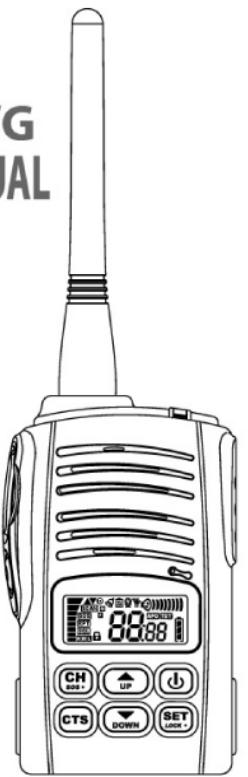


LP-4502E/G USER'S MANUAL



■ Thank you for purchasing LP-4502 2 way radio
Based on the ever-changing innovative technology ,we have been developing many different wireless products which had gained consumers' affection widely. Besides our appreciation for your love of our products, we even wish you to find new product information from us. Your precious ideas will be cherished by us.

Please read through the manual carefully for many features of this model.

This manual is applicable for PMR (for European countries) and GMRS (for United States) specification type. Sticker on back of radio specifies classification of PMR type (4502E) or GMRS type (4502G).

■ Distinctive features :

- Use of TCXO resonator to enhance freq. stability
- Digitally designed to ensure stable quality
- Extra-small size with sturdy case, compliant with US military standards
- 7 tone calls & amateur's MORSE code
- 8 levels of VOX (voice-activate feature) with quick VOX capability ON/OFF
- 3 steps auto-power save modes/ 4 steps auto-power-off/ 4 steps time-out-timer
- Both channel and freq. scan features
- 1 hazard channel and 1 memory channel setting
- TX/RX Different channels
- 14 Channels with 38 group-codes (CTCSS) on each channel
- Multi-Icon Backlit LCD screen
- Roger Tone ON/OFF

■ RADIO CONTROLS/FUNCTIONS

LP-4502



1. LED indicator 8. Power key
2. External speaker jack 9. Function key
3. External microphone jack 10. Down key
4. Speaker area 11. CTCSS key
5. Microphone 12. Channel key
6. LCD screen 13. Monitor/ back light key
7. UP key 14. PTT (Push-to-talk) key
15. Antenna

■ ICONS GUIDE



Tone call
 Auto-Power Save
 VOX(Voice-activate system)
 Keypad tone
 Volume
 Auto Power-Off
 TX Time-Out Timer
 Battery power
 CTCSS number
 Channel number
 Squelch level
 KEYPAD lock
 TX power (This isn't shown for PMR Type)
 Hazard (Emergency) channel
 Memory Channel
 Scanning
 Signal strength indicator
 TX/RX Different channels
 Dual channel watch
 Repeater mode enabled (for GMRS Type)

■ Operation Guide

1. Power ON/OFF

Hold  about 0.5 sec to power radio. While power ON, hold  about 1.5 sec to turn power OFF.

2. Transmitting/ Receiving



While holding , speak to the microphone area. LED glows red during transmission. To receive, release . LED glows green when receiving.

※ Keep about 10 cm from microphone area when speaking slowly and clearly.

3. Volume adjustment



Momentarily press repeatedly on , to adjust volume louder. Momentarily press repeatedly on , to adjust volume lower. Press and hold  or  to swiftly adjust volume. Do adjustment as you need.

※ Caution: For external mic/ear user, adjust volume , starting from lowest level.

4

4. Channel selection



Momentarily press . While channel icon blinks, temporarily press repeatedly on  or  to select channel. To preset channel, temporarily press  or .

5. Scan Channel



Momentarily press . While channel icon blinks, hold on  or  about 2 sec. to start scanning of channel. Jumping of channel numbers increasingly or decreasingly indicates scan in progress . Scan stops when its detects a busy channel. Temporarily press on  or  will disable scan and select the final busy channel.

※ Note: To Scan, turn off CTCSS codes.

6. CTCSS ON/OFF



Hold on  for about 2 sec, to enable CTCSS. Hold on  again for about 2 sec to disable. While CTCSS is enabled, press temporarily  /  repeatedly to select CTCSS.

5

7. LCD back light ON/OFF

Temporarily press  to turn backlight ON. Temporarily press  again to turn backlight OFF or it will automatically turn OFF after 5 sec. lighting.

8. Monitoring

Hold on  for about 1 sec. Static is heard if the channel is clear or any voice on this channel can be heard regardless of CTCSS settings . LED glows green.

※ Monitor is used for following purposes.

- To receive weak signal due to distance or for signal intermittently received
- To receive all signals on same channel even with different CTCSS

9. Keypad lock /unlock



Hold on  for about 3 sec till  shows on the screen to confirm keypad lock is enabled. To unlock keypad ,hold on  again for about 3 sec till  clear from the screen.

※ When keypad lock is enabled, volume control and program features are locked to prevent accidental function changes.

10. Function settings



Temporarily press  to enable manu mode on screen . Use  /  to scroll manu item between 1 and 9.

F 1. Tone call selction: Under manu item 1, tone call 1 ~ 7 can be selected. Factory default is at 1 .



F 2. Power save mode selection. Under manu item 2, power save modes 1-1 ~ 1-3 can be selected. Choose 1-3 if talk time is short for best power saving .Factory default is OFF.



F 3. VOX ON/OFF selection :Under manu item 3, VOX on/off can be selected. Factory default is OFF.



F 4. VOX's sensitivity : Under manu item 4, VOX's sensitivity can be selected 1~8 levels. L8 is least sensitive (Refer to 12). Note; If VOX is disabled in F.3, this features is automatically disabled . Skip F4 and proceed with F5 setting.



F 5. TX/RX different channels ON/OFF: Under manu item 5, this feature enabled or disabled.



F 6. Keypad tones: Under manu item 6, select ON/OFF. The factory default is ON. The beep sounds very weakly at OFF.



F 7. Auto-power-off: Under manu item 7, choose OFF/03/10/30/60 min. depending your need. The factory default is OFF. If 03 is selected, the radio automatically turns power off if none of the key is operated or no signal received after 3 min.



8

F 8. Time-Out Timer :Under manu item 8, choose OFF/30/60/120/180 depending your need. The factory default is OFF. If 30 is selected, the radio will stop transmission if continuous talk exceeds over 30 sec. and radio will automatically will swift to receiving mode.



F 9. Squelch setting: The factory default is 3. If the squelch is set at 0, the static sound is heard all the time. If setting at 1, radio is best to pick up weak signal but susceptible to interferences. Squelch 9 is the least sensitive and suited for use against high interferences. Under manu item 9, choose squelch level 1 to 9 depending on your need.



F 10. Repeater ON/OFF



When this features is enabled, operating channels will be on Ch15 ~ 22 for GMRS type. Transmitting is done on different frequency (5 Mhz + preset channel freq.)

* This feature is applicable on GMRS type.

F 11. Roger Tone ON/OFF

9

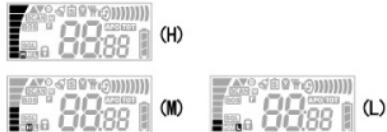
11. Tone call

Holding **PTT**, temporarily press **CTS** to send tone call to other receivers. (For selection of tone call, refer to **F 1**.)

12. VOX (Voice activate transmission feature) ON/OFF

Holding PTT, temporarily press **SET** to enable VOX. To disable it, holding PTT, temporarily press again **SET**. For programming of VOX's sensitivity, refer to **F 4**.

※ While VOX is enabled, press of PTT is no longer required during transmission. Just talk into the microphone area of radio unit with appropriate sound (depending on VOX's sensitivity).

13. TX Power adjustment

Holding **PTT**, temporarily press **UP** / **DOWN** to select for option of H/M/L. Select H for

10

high TX power, M for medium and L for low. When the battery is low, beep can be heard when PTT is pressed. The radio will automatically change to self-adjusted TX power (L or M level).

※ TX power (This isn't shown for PMR Type)

14. TX/RX Different channels

Holding **PTT**, temporarily press **CH** till LCD screen shows **M** + **Y** to enable this feature. To disable, hold **PTT** and temporarily press **CH** till **M** + **Y** disappears from LCD screen.

※ When this feature is enabled, if transmission is done on this memory channel, incoming signal is received on the preset channel. Or vice versa.

15. Memory channel

1. Holding **CH**, temporarily press **DOWN** to select memory channel. The memory channel is marked with a **M**. (Refer to 18 for setting of memory channel.)

11

2. Holding **CH**, temporarily **UP** press, to restore to preset channel.

※ The factory default is CH01 and CTCSS off.

16. Hazard (emergency) channel



Hold **CH** for about 3 sec to enable hazard channel till **SOS** shows on LCD. To disable hazard channel, hold **CH** for about 3 sec till **SOS** disappears. For GMRS, the factory default is CH20 and CTCSS at 22.

For PMR the default is CH01 and CTCSS off.

17. Use of dual channel watch (preset and memory channels)



Press temporarily **CH** till Channel number blinks. Hold both **UP** and **DOWN** simultaneously about 1 sec and release them to enable this feature. The preset and memory channel blink each time on LCD. When signal on these channels is received, sound can be heard, and the receiving channel is seen on the LCD. This channel is fixed about 8 sec. to reply. After 8 sec if no signal is received, channel rotation begins.

To select channel for use during channel rotation, temporarily PTT if the desired channel is seen. This channel is on standby for about 8 sec before channel rotation begins.

To disable this, temporarily press both **CH** and **SET** simultaneously.

18. Setting of memory and hazard channels

1. Select favorite channel and CTCSS (channel) (CTCSS)



2. Hold **CH** and **SET** simultaneously first. With **CH** still being hold, release **SET** and temporarily press **UP** / **DOWN** repeatedly till **M** or **SOS** shows on the screen.

(**M** shows the memory channel. **SOS** shows the hazard channel.)



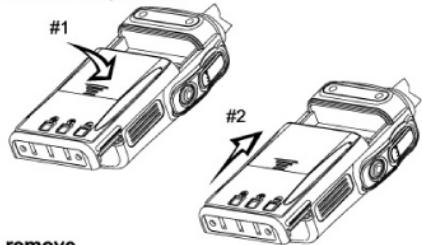
3. When favorite channel shows, temporarily press **SET** to select it.

4. After memorization, release **CH** to jump out memorization mode.

■ INSTALLING/REMOVING BATTERY PACK

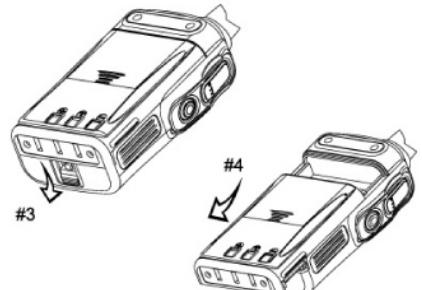
To install

- 1 Place battery pack into battery compartment as in illus # 1.
- 2 Push battery pack forward as in illus # 2. It will lock into compartment.



To remove

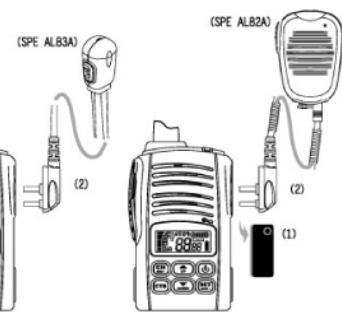
- 1 Holding radio in one hand, push down battery latch as in illus # 3
- 2 Slide battery pack backwards as in illus # 4.



14

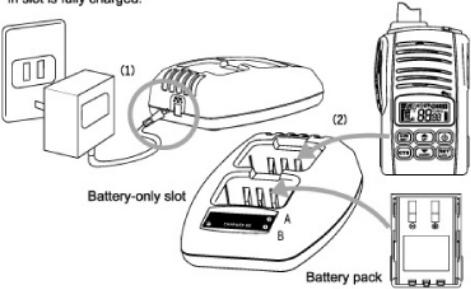
■ USE OF INTERNAL MIC/SPEAKER

- 1 Remove accessory jack cover
- 2 Insert accessory jack
- 3 Fix accessory with the screws



■ Battery charging

Power drop-in charger with standard AC/DC wall charger. Drop in radio installed with battery into the battery-with-radio slot. Spare battery pack into the battery-only slot. Single or dual charging is possible. Each LED light individually indicates charging slot in process. LED turns off when battery in slot is fully charged.



15

■ GMRS Type channel number with frequency

channel	GMRS/FRS Frequency(MHz)	channel	FRS Frequency(MHz)
1	462.5625	8	467.5625
2	462.5875	9	467.5875
3	462.6125	10	467.6125
4	462.6375	11	467.6375
5	462.6625	12	467.6625
6	462.6875	13	467.6875
7	462.7125	14	467.7125
channel	GMRS Frequency(MHz)	Reteater ON Tx Frequency(MHz)	
15	462.550	467.550	
16	462.575	467.575	
17	462.600	467.600	
18	462.625	467.625	
19	462.650	467.650	
20	462.675	467.675	
21	462.700	467.700	
22	462.725	467.725	

■ PMR Type channel number with frequency

The ranges of frequency are only for Europe PMR446

channel	Frequency(MHz)	channel	Frequency(MHz)
1	446.00625	5	446.05625.
2	446.01875	6	446.06875
3	446.03125	7	446.08125
4	446.04375	8	446.09375

■ CTCSS vs frequency

01=67.0Hz	11=97.4Hz	21=136.5Hz	31=192.8Hz
02=71.9Hz	12=100.0Hz	22=141.3Hz	32=203.5Hz
03=74.4Hz	13=103.5Hz	23=146.2Hz	33=210.7Hz
04=77.0Hz	14=107.2Hz	24=151.4Hz	34=218.1Hz
05=79.7Hz	15=110.9Hz	25=156.7Hz	35=225.7Hz
06=82.5Hz	16=114.8Hz	26=162.2Hz	36=233.6Hz
07=85.4Hz	17=118.8Hz	27=167.9Hz	37=241.8Hz
08=88.5Hz	18=123.0Hz	28=173.8Hz	38=250.3Hz
09=91.5Hz	19=127.3Hz	29=179.9Hz	
10=94.8Hz	20=131.8Hz	30=186.2Hz	

■ Specifications

Mode	: FM (F3E)
Frequency stability	: ± 2.5 kHz
Frequency resolution	: 12.5 kHz
Power supply requirements	: optional BPF80 DC:7.2V (negative ground)
RX Current	: Less than 40 mA(Auto Save Off)
Operating temp. range	: -30°C to +70°C
Number of CTCSS frequency	: 38 (67.0 - 250.3 Hz)
Weight (includes BT FR80)	: 250 g
TX Output power Current	HI: Less than 2 W ERP(GMRS Only) M: Less than 1 W ERP(GMRS Only) L: Less than 0.5 W ERP
Audio output power	: More than 500 mW
Sensitivity (12 dB SINAD)	: Less than 0.22 μ V
External microphone connector	: 3-conductor 2.5 (d) mm
External SP connector	: 2-conductor 3.5 (d) mm
Max.SAR value	
GMRS (Part 95A)	: 1.497 mW/g @ Body-worn position : 0.755 mW/g @ Face-held position
FRS (Part 95B)	: 0.728 mW/g @ Body-worn position : 0.416 mW/g @ Face-held position

■ Optional Accessories

- **BT FR80**
Ni-MH Battery Pack 7.2 V/700 mAh
- **L CHG-80**
Twin Charger
- **ADA 12V**
600mA Adapter
- **SPE AL82A**
External Speaker/Microphone with LED
- **SPE AL83A**
External Earphone/Microphone with LED

■ Safety information

1. Self-replacing or re-structuring of any parts by is legally not permitted or will lose license
2. Use is prohibited at restricted environment declared by authority ,during flight, highly-explosive area like near mining areas
3. Avoid storing in high temperature or humid place for long time
4. Turn to lowest volume if external Mic/Speaker is used, then adjust appropriately
5. If strange smell or smoke comes off from radio, dispatch to service center immediately
6. Never use other power sources for charging other than the standard charger set designed for this radio model
7. Take off battery pack if out of use for long time

- CAUTION! - IMPORTANT SAFETY INFORMATION!

Your wireless hand-held portable transceiver contains a radio frequency transmitter. When the PTT button is pushed, the transmitter sends out RF signals. The device is authorized to operate at a transmit duty factor not exceeding 50% using alkaline "AAA" size batteries to comply with Federal Communications Commissions (FCC) RF exposure safety level guidelines for hand-held wireless devices. For body-worn operation, this device has been tested for SAR (Specific Absorption Rate) and meets the FCC RF exposure guidelines when used with the accessories supplied or designated for this device by the manufacturer. Use of other accessories may not ensure compliance with FCC RF exposure guidelines. Use the manufacturer-supplied antenna only. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations. To maintain compliance with the FCC'S RF exposure guidelines, hold the transceiver at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away.

GMRS License

Use of GMRS radios within the United States requires a FCC GMRS license. An individual of 18 years of age or older, who is not a representative of a foreign government is eligible to apply for a GMRS system license. You will need two forms from the FCC - FCC FORM 159 and FCC Form 605 Main Form and Schedule F.

You can find the forms online at <http://www.fcc.gov/formpage.html> or call 1-800-418-3676.

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