

Recent

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INSTRUCTION MANUAL

RS-629D

Professional Digital
Handheld Radio



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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.

User Instructions:

- Refer service to the well-trained professional technicians only. Do not disassemble the transceiver 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 expander 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 2.5cm away from mouth.
- When worn on the body the belt-clip should be used.

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.

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Unpacking and Checking Equipment

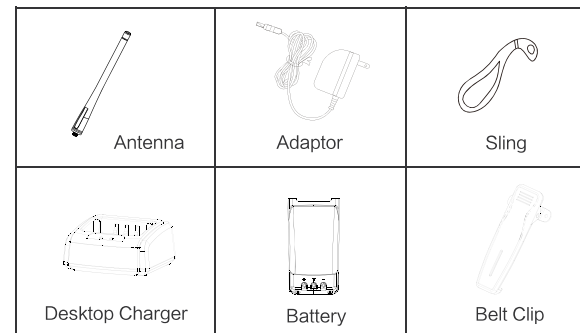
Main Functions Features:

- Support Digital/Analog Modes
- Chinese/English Menu Display
- Multi-call Modes: Individual Call, Group Call, All Call
- Messages Function
- Remote Kill, Activate
- Emergency Alarm Function
- Call Voice Encryption
- DTMF Encoding and Decoding

Supplied Accessories

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
Transceiver	1
Antenna	1
Adaptor	1
Sling	1
Desktop Charger	1
Battery	1
Belt Clip (With Screws)	1



Battery Information

■ Charging Precautions

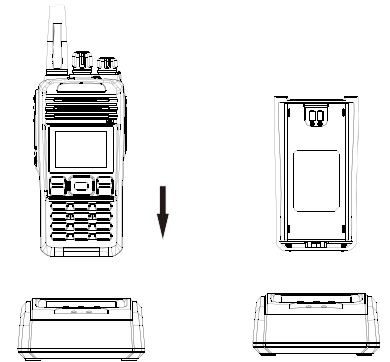
Please charge the battery before using new or long time no used transceiver. Charge and discharge cycle two or three times will make battery capacity to achieve the best state. When battery power low, need to charge the battery or replace with new one.

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 groove, make sure well connected and stable, charger red light on, start charging.
3. Green light on and red light out when full charging.



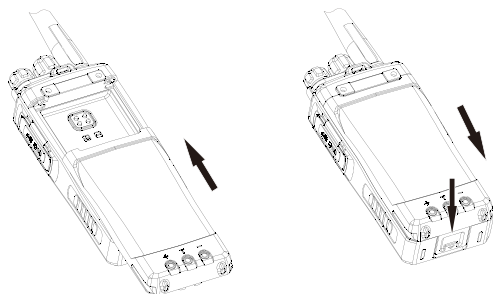
※ **Notice:**

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

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.
Press down battery low end until hearing clicked sound when locked by push clip.
2. Press push clip downwards to remove battery pack from radio.



※ **Notice:**

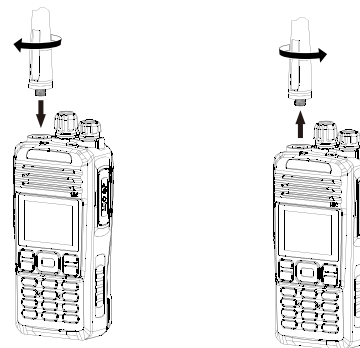
- Never short circuit battery terminal and throw battery in fire.
- Never try to disassemble battery shell, never assemble battery pack in dangerous environment, spark will cause explosion.

■ Install Antenna

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

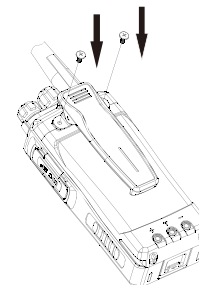
- ◆ Remove Antenna

Rotate in anti-clockwise direction to remove antenna.



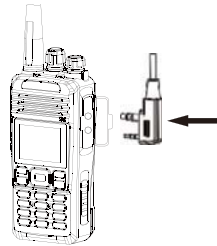
■ Install Belt Clip

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



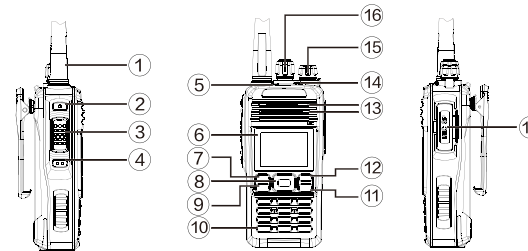
■ Install External Loudspeaker/Microphone

Open rubber plug and insert loudspeaker/microphone into jacks.



Getting Acquainted

■ 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 LCD Screen:
Check display details in chapter of "LCD Screen" .
- ⑦ [Menu] Menu Key:
Press this key to enter menu mode while in normal mode.
- ⑧ [◂] Selection Key:
Menu items Up/Down/Left/Right selection while in menu mode.
- ⑨ [☎] Contacts Inquiry Key:
Press this key to enter contacts menu directly in regular mode.

- ⑩ [0~9*#\#]Numeric/Letter Keypad:
Press numeric/letter keypad to input number, English, Chinese messages in messages editing mode.
- ⑪ [↵]Return Key:
Press this key to return main interface.
- ⑫ [BACK]Back/Delete Key:
Press this key to return to previous menu while in menu mode, to delete the number or text input while in messages editing or ID number key in mode.
- ⑬ Loudspeaker/Microphone
- ⑭ Alarm Button:
Short press to activate alarm mode, long press to close alarm mode.
- ⑮ Power/Volume Control Knob:
For power on/off and adjust the volume.
- ⑯ Channel Knob:
Rotate to choose channels, channel number can be set, max. 128 channels for each zone.
- ⑰ Loudspeaker/Microphone Jack:
For external loudspeaker/microphone jack

■ 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.
- 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: open or close scan.
- Tight/Normal Squelch: Switch between deep squelch and normal squelch.
- Encryption ON/OFF: open or close encryption.
- VOX ON/OFF: open or close VOX.
- Individual Call Manual Dialing: You can achieve individual call and manual dialing when activated.
- Lone Worker ON/OFF: You can hear prompt tone when no operation for certain time.

■ Display Screen

Icon	Description
	RSSI Signal Strength Indicator, the more signal scrollbar, the stronger signal.
	Means current channel is analog channel.
	Means current channel is digital channel.
	Means current channel sets call.
	Means unread message.
	Means read message.
	Means start scanning.
	Display when current channel with high power.
	Display when current channel with low power.
	Display when talk around function activated.
469.50000	Channel frequency displayed.
Zone1 8	Zone number and channel number displayed.

Text Input Mode

Various text inputs selectable for different functions use, such as writing messages, editing channel name and so on. Three kinds of text input modes are included: English, Chinese, and Number. Enter text input interface (Writing messages for example), press [≡] to switch text input mode, corresponding icons displayed on upper right corner of the screen: English **EN**, Number **123**, Chinese **拼**.

English Input Mode

Input English letters and marks by Number/Letter keypad, some characters need to press one key for many times, details as below.

Times \ Keypad	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) [1]	1	.	,	?	!	@	&	'	%	-	:	*	#
(2) [2]	a	b	c	2	A	B	C						
(3) [3]	d	e	f	3	D	E	F						
(4) [4]	g	h	i	4	G	H	I						
(5) [5]	j	k	l	5	J	K	L						
(6) [6]	m	n	o	6	M	N	O						
(7) [7]	p	q	r	s	7	P	Q	R	S				
(8) [8]	t	u	v	8	T	U	V						
(9) [9]	w	x	y	z	9	W	X	Y	Z				
(0) [0]	0	Space											
(*) [*]	*												
(≡) [≡]	Used for switching input mode.												

Chinese Input Mode

Pinyin for Chinese input mode. Press [1] to input punctuation, press [2] to [9] to input corresponding Pinyin. When in Pinyin input interface, first line shows Pinyin content, second line shows corresponding Chinese character. When anti-explicit content on first line, users can choose needed Pinyin by [↵] or [↶], Press [BACK] to delete input Pinyin sequentially one by one, when all input Pinyin deleted, Pinyin input interface disappeared. Press [MENU] key confirm selecting Pinyin, anti-explicit

content on second line, users can choose needed Chinese character by [↵] or [↶], press [BACK] to return Pinyin selection, press [MENU] to select anti-explicit Chinese character and displayed in editing area, finish input and Pinyin input display disappeared. Press [*] to display *, press [0] to display space.

Number Input Mode

In number input mode, press number keys directly to input needed number. Only number input mode can be used when input ID code by keypad.

※ Remark:

When input user's name, ID or messages, if no content in editing area, press [BACK] to return previous menu, if there is content in editing area, press [BACK] to delete characters one by one until no content, then press [BACK] to return previous menu. You can press [↵] to directly return main interface.

Basic Operation

■ Power ON/OFF

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 all LED indicator lights disabled, screen backlights won't be lighted up, only with power on prompt tone.
- If tones/alerts turned off, then no prompt tone when power on.

■ Volume Adjustment

Rotate Power/Volume Control Knob to adjust volume.

■ Zone Selection

Several talk channels can be composed as one zone, this radio support max. 250 zones, max. 128 channels can be set in each zone.

Use menu function:

1. Press [MENU] to enter menu mode.
2. Press [▲] or [▼] to Zone, then press [MENU] to select.
3. Display current zone with zone name.
4. Press [▲] or [▼] to needed zone, then press [MENU] to select.
5. "Selected zone" displayed immediately and then back to main interface.

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

1. After zone selected, rotate channel knob to select channels, user alias or ID, talk group alias or ID.
2. 1000 channels support for this radio.

Initiate and Receive Call

1. After zone selected, rotate channel knob to select required channels, user alias or ID, talk group alias or ID.
2. This radio has three call modes: 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. RSSI icon, talk group name, caller ID (talk group alias), group call icon (For digital mode only) displayed on screen.
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.

※ **Notice:**

If radio not in main interface when receiving a group call, radio keeps in current interface before replying this call. Press [↵] or [BACK] keys to return main interface, check caller alias before replying this call.

■ Receive and Reply Individual Call

When individual call received:

1. LED indicator light as green. RSSI icon, individual call, user name or ID, single call icon (For digital mode only) displayed on screen.
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, screen display call end.

※ **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. RSSI icon, all call, user name or ID, all call icon (For digital mode only) displayed on screen.
2. After all call terminated, radio returns to previous screen before receiving all call.

※ **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 talk group by below methods:

- Channel knob
- Programmable one-touch call key
- Contacts
- Manual Dial (By Contacts): This method is only suitable for single call, and dial by keypads.

■ Initiate Call by Channel Knob

◆ Initiate Group Call

1. Rotate channel knob, use enabled talk group alias or ID to select channels.
2. Press [PTT] to initiate group call, LED indicator light as red. Talk group alias or ID, group call icon displayed on screen.
3. Release [PTT] to receive, when target radio replies, LED indicator light as green. Group call icon, talk group alias or ID, transmitting radio alias or ID displayed on screen.
4. Radio returns to previous screen before receiving call. You can initiate group call by contacts also.

◆ 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. RSSI icon, single call, user name or ID, single call icon (For digital mode only) displayed on screen.
3. Release [PTT] to receive, when target radio replies, LED indicator light as green.
4. You will hear a short prompt tone when call terminated, call end displayed on screen.

※ **Remark:**

You can initiate single call by contacts or conduct contacts quick access by keypad entry, to search for target radio.

◆ 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. All call talk group alias or ID, all call icon displayed on screen.

※ **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. Talk 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. After call terminated, radio returns to screen before receiving call.

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, screen alternately displays alarm number, alarm mode, sender alias or ID, meanwhile with beep tone and red light flashing.
2. This radio will automatically confirm emergency alarm if activated. When emergency alarm received, screen displays received emergency alarm prompt until sending confirmation and quit emergency alarm mode. You can not receive any other calls or prompts during an emergency alarm response, until you quit emergency alarm mode and return to previous display.

※ **Notice:**

Press [BACK], then press programmable [Alarm Off], remove all received emergency alarm prompt and 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.

3. Release [PTT] to receive, when emergency call initiate radio replies, LED indicator light as green. Group call icon, talk group ID, transmitting radio ID displayed on screen.
4. After call terminated, press [BACK], then press programmable [Alarm Off], remove all received emergency alarm prompt and quit emergency alarm mode, radio returns main interface.

■ 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. Screen alternately displays sending alarm and radio ID. LED indicator light as red and emergency call icon displayed.
3. When receiving emergency alarm confirmation, radio sends emergency call prompt tone and green light flashing, emergency alarm success displayed.

If no any emergency alarm confirmation received, radio sends emergency

call prompt and emergency alarm fail displayed.

4. Radio quits emergency alarm mode and returns main interface. 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 emergency channel.

1. Press programmable [Emergency Mode Activated] key.
2. Screen alternately displays sending alarm and radio ID. LED indicator light as red and emergency call icon displayed.
3. When receiving emergency alarm confirmation, radio sends emergency call prompt tone and green light flashing, emergency alarm success displayed.
4. Press [PTT] to initiate call, LED indicator light as red, talk group icon displayed.
5. Release [PTT] to receive.

※ **Remark:**

If “Channel Idle Prompt Tone” activated, when target radio release [PTT], 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.

Radio returns to main interface.

6. Radio returns to main interface.

※ **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 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 continue transmitting until you release [PTT].

1. Press programmable [Emergency Mode Activated] key.
2. Screen displays sending alarm. LED indicator light as red and emergency call icon displayed.
3. When emergency call success displayed, 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 and emergency call icon displayed on screen.
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.

※ Notice:

If emergency alarm request fail, radio returns to main screen.

■ Restart Emergency Mode

Radio will restart emergency mode in the follow 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.