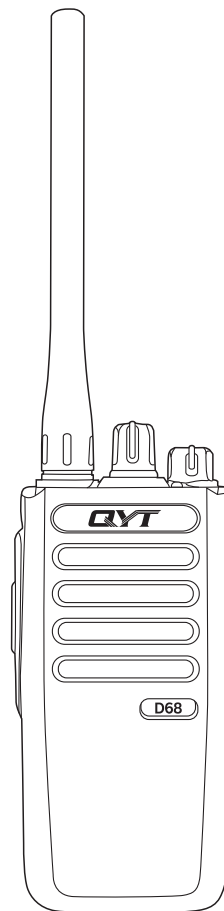


QYT

QYT



D68
User's Manual

Brief Introduction

Thank you for buying handheld two way radio QYT D68. The goal of D68 is to provide cost-effective communication equipment for a variety of business sites and the amateur and supply all fast-paced walks of life with perfect communication solutions.

This product uses professional and commercial or amateur frequency, you need to apply for use to radio management institution of the provinces, cities or autonomous regions.

please read this manual carefully in order to know how to properly operate the radio before use.

Contents

Main Features -----	i
Unpacking and Checking Equipment -----	01
Preparation -----	02
Getting Acquainted -----	07
Basic operations -----	09
Functions Instruction -----	10
LED Indicator -----	10
Beeper -----	10
PTT-----	10
RX and Making a Call-----	11
Message Setting -----	15
Encryption -----	15
Emergency Alarm-----	16
Scan -----	16
Settings -----	18
Radio Tone/Beeper On/Off-----	19
Battery Capacity Checking-----	19
Troubleshooting -----	20
Appendix I CTCSS (Hz) -----	21
Appendix II DCS-----	21
Specification -----	22
Warranty Card-----	23

Main Features

- High/Low Power
- Chinese/English Voice Prompts
- Monitor
- 32 Channels
- Power Save/Low Power Alarm
- Normal/ High SQ
- VOX/Sensitivity
- Wide/Narrow Selection
- Lone Worker
- Channel Scanning/Priority Scanning
- DTMF Encode& Decode
- Tail Elimination
- Emergency Alarm
- Battery Indicator
- Program Key
- TOT
- Encryption
- Repeater/ Talk Around
- Message

Unpacking and Checking Equipment

Welcome to use **QYT** radios, before using we suggest you:

- Please check the packing box of this product and see if there are signs of damage.
- Please open the packing box carefully. We recommend that you identify the items listed in the following packing list. if you find that our product and its accessories in handling are lost or damaged during the shipment. Please immediately contact dealers.

Parts List

Item	Quantity
Radio	1
Rubber Antenna	1
Li-ion Battery Pack	1
Desktop Charger	1
Power Adapter	1
Belt Clip	1
Users' Manual	1
Hand-Strap	1
Warranty Card	1

Preparation

Charging the Battery

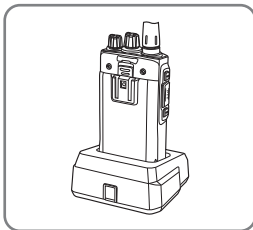
Please use the battery charger designated by QTY to charge battery, and follow the steps :

1. Insert DC jack of power adapter into DC jack behind the charging kit.
2. Insert power adapter into AC power supply socket, now the charging red and green indicator lights, successfully connect the power supply.
3. Insert the battery to radio equipped with battery into the charging kit.

Red indicator keeps lighting means radio is under charging .

Red indicator flashes means battery not be used for long time and over-discharged .And will turn to normal charge when red indicator keeps lighting .

4. Confirm the battery is fully charged, when red indicator goes out .
5. Please take off the adaptor and battery .



Using the Battery

The battery is not completely charged at the factory, please charge it before using.

After purchase or extended storage (more than two months), the first time to charge battery can not make battery reach its normal operating capacity. After repeating charge /discharge it two or three times, the operating capacity will increase to its normal capacity.



After fully charge the battery ,please do not charge it again and should take it off from the charger. If not ,it will short or damage the battery life for over charge .

Note :

- 1) The temperature for charging should be from 5 °C to 40 °C. Battery can not be over fully charged out of this temperature range .Please prepare a spare battery for the cooler weather and do not discard the defect battery .Because it may be used under the normal temperature .
- 2) Please clean the battery terminal when it covers with some dust or dirty .
- 3) To make sure the battery can be normal use and charge .
- 4) Please turn off the radio power before charging .
- 5) Do not charge the battery before radio or the battery being wet .
- 6) Please change another new battery if battery can not be recover normal capacity after fully charged .

Battery Type

Please use the TWAY assigned battery to charge .It maybe explode and harm to human body if use other batteries .

Safety Tips

Do not discard the battery into fire .

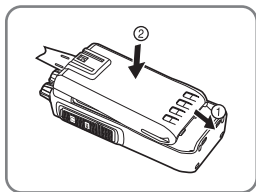
Do not unfold the battery case by yourself.

Battery Storage

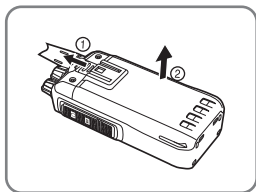
- 1) Please fully charged battery first to store before long time no use it .
To avoid the battery self over discharge and being damage.
- 2) To avoid short the battery capacity ,please fully charged the battery after long time no use .Recommend charge the battery again after six months.
- 3) Please take care the temperature and humidity for storing battery .
Make sure the battery store under the normal temperature ,cool and dry to reduce battery discharge .

■ Installing / Removing the Battery

To install the battery into the battery positioning hole of radio bottom, then press the battery, make the button completely to lock battery. To remove the battery, please turn off the radio, and then push up the battery button of radio top, finally take off the battery.



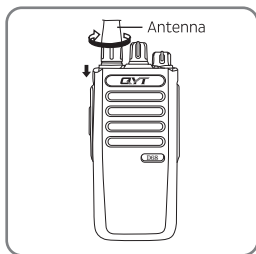
(Install the battery)



(Remove the battery)

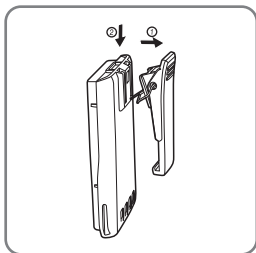
■ Installing / Removing the Antenna

Screw the antenna into the connector on the top of the radio by holding the antenna at its base and turning it clockwise until secure. To turn the antenna counter-clockwise until you can remove it.



■ Installing the belt clip

If necessary, attach the belt clip to the back of battery with the screws supplied carry conveniently.



■ Installing Earphone/Programming Jack

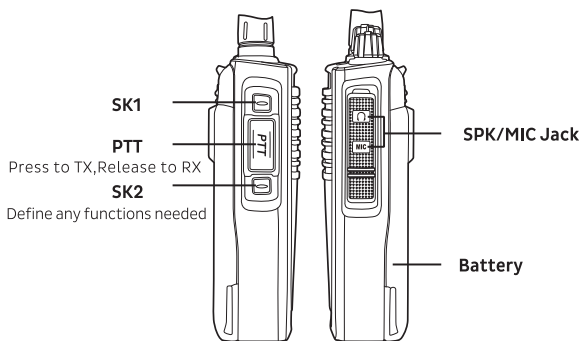
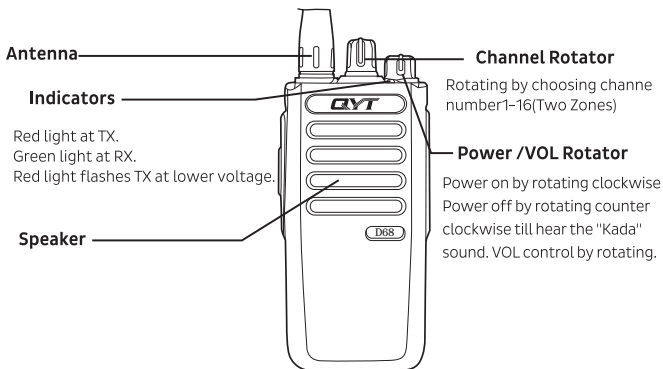
Uncover earphone lid, directly insert earphones into earphone holes (earphones need to be additionally purchased).

You can use computer programming software to operate (consult with local dealers about computer programming software).

Note: If your radio developed with VOX function ,you should re-turn on radio power once to active VOX function.



Getting acquainted



Note: Program Key 1/2 can be defined the following functions by short/long press.

SK:

Item	Function
1	Unassigned
2	All Alert Tones On/Off
3	Emergency On
4	Emergency Off
5	High/Low Power
6	Monitor
7	One Touch Access 1
8	One Touch Access 2
9	One Touch Access 3
10	One Touch Access 4
11	One Touch Access 5
12	One Touch Access 6
13	Repeater/Talk Around
14	Scanning ON/OFF
15	Tight/Normal SQ
16	Privacy On/Off
17	VOX ON/OFF
18	Zone Toggle
19	Battery Indicator
20	Lone Worker ON/OFF

Basic operations

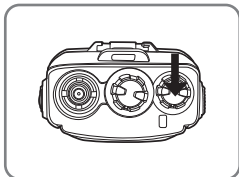
■ Power On/Off

Turn the power switch knob clockwise to turn on radio power; to turn it off ,turn the power switch knob counter-clockwise.

Note: No beeper indication when power on if unable the radio tone/beeper indication.

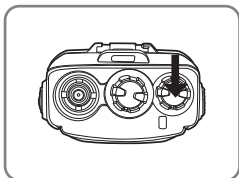
If you cannot turn on the radio , please check the battery pack , make sure charging the battery and correctly install battery .

If you can not turn on the radio ,please contact the dealer .



■ Volume Control

Turn the volume switch knob clockwise to increase volume; to decrease the volume, rotate the volume switch knob counter-clockwise. You can check the volume level by pressing the programmed key of monitor .



Note: Please refer to program software to set the programming key 1 or 2.

■ Channel Selection

Turn the channel switch to desired channel number (32 Channels) .

Note: There are two zones ,16 channels for each zone for this radio .

Zone 1 and Zone 2 are switchable by programming setting.(Details refer to "Zone Selection")

■ TX

Press PTT and face to microphone talking .

Please make the distance between your lip and microphone at 3-4 cm , and talk as usual to get the best voice quality .

■ RX

Release PTT to receive information and adjust desired volume level to get good voice quality .

Functions Instructions

● LED Indicator

The LED indicator is to show the radio working status.

Red light : radio is transmitting signal.

Green light : radio is powering on or receiving non-encrypted calling or message ,or detecting airing activity .

● Beeper

Beeper function is for checking radio working status or signal receiving

Continuous tone : simple ,radio sounds until user over it .

Period tone : programmed desired setting time as a period .

Automatically turn on/Stop/Repeat .

Repeat tone : simple and repeat by itself ,until user over it .

Instant tone : sound once by shortly and programmed the time by radio software .

● PTT

You can set each channel to be digital channel .

1,When calling ,PTT button can enable radio to transmit information to the another calling radios. Press PTT to communicate ,release to receive .It will active the microphone when pressing PTT .

2, When no calling on the radio ,PTT button is used to new calling (refer to make a radio communication) . According to program software ,

the allowed calling tone will be active until over beeper sound before communication .

3,When calling and radio enable the “Free Channel Indication” function , then you release the PTT ,will get a short beeper tone . That means this is a free channel and wait for your answer .

4, When calling stop (eg ,receiving the emergency alarm) ,you will hear the free channel beeper .

You can disable all using radios beeper tone and indication to turn off the free channel indication .(Tone/Beeper ON/OFF)

5,Switch rotator to change digital channel .

● **Receiving and Making A Call**

Zone Selection

The Zone is a channel group .This radio only support 2 Zones and 16 channels for each Zone .

1, Press programmed Zone key .

2,You will hear “Yes “tone to switch radio from Zone 1 to 2 .

Or “ No “ tone to switch radio from Zone 2 to 1.

After choosing the channel ,user ID or Desired calling contact ID , rotating the channel switch to corresponding channel ,user ID or contact ID .

Receiving And Answering a Calling

After setting the channel number, user ID or contact ID ,directly to receive information or answer the calling .

Red light :Transmitting.

Green light: Receiving.

Receiving And Answering Group Calling

Program the radio as a group member to receive any information from this group calling .

1, LED green lights .

2,Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

3 ,Press PTT to answer ,LED light red .

4,Talk to microphone after active the tone of allowing calling tone .

5, Release PTT to receive information .

6, Automatically over the calling if there is no operation with permitted period .

Receiving and Answering a Private Calling

A private calling is from single radio to another single radio .There are two types .

First ,detecting radio before calling; Second, ready to make a call .

The LED light green for the chosen radio .You only can program the using radio with one type.

● Private Call

Receiving a private calling :

1, LED light green .

2, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

3 ,Press PTT to answer ,LED light red .

4,Talk to microphone after active the tone of allowing calling tone .

5, Release PTT to receive information .

6, Automatically over the calling if there is no operation with permitted period .

7, Radio sound a short tone .

Receiving All Call

All call is transmitting information to all the radios. Especially for releasing special notice .

When receiving :

- 1, Radio sound a tone and LED light green.
- 2, Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

Note: When receiving all call, you change to another channel, then will stop receiving the all calling .And during receiving, you can not use any programmed keys until calling is over .

Make Radio Call

Choose desired channel number ,user ID or contact ID by the following : channel rotator ,pre-programmed key to make a calling .

Making Group Call

Program the radio as a group member to transmit any information to this group .

- 1, Rotate channel switch to desired contact ID or channel .
- 2, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .
- 3, Press PTT to call and LED light red .
- 4, Talk to microphone after active the tone of allowing calling tone .
- 5, Release PTT to receive information and reply ,LED light green.
- 6, Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

Automatically over the calling if there is no operation with permitted period .

Making Private Call

- 1, Rotate channel switch to desired channel from user ID .
- 2, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

3 ,Press PTT to answer ,LED light red .

4,Talk to microphone after active the tone of allowing calling tone .

5, Release PTT to receive information .

6, Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer.

Automatically over the calling if there is no operation with permitted period .

7, Radio sound a short tone .

Making All Call

Program the radio with this function and transmit information to all users .

1, Rotate channel switch to desired channel from contact ID .

2, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

3 ,Press PTT to answer ,LED light red .

4,Talk to microphone after active the tone of allowing calling tone . All the users on this channel can not answer the calling .

Programmed Key to Make Group /Private Call

This function enable users easily to make a private or group call to defined ID or contact by short or long pressing to active . You can allocate one ID or contact to one programmed key to call .There are several keys to be programmed .

1, Press the programmed key to private/group call from defined ID or contact list .

2, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

3 ,Press PTT to call ,LED light red .

4,Talk to microphone after active the tone of allowing calling tone .

5, Release PTT to receive information .

6, Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer.

Automatically over the calling if there is no operation with permitted period .

7, Radio sound a short tone .

● **Message Setting**

Send Pre-set Message

You can at most pre-set 50 pieces message .

1, Choose desired contact to send a pre-set message .

2, LED light red .

3,Two tones of “DiDi” means sending message successfully .A lower tone means no message send .

● **DTMF Decode/Encode**

This function is only available radio channel in analog mode.

1,You can program desired DTMF code for each channel.

2,Choose the desired sending DTMF code.

3,Program the One Touch Access key with this sending DTMF code .

● **Encryption**

This function is only available for digital channel .

You can at most preset 16 list encryption ,encrypted code(4 bytes) by program software and enable/disable this function .

● **Emergency Alarm**

Press this programmed key to active emergency alarm.

● **Lone Worker**

Programming radio this function is to protect radio users safety with lonely work .

When enable this function and set the period ,radio will alarm the user before run of time .User should press this key to answer in “safety” state ,if not ,radio will goes into emergency alarm.

● **Scan**

Scan List

Creat the scan list and allocate to single channel/ contact list .

Through cycle scanning the listed channel /contact list to search the any communication channel .

It support at most 250 list and 16 members for each list .

Scan

LED light red when scanning .

Two methods of scanning :

1) Main Channels (by manual) :

Scan all channels/contact group from all scanning lists.

When scanning ,your radio automatically start from the last scanned channel/contact list or starting scanning channel.

2) Automatically manual :

Scanning start from the channel which be active automatically scanning.

Start And Stop Scan

1) Choose automatically scanning channel by press programmed key or rotate channel switch .

2) When scanning active ,LED light red and sound a confirm tone . or stop scanning ,LED goes off and sound a negative tone .

Double Priority Channel

When radio enable this function ,scan the priority channel and normal channel at the every scanning with recycle scanning .

During Scanning ,Answer Calling :

Stop at the detected active channel/contact list .

Radio keeps at this stop channel ,that is so called “Free Time” programmed period.

1, Keep the radio 1-2 feet (2.5-5.0cm) away from mouth .

If the radio program the “Free Channel Indication” ,release PTT to get a short tone ,that means it is free channel and wait for your answer .

2 ,Within the permitted period ,Press PTT to call ,LED light red .

3,Talk to microphone after active the tone of allowing calling tone .

4, Release PTT to receive information .

5, Radio automatically over the calling if there is no operation with permitted period.

Settings

■ SQL

You can adjust the SQL to filter lower signal calling or channels with background noise is higher than normal value .

Normal :default value.

High: filter no use calling or background noise ,but may also filter the calling from long distance .

- 1) Program the SQL key .
- 2) A positive tone means high SQL ; A negative tone means normal SQL.

■ High/Low Power

High power enable communication with long distance radio .Low power enable communication with short distance radio .

- 1) Program High/Low Power key .
- 2) A positive tone means radio transmit at the low power ; A negative tone means radio transmit at the high power .

■ VOX

This function enable your radio to make a call with a programmed channel .No matter when the accessories with VOX function detect the signal ,radio will transmit the information within programmed period .

Press PTT to disable VOX function .

Operate follow step to re-start the VOX :

Turn off the radio and power on again .Or rotate channel switch to another one .Or operate the below .

Note : Enable or disable this function to those active radios .

- 1) Program the key with VOX function and can turn on/off .
- 2) Talk to microphone after active the tone of allowing tone.

■ Radio Tone/Beeper ON/OFF

Enable/disable the radio with tone/beeper if necessary .

- 1) Program the key with Tone ON/OFF function .
- 2) A positive tone means turn on beeper/tone function ; A negative tone means turn off beeper/tone function .

■ Battery Capacity Checking

LED light yellow : charging

LED light green: fully charged.

Press programmed key to check the battery capacity by the beeper .

- 1) Very low power : “Diling,Diling” Tone.
- 2) High: Three tones of “Diling Diling”
- 3) Middle: Two tones of “Diling Diling”
- 4) Low: One tone of “Diling Diling”.

Troubleshooting

Symptom	Try This
No power	<ul style="list-style-type: none">● Battery power may have run out, please update battery or recharge it.● Battery may not be properly installed, please take it off and re-install.
Battery lasts a short time after charge	<ul style="list-style-type: none">● The battery life is over, please replace new battery.
Can not talk to other members of your group.	<ul style="list-style-type: none">● Verify transmitting is within effective operating range.● Verify channel, frequency and code settings are correct.
Hearing other conversation on a channel (not group members')	<ul style="list-style-type: none">● Please change code settings, including all two way radio settings of your group.

CTCSS (Hz)

1-67.0	14-103.5	27-159.8	40-199.5
2-69.3	15-107.5	28-162.2	41-203.5
3-71.9	16-110.9	29-165.5	42-206.5
4-74.4	17-114.8	30-167.9	43-210.7
5-77.0	18-118.8	31-171.3	44-218.1
6-79.7	19-123.0	32-173.8	45-225.7
7-82.5	20-127.3	33-177.3	46-229.1
8-85.4	21-131.8	34-179.9	47-233.6
9-88.5	22-136.5	35-183.5	48-241.8
10-91.5	23-141.3	36-186.2	49-250.3
11-94.8	24-146.2	37-189.9	50-254.1
12-97.4	25-151.4	38-192.8	
13-100.0	26-156.7	39-196.6	

DCS

023	071	143	225	266	356	452	532	664
025	072	145	226	271	364	454	546	703
026	073	152	243	274	365	455	565	712
031	074	155	244	306	371	462	606	723
032	114	156	245	311	411	464	612	731
036	115	162	246	315	412	465	624	732
043	116	165	251	325	413	466	627	734
047	122	172	252	331	423	503	631	743
051	125	174	255	332	431	506	632	754
053	131	205	261	343	432	516	645	
054	132	212	263	346	445	523	654	
065	134	223	265	351	443	526	662	

Specifications and Parameters

General Specifications	
Model NO.	QYT D68
Frequency Range	400-480/136-174MHz
Channel	32 (2 ZONE)
Channel Spacing	12.5KHz
Battery Type	Li-ion, 1600mAh
Frequency stability (-20°C, +60°C, +25°C Ref)	±1.5 ppm
Operating Temperature	-20°C+50°C
Antenna type	SMA-K
Antenna Impedence	50Ω
Audio Output Power	≤1000mW@16Ω
Dimension(H*W*D)	132*62*38mm
Weight	250g
Transmitter	
Output Power	High: ≤5W
Spurious and Harmonics	-36dBm < 1GHz / 30dBm > 1GHz
Modulation	Digital : 8K50F1E / 8K50F1D, 4FSK Analog : 8K50F3E
Free Time Slot Power	TDMA ≤ 57dBm
Modulation BER(Bit Error Rate)	≤5%
Receiver	
Sensitivity	≤-120dBm @ 12.5K
Adjacent Channel Selectivity	≤ -65dB
Intermodulation	≤ -55dB
Block	≤ -84dB
Spurious Response Anti-interference	≤ -70dB
S/N	45dB
Rated Output Power	750mW
Rated Audio Distortion	5%

Warranty Card

Contact:_____

Company Name:_____

ADD:_____ Post Code:_____

Tel:_____ Mob.: _____

Fax:_____ Email: _____

Ordered:_____ Model:_____

Ordered No.:_____ Purchased Date:_____

S/N: _____ (EAN)_____

Warranty Card No.:_____

Trouble Description:

Terms and Conditions

1)This warranty is provided only for product purchased from authorized dealer of Fujian Nanan Quan Yi Electronics Co.Ltd (hereinafter called) .

2) Warrants this product to be free from manufacturer's defects for a specified period .

3)Within the specified warranty period , will repair or replace non consumable parts (excluding casing ,accessories ,batteries ,cable and consumable) that are damaged under normal use (by judgement of) at no additional charge .

4)The warranty will not be covered under the following conditions.

A, Out-of-warranty products .

B , The product is modified without approval.

C ,Obvious attack of appearance whatever it is .

D ,The product is subjected to unusual physical or electrical stress , including physical damage ,burnt components and broken connectors, watered radio.

E ,The serial number label is removed or altered .

5)This warranty card must be presented together with dealer's invoice when the defective product is returned for repair .

Otherwise , reserve the right of not providing free warranty during the warranty period .

6)The customer is responsible for returning the defective product at his own expense .

7)Your warrant period is calculated from the date of invoice of this product .