

## Basic operations Functions Instructions

<http://www.tyt888.com>

### 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.

#### 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 (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.

### **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 activate 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).
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**

### **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.

## **Encryption**

This function is only available for digital channel.

You can at most preset 16 list encryption, encrypted code (4 byte) enable/disable this function.

## **Emergency Alarm**

Press this programmed key to active emergency alarm.

## **Lone Work**

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**

Create 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.

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. Within the permitted period, 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.

## 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.

### 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.

### Check Battery

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".

**Specifications**  
**Trouble shooting guide**  
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<http://www.tyt888.com>

## Specifications

### General Specifications

Frequency range	UHF: 400-480MHz
Channel	32 Channels
Channel Spacing	12.5KHz
Operating Voltage	7.4V
Battery Type	Li-ion
Operating Temperature	-30℃ +60℃
Store Temperature	-40℃ +85℃
Antenna Impedence	50 Ω
Audio Output Power	≤ 1000mW@16Ω
Battery capacity	2000mAh standard Li-ion battery
Dimension (H*W*D)	128*61*38mm
Weight	258g
Digital Data rate	9600bps

### Transmitter

Output power	High: ≤ 5W (HI) Low: ≤ 1W (Low)
Frequency Stability	+/-1.0PPM
Adjacent Channel Power	≤ -60dB
Free Time Slot Power	TDMA: ≤ 57dBm
Hum and Noise	-40dB@12.5KHz
Spurious Radiation	Antenna: 9KHz-1GHz ≤ -36dBm 1GHz-12.75GHz ≤ -30dBm
FM Modulation Mode	12.5KHz: 11K0F3E
4FSK Digital Mode	12.5KHz(data only):11K0FXD 12.5KHz(data +voice): 11K0FXW
Modulation Maximum Deviation	2.5KHz@12.5KHz
Nonactive Slot Power	-57dBm
Digital Protocol	ETSI TS 102 361-1 -2 -3
Vocoder Type	AMBE+2TM
Audio Response	+1dB~-3dB
Modulation BER(Bit Error Rate)	≤ 5%

## Receiver

Analog sensibility	0.35uV/-116dBm(20dB SINDA) 0.22uv/-120dBm(Type)
Digital sensibility	0.3uV/-117.4dBm (BER 5%) 0.22uv/-110dBm (BER 1%)
Co-channel Rejection	≥ -12dB
Adjacent Channel Selectivity	TIA603C:65dB ETSI:60dB
Spurious Response	TIA603C:75dB ETSI:70dB
Rated audio power	1W
Audio response	=1dB~-3dB
Rated audio distortion	3%(Type)
Spurious Radiation	Antenna: 9KHz-1GHz ≤ -57dBm 1GHz-12.75GHz ≤ -47dBm

**Note:** Specifications will be revised without notice due to technical improvement. Thank you.

## Trouble shooting guide

<i>Troubles</i>	<i>Solution</i>
No Electrical Source	<ul style="list-style-type: none"><li>● The battery has been exhausted. Replace or recharge the battery.</li><li>● The battery is installed incorrectly. Remove it and install again.</li></ul>
The operating time becomes short, even the battery is fully charged.	<ul style="list-style-type: none"><li>● Replace the battery.</li></ul>
Not able to communicate with the transceivers of the same group.	<ul style="list-style-type: none"><li>● Confirm the QT/DQT is the same.</li><li>● The distance is outside of range.</li></ul>
The voice of another group can be heard.	<ul style="list-style-type: none"><li>● Change all QT/DQT of the group.</li></ul>
Other radios can not receive the TX signals or receive signals in a low volume.	<ul style="list-style-type: none"><li>● Switch the volume knob to the highest level</li><li>● The microphone may be damaged, send it to the local dealer for check.</li></ul>
Noise is always heard.	<ul style="list-style-type: none"><li>● The distance is outside of range. Turn on the radio in nearer range and try again.</li></ul>



## Warranty card

### Note:

1. This warranty card is only applicable to two-way radio of the above-listed model and serial number.
2. The warranty card is an important document for the end-user to enjoy warranty service, please keep it well.
3. The warranty card shall be filled and chopped by the dealer, or it is invalid.

Customer's name: \_\_\_\_\_ Gender: \_\_\_\_\_

Add and postal code: \_\_\_\_\_

Customer's Tel: \_\_\_\_\_

Model: \_\_\_\_\_

Serial number: \_\_\_\_\_

Purchasing date: \_\_\_\_\_

Invoice No.: \_\_\_\_\_

Dealer: \_\_\_\_\_ Stamp: \_\_\_\_\_

Add and postal code of the dealer: \_\_\_\_\_

Contact Tel: \_\_\_\_\_

Handling people: \_\_\_\_\_

Thank you for buying **TYT** two-way radios, we will do our best to provide you with a stable, clear and efficient wireless communication services. In order for you to enjoy a better quality warranty service, please focus on the following information:

The products warranty period begins from the purchasing date, if product failure under normal use within warranty period occurs, according to the contents of this warranty, (the radio is guaranteed for 12 months, accessories 6 months), please carry the warranty card originals and purchase invoice to Tytera designated authorized warranty repair station for warranty service.

The following situations occur during warranty period will be implemented in paid service:

- (1) Failure to produce the warranty card
- (2) The card has altered traces or inconsistent with the product
- (3) Defect or damage caused by abnormal or non-normal use
- (4) Defect or damage caused by misuse, accident, water or negligence
- (5) Defect or damage caused by improper testing, operation, maintenance, installation, disassembly or adjustment
- (6) Defect or damage caused by unauthorized repair or disassembly
- (7) Defect or damage caused by force majeure
- (8) Wear and tear under normal use

When you are in need of repair, please send the radio, warranty card and purchase invoice together by post or take directly to Tytera designated authorized service stations, shipping costs should be borne by the user.

### Maintenance record

Carry-in date			
Completion date			
Fault description			
Maintenance staff numbers			
Maintenance personnel No.			
Signature			

This warranty card to be kept by the user, no replenishment if lost