

# DOUBLE TRANSCEIVER OF THE CAR

## DOUBLE TRANSCEIVER OF THE CAR

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:

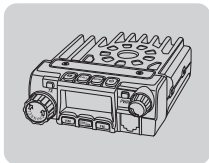
- Don't use this machine when driving, so dangerous.
- This radio is designed to use 13.8 V dc voltage, do not use the 24 V power supply to the power supply.
- Please do not place the machine in the dust, moisture or water splashing.
- If you accept received external disturbance, should make the machine 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.

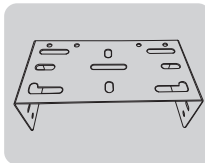
### Standard accessories



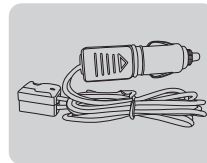
Machine



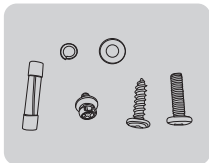
Microphone



Mounting bracket

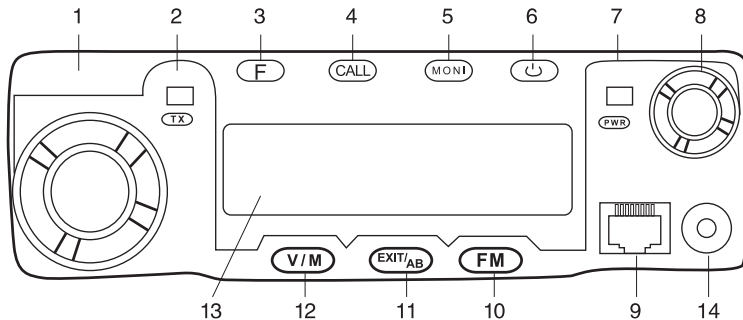


Power cable



Screw, the fuse

## ■ PANEL DESCRIPTION



1 Progress of the knob

2 Transmit indicator

3 Function keys

4 Call key

5 Monitor function

6 Power key

7 Power indicator

8 Volume Knob

9 Microphone Connector

10 FM radio function key

11 Exit the AB signal switching, alarm function

12 Channel switching

13 Display screen

14 Data Terminal

## Hotkey function guide

[ **F** ]: click to enter menu select mode.

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

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

[ **⏻** ]: hold the key to turn on and turn off the radio power.

[ **V/M** ]: press to select channel mode and frequency mode.

[ **EXIT/AB** ]: press to choose A/B frequency and exit function mode.

[ **FM** ]: press to enter and exit FM radio function.

## ■ 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, use **[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]: 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)

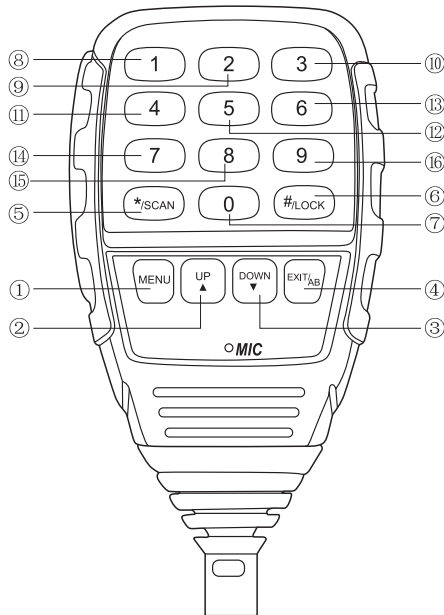
Press **[CALL]** Key to transmit 5TONE

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<br>retuned       | OFF                | No retuned                                                                           |
|    |        |                                 | D023N,...,D754I    | Digital retuned the standard sequence                                                |
| 13 | T-CTCS | Launch<br>simulation<br>retuned | OFF                | No retuned]                                                                          |
|    |        |                                 | 67.0HZ,...,254.1HZ | Digital retuned the standard sequence                                                |
| 14 | DTMFST | Lateral<br>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<br>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<br>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<br>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<br>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 Pupples 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  | Erasure 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 | RESET  | Initialize                 | VFO               | Menu to initialize                                                                                                                              |
|    |        |                            | ALL               | Menu and channel initialization                                                                                                                 |

## ■ THE KEY TECHNICAL INDEXES

### General specification

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| Frequency range      | VHF: 136~174MHz 245~245.9875MHz (220~260MHz)<br>UHF: 400~480MHz 480~520MHz |
| 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