

Wintec

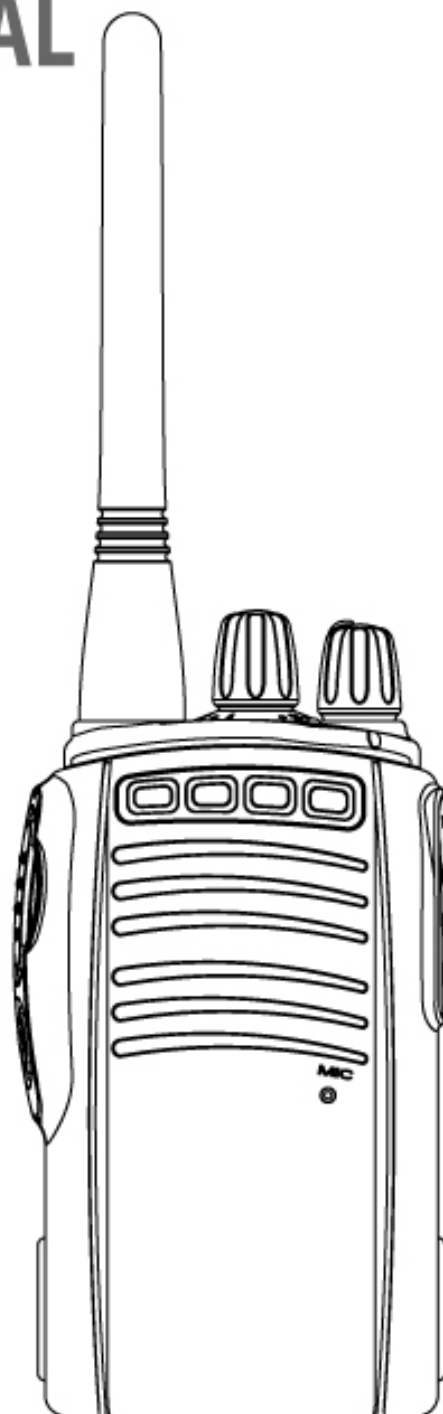
LP-4604/4605 USER'S MANUAL

LP-4604

(UHF PROFESSIONAL FM
TRANSCEIVER)

LP-4605

(VHF PROFESSIONAL FM
TRANSCEIVER)



■ Thank you for purchasing LP-4604/4605 2 way radio manufactured by Wintecroncs. Based on the ever-changing innovative technology, we have been able to develop many different wireless products that have gained widely consumers' affection. Besides our appreciation for your love of our products, we even wish you to be attentive to new product information. Your precious comment will be appreciated by us.

Please read through the manual carefully to learn whole features of this model.

■ CERTIFICATE APPROVAL

FCID:NJQLP-4604

CE 0700 !

■ APPLICABLE MODEL FOR THIS MANUAL

LP-4604

LP-4605

■ Safety Warning

Consumers need to understand clearly about safety in the use of product Turn off power before fueling or parking at the gas station.

■ Recycle marking



CE



Contents

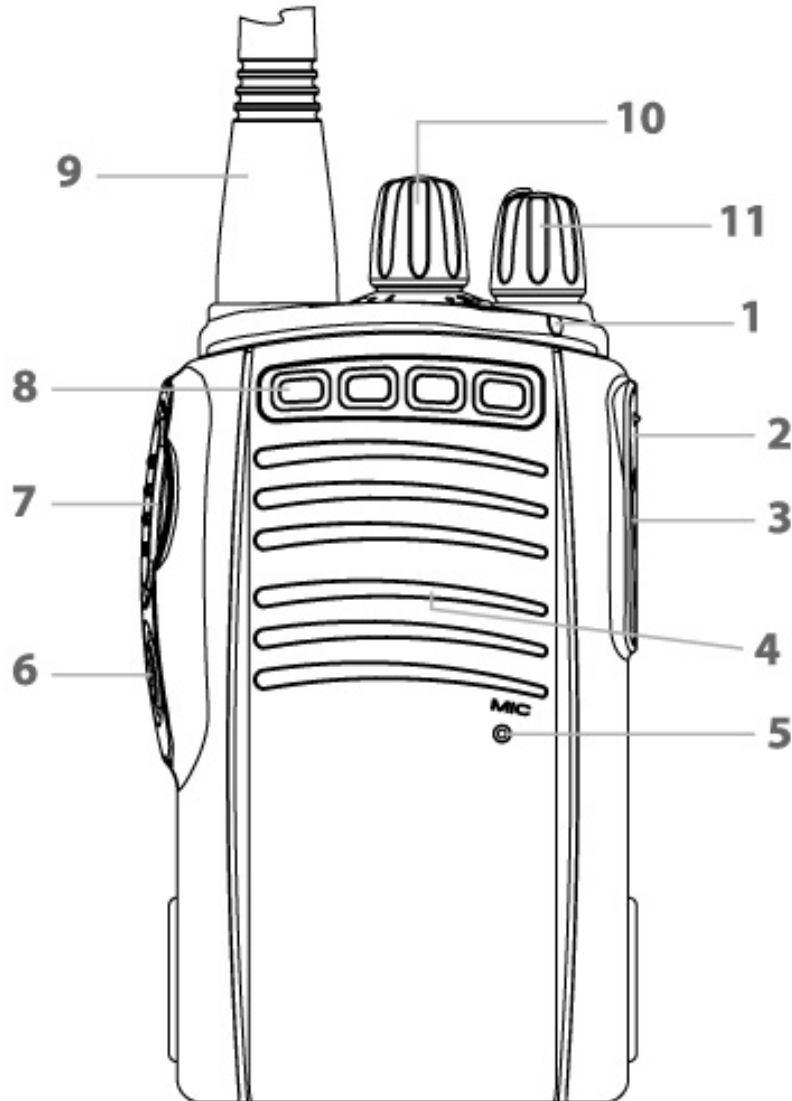
<input type="checkbox"/>	FEATURES	1
<input type="checkbox"/>	RADIO CONTROLS/FUNCTIONS	2
<input type="checkbox"/>	OPERATION GUIDE	3-5
▶	1、Power On/Off	3
▶	2、Receiving/Transmitting	3
▶	3、Adjusting Volume	3
▶	4、Assignment of channels	3
▶	5、Channel Scanning	4
▶	6、Priority Channel Scanning	4
▶	7、VOX ON/OFF	5
▶	8、Sensitivity adjustment of VOX	5
<input type="checkbox"/>	REMOVING OF BATTERY	6
<input type="checkbox"/>	EXTERNAL SPEAKER/ EARPHONE	7
<input type="checkbox"/>	SPECIFICATIONS	8
<input type="checkbox"/>	PROGRAMMABLE FUCTIONS	
	INTRODUCTION	9
<input type="checkbox"/>	OTHER PROGRAMMABLE FUCTIONS	
	INTRODUCTION	10
<input type="checkbox"/>	PROGRAMMABLE KEYPAD CONTROLS	
	AND FUCTIONS	11
<input type="checkbox"/>	FACTROY ADJUSTMENT	12
<input type="checkbox"/>	OPTIONAL ACCESSORIES	13
<input type="checkbox"/>	SPECIAL NOTES	14
<input type="checkbox"/>	LOW BATTERY WARNING	14

■ Features

- Wide frequency coverage that suits application in many countries.
- 16 programmable channels and 5 programming keypads
- Internal TCXO resonator to enhance freq. stability
- Digitally designed to ensure stable quality
- Extra-small size in rugged case, compliant with US military environment test
- Signal light indicator ON/OFF
- Independent TX/RX CTS/DCS
- Narrow band (2.5K)/ Wide band (5K) programmable options.
- 16 steps of VOX (voice-activated feature)
- Programmable PRI / SOS/SCAN channel function.
- Multiple programmable functions
- Compliant with ROHS

■ RADIO CONTROLS/FUNCTIONS

LP-4604/4605



- | | |
|---------------------------|--|
| 1. LED Indicator | 7. (Push-to-talk) PTT button |
| 2. External Speaker Jack | 8. Programmable Keypad P1~P4 |
| 3. External Mic Jack | 9. Antenna |
| 4. Speaker | 10. 16 programmable channel
switch On/Off |
| 5. Mic | 11. Power Switch/ Volume Control |
| 6. Programmable keypad P0 | |

■ Operation Guide

1. Power On/Off

Rotate the Power switch/ volume control knob clockwise to switch power ON. When the click sound of switch and the melody is heard, the transceiver is powered..

Rotate the Power switch/Volume control knob counterclockwise to switch power OFF.

When the click sound of switch is heard, transceiver's power is turned off.

2. Receiving/Transmitting

Rotate the Channel Control knob to the desired channel, press and hold PTT button. The LED lamp turns red during transmission. Talk to the speaker microphone from a distance of 10 cm. Release PTT button for the transceiver for receiving. During receiving, LED light turns on green.

3. Adjusting Volume

For the adjustment of volume, rotate the Power / Volume control knob in clockwise direction to increase volume. Rotate Power/Volume knob counterwise to decreases volume. Rotate the Power switch/Volume knob slowly to avoid outburst of sound harmful to ears. Too low volume might miss users' attention. Adjust volume to an appropriate level.

4. Assignment of channels

This function can only be programmed by the dealers.

There are channels 1 ~ 16 selectable by Channel

knob.

All such 16 Channels are dealer-programmable for authorized use by consumers. In other words, if consumer tries to adjust to any unauthorized channel, speaker sounds beeps and LED lamp turn on orange.

5. Channel Scanning

****This is dealer-programmable function to allow the dealers to use ****

During programming, assign desired channels as "Scan add".

EX: If channels CH1, CH2 ,CH5, CH9, CH12 are assigned as "Scan add", these channels will be scanned in this sequence continuously till a busy channel is found. Transceiver will stay on that busy channel for reception or to transmit. It will again go on scanning after 3 sec at the end of reception or radio-communication. The scanning will continue until channel knob is rotated (or) scan button is hold on. While there is no signal and if PTT is pushed, transmission is done from self original channel.

6. Prority Channel Scanning

****This dealer-programmable function can be activated by the dealers by selecting PRI CH ****

During programming, assign a channel as "PRI.CH" and "Scan add". Transceiver will scan these channels interchangeably .

Ex: If channel 1 is assigned to be "PRI.CH" and CH1, CH2, CH5, CH6S assigned to be "Scan add ", scan sequence will be CH1(P), CH1, CH1(P), CH2 ,CH1(P) ,CH5, CH1(P),CH6, CH1(P). The scanning will continue until channel knob is rotated (or) scan

button is hold on. During scanning, if busy channel is found, transceiver stops scanning to allow radio-communication. It will continue scanning after 3 sec from the end of reception or transmission.

If scanned-out channel is not priority channel, the transceiver will leave it for 3 sec and will stay standby on priority channel to check if there is any signal. It will change to "Add Ch" after 3 sec from the end of reception or radio-communication. While there is no signal and if PTT is pushed, transmission is done from priority channel.

7. VOX ON/OFF

**This is dealer-programmable function to allow the dealers to use **

To activate this, press and hold PTT and push P0 simultaneously. To deactivate, repeat the same procedure. A ding-dong melody will be heard at the end of activation and deactivation of VOX.

8. Sensitivity adjustment of VOX

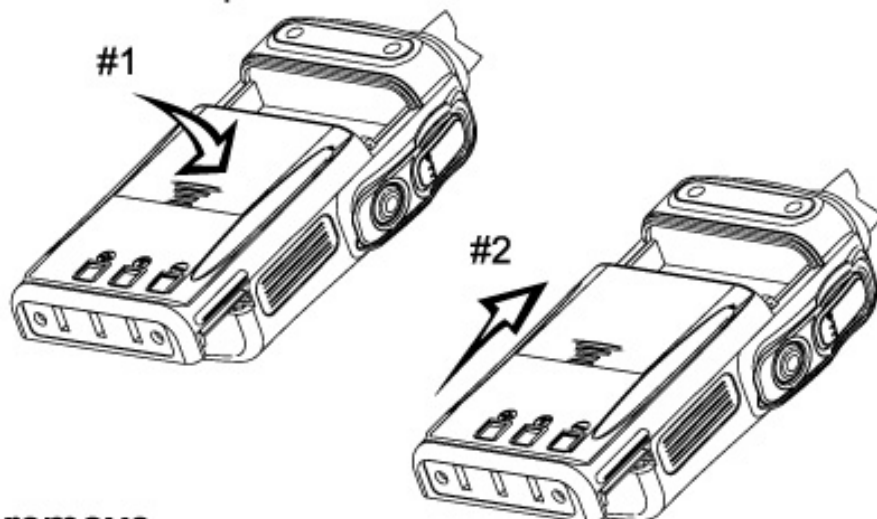
Press and hold P0 and simultaneously turn on the power and wait for 3 sec to activate VOX adjustment mode (Following 3 beeps, and the red LED lamp will flash three times)

Use Channel knob to select 1~16 sensitivity level of VOX (1 being the highest, 16 being the lowest in sensitivity.) Talk to MIC speaker to find suitable sensitivity level (VOX will send out a short beep at the beginning of operation, the LED lamp turns red without transmitting) When desired sensitivity is reached, press and hold P0 button. One beep can be heard when transceiver complete setting and exists VOX adjustment mode.

■ INSTALLING/REMOVING BATTERY PACK

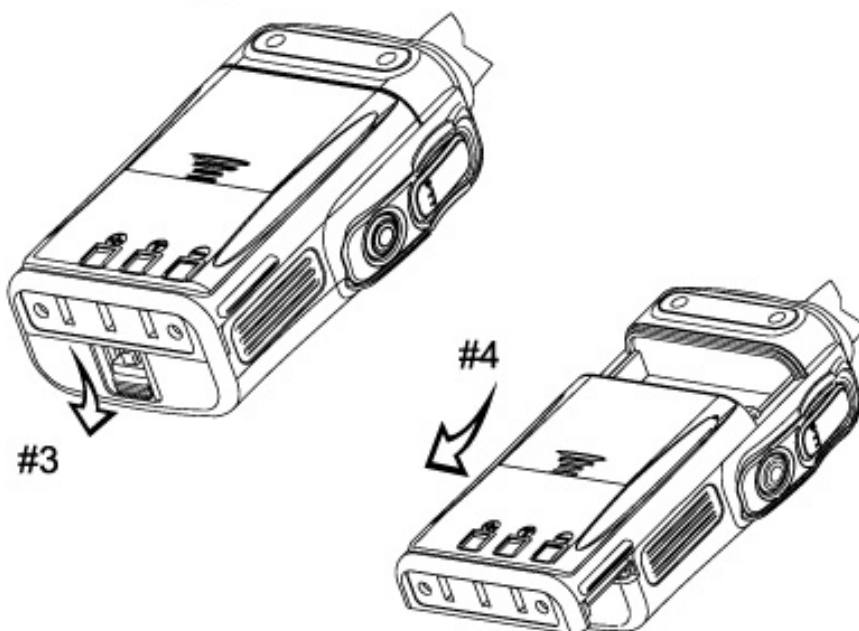
To install

- 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.



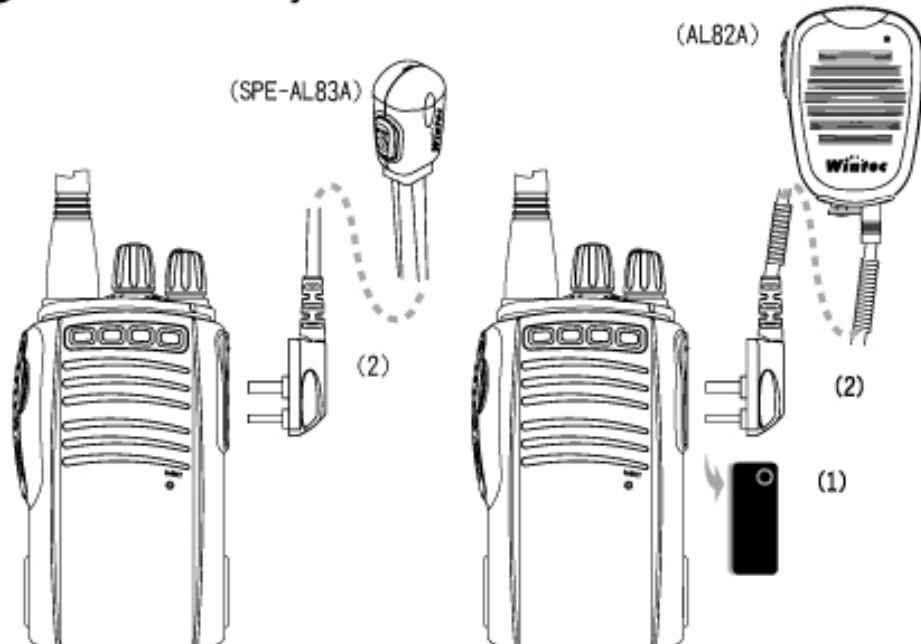
To remove

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



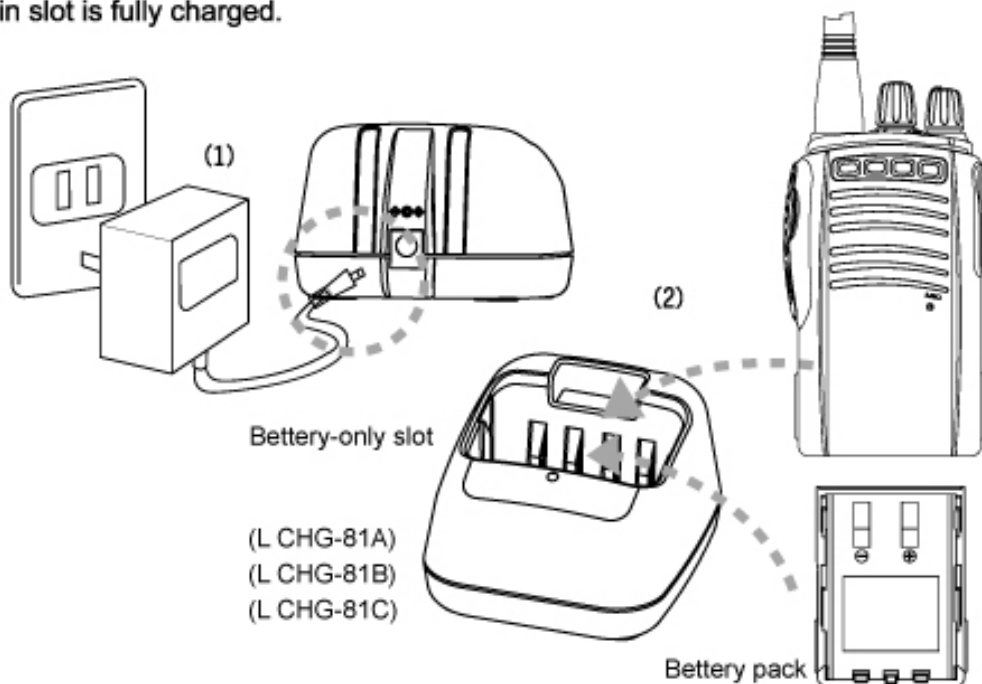
■ USE OF EXTERNAL MIC/SPEAKER

- 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.



■ Specifications

General

Frequency Range (4605) - - - - - 135~175MHz

(4604) - - - - - 400~480MHz

Number of Channels - - - - - 16

CTCSS/DCS Tone

Mode - - - - - FM

Resistance - - - - - 8ohm 0.6W

Power Supply Voltage - - - - - optional BPF80 DC:7.2V

Dimensions - - - - - 55(W)x95(H)x31(D)mm

Weight - - - - - 250g (includes BT FR80)

Operating Temperature Range - - - - - -30 C~+80 C

Receiver

Sensitivity(12dB Sinad) - - - - - 0.20uV

Current Drain - - - - - Less than40mA

Transmitter

Output Power(LP-4605) - - - - - MAX:VHF 5W@7.2VDC

(LP-4604) - - - - - MAX:UHF 4W@7.2VDC

Current Drain(LP-4605) - - - - - $1.6 \pm 0.2A @ 5W$

(LP-4604) - - - - - $1.6 \pm 0.2A @ 4W$

■ OPERATION GUID

Introduction to programmable functions (Use WPG-46A software for programming)

Programmable items	Explanation
TX Frequency	The TX step-up freq at 5Khz within 400~480 MHz
RX Frequency	The RX step-up freq at 5Khz within 400~480 MHz
CTS/DCS ENC	CTS/DCS ENC is programmable to " OFF", CTS(1~50)/DCS(51~55)/DCS reverse (156~258)
CTS/DCS/ DEC	CTS/DCS DEC is programmable to "OFF", CTS(1~50)/DCS(51~55)/DCS reverse (156~258)
TX power selection	TX power is selectable to LOW or HI
W/N band selection	RX/TX is selectable to Narrow Band (2.5KHz) Or Wide Band (5KHz)
Scan ADD	Desired channel numbers can be added to " Scan ADD". If this function is activated, continuous scanning will only be done on these channels. Scanning will skip other channels which are not added to "Scan ADD"
PRI Channel setting	<ol style="list-style-type: none">1. Priority cannel number must be selected before this function is activated.2. When this function is activated, priority channel will automatically be scanned and transmission is done from it.
SOS Channel	Firstly select a channel as SOS channel. When this function is activated, the SOS channel will automatically be scanned for transmission on that channel.
BUSY Ch	If activated, each time before transmitting, transceiver will firstly check if the channel is occupied. Transmission on a busy channel will be prevented. In other words, transmission can be done only when that channel is un-occupied.

■ Other Programmable Functions (For Dealers)

Other programmable features	Explanation
CALL TONE	1. Tone call is selectable B1~B7 (default at B1) 2. B7 tone is 1750 Hz(for repeater use)
POWER SAVE MODE	POWER SAVE MODE selectable OFF~1:1, 1:2, 1:3, 1:4 (Default 1:2)
VOX transmission	VOX TX selectable ON/OFF (Default at OFF)
VOX SENSITIVITY	VOX TX SENSITIVITY is selectable L1~L16 (Default at L5)
KEY PAD TONES	KEY PAD TONES is selectable to ON/OFF (Default at ON)
APO	AUTO POWER OFF is selectable to 03, 10, 30, 60 min (Default at OFF)
TOT	TIME OUT TIMER is selectable to 30, 60, 120, 180 sec (Default at OFF)
SQUELCH LEVEL	SQUELCH LEVEL is selectable to L0~L9 (Default at L3)
ROGER TONE	ROGER TONE is selectable to ON/OFF Beep tone will be heard at the end of the each transmission
CHANNEL SECTOR SELECT	Channel Sector Selection: Optional programmable channel selectable 1~15 fixed channel (Default at programmable Chs)
MONITER TYPE SEL	Monitor mode A: If this mode selected and turned On, the monitoring function works. When released the MONITER TYPE SEL -function button, the monitoring is OFF. For Monitor B: if this mode is selected and turned On, the monitoring function works continuously . Push MONITER TYPE SEL -function button again to disable it.
VOX FUNC DISABLED	VOX can be disabled if not desired
EXT RX LED DISABLED	Only applicable with Mic/speaker made by Wintecronics. LED lamp turns on when receiving signal. This function can also be disabled.

■ Introduction of programmable functions

Programmable Function Items	Explanation
0: NO USE	Assign the button not to be used
1: MONITER	Press and hold Monitor-function button for 2 secs to activate the monitoring function (There are A, B modes selectable from the program function list.
2:TSQ/DSQ DISABLE	Press and hold TSQ/DSQ-function button for 2 secs to disable TSQ/DSQ code of the channel. Do the same procedure to restore original able mode
3: TO SOS CH	Press and hold the TO SOS CH-function button for 2 secs to switch from present Ch to SOS channel. Do the same procedure again or changing of CH to restore the original setting. (If SOS Ch is not selected in advance, this function is disabled.)
4: TO PRIO CH	Press and hold the TO PRIO CH-function button for 2 secs to switch from present Ch to Priority channel. Do the same procedure again or changing of CH to restore the original setting. (If Pri Ch is not be selected in advance, this function is disabled.)
5:PRI. CHANNEL SCAN	Press and hold the PRI CHANNEL SCAN-function button for 2 secs to enable Pri Ch Scan against other Chs. Do the same procedure again or changing of CH to restore the original setting. (If scanned Chs and Pri Ch are not selected in advance, this function is disabled.)
6:NOR. CHANNEL SCAN	Press and hold the NOR. CHANNEL SCAN-function button for 2 secs to enable Scan ADD channel scanning with Pri channel. Do the same procedure again or changing of CH to restore the original setting. (If Scan ADD and Pri Ch are not selected in advance, this function is disabled.)
7: CH & KEY LOCK	Press and hold the CH & KEY LOCK-function button for 2 secs to enable Ch & Key Lock. After that, Ch change or any button pressing will be followed by warning beep. To disable it, press and hold same button for 2 secs again. (PTT transmission can still be done even at key lock)
8: TX Power ADJ.	Press and hold TX Power ADJ-function button for 2 sec to change TX power modes. Hi Power mode is confirmed by 2 beeps and low power mode by 1 beep. Changing of Ch can restore to original setting.
9: CALL TONE	While pressing PTT button, temporarily push this button to transmit call tone. If the PTT is released and just push and hold this button for 2 sec, the selected call tone is heard. If you want "call tone" function assign to the P0 button, VOX FUNC must be set in advance. To DISABLE this function (it is necessary that VOX must be turned off all time),otherwise this function is disabled.

■ Dealers Programmable Functions

These functions are operable only by distributors for maintenance need. It is not intended for use by general consumers.

Factory programmable functions	Explanation
LOC OSC	LOC OSC frequency is adjustable value 0~255 (Default at 127)
TX LOW POWER	TX LOW POWER adjustment, value 0~255 (default 82)
TX HI POWER	TX HI POWER adjustment, value 0~255 (default 193)
TX CTCSS MODULATION	TX CTCSS MODULATION adjustment, value 0~31 (default 20)
SQL FINE ADJ.	SQL FINE adjustment, value -4dbm~+3dbm (default 0dbm)
MODULATION LEVEL ADJ.	MODULATION LEVEL adjustable 0~255 (Default at 200).

■ Function button P0~P4

(available on custom-made model only)

(This table shows function button by factory default . Function buttons can be re-arranged by programming.

Programmable Keypads	Default function
P0 function button	MONITER
P1 function button (only on custom-made model)	CH & KEY LOCK
P2 function button (only on custom-made model)	TX POWERADJ
P3 function button (only on custom-made model)	NORMAL CHANNEL SCAN
P4 function button (only on custom-made model)	TO SOS CH

■ OPTIONAL ACCESSORIES



ANT AL80
Antennas



LP-84M
Belt clip



PB AL01
Leather case



WI AL01
Interface cable for programming



LP-83A
Clip microphone earphone with LED indicator



LP-83B
Clip microphone earphone with LED indicator



LP-82A
Speaker microphone with LED indicator



BT FR80 700mA
Ni-MH battery pack



BT FR80Li 1300mA
Li-polymer battery pack



BT FR80C
Car adapters fake battery



LCHG-81A
Twin rapid charger for BT FR80



LCHG-81B
Rapid charger for BT FR80 & BT FR80Li



LCHG-81C
Regular charger for BT FR80

■ 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.

■ Low Battery Notice

1. When battery is low, you will hear a beep sound.for every transmission to remind user battery is low. At main time, power output will automatically change to M level automa.
2. When battery is extremely low, you will hear twice beep sounds for every transmission. At main time, power output will automatically change to Level automatically.
3. When battery is used up, radio will automatically turn OFF.

PK AL

MADE IN TAIWAN

ver.1