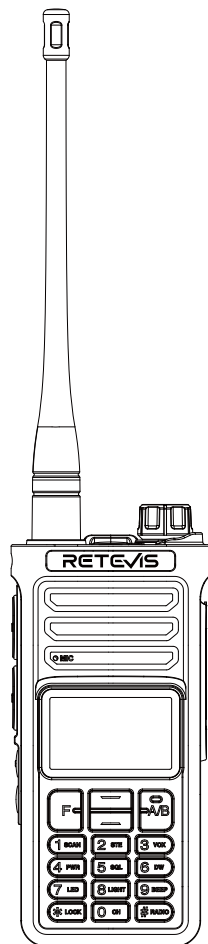


RETEVIS



RA89G
User Manual

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For downloading further resources:
Brochures, Software/Firmware, Manual etc, Please contact
your direct reseller first OR go to website retevis.com and
check "Relevant Documents" in the each product link to
download it.

USING TIPS

Please read the following brief instructions, non-compliance with these rules may cause danger or violate the law.

- Obey the local government regulation before using this radio, improper use may violate the law and be punished.
- Turn off the radio before entering flammable or explosive areas.
- Do not charge or change the battery in flammable or explosive areas.
- Turn off the radio before getting close to the blasting zone or detonator areas.
- Do not use radio whose antenna is damaged, touching of damaged antenna will cause heat injury.
- Do not attempt to open the radio; the maintenance work should be done by technical expert only.
- To avoid troubles caused by electromagnetic interference or electromagnetic compatibility, please turn off the radio in places where the "Do not use wireless equipment" banner is displayed, such as hospital and other healthcare places.
- In the car with an airbag, do not put the radio within the scope of the airbag deployment.
- Do not store the radio under the direct sunshine or in hot areas.
- When you transmit with the radio, do keep away from its antenna for 5cm at least.
- If the radio appears smelly or smoke, please shut off its power immediately and contact with your local dealer.
- Do not transmit too long, for the radio may heat and hurt the user.

CHARGING BATTERY PACK

Charging Precaution

The supplied battery pack of this radio is a high-performance Li-ion with 7.4V standard voltage 2800mAh high capacity in a very compact package. Under normal use, the battery pack may be used for approximately 300 charge cycles and more, after which operating time maybe expected to decrease. If you have an old battery pack which is displaying capacity which has become diminished, you should replace the pack with a new one.

Notice: ■ Please do not short-circuit the battery terminals or expose of in fire. Do not disassemble the battery unauthorized.

Charge the battery between temperature 0°C and 45°C. The battery can not be normally charged beyond this temperature range

■ Please turn off the transceiver when you charge it Transmitting with the transceiver in charge will affect its normal charge.

Do not unplug the Power Adapter or battery when it is charged.

■ If the battery pack lasts shortly even it is full of power, It indicates that the battery is depleted, please change the battery pack. Please do not charge when the battery or the radio is wet. Please dry it with a cloth before charging to avoid any danger.

Warning: When the conductive metals such as jewelry, key or decorative chains touch the battery terminals, all the batteries are likely to cause damage to the items or personal injury. These conductive metals may form a short circuit and generates much heat. Do deal with any battery carefully, especially when put it into pocket, wallet or other metallic containers.

Charging Operation

Charging Operation

After installing the battery pack, if the battery icon shows  , it means that the battery pack is out of power, Please charge it.

Indicator light of the charger will show charging condition

Indicator Display	Status
Red	Charging
Green	Completed

Battery Tips:

The battery is not fully charged in factory, please charge before using it.

Charge and discharge the battery for two or three times, the battery capacity will reach the best condition. When the battery capacity is low, please charge or change the battery.

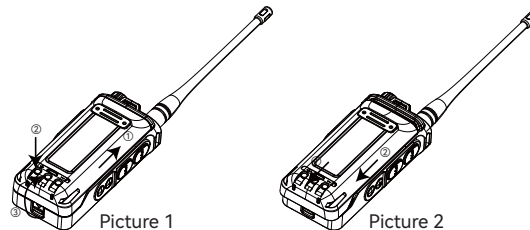
The battery lasts shortly even if it is fully charged, the battery is depleted, please contact your local dealer to buy a new authentic battery.

INSTALLATION OF ACCESSORIES

Installation of Battery Pack

Place the battery horizontally on the back of the walkie-talkie. Then, push the battery upwards until you hear a click. The battery is now installed.

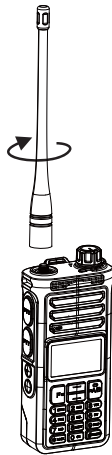
Push the battery clip downwards. Then, push the battery downwards again to remove it.



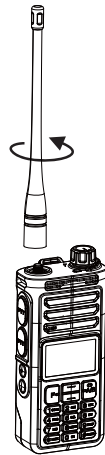
Installing and removing the antenna

1. Align the threaded end of the antenna and the threaded hole at the top of the radio, and rotate the antenna clockwise until it is tight. (Picture 3)

2. To remove the antenna, rotate it counter-clockwise until the antenna spirals out. (Picture4)



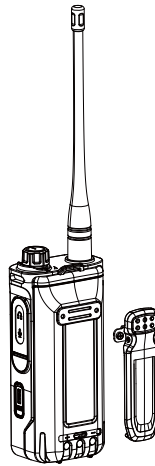
Picture 3



Picture 4

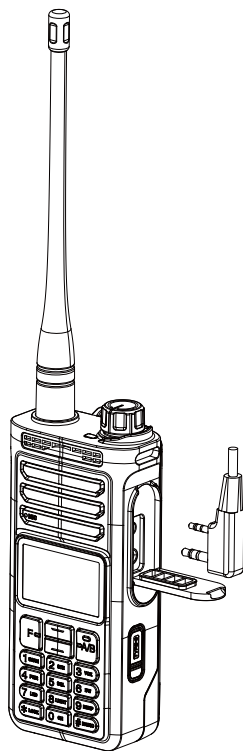
Installing Belt Clip

Align the two holes of the belt clip and the two holes of the radios, fix them with the supplied M2.5*5 screws. Loosen the screw set to remove belt clip.



Picture 5

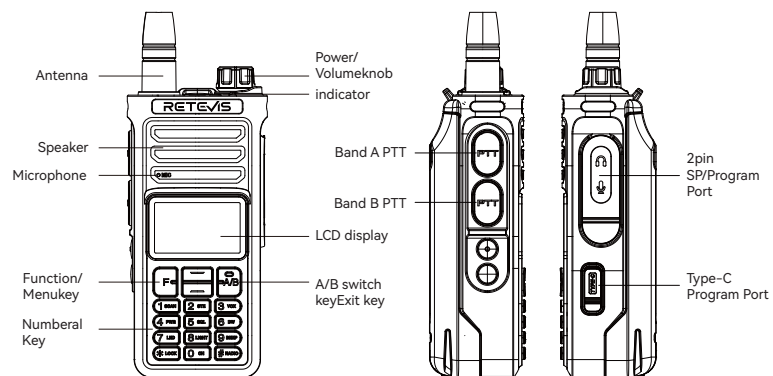
Installing External Micro/Speaker
Open the cover of the Mic/Speaker Jack and insert the microphone/speaker plugs into the jack.



Picture 6

GETTING FAMILIAR

RADIO ILLUSTRATION



Icons	Description of functions
	Charging Operating band signal & power meter
	High TX power active
	Dual watch/standby active
	RX power save active
	Scanning active
	Narrow/wide band mode active
	Repeater shift direction
	Keypad lock
	DTMF signal active
	2 Tone signaling active
	5 Tone signaling active
	Battery power indicator
	Channel number/Menu items number indicator

LCD DISPLAY



KEYPAD FUNCTIONS

	[F]	[A/B]	[-]	[=]	
Press key	Enter Menu mode/ confirm the setting	1. Switch the A or B frequency to be the "Operation" Band. 2. Exit Function.	Upper menu item, channel or frequency	Lower menu tem, channel or frequency	
	[1 scan]	[2 STE]	[3 vox]	[4 PWR]	[5 SQL]
Press key	Frequency/ Channel No. Entry "1"	Frequency/ Channel No. Entry "2"	Frequency/ Channel No. Entry "3"	Frequency/ Channel No. Entry "4"	Frequency/ Channel No. Entry "5"
Press [F] +	Enter scan menu	Enter into End tone Elimination item	Enter VOX level setting	Enter high/low power setting	Enter squelch level setting
	[6 DW]	[7 LED]	[8 Light]	[9 Beep]	[0 CH]
Press key	Frequency/ Channel No. Entry "6"	Frequency/ Channel No. Entry "7"	Frequency/ Channel No. Entry "8"	Frequency/ Channel No. Entry "9"	Frequency/ Channel No. Entry "0"
Press [F] +	Enter Dual. Standby item	Enter Backlight item	Enter light item	Enter beep item	Enter DTMF 2T & 5T
	[*Lock]		[# Radio]		
Press key	Press and hold key to start keypad lock		Switch CH mode and frequency mode Long press [#] to enter FM radio		
Press [F] +	Enter TX/RX Tone code		Press [F] +[#] to start emergency alert		

Working Mode

1) Memory Channel Mode (MR)

When you have stored a memory channel at least and under VFO mode, press **【#Radio】** key to enter MR mode.

The frequency will be indicated on the display and the channel No. will be indicated at the right side. If the transceiver display name option is ON and channel name edited, it will show the name of the channel.

Please see Shortcut Menu Operation item 33 rd .

2) Channel Mode(CH)

When you have stored a memory channel at least, power on the radio, press **【F】** +33 to enter DIS MD and choosing CH mode. Channel No. will be indicated on the display and if the transceiver display mode option is on, it will show the name and the channel.

Please see Shortcut Menu Operation item 33rd.

3) FM Radio Mode

The transceiver provides frequency 64.00-108.00MHz FM radio. Under this mode, you can choose FM frequency you need directly. Scan frequency range and store your favorite channels. Long press **【#Radio】** to enter and exit FM radio mode.

4) Menu Mode

Press **【F】** KEY to enter MENU mode, there are 42 items in total. Please see SET MENU MODE.

5) Reset Mode

Press **【F】** +[4] [9] key to enter Reset mode, then press **【F】** key to enter. Up or Down key to select ALL/VFO/FULL

1.ALL: initialize all setting.

2.VFO: initialize all setting under frequency mode.

3.FULL: initialize all setting under frequency and channel mode.

SET MENU MODE			
No.	LCD Display	Available Values Function	Description of
1	SCAN	/	Frequency/Channel Scan
2	End.Tail	120/180/240/FREQUENCY/OFF	End Tone Elimination
3	VOX LEV	1-7	VOX Level Setting
4	POWER	HIG/LOW/MID	High/Low/Middle TX Power
5	SQL	0-9	SQL level setting
6	Dual.Stand	ON/OFF	Dual Wait/Standby
7	BackLight	ON/5S/10S/15S/20S/ 25S/30S/OFF	Backlight time

No.	LCD Display	Available Values Function	Description of
8	LIGHT	1-7	Background Light Color
9	BEEP	ON/OFF	Keypad Beeper Setting
10	DT/CH	1-16	Preset Channel Selection
11	TOT	OFF/30/60/.../270	Transmitter Time-Out Timer
12	BCLO	OFF/SUB/Carrier	Busy Channel Lock-Out
13	VOX.SW	ON/OFF	VOX Switch ON/OFF
14	ROGER	ON/OFF	Transmit Over Beeper
16	RX.SAV	1:1/1:2/1:4/OFF	Receive Saver
17	SCAN.S	TO/CO/SE	Scan Mode
18	AUTO LK	ON/OFF	Auto Keypad Lock
19	VOICE	ON/OFF	Voice Prompt
20	OPENSET	OFF/DC/MEG/CHAR	Power-on Display
21	DC VOLT	/	Battery Power Voltage
22A	OFFSET	0.000-99.995MHz	Repeater Shift(Under VFO mode)
22B	DIS.NM	ON/OFF	Display Channel Name (Under CH mode)
23	C-CDC	OFF/67.0/D023N	TX/RX Tone code
24	R-CDC	OFF/67.0/D023N	RX Tone code
25	T-CDC	OFF/67.0/D023N	TX tone code
26	S-D	+/-/OFF	Shift Direction
27	STEP	5K/6.25K/.../100K	VFO Step
28	N/W	WIDE/NARR/MIDD	Wide/Narrow/ Mid Bandwidth
29	SEEK CTC	/	CTCSS Scan
30	SEEK CDC	/	DCS Scan
31	Scrambler	ON 1-8/OFF	Voice Scrambler
32	LOCK MD	ALL/PTT/KEY/KEY+S	/
33	DIS MD	FRE/CH/MR	Working mode setting
34	Radio Monitor	ON/OFF	Dual Watch/monitor
35	CH.NAME	Display Channel Name	(Under CH mode)
37	MICLEV	1-8	Microphone sensitive level
38	WX Alarm	OFF/ON	Weather Alarm function
39	NOAA List	NOAA-1....12	NOAA Channel List

No.	LCD Display	Available Values Function	Description of
40	Menu Time	Off,5S/10S/15S/20S/30S/ 40S/50S/60S	Menu Exit time setting
41	RX.LIGHT	ALW.ON/CODE.ON/OFF	Receiving light
42	Led Type	All. Enable/ All Disable	RX/TX Indicator on/off
43	P1 Short	Power Select	P1 Custom function key
44	P1 Long	Alarming	P1 Custom function key
45	P2 Short	FM Radio	P2 Custom function key
46	P2 Long	Scan	P2 Custom function key
47	Start Frequency	/	VFO scan start frequency
48	End Frequency	/	VFO scan end frequency
49	Reset	ALL/VFO/FULL	Reset function
50	Bluetooth	BT Switch ON/OFF	Turn on Bluetooth
		Pairing Scan Found Device My devices	Pair available device Scan available device View the found device My device name
		Paired Device	View paired device
		Hold Time	/
		Mic Gain	BT Mic gain setting
		Spk Volume	BT Speaker volume setting
		Speak	Internal speaker on/ off
		Bluetooth Info	BT Name: the device name BLE Mac: the device Mac address
		PTT Type	Bluetooth/Radio
51	Radio Ver	T: Time &Version	Radio version

DETAILED FUNCTION DESCRIPTIONS

1) Scan & Scan Mode setting (SCAN&SCANS---MENU 1&17)

Functions: under VFO/MR/CH mode, the transceiver allows you to scan the entire current operating band and memory channels.

Enter Menu 1 and press **【F】** key to start scanning.

When you have started scanning, press up or down key to change direction. And it will halt on a signal it encounters, press **【F】** key to stop scanning.

Scanning operation is basically the same in each of the above modes. Before you begin, take a moment to select the way in which you would like the scanner to halt on a signal. Enter Menu 17th to set scan mode. Default: TO.

Three options for the scan mode are available under VFO mode:

TO: In this mode, the scanner will halt on a signal it encounters, and will hold there for some time. If you do not take action to disable the scanner within the time period, the scanner will resume even if the stations are still active.

CO: In this mode, the scanner will halt on a signal it encounters, and will hold there if the stations are still active. And after the carrier has dropped, the scanner will resume.

SE: In this mode, the scanner will halt on a signal it encounter, it will not restart automatically; you must manually re-initiate scanning if you wish to resume.

2) End-tone Elimination(End.Tail---MENU 2)

Functions: It can eliminate annoying noise when transmission is finished. The benefit of this function is particularly evident for those using earphone.

Enter Menu 2nd to set End-tone Elimination function.

3) VOX Level & VOX Switch (VOX&VOX.SW---MENU 3&13)

Functions: The VOX function provides automatic transmit/receive switching based on voice input to the microphone. With the VOX switch ON, you do not need to press PTT switch in order to transmit, and it is not necessary to use a VOX headset in order to utilize VOX operation.

Enter Menu 13th to set VOX switch.

Enter Menu 3rd to set VOX level, it has 7 grades.

The higher level is, the more sensitive will be.VOX level is 1-3 grades if in noise cancellation mode.

This transceiver provides for adjustment of “ Hang- Time” of the VOX (the transmit-receive delay after the cessation of speech) via programming software.

4) TX Power setting (POW---MENU 4)

Functions: you can select high/low TX power according to your talking environment and need. When you store memories, you can store High and Low power settings separately in each memory.

Enter Menu 4th to set TX power. when you select Low power, the “L” icon will appear on the display.

5) Squelch Adjustment (SQL---MENU 5)

Functions: Squelch system allows you to mute the background noise when no signal is being received. Not only does the Squelch system “standby” operation more pleasant, it

also significantly reduce battery current consumption.
Enter Menu 5th to set SQL level.

6) Dual Wait/Standby (D.stannd---MENU 6)

Functions: This transceiver allows you to receive the sub band signal even if you are working on the operating band. It could monitor the signal under both master and sub band at the same time.
Enter Menu 6th to set Dual Wait.

7) Backlight (MENU 7)

Function: Set the backlight display time
Enter Menu 7th to select how long will the screen light.
ON: Illuminates the backlight when any key is pressed. You can set 5S,10S,15S,20S,25S,30S to disalbe the backlight.
OFF: Backlight always on.
Background Light brightness(LIGHT---MENU8) Functions:Adjust screen brightness.
Enter Menu 8th to Adjust screen brightness 1,2,3,4,5,6,7.

8)Keypad Beeper setting (BEEP---MENU 9)

Functions: enable/disable the keypad beeper.
Enter Menu 9th to set keypad beeper.

9) Preset Channel Selection(DT/2T/5T CH-MENU 10)

Functions: Preset the signal type(OFF/DTMF/2T/5T) at software,by choosing 1-16 channel to achieve remote kill/stun/activate/revive function.
Enter Menu 10th to choose 1-16 channel.

10) Transmitter Time-Out Timer (TOT---MENU 11)

Functions: the TOT feature provides a safety switch which limits transmission to a pre-programmed value. This will promote battery conservation by not allowing you to make excessively-long transmissions, and in the event of a stuck PTT switch it can prevent interference to other users as well as battery depletion.
Enter Menu 11th to set TOT.

11) Busy Channel Lock-Out (BCLO---MENU 12)

Functions: the BCLO feature prevents the radio's transmitter from being activated if a signal strong enough to break through the "noise" squelch is present. On a frequency where stations using different CTCSS or DCS codes may be active, BCLO prevents you from disrupting their communications accidentally (because your radio may be muted by its own tone decode). Enter Menu 12th to set BCLO.
OFF: Disable BCLO feature.
Carrier: the radio's PTT will be prevented only if the frequency is busy used.
SUB: the radio's PTT will be prevented only the frequency and tone code is the same.

12) Transmit Over Beeper (ROGER---MENU 14)

Functions: sending a beeper to inform the receiver TX is over.
Enter Menu 14th to set ROGER. Default: OFF.

13) Receive Saver (RX.SAV---MENU 16)

Functions: this feature significantly reduces quiescent battery drain, and you may receive the full data burst.

Enter Menu 16th to set RX.SAV.

14) Auto Keypad Lock(AUTOLK & LOCK MD—MENU 18 &MENU 32)

Functions: in order to prevent accidental frequency change or inadvertent transmission. Various aspects of the radio's keys and switches may be locked out.

Enter Menu 32th to set LOCK MD, you can choose to lock All/K+S/KEY/PTT.

When you switch AUTOLK ON, the keypad will be locked automatically if there no key is operation for 10 second.

If the radio is locked, press 【*Lock】 key to unlock it. Also you can lock it using 【*Lock】 by manual.

15) Voice Prompt (VOICE---MENU 19)

Functions: enable/disable voice prompt.

Enter Menu 19th to set VOICE.

16) Power-on Display setting (OPN.SET&VLT---MENU 20&21)

Functions: choose power-on display mode and edit power-on message Enter Menu 20th to set OPN.SET.

DC: battery power voltage

MEG: power-on message

Enter Menu 21st to check battery voltage.

17) Repeater Shift setting (OFFSET&S-D---MENU 22&26)

Functions: repeater stations, usually located on mountaintops or other high locations, provide a dramatic extension of the communication range for low-powered hand-held or mobile transceivers.

Under VFO mode, you can set the magnitude and direction of the repeater shift.

Enter Menu 22rd to set magnitude of the repeater shift.

Available values: 0.00 ~ 99.95 MHz

Enter Menu 26th to set the repeater shift direction. Default: OFF.

18) Display Channel Name(DIS.NAME &NM SET—MENU 22 &35)

Function: switch channel name display ON/OFF and edit channel name under MR/CH mode Enter Menu 22nd to switch display channel name ON/OFF.

Enter Menu 35th to edit channel name, also you can edit it directly by program- ming software.

UsingUp or Down key to select character, 【*Lock】 to switch cursor position.

19)Tone code & Tone Search Scanning & Tone calling

(C-CDC & R-CDC &T-CDC&SEEK 67.0 & D023N—MENU 23&24&25&29&30).

Function 1: CTCSS/DCS Operation

Many repeater systems require that a very-low-frequency audio tone be superimposed on your FM carrier in order to activate the repeater. This helps prevent false activation of the repeater by radar or spurious signals from other transmitters.

Enter Menu 23th/24th/25th to set TX&RX Tone code/ RX Tone code/ TX Tone code.

1) Press **【*Lock】** key to select CTCSS/ DCS/ OFF. After you choose CTCSS/ DCS, press up or down key to choose the right group you need.

2) Press **【*Lock】** key to select DCS direction.

This transceiver has 50 groups CTCSS, 104 groups normal/inverted DCS.

This transceiver has 50 groups CTCSS, 104 groups normal/inverted DCS.

Function 2: TONE Search Scanning

In operating situations where you don't know the CTCSS/DCS tone being used by another station or stations, you can command the radio to listen to the incoming signal and scan in search of the tone being used.

Enter Menu 29st/30nd to start CTCSS/DCS searching.

If the Tone scan feature does not detect a tone or code, it will continue to scan indefinitely. When this happens, it may be that the other station is not sending any. You can press PTT key to halt the scan at any time.

You also can press MONI key during Tone scanning to listen to the (muted) signal the other station. When you release the MONI key, Tone scanning will resume.

Tone Scanning works either in the VFO or MR modes.

Function 3: TONE Calling (1750Hz)

If the repeaters in your country require a 1750Hz burst tone for access (typically in Europe), you can press and hold Side Key 1 for 2S and transmitter will automatically activated, and a 1750Hz audio tone will be superimposed on the carrier. Once access to the repeater has been gained, you may release Side Key 1 and use PTT key for activating. The transmitter.

20) VFO Step setting (STEP---MENU 27) Functions: setting of the synthesizer steps.

Enter Menu 27th to set VFO step.

Available Values: 2.5/5/6.25/10/12.5/25/50/100kHz.

CTCSS TONE FREQUENCY (Hz)						
67.0	69.3	71.9	74.4	77.0	79.7	
82.5	85.4	88.5	91.5	94.8	97.4	
100.0	103.5	107.2	110.9	114.8	118.8	
123.0	127.3	131.8	136.5	141.3	146.2	
151.4	156.7	159.8	162.2	165.5	167.9	
171.3	173.8	177.3	179.9	183.5	186.2	
189.9	192.8	196.6	199.5	203.5	206.5	
210.7	218.1	225.7	229.1	233.6	241.8	
250.3	254.1	/	/	/	/	
DSC TONE FREQUENCY (Hz)						
023	074	172	265	371	503	662
025	114	174	266	411	506	664
026	115	205	271	412	516	703
031	116	212	274	413	523	712
032	122	223	306	423	526	723
036	125	225	311	431	532	731
043	131	226	315	432	546	732
047	132	243	325	445	565	734
050	134	244	331	446	606	743
051	143	245	332	452	612	754
053	145	246	343	454	624	/
054	152	251	346	455	627	/
065	155	252	351	462	631	/
071	156	255	356	464	632	/
072	162	261	364	465	645	/
073	165	263	365	466	654	/

21) Wide/Narrow band selecting (N/W---MENU 28)

Functions: setting of wide / midd / narrow bandwidth Enter Menu 28th to set bandwidth.

Available Values: Wide---25kHz / Midd---20kHz / Narrow---12.5kHz

22) Radio Monitor(DW-MENU 34)

Function: Dual Watch feature makes transceiver can monitor the calling signal when FM radio is on and you won't miss any calling.

Enter Menu 34 to set Dual Watch. Default: OFF.

23) Dual PTT Function

This radio has two PTT (push-to-talk) buttons to fulfill dual channel standby and transmitting to facilitate multiple-group and cross-department calls. While the first PTT button controls Band A, the other PTT button controls Band B. RA89G is on standby for both channels. With dual standby users won't miss vital calls from either channel.

ADVANCED FUNCTIONS

1) EMERGENCY ALERT [F] + [*Radio]

Under standby mode, press [F] to enter menu setting. LCD display "MENU", then press [F] to turn on emergency alert function, radio will transmit emergency ring, until you press PTT, it will exit.

2) KEYPAD LOCK SETTING

Under standby mode, press [*Radio] for 2 S to lock to unlock the keypad. The lock icon will be displayed at the top of LCD when keypad is locked.

And you can Enter Menu 32th [LOCK MD] to set Keypad lock method:

ALL/PTT/KEY/KEY+S lock.

3) TONE CALLING (1750 TONE)

To access a repeater, press and hold a side key that has been customized as a 1750 tone for the amount of time specified by the repeater. The transmitter will automatically be activated, and a 1750Hz audio tone will be superimposed on the carrier. Once access to the repeater has been gained, you may release the sidekey and use PTT for activating the transmission.

4) CHANNEL STORAGE AND DELETE

Channel Storage

Under VFO mode, input desired frequency by keypad directly or select one by pressing up and down key and then long press [F], the digits blinks at the right top of LCD, press number to input desired channel directly, or press up and down key to choose desired one, then press [#Radio] for storage.

Note: after you input desired channel number, if it has a ▲ means that this channel is already occupied, you can choose another one. If it only blinks the number means that this is an empty channel.

Channel delete

1) Under VFO mode, long press [F], the memory channel blinks with a ▲ at the bottom of channel number.

2) Press up or down key or input channel number you want to delete, then press

【*Lock】 to confirm confirm

3) After delete, it will skip into next channel, if you want to delete it, repeat above operation.

5) FM RADIO FUNCTION

1. On/off radio receiver

Under standby mode, press [#Radio] to open FM radio function, LCD display “70.00M”, then press [#Radio] again, radios receiver is off.

2. Mode selection:

Under FM radio mode, press [#Radio] to switch between FM memory mode and FM frequency mode (this function is unavailable when there is not FM memory channel)

3. Frequency selecting

Under FM frequency mode, input the digits directly by keypad or press up or down key to choose the desired frequency. Under FM memory mode, press up or down key to choose the desired channel.

4. FM radio storage

Under FM frequency mode, long press 【F】 , the channel number for storage blinks at the right of the screen. Press up or down key to select the desired channel number, press 【#Radio】 to confirm and then back to the receiving mode.

5. FM radio channel delete:

Under FM frequency mode, long press 【F】 , the channel number blinks, press up or down key to choose the channel number you want to delete, Press 【*Lock】 to confirm. Repeat this operation, you can delete all memory channel 24 in maximum.

6) Selected channel call:

DTMF

When the signal of the channel selects the DTMF, press PTT 2 and at the same time press side key 1, the current channel will automatically check if the DTMF signaling is received and decoding it. And achieve a corresponding function according to the received code. The function including: ANI display, remote stun/waken/kill..

ANI Display:

1. DTMF Encode type choose ANI:

DTMF MENU		
Dtmf Encode		
No.	Type	Code
1	ANI	003*001

2. Input the called ID, eg, your radio ID is 001, the called radio ID is 003

No.	Type	Code
1	ANI	003*001
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

Special Call

No: M1

Call Type: ANI

Call ID: 003

Enter Cancel

3. Select channel NO.

Own ID: 001 Dtmf Speed(MS): 100

Delimiter: * First Digit(MS): 200

Group Code: A Auto Reset Time(S): 10

☒ DTMF ANI ☒ Side Tone

Select Ch: 1

4. Choose DTMF signal

No.	Rx Fre	Tx Fre	Decode	Encode	Scramble	Power	B_Lock	Step	Wide	Signal
1	445.02500	445.02500	OFF	OFF	OFF	Hig	OFF	12.5K	Wide	DTMF

5. Press PTT 2 and side key 1 at the same time to achieve the ANI display function.

Remote stun, remote kill function

Stun code: when the radio receives the corresponding DTMF code, the radio will be remote stunned and disabled transmit.

Kill code: when the radio receives the corresponding DTMF code, the radio will be remote killed and disabled receive and transmit.

Waken code: release the state of stun/kill.

Select Ch: the default channel when the DTMF is calling.

1. DTMF Encode type choose OFF, user can input the desired DTMF code directly.

DTMF MENU		
Dtmf Encode		
No.	Type	Code
1	ANI	003*001
2	OFF	323457989012345
3	OFF	323457989012345#
4	OFF	423465789012345
5	OFF	423465789012345#
6		

2. In transmitting ,input the remote kill/stun code for the radio which you want to remote kill/stun.

Stun Code	323457989012345
Kill Code	423465789012345

3. DTMF Encode:

Remote receive code : "remote stun code + #" to waken radio which at stun state

Remote receive code: "remote kill code + #" to waken radio which at kill state

4. Select channel

Own ID 001	Dtmf Speed(MS) 100
Delimiter *	First Digit(MS) 200
Group Code A	Auto Reset Time(S) 10
☒ DTMF ANI	☒ Side Tone
	Select Ch 1

Like above setting,
 Channel 1: ANI display,
 Channel 2:remote stun code
 Channel 3:remote waken from stun state
 Channel 4:remote kill code
 Channel 5: remote waken from kill state

5.Signal choose DTMF

No.	Rx Freq	Tx Freq	Decode	Encode	Scramble	Power	B_Lock	Step	Wide	Signal
1	445.02500	445.02500	OFF	OFF	OFF	Hig	OFF	12.5K	Wide	DTMF

6.Remote kill/waken/stun operation.

After setting like above, if you would like to achieve Radio A kill Radio B, there are two way to achieve:

One: At programming software DTMF setting choose Ch 4.

Then press the PTT 2 and side key 1 to achieve remote radio B.

Two: At radio, choose Menu 10th—DT CH—Channel number choose 4.

Then press the PTT 2 and side key 1 to achieve remote radio B.

Similar operation for remote stun/waken.

1750 Hz Tone

Under standby mode press side key1 for 2second then enter into 1750 repeater tone.

2 TONE Operation

The screenshot shows the '2 Tone Menu' software interface. It has a title bar '2Tone Menu u' and standard window controls. The main area is divided into two panes. The left pane, titled '2 Tone Encode', contains a table with columns 'No.', 'First Tone', 'Second Tone', and 'Name'. The first row is populated with '1', '666.0', '2222.0', and '2T-01'. The right pane, titled '2 Tone Decode', contains several settings: 'Decode Format' set to 'A-B', 'Decode Response' set to 'ReMind', and four tone frequency inputs: 'A Tone(HZ)' (666.0), 'B Tone(HZ)' (2222.0), 'C Tone(HZ)' (626.5), and 'D Tone(HZ)' (2043.0). Below these are 'Setting' options: 'First Tone Time(MS)' (500), 'Interval Time(MS)' (1000), 'Second Tone Time(MS)' (500), 'First Tone Time(MS)' (10), 'Long Tone Time(MS)' (1000), and 'Auto Reset Time(S)' (1). There is a checked checkbox for 'Side Tone'. At the bottom are 'Enter' and 'Cancel' buttons.

No.	First Tone	Second Tone	Name
1	666.0	2222.0	2T-01
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

2 Tone Decode

Decode Format: A-B

Decode Response: ReMind

A Tone(HZ): 666.0

B Tone(HZ): 2222.0

C Tone(HZ): 626.5

D Tone(HZ): 2043.0

Setting

First Tone Time(MS): 500 Interval Time(MS): 1000

Second Tone Time(MS): 500 First Tone Time(MS): 10

Long Tone Time(MS): 1000 Auto Reset Time(S): 1

☒ Side Tone

Enter Cancel

2 Tone encode

Input: the frequency of first tone and second tone

Note: the frequency between of the first tone and second tone should not too similar to avoid the decoding is wrong.

2 Tone decode

Decode Format: the combination of decode, for example: A-B, you should make sure the frequency of first tone is A, and second tone is B. Other combination is similar.

5 Tone Operation

STone Menu

STone Encode STone Decode

No.	Type	Call ID	Ch Name
1	AMT	12345	ST-01
2	OFF	12345678	ST-02
3	OFF	12345678	ST-03
4	OFF	87654321	ST-04
5	OFF	35578411	ST-05
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

Enter Cancel

5 Tone encode

The write way is same with the DTMF.

5 Tone decode

Function: The function will be achieved when the radio receives the corresponding code.

Select: Turn on squelch

Stun/kill: same with DTMF

Wake: release the state of stun/kill

7) APP Programming Operation

Program the RA89G via the RETEVIS smartphone APP (no computer/CPS needed) and connect Wireless accessories (earphones, PTT).

Turn on BT (2400-2483.5 MHz, max 10 mW) on the radio:

Enter Menu 50 to turn on BT Switch, LCD displays a phone icon means BT is active.

Connect the APP to the radio:

Download the "RETEVIS" APP from the App Store (iOS) or Google Play (Android).

Open the APP → Add Radio → Select "Retevis RA89G" from the Radio list.

It will read the data from the radio first.

Program the configuration on the phone APP.

Connect Wireless Accessories

Pair Wireless earphones (for hands-free audio) or Wireless PTT (remote push-to-talk) with the RA89G.

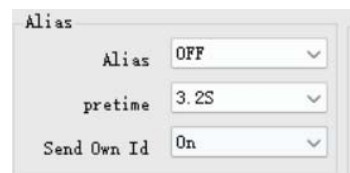
Make the earphone into the pairing mode, and scan the earphone device. It will display the device name if found it.

8) Radio Alias display

When using DTMF or 5TONE calls, you can set an alias for display.

The steps are as follows:

1. Transmitter settings: Enable the transmitter to send its own ID.



Alias

Alias OFF

pretime 3.2S

Send Own Id On

2. Receiver settings: Enable alias display on the receiver.



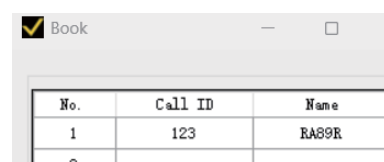
Alias

Alias On

pretime 3.2S

Send Own Id On

Enter the transmitter's ID and the corresponding alias in the receiver's contact list.



No.	Call ID	Name
1	123	RA89R

Note: 1. When using the DTMF/5TONE function, if sending/displaying aliases is enabled, pressing the PTT 2 will directly send the DTMF or 5Tone ID number; there is no need to press side button 1 to initiate the call. For the remote stun/kill and activation functions, press the PTT 2, wait for 3 seconds, and then press side button 1 to send the remote stun/kill or activation code.

2. When making normal communication, if sending/displaying aliases is enabled, pressing the PTT 2 will send the transmitter ID (default is the DTMF ID), and the receiver will display the transmitter's ID or alias.

TECHNICAL PARAMETERS	
General	
Channel	200
Operating Voltage	7.4VDC
Operating Temperature	-10°C ~ +50°C
weight	268g (battery and antenna included)
Dimension	121x58x42mm
Transmitter	
Frequency	GMRS 462-467Mhz
Modulation Type	FM
Modulation Noise	<-40dB
Modulation Distortion	<5%
Frequency Stability	5ppm
Max Fr. Deviation	≤±5KHz
Current	≤1600mA
Audio response (300-3400Hz)	+6.5~-14dB
Adjacent Ch Power	≥65dB
Receiver	
Sensitivity	≤0.2μV
Occupied Bandwidth	≤16KHz
Selectivity	≥65dB
Intermediation	≥55dB
Audio powe	>500m W
Audio distortion	≤10%
Frequency Stability	5ppm
Current	standby: 60mA working:250mA
Audio response (300-3400Hz)	+7~-12.5dB

Troubleshooting

The transceiver does not turn ON.	The battery is exhausted.	Charge the battery pack, or replace the batteries.
	Loose the connection of a battery pack (case).	Clean the battery terminals.
No sound comes from the speaker	The volume level is too low.	Rotate Volume Knob to adjust the level.
	The squelch level is too high.	Adjust the squelch level.
	An external speaker is connected to the [SP]jack.	Check the external speaker connection.
	The CTCSS tone is not compatible.	Disable CTCSS/DCS or be sure setting matches incoming transmission.
Keypad is unresponsive	Keyboard locked or not.	Check if the keypad has been locked. Check if other keys are currently pressed.
Battery life lower than expected	Be sure the charger indicates the battery is fully charged. The battery pack capacity will naturally diminish over a number of charge cycles. This is the case with all lithium batteries.	
Transmitting is impossible	Set the transmit power level to High.	
	The PTT Lock function is activated.	Turn OFF the PTT Lock function on the MENU screen.
	The Busy Lockout function is activated.	Turn OFF the Busy Lockout function on the MENU screen.
	The transmit frequency is out of the amateur radio band.	Set the transmit frequency within the amateur radio band.

The list aims at helping you correct the problems that don't belong to the device's fault. If you can't find out the reason for problems or can't work them out, please contact your seller or customer service. As follow email address: info@retevis.com.

* To provide you with more comprehensive and accurate product instructions (including feature optimization instructions, new operating instructions, and FAQs), this product's electronic manual will be continuously updated.

The printed manual is the fixed version at the time of shipment. In the event of any discrepancy between the printed manual and the electronic version, the latest electronic version will prevail. We recommend that you regularly review the electronic version for the best user experience.

CAUTION

User' instructions should accompany the device when transferred to other users. Unauthorized modification and adjustment Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

Radio License

This two-way radio is a GMRS station. A valid individual license is required to operate a GMRS station. To obtain an individual license, an applicant must be eligible and follow the applicable rules and procedures established by FCC. The applicant must pay the required application and regulatory fees. Each individual license in the GMRS will normally have a term of ten years from the date of grant or renewal, and may be renewed pursuant to the procedures of FCC. To obtain a GMRS operator license, you need FCC Form 605 & 159, we suggest visiting the FCC website at <https://www.fcc.gov/wireless/support/fcc-form-605>, which includes necessary instructions. More questions about the license application, please contact the FCC at 1-888-225-5322 or go to the FCC's website: <http://www.fcc.gov>.

Note: According to FCC rules, any individual who holds an individual GMRS license may allow his or her immediate family members to operate his or her GMRS station or stations. Immediate family members are the licensee's spouse, children, grandchildren, stepchildren, parents, grandparents, stepparents, brothers, sisters, aunts, uncles, nieces, nephews, and in-laws.

FCC compliance information

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference. (Licensed radios are applicable)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (Other devices are applicable)

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is

encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized modification and adjustment

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, or accumulators must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws and rules in your area.



RF Safety

This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. RF energy, which when used improperly, can cause biological damage. Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits: <http://www.who.int/en/> Transmit no more than the rated duty factor 50% of the time. Transmitting necessary information or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance. For users who wish to further reduce their exposure, some effective measures to reduce RF exposure include:

- Reduce the amount of time spent using your wireless device.
- Use a speakerphone, earpiece, headset, or other hands-free accessory to reduce proximity to the head (and thus head exposure).

While wired earpieces may conduct some energy to the head and wireless earpieces also emit a small amount of RF energy, both wired and wireless earpieces remove the greatest source of RF energy (handheld device) from proximity to the head and thus can greatly reduce total exposure to the head.

- Increase the distance between wireless devices and your body.
- This radio is designed for and classified as "Occupational/Controlled Use Only".

Occupational/Controlled environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential of exposure, for example, as a result of employment or occupation. It means a radio must be used only by individuals aware of the hazards, and the ways to minimize such hazards; Not intended for use in a General population/uncontrolled environment.

Hand-held Mode

To control your exposure and ensure compliance with the controlled environment exposure limits, always adhere to the following procedure:

-To receive calls, release the PTT button.

-To transmit (talk), press the Push-to-Talk (PTT) button in front of the face.

-Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips.



Electromagnetic Interference/Compatibility

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so, such as hospitals or healthcare facilities.

- Persons with pacemakers, implantable cardioverter defibrillators (ICDs) or other active implantable medical devices should
 - Consult with their physicians regarding the potential risk of interference from radio frequency transmitters, such as portable radios (poorly shielded medical devices may be more susceptible to interference).

- Turn the radio OFF immediately if there is any reason to suspect that interference is taking place.

- Do not carry the radio in a chest pocket or near the implantation site, and carry or use the radio on the opposite side of the body from the implantable device to minimize the potential for interference. Hearing Aids: Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

- Other Medical Devices: If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy.

Your physician may be able to assist you in obtaining this information.

Turn off your radio in the following conditions:

- Turn off your radio prior to entering any area with a potentially hazardous or explosive atmosphere. Only radio types that are especially qualified should be used in such areas as "Intrinsically Safe". Note: the areas with potentially explosive atmosphere referred to above include blasting caps, blasting areas, inflammable gas, dust particles, metallic powders, grain powders, fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles (such as grain, dust or metal powders) and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often – but not always posted.

Use of Communication Devices While Driving

- Always check the laws and regulations on the use of radios in the areas where you

drive. Use of Communication Devices, for example, mobile radio, may not be allowed.

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions or regulations so require.



- Do not place a portable radio in the area over an air bag or in the airbag deployment area.

The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the airbag inflates.

Protect your hearing

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Limit the amount of time you use headsets or earpieces at high volume.
- When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear. The louder the radio's volume, the less time is required before your hearing could be affected.



- Use carefully with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss.

CAUTION: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing.

Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

Batteries Safety

• WARNING: KEEP NEW OR OLD USED BATTERIES OUT OF REACH OF CHILDREN.

- In the event of a battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice immediately.
- If a radio or a battery has been submerged in water, please dry and clean it before use. Do not dry the radio or battery with an appliance or heat source, such as a hair dryer or microwave oven. If the radio has been submersed in a corrosive substance (e.g. saltwater), rinse the radio and battery in fresh water, then dry them.

Since batteries are sensitive to high temperatures when storing them, keep them in a cool and dry place. The recommended temperature should be between +10 °C and +25 °C and never exceed +30 °C. Batteries should therefore not be stored next to radiators or boilers nor in direct sunlight.

Extremes of humidity (below 35% and above 95% relative humidity for sustained periods) should be avoided since they are detrimental to both batteries and packing. Although the storage life of batteries at room temperature is good, storage is improved at lower temperatures provided special precautions are taken. Also, accelerated warming is harmful.

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;

A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

- The plug of the adapter is considered a disconnect device. The socket-outlet shall be installed near the equipment and shall be easily accessible.

WARNING:

CHOKING HAZARD—Small Parts. Not suitable for children under 3 years old.



Authorized Accessories List

- Contact Retevis for assistance regarding repairs and service.
- For a list of Retevis-approved accessories for your radio model, visit the website:
<http://www.Retevis.com>.

Guarantee

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

Remarks:

- 1.This guarantee card should be kept by the user, no replacement if lost.
 - 2.Most new products carry a two-year manufacturer's warranty from the date of purchase.
 - 3.The user can get warranty and after-sales service as below:
 - Contact the seller where you buy.
 - Products Repaired by Our Local Repair Center
 - 4.For warranty service, you will need to provide a receipt proof of purchase from the actual seller for verification
- Exclusions from Warranty Coverage:
- 1.To any product damaged by accident.
 - 2.In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
 - 3.If the serial number has been altered, defaced, or removed.



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Web: www.retevis.com
E-mail: info@retevis.com
Facebook: [@retevis.fans](https://www.facebook.com/retevis.fans)



Made in China

材质：80g双胶纸
尺寸：160×120mm
工艺：骑马订装订
颜色：四色印刷
*此页不印刷