TRI-BAND MOBILE RADIO

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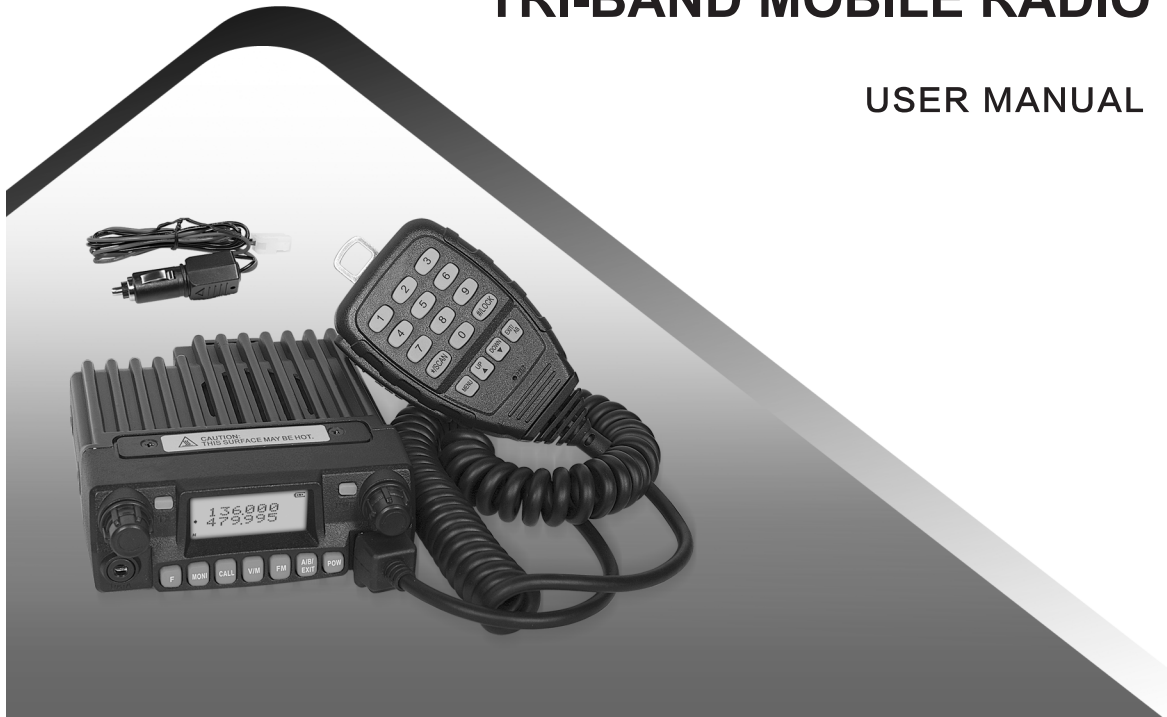
USER MANUAL



Thank you for purchasing this tri-band mobile radio. It is unique for it's compact body, powerful output and tri-band frequency range design. It's also designed with new and personalized operation menu to give you easy-to-use and exceptional operation experience. We believe its mini size and cost-effective price will well meet your demand.

Before operation and to obtain the best performance, we recommend you to read this user manual carefully to become familiar with the features and uses.

CONTERNTS

ATTENTION!

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

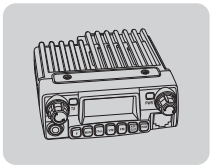
- Don't use this machine when driving, so dangerous.
- This radio is designed to use 13.8 V dc voltage, do not use the 24 V power supply to the the mobile radio.
- Please do not place the machine in the dust, moisture or water splashing.
- If there's any electromagnetic interference, please keep the mobile radio away from the sources such as TV set, engine generator etc.
- Do not expose the mobile radio to long periods of direct sunlight, for example on the dashboard of a vehicle or close to heating appliances.
- If the mobile radio generate any smoke or strange smell, please turn off the power supply immediately and make sure all is safe, then you can send the unit to the nearest after-sale center for inspection or repairment.
- Do not keep transmitting with high power output for too long time, which may lead to overheating and cause auto power off or failure.

PRODUCT INSPECTION

Welcome to use our mobile radio KT-8900R, before operation, it is recommended that you:

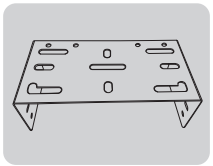
- Please check the package is in good condition without any damage.
- Please unpack the package box carefully and check that all items are included.
- If you find any items are missing or have been damaged during shipment, please contact your dealer immediately.

Standard accessories

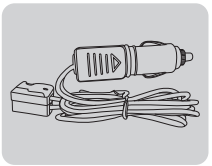


Mobile Radio

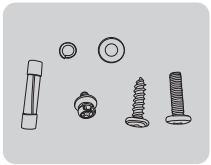
Speaker Microphone



Mounting Bracket

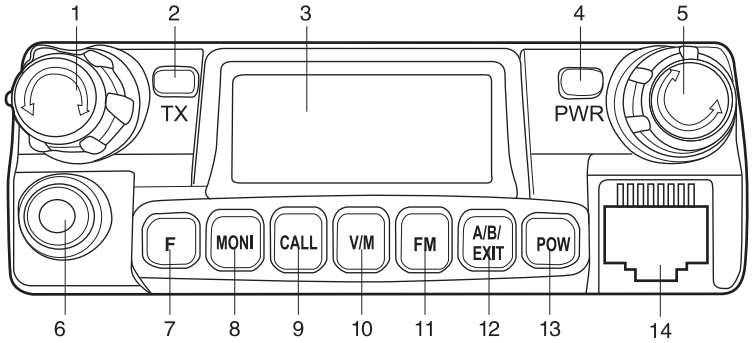


Cigar–plug
Power Cable



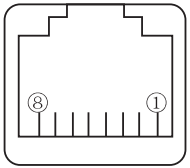
Screws & Fuse

PANEL DESCRIPTION



1 Progress Knob
2 TX Indicator
3 Display Screen
4 Power Indicator
5 Volume Knob
6 PC Programming Socket
7 Function Key
8 Monitor
9 Call Key
10 Mode Switch
11 FM Radio
12 A/B Band Switch, Emergency Alarm
13 Power On/Off
14 Microphone Connector

Note: 3.5mm ear socket is above the power supply cable.



① Data Input
② Null
③ MIC
④ MIC Ground
⑤ PTT.
⑥ GND
⑦ +8V DC Output
⑧ Null

Front Panel Controls and Switches

[F]: Press to enter menu selection mode.

[CALL]: In standby mode, press to send caller ID of selected signaling; In transmitting mode, press to send repeater activation signaling.

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

[POW]: Press and hold the key to turn on or turn off the power.

[V/M]: Press to switch between channel mode and frequency mode.

[A/B/ EXIT]: Press to select A band, B band or exit. Press and hold for 2 seconds to activate alarm function.

[FM]: Press to enter or exit FM radio mode.

Frequency Range Setting

Press and hold **[F]** key to turn on the radio and it will display "PASSWD' on the screen, then input correct password (six digits length) and it will display "135 179", at this time you can set all three bands frequency range including VHF135-179MHz, VHF240-270MHz and UHF400-520MHz.

Example: For VHF 135 179, you can input "136 174" (136-174MHz).

For VHF 240 270, you can input "240 260" (240-260MHz).

For UHF 400 520, you can input "400 480" (400-480MHz).

Note: After frequency range is successfully programmed, users can operate only among the range.

Password Setup

Users can setup a password(6 digits) for PC program, please keep in mind or you are not allowed to read or write the data without it.

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. 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 SETUP

Menu Function Setup (Can be set by speaker microphone)

1. **[F Key]+[0 Key]**: **TDR** (Dual standby function): Enable/Disable dual standby function. ON: TDR enabled. OFF: TDR disabled, only current band is in standby mode. Press **[F Key]** to save the setting.
2. **[F Key]+[1 Key]**: **STEP**: In frequency mode, select desired channel step from 5KHz, 6.25KHz, 10KHz, 12.5KHz and 25KHz. Press **[F Key]** to save the setting.
3. **[F Key]+[2 Key]**: **SQL**: Squelch level setup, totally 10 levels. 0: Squelch off. 1-9: Level 1-9 selective. Press **[F Key]** to save the setting.
4. **[F Key]+[3 Key]**: **TXP**: Transmitting power output setup, High/Low power selective. Press **[F Key]** to save the setting.
5. **[F Key]+[4 Key]**: **SCR**: Scrambler setup. ON: Scrambler function activated, to realize audio encryption. OFF: Scrambler function turned off. (Optional). Press **[F Key]** to save the setting.
6. **[F Key]+[5 Key]**: **TOT**: Time out timer, 15-600s selective with step 15s. Press **[F Key]** to save the setting.
7. **[F Key]+[6 Key]**: T**OA**: Time out timer pre-alert setup. OFF/1-10s selective, which will alert by LED flashing before transmitting end. Press **[F Key]** to save the setting.
8. **[F Key]+[7 Key]**: **WN**: Wide/narrow bandwidth 25KHz/2.5KHz selective. Press **[F Key]** to save the setting.
9. **[F Key]+[8 Key]**: **ABR**: LCD backlight time setup. OFF: LCD backlight will always on. 1-50s selective, LCD backlight will automatically turn off after pre-programmed time. Press **[F Key]** to save the setting.
10. **[F Key]+[9 Key]**: **BEEP**: Key tone ON/OFF setup. Press **[F Key]** to save the setting.

11. **[F Key]+[1 Key]+[0 Key]**: **R-DCS**: DCS decode setup, normal code D023N-D754N and inverted code D023I-D754I selective. Press **[F Key]** to save the setting.
12. **[F Key]+[1 Key]+[1 Key]**: **R-CTCS**: CTCSS decode setup. CTCSS OFF and standard code 67Hz-254.1Hz are selective, users can also enter desired CTCSS (Both standard and non-standard) by speaker microphone. Press **[F Key]** to save the setting.
13. **[F Key]+[1 Key]+[2 Key]**: **T-DCS**: DCS encode setup, normal code D023N-D754N and inverted codeD023I-D754I selective. Press **[F Key]** to save the setting.
14. **[F Key]+[1 Key]+[3 Key]**: **T-CTCS**: CTCSS encode setup. CTCSS OFF and standard code 67Hz-254.1Hz are selective, users can also enter desired CTCSS (Both standard and non-standard) by speaker microphone. Press **[F Key]** to save the setting.
15. **[F Key]+[1 Key]+[4 Key]**: **DTMFST**: DTMF side tone setup, OFF/KEY/ANI/BOTH selective. OFF: DTMF tone will not be emitted from the speaker. KEY: DTMF tone will be emitted from the speaker only when pressing side key to transmit DTMF code. ANI: DTMF tone will be emitted from the speaker only when DTMF code automatically transmitted. BOTH: DTMF tone will be emitted from the speaker for both KEY and ANI. Press **[F Key]** to save the setting.
16. **[F Key]+[1 Key]+[5 Key]**: **BCL**: Busy channel lockout. OFF: The mobile radio can transmit at any time. ON: User will not be able to transmit on the busy channel. A beep tone warns you that the channel is busy when you push the **[PTT]** switch on a busy channel. Press **[F Key]** to save the setting.
17. **[F Key]+[1 Key]+[6 Key]**: **SC-ADD**: Scan add setup. OFF: Deletes the Channel from the SCAN list. ON: Adds the Channel to the SCAN list. Press **[F Key]** to save the setting.

18. **[F Key]+[1 Key]+[7 Key]**: **PRI-SC**: Priority scan setup. OFF: No Priority channel. ON: There is a priority channel which you can select in the optional features window or by manual program. Press **[F Key]** to save the setting.
19. **F Key]+[1 Key]+[8 Key]**: **PRI-CH**: Priority channel scan setup. Select a priority channel from pre-programmed CH000-199. Press **[F Key]** to save the setting.
20. **[F Key]+[1 Key]+[9 Key]**: **SC-REV**: Scan-Resume Mode. TO: Time Scan, the scanner will halt on a signal it encounters for a while and then resume to scan. CO: Carrier Scan, the scanner will halt on a signal it encounters and resume to scan after the signal disappear. SE: Search Scan, the scanner will halt on a signal with matched signalling it encounters resume to scan after it disappear. Press **[F Key]** to save the setting.
21. **[F Key]+[2 Key]+[0 Key]**: **OPTSIG**: Optional Signalling Setup, OFF/2TONE/5TONE/DTMF Selective. Press **[F Key]** to save the setting.
22. **[F Key]+[2 Key]+[1 Key]**: **SPMUTE**: Speaker Mute Setup. QT: Channel with this option will open the speaker when matched QT/DQT received. AND: Channel will have to check for both QT/DQT and Option Signalling in order to open its speaker. OR: Channel will check for either matched QT/DQT or matched Option Signalling to open its speaker. Press **[F Key]** to save the setting.
23. **[F Key]+[2 Key]+[2 Key]**: **PTT-ID**: PTT-ID setup. OFF: PTT-ID is disabled. BOT: Press **[PTT]** to deliver ID Code. EOT: Release **[PTT]** to deliver ID Code. BOTH: Press or release **[PTT]** to deliver ID Code. (ID Codes are PC software pre-programmed, user can select desired ID code in Menu 24 manually). Press **[F Key]** to save the setting.
24. **[F Key]+[2 Key]+[3 Key]**: **PTT-ID**: PTT-ID transmit delay time setup. Select desired delay time during

0-30 seconds. Press **[F Key]** to save the setting.

25. **[F Key]+[2 Key]+[4 Key]**: **S-INFO**: Optional signalling information and autodial memory. 1-15 groups optional singlling encode/decode memories, can be programmed only by PC software.
26. **[F Key]+[2 Key]+[5 Key]**: **EMC-TP**: Emergency alarm mode setup. ALARM: The radio emits Emergency Alarm only. ANI: The radio sends Emergency Code and ANI Code to other group members. BOTH: The radio sends Emergency Alarm, Emergency Code and ANI Code simutaneously. Press **[F Key]** to save the setting.
27. **[F Key]+[2 Key]+[6 Key]**: **EMC-CH**: Emergency alarm channel setup. Select any channel from pre-programmed CH000-199 as specified emergency channel. Press **[F Key]** to save the setting.
28. **[F Key]+[2 Key]+[7 Key]**: **RING-T**: Ring time setup. OFF: Ring function is disabled. The radio will ring in pre-programed time (1-10s selective) after received matched option signalling. Press **[F Key]** to save the setting.
29. **[F Key]+[2 Key]+[8 Key]**: **CHNAME**: Channel name edition (Alphanumeric). User is able to edit the channel name in Channel Mode, press **[F Key]** to save the setting.
30. **[F Key]+[2 Key]+[9 Key]**: **CA-MDF**: A Band channel display mode. FREQ: Frequency mode. CH: Channel mode. NAME: Name display (alphanumeric display and PC programmable only). Press **[F Key]** to save the setting.
31. **[F Key]+[3 Key]+[0 Key]**: **CB-MDF**: B Band channel display mode. FREQ: Frequency mode. CH: Channel mode. NAME: Name display (alphanumeric display and PC programmable only). Press **[F Key]** to save the setting.
32. **[F Key]+[3 Key]+[1 Key]**: **AUTOLK**: Keypad automatic lockout, ON/OFF selective, press **[F Key]** to save the setting.

33. **[F Key]+[3 Key]+[2 Key]**: **PONMSG**: Power-on message display setup. FULL: Full screen display when power on. MSG: Display specified message when power on. BATT-V: Display battery voltage when power on. Press **[F Key]** to save the setting.
34. **[F Key]+[3 Key]+[3 Key]**: **WT-LED**: Standby backlight color setup. OFF/BLUE/ORANGE/ PURPLE selective, press **[F Key]** to save the setting.
35. **[F Key]+[3 Key]+[4 Key]**: **RX-LED**: RX (receiving) backlight color setup. OFF/BLUE/ORANGE/ PURPLE selective, press **[F Key]** to save the setting.
36. **[F Key]+[3 Key]+[5 Key]**: **TX-LED**: TX (Transimit-tng) backlight color setup. OFF/BLUE/ORANGE/ PURPLE selective, press **[F Key]** to save the setting.
37. **[F Key]+[3 Key]+[6 Key]**: **MEM-CH**: Memory Channel Storage Setup. Select a channel (000-199) to store desired frequency, the channel (000-199) with "CH" was programmed with frequency earlier. Press **[F Key]** to save the setting.
38. **[F Key]+[3 Key]+[7 Key]**: **DEL-CH**: Memory channel delete setup. Delete any channel from 000-199, the channel number without "CH" is not programmed with frequency. Press **[F Key]** to save the setting.
39. **[F Key]+[3 Key]+[8 Key]**: **SFT-D**: Offset Direction Setup: Offset is valid in frequency mode (VFO mode). OFF: Offset is turn off, TX frequency is same as RX frequency. "+": Plus offset, means TX frequency is higher than RX frequency. "-": Minus offset, means TX frequency is lower than RX frequency. Press **[F Key]** to save the setting.
40. **[F Key]+[3 Key]+[9 Key]**: **OFFSET**: Offset frequency setup. Offset frequency range is 00.000-69.990MHz selective, press **[F Key]** to save the setting.

41. **[F Key]+[4 Key]+[0 Key]**: **ANI**: ANI code setup. ANI code is only PC software programmable.
42. **[F Key]+[4 Key]+[1 Key]**: **ANI-L**: Length of ANI Code. Select the length of ANI code 3,4,5, press **[F Key]** to save the setting.
43. **[F Key]+[4 Key]+[2 Key]**: **REP-S**: Repeater activation by optional signalling setup. When radio is transmitting, press **[CALL]** to send 1000Hz/1450Hz/1750Hz/2100Hz to activate repeater function. Press [F Key] to save the setting.
44. **[F Key]+[4 Key]+[3 Key]**: **REP-M**: Repeater transpond setup. OFF: The function is disabled. CARRI: Repeater transpond by receiving matched carrier. CTDCS: Repeater transpon by receiving matched CTCSS/DCS. TONE: Repeater transpon by receiving matched tone. DTMF: Repeater transpond by receiving matched DTMF code. Press **[F Key]** to save the setting.
45. **[F Key]+[4 Key]+[4 Key]**: **TDR-AB**: Dual standby function (TDR) setup. OFF: The function is disabled, radio always stay on the main band. ON: Radio will automatically switch to the channel which receiving matched signals. Press **[F Key]** to save the setting.
46. **[F Key]+[4 Key]+[5 Key]**: **SET**: Squelch tail-elimination setup. ON: Enable squelch tail-eliminated function. OFF: Disable squelch tail-eliminated function. If radio work with a repeater, please turn off this function. Press **[F Key]** to save the setting.
47. **[F Key]+[4 Key]+[6 Key]: RP-STE**: Repeater squelch tail elimination setup. OFF: This function is disabled. 1-10 indicate squelch tail length, used to eliminate squelch tail noise produced because of repeater delay. Press **[F Key]** to save the setting.
48. **[F Key]+[4 Key]+[7 Key]: RPT-DL**: Delay time to receive repeater signal setup. OFF: Disable this function. 1-10: Select delay time to receive repeater signal. Press **[F Key]** to save the setting.

49. **[F Key]+[4 Key]+[8 Key]**: **RESET**: Reset setup. VFO: Reset the menu mode to factory default setting. ALL: Reset all memories and other settings to factory default setting.

Press **[EXIT/AB]** to exit after setting.

Manual Memory Channel Storage and Deletion Operation

Memory Channel Storage:

1. Input desired frequency by keypad, while operating in VFO mode. E.g.: 435.125MHz, just input 4,3,1,2,5.
2. Select desired RX CTCSS/DCS (Refer to menu 10 and 11), select desired TX CTCSS/DCS (Refer to menu 12 and 13). E.g.: Press **[F]** Key + **[1]** Key + **[1]** Key + **[F]** Key + **[DOWN]** Key to select RX CTCSS 67.0Hz, press **[F]** Key + **[EXIT/AB]** Key to save the setting. Press **[F]** Key + **[1]** Key + **[3]** Key + **[F]** Key + **[DOWN]** Key to select TX CTCSS 67.0Hz, press **[F]** Key + **[EXIT/AB]** Key to save the setting. (Select OFF then no CTCSS/DCS is programmed)
3. Refer to menu 36 to store memory channel. Press **[F]** Key + **[3]** Key + **[6]** Key + **[F]** Key + **[UP]** Key to store memory channel information.

Memory Channel Deletion:

Refer to menu 37 for memory channel deletion. Press **[F]** Key + **[3]** Key + **[7]** Key + **[F]** Key + **[UP]** Key to select desired channel + **[F]** Key to delete the memory channel.

FM Radio Memory Channel Storage

FM radio memory channel and its corresponding channel name is PC programmable. In FM mode, user can press **[*]** to auto search FM signal.

Keypad Lock-out

In standby mode, press and hold **[#]** Key for 2 seconds to turn on/off keypad lock.

Transmitting repeater signalling

Select desired repeater signalling tone (Four tones selective).

Press **[F]** Key + **[4]** Key + **[2]** Key + **[F]** Key + **[UP]** Key to select desired repeater signalling tone + **[F]** Key to store. Press **[PTT]** key + **[CALL]** Key to emit pre-programmed repeater signalling tone.

PTT ID Setting

PTT-ID code is pre-programmed by PC software.

1. Refer to menu 20 to select the desired signalling. Press **[F]** Key + **[2]** Key + **[0]** Key + **[F]** Key + **[UP]** (DOWN) Key to select desired signalling + **[F]** Key to save the settings.
2. Refer to menu 22 to set PTT transmit time. Press **[F]** Key + **[2]** Key + **[2]** Key + **[F]** Key + **[UP]**(DOWN) Key to select PTT-ID transmit time + **[F]** Key to save the settings.
3. Refer to menu 23 to select PTT transmit delay time. Press **[F]** Key + **[2]** Key + **[3]** Key + **[F]** Key + **[UP]** (DOWN) Key to select desired delay time + **[F]** Key to save the settings.
4. Press **[PTT]** to send the programmed ID code.

Optional Signalling Setup

DTMF Signalling Setup

This radio is capable of DTMF encode/decode feature, users can program the desired DTMF code by PC program.

DTMF Signalling

If the radio is pre-programmed with DTMF signalling code, when it receive a matched code it will alert and display the corresponding code, also radios can communicate with each other in valid time. (ID code is programmable by PC software)

Patrol Function

When receiving matched DTMF signalling which is same as pre-programmed patrol code, the radio will emit self ID code which will display on master controll radio.

This function is able to select to be or not to be controlled by master ID code, this function is not controlled by RX signalling. (Patrol code is programmable by PC software)

Monitor function

When receiving matched DTMF signalling which is same as pre-programmed monitor code, the radio will transmit to monitor the surrounding voice. This function is able to select to be or not to be controlled by master ID code, this function is not controlled by RX signalling. (Monitor code is programmable by PC software)

Remote stun

When receiving matched DTMF signalling which is same as pre-programmed remote stun code, transmitting is disabled, it will also alert on the display mode. The radio will restore to work normally only after remote revived. This function is able to select to be or not to be controlled by master ID code, this function is not controlled by RX signalling. (Remote stun code is programmable by PC software)

Remote Kill

When receiving matched DTMF signalling which is same as pre-programmed remote kill code, transmitting, receiving and all activities will be disabled, it will also alert on the display mode. The radio will restore to work normally only after remote revived. This function is able to select to be or not to be controlled by master ID code, this function is not controlled by RX signalling. (Remote kill code is programmable by PC software)

Remote Revive

When receiving matched DTMF signalling which is same as pre-programmed remote revive code, the radio will be revived and restore to work normally. This function is able to select to be or not to be controlled by master ID code, this function is not controlled by RX signalling.(Remote revive code is programmable by PC software)

Emergency Alarm

When receiving matched DTMF signalling which is same as pre-programmed emergency alarm code, the radio will emit emergency alarm. Emergency alarm mode and channel is PC programmable. This function is not controlled by master ID code and RX signalling. (Emergency alarm code is programmable by PC software)

Signalling controlled by master ID: Function will be implemented only when both signalling and mater ID matched.

Signalling no controlled by master ID format:signalling + # + Information Code

Signalling controlled by master ID format: signalling + # + Master ID code + # + Information Code

Transmit DTMF Signalling by [Call] Key

1. Select DTMF signalling, press **[F]** Key + **[2]** Key + **[0]** Key + **[F]** Key + UP(DOWN) to select DTMF signalling + **[F]** Key to save settings.
2. Select signalling code. Press **[F]** Key + **[2]** Key + **[4]** Key + **[F]** Key + UP(DOWN) to select decode signalling code + **[F]** Key to save settings. (DTMF code is PC software programmable)
3. In standby mode, press **[Call]** Key to transmit selected DTMF code.

Transmit 2 tone signalling by [CALL] Key

1. Press **[MENU]** Key to select menu 20 OPTSIG, then press **[F]** Key to select 2TONE on.
2. Press **[MENU]** Key to select menu 24-S-INFO, then press **[F]** Key to select pre-programmed signalling from groups (1-16). (2TONE use purpose is PC software programmable)
3. Radio will activate corresponding function when matched 2TONE signalling received.
4. In standby mode, press **[CALL]** to transmit 2TONE signalling code.

5 TONE Signalling Setup

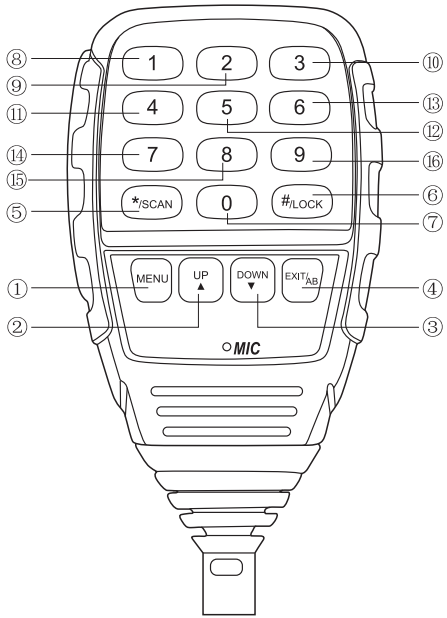
The radio is configured with 5 TONE function, which is programmable by PC software. When receiving matched 5 TONE signalling which is same as pre-programmed identity code (must be five digits), radio will ring and display corresponding signalling code. Radios can communicate with each other in valid time. (Identity code is PC software programmable).

Press **[CALL]** Key to transmit 5 TONE signalling code.

1. Press **[MENU]** Key to select menu 20 OPTSIG, then press **[F]** Key to select 5 TONE on.
2. Press **[MENU]** Key to select menu 24-S-INFO, then press **[F]** Key to select pre-programmed signalling from groups (1-16). (5 TONE use purpose is PC software programmable, each time can transmit 3 groups 5 TONE maximum as per request).
3. In standby mode, press **[CALL]** to transmit 5 TONE signalling code.

SPEAKER MICROPHONE DESCRIPTION

① "MENU": Function key
② "UP": Tune up channel step
③ "DOWN": Tune down channel step
④ "EXIT": Exit A/B channel switch, emergency alarm etc.
⑤ "*/SCAN": Offset function, scan, digital "*"
⑥ "#/LOCK": Keypad lockout function, digital "#"
⑦ "0": Number 0
⑧ "1": Number 1
⑨ "2": Number2
⑩ "3": Number3
⑪ "4": Number4
⑫ "5": Number5
⑬ "6": Number6
⑭ "7": Number7
⑮ "8": Number8
⑯ "9": Number9



■ MENU FUNCTION

Menu	Icon	Function	Secondary Menu Icon	Secondary Menu Function Setup and Description
0	TDR	Dual standby function	OFF	Disable TDR (dual standby function)
			ON	Enable TDR (dual standby function)
1	STEP	Channel step	5.00K	In VFO mode, press [UP] or [DOWN] to select desired channel step.
			6.25K	
			10.00K	
			12.50K	
			25.00K	
2	SQL	Squelch level	0,⋯,9	Squelch level 0–9 selective
3	TXP	TX Power	HIGH	High power output
			LOW	Low power output
4	SCR	Voice encryption	OFF	Disable voice encryption
			ON	Enable voice encryption
5	TOT	Time out timer	15,30,⋯600	Time out timer, 15–600s selective, step is 15s.
6	TOA	Time out timer pre–alert	OFF	Disable this function
			1,2,..10	Radio will alert by LED flashing before transmitting end.
7	WN	Wide/Narrow bandwidth	WIDE	Wide bandwidth 25KHz
			NARR	Narrow bandwidth 25KHz
8	ABR	Auto backlight	OFF	Backlight always on
			1,2,3,4,⋯ 50	Auto backlight off time
9	BEEP	Alert tone	OFF	Alert tone off
			ON	Alert tone on
10	R–DCS	RX DCS	OFF	None DCS tone programmed
			D023N,⋯,D754I	Desired DCS tone programmed
11	R–CTCS	RX CTCSS	OFF	None CTCSS tone programmed
			67.0HZ,⋯,254.1HZ	Desired CTCSS tone programmed

12	T–DCS	TX DCS	OFF	None DCS tone programmed
			D023N,⋯,D754I	Desired DCS tone programmed
13	T–CTCS	TX CTCSS	OFF	None CTCSS tone programmed
			67.0HZ,⋯,254.1HZ	Desired CTCSS tone programmed
14	DTMFST	Side key tone	OFF	Radio will not emit code tone when transmitting DTMF code
			KEY	Radio emit code tone when manually transmitting DTMF code by key
			ANI	Radio emit code tone when auto transmitting the DTMF code
			BOTH	Radio emit code tone in both conditions
15	BCL	Busy channel lockout	OFF	The radio can transmit at any time.
			ON	The radio cannot transmit when the selected channel is busy.
16	SC–ADD	Scan channel add	OFF	Deletes the Channel from the SCAN list
			ON	Adds the Channel to the SCAN list
17	PRI–SC	Priority scan	OFF	Priority scan off
			ON	Priority scan on
18	PRI–CH	Priority channel	000,⋯,199	Select a desired channel as priority channel
19	SC–REV	Scan revert type	TO	Scan by time
			CO	Scan by carrier
			SE	Search to scan
20	OPTSIG	Optional signaling	OFF	Disable optional signalling
			DTMF	DTMF as optional signalling
			2TONE	2 TONE as optional signalling
			5TONE	5 TONE as optional signalling
21	SPMUTE	Speaker mute	QT	Speaker unmutes when receiving matched QT/DQT
			AND	Speaker unmutes when receiving both matched optional signalling and QT/DQT
			OR	Speaker unmutes when receiving either matched optional signalling or QT/DQT
22	PTT–ID	PTT–ID transmit	OFF	Disable PTT–ID transmit
			BOT	Press PTT to transmit signalling code
			EOT	Release PTT to transmit signalling code

22	PTT–ID	PTT–ID transmit	BOTH	Press and release PTT to transmit signalling code
23	PTT–LT	PTT–ID transmit delay time	0,1,···,30	Delay time before PTT–ID transmit
24	S–INFO	Signalling code	1,···,15	Signalling code can be programmed by PC software only
25	EMC–TP	Alarm Mode	ALARM	Radio emit emergency alarm tone.
			ANI	Radio emit both emergency alarm code and ANI code.
			BOTH	Radio emit emergency alarm tone, emergency alarm code and ANI code.
26	EMC–CH	Emergency alarm channel	000,···,199	Radio will emit emergency alarm from specified emergency alarm channel
27	RING–T	Ring time	OFF,1,2,···10	The radio will ring in pre–programed time(1–10s selective) after received matched option signalling, speaker will then unmute after time's up.
28	CHNAME	Channel name edition		In channel mode to edit the channel name
29	CA–MDF	A Band channel display mode	FREQ	Frequency mode
			CH	Channel display mode
			NAME	Channel name display mode
30	CB–MDF	B Band channel display mode	FREQ	Frequency mode
			CH	Channel display mode
			NAME	Channel name display mode
31	AUTOLK	Keypad automatic lockout	OFF	Disable keypad auto lockout function
			ON	Enable keypad auto lockout function
32	PONMSG	Power–on message display mode	FULL	Full screen display when power on
			MSG	Display specified message when power on
33	WT–LED	Standby backlight color	OFF	Close the backlight
			BLUE	In standby mode, blue backlight on
			ORANGE	In standby mode, orange backlight on
			PURPLE	In standby mode, puple backlight on

34	RX–LED	RX (receiving) backlight color	OFF	Close the backlight
			BLUE	Blue backlight on when receiving
			ORANGE	Orange backlight on when receiving
			PURPLE	Pupple backlight on when receiving
35	TX–LED	TX (Transimittng) backlight color	OFF	Close the backlight
			BLUE	Blue backlight on when transmitting
			ORANGE	Orange backlight on when transmitting
			PURPLE	Pupple backlight on when transmitting
36	MEMCH	Memory Channel Storage	000,⋯,199	Select a channel (000–199) to store desired frequency, the channel (000–199) with "CH" was programmed with frequency earlier.
37	DELCH	Memory channel delete	000,⋯,199	Delete any channel from 000–199, the channel number without "CH" is not programmed with frequency.
38	SFT–D	Offset Direction	OFF	Offset is turn off, TX frequency is same as RX frequency.
			+	Plus offset, means TX frequency is higher than RX frequency.
			–	Minus offset, means TX frequency is lower than RX frequency.
39	OFFSET	Offset frequency	00.000,⋯,69.990	Offset frequency range is 00.000–69.990MHz selective. In VFO mode, the offset between TX and RX.
40	ANI	ANI code		ANI code is PC programmable only
41	ANI–L	Length of ANI code	3,4,5	Length of ANI code
42	REP–S	Repeater activation by optional signalling	1000	When radio is transmitting, press [CALL] to send 1000Hz to activate repeater function.
			1450	When radio is transmitting, press [CALL] to send 1450Hz to activate repeater function.
			1750	When radio is transmitting, press [CALL] to send 1750Hz to activate repeater function.
			2100	When radio is transmitting, press [CALL] to send 2100Hz to activate repeater function.

43	REP–M	Repeater transponder mode	OFF	Disable repeater transponder function
			CARRI	Repeater transpond when receiving matched carrier
			CTDCS	Repeater transpon when receiving matched CTCSS/DCS.
			TONE	Repeater transpon when receiving matched tone.
			DTMF	Repeater transpond when receiving matched DTMF code.
44	TDR–AB	Dual standby function (TDR)	OFF	The function is disabled, radio always stay on the main band.
			1,⋯,50	Radio will automatically switch to the channel which receiving matched signals.
45	STE	Squelch tail–elimination	ON	Enable squelch tail–eliminated function.
			OFF	Disable squelch tail–eliminated function.
46	RP–STE	Repeater squelch tail elimination	OFF	This function is disabled.
			1,⋯,10	1–10 indicate squelch tail length, used to eliminate squelch tail noise produced because of repeater delay.
47	RPT–DL	Delay time to receive repeater signal	OFF	Disable this function.
			1,⋯,10	1–10: Select delay time to receive repeater signal.
48	RESET	Reset	VFO	Reset the menu mode to factory default setting.
			ALL	Reset all memories and other settings to factory default setting.

GENERAL SPECIFICATIONS

General Specifications

Frequency range	VHF:136–174MHz 240–260MHz UHF:400–480MHz (460–520MHz)
Channel capacity	200 channels
Channel Spacing	25KHz/20KHz/12.5KHz
Channel step	5KHz、6.25KHz、10KHz、12.5KHz、15KHz、25KHz、
Working Voltage	13.8V DC ± 15%
Squelch way	CARRIER / CTCSS / DCS / 5Tone / 2Tone / DTMF
Frequency stability	± 2.5ppm
Operating temperature	–20~+60℃
Dimension	98（W）x 35（H）x118（D）mm
Weight	408g

Receiver (ETSI EN 300 086 Standardized.Test)

	Wide Band	Narrow Band
Sensitivity	≤0.25μV	≤0.35μV
Adjacent Channel Selectivity	≥70dB	≥60dB
Intermodulation	≥65dB	≥60dB
Spurious Rejection	≥70dB	≥70dB
Audio response	+1~–3dB (0.3~3KHz)	+1~–3dB (0.3~2.55KHz)
Hum & Noise	≥45dB	≥40dB
Audio Distortion	≤5%	
Audio output power	≥2W@10%	

Transmit (ETSI EN 300 086 Standardized.Test)

	Wide Band	Narrow Band
Output power	25W/20W(VHF/UHF)	
Modulation Mode	16KΦF3E	11KΦF3E
Adjacent Channel Selectivity	≥70dB	≥60B
Hum & Noise	≥40dB	≥36dB
Spurious Emission	≥60dB	≥60dB
Audio response	+1~–3dB (0.3~3KHz)	+1~–3dB (0.3~2.55KHz)
Audio distortion	≤5%	

Attention: Above specifications are subject to change without any notice due to technology enhancement.