Thank you

Thank you very much for choosing of two-way radio. This transceiver offers reliable, clear and efficient telecommunication service. This transceiver adopts innovative DSP base processing system to achieve high-fidelity voice processing and encryption. It is including the best stability and great reliability as well as exterior smooth lines, novel, fashionable, nice timbre and long distance communication design. is a cost-effective, multi-function handheld transceiver which meets every walk of life needs.

We convinced that you will be satisfied with this transceiver's quality and functions.

In order to full comprehend the various excellent functions and using maintenance of this transceiver, please read the user manual carefully before using.

CAUTIONS

When programming the transceiver, first of all, read the factory initial data , and then rewrite the frequency and signaling etc., otherwise errors may occur because of different frequency band etc.

Models apply to this manual

VHF/UHF FM Transceiver

Programming Software

Main Features

- \bullet Dual Band \diagdown Dual Display \searrow Dual Receive \backsim (V/v, U/u, V/u, Two Way Voice Can Be Output At The Same Time.
- Repeater Function (V/u Or U/v) One-Way Or Two-way Selection
- Pf1, Pf2 The Side Key Programmable
- Ani Identity Recognition
- Dtmf Dual Tone Multiple Frequency
- All Call, Group Call And Single Call
- Caller Id
- Remote Stun
- Remote Kill
- VOX
- CTCSS / DCS
- Wide/Narrow Band Select
- Urgent Alert
- High/low Power Select
- Double Ptt Function

CONTENTS

Warning	01
Unpacking and Checking the Equipment	02
Battery Information	03
Care and Clearing	05
Accessory Installation	06
Getting Acquainted	10
Operating Mode	14
Menu Introduction	16
Technical Specifications	28

Warning

- Please read this manual carefully before using this transceiver.
- Please do not communicate or charge this transceiver in flammable, explosive and area which transceiver communication is prohibited (such as oil station, gas station, airport etc.)
- Please do not operate this transceiver without licence in government laws banned areas.
- Please make sure this transceiver avoids the sunshine, and avoids to put it near any heating device.
- Please make sure this transceiver avoids any dusty, humid and water splashed place, and also avoids to put it on

unstable surface.

• If transceiver smells or smokes, please remove the battery pack from transceiver at once, and then contact our

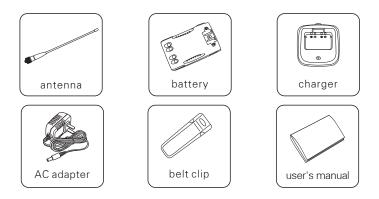
company or local dealer.

- The repair job of this transceiver is in the charge of professionals & technicals, self-disassembly is prohibted

Unpacking and Checking the Equipment

Carefully unpack the transceiver. We recommend that you identify the items in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please notify your chierda dealer.

Standard accessories



Retg/15.

Battery Information Notice for charging battery

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

Notice:

1、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

 $2\$ The ambient temperature should be between 0 and 40 in charging. Charging outside this range may not fully charge the battery

 3_{\times} Always switch off the transceiver equipped with a battery before charging. Otherwise, it will interfere with correct charging

 4_{\times} To avoid interfering the charging procedure, please do not cut off the power or take out the battery during charging

 $5_{\rm N}$ When the battery is fulled but using time is getting short, it means the lift of battery is over, please use a new battery.

6. Do not recharge the battery if it is already fully charged.

This may shorten the life of the battery or damage the battery

 $7_{\rm N}$ Do not charge the battery or transceiver if it is damp. Dry it before charging to aviod danger.

WARNING: when keys or ornamental chains and other electric metals 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 charger the battery

After installing the battery, if the radio displays 🗖 low battery, please charge the battery.

Indicator	Status
Red light	charging
Green light	full charged

How to charge the battery

- 1、Take out the plug pin of the charger, and then plug it into the AC power
- 2、And confirm the battery will connect with terminals of the charger well. Meanwhile the indication light get orange, now it means to be charging
- $3_{\scriptscriptstyle N}$ After 5 hours charging , the indication light will get green when the battery is full charged

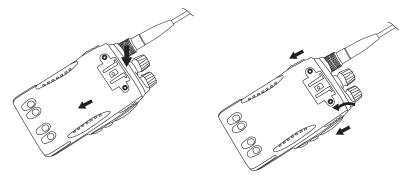
CAUTION: Power-off the radio when charging

Care and clearing.

- 1、To keep away from hot place and direct sunlight
- 2、When using this transmitting, we recommend transmitting for 1minute 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.
- 3_{\times} Please keep the radio dry. Do not wash radio with ardent chemicals and detergents

Attachment Installing Installing/ Removing the Li-ion Battery

Match the two grooves of the battery pack with the corresponding guides on the back of the transceiver, and then push it. Press the battery and transceiver firmly together until the release latch on the top of the transceiver locks. After hearing a "click" sounds, the battery has been locked. To remove the battery, slide up the release latch and remove the pack away from the transceiver

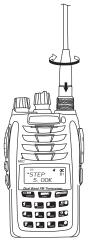


(Installation diagram)

(Removing diagram)

Installing/ Removing the Antenna

Screw the antenna into the connector on the top of the transceiver by holding the antenna base and turning it clockwise until secure. Turn the antenna anticlockwise to remove it.



(Installation diagram)



(Removing diagram)

Installing/Removing the Belt Clip

Place the belt clip to the corresponding grooves on the back of the transceiver for easy carry. Push the buckle up, the belt clip can be removed.







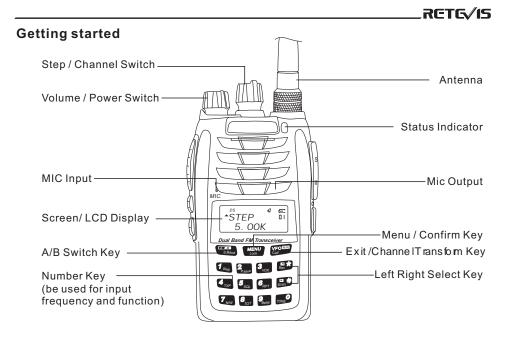
(Removing diagram)

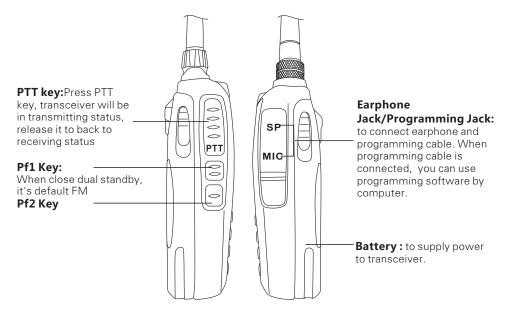
Installing Optional Speakers/ Microphone:

Uncover the MIC–SP cover and then insert the HS03 speaker/ microphone Plug into MIC–SP Jack

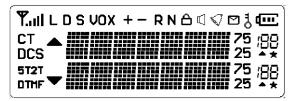


(Installation diagram)





RETG√IS



LCD Display Description

lcon	Corresponding meaning
T.ul	Signal and power indicator
L	Low power in current channel or edit channel indication
D	Open dual Standby function
S	Save battery function ON indication
VOX	VOX function ON indication
+ -	Offset frequency
R	Reverse frequency
N	Narrow band
A	Key lock

RETG/IS_____

lcon	Corresponding meaning
\checkmark	Tone Of indication
Ē	Battery capacity indication
СТ	Current edit channel or current transmit channel select CT indicator
DCS	Current edit channel or current transmit channel select DCS indicator
DTHF	Optional Signaling of Current edit channel or current transmit channel select DTMF indicator
	When Standby, current edit channel indicator; Menu selection interface during menu operation
•	When Standby, current edit channel indicator; Menu set interface during menu operation
75,25	Tail frequency indication
×88	Channel indicator
	Channel busy

RFTG/IS

Working Mode

1, Frequency Mode (VFO)

Under this mode, you can rotate channel switch key to change frequency or direct input frequency and store channel by pressing number keys.

2. MR Mode

When at least one channel is stored and under VFO mode, press[🕮]key to enter MR mode. Frequency will be displayed in the middle of screen, and channel number will be displayed on the right side of frequency. When the transceiver name display function is on and channel name has been edited, channel name will be displayed. Please refer to meau operation NO.23, 24.

3. CH Mode

When at least one channel is stored, press transceiver, press keys to select, the screen will display RESET?/ MODE, and press MENU key to confirm to enter CH mode. Channel number will be displayed and if display function is on, channel name can be seen. Please refer to menu operation NO.23,24.

4. FM Radio Mode

This transceiver has FM radio function, 76.00–108.00Mhz, Press PF1 or PF2 kev(program by software) to enter and exit FM radio mode.

5. Double Function of PTT Key

When PF1 and PF2 has be sent as Sub-channel to transmit, PTT as main channel transmit,



then PF1 and PF2 are in sub-channel transmit.

6、Menu Mode

Press[🐨]key to enter menu mode, total 38 functions. Please refer to shortcut operation.

7、Restart Mode

Press [PTT] key and 1 key and VFO to enter restart mode, initialize all setting under frequency mode.

Press [PTT] key and 2 key and FULL to enter restart mode, initialize all setting under channel mode.

Selectable Function Brief Introduction

NO.	Screen Display	Selectable Settings	Brief Introduction
01	STEP	5.00K/6.25K//50K	Step Frequency Select
02	RX.SAV	ON/OFF	Battery Save Mode
03	VOX	OFF/1/25	VOX Switch
04	POWER	HIGH/LOW	Output Power Select
05	SQL	0-9	Squelch Level
06	RELAY	ON/OFF	Repeater Switch
07	N/W	WIDE/NARROW	Band Setting
08	ТОТ	30/60//270/OFF	Time-Out Timer
09	BEEP	ON/OFF	Prompt Voice Switch
10	COLOR	PURPLE/BLUE/ORANGE	Background Color
11	VOT	0.5S/1.0S3.0S	Vox delay Time(s)
12	D.WAIT	ON/OFF	Dual Standby Select
13	LED	ON/OFF/AUTO	Background Light
14	VOICE	CHINESE/ENGLISH/OFF	Prompt Voice Indicator
15	ANI	ON/OFF	Personal Identification Switch
16	ROGER	ON/OFF	TX Ends Prompt Voice Switch
17	AUTOLK	ON/OFF	Auto Key Lock
18	BCLO	ON/OFF	Busy Channel Lock Out
19	S-D	ON/OFF	Offset Direction Setting
20	OFFSET	010.000384.000	Offset Frequency Setting

NO.	Screen Display	Selectable Settings	Brief Introduction
21	OPNSET	FULL/DC/MSG	Open Mode Set
22	PTT-ID	OFF/SOT/EOT/BOTH	Push-To-Talk ID Set
23	PONMSG		Power On Message Edit
24	SCANS	CO/SE/TO	Scan Mode
25	DW	ON/OFF	Monitoring Transceiver When FM Radio is on
26	C-CDC	OFF/67.0/69.3//D754I	CTCSS / DCS Set
27	R-CDC	OFF/67.0/69.3//D754I	Receiving CTCSS / DCS Code Set
28	T-CDC	OFF/67.0/69.3//D754I	Transmitting CTCSS / DCS Code Set
29	NAME	ON/OFF	Channel Name Display Edit
30	CHNAME		Channel Name Edit
31	RPT-RL	0.5S/1.0S//4.0S	Repeater Transmitting Delay Set
32	RPT-SPK	ON/OFF	Repeater Speaker Set
33	RPT-PTT	ON/OFF	Repeater PTT Switch Set
34	RPT-MOD	DOUBLE/SINGLE	Repeater Mode
35	VOL-MOD	MAIN/SUB/OFF	Volume Mode Set
36	DST	ON/OFF	DTMS Side Signalling Switch
37	TX.SEL	EDIT/BUSY	Priority Transmitting Channel Set
38	STE	ON/OFF	Sound Tail Elimination Set

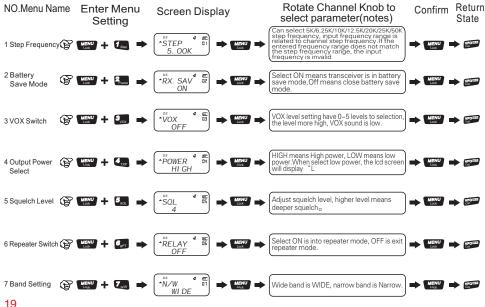
Shortcut Operations

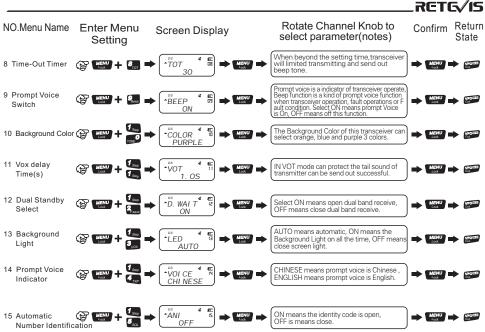
- 1: Short press [💷] to change main channel
- 2: Short press[🖅]to switch VFO model and MR model
- 3: Press PPT and [🜆]at the same time to open the radio , reset all setting about VFO model
- 4: Press PPT and [Image: A same time to open the radio, reset all setting about VFO model and MR model
- 5: Long press [🖼] to switch single receive or dual receive
- 6: Long press[🐨]to lock the key, and long press[🐨]again to unlock the key
- 7: Long press [🖅] to enter saved DTMF code
- 8: Long press[💴]to enter scan model

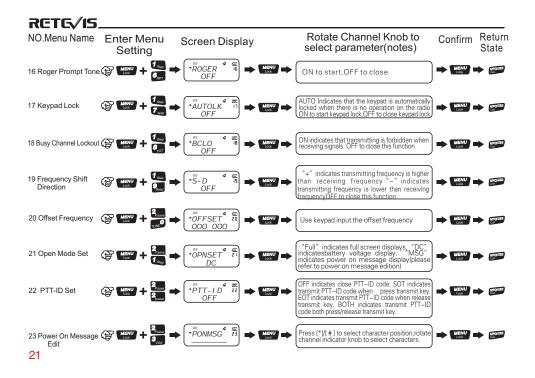
Menu Setting Methods:

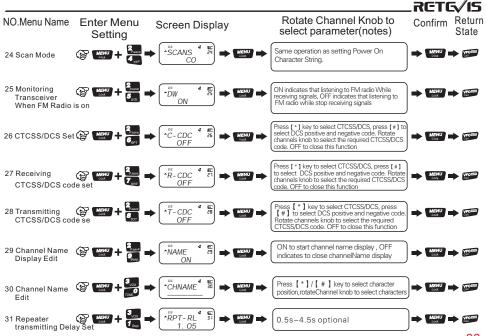
- 1: When in standby, press [🐨]key to enter menu operation, LCD screen displays "MENU".
- 2: Rotate the band switch to change menu, enter to set when indicator display menu
- 3: press [10 confirm and enter , Rotate the band switch to select
- 4: When finish selection, press[🐨]key to confirm.
- 5: Press[🖅]key twice to exit menu setting, and return to standby situation.

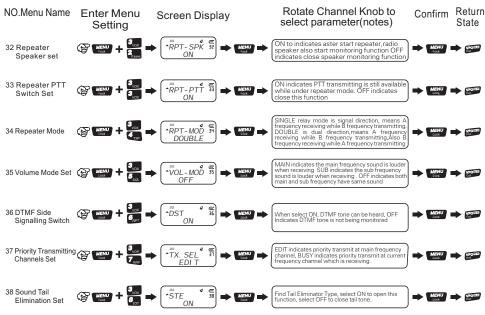
Shortcut Operations











Other Functions Operation Instruction Start FM Radio

Notice: PF1/PF2 buttons have been set as FM Radio hot key on software

1. Press PE1/PE2 buttons to start EM radio

2. Input FM radio frequency by keypad directly

3.If local FM Radio frequency is unknown, then scan local FM Radio frequency to solve this problem.

Method: press PF1/PF2 buttons to start FM Radio→press [💭] key 2s to start FM Radio Scan, and scan will stop when a FM Radio signal is detected, then press [💷] to exit scan mode

4.FM Radio Storage

Method: Input the required FM radio frequency first → Press [🐨] key→press [🐨] key 2s , when a prompt sound is heard. Rotate channels knob to select the required storage channels \rightarrow press [[[]]] lev 2s, when a prompt sound is heard, that means storage successful \rightarrow press [m^{2}] key to exit.

Emergency Alarm

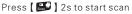
Press [₩₩] key→ Press [₩] to start emergency alarm, transceiver speaker will beep alarm sound, and also start remote alarm at the same time.

Notice: IF PF1/PF2 buttons have been set as alarm function, then press PF1.PF2 buttons to quick start emergency alarm.

Keypad lock start/close

To start/close keypad lock, press [1 key 2s when in standby time.

Scan



Channel Storage

Under full frequency mode, input all the required frequencies by keypad, and also set CTCSS/DCS code,

then press [key shortly \rightarrow press [key 2s, when a prompt sound is heard \rightarrow rotate channels knob to the required channel \rightarrow press [key 2s, when a prompt sound is heard, that means storage successful \rightarrow press [key to exit.

Delete stored channels or FM Radio channels

Under channel mode, select required channel—rotate power knob—press [[]] to start transceiver, []

press [Key to confirm delete.

Notice: if want to delete stored FM radio channels, please do it under FM radio channel mode

How to Use Single Tone Pulse Frequency

Press PF1/PF2 buttons which have been set single tone pulse function without release, transceiver will automatically transmit single tone pulse signal to start repeater, release PF1/PF2 buttons after repeater starts, and then press PTT button to start repeater communication

Notice: Some repeaters need a single tone pulse signal to activate it, if the repeater has started, that activating pulse is not needed. Single Tone Pulse signal has 4 types, frequencies, including 1750Hz, 2100Hz, 100Hz, 1450Hz, the frequency can be set to PF1/PF2 buttons by software

How to use repeater

This transceiver has own repeater function without working with other repeaters. the methods are as follows:

1.Press [III] key→press [III] key→ rotate channel knob to select ON→press [IIII] key to confirm start repeater function→set repeater frequency→select menu 31 to set repeater delay time→select menu 34 to select single direction repeater or dual direction repeater.

3.To store repeater channel frequency , please refer to channel storage

All call, Group call, Single call and Caller ID

This transceiver has DTMF decode and encode function, all call, group call, single call and caller ID are available without other communicate devices

For Example:

There is a group with 15 people in 3 teams, each team code is %, and each group member ID are : 5 people in Team 1, each ID :

5 people in Team 2, each ID :

A B C D E ↓ ↓ ↓ ↓ 131 132 133 134 135

5 people in Team 3, each ID :

 $\begin{array}{cccc} A & B & C & D & E \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 141 & 142 & 143 & 144 & 145 \end{array}$

If want to single call A member in team 1, then transmit 121 code. Only member A can hear this call, others can not hear. If transmit 12* code, then all members in team1 can hear this call, but team 2 and team 3 can not hear. If transmit 1**, then all 3 teams members can hear the call

Caller ID

If transmitting code while transmitting caller ID, then call ID will be displayed on receiver's transceiver. (Example) If A member in team 1 call B member, member A transmits 122*121, then member B transceiver will display member A ID 121, this is Caller ID

Remote Stun/Remote Stun wakeup

Transmit remote stun code (such as 1212), transmit 1212 code then that transceiver can be only receiving To wakeup that transceiver , only need to transmit remote stun code 1212+# code

Remote Kill/Remote Kill wakeup

Transmit remote kill code (such as 1234), transmit 1234 code then that transceiver can not transmitting and receiving.

To wakeup that transceiver , only need to transmit remote kill code 1212+# code.

Transmit DTMF Code Manually

This transceiver can transmit DTMF code manually, when this transceiver is transmitting, input 0–9ABCD*# on the keypad, then the corresponding codes will be transmitted. PF1 corresponds A code, [***] key corresponds B code, [***] key corresponds C code, and [***] key corresponds D code

Transmit stored DTMF code

Press [] key 2s or short press programmed PF1/PF2, enter DTMF code groups, rotate channel knob to select DTMF code groups, press PTT to transmit.

Specifications :

Specifications		
Frequency range	VHF 136-174MHz	
Frequency range	UHF 400-480MHz	
Frequency sensitivity	± 2.5ppm	
Rated voltage	7.4VDC ±20%	
Memory channel	128 channel	
Antenna allocation	Pupinization antenna	
Antenna impedance	50	
Dimension	100*60*36mm (excluding the antenna)	

RETG/15_____

Transmitter:	
Modulation mode	16K ¢ F3E/11K ¢ F3E
Maximum frequency deviation	≤ 5kHz/≤ 2.5kHz
Adjacent Channel Power	≥70dB ≥62dB
Spurious power	≤7.5uW
Preemphasis Character	6dB/Every times the frequency will increase
Current	≤1.6A
Wide /narrow	0.75kHz ±0.1kHz, 0.4kHz ±0.1kHz
Modulation sensitivity	8–12mV
Audio distortion	≤5%
Receiver:	
Sensitivity	$\leq -0.2\mu V \leq -0.25\mu V$
Audio output power	≥ 500mW/10%
Audio distortion	≤5%
obstruct	≥85dB
Intermodulation	≥ 65dB ≥60dB
Adjacent channel selection	≥70dB ≥60dB
Spurious rejection	≥65dB

GUARANTEE CARD

Model Number:	
Serial Number:	
Purchasing Date:	
Dealer:	Telephone:
User's Name:	Telephone:
Address:	Post Code:

REMARKS:

- 1. This guarantee card to be kept by the user, no replenishment if lost.
- 2. This guarantee card to be filled & chopped by the dealer, or it is invalid.
- 3. Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
- 4. One-year guarantee, charger, battery, earphone, antenna and feeder line are not under guarantee.
- 5. The user can get repairing service from the following ways:
 - a.Go to the shop where you buy the machine
 - b.Our local repairing agent