

TRI-BAND TRANSCEIVER OF THE CAR

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USER'S MANUAL



Thank you very much for using my company produces the radios. This product has the function of the new development menu Personalized design operation, Make it easy for you to use Exquisite volume and reasonable price will meet your requirements.

■ EXPLICIT DEFINITONS

- It is important that the operator is aware of and understand hazards common to the operation of any transceiver.
- Explosive environment (such as gases, dust, fumes, etc.)
- Turn off your transceiver while taking on fuel, or while parked in gasoline service stations.

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■ MATTERS NEED ATTENTION

Please observe the following precautions to prevent fire, personal injury, damage to the radio:

- Don't use this machine when driving, so dangerous.
- This radio is designed to use 13.8 V dc voltage, do not use the 24 V power supply to the power supply.
- Please do not place the machine in the dust, moisture or water splashing.
- If you accept received external disturbance, should make the machine away from jamming equipment.
- Do not use the captain time exposed to direct sunlight or heating equipment accessories.
- If the unit emitting smoke or strange smell, should immediately cut off power supply, No later to confirm the machine safety, sent to the nearest repair service station to check it.
- Don't for a long time with high power output for launch, which could lead to walkie talkie is overheating.

■ UNPACKING AND INSPECTION EQUIPMENT

Welcome to use the wireless interphone, before use, it is recommended that you:

- Please check the packaging of this product have any signs of damage.
- Please confirm box carefully opened the box, if any items listed in the table below.
- If you find this product and its accessories in the handling of any lost or damaged, immediately contact the dealer.

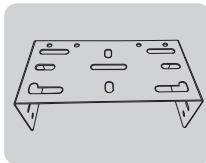
Standard accessories



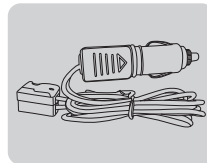
Machine



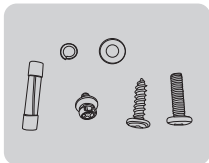
Microphone



Mounting bracket

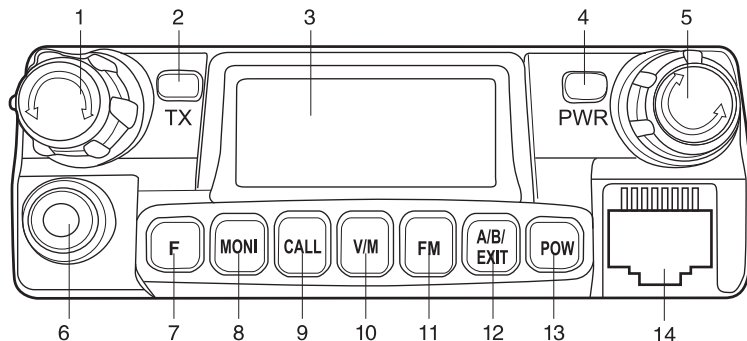


Power cable



Screw, the fuse

■ PANEL DESCRIPTION



1 Progress of the knob

2 Transmit indicator

3 Display screen

4 Power indicator

5 Volume Knob

6 Write frequency Connector

7 Function keys

8 Monitor function

9 Call key

10 Model switching

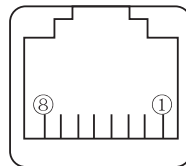
11 FM radio function key

12 Exit the AB signal switching,
alarm function

13 Power key

14 Microphone Connector

Note: 3.5 jack headphones over the power cord



① Data input

② Empty

③ MIC

④ MIC grounding

⑤ PTT.

⑥ GND

⑦ + 8V DC output

⑧ Empty

Hotkey function guide

[]: Click to enter menu select mode.

[]: In standby mode, press to send caller ID at selected signaling mode. in transmit mode, press to send repeat activate signaling.

[]: Ppress to turn on the squelch, repeat to turn off the squelch.

[]: Hold the key to turn on and turn off the radio power.

[]: Press to select channel mode and frequency mode.

[]: Press to choose A/B frequency and exit function mode. Hold the key 2 seconds to activate Alarm function and relieve PTT transmit.

[]: Press to enter and exit FM radio function.

Frequency Range Setting

Hold the [F] key to turn on the radio, Display after six PASSWD input the correct password, 135, 179

Enter frequency range, 144, 148

Example: 135 179 Enter frequency range, 136, 174

240 270 Enter frequency range, 240, 260

400 520 Enter frequency range, 400, 480

Can only be used type frequency range.

Read and Write the Password Function

Choose a password, speaking, reading and writing (set password, please remember, once set, after software to read and write all need password to open)

■ SAME TX RX FREQUENCY, DIFFERENT TX RX FREQUENCY CHANNEL MEMORY

Same TX RX frequency channel memory

1. Use keypad write require frequency, for example 145.000, press **[F Key]** to menu 36, press **[F Key]** to show 001 flashing(choose channel number), press **[F Key]** again to show CH-001, press **[EXIT]** to complete the memory and exit.
2. Use keypad write require frequency, for example 146.000, press **[F Key]** to menu 36, press **[F Key]** to show 002 slashing (choose channel number), press **[F Key]** again to show CH-002, press **[EXIT]** to complete the memory and exit.
3. Part A display channel: under menu 29, press **[F Key]** to show , press [F] key **FREQ** flashing, made choice by switch. CH show channel, **FREQ** show frequency and channel number,

press **[F Key]** to complete.

4. Part B display channel: under menu 30, press **[F Key]** to show , press **[F Key]** **FREQ** flashing, made choice by switch. CH show channel, **FREQ** show frequency and channel number, press **[F Key]** to complete.
5. Press PTT to exit menu, use **[EXIT/AB]** key to switch.

Different TX RX frequency channel memory (connect repeater)

1. Use keypad write require frequency, for example 164.500, press **[F Key]** to menu 36, show MEM-CH-001 press **[F Key]** to show 001 flashing, press **[F Key]** again to show CH-001, complete RX memory, and press **[EXIT]**.
2. Use keypad write require frequency, for example 158.800, press **[F Key]** to menu 36, show MEMCH-001 press **[F Key]** to show 001 flashing, press

[F Key] again complete different frequency memory, and press **[EXIT]**.

Different TX RX frequency with CTCSS/DCS channel memory (connect repeater)

(For example RX 465.525 CTCSS 67.0 TX 455.525 DCS D023N)

1. Press **[F Key]** to menu 11, show R-CTCS/OFF, press **[F Key]** show OFF flashing, use switch choose RX CTCSS 67.0, press **[F Key]** complete.
2. Use switch choose menu 12 T-DCS/OFF, press **[F Key]** show OFF flashing, choose DCS D023N, press **[F Key]** confirm and press **[EXIT]** to complete.
3. Use keypad to write RX frequency 465.525, press **[F Key]** to menu 36, show MEM-CH/001, press **[F Key]** to 001 flashing, press **[F Key]** to confirm, display CH001, RX memory complete, press **[EXIT]**.
4. Use keypad to write TX frequency, press **[F Key]** to

menu 36, show MEM-CH001, press **[F Key]** let CH001 flashing, press **[F Key]** confirm and press **[EXIT]** key to complete TX memory.

■ MENU FUNCTION SETTING

Menu function setting (Can setting by mic-keypad)

1. **[F Key]+[0 Key]: TDR** turn on/off dual frequency standby setting. ON can both A/B frequency standby at same time. OFF only for frequency you selected. Use **[F Key]** to save setting.
2. **[F Key]+[1 Key]: STEP** setting the step figure at frequency mode, 5KHZ, 6.25KHZ, 10KHZ, 12.5KHZ, 25KHZ available. Use **[F Key]** to save setting.
3. **[F Key]+[2 Key]: SQL** receiver squelch setting. 10 level, 0 is turn on the squelch, 1-9 to adjust level, use **[F Key]** to save setting.
4. **[F Key]+[3 Key]: TXP** transmit output power setting. HIGH/LOW use F Key to save setting.
5. **[F Key]+[4 Key]: SCR** Scrambler setting. Activating voice scrambling avoids the user's speech being overheard by user without using scrambling function. (Optional)
6. **[F Key]+[5 Key]: TOT** transmission time-out timer. Setting transmit time from 15 to 600 seconds by 15 step. Use **[F Key]** to save setting.
7. **[F Key]+[6 Key]: TOA** transmit over alarm setting. OFF is close function. Set from 1-10 seconds, use **[F Key]** to save setting.
8. **[F Key]+[7 Key]: WN** WIDE / NARR band width setting. Use **[F Key]** to save setting.
9. **[F Key]+[8 Key]: ABR** LCD light time setting. OFF is to close the function stay LCD light working. Set by 1-50 seconds, us **[F Key]** to save.
10. **[F Key]+[9 Key]: BEEP** function key guide voice. OFF/ON
11. **[F Key]+[1 Key]+[0 Key]: R-DCS** DCS receive setting. D023N-D754N positive sequence, D023I-D754I reversed sequence. Use **[F Key]** to save setting.

12. **[F Key]+[1 Key]+[1 Key]: R-CTCS** CTCS receive setting. 67.0HZ-254.1HZ or can use keypad to enter your target CTCS. Use **[F Key]** to save setting.
13. **[F Key]+[1 Key]+[2 Key]: T-DCS** transmit DCS setting. D023N-D754N positive sequence. D023I-D754I reversed sequence. Use **[F Key]** to save setting.
14. **[F Key]+[1 Key]+[3 Key]: T-CTCS** transmit CTCS setting. 67.0HZ-254.1HZ or can use keypad to enter your target CTCS. Use **[F Key]** to save setting.
15. **[F Key]+[1 Key]+[4 Key]: DTMFST** DTMF side tone setting. OFF: Close function. KEY: Sound code voice only when radio transmit DTMF code. ANI: Sound code voice when automatic code mode. BOTH: Sound code voice at both mode.
16. **[F Key]+[1 Key]+[5 Key]: BCL** busy channel lock-out. OFF: transmit at busy channel. ON: no-transmit at busy channel. Use **[F Key]** to save setting.
17. **[F Key]+[1 Key]+[6 Key]: SC-ADD** scan add setting. OFF: store channel without add to scan list. ON: store channel and add to scan channel list. Use **[F Key]** to save setting.
18. **[F Key]+[1 Key]+[7 Key]: PRI-SC** priority scan setting. ON/OFF turn on/off the function. Use **[F Key]** to save setting.
19. **[F Key]+[1 Key]+[8 Key]: PRI-CH** priority channel scan setting. Select 000 -199 channels mark with CH at front to priority scan. Use **[F Key]** to save setting.
20. **[F Key]+[1 Key]+[9 Key]: SC-REV** Scan recover setting. TO: time scan, after receive carrier signal will stop scan and rescan after a while. CO: after receive carrier signal will stop scan. SE: Search scan mode. Scan will stop after receive according signal with radio.
21. **[F Key]+[2 Key]+[0 Key]: OPTSIG** Signal option setting. OFF turn off the function. DTMF: dual channel signal selected mode. 2TONE: 2 tone

signal mode. 5TONE: 5 tone signal mode. Use **[F Key]** to save setting.

22. **[F Key]+[2 Key]+[1 Key]: SPMUTE** speaker mute setting. QT: turn on the speaker when receive setting DCS. If no setting DCS then will turn on the speaker when receive carrier signal. AND: speaker turn on only DCS and option signaling both meet radio setting. OR: speaker turn on either DCS or option signaling meet with radio setting. Use **[F Key]** to save setting.

23. **[F Key]+[2 Key]+[2 Key]: PTT-ID** PTT-ID transmit setting. OFF: no send ID code when transmit. BOT: send ID code when transmit. EOT: send ID code after transmit. BOTH: send ID code both start transmit and transmit finish. (ID code is signal information code by PC software setting, from menu 24 to select ID code) use **[F Key]** to save setting.

24. **[F Key]+[2 Key]+[3 Key]: PTT-LT** PTT-ID transmit

delay setting. Set delay time during 0-30 seconds. Use **[F Key]** to save setting.

25. **[F Key]+[2 Key]+[4 Key]: S-INFO** Signal information and automatic dialing memory. 1-15 group signal code/decode memory. Only can set by PC software.

26. **[F Key]+[2 Key]+[5 Key]: EMC-TP** alarm mode setting. ALARM: turn on the alarm sound. ANI: send alarm code and ID code. BOTH: both above. Use **[F Key]** to save setting.

27. **[F Key]+[2 Key]+[6 Key]: EMC-CH** alarm channel setting. Channel set CH ahead when alarm is effective channel. Use **[F Key]** to save setting.

28. **[F Key]+[2 Key]+[7 Key]: RING-T** Ring time setting. OFF: close function. Choose 1-10 seconds to set ring time when radio got match signal code. Use **[F Key]** to save setting.

29. **[F Key]+[2 Key]+[8 Key]: CHNAME** channel name edit. Use function under channel model.

30. **[F Key]+[2 Key]+[9 Key]: CA-MDF** Channel A setting. **FREQ:** channel show frequency at channel mode. **CH:** channel show channel list at channel mode. **NAME:** channel show channel name at channel mode.
31. **[F Key]+[3 Key]+[0 Key]: CB-MDF** Channel B setting. **FREQ:** channel show frequency at channel mode. **CH:** channel show channel list at channel mode. **NAME:** channel show channel name at channel mode.
32. **[F Key]+[3 Key]+[1 Key]: AUTOLK** Automatic lock-out setting. **OFF/ ON** turn off/on the function. Use **[F Key]** to save the setting.
33. **[F Key]+[3 Key]+[2 Key]: PONMSG** Display mode setting. **FULL:** Full display when turn on the radio. **MSG:** appointed message display when turn on the radio. **BATT-V** Show battery power output voltage when turn on the radio. Use **[F Key]** to save setting.
34. **[F Key]+[3 Key]+[3 Key]: WT-LED** standby back light setting. **OFF:** close. **BLUE:** choose blue color. **ORANGE:** choose orange color. **PURPLE:** choose purple color. Use **[F Key]** to save setting.
35. **[F Key]+[3 Key]+[4 Key]: RX-LED** back light setting at receive. **OFF:** close back light. **BLUE:** choose blue color. **ORANGE:** choose orange color. **PURPLE:** choose purple color. Use **[F Key]** to save setting.
36. **[F Key]+[3 Key]+[5 Key]: TX-LED** back light setting at transmit. **OFF:** close back light. **BLUE:** choose blue color. **ORANGE:** choose orange color. **PURPLE:** choose purple color. Use **[F Key]** to save setting.
37. **[F Key]+[3 Key]+[6 Key]: MEM-CH** channel memory setting. Show **CH** after you select channel to memory. Use **[F Key]** to save setting.
38. **[F Key]+[3 Key]+[7 Key]: DEL-CH** channel delete setting. **CH** will disappear after you select the channel and use channel delete function. Use

[F Key] to save setting.

39. **[F Key]+[3 Key]+[8 Key]: SFT-D** Frequency difference direction setting. OFF: no frequency difference at frequency mode. +: transmit frequency figure equal receive frequency figure add frequency difference figure at frequency mode. -: transmit frequency figure equal receive frequency figure minus frequency difference figure at frequency mode. Use **[F Key]** to save setting.

40. **[F Key]+[3 Key]+[9 Key]: OFFSET** frequency difference figure setting. Can choose figure during 00.000-69.990MHZ under frequency mode. Use **[F Key]** to save setting.

41. **[F Key]+[4 Key]+[0 Key]: ANI** radio ID code. Code only can set by PC software.

42. **[F Key]+[4 Key]+[1 Key]: ANI-L** ID code length. Can choose 3.4.5 length, use **[F Key]** to save setting.

43. **[F Key]+[4 Key]+[2 Key]: REP-S** repeater activate

setting. 1000: under transmitting press Call to send 1 KHZ frequency signal to activate the repeater. 1450: under transmitting press Call to send 1.45 KHZ frequency signal to activate the repeater. 1750: under transmitting press Call to send 1.75 KHZ frequency signal to activate the repeater. 2100: under transmitting press Call to send 2.1KHZ frequency signal to activate the repeater. Use **[F Key]** to save setting.

44. **[F Key]+[4 Key]+[3 Key]: REP-M** repeater forwarding mode setting. OFF: close function. CARRI: forwarding after receive carrier. CTDCS: forwarding after receive correct CTDCS. TONE: forwarding after receive correct mono audio. DTMF: forwarding after receive assigned DTMF code. Use **[F Key]** to save setting.

45. **[F Key]+[4 Key]+[4 Key]: TDR-AB** double waiting for automatic switch Settings. OFF which channel to receive signals, frequency, which is a permanent

switch to channel 1-50 frequency after the received signal, frequency indicates the delay time the cursor returns to the original frequency. (in seconds) adjusted according to the **[F Key]** storage parameters.

46. **[F Key]+[4 Key]+[5 Key]: SET** Call end eliminate Settings. ON open to eliminate receiving end clicks, shut OFF receiving end eliminate, clicks. If you need to receive confirmed transit signal repeater return, please turn off the menu. Adjusted according to the **[F Key]** storage parameters.

47. **[F Key]+[4 Key]+[6 Key]: RP-STE** Relay end eliminate Settings. Close OFF, 1-10 represents the end length, that is used to eliminate the relay, because of the repeater delay in brief noise. Adjusted according to the **[F Key]** storage parameters.

48. **[F Key]+[4 Key]+[7 Key]: RPT-DL** Receiving repeater back short delay signal delay time Settings. OFF closed relay delay reception, 1-10 open relay reception delay time, the storage **[F Key]** parameters

after the completion of the whole.

49. **[F Key]+[4 Key]+[8 Key]: RESET** Initialization Setting. VFO: reset the menu setting to initialization setting. ALL: reset the menu setting and channel setting to initialization setting.

Press **[EXIT/AB]** after menu setting.

Operation for manual channel memory and delete

Channel memory:

1. Directly input frequency by keypad under frequency mode. Example: 435.125MHZ input 4, 3, 5, 1, 2, 5.
2. Setting CTDCS frequency (manual page10, 11), Setting transmit CTDCS frequency (manual page12, 13). For example: receive CTDCS 67.0HZ, transmit CTDCS 67.0HZ. Press **[F]** Key + **[1]** Key + **[1]** Key + **[F]** Key + **[DOWN]** Key, select 67.0HZ + **[F]** Key + **[EXIT/AB]** Key to save receive CTDCS frequency. Transmit CTDCS 67.0 HZ press **[F]** Key + **[1]** Key +

[3] Key + **[F]** Key + **[DOWN]** Key, select 67.0HZ + **[F]** Key + **[EXIT/AB]** Key to save transmit CTDCS frequency. (select OFF if no need CTDCS)

3. See manual 36 to memory the channel, press **[F]** Key + **[3]** Key + **[6]** Key + **[F]** Key + **[UP]** (DOWN) select channel + **[F]** Key to memory the channel information.

Channel delete:

See manual 37 for channel delete. Press **[F]** Key + **[3]** Key + **[7]** Key + **[F]** Key + **[UP]** (DOWN) select the channel number + **[F]** Key delete the channel.

Memory FM radio channel

Use PC software to edit FM radio channel. (software FM option) Under transmit send DTMF code by microphone keypad. Press microphone **[*]** Key to search FM channel under FM mode.

Keypad Lock-out

Hold the microphone **[# key]** for 2 seconds at standby to turn on/off the keypad lock-out function.

Transmit transit signal

Select transit signal frequency (our radio have 4 kind transit signal frequency). Press **[F]** Key + **[4]** Key + **[2]** Key + **[F]** Key + UP(DOWN) select transit signal frequency + **[F]** Key save. Hold **[PTT]** Key and press **[Call]** Key to transmit setting transit signal.

PTT ID Setting

Use PC software to edit PTT-ID code.

1. See manual 20, select signal, Press **[F]** Key + **[2]** Key + **[0]** Key + **[F]** Key + **[UP]** (DOWN) select signal + **[F]** Key save the setting.
2. See manual 22, setting PTT launch. Press **[F]** Key + **[2]** Key + **[2]** Key + **[F]** Key + **[UP]** (DOWN) select PTT-ID transmit time + **[F]** Key save setting.
3. See manual 23 setting PTT transmit delay time.

Press **[F]** Key + **[2]** Key + **[3]** Key + **[F]** Key + **[UP]** (DOWN) select delay time + **[F]** Key save setting.

4. Press **[PTT]** to send setting ID code.

Optional signal setting

DTMF signal setting

This radio have DTMF coding/decode function, use PC software to input code information.

DTMF signal

setting receive DTMF signal first, after receive the same code as your setting radio will show the code by display and ring. Then can speech during effective time. (ID code setting by PC software)

Inspect function

When receive DTMF code is same as setting inspect code receiver will send ID code. Screen can display this code. This function can setting if control by master

ID, can no control by receive signal. (Inspect code can set by PC software)

Monitor function

When receive DTMF signal is same as setting code, receiver will turn on the monitor function for nearby signal. This function can setting if control by master ID, can no control by receive signal. (Monitor code can set by PC software)

Remote stun

When receive DTMF signal is same as pre-set remote stun code, receiver will turn off transmit function, only can work at receive. And LCD will display remote stun information. Only after receive turn on code the radio will turn on the transmit function. This function can setting if control by master ID, can no control by receive signal. (remote stun code can set by PC software)

Remote Kill

When receive DTMF signal is same as pre-set remote kill code, receiver will turn off all function, and LCD will display remote kill information. Only after receive turn on code the radio will turn on all function. This function can setting if control by master ID, can no control by receive signal. (remote kill code can set by PC software)

Turn on function

When receive DTMF signal is same as pre-set turn on code, receiver will cancel remote stun or remote kill. This function can setting if control by master ID, can no control by receive signal. (Turn on code can set by PC software)

Alarm function

When receive DTMF signal is same as pre-set alarm code, receiver will turn on the alarm function. Alarm mode and alarm channel can set by PC software optional edit.

This function no control by master ID and no control by receive signal. (Alarm code can set by PC software)
Signal control by master ID means function only work by signal code and master ID both confirm.

No control by master ID coding format: signal code +# (patch code)+information code.

Control by master ID coding format: signal+#(patch code)+ master ID code+#(patch code)+information code.

DTMF transmit by Call Key setting:

1. Select DTMF signal, press **[F]** Key + **[2]** Key + **[0]** Key + **[F]** Key + UP(DOWN) select DTMF signal + **[F]** Key save setting.
2. Select signal information code. Press **[F]** Key + **[2]** Key + **[4]** Key + **[F]** Key + UP(DOWN) select decode signal information code group (1-15) + **[F]** Key save the setting. (Can use PC software set DTMF code).
3. Press **[Call]** Key transmit selected DTMF code group at standby.

2 tone and 2 tone signal transmit by Call

Key setting

1. Press **[MENU]** Key select 20 OPTSIG, press **[F]** Key select 2TONE function.
2. Press **[MENU]** Key select 24 S-INFO, press **[F]** Key select pre-code signal group(1-16). (Can use PC software setting 2 tone)
3. Corresponding function will turn on when receive 2TONE signal is same as pre-set 2TONE code.
4. Press **[Call]** Key to send 2TONE group code at standby.

5TONE signal setting

This radio have 5TONE coding/decode function. You can use PC software to input signal information code. Set 5TONE signal then after receive same same 5TONE signal code receive and turn on the ring function and display the information code. Speech at effective time is available. (ID code can use PC

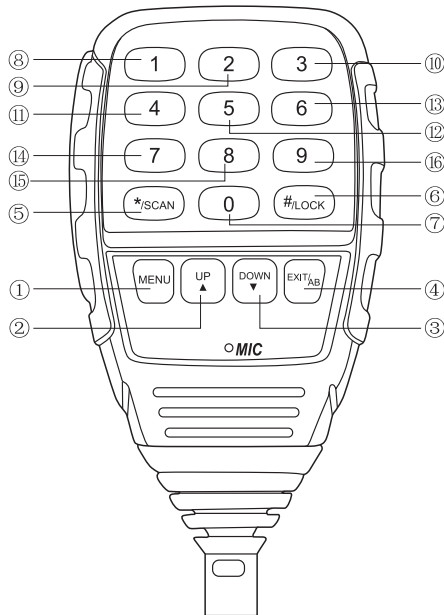
software to setting)

Press **[CALL]** Key to transmit 5TONE

1. Press **[MENU]** Key, select 20 OPTSIG press **[F]** Key select 5TONE function.
2. Press **[MENU]** Key, select 24 S-INFO press **[F]** Key select pre-code signal group 1-16. (Can use PC software setting 5TONE information code, each group can transmit 3 group 5TONE code for optional).
3. Press **[CALL]** Key transmit pre-set 5TONE code group at standby.

■ HAND THE MI DESCRIPTION

- ① "MENU": Function keys
- ② "UP": Higher frequency
- ③ "DOWN": Lower frequency
- ④ "EXIT": Exit the AB channel switch, alarm function
- ⑤ "* /SCAN": Pour, scanning and digital frequency function, digital *
- ⑥ "#/LOCK": Keyboard lock function, digital #
- ⑦ "0": Number 0
- ⑧ "1": Number 1
- ⑨ "2": Number 2
- ⑩ "3": Number 3
- ⑪ "4": Number 4
- ⑫ "5": Number 5
- ⑬ "6": Number 6
- ⑭ "7": Number 7
- ⑮ "8": Number 8
- ⑯ "9": Number 9



■ FUNCTION MENU

Menu	Character	Function	Second character	The secondary menu Settings
0	TDR	D–frequency waiting	OFF	Close the double–frequency waiting
			ON	Start the dual–band waiting
1	STEP	Step frequency	5.00K	In frequency mode, press the UP, DOWN, change the frequency of the step value
			6.25K	
			10.00K	
			12.50K	
			25.00K	
2	SQL	Squelchstep	0,...,9	Squelch Step
3	TXP	Transmitted power	HIGH	high power transmitter energy
			LOW	Small power emission
4	SCR	Voice encryption	OFF	Close the voice encryption
			ON	Open the voice encryption
5	TOT	Time	15,30,...600	Numbers from 15 to 600. With 15 step by step,
6	TOA	Launch end early warn	OFF	Closed end early warning
			1,2,...10	Launch for the rest of the end,this time indicator light will flash
7	WN	EAJ	WIDE	Broadband work
			NARR	Narrowband work
8	ABR	Auto light	OFF	Shut down automatically light
			1,2,3,4,... 50	On the backlight to automatically shut down time
9	BEEP	Voice to switch	OFF	Closing beep
			ON	Open the prompt to operate
10	R–DCS	Receive retuned	OFF	No retuned
			D023N,...,D754I	Digital retuned the standard sequence
11	R–CTCS	Receive analog retuned	OFF	No retuned
			67.0HZ,...,254.1HZ	Simulation retuned the standard sequence

12	T-DCS	Launch digital retuned	OFF	No retuned
			D023N,...,D754I	Digital retuned the standard sequence
13	T-CTCS	Launch simulation retuned	OFF	No retuned]
			67.0HZ,...,254.1HZ	Digital retuned the standard sequence
14	DTMFST	Lateral sound switch	OFF	To launch time, DTMF key launch, the machine does not send out the voice of the code
			KEY	At launch time, the key launch DTMF, native sound
			ANI	At launch time, automatically send code, the machine is sound
			BOTH	Launch time, the key code and code automatically, the machine is sound
15	BCL	No launch	OFF	Channels are also allowed to launch
			ON	Channel occupied launch is prohibited
16	SC-ADD	Add Scan Channel	OFF	Storage channel, the channel is not added to the storage by the scanning list
			ON	Storage channel, the channel is added to the storage by the scanning list
17	PRI-SC	Priority scan	OFF	Priority scanning function to shut down
			ON	Priority scanning function
18	PRI-CH	Priority channel	000,...,199	Priority scanning open channel show a CH for effective channel
19	SC-REV	Scan back way	TO	Scan time way
			CO	Carrier way to scan
			SE	Search to scan
20	OPTSIG	Optional signaling	OFF	Close the optional signaling
			DTMF	The current optional signaling of DTMF signal
			2TONE	The current optional signaling is 2 tidings
			5TONE	The current optional signaling is 5 tidings
21	SPMUTE	horn loudspeaker	QT	Retuned match open the horn
			AND	Retuned and optional signaling match at same time open horn
			OR	Retuned or optional signaling a match or open the horn
22	PTT-ID	PPT launch	OFF	Press the PPT is not yards
			BOT	Press the PPT is yards
			EOT	ON the PPT is not yards

22	PTT-ID	PPT launch	BOTH	Press and release PPT are sending
23	PTT-LT	Sending additiona	0,1,...,30	Before sending the delay time of automatically
24	S-INFO	S information	1,...,15	Need,Issue the information code
25	EMC-TP	Alarm Mode	ALARM	Sound an alarm when the machine is warning tone
			ANI	Send an alarm when alarm code and native identity code
			BOTH	Alarm, give tones sent identity code at the same time
26	EMC-CH	Akarm channel	000,...,199	Alarm, specified alarm channel, channel show CH ahead effective
27	RING-T	Ring time	OFF,1,2,...10	Receiving matching signaling, tones this machine is call open horn
28	CHNAME	Channel name edit		In the channel mode, edit the current channel name
29	CA-MDF	A channel display mode	FREQ	A section of the channel mode, channel frequency display
			CH	A section of channel mode, the channel to channel number display
			NAME	A section of the channel mode, channel by channel name display
30	CB-MDF	B channel display mode	FREQ	B section of the channel mode, channel frequency display
			CH	B section of channel mode, the channel to channel number display
			NAME	B section of channel mode, the channel to channel number display
31	AUTOLK	KeyLock	OFF	Close the keyboard lock automatically
			ON	Open the keyboard automatic locking function
32	PONMSG	Boot mode	FULL	Full screen
			MSG	The specified information
			OFF	Close the backlight
33	WT-LED	Standby light choice	BLUE	Open the blue light under the standby
			ORANGE	Open the Orange light under the standby
			PURPLE	Open the pupple light under the standby
34	RX-LED	Receiving light choice	OFF	Close the backlight
			BLUE	Open the blue light receiving condition
			ORANGE	Open the Orange light receiving condition
			PURPLE	Open the Puppel light receiving condition

35	TX-LED	Transmit light choice	OFF	Close the backlight
			BLUE	Open the blue light emission condition
			ORANGE	Open the Orange light emission condition
			PURPLE	Open the Purple light emission condition
36	MEMCH	Channel memory	000,...,199	When storage channel, indicates channel number is stored, if digital display CH – in front of it, said that original channel storage parameters
37	DELCH	Erase channel	000,...,199	Delete specified channel parameters, if no CH – front, is invalid
38	SFT-D	Frequency offset direction	OFF	Frequency transmitting frequency and receive frequency no difference
			+	Frequency mode, the launch is receiving and frequency offset
			–	Frequency mode, launch is equal to receive frequency subtraction
39	OFFSET	Frequency direction	00.000,...,69.990	Frequency mode, the transmitting and receiving of the poor
40	ANI	Code		The status code is used to observe the machine Settings
41	ANI-L	ANI Length	3,4,5	Effective length of the native identity code
42	REP-S	Repeater activate	1000	Launch,call single frequency tone frequency,for exciting relay station
			1450	Launch,call single frequency tone frequency,for exciting relay station
			1750	Launch,call single frequency tone frequency,for exciting relay station
			2100	Launch,call single frequency tone frequency,for exciting relay station
43	REP-M	Repeater Mode	OFF	Close the relaying
			CARRI	Receive forwarded to the carrier
			CTDCS	Receives the dumb tidings to forward
			TONE	Forwarding receives the mono audio channel
			DTMF	Receive the specified forwarding when DTMF code
44	TDR-AB	Dual standby for automatic switching	OFF	Which channel to receive signals, the frequency which is a permanent switch to channel
			1,...,50	Deputy frequency after the received signal, the main frequency indicates the delay time the cursor returns to the original frequency. The unit is in seconds

45	STE	End de-noising	ON	Open the phone end de-noising function
			OFF	Close call end de-noising function
46	RP-STE	Relay end eliminate	OFF	Closed relay end eliminate function
			1,...,10	On behalf of the length of the end
47	RPT-DL	Relay reception Last time	OFF	Close the receiving delay relay signals
			1,...,10	Open the delay time relay reception
48	RESET	Initialize	VFO	Menu to initialize
			ALL	Menu and channel initialization

■ THE KEY TECHNICAL INDEXES

General specification

Frequency range	VHF:136-174MHz 240-260MHz UHF:400-480MHz (460-520MHz)
Number Of Channels	200
Channel Spacing	25KHz 20K 12.5
Phase lock step step	5KHz、6.25KHz、10KHz、12.5KHz、15KHz、25KHz、
Working Voltage	13.8V DC $\pm$ 15%
Squelch way	CTCSS / DCS / 5Tone / 2Tone / DTMF
Frequency stability	$\pm$ 2.5ppm
Operat Temperature	-20~+60°C
Dimension	98 (W) x 35 (H) x118 (D) mm
Weight	408g

Receiver (ETSI EN 300 086 Standardized.Test)

	Broadband	Narrow band
Sensitivity	$\leq 0.25\mu\text{V}$	$\leq 0.35\mu\text{V}$
Channel choice	$\geq 70\text{dB}$	$\geq 60\text{dB}$
Intermodulation	$\geq 65\text{dB}$	$\geq 60\text{dB}$
Spurious Rejection	$\geq 70\text{dB}$	$\geq 70\text{dB}$
Audio response	+1~-3dB (0.3~3KHz)	+1~-3dB (0.3~2.55KHz)
Signal to noise ratio	$\geq 45\text{dB}$	$\geq 40\text{dB}$
Audio Distortion	$\leq 5\%$	
Audio output power	$\geq 2\text{W}@10\%$	

Transmit (ETSI EN 300 086 Standardized.Test)

	Broadband	Narrow band
Output power	25W/20W(VHF/UHF)	
Modulation Mode	16KΦF3E	11KΦF3E
Channel Power	$\geq 70\text{dB}$	$\geq 60\text{B}$
Signal to noise ratio	$\geq 40\text{dB}$	$\geq 36\text{dB}$
Parasitic harmonic	$\geq 60\text{dB}$	$\geq 60\text{dB}$
Audio response	+1~-3dB (0.3~3KHz)	+1~-3dB (0.3~2.55KHz)
Audio distortion	$\leq 5\%$	

Attention: There may be more changes, all the rules forgive not in addition to notice or liability