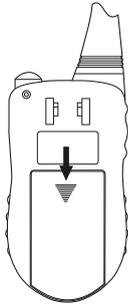


Figure 1

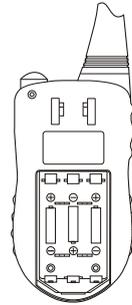


Figure 2

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

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Setting Up Your FRS Radio

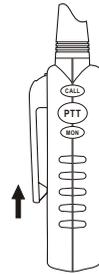


Figure 3

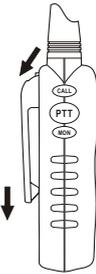


Figure 4

Installing the BELT CLIP

1. Slide the belt clip into the belt clip slot as shown in figure 3.
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 in figure 4.
2. While pulling the belt clip latch, push down the belt clip to remove it from the unit.

Connecting the ADAPTER

To charge the unit using "AAA" Ni-MH rechargeable batteries, insert the round connector of the AC/DC ADAPTER into the Charger Jack on the right side of the unit. (The adapter is not included with the unit.)

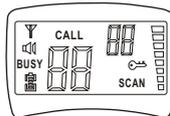
Accessory Connection

The FRS101 Radio is designed to be used with accessories (Earphone, Microphone, etc.).

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Setting Up Your FRS Radio

LCD Screen



A.	- RX icon. Displayed when receiving a signal.
B.	- TX icon. Displayed when transmitting a signal.
C.	- Displays the current VOLUME LEVEL.
D.	- CTSS code. Changes from 1 to 38 as selected by user.
E.	- Displayed during the CHANNEL SCAN mode.
F.	- Displays during the VOX mode.
G.	- Press and hold the B/K button for 2 seconds until BUTTON LOCK symbol is displayed.
H.	- Displays the current BATTERY LEVEL charge
I.	- Displays when the unit is busy
I.	- CHANNEL NUMBER. Changes from 1 to 14 as selected by user.

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OPERATION

Turning the Unit ON

Press and hold the **Power ON/OFF Button** key for 3 seconds. The unit will beep and display the current channel.

Turning the Unit OFF

Press and hold the **Power ON/OFF Button** key for 2 seconds. The unit will turn off and the system enters a mode at the lowest power consumption.

Adjusting Speaker Volume

Press the **VOL** Button to increase the Speaker Volume.

The Speaker Volume level is indicated by the number of bars displayed in the upper right corner of the LCD Screen.

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 **MON** 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 (see "LCD Screen" for details). Hold the unit in vertical position with the MICROPHONE 2 to 3 inches from the mouth.
2. While holding the **PTT** button, speak to the unit using normal tone Voice.
3. Release the **PTT** button when you have finished transmitting. A "Roger Tone" will be heard when **PTT** is released.

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

Changing CHANNELS

- Press the UP (▲) button to change to a higher channel.
- Press the DOWN (▼) button to change to a lower channel.
- The channel changes from 1 to 14, or from 14 to 1.

NOTE: Refer to the "Channel Table" section of this User's Manual for detailed frequency listings.

CTCSS Tone Adjustment

- Press the CTCSS/BEEP (CTCSS) button to change to CTCSS tone adjustment mode, tone digits on LCD will be blinking.
- Press the UP (▲) or DOWN (▼) button to change CTCSS tone channel

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

CHANNEL MONITORING

- Press and hold MONITOR (MON) button to turn on the speaker and listen the set channel; speaker stay on as long as they is pressed.

CHANNEL MONITOR LOCKING

- Press and hold MONITOR (MON) button for more than 5 secs to keep the speaker always on even if the key is released.

Sending CALL TONES

- Press and release the CALL (CALL) button to call other FRS units with call alert tone.
- Your call alert tone will transmit to nearby receivers set to the same channel.

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OPERATION

CHANNEL SCAN

- Press the SCAN/SCANLIST (S) button to start scan channel action in the UP direction.
- Press and hold UP (▲) button for 2 seconds will also start scan channel action in the UP direction.
- Press and hold DOWN (▼) button for 2 seconds will also start scan channel in the DOWN direction.
- During scanning, press (PTT) or SCAN/SCANLIST button to release the scan mode.
- During scanning, press UP (▲) button to change the scanning direction to UP
- During scanning, press DOWN (▼) button to change the scanning direction to DOWN

KEY TONE Selection

Press and hold CTCSS/BEEP key for 2 seconds will turn key-tone on or off.

BACKLIGHT Feature

Press "BACKLIGHT/KEYLOCK" key to turn on or off the backlight. While turned on, there is a timeout delay of 5 seconds to automatically turn off the light.

KEY LOCK Feature

Press and hold "BACKLIGHT/KEYLOCK" key for 2 seconds to turn on or off the key-lock

MEMORY Feature

Press and hold "M1", "M2" or "M3" key for 3 seconds to store current setting to EEPROM, including CTCSS tone number corresponding to each channel. Press "M1", "M2", or "M3" key to recall memory setting from EEPROM.

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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 installed. Only use the optional AC/DC ADAPTER with "AAA" Ni-MH rechargeable batteries (batteries not included).

To Charge the FRS Radio

To use this FRS Radio with an AC/DC ADAPTER and rechargeable batteries do the following:

1. Insert three (3) Ni-MH rechargeable batteries (not included).
2. Plug the 7.5 V DC / 200 mA ADAPTER (not included) into the CHARGER JACK on the right side of the radio and turn it on ON by pressing the POWER (P) button.

NOTE: The FRS Radio cannot transmit calls while the BATTERY PACK is being charged. It takes approximately 4 to 5 hours to fully charge the batteries if they are at their lowest level.

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SPECIFICATION

General

Frequency range	462/467MHz
Channels	14
Modulation type	FM
Antenna impedance	50 Ohm
Loudspeaker	8 Ohm 0.5W
Microphone	electronic type
Power supply	3AAA Ni-cads or Alkaline (4.5VDC)

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

NOTE: The maximum transmission range will vary depending on terrain and environment.

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SPECIFICATION

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

Receiver

Sensitivity at 12dB Sinad 0.25uV
 Selectivity 50dB
 Squelch range automatic
 Audio output power 0.25W @ 8 Ohm (10% distortion)
 Audio frequency response 400-2400Hz

Transmitter

RF Output Power nominal 500mW @ 4.5VDC
 Frequency Tolerance 0.00025%
 Harmonic Suppression more than 50dB
 Modulation FM +/- 2.5kHz

**Specifications are nominal and subject to change*

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 equipment 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.

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.