

OWNER'S MANUAL

FRS RADIO

21-1845

INTRODUCTION

With RadioShack's base station FRS radio, you can stay in constant communication with your family throughout your home. In addition, they're great for office use as well.

Your radio has 14 channels and 38 different QUIET codes. If someone else is using the channel you selected and you do not want to hear that person, select another channel, or use the QUIET feature. You can talk with a person who has a FRS radio if both radios are tuned to the same channel and QUIET code.

Your radio has auto-squelch, which means you will not hear anything on a channel unless someone is transmitting nearby on the same channel. You can turn off auto-squelch to hear weaker, distant transmissions.

You can connect an optional speaker/microphone and earphone to the radio. The VOX operation brings you convenient hands-free use.

Your transceiver has these features:

Selective Channel and QUIET ---- You can select the channel from one of the 14 FRS channels and one of the 38 QUIET by using two arrays of dip switches.

PLL Controlled Circuitry ---- provides accurate and stable channel selection.

QUIET (Continuous Tone Control Squelch System) ---- helps reduce interference from other systems in the area operating on the same frequency.

Built-in Modulation Limiter Circuit ---- automatically adjusts for a wide variety of voice levels to ensure an understandable transmission.

External Earphone and Microphone ---- Let you transmit or receive message by pressing or releasing Push-To-Talk button on the headset or use VOX option for hands-free operation.

Fixed Telescopic Antenna ---- Let you have a better performance of communication.

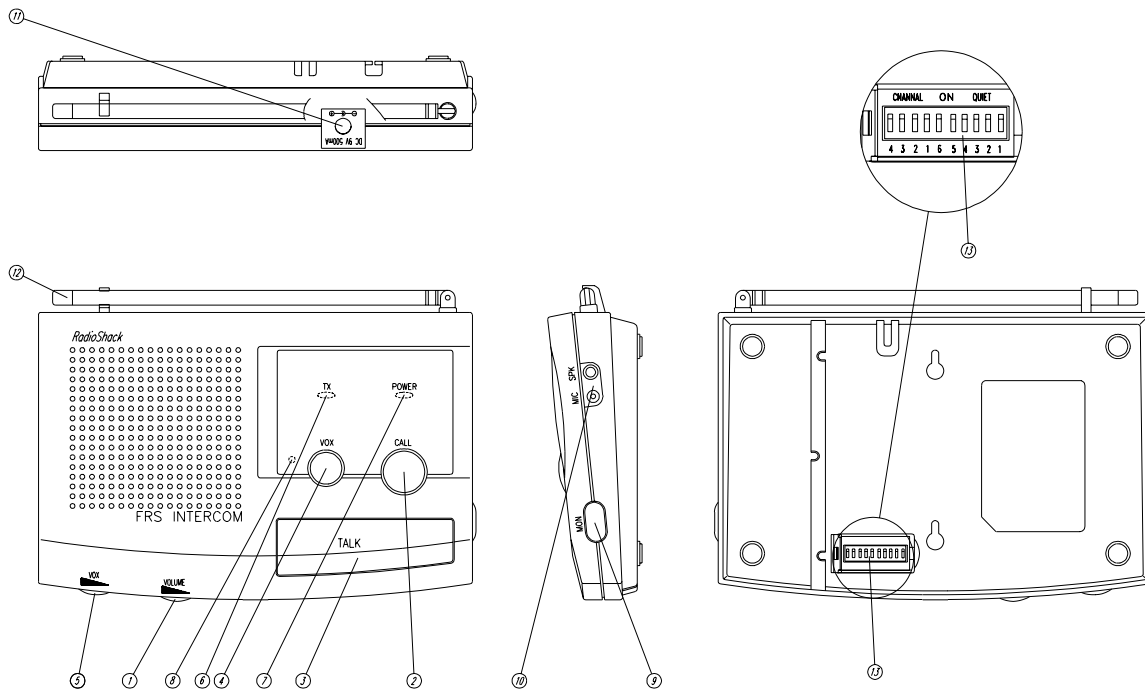
We recommend you record your transceiver's serial number here. This number is on the transceiver's back panel.

Serial Number _____

Your transceiver might cause TV or radio interference even when it is operating properly. To determine whether your transceiver is causing the interference, turn off your transceiver. If the interference goes away, your transceiver is causing it. Try to eliminate the interference by:

- Moving your transceiver away from the receiver.
- Contacting your local RadioShack store for help.

FUNCTION AND LOCATION OF THE CONTROLS



1. Volume Control.

Rotate this control rightwards to turn on your radio and adjust the volume, until you get a comfortable listening level.

2. CALL

You can cause a ringer sound on all radios tuned to the same FRS channel and/or the privacy code as your radio. To send a page, press and hold down the **CALL** button.

3. Talk button

To talk, hold down the **Talk**. Speak into the microphone in a normal tone of voice when the TX indicator lights. When you finish speaking, release the **Talk** button.

4. VOX Button

To active/deactivate VOX function, press and release the VOX button. When VOX on led indicator lights, it indicates the VOX function is activated. When VOX function is activated, the unit transmitter will automatically be opened when the user speaks. It will continue to transmit until the user finishes. Then, the unit will go into the receive mode.

5. VOX Sensitivity

Rotary this control to adjusts the VOX sensitivity. When there is too much background noise, it is better to turn this control leftwards to select Lo sensitivity.

6. Transmit LED Indicator

It will light when you transmit.

7. Power LED Indicator

It will light when the unit is turned on.

8. VOX LED Indicator

When VOX on led indicator lights, it indicates the VOX function is activated.

9. MON Button

To hear everything happening on a channel, including weak transmission, hold down **MON** button. Release the **MON** button to turn the auto-squelch back on.

10. External Mic/Spk Jack

Connect an optional speaker/microphone or earphone in this jack.

11. Power Jack

Just plug the station into the DC outlet of included DC adapter, then connect the adapter to a standard AC outlet.

12. Fixed Telescopic Antenna

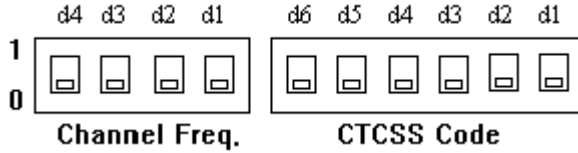
Adjust antenna will let you have a better performance of communication.

13. Two arrays of dip switches (at the bottom)

Let you select one channel from 14 FRS channels and one of 38 QUIET frequencies by using these two arrays of dip switches.

SETTING CHANNEL FREQUENCIES AND CTCSS CODES

On the station bottom, you will find two arrays of dip switch. These switches are used to set the channel frequency, and CTCSS code.



● Setting for 38 CTCSS Code

The first array of 6-digit dip-switch is used to set 38 CTCSS codes. Please find below table for setting.

CTCSS		Dip Switch	CTCSS		Dip Switch
Code	Freq.(Hz)	Setting	Code	Freq.(Hz)	Setting
	without CTCSS	000000			
01	67.0	000001	20	131.8	010100
02	71.9	000010	21	136.5	010101
03	74.4	000011	22	141.3	010110
04	77.0	000100	23	146.2	010111
05	79.7	000101	24	151.4	011000
06	82.5	000110	25	156.7	011001
07	85.4	000111	26	162.2	011010
08	88.5	001000	27	167.9	011011
09	91.5	001001	28	173.8	011100
10	94.8	001010	29	179.9	011101
11	97.4	001011	30	186.2	011110
12	100.0	001100	31	192.8	011111
13	103.5	001101	32	203.5	100000
14	107.2	001110	33	210.7	100001
15	110.9	001111	34	218.1	100010
16	114.8	010000	35	225.7	100011
17	118.8	010001	36	233.6	100100
18	123.0	010010	37	241.8	100101
19	127.3	010011	38	250.3	100110

● Setting for Channel Frequencies

The second array of 4-digit dip switch is used to set any one of the 14 channel frequencies. Please find below table for setting.

Dip Switch Setting	Channel	Frequency (MHz)
0000	FRS 1	462.5625
0001	FRS 1	462.5625
0010	FRS 2	462.5875
0011	FRS 3	462.6125
0100	FRS 4	462.6375
0101	FRS 5	462.6625
0110	FRS 6	462.6875
0111	FRS 7	462.7125
1000	FRS 8	467.5625
1001	FRS 9	467.5875
1010	FRS 10	467.6125
1011	FRS 11	467.6375
1100	FRS 12	467.6625
1101	FRS 13	467.6875
1110	FRS 14	467.7125
1111	FRS 14	467.7125

C. OPERATION

1. Plug the station with 9VDC 500mA adapter for power.
2. Rotate volume control to turn on the radio. Press the **MON** button and adjust to a comfortable listening level.
3. Press the **Talk** button to transmit or use VOX option for hands-free. The **TX** indicator lights green.
4. Select the desired channel and/or QUIET code.
5. To receive, simply release the **Talk** button. In VOX mode, the unit will receive when the user transmits speaking.
6. To turn off the transceiver, turn volume to the left until a click is heard.

Note: You can only communicate with another radio that is using the same channel and/or the same QUIET code as your radio.

TECHNICAL SPECIFICATIONS

RX Frequency.....	462-467 MHz
Channels.....	14
Modulation type.....	FM
Antenna impedance.....	50 Ohm
Microphone.....	condenser type
Power supply.....	9 VDC 500mA
Sensitivity at 12dB Sinad.....	0.5µV
Adjacent Channel Rejection.....	45dB
Audio Squelch	Auto
Audio output power.....	500mW @ 8 Ohm
Audio Distortion	5%
RF Output Power.....	500 mW ERP @ 9 VDC
Harmonic Emissions.....	more than 50dB
Dimensions (HWD).....	36×178×120mm
Weight.....	approx 350g