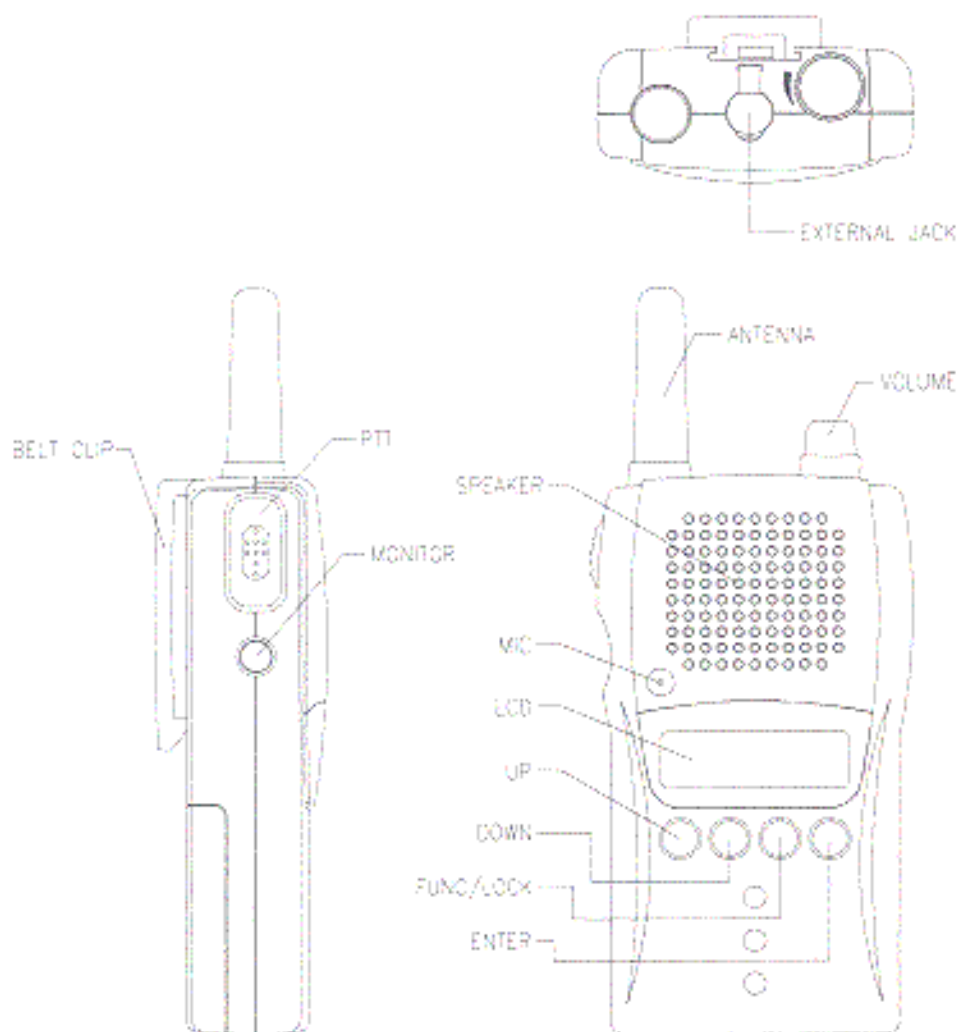# MODEL JF-414HX
14 CHANNEL FRS COMMUNICATOR
OPERATING INSTRUCTIONS

FUNCTIONS AND CONTROLS

1. Detachable Belt Clip
2. Push-To-Talk (PTT) Button
3. Monitor Button
4. On/Off Volume Control
5. External Mic / Speaker / Charging Jack
6. Antenna
7. LCD Panel
8. Up Button
9. Down Button
10. Function / Lock Button
11. Enter Button
12. Built-in Speaker
13. Built-in Microphone
14. Battery Door

UNDERSTANDING YOUR FAMILY RADIO SERVICE (FRS) COMMUNICATOR

The FCC (Federal Communications Commission) has created 14 license free frequency channels called Family Radio Service (FRS) frequencies for family, business and individual recreational use. Your FRS COMMUNICATORS are designed to operate on these 14 channel frequencies anywhere within the United States and other areas listed by FCC.

POWER SOURCE

Each Communicator unit operates on three 'AAA' size batteries.

1. Remove the Battery Door (#14) from the front cabinet by sliding it downwards.
2. Following the polarity diagram shown inside the battery compartment, insert three 'AAA' size batteries (not included). Replace the Battery Door (#14).

   IMPORTANT: Be sure that the batteries are installed correctly. Wrong polarity may damage the unit.

3. For better performance and longer operating time, we recommend the use of alkaline-type batteries.
4. Do not mix old and new batteries.
5. Do not mix alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium) batteries.
6. 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.

WRIST STRAP AND DETACHABLE BELT CLIP INSTALLATION

The Wrist Strap and Detachable Belt Clip are provided to enable you to carry the palm-sized Communicator easily and safely.

1. To use the Wrist Strap, simply attach it to the hole just behind the Antenna (#6). Feed the small loop on the end of the strap through the hole and then pass the strap through the loop and pull tight.

2. The Detachable Belt Clip is already attached to your Communicator and locates into 2 small slots on each side of the unit. If you want to remove the belt clip, ease the belt clip locating lug out of one of the slots with a small tool, such as a small screw driver, and ease the belt clip from the unit. To re-install, just snap the locating lugs on the belt clip into the slots on either side of the unit.

LCD PANEL DISPLAY

1. RSSI (Receiving Signal Strength Indicator) or TX bar icon

Indicates the receiving signal strength and also, blinks TX bar icon by On / Off during

transmission.

2. Monitor indicator Display

Blinks during the monitor button is used.

3. CTCSS indicator Display

Blinks when the correct CTCSS tone is inputted.

4. Seek Scan Indicator Display

Blinks in seek scan mode or when the seek scan mode is activated.

5. Dual Watch Scan Indicator Display

Blinks in dual watch scan mode or when the dual watch scan mode is activated.

6. Key Lock Indicator Display

Blinks in auto lock selection mode or when the key lock is activated.

7. Baby Care (VOX) Indicator Display

Blinks in VOX selection mode or when the VOX is activated.

8. Battery Level Indicator Display

Indicates the battery level meter.

9. Power Save Display

Reception and transmission mode fixed.
Blinks when the power save is activated. Blinks fast or slow according to a period of power save.

10. TX Display

Blinks when a signal is transmitted.

11. RX Display

Blinks when a signal is received.

12. Large Segment Display

Displays the number of channels at the normal mode, and displays the function menu at the function mode. (e.g. CTC / SC / dW / VO / Vdt / Alo / CAL)

13. Small Segment Display

Displays the CTCSS tone option at the normal mode. CTCSS option is displayed by "Hz". No option is displayed by "–".
Displays the SUBMENU of each MENU at the function mode. (e.g. CTCSS code hz / SC up, dn / dW number / VO off, high, low / Vdt 1sec, 2sec, 3sec, 5sec / Alo off, Auto / CAL number)

OPERATION / KEY FUNCTION

1. ENTER BUTTON
The unit confirms the setting menu and return to the standby mode when pushing the Enter button.

2. FUNC/LOCK BUTTON
   1) Short Push (less than 0.5 second)
   The unit enters Function Edit Mode when you push the Function Button at standby mode or at reception mode and then, the unit enters next Menu from the Function Edit Mode.
   The unit returns to standby mode when you push the Function Button at the last Menu.

   2) Long Push (more than 0.5 second)
   When you push the Function Button a little longer at standby mode or at reception mode, all the Keys, except PTT Key and Monitor Key, will be locked and unlocked – On/Off of KEY LOCK.

3. UP BUTTON
   1) Short Push
   The UP Button provides for selecting channels one by one in "UP" direction at standby mode or reception mode and also, provides for shifting from current Menu to next Menu one by one at Function Edit Mode.
   2) Long Push
   The UP Button provides for selecting channels rapidly in "UP" direction at standby mode or reception mode and also, provides for shifting from current Menu to next Menu rapidly at Function Edit Mode.

4. DOWN BUTTON
   1) Short Push
   The DOWN Button provides for selecting channels one by one in "DOWN" direction at standby

mode or reception mode and also, provides for shifting from current Menu to previous Menu one by one at Function Edit Mode.

2) Long Push

The DOWN Button provides for selecting channels rapidly in "DOWN" direction at standby mode or reception mode and also, provides for shifting from current Menu to previous Menu rapidly at Function Edit Mode.

OPERATION / FUNCTION EDIT MODE

1. CTCSS OPTION SELECTION MODE

- The unit sounds when you push the Function Button at selection mode of squelch level and lights up CTCSS icon and then, enters CTCSS option selection mode.
- The channel scans in "UP" direction when you select UP Menu.
- The unit activates by Carrier squelch when CTCSS option is Off, but the unit activates by Carrier squelch and Tone squelch when the CTCSS option is not Off.
- The UP or DOWN Button provides for selecting Menu.
- The unit saves the setting CTCSS option and sounds back beeping and then, flickers CTCSS icon and returns to the reception mode, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit lights up CTCSS icon and opens audio when the Tone corresponded with the setting Tone is received.

2. SEEK SCAN MODE

- The unit sounds the key beeping and lights up Seek Scan icon and then, enters Seek Scan selection mode when you push the Function Button at CTCSS option selection mode. - The channel scans in "UP" direction when you select UP Menu and also, the channel scans in "DOWN" direction when you select DOWN Menu.
- The UP or DOWN Button provides for selecting Menu.
- The unit saves the setting Scan direction and sounds back beeping and then, starts scanning, if you push Enter Button or you do not input any option button for 5 seconds.
- The Scan time of each channel is 100ms.
- If there is any signal received, then the unit receives the signal at the channel for 5 seconds and re-starts scanning.
- If you push PTT Button within 5 seconds when a signal is received, the receiving time is extended to 15 seconds.
- If you push the Function Button during Seek Scan, the Seek Scan is removed.
- The unit lights up Seek Scan icon during Seek Scan.

3. DUAL WATCH SCAN SELCTION MODE

- The unit sounds the key beeping and lights up Dual Watch Scan icon and then, enters Dual Watch Scan selection mode if you push the Function Button at Seek Scan selection mode.
- The Up or Down Button provides for selecting Dual Watch Channel.
- The unit saves the setting Dual Watch Channel and sounds back beeping and then, starts Dual Watch Scan, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit scans current channel and Dual Watch channel by turns.
- The unit scans Dual Watch channel every 5 seconds when a signal is received at current channel.
- If a signal is received at Dual Watch channel, the unit receives a signal at Dual Watch channel until reception is over.
- The unit waits at the receiving channel for 5 seconds if reception is over.
- Dual Watch scan is removed if you push Function Button during Dual Watch scanning.
- Dual Watch icon lights up during Dual Watch scanning.

4. VOX SELECTION MODE

- The unit sounds the key beeping and lights up VOX icon and then, enters VOX selection mode if you push the Function Button at Dual Watch scan selection mode.
- The Up or Down Button provides for selecting VOX mode to be On / Off.
- The unit blinks VOX icon at VOX selection mode.
- The unit saves the setting VOX On / Off and sounds back beeping and then, lights up or flickers VOX icon according to On or Off of mode selection and returns to standby mode, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit activates TX If the audio higher than the level of the setting VOX is inputted from Mic. when VOX is On.
- The unit lights up VOX icon when VOX is On.

5. VOX DELAY SELECTION MODE

- The unit sounds the key beeping and lights up VOX icon and then, enters VOX Delay selection mode if you push the Function Button at VOX selection mode.
- The Up or Down Button provides for setting VOX Delay.
- The unit blinks VOX icon at VOX Delay selection mode.
- The unit saves the setting VOX Delay value and sounds back beeping and then, lights up or flickers VOX icon according to On or Off of VOX mode and returns to standby mode, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit extends VOX Delay time according to the setting time if there is no input of VOX when VOX is activated.
- VOX Delay time is optional as 1 second, 2 seconds, 3 seconds, and 5 seconds.

6. AUTO LOCK SELECTION MODE

- The unit sounds the key beeping and lights up Lock icon and then, enters Auto Lock selection mode if you push the Function Button at VOX Level selection mode.
- The Up or Down Button provides for selecting Auto Lock mode to be On or Off.
- The unit blinks Lock icon at Auto Lock selection mode.
- The unit saves the setting Auto Lock On / Off and sounds back beeping and then, flickers Lock icon and returns to standby mode, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit sounds Key lock mode beeping and lights up Lock icon and then, enters Key lock mode if you do not input any option button for 15 seconds when Auto Lock is On. You can remove the Key Lock by pushing the Function Button more than 0.5 second.

7. CALL COLOR SELECTION MODE

- The unit sounds the key beeping and lights up Call Beep icon and then, enters Call Beeping color tone selection mode if you push the Function Button at Auto Lock selection mode.
- The Up or Down Button provides for selecting four kinds of single tones three kinds of melody tones.
- The unit blinks Call Beep icon at Call Beep color tone selection mode.
- The unit saves the setting Call Beeping color tone and sounds back beeping and then, flickers Call Beep icon and returns to standby mode, if you push Enter Button or you do not input any option button for 5 seconds.
- The unit transmits Call Beep as the setting color tone if you push the PTT Button twice consecutively. Any button does not work during transmitting call signal and the unit returns to standby mode when transmission of call is over.

MAIN FEATURES SUMMARY

1. Channel – 14 channels fixed.
2. CTCSS Tone Option – 38 kinds of sub-tones available.
3. Seek Scan – Full channel scanning.
4. Dual Watch Scan – This is a scanning function between priority channels.
5. VOX operation - Baby care operation.
6. RSSI signal strength display – 5 steps display.
7. Power Save – Automatically power saving, the unit blinks Cell shape icon periodically according to the power saving time.
8. Battery Meter Level display – 4 steps (High/Mid/Mid Low/Low)
9. Emergency Call – The unit transmits the setting call color when you push PTT Button twice consecutively.
10. Monitor operation – The unit lights up the back-lit for 5 seconds monitoring current channel.

NOTES FOR GOOD COMMUNICATIONS

1. Your Communicator unit's 14 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. Your Communicators have 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 (#8) and speak slowly in a normal voice.

CARE AND MAINTENANCE

1. Clean your unit with a damp (never wet) cloth. Solvent or detergent should never be used.
2. Avoid leaving your unit in direct sunlight or in hot, humid or dusty places.
4. Keep your unit away from heating appliances and sources of electrical noise such as fluorescent lamps or motors.

SPECIFICATIONS

Description	Specifications
Operating Channels	14
Operating Frequency Range	UHF 462.5500 to 467.7250 MHz
Talk Range	Up to 2 miles
Output Power	0.3 Watts
Power Source	'AAA' alkaline batteries X 4, 6VDC
Battery Life	About 40 hours (5/5/90 duty cycle)

CHANNEL FREQUENCY CHART

Channel No.	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

REVELANT GUIDELINES AND STANDARDS

1. Technical Regulations of Part 15 and 95 of the FCC Rules.
2. Type Acceptance Requirements of Part 2 of the 47CFR Regulations.

CARE AND SAFETY

To assure optimal radio performance and to ensure RF energy exposure is within the guidelines of the above standards, the following operating procedures should be observed:

FOR PORTABLE 2-WAY RADIOS

- When transmitting with a portable radio, hold radio in a vertical position with its microphone 1-2 inches away from your mouth. Keep antenna at least 1 inch from your head and body.
- If you wear a portable radio on your body, ensure the antenna is at least 1 inch from your body when transmitting.

ELECTRIOMAGNETIC INTERFERENCE/COMPATIBILITY

Most electronic devices are susceptible to electromagnetic interference (EMI) if inadequately shielded, designed or otherwise configured for electromagnetic compatibility.

- Turn off your radio in any facilities where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.
- Turn off your radio when on board aircraft when instructed to do so. Any use of the radio must be in accordance with airline regulations or crew instructions.

⚠ CAUTION

Damaged Antenna

Do not use any radio with a damaged antenna. If a damaged antenna comes in contact with the skin, a minor burn may result.

Batteries

Do not short circuit exposed terminals of any batteries with any conductive materials. In doing so, the material may become quite hot and cause property damage and/or body injury such as burns.

⚠ WARNING

Parts Replacement or Substitution

Replacement or substitution of parts other than those recommended by Spectra® may cause a violation of the technical regulations of part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the FCC Rules.

For Vehicles with an Air Bag

Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of

vehicle.

Potentially Explosive Atmospheres

Turn your radio off when in any area with a potentially explosive atmosphere, unless it is a type especially qualified for such use. Sparks in such areas could cause an explosion or fire resulting in body injury or even death.

Batteries

Do not replace or charge batteries in a potentially explosive atmosphere. Contact sparking may occur while installing or removing batteries and cause an explosion.

Blasting Caps and Areas

To avoid possible interference with blasting operations, turn your radio off near electrical blasting caps or in a "blasting area" or in areas posted:" Turn off 2-way radio". Obey all signs and instructions.

Note: Areas with potentially explosive atmospheres are often, but not always, clearly marked. They include fuelling areas such as below deck on boats, fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

J COMMUNICATIONS CO., LTD.
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