

**Recent**

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## INSTRUCTION MANUAL

**RS-628D**  
DUAL-BAND HANDHELD  
TRANSCEIVER



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QUANZHOU RISEN ELECTRONICS CO.,LTD.

## To the user:

Thanks for purchasing our transceiver. We believe it will provide great convenience to your work and life.

With novel design and stable performance, you will experience professional and humanized design from our transceiver. We believe that you will be satisfied with the quality and functions, and provide you with convenient, quick, reliable two way voice communication.

Please read the manual carefully before using the product, for better experience functionality and performance of this digital radio.

## User Instructions:

- Refer service to the well-trained professional technicians only. Do not disassemble the radio by yourselves.
- To avoid problems caused by electromagnetic interference or electromagnetic compatibility, please power off the radio at places where required, such as hospital and other health care sites, also when required by aircraft crew.
- When in car with airbag, do not put radio in the airbag expanded area.
- Power off the radio before entering flammable and explosive environment.
- Do not replace or charge battery in flammable and explosive environment.
- Power off the radio before approaching the blast zone and

lightning district.

- Do not use radio with damaged antenna, which contacts skin may cause minor burns.
- Ensure antenna well installed before using radio, radio will be damaged when transmitted without antenna installed.
- When transmitted, hold radio in the vertical state, keep microphone about 5cm away from mouth.
- When transmitted, keep antenna at least 2.5cm away from body.

## Battery:

- If some conductive materials on body contact with exposed battery terminal, they may be damaged and cause minor burns, including jewelry, keys and beaded necklace, they will short circuit the battery, rapidly warming and cause burn. Should be extremely cautious when put full charged battery in the pocket, wallet or other containers with metal objects. Can not be exposed to fire, disassembled and extrusion.
- Maximum ambient temperature for charger power supply or transformer should be no more than 40°C (104°F).
- Power off the radio when charging. Do not use radio while charging.
- Disconnect the charger when no need to charge, continuous charging will shorten battery life. Do not make charger as radio storage seat.

For optimum use and safety effects, we suggest replacing battery after one year use

# CONTENTS

<b>Unpacking and Checking Equipment</b>	1
Supplied Accesories	1
<b>Battery Information</b>	2
Charging Precautions	2
Charging the Battery	2
<b>Accessories Installation</b>	4
Install/Remove Battery Pack	4
Install Antenna	5
Install Belt Clip	5
Install External Loudspeaker/Microphone	6
<b>Getting Acquainted</b>	7
External View	7
Programmable Buttons	8
<b>Basic Operation</b>	9
Power on	9
Volume Adjustment	9
Zone Selection	9
Select Channel/User's ID/Talk Goup ID	9
<b>Initiate and Receive Call</b>	10
Receive and Reply Group Call	10
Receive and Reply Individual Call	10
Receive All Call	11
Initiate a Call	11
Initiate Call by Channel Knob	11
Initiate Group Call	11
Initiate Individual Call	12
Initiate All Call	12
Initiate Group Call or Individual Call by One-touch Call Key	12
<b>Emergency Alarm Function</b>	14
Receive Emergency Alarm	14
Reply Emergency Alarm	15

Send Emergency Alarm	15
Send Emergency Alarm with Call	15
Send Emergency Alarm with Following Voice	16
Restart Emergency Mode	17
Exit Emergency Mode	17
<b>Advanced Functions Operation</b>	19
Scan List	19
Scan Indication and Method	19
Start and Stop Scan	19
Scan Reply	19
Temporarily Remove Unwanted Channels during Scan	20
Messages	20
Send Quick Text	20
Setting	20
Squelch Level	20
Power Level	21
VOX	21
Tones/Alerts	21
Battery Power Indication	22
Talk Around	22
Lone Worker	22
Encryption	23
Encryption Setting	23
Encryption Switch	23
DTMF	23
Remote Kill \ Activate	23
Analog Channels Send Remote Kill Code	24
Receive Remote Kill \ Activate	24
<b>Main Technical Specifications</b>	25
<b>Troubleshooting</b>	26

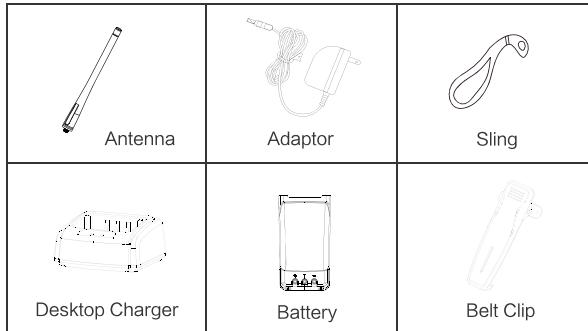
### Main Functions Features:

- Support Digital/Analog Modes
- Multi-call Modes: Individual Call, Group Call, All Call
- Emergency Alarm Function
- Call Voice Encryption
- DTMF Encoding and Decoding
- Support Dual Priority Channel Scan in Analog/ Digital Modes

### ■ Supplied Accesories

Please carefully unpack the product and check the main equipment and accessories listed in the following table. If any items are missing or have been damaged during shipment, please contact the dealer immediately.

Items	Quantity
Radio	1
Antenna	1
Adaptor	1
Sling	1
Desktop Charger	1
Battery	1
Belt Clip (With Screws)	1



## Battery Information

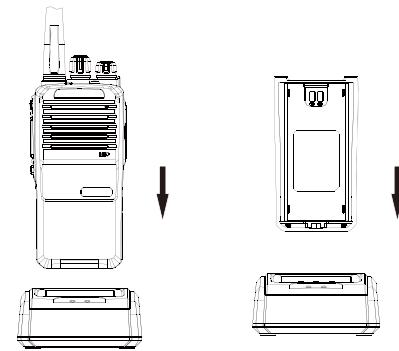
### ■ Charging Precautions

Please charge the battery before using new or long time no used radio. Charge and discharge cycle two or three times will make battery capacity to achieve the best state. When battery power low, need charge the battery or replace with new one.

1. Do not short circuit the battery terminals or put it into fire.
2. Radio with battery can be charged also, but need to power off to ensure full charge.
3. Do not put radio and battery on desktop charger when no need to charge, continuous charging will shorten battery life.
4. Do not put full charged battery back on desktop charger, this will significantly reduce battery cycle life.
5. Put battery in indoor environment of over 25°C if possible, battery easy to fail when temperature is lower than -10°C for long time.  
When temperature higher than 35°C or lower than -10°C, battery discharge capacity may be reduced, this is determined by the physical characteristics of lithium batteries.

### ■ Charging the Battery

1. Well connect supplied adaptor output cable and desktop charger, connect adaptor to AC power, light up red light and green light simultaneously for 2 seconds then out, indicating normal connection.
2. Insert battery pack or transceiver with battery into battery grove, make sure well connected and stable, charger red light on, start charging.  
Green light on and red light out when full charging.
3. Keep charging for one more hour when green light on to optimal battery performance.



#### ※ Notice:

It is suggested to power off before charging, or else battery status can't be well judged by charger and charging time will be extened.

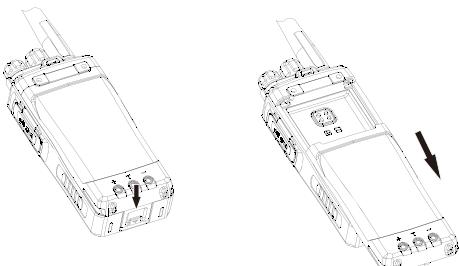
## Accessories Installation

### ■ Install/Remove Battery Pack

1. Align battery protruding upper two bits with corresponding upper slots on radio aluminum shell, push forward into slots.
2. Press down battery low end until hearing clicked sound when locked by push clip.



3. Press push clip downwards to remove battery pack from radio.



#### ※ Notice:

- Never short circuit battery terminal and throw battery in fire.
- Never try to disassemble battery shell.

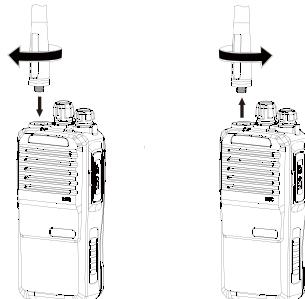
### ■ Install Antenna

#### ◆ Install Antenna

Insert supplied antenna into antenna base, tighten antenna by rotating in clockwise direction until consistent with the base.

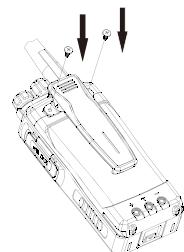
#### ◆ Remove Antenna

Rotate in anti-clockwise direction to remove antenna.



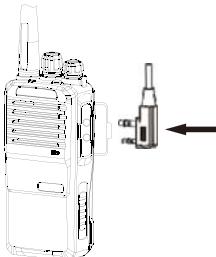
### ■ Install Belt Clip

Remove battery first and aim belt clip at two screw holes on equipment, then screw on by screwdriver. Unscrew to remove belt clip.

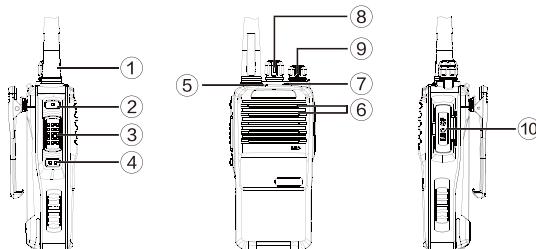


### ■ Install External Loudspeaker/Microphone

Open rubber plug and insert loudspeaker/microphone into jacks.



### ■ External View



① Antenna

② [PF1] Side Key:

Programmable key can be set as different functions by PC programming software, check details in chapter of “Programmable Key” .

③ [PTT] Key:

Press to transmit signal, release to switch receive standby status.

④ [PF2] Side Key:

Programmable key can be set as different functions by PC programming software, check details in chapter of “Programmable Key” .

⑤ LED Indicator Light:

Red light on while transmitting, green light on while receiving.

⑥ Loudspeaker/Microphone

Alarm Button:

⑦ Short press to activate alarm mode, long press to close alarm mode.

⑧ Power/Volume Control Knob:

For power on/off and adjust the volume. menu mode.

⑨ Channel Knob:

Rotate to choose channels, channel number can be set, max. 128 channels for each zone.

⑩ Loudspeaker/Microphone Jack: .

For external loudspeaker/microphone.

### ■ Programmable Buttons

Programmable Buttons: Can be programmed as radio function shortcut key according to the duration of button press.

Note: Short Press - Quickly press and release.

Long Press - Press and hold for certain time, duration time can be set by PC software, between 0.25–3.75 seconds.

Top Button, PF1 Side Key, PF2 Side Key long and short press function can be defined by programming software, programmable functions as below:

- None: No any functions.
- All Tones/Alerts ON/OFF: Open or close all tones.
- High/Low Power Selectable: Switch high/low RF power.
- Monitor: Monitor all activities of selected channel.
- ~⑩. One-click Access Function 1~6: Can be set as Digital/Analog Mode, Contacts, Call Type, Messages/Encode.
- Repeat/Talk Around: Switch between communication by repeater and directly with other radios.
- Scan ON/OFF: Active or close scan.
- Tight/Normal Squelch: Switch between deep squelch and normal squelch.
- Encryption ON/OFF: Active or close encryption.
- VOX ON/OFF: Active or close VOX.
- Zone Switching: It can be switched between the two zones when turns on.
- Battery Power Indication: Indicate the Battery Power.
- Lone Worker ON/OFF: You can hear prompt tone when no operation for certain time.

### ■ Power On

1. Rotate Power/Volume Control Knob in clockwise direction to power on, and a beep prompt tone, green light is flashing, after screen displays startup screen, radio access to working status.
2. Rotate this knob in anti-clockwise direction until click sound heard to power off.

※ **Notice:**

If tones/alerts turned off, then no prompt tone when power on.

### ■ Volume Adjustment

Rotate Power/Volume Control Knob to adjust volume, meanwhile displayed on screen.

### ■ Zone Selection

Several talk channels can be composed as one zone, this radio can support max. 2 zones, max. 16 channels can be set in each zone.

1. Press the programmable [Zone Switching].
2. When you hear a positive tone, the radio switches from zone 1 to zone 2. When you hear a negative tone, the radio switches from zone 2 to zone 1.

### ■ Select Channel, User's ID, Talk Group ID

1. After zone selected, rotate channel knob to select channels, user alias or ID, call group alias or ID.

## Initiate and Receive Call

1. After zone selected, rotate channel knob to select required channels, user alias or ID, call group alias or ID.
2. Three call modes are included: Individual Call, Group Call, All Call.
  - Individual call is separate call from one radio to another.
  - Group call is several radios configured as several call groups, same group members can make group call to each other. To receive and initiate group call, this radio should be configured as needed call group, can configure “Channel Member” by “Channel Information” and “Group Information” in PC programming software.
  - All call is call from one radio to all radios on the channel. It is used for announcing important notice that requires special attention from users.

※ **Notice:**

- When initiate or reply all calls and intercom, please hold radio in a vertical position and keep 1 to 2 inches (2.5 to 5.0cm) from mouth.
- When release [PTT] to receive various calls, if “Channel Idle Prompt Tone” activated, when target radio release [PTT], you will hear a short prompt tone, means this channel idle and wait for your reply. You can press [PTT] to reply, if no voice activity in scheduled time limit, then call terminated.

### ■ Receive and Reply Group Call

When group call received:

1. LED indicator light as green.
2. Press [PTT] to reply group call, LED indicator light as red.
3. Release [PTT] to receive. If no voice activity in scheduled time limit, then group call terminated.

### ■ Receive and Reply Individual Call

When individual call received:

1. LED indicator light as green.

2. Press [PTT] to reply individual call, LED indicator light as red.
3. Release [PTT] to receive. If individual call terminated, you will hear a short prompt tone.

※ **Notice:**

To decrypt encrypted call, this radio shall have same encryption key with transmitted radio.

### ■ Receive All Call

When all call received:

1. LED indicator light as green.
2. If no voice activity in scheduled time limit, then all call terminated.

※ **Notice:**

When receiving all call, if you switch to another channel, radio stops receiving this all call. No programmable keys can be used during all call.

### ■ Initiate a Call

You can choose one channel number, user’s ID or call group by below methods:

- Channel knob
- Programmable one-touch call key

### ■ Initiate Call by Channel Knob

#### ◆ Initiate Group Call

To initiate group call, radio should be configured as included in this call group.

1. Rotate channel knob, use enabled talk group name or ID to select channels.
2. Press [PTT] to initiate group call, LED indicator light as red.
3. Release [PTT] to receive, when target radio replies, LED indicator light

as green.

4. Radio returns to previous screen before receiving call. You can initiate group call by contacts also.
5. If “Channel Idle Prompt Tone” activated, when release [PTT] of target radio, you will hear a short prompt tone, means this channel idle and wait for your reply. You can press [PTT] to reply, if no voice activity in scheduled time limit, then call terminated.

#### ◆ Initiate Individual Call

1. Rotate channel knob, use enabled user’s name or ID to select channels.
2. Press [PTT] to initiate call, LED indicator light as red.
3. Release [PTT] to receive, when target radio replies, LED indicator light as green.
4. If “Channel Idle Prompt Tone” activated, when release [PTT] of target radio, you will hear a short prompt tone, means this channel idle and wait for your reply. You can press [PTT] to reply, if no voice activity in scheduled time limit, then call terminated.
5. You will hear a short prompt tone when call terminated.

#### ◆ Initiate All Call

This function can transmit signal to all channel users. This function should be activated by PC programming software.

1. Rotate channel knob, select channels by enabled all call talk group name or ID.
2. Press [PTT] to initiate call, LED indicator light as red.

#### ※ Notice:

Channel users can not reply all call.

## ■ Initiate Group Call or Individual Call by One-touch Call Key

One-touch call key function easily makes group call or individual call to

predefined alias or ID. This function can be assigned as short press or long press keys by PC programming software.

You can assign one alias or ID to a one-touch call key, several one-touch call keys can be set.

1. Press programmable one-touch call key, to initiate a group call or individual call to predefined alias or ID.
2. Press [PTT] to initiate call, LED indicator light as red. Call group/user’s name or ID, group call/individual call icon displayed on screen.
3. Release [PTT] to receive, when target radio replies, LED indicator light as green.
4. If “Channel Idle Prompt Tone” activated, when release [PTT] of target radio, you will hear a short prompt tone, means this channel idle and wait for your reply. You can press [PTT] to reply, if no voice activity in scheduled time limit, then call terminated.

## Emergency Alarm Function

When in emergency, you can initiate emergency alarm at any time or on any screen display, even when current channel active.

### ◆ Alarm Mode:

- Emergency Alarm: When activated, radio sends emergency alarm only, then automatically exit alarm state.
- Emergency Alarm with Call: Radio sends emergency alarm, and then you can press [PTT] to send emergency call.
- Emergency Alarm with Following Voice: Radio sends emergency alarm, and then sends following voice in emergency call mode.

### ◆ Alarm Type:

Programmable emergency call button can be assigned as one of emergency alarm types as below by PC programming software.

- Ban: This radio can not transmit alarm signal, but can receive alarm signal from other radios.
- Normal: Radio transmits an alarm signal with sound or visual cues.
- Silent: Radio transmits an alarm signal without sound or visual cues. Before you press [PTT] to transmit, target radio will not respond to the call.
- Silent with Voice: Radio transmits alarm signal meanwhile can receive call. Before you press [PTT] to transmit or receive call, there is no sound or visual cues.

## ■ Receive Emergency Alarm

1. When receiving emergency alarm, sender alias or ID, meanwhile with beep tone and red light flashing.

This radio will automatically confirm emergency alarm if activated. You

2. can not receive any other calls or prompts during an emergency alarm response period, until you quit emergency alarm mode.

## ■ Reply Emergency Alarm

When receiving emergency alarm:

1. Press any keypad to stop all received emergency alarm voice prompt.
2. Press [PTT] to start up call with emergency call initiate radio. LED indicator light as red. Radio is in the emergency call mode.

### \* Remark:

If “Channel Idle Prompt Tone” activated, when transmitting radio release [PTT], you will hear a short prompt tone, means this channel can be used.

Release [PTT] to receive, when emergency call initiate radio replies, LED indicator light as green.

## ■ Send Emergency Alarm

This function allows you to send emergency alarm, and then trigger trips in another radio.

1. Press programmable [Emergency Mode Activated] key.
2. LED indicator light as red.
3. When receiving emergency alarm confirmation, radio sends emergency call prompt tone and green light flashing, indicates emergency alarm success.  
If no any emergency alarm confirmation received and all set retry counts used, radio sends emergency call prompt tone, indicates emergency alarm failed.
4. Radio quits emergency alarm mode. If radio set as silent, there is no sound or visual cues in emergency call mode.

## ■ Send Emergency Alarm with Call

This function allows you to send emergency alarm to another radio. After confirmation, these two radios communicate by a programmable emer-

gency channel.

1. Press programmable [Emergency Mode Activated] key.
2. LED indicator light as red.
3. When receiving emergency alarm confirmation, radio sends emergency call prompt tone and green light flashing, indicates emergency alarm success.
4. Press [PTT] to initiate call, LED indicator light as red.
5. Release [PTT] to receive.

※ **Remark:**

- If “Channel Idle Prompt Tone” activated, when release [PTT] of target radio, you will hear a short prompt tone, means this channel is idle and wait for your reply. Press [PTT] to reply, or press programmable [Emergency Mode Off] to quit emergency mode.
- If this radio sets as “Silent”, there is no sound or visual cues in emergency call mode, will not receive any call from target radio, until you press [PTT] to call.
- If this radio sets as “Silent with Voice”, there will be no sound or visual cues when in emergency call mode or when you receive call from target radio. When you press [PTT] to initiate or respond call, it will send prompt.

## ■ Send Emergency Alarm with Following Voice

This function allows you to send emergency alarm to another radio. After confirmation, this radio microphone will be automatically activated, you can directly communicate with other radios and no need to press [PTT]. This activated microphone state is called “emergency microphone”. If press [PTT] during programmable “emergency microphone” transmitting period, this radio will neglect [PTT] press and keep in emergency mode.

※ **Notice:**

If you press [PTT] key during emergency microphone period, and continue pressing after “Emergency Microphone” duration, this radio con-

tinue transmitting until you release [PTT].

1. Press programmable [Emergency Mode Activated] key.
2. LED indicator light as red.
3. When prompt tone heard, speak clearly to microphone. When “emergency microphone” activated, radio will transmit signal automatically, not need to press [PTT], until “emergency microphone” period terminated.
4. When transmitting, LED indicator light as red.
5. When “emergency microphone” duration terminated, this radio automatically stop transmitting signal. Press [PTT] to transmit again.

※ **Remark:**

- If this radio sets as “Silent”, there is no sound or visual cues in emergency call mode, will not receive any call from target radio, until “emergency microphone” duration terminated and press [PTT] to call.
- If this radio sets as “Silent with Voice”, there will be no sound or visual cues when you initiate call by emergency microphone in emergency call mode or when target radio responds after programmable “emergency microphone” duration. When you press [PTT], prompt appears.

## ■ Restart Emergency Mode

Radio will restart emergency mode in the following circumstances:

- If change channel in emergency mode, will quit this mode. If activate emergency alarm on new channel, radio will restart emergency call.
- In an emergency call start / transmit state, press programmable [emergency mode activated], to make radio exit this state and restart emergency call.

## ■ Exit Emergency Mode

Radio will exit emergency mode in the following circumstances:

- Receive emergency alarm confirmation (For emergency alarm only).

- Reach total sending alarm times.
- Press programmable [Emergency Mode Off].
- Press [PTT].

※ **Notice:**

If power off, radio exits emergency mode. When power on, radio will not restart emergency mode.

Available advanced functions will be different between digital channels and analog channels, including Scan List, Scan, Messages, and Setting.

### ■ Scan List

Set up scan list and allocate to single channel/call group, this radio checks whether current channel with voice activity by scan-round on channel/call group sequence of scan list. This radio can support max 250 scan lists, and 31 members for each list. Every scan list can support mixed channels of analog and digital.

#### ◆ Scan Indication and Operation Method

When start the scan, yellow light flashing, this radio checks whether current channel with voice activity by circular programmable scan list. Two scanning methods available:

- Manual Scan: This radio scans all pre-programmed channels/call groups included in scan list. When entering scan, radio will start scan on last scanned channel/call group or on current channel according to different settings.
- Automatic scan: When choosing an activated automatic scan channel/call group, radio will start scan on activated automatic scan channel.

#### ◆ Start and Stop Scan

1. Press programmable [Scanning ON/OFF] key or rotate channel knob to select an activated channel.
2. When scan is activated, LED indicator light as yellow flashing, you can hear a positive prompt tone; when scan is stopped, LED indicator light out, you can hear a negative prompt tone.

#### ◆ Scan Reply

When radio scans and detects a channel/call group with signal, radio

will stay on the channel/ call group, residence time called as “Suspension time”. It can be set by the programming software.

1. During the “Suspension time”, press [PTT], LED indicator light as red.
2. Release [PTT] to receive.
3. If no response during “Suspension time”, then radio will continue scanning.

#### ◆ Temporarily Remove Unwanted Channels during Scan

If radio stays on an unwanted channel, you can press programmable [Temporarily Remove Unwanted Channel] to temporarily remove this channel, which will not be scanned by radio.

If restart scan, temporarily remove channels will be included in scan list again.

### ■ Messages

The radio can send quick texts.

#### ◆ Send Quick Text

Quick texts can be edited by PC programming software.

1. Press programmable [One-touch Call] to send quick text to a predefined ID.
2. LED indicator light as red.
3. If two prompt tones heard, the message is sent successfully. If only one prompt tone heard, the message is failed to be sent out.

### ■ Setting

#### ◆ Squelch Level

You can adjust the squelch level to suppress some interference from weak signal. Tight and normal squelch levels are included.

If squelch level set as tight, it will suppress useless call and background noise, but long distance call may also be suppressed.

1. Press programmable [Squelch].
2. If you hear a positive prompt tone, squelch level set as tight.  
If you hear a negative prompt tone, squelch level set as normal.

#### ◆ Power Level

RF power level for each channel can be set as high or low power.

1. Press programmable [High/Low Power Selection].
2. If you hear a positive prompt tone, it set as low power.  
If you hear a negative prompt tone, it set as high power.

#### ◆ VOX

VOX makes you to activate transmitted call on programmed channels by voice. When VOX function ON, if voice detected by microphone, radio will automatically transmits call within programmed time period.

VOX function will be disabled when pressing [PTT] within radio operating period. To restart VOX function, please make one of operations as below:

- Power off and restart the radio.
- Rotate channel knob to change channel.
- Press programmable [VOX] to turn on or turn off VOX.
- If call admission tone activated, you can use trigger word to initiate call. Wait until call admission tone ends, speak clearly to microphone.

#### ◆ Tones/Alerts

If needed, you can turn on or turn off all tones/alerts, except for incoming call emergency prompt tone.

1. Press programmable [All Tones/Alerts Switch].

2. If you hear a positive prompt tone, means all Tones\Alerts ON.  
If you hear a negative prompt tone, means all Tones\Alerts OFF.

#### ◆ Battery Power Indication

You can check the battery remaining power.

1. Press programmable [Battery Power Indication] to know the battery power through the prompt tone.
2. If you hear one prompt tone, it means the battery power is low and needs to be charged. If you hear four prompt tones, it means the battery power is high.

#### ◆ Talk Around

If needed, you can turn on or turn off the talk around function on the relay channel.

1. Press the programmable [Relay/Talk Around].
2. If you hear a positive prompt tone, means talk around function ON.  
If you hear a negative prompt tone, means talk around function OFF.

#### ◆ Lone Worker

If needed, you can turn on or turn off lone worker function on digital channels.

1. Press the programmable [Lone Worker]
2. If you hear a positive prompt tone, means lone worker function ON.  
If you hear a negative prompt tone, means lone worker function OFF.
3. When lone worker function activated, if with any keypad operation within response timer period, then lone worker function will be turned off; If no any operation within response timer period, emergency alarm function will be activated.

## ■ Encryption

This radio has encryption function. Use this function to prevent disclosure of communications voice and data, to ensure the privacy of communication. TX signaling and user identification section of this radio are not encrypted.

#### ◆ Encryption Setting

You can set encryption type and key in the PC programming software “Encryption Setting” window.

This radio only supports one basic encryption type, total 16 groups of encryption key can be set.

If you want to decrypt the encrypted call or data transmission, the encryption key of the transmitting radio and the receiving radio must be the same.

#### ◆ Encryption Switch

Use PC programming software to set programmable [Encryption ON/OFF] key. Press [Encryption ON/OFF] to turn on/off encryption function.

## ■ DTMF

For analog channels, use DTMF to achieve radio call.

- You can set DTMF in the analog channel through “DTMF Signal” of PC programming software and then select through “One-touch Access” or “Call Type” etc. in “Programming Key” window.
- Press programmable [1 ~ 6] to initiate DTMF call.

## ■ Remote Kill /Activate

## Main Technical Specifications

You can activate or remote kill any radio in the system. For example, you can disable one stolen radio, to prevent others to use it, and activate it when getting back.

### ※ Remark:

Please enable these functions before using the remote kill or activate.

### ◆ Send Remote Kill Code on Analog Channels

For analog channels, you can set send DTMF remote kill code by PC programming software, in “Code” option of “DTMF Signalling”. Press programmable [One-touch 1~6] to send DTMF remote kill code.

### ◆ Receive Remote Kill/Activate

The radio can receive remote kill on digital channels and analog channels.

- For digital channels, you can turn on and off “Radio Remote Kill Decoding” option by PC programming software “Digital Emergency Alarm System”. Digital channels can receive remote kill code if it turns on.
- For analog channels, you can select “Response Types” including remote kill, remote stun, activate, revive functions etc. by PC programming software “DTMF Signalling” window “Decoding” options.

General Specifications	
Frequency Range	( 2 ) 400~470MHz
Channel Capacity	16
Channel Space	12.5kHz
Frequency Stability	± 1.5ppm
Operating Voltage	DC7.4V±15%
Dimension ( W × H × D )	60mm × 135mm × 37mm ( Antenna Excluded )
Weight	275g ( With battery,belt clip,antenna )
Battery Pack	1500mAh ( Li-ion Battery )
Working Temperature	-30 °C ~ +55 °C
Storage Temperature	-40 °C ~ +85 °C
Receiver	
Analog Sensitivity	≤0.22 μ V / -120dBm
Digital Sensitivity	-119dBm (BER ≤5%)~117dBm (BER ≤1%)
Intermodulation	≥50dB @12.5 kHz; ≥55dB @25 kHz
Adjacent Channel Selectivity	≥50dB @12.5 kHz; ≥55dB @25 kHz
Co-channel Rejection	≥-8dB
Blocking	≥85dB
Modulation RX bandwidth	≥2 × 3kHz @12.5 kHz; ≥2 × 5kHz @25 kHz
Audio Power	>1W
Audio Distortion	≤5%

Transmitter	
RF Power	( 2 ) 4W/1W
Modulation Sensitivity	10 ± 3mV
Spurious RF Components	≤-58dB
Adjacent Channel Power	≤-55dB @12.5KHz; ≤-65dB @12.5KHz
4FSK Modulation Accuracy	≤5% @25°C
Audio Distortion	≤5%

## Troubleshooting

NO.	Troubles	Troubleshooting
1	Power-on no response	<ul style="list-style-type: none"><li>• Battery life exhausted, please replace battery or charge.</li><li>• Battery not installed correctly, please remove and reinstall the battery.</li></ul>
2	The battery is easily exhausted after fully charging	<ul style="list-style-type: none"><li>• Battery pack life is ending, please replace it.</li></ul>
3	Communication voice is low	<ul style="list-style-type: none"><li>• Too distant from the mic, the best distance is 3–10cm.</li><li>• Volume is not set properly, rotate the volume knob, to increase the volume.</li></ul>
4	Can not intercom	<ul style="list-style-type: none"><li>• The channel value is not correct, please reset it.</li><li>• ID is not correct, please select the right ID.</li><li>• Surpass the communication range of the radio.</li></ul>

Hardware Version No. : 6PM7-5731-HMC

Software Version No. : M-5731HM-C1210

FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# RF Radiation Information

## RF Radiation Profile

Radio Frequency (RF) is a frequency of electromagnetic radiation in the range at which radio signals are transmitted. RF technology is widely used in communication, medicine, food processing and other fields. It may generate radiation during use.

## RF Radiation Safety

In order to ensure user health, experts from relevant industries including science, engineering, medicine and health work with international organizations to develop standards for safe exposure to RF radiation. These standards consist of:

United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J;

American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992;

Institute of Electrical and Electronic Engineers (IEEE) C95. 1 – 1999;

International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998;

## FCC Regulations

Federal Communication Commission (FCC) requires that all radio communication products should meet the requirements set forth in the above standards before they can be marketed in the U.S, and the manufacturer shall post a RF label on the product to inform users of operational instructions, so as to enhance their occupational health against exposure to RF energy.

## Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:

- a. Your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.
- b. Keep the radio at least 2.5 centimeters away from your body during transmission.
- c. The provided belt-clip should be used when the radio is body-worn.