# Any Tone®

Qixiang Electron Science & Technology Co., Ltd. www.qxdz.cn





## 518UV II

CE ① VROHS

**INSTRUCTION MANUAL** 

#### THANK YOU!

**AnyTone** transceiver will provide you with reliable, clear and efficient communication service. The transceiver introduces innovative DSP digital signal processing technology, high degree integration, it is including kinds of professional function, best stability and great reliability as well as exterior smooth lines, novel, fashionable, sturdy and durable.

The transceiver is including plenty of TX, RX channels, as well as UU, VV and UV standby modes, can be single U or V band by operation. It is able to realize cross band function, dual PTT function, 51 groups of CTCSS encode/decode and 1 group of user-defined CTCSS encode/decode, 1024 groups of DCS encode/decode, 5TONE encode/decode, DTMF encode/decode, built-in FM radio functions, etc...

It is a meticulous build functional and Multi frequency band radio for radio amateur.

te the frequency and signaling

etc., other wise errors may occur because of different frequency band etc.

#### CAUTIONS

**Any Tone** transceiver is excellent designed with advanced technology. The following tips will be helpful for you in performing your obligation under warranty and understanding the safety of transceiver usage.

- 1. Keep the transceiver and accessories away from children.
- Please do not try to open or modify the transceiver without permission, non-professionals operation may also cause damage.
- 3. Please use assorted battery and charger to avoid damage.
- 4. Please use assorted antenna to ensure the communication distance.
- 5.Please avoid exposing the radio under the sunshine for a long time or storing it in too hot places. High temperature will shorten the life of electronic devices.
- 6.Please avoid storing the radio in the dusty, dirty and damp areas.
- 7.Please keep the radio dry. Do not wash radio with ardent chemicals and detergents.
- 8 Do not transmit without antenna
- 9.When using this transceiver, we recommend transmitting for 1 minute then receiving for 4 minutes. continuously transmitting for long time or working in high power will heat the back of the transceiver. Do not place the transceiver's hot back close to any plastics.
- 10.If any abnormal smell or smoke coming from the transceiver, please turn off the power instantly and take off the battery and its case. Then contact local **AnyTone** dealers.

#### NOTE:

All the above tips apply for your *AnyTone* transceivers' accessories. If any device can not operate normally, please contact with local *AnyTone* dealers.

If you use any accessories made by other companies, *AnyTone* company does not guarantee the operability and safety of the transceiver.

## • TABLE OF CONTENTS



UNPACKING	01
Supplied Accessories	
STANDARD ACCESSORIES/ADDITIONAL ACCESSORIES	02
Standard Accessories	02
Additional Accessories	
BATTERY INFORMATION	03
Charging Operation	03
Battery Charger Type	03
Notice for Charging Battery	03
How to Charge	04
Charging Prompt	
How to Store the Battery	
GETTING ACQUAINTED	
LCD Display	
BASIC OPERATIONS	10
Turn the Radio On & OFF	
Adjusting Volume	
Switch between Main band and Sub band	
Switch between Channel mode	
Channel Adjusting	
Frequency Adjusting	11
Frequency Input by Keypad	
Channel Input by Keypad	
FM Channel Searching	
Squelch Off Momentary / Squelch Off	13

## • TABLE OF CONTENTS

	Keceiving	. 1
	Transmitt <sup>i</sup> ng	1
	Emergency Alarm	1
	Side Key [PF1] function instruction	1
	Side key [PF2] function instruction	1
	Edit channel	
	Delete channel	. 1
	Programming scan	1
	Turn On/Off FM Radio	
	CTCSS/DCS Setup	1
	CTCSS/DCS Scan	1
	Offset Frequency Direction Setup	1
	Frequency/Channel Scan	. 1
	Channel Scan Skip	. 1
	Frequency Reverse	. 2
	TX Power selection	. 2
	Stopwatch function	. 2
	DTMF code Transmit and Enquiry	. 2
	Keypad lock	. 2
	Single-band Switching	
ur	ction Menu Setup	. 2
	Display Mode Setup	. 2
	Resume Factory Default	. 2
E	CHNICAL SPECIFICATION	3
R	DUBLE SHOOTING GUIDE	3

#### UNPACKING



Please carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material.

If any items are missing or have been damaged during shipment, please contact with dealers immediately.

## ((( Supplied Accessories

Item	Number	Quantity
Antenna	QA11UV	1
Li-ion Battery	QB-40L	1
Battery Charger	QBC-40L	1
AC Adaptor	QPS-07	1
Belt Clip	BC09	1
Instruction Manual		1

#### • STANDARD ACCESSORIES/ADDITIONAL ACCESSORIES

#### (( Standard Accessories



Antenna\*1 QA11UV 155/435MHz



Li-ion Battery QB-40L



Battery Charger QBC-40L



AC Adaptor QPS-07



Belt Clip BC09



Instruction Manual

## ((\(\gamma\) Additional Accessories



USB Programming Cable PC03



Programming Software QPS518UV\_1.01



Earphone



Battery Pack for Car Charger CPS05



Handheld Microphone QHM22



Telescopic antenna

<sup>\*1.</sup>Note: For frequency band of antenna, please refer to label indicated in the bottom of the antenna.



## (( Charging Operation

The battery is not charged at the factory, please charge it before use. Charge the battery for the first time after purchase or extended storage (more than 2 months) may not bring the battery to its normal operating capacity. After repeating fully charge/discharge cycle for two or three times, the operating capacity will reach the best performance. The battery life is over when its operating time decreases even though it is fully and correctly charged. Replace the battery.

## (( Battery Charger Type

Please use our company's designated charger, other models may cause explosion and injure people. After installing the battery, if the radio red light twinkles and remind changing battery, please charge the battery.

## (((Notice for Charging Battery

- ▲ Do not shortcircuit our company designated charger. Never attempt to remove the casing from the battery, we show no responsibility on the faulty caused by modifying freely without permission of our factory.
- ▲ The ambient temperature should be between 5°C and 40°C in charging. Charging outside this range may not fully charge the battery.
- ▲ Always switch off the transceiver equipped with a battery before charging. Otherwise, it will interfere with correct charging.
- ▲ To avoid interfering the charging procedure, please do not cut off the power or take out the battery during charging.

- ▲ Do not recharge the battery if it is already fully charged. This may shorten the life of the battery or damage the battery.
- ▲ Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

#### WARNING:

When keys or ornamental chains and other electric metals contact with the battery terminals, the battery may cause damage or hurt bodies. If the battery terminal short circuit, it will generate a lot of heat, please be careful when you bring or use the battery, please put battery or radio into insulated container. Do not put it into metal container.

## (((How to Charge

- 1.Plug the AC adaptor into the AC outlet, then plug the cable of AC adaptor into the DC jack, the indicator lights orange for 1s and turns into GREEN---waits to charge.
- 2.Slide the battery or transceiver with battery into the charger; make sure the battery terminals are in contact with the charging terminals well. LED turns into twinkling RED---pre-charging begins.
- 3.Pre-charging for about 5 minutes, LED twinkles stop then charging begins.
- 4.lt takes about 4 hours to fully charge the battery, when LED turns into GREEN full charged.





NOTE: When charging a power-on transceiver equipped with battery, the LED will not turn into green to show the full charge status. Only when turn off the transceiver, the LED can indicate normally. Because when the transceiver is power on, it would consumes energy, the charger cannot detect when battery has been fully charged, the charger will charge battery in voltage consumption and fail to indicate correctly.

#### 5. Charging Process:

Status	LED
Standby (self-examine orange lights	
1second when power on) ——————	- 🖵 Green light
Pre-charging (pre-charging stage) ————	- ∰ Red light twinkles for about 5 minutes │
Charging (charge in constant currency) ————	RED light lightens for about 4 hours
Full charged (charge in constant voltage) ————	- 📥 Green light

#### 6 LFD Indicator:

STATUS	self-examine when power on	(No battery)	Pre-charging	Charge normally	Full Charged	Trouble
LED	Orange (for 1 second)	Green	Red light twinkles for 5 minutes	Red	Green	Red twinkles for a long time

NOTE: Trouble means battery heating, battery short-circuit or charger short-circuit.

## (( Charging Prompt

- 1.Self-examination: When charging, ORANGE light twinkles for 1 second and goes out. That means the charger has passed its self-examination and it can charge the battery normally. If the light remains orange or the red light twinkles, which means the charger can not pass its self-examination or charge the battery.
- 2.Trickle pre-charging: When the battery has been inserted into the charger and red light twinkles, which means the remnant voltage is low, the charger trickle charge the battery (pre-charging status), until the battery reaches a certain electric quantity, the charger automatically turns into normal charging. And if the red light stop twinkling, which means the remnant voltage meets a certain electric quantity, the charger will charge the battery normally.

NOTE: The time for Trickle pre-charging is not exceed 30m. After 30m, the red indicator is still twinkling, it means it is unable to charge battery. Please kindly check battery and charger.

## (( How to Store the Battery

- If the battery needs to be stored for a long period, the battery should be removed from the radio. It's state of charge should be 50-100% charged.
- 2.It should be kept in low temperature, dry environment.
- To keep away from hot places and direct sunlight.

#### WARNING

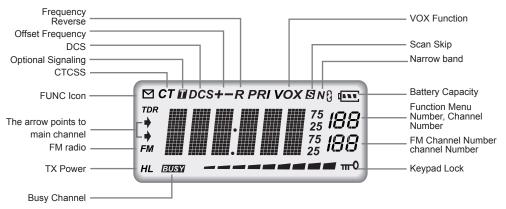
- **▲** Do not short circuit battery terminals.
- $\ \ \, \Delta$  Never attempt to remove the casing from the battery pack.
- $\blacktriangle$  Never assemble the battery in dangerous surroundings, spark may cause explosion.
- **▲** Do not put the battery in hot environment or throw it into fire, it may also cause explosion.

#### GETTING ACQUAINTED



#### (( LCD Display

On LCD display screen, you will see various icons which stand for the selected functions and sometimes you may forget the meaning of them. Here you will find the following table extremely useful.



#### NOTE:

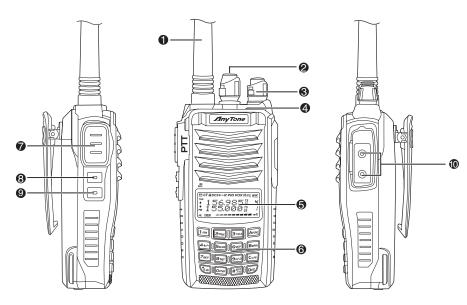
Battery capacity indicator(full)

■ No power, replace battery pack or charge battery

**□** □ Battery capacity remnant

**——————** Real time display receiving signal strength/Power Indicator

## • GETTING ACQUAINTED



#### GETTING ACQUAINTED



- Antenna
- Selector Knob
- Power / Volume Switch

Rotate it clockwise to turn on transceiver, rotate it anticlockwise until heard "click" to turn off the transceiver.

When transceiver is power on, rotate it clockwise to increase volume, anticlockwise to reduce volume.

- TX/RX indicator, RX is GREEN, TX is RED
- 6 LCD display

Displays current frequency/channel and operations

6 Keypad

Enters desired frequency/channel or operations by keypad

PTT key

Press PTT key to talk, release this key to receive.

- PF1 key
- PF2 key
- Speaker/Microphone jack, programming software jack

#### ((Turn the Radio On & OFF



Under power-off state, please turn [POWER]/[VOLUME] clockwise to turn on the transceiver.



Under power-on state, please turn [POWER]/[VOLUME] anticlockwise to turn off the transceiver.

#### ((Adjusting Volume



Under power-on state, turn [POWER] /[VOLUME] to adjust volume. Clockwise-up, anticlockwise -down.

When adjusting the volume, user can press the key programmed as Squelch Off to monitor current volume firstly.

#### NOTE:

Press the side key programmed as Squelch Off Momentary to monitor the background noise. Turn [POWER]/ [VOLUME] to control the volume. The volume you need can be adjusted more correctly when communicating with the other party.



## ((\stackstart Switch between Main band and Sub band

Under standby state, press key to switch channel between Main band and Subband. Arrow directs the current operational channel.

```
461.725 © 2
• 155.000
```

#### ((Switch between Channel mode

Under standby state, press key to set main band as Channel mode



#### ((Channel Adjusting

When transceiver in Channel mode or FM radio channel mode, rotate channel switch to adjust channel. Rotate channel switch clockwise to enter the downward channel, anticlockwise to enter the upward channel

NOTE: In transceiver mode, arrow directs the main band channel.

If there is a null channel between two channels, transceiver will skip null channel, enter into next channel directly.



NOTE: Channel step:2.5K) 5K) 6.25K) 10K) 12.5K) 20K) 25K) 30K and 50KHz in total 9 for optional. FM radio step frequency is 50K.

## (((Channel Input by Keypad

Under channel mode of transceiver or FM radio, you can switch to desired channel by entering three numbers (001-199). If the entered channel is not in edited channel range, the transceiver will emit beep to prompt wrong input and return to current channel. For example, entering 001 is channel 1, 030 is channel 30, 125 is channel 125.

• CH 02 155.000 . .



## (( FM Channel Searching

When transceiver in FM radio mode, press key, LCD displays " ■ "icon, then press from to start FM searching. When one station is sought, LCD displays current station frequency, you can listen to current station.

m 100.70

#### (( Squelch Off Momentary / Squelch Off

Side key [PF2] can be setup for Squelch off Momentary or Squelch off function by programming software.

- 1.Squelch off: Press [PF2] key, squelch circuit is not mute, back-ground noise can be heard. Press [PF2] key again, squelch circuit is mute.
- 2. Squelch off Momentary: Press and hold [PF2] key, squelch circuit is not mute, back-ground noise can be heard. Release [PF2] key, squelch circuit is mute.

#### ( Receiving

When your transceiver is called by other party, the green LED light will be on and the arrow icon will flash. you can hear the calling.

NOTE: You may not receive the calling when your transceiver is set at high squelch level. If current channel is programmed with decode signal, only the same signaling call can be heard.

## ((• Transmitting

According to [PF2] key setup in programming software, hold [PF2] key to monitor the channel to ensure

it is not busy, press [PTT] key and talk to speaker.

Please keep the distance between mouth and speaker to be 2.5-5CM, speak in normal tone to get the best acoustic fidelity.

NOTE: When press and hold PTT key, transceiver is transmitting if the red LED light is on, release [PTT] key to receive calls.

## ((<sub>1</sub>Emergency Alarm

Under standby state, press and hold [PF1] key which is programmed with ALARM function until LCD displays "ALARM", Emergency alarm function is started. This transceiver has 4 Alarm modes for optional, can be setup in programming software. Power off transceiver to exit Alarm.

#### (( Side Key [PF1] function instruction

- VOLT: Battery capacity inquiry: Under standby, press [PF1] key, LCD displays current battery capacity, press this key again to exit.
- 2. CALL: Transmit the prestored DTMF/5TONE Encode signal in channel.
- 3. ALARM: Long pressing [PF1] key, LCD display "ALARM", transceiver will enable the preset alarm function.
- 4. SUBPTT: Press [PF1] key, transceiver will transmit at sub-band frequency.
- Transmit tone pulse frequency: Press and hold [PTT] key, then press [PF1] key to transmit selected tone pulse frequency.

NOTE: The tone pulse frequency can be set to 1750Hz, 1450Hz, 1000Hz or 2100Hz in Function menu No.28 TBST.



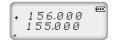
## ((Switch between Main band and Sub band

Under standby state, press key to switch channel between Main band and Subband. Arrow directs the current operational channel.

```
461.725 ≅
• 155.000
```

#### ((Switch between Channel mode

Under standby state, press key to set main band as Channel mode



#### ((Channel Adjusting

When transceiver in Channel mode or FM radio channel mode, rotate channel switch to adjust channel. Rotate channel switch clockwise to enter the downward channel, anticlockwise to enter the upward channel

NOTE: In transceiver mode, arrow directs the main band channel.

If there is a null channel between two channels, transceiver will skip null channel, enter into next channel directly.



switch into channel mode, channel number flashes.

- 2. Rotate channel switch to select desired deleting channel number.
- 3. Press key, the top left corner of LCD displays " ☐" icon, press and hold key until transceiver emits "DUDU" beep and clear up frequency information of current channel, deletion is successful.

NOTE: This process can be applied for deleting FM radio channels.

## (((• Programming scan

Setup the frequency of L1 channel, U1 channel, L2 channel and U2 channel will realize VFO frequency scanning border limited. L1 & L2 is starting frequency, U1 & U2 is end frequency. When VFO frequency between L1~ U1 or L2~ U2, transceiver will scan frequencies between L1~ U1 or L2~ U2. When VFO frequency is lower than L1 or L2, transceiver will scan frequencies higher than L1 or L2. When VFO frequency is higher than U1 or U2, transceiver will scan frequencies higher than U1 or U2.

- 1. In VFO mode, enter desired frequency and relative setup, press key, the top left corner of LCD displays " \( \subseteq \subseteq \text{icon, then press key switch into channel mode, channel number flashes.} \)
- 2. Rotate channel switch to choose desired channel number.
- 3. Press key, the top left corner of LCD displays " □ icon, then press key until transceiver emits "DUDU" beep, channels are saved successfully.

NOTE: To make this setup, L1 and U1 must in same frequency band. L2 and U2 must in same frequency band.



#### ((Turn On/ Off FM Radio

Under standby state, press key, the top left corner of LCD displays " ☑" icon, then press kev. LCD displays "FM ON" and current FM radio frequency. FM radio function is on. When FM radio is on, press [see key, LCD displays "FM OFF", FM radio is mute.

When FM radio is on, press key, the top left corner of LCD displays " \sqrt{\sqrt{\sqrt{\text{T}}}}" icon, press key to turn off FM radio and return to transceiver state. Re-start transceiver also can exit FM radio function

· FM ON 100.70

100.70

NOTE: To use FM radio function, user must set RADIO function on 30th menu to be ON, otherwise can not use FM radio function normally.

## ( CTCSS/DCS Setup

Under standby state, press key, the top left corner of LCD displays " ☑" icon, press kev. LCD displays "CT" icon, it means current channel add CTCSS signal function. Repeat above operation, LCD displays "DCS" icon, it means current channel add DCS signal function. Repeat above operation, "DCS" icon disappears, current channel without CTCSS/DCS signal.

156.000 155.000

156.000 155.000

#### ( CTCSS/DCS Scan

Press key, the top left corner of LCD displays " " icon, press key to enter into CTCSS/DCS scan. Under this state, rotate channel switch to change scan direction. When scan the matching CTCSS/

DCS signaling, it will stay 5seconds and then go on scanning. Press any other keys except , key to exit.

NOTE: This function is invalid when transceiver works in professional mode or the arrow directed channel no setting CTCSS/DCS signaling.

In current channel, if signaling set as CTCSS, it will scan CTCSS, if sets as DCS, will scan DCS.

```
• 165.5HZ
155.000
• 066.N
155.000
```

## ( Offset Frequency Direction Setup

Under standby state, press key, the top left corner of LCD displays " M" icon, press key to choose offset frequency direction. There are 3 options, Positive offset, Minus offset, shut off offset.

- 156.000 155.000
- (+) Positive offset: Indicates TX frequency is higher than RX frequency. When enable reverse function, the RX frequency is higher than TX frequency.
- . 156.000 155.000
- (-) Minus offset: Indicates TX frequency is lower than RX frequency. When enable reverse function, the RX frequency is lower than TX frequency.
- 3. None: Indicates shut offset off.

Under frequency mode (VFO) or channel mode, press key then press key to choose positive offset direction(+), minus offset direction (-), shut offset off one by one (Please refer to offset frequency setup).

NOTE: This function is invalid in professional transceiver mode.



#### (((Channel Scan

Under corresponding mode, press key, the top left corner of LCD displays " ☑" icon, then press key to start frequency scan or channel scan.

1 Channel Scan

Under channel mode, this function is used for monitoring signal of each channel in this mode. Press numeric key or key to exit.

#### NOTE:

- ▼ Frequency scan is of all bands scan) it scans upwards as your STEPPING setting.
- ▼ In channel scan) the skipped channel is not in the line of scanning. Scan upwards as per channel no. (please refer to channel scan skip).
- Channel scan can change scan direction by rotating channel switch) when find a matching carrier wave and signaling) the transceiver will stay 5 seconds then go on scanning. (Please refer to scan setup)

## ((Channel Scan Skip

Under channel mode, press  $\[ \]$  key, the top left corner of LCD displays "  $\[ \]$ " icon, then press  $\[ \]$  key to set current arrow directed channel as Channel scan skip. Repeat above operation to cancel channel scan skip.



- 1. LCD displayed "S" means the current channel will not be scanned.
- 2. "5" icon disappeared means the current channel will be scanned.

#### (( Frequency Reverse

Under standby state, press key, the top left corner of LCD displays " ☑ " icon, then press key to set arrow directed channel as frequency reverse, repeat above operation to turn off frequency reverse.

 When LCD displays "R" icon, it means current arrow directed channel open the frequency reverse function, the TX frequency and RX frequency is interchanged, if CTCSS/DCS signaling is set, it will also interchange.



2. When "R" icon disappears, it means reverse function is close.

#### ((TX Power selection

Under standby state, press key, the top left corner of LCD displays " ™ " icon, then press key to choose High/Low power for current arrow directed channel.

• 156.985 ` 155.000

- 1. When LCD displays  ${}^{\text{"}}L{}^{\text{"}}$  icon, it means low power is chose.
- 2. When LCD displays "H" icon, it means high power is chose.

#### • 156.985 155.000

(111)

## (( Stopwatch function

- 1. Under standby state, press wey, the top left corner of LCD displays " ☑ " icon, then press to enter into stopwatch function.
- 2. Press key to start timing. Under this state, press key to pause timing. When timing is pause, press key to continue timing.

• 00 <sup>©©</sup> :04:86



3. Press [PF1], [PF2] or key to exit stop watch function.

NOTE: During timing, press key to stop timing and displays current data, press this key again to clear timer.

## (((• DTMF code Transmit and Enquiry

- 1. Press key, the top left corner of LCD displays " ™ " icon, then press key, LCD displays DTMF data and group number (total 16 groups) of current group.
- Rotate channel switch to choose desired group and DTMF data, press PTT key to transmit selected DTMF signaling. If current group not edit DTMF data, LCD displays "EMPTY".
- 3. When current group displays "EMPTY", press key, the top left corner of LCD displays " ☑ " icon, press and hold key until transceiver emits "DU" beep, transceiver enters into DTMF edit state, LCD displays "\_\_\_\_\_\_\_", now you can enter desired DTMF data by keypad.
- 4. When finished editing, press side key [PF2] to save DTMF signaling.

## ((<sub>1</sub>Keypad lock

In order to prevent wrong operation, user can make use of keypad lock function. Under standby state, press key, the top left corner of LCD displays " ☑ " icon, then press and hold key until transceiver emits "DU" beep, LCD displays "—o"

• 156.985 155.000

FMPTY

01

**©**€

icon, keypad is locked. Repeat above operation, "-o" icon disappears, key lock function is cancelled.

## ((1) Single-band Switching

To avoid interference from the sub channels when main channel in use, you can use the single band switching function to turn off sub channel band quickly.

- 1. In standby mode, press key, the radio will display the upper band, the lower band will be turned off.
- Press key again, the radio will display the lower band, the upper band will be turned off.
- 3. Press key again to return to dual band display.

- 435.150 145.000
- 435.150 <sup>©</sup>
- \* 145.000
  - 435.150 <sup>666</sup> \* 145.000



Menu 1-13 of this transceiver are channel operations. Channel operations temporarily changed the functions of current channel. When power off or channel has been changed, the relevant setup will be erased.

The operating methods are as follows:

- 1. Press key, the top left corner of LCD displays " " icon, then press sey key to enter function menu.
- 2. Press key to choose desired function.

Note: When setup CTCSS/DCS encode and decode) press key to choose CTCSS) DCS or off. If choose DCS) press key to switch positive code or reverse code.

- 3. Rotate channel switch to choose desired setting.
- 4. Press key or key to confirm and exit.

If you need detailed operation, please download complete user manual from our website (www. qxdz.cn), or call our service department.

Menu No.	LCD Display	Function	Options	Description
		CTCSS/DCS Encode	OFF	No CTCSS/DCS Encode
1 T-CD	T-CDC		62.5HZ-254.1Hz+Self defined	51 groups fixed CTCSS encode+1 group self- defined encode
			000N-777I	1024 groups DCS Encode
			OFF	No CTCSS/DCS Decode
2	R-CDC	R-CDC CTCSS/DCS Decode	62.5HZ-254.1Hz+Self defined	51 groups fixed CTCSS decode+1 group self- defined decode
			000N-777I	1024 groups DCS decode

	RT-CDC	CTCSS/DCS Encode/Decode Synchronous	OFF	No CTCSS/DCS encode/decode
3			62.5HZ-254.1Hz+Self defined	51 groups fixed CTCSS encode/decode + 1 group self-defined CTCSS encode/decode
			000N-777I	1024 group DCS encode/decode
4	TONDEC	Optional signaling setup	DTMF	Current optional signal is DTMF.
			SQ	When current channel received matching RF signals, transceiver can hear the talking from the other party.
	SIGNAL	AL Squelch mode setup	CTCSS/DCS	When current channel received matching RF signals and matching CTCSS/DCS signaling, transceiver can hear the talking from the other party.
5			TONE	When current channel received matching RF signals and matching optional signaling, transceiver can hear the talking from the other party.
			СТ&ТО	When current channel received matching RF signals + matching optional signaling + matching CTCSS/DCS signaling, transceiver can hear the talking from the other party.
			СТ/ТО	When current channel received matching RF signals, or matching optional signaling, or matching CTCSS/DCS signaling, transceiver can hear the talking from the other party.
6	STEP	Frequency step size setup	2.5K-50K	9 options in total



7	W/N	Wide / Narrow Band Selection	25K/12.5K	Wide band/Narrow band
8	REV	Frequency	ON	Turn on Frequency reverse function, TX and RX frequency of current channel will be interchanged.
		Reverse	OFF	Close Frequency reverse function.
9	9 TALKAR	Talk Around	TX=RX	Turn on Talk Around function, current channel will transmit at RX frequency, if CTCSS/DCS signaling is set, it will interchange decoding CTCSS/DCS as encoding.
			OFF	Close Talk Around function.
10	OFFSET	Offset Frequency setup	0-70MHz	Frequency range is 00-70MHz. Press key, the offset frequency can be adjusted by MHz step.
11	NAME	Editing Channel name	a-Z	In channel name display mode, will display the edited channel name.
			BUSY	Carrier wave lock, transmitting is prohibited when received matching carrier wave.
12	RPLOCK	Busy Channel Lockout	REPEAT	Signaling lock, transmitting is prohibited when received matching carrier but with mismatching CTCSS/DCS
			OFF	Close BCLO function.
13	TX	TX OFF	ON	TX function is enabled in current channel.
13	1^		OFF	TX function is disabled in current channel.
14	BAND	Band Limit	ON/OFF	Turn on/off band limit function.

		Sub band display setup	FREQ	Display sub band frequency or channel
15	DSPSUB		VOLT	Display current battery voltage
		Cottap	OFF	Sub band display is disabled
16	BEEP	Keypad Voice prompt setup	ON/OFF	Turn on/off keypad voice prompt function
			OFF	Turn off time-out timer
17	ТОТ	Time-Out-Timer	10-270S	Total 27 levels of TOT for optional, each interval is 10S
40		Voice Operated Transmission (VOX) Setup	OFF	Turn off VOX function
18	VOX		1-10	Total 10 VOX levels for optional
19	VDELAY	VOX Delay Setup	0.5S-3S	Total 27 levels for optional, each interval is 0.1S
20	APO	Automatic Power Off Setup	OFF	Disable the Automatic power off function
20	AFO		30MIN-2HOUR	30minutes ~ 2hours: Total 3 levels for optional.
21	DTMF	DTMF Transmitting Time	50MS-500MS	Total 5 kinds of DTMF transmitting time for optional.
22	SQL	Squelch level Setup	00-09	10 levels of squelch in total for optional, "00" is minimum setup value (normally open)
		Coop Durall Time	5ST-15ST	When scanning matched signal, transceiver will stop scanning for 5-15seconds then resume.
23	SCAN	SCAN Scan Dwell Time Setup	2SP	When scanning matched signal, transceiver will stop scanning, 2seconds after signal disappeared, then resume.



			FUNCT	When finished function setting or enter into function menu, icon disappeared.
24	FTIME	Function Icon Stay Time	1SEC-3SEC	When finished function setting or enter into function menu, icon stay 1-3 seconds then disappeared.
			ALWAYS	Function icon is always display, only when pressing function key again, the icon will disappear.
25	LIGHT	LCD Dooldight	ON/OFF	Always on/off
25	LIGHT	LCD Backlight	AUTO	Backlight will automatic closed after a period.
26	COLOR	LCD Backlight Color	BLUE/ORG/PUR	Blue/Orange/Purple
27	ID	Self ID inquiry	***	LCD displays radio self ID, DTMF ID is 3 digits.
28	TBST	Tone Pulse Frequency Selection	1750Hz/2100Hz/1450Hz/ 1000Hz	Tone plus frequency is 1750Hz/2100HZ/1450Hz /1000Hz
		N/E Battery Save Setup	OFF	Turn off battery save function.
29	SAVE		1:2-1:8	Battery save time is 1:2-1:8
İ			AUTO	Battery save ratio is adjusting automatically.
30	RADIO	FM radio	ON/OFF	Allow/Prohibit using FM radio.
			VOLT	Displays current battery capacity.
		0.15.1.5	CALL	Call function.
31	PF1	Self define PF1 key function	ALARM	Emergency alarm function.
		,	SUBPTT	Sub band PTT.
			OFF	No function.

## (( Display Mode Setup

There are three kinds of display modes for optional.

- 1. Press [PF2] key to turn on radio, hold [PF2] key until transceiver emits beep.
- 2. Press [sum] / [com] key to choose No. 01 function item, it shows "DSP" on LCD.
- 3. Rotate channel switch to choose desired setup.
  - FREQ: Frequency + Channel mode, transceiver displays current channel name + frequency, press key to switch into VFO mode.
  - **CH:** Channel mode, 1~21 items of function menu will hide automatically, user can only operate some functions. It is unable to switch into VFO by pressing key. This model can be used for Amateur mode.
  - **NAME:** Channel + Name Tag mode, transceiver displays current channel number + channel name, press wey to switch into VFO mode.
- 4. Press key or key to confirm and exit.



## (((• Resume Factory Default

You can make all the settings of transceiver return to the factory default settings when transceiver can not work normally because of wrong operation or error setup.

- 1. Press [PF2] key to turn on radio, hold [PF2] key until transceiver emits beep.
- 2. Press [ key to choose No. 02 function item, it shows "RESTOR" on LCD.
- 3. Rotate channel switch to choose desired setup.



OFF: No operations.

**FACT:** Resume all items to factory default, including channel and background settings.

**INIT:** Resume background settings to factory default, channel operations are keeping.

- 4. Press key to exit current selection.
- 5. Press key to confirm current selection.

RESTOR OF



RESTOR OF

Note: In power off state, hold key to power on radio, the radio will resume to factory default.

## • TECHNICAL SPECIFICATION

General				
Frequency Range	VHF: 136~174MHz UHF: 400~480MHZ (EX: 400~520MHz)			
Channel Capacity	200 channels			
Channel Spacing	25KHz (wide band) 12.5KHz (narrow band)			
Phase-locked Step	0.1KHz			
Operation Voltage	7.4V DC ±20%			
Battery Life	More than 12 Hours(1350mAh), by 5-5-90 working cycle			
Frequency Stability	±2.5ppm			
Operation Temperature	-20℃~ +55℃			
Size	127x61x36.5mm (with battery,antenna)			
Weight	235g (with battery, antenna)			

Receiving Part			
	Wide band	Narrow band	
Sensitivity (12dB SINAD)	≤0.25µV	≤0.35µV	
Adjacent Channel Selecitvity	≥65dB	≥60dB	
Intermodulation	≥60dB	≥60dB	
Spurious Rejection	≥70dB	≥70dB	
Hum & Noise	≥45dB	≥40dB	
Audio Distortion	≤5%		
Audio Power Output	1000mW/10%		

Transimitting Part			
	Wide band	Narrow band	
Power Output	4W/1W (UHF) 5W/1W (VHF)		
Modulation	16КФF3Е	11КФF3Е	
Adjacent Channel Power	≥65dB	≥60dB	
Hum & Noise	≥40dB	≥40dB	
Spurious Emission	≤-36dB	≤-36dB	
Audio Distortion	≤5%		

## • TROUBLE SHOOTING GUIDE



Problem	Corrective Action	
No power	A.The battery may be exhausting. Recharge or replace the battery.     B.The battery may not be installed correctly. Remove the battery and install it again.	
Battery power dies shortly after charging.	The battery life is finished. Replace the battery pack with a new one.	
No sound after using earphone. for a while	Earphone jack is broken. Please contact with local dealers to repair.	
Cannot talk or hear other members in your group	A.Different frequency or channel, please change it. B.Different CTCSS / DCS / DTMF, please reset it. C.Out of communication range.	
Receiving intermittent with in big noise	Out of communication range or obstruct by tall buildings or in big noise.	

The SAR limit of USA (FCC) is 8 W/kg averaged over one gram of tissue. Device types 518UVII (FCC ID: T4K3208UV) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use when properly worn on the body is 2.366 W/kg and for head is 3.990 W/kg. . This device was tested for typical body-worn operations with the back of the handset kept 25mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 25mm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

The device was SAR tested a distance of 25mm for the held to face position.

This device must be restricted to work related operations in an Occupational/Controlled RF exposure Environment, not exceeding a maximum transmitting duty factor of 50%. All qualified end-users of this device must have the knowledge to control their exposure conditions and/or duration to comply with the Occupational/Controlled MPE limit and requirements.