BF251,256 Users Manual

Model BF251,256 DISPLAY

1. **Large Segment Display:** Indicates the channel number in use.

2. **Small Segment Display:** Displays the CTGSS tone option in the channel from (00-38).

3. **Low Battery Level Indicator:** Icon indicates the low battery status.

4. **Voice Activated Transmission (VOX) Indicator:** This function allows hands free conversation. The icon appears when the VOX mode is activated.

Powering the transceiver:
Your BF251,256 radio transceiver operates on four AAA batteries. Alkaline batteries will provide slightly better performance than rechargeable batteries. Only Audiovox approved rechargeable batteries can be recharged in the radio transceiver using the optional charging stand.

Installing the batteries:
Battery installation is made more convenient when the belt clip is removed. To do this, release the spring clip securing the belt clip to radio and slide the belt clip downward and away from the radio body. Next, press down with the thumb at the arrow, slide the battery cover down and lift off the battery cover. Insert four AAA batteries (alternate positive ends (+) toward the bottom of the transceiver, (starting left-to-right).

1. Using thumb, press down on battery cover at arrow and slide cover down to open.
2. Slide the cover down and then lift cover at bottom to open. Remove cover.
3. Insert four AAA batteries (positive (+) end toward the bottom begining at right side and alternating positive terminals as shown),or insert the rechargeable batteries.

The following guidelines will improve performance and provide longer operating times for the BF251,256:

1. Do not mix old and new batteries.
2. The use of alkaline-type batteries is recommended to provide the longest operating time.
3. Do not mix alkaline, standard (carbon-zinc) or rechargeable batteries.
4. If the unit is not to be used for an extended period of time, remove the batteries. Old or leaking batteries can cause damage to the unit and will void the warranty.

BF251,256 OPERATIONAL MODES

Controls:

Power On/Off (15) Button
Press and hold the power on/off button ( ) for at least 2 seconds. You will hear a confirming melody to indicate the unit is on. To turn the unit off, press and hold the button for at least 2 seconds.

Adjusting the Volume
With the unit powered on, press the Up Channel/Volume button (▲) to increase volume and the Down Channel/Volume button (▼) to decrease volume. The display will indicate the current volume level by the small number in the icon ( )

Monitor/Display Backlight Button (2)
This button is used to to check activity on the current frequency before transmitting. Check activity by pressing the Monitor (M) Button longer than 2 seconds; the busy icon will apppear on the display and you will hear static if frequency is clear.
Do not transmit if you hear conversation.
Hold down the Monitor Button again longer than 2 seconds and the busy icon will disapppear from the display.
The monitor function will temporarily bypass the squelch setting and play all signals on a given channel. This feature is useful when communicating with other parties at extreme range.
By pressing the monitor button momentarily, the LCD backlight is turned on; the LCD backlight will turn off automatically in about 5 seconds, or when the monitor button is pressed momentarily once again.

Push To Talk (PTT) Button (4)
Pressing and holding this button will allow you to speak to any transceiver that is set to the same channel and privacy code setting as yours. Hold the transceiver approximately 1 to 2 inches from your face as you speak into the built in microphone (9). After you have finished speaking, release the PIT Button to allow reception of incoming signals. It is not possible to transmit and receive at the same time.
The PTT Button can also be used as a two-way call ringer Pressing the button twice quickly will call another party on the same channel.

Up Channel/Volume Button (10)

In the standby mode, pressing this button will increment the listening volume. When in function edit mode this button will be used to adjust the unit's settings.

Down Channel/Volume Button (11)

In the standby mode, pressing this button will decrement the listening volume. When in function edit mode this button will be used to adjust the unit's settings.

Mode Button (12)

This button is used to select various feature settings in the FRS.

External Speaker (SPK)/Microphone (MIC) Jacks (6)

This set of jacks accepts an Audiovox headset/microphone connector for total hands-free operation.

Operating Mode and Features

FRS Operation

- From FRS standby mode, press and hold the (~) button for 2 seconds to turn on power.
- Press the MODE button so the Channel number flashes.
- Select the desired channel with the Up (10) and Down (11) Buttons.
- Press and hold the PU button (4) to transmit, then speak into the microphone clearly and slowly.
- Release PTT Button (4) to receive.
- Communication can only be accomplished when the channel and CTCSS tone frequency of at least two parties are the same.
- The **CTC** icon will be displayed on the LCD panel if the CTCSS tone frequency function is enabled.

Channel Selection

In order to communicate with other FRS units, both transmitting and receiving party must be on the same frequency.
The BF251,256 has 14 channels (frequencies) (1-14) indicated by the large digits on the LCD display panel. Before transmitting on the selected channel, press the Monitor (M) Button (2) to check the activity on that channel. It there is activity on the selected channel, change to another channel that is clear.
To change the channel,

- From standby mode, press the MODE button (12) until the channel number flashes.
- Press the Up Button (10) briefly to move to the next higher main channel number.
- Press the Down Button (11) briefly to move to the next lower main channel number.

CTCSS Mode (Sub-Channel) Selection

Coded Tone Controlled Squelch System (CTCSS) with 38 Sub-Frequencies. This feature allows you to utilize the coded squelch tones (00-38) within a main channel. This enables you to communicate with another party on the same main channel using the same subcode. (This filters out unwanted transmissions without the same coded squelch tone). There are 38 CTCSS Sub-channels for each main channel. A different subcode may be selected for each of the 14 channels.
To change the CTCSS Sub-channel,

- From FRS standby mode, press the Mode Button twice; a flashing **oo** or sub-channel number is displayed. If **oo** is displayed, press the Up or Down button to enable the CTCSS mode;
- Then press the Up or Down button to select the desired sub-channel for use.
- Press the Power On/Oft button momentarily to confirm selection.

The CTCSS mode can be turned off by selecting the **oo** icon as the setting.

NOTE:
To communicate with other FRS units, they must be switched to the same channel and

CTCSS subcode. To communicate with other FRS units that do not have subcodes, switch your unit to the same channel with the subcode set to **oo.**
The CTCSS subcodes do not prevent others from hearing your transmission. This will only allow you to ignore all traffic on a given channel not using the same subcode.

VOX Selection Mode
This option enables you to have hands-free conversation. Your voice or nearby sound is detected and the radio transmits without the need to press the PTT button.
To set radio for VOX operation,
- From FRS standby mode, press the VOX button.
- The **VOX** icon will appear steady on the LCD display.

VOX can be turned off by pressing VOX button.

Channel Scan Operation
This feature allows you to monitor all channels automatically for valid signals. While scanning, you can transmit and receive. When a signal is received, the scan is interrupted and will return to scan mode S seconds after reception is terminated.
NOTE:
While the scan function is active, the MODE button will be inoperative. The scan mode will reduce the overall battery life due to the battery save function is overridden.
To enable the channel scan mode,
- From FRS standby mode, press the SCAN Button;
- The radio will display each channel (1-14) number in order as the scan mode operates to find an active main channel.
-When unit doesn't find any signals and you want to transmit, press the PTT switch to return to seconds after the communication is completed.
- If there is no activity and you want to leave the scan mode, press the SCAN button momentarily and the unit will return to normal operation;

Battery Alert
When the battery icon ( ) blinks on the LCD panel, recharge unit or install fresh batteries. If the batteries are not replaced the ( ) icon will appear and an audio tone will sound to warn the user that the batteries must be replaced.

Batteries
There are two methods of powering the BF251,256:
1. Alkaline Batteries - (4 x AAA size)
2. Rechargeable Ni-MH Batteries - (Rechargeable Ni-MH batteries and Charging Stand not included). Use only Audiovox approved rechargable batteries.
   NOTE: To extend battery life, avoid overcharging the batteries.

NOTES FOR GOOD COMMUNICATION
1. The BF251,256 channels are shared on a 'take turns' basis. This means other groups may be talking on any of the channels. A common code of ethics/courtesy is to switch

to another vacant channel and not to attempt to talk over someone who is already using the channel you first selected.
2. The BF251,256 has been designed to maximize performance and improve transmission range in the field. To avoid interference, it is recommended that you do not use the units closer than 5 feet apart.
3. For best transmission results, always keep your mouth about 2-3 inches from the microphone (9) and speak slowly in a normal voice.
4. To increase battery life, avoid features such as Scan. This feature will reduce operating time considerably.

Warning

- Remove the batteries from the transceiver if it is not expected to be used for long periods. This will eliminate the possibility of chemicals leaking from the batteries and corroding the transceiver.
- Avoid exposing the transceiver to water or extremes of temperature.
- Do not use this device in or near a mining facility, which uses remotely triggered explosives or in areas labeled "Blasting Area". Premature or accidental detonation may result.
- Do not attempt to modify or in any way increase the output of this transceiver Its output is designed to meet the legal limits set by the FCC.
- Do not use this device or change its batteries in potentially explosive atmospheres as sparks in such areas could result in an explosion. Turn your transceiver off wherever posted notices restrict the use of radios or cellular telephones. Facilities such as hospitals may use equipment that is sensitive to RF energy.
- Turn your transceiver off on board aircraft when requested to do so.
- Do not place your radio in front of a vehicle's air-bag. It the air-bag deploys, it could propel the transceiver like a projectile causing bodily injury.

Troubleshooting

Problem	Possible cause	Correction
No transmission while pressing the PU Button	Weak batteries	Charge or replace batteries
	Incorrect battery polarity	Install the batteries following the directions in paragraph Installing the Batteries.
Weak or no signal received	Weak batteries	Charge or replace batteries
	Channel and privacy Code not set the same as target transceiver	Adjust the transceiver's Settings to match those Settings of the target transceiver
	Volume level too low PTT Button inadvertently Depressed	Increase volume level Release PTT Button
	Excessive radio interference on a particular channel Obstruction of radio signal	Change to a different channel Avoid operating in or near large buildings or vehicles
Unit beeps, but will not function when turned on	Batteries extremely discharged	Charge or replace batteries
Reception of unwanted signals	CTCSS privacy mode not on	Turn on the CTCSS privacy Mode and set code number to Match the setting of the target transceiver.
	Interference from electronic devices such as computers or TVs	Turn the devices off or move father away from them.

Technical Specifications:

General

Frequency Range FRS ($_{1}$g Channels)	462.5625 - 467.7125 MHz
Channel Spacing	25kHz
Privacy Codes38	for each main channel
Dimensions (W x H x D)	2.l0in x 3.86in x l.l0in
(Without Antenna)	53.4mm x 98mm x28 mm

Power Supply]

Power Source	Alkaline Batteries, AAA (4), 6 VDC Ni-MH rechargeable, AAA (4), 4.8VDC, 650 mAh
Operating Time (Transmit; Receive: Standby) (5: 5: 90 ratio) (Based on alkaline batteries)	30 hours Low Power 14 hours High Power

Receiver

Useable Sensitivity	> -119dBm
Maximum Audio Output Power	> 0.15 Watt maximum (8 Ohm)
Modulation Distortion	< 5%(1 kHz,60%)

Transmitter

RF Output Power	0.5 Watt maximum
Maximum Deviation	+/- 2.5 kHz
Modulation Distortion	<5%(1 kHz, 70%)

This transceiver complies with FCC regulations for use in the United States of America. Use in other countries may be prohibited or restricted by local regulation. Please check with the local regulating agency before using this device outside the United States of America.

Main Channel Frequencies:

Channel	Freq. MHz	Channel	Freq. MHz
1	462.5625	12	467.6625
2	462.5875	13	467.6875
3	462.6125	14	467.7125
4	462.6375		
5	462.6625		
6	462.6875		
7	462.7125		
8	467.5625		
9	467.5875		
10	467.6125		
11	467.6375		

Continuous Tone Coded Squelch System Tone Frequencies (in Hz)

CTCSS	Freq. Hz	CTCSS	Freq. 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

***oF** =No Tone

Safety Information For FRS UNIT

Your wireless handheld portable transceiver contains a low power transmitter
When the Push-to Talk(PTT) button is pushed it sends out radio frequency (RF) signals This device is authorized to operate at a duty factor not to exceed 50% In August 1996, the Federal Communications Commission (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 2 inches (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 manufacturers supplied belt clip for this product and ensure that the antenna is at least 1 inch (2.5 centimeters) from your body when transmitting.

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