ATTACHMENT M: USER'S MANUAL

FR1538-2ch
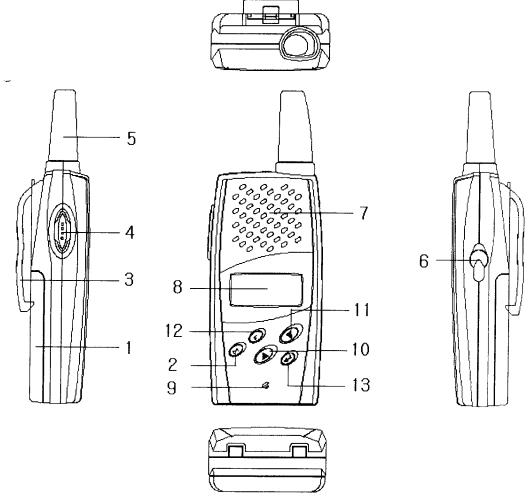
SERVICE MANUAL
2-WAY PORTABLE
HANDHELD
RADIOS

September. 29, 2000

J-communications Co., Ltd

3. OPERATION

3.1 Key Name

FUNCTIONS AND CONTROLS

1) Battery Door
2) Monitor Button
3) Detachable Belt Clip
4) Push-To-Talk (PTT) Button
5) Antenna
6) External Mic / Speaker
7) Built-in Speaker
8) LCD Panel
9) Built-in Microphone
10) Up Button & Volume Control

11) Down Button & Volume Control
12) Function Button
13) Power On/Off & Enter Button

3.2 ICONS on LCD

1) RSSI (Receiving Signal Strength Indicator) or TX Bar Icon

Indicates the receiving signal strength and blinks during transmission.

2) Monitor Indicator

Appears when the monitor button is used.

3) CTCSS Indicator

Blinks when the correct CTCSS tone is entered.

4) Auto Channel Scan Indicator

Appears in the auto scan mode or when the auto scan mode is activated.

5) Dual Watch Scan Indicator

Appears in dual watch scan mode or when the dual watch scan mode is activated.
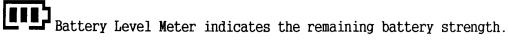
6) Key Lock Indicator

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

7) VOX Indicator

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

8) Battery Level Indicator

Battery Level Meter indicates the remaining battery strength.

9) Tx Indicator

Appears when a signal is being transmitted.

10) Rx Indicator

Appears when a signal is being received.

12) Large Segment Display

Indicates the channel number in use at the normal mode.
When the Function Button is pressed, it Displays the function menu in sequence : CH / cTc / SC / dW / UO / Udt / ALo / CAL / ton / tAL

13) Small Segment Display

Displays the CTCSS tone option at the normal mode. CTCSS option is displayed in Hz.
Displays the SUBMENU of each MENU in the function mode.
(e.g. CH 1~69 / cTc: hz / SC: up, dn / dW: channel number /
UO: high, mid, low, off / Udt: 5sec, 3sec, 2sec, 1sec /
ALo: off, auto / CAL number:1-7,off / ton:no-Freq / tAL:on,off)

3.3 Key Function

3.3-1 ENTER BUTTON (#13)

1) Short Touch - Power On

 - Press this button (#13) briefly to turn the unit on.
   A short confirming melody will play.

2) Long Touch - Power Off

 - Press this button (#13) for longer than 1.5 seconds to turn the
   unit off.

※ Press it to confirm the required option for respective functions
   during function edit mode.

3.3-2 FUNCTION BUTTON (#12)

1) Short Touch

 - Press this button briefly to enter function edit mode in standby
   mode.

2) Long Touch

 - Press for longer than 1.5 seconds to activate the KEY LOCK in the
   standby mode.

※ Please note all buttons will be disabled except the Monitor
   Button (#2) and PTT Button (#4) will remain fully operational.

3.3-3 UP BUTTON (#10)

1) Short Touch

 - In the standby mode, press this button briefly to move to the
   next higher main volume level.
   In the function edit mode, press briefly to shift from the
   current option in each submenu to the next option in the same
   submenu.

2) Long Touch

- Pressing this button for more than 1.5 seconds will allow you to
  navigate at a more rapid rate through different volume level in
  the standby mode or through different menus in the function edit
  mode.

3.3-4 DOWN BUTTON (#11)

1) Short Touch

- In the standby mode, press this button briefly to move to the
  previous lower main volume level.
  In the function edit mode, press briefly to shift from the
  current option in each submenu to the previous option in the same
  submenu.

2) Long Touch

- Pressing this button for more than 1.5 seconds will allow you to
  navigate at a more rapid rate through different volume level in
  the standby mode or through different menus in the function edit
  mode.

3.3-5 PUSH-TO-TALK (PTT) BUTTON (#4)

- Press it firmly and speak into the Built-in Microphone (#9) to
  transmit.
  The red Tx LED Indicator at the right side of the LCD Panel (#8)
  will light.

- Release it to revert to standby mode. When an incoming call is
  received, the green Rx LED Indicator on the left side of the LCD
  Panel (#10) will light.

- 2-Way Call Ringer
  : Press the PTT Button twice quickly to call another party on the
  same channel.
  The word CALL and the Tx icon will appear in the display.
  The user selected call ringer melody will play.

3.3-6 MONITOR BUTTON (#2)

- Press it to check activity on the current channel before you try to transmit.

- Adjust the Volume Control (#10, #11) if necessary.

- When you press the Monitor Button, the LCD Panel (#8) will be illuminated with an amber color back-light and both the Tx and Rx LED Indicators will light.

- If you press the Monitor Button during the function edit mode, you will return to standby mode directly.

3.3-7 EXTERNAL MIC/SPEAKER (#6)

- This jack accepts an optional headset/microphone for totally handsfree operation.
  Please refer to the enclosed Accessory Order Form to order accessories.
  See also section regarding VOX SELECTION MODE.

3.4 Setting and Operation

3.4-1 BASIC CHANNEL SELECTION

In order to communicate with other PMR units, both you and the receiving party must be on the same channel.
JSP-408HF has 8 channels (1-8) as indicated by the large digits in the LCD Display Panel (#8). Before, trying to transmit on the selected channel, you should press the Monitor Button (#2) to check the activity on that channel. If someone is already on the selected channel, you should try another channel that is clear.
To change the basic channel,
- In the standby mode, 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.

3.4-2 CTCSS (Coded Tone Controlled Squelch System) SUB-CHANNEL SELECTION MODE

This feature allows you to utilize a less used channel range (00-38) within a main channel. This enables you to communicate with another party on the same main channel using the same subcode. This helps to avoid congestion on the main channel and filters out unwanted noise and static.

There are 38 CTCSS subchannels for each main channel.

To change the CTCSS subchannel,

- Press the Function Button (#12) until the word cTc appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to choose the desired subchannel to use. The corresponding subcode frequency will be displayed in the lower right corner.
- Press the Enter Button (#13) to confirm your selection.

NOTE: To communicate with other LPD units, they must be switched to the same channel and CTCSS subcode.
To communicate with other LPD units that do not have subcodes, switch your unit to the same channel with the subcode set to OFF.

3.4-3 AUTO CHANNEL SCAN MODE

This feature allows you to scan for an active channel and communicate with the party transmitting.

To access the Auto Channel Scan menu,

- Press the Function Button (#12) until the auto channel icon blinks and SC appears in the LCD Panel (#8).
- Press the Up Button (#10) or the Down Button (#11) to choose scanning up or down from the current channel number.
- Press the Enter Button (#13) to confirm your selection.
- The unit will begin scanning for an active main channel.
  If a transmission is detected, the Rx and RSSI icons will appear in the LCD Panel (#8).
- To turn off the auto channel scan feature in the standby mode, simply press the Function Button (#12) once.

3.4-4 DUAL WATCH SCAN MODE

This feature allows you to monitor two different channels at the same
time.   If you pre-set any priority channel other than the current
channel in use, the pre-set channel will be scanned every 0.5 second
and signals you when a call is received.
To access the Dual Watch Scan menu,
  - Press the Function Button (#12) until the dual watch icon blinks
    and dW appears in the LCD Panel (#8).
  - Press the Up Button (#10) or the Down Button (#11) to select the
    desired channel number you wish to closely monitor.
  - Press the Enter Button (#13) to confirm your selection.
  - To turn off the dual watch feature in the standby mode, simply
    press the Function Button (#12) once.

3.4-5 VOX SELECTION MODE

The Voice Activated Transmission (VOX) function allows your voice to
activate transmission automatically when the Communicator is used with
the optional handsfree mic/headset (refer to enclosed Accessory Order
Form).   It also allows handsfree use when a mic/headset is not being
used without having to use the PTT Button (#4).
To access the VOX Selection menu,
  - Press the Function Button (#12) until the VOX icon blinks and UO
    appears in the LCD Panel (#8).
  - Press the Up Button (#10) or the Down Button (#11) to select from
    high, low or off.   High or low setting determines VOX response
    sensitivity.
  - Press the Enter Button (#13) to confirm your selection.
  - To turn off the VOX feature, enter the VOX selection mode and then
    select Off.

3.4-6 VOX RECOVERY TIME SELECTION MODE

This allows the response characteristics of the VOX function to be
precisely adjusted to suit individual needs.
To access the VOX Recovery Time Selection menu,
  - Press the Function Button (#12) until Udt appears in the LCD Panel
    (#8) with the VOX icon blinking.

- Press the Up Button (#10) or the Down Button (#11) to select from 5, 3, 2 or 1 second setting. This setting determines the delay time between transmitting and receiving.
- Press the Enter Button (#13) to confirm your selection.
- Please note you may need to try different VOX time settings to determine the best value to suit your speaking habit.
- To turn off the VOX feature, enter the VOX selection mode and then select Off.

3.4-7 AUTO KEY LOCK SELECTION MODE

This feature prevents accidental channel change and disturbance to the preferred settings of the Communicator. Auto Key Lock temporarily disables the Up, Down and Enter Buttons.
To access the Auto Key Lock Selection menu,
- Press the Function Button (#12) until the auto lock icon blinks and ALo appears in the LCD panel (#8).
- Press the Up Button (#10) or Down Button (#11) to select the Auto option.
- Press the ENTER key to confirm your selection.
- If you do not press any key for more than 15 seconds in the standby mode, all respective keys will automatically be locked.
- To turn the auto key lock on or off in standby mode, simply press and hold the Function Button (#12) for more than 1.5 seconds.
- To quickly activate the Auto Key Lock, hold the Function Button (#12) for more than 1.5 seconds.

3.4-8 CALL RINGER MELODY SELECTION MODE

This feature provides 7 user selectable call ringer melodies to alert you of a calling party.
To select your favorite Call Ringer melody,
- Press the Function Button (#12) until the call icon blinks and CAL appears in the LCD panel (#8).
- Press the Up Button (#10) or Down Button (#11) to preview the 7 available melodies.
- Press the ENTER key to confirm your selection.