Thanks for buying the series transceiver.

This transceiver offers novel design, enhanced features, solid performances and easy accessibility. We believe you will be pleased with the high quality and reliable features for all your communication needs.

PRECAUTIONS

This transceiver with excellent design, and advanced technology. Please follow the below suggestions and warning to assist you to carry out the responsibilities on the warranty terms, and learn the safety for using the transceiver.

1. Please keep the transceiver and accessories out of the reach of children.
2. Do not disassemble the transceiver to avoid the possibility of damaging by non-professionals.
3. Please ONLY use the supplied batterypack and charger to avoid the possibility of damaging the transceiver.
4. Please ONLY use the supplied antenna to avoid the possibility of shortening the communicating distance.
5. Neither expose the transceiver directly to the sunlight nor in the overheated places in long period.
6. Keep the transceiver away from the dusty and humid places.
7. Clean the transceiver with a mild brush/cloth or detergents instead of the aggressive chemical material.
8. Do not transmit before well installing the antenna.
9. If any abnormal odor or smoke is detected from the transceiver, please power it off immediately, then remove the battery from the transceiver. And contact your dealer.

NOTE ⚠

» All the above mentioned suggestions and warnings are compatible for all series transceivers and the supplied accessories. Please contact your dealer about any upset operation.

» The manufacturer is not responsible for any safety and operation problems caused by using the imcompatible accessories or parts.

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Professional FM Transceiver

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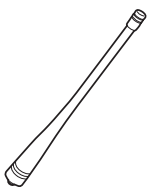
Unpacking and checking of the equipment

Professional FM Transceiver

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

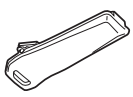
Supplied accessories

Transceiver


High gain antenna

Li-ion batterypack

Intelligent charger


Belt clip

Hand strap

User's manual

Description of functions

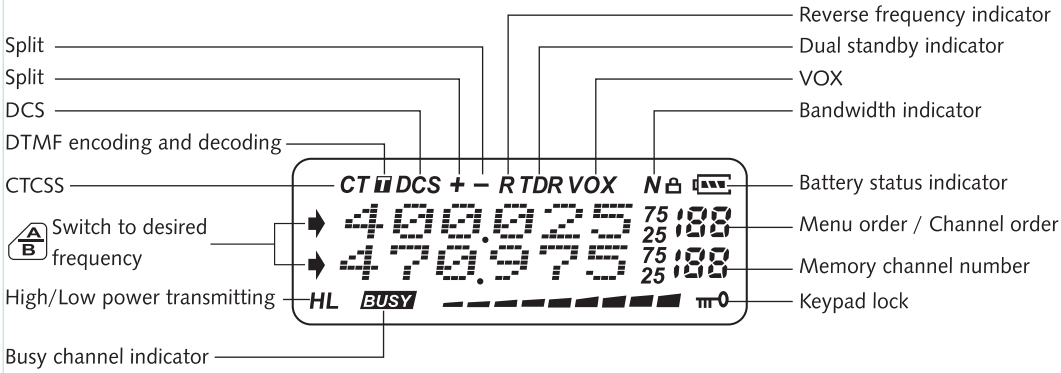
1. VHF: 66-88 MHz/136-174 MHz/245-246 MHz
   UHF: 350-390 MHz/400-470.9875 MHz/450-520 MHz
2. Output power: VHF: 5W/1W UHF: 4W/1W
3. Frequency mode: dual frequency display, dual frequency standby
   Channel mode: dual channel display, dual channel standby
4. Multi-display mode when power on (Full screen/BATT-V/Others)
5. 128 memory channels
6. DTMF encoding and decoding
7. ANI code (caller ID)
8. VOX
9. All calls, selective calls and group calls
10. Calling ring function
11. 105 groups DCS/50 groups CTCSS
12. Voice guide (English/Chinese)
13. Wide/Narrow bandwidth selectable (25KHz/12.5KHz)
14. Three color backlight selectable in transmitting/receiving/standby mode
15. Multi-display method (channel order number/channel frequency/channel name)
16. Reverse frequency function
17. Distant urgency alarm function

18. Multifunctional scan modes
19. Digital FM radio (76-108 MHz)
20. Frequency steps selectable (5/6.25/10/12.5/25KHz)
21. High/Low power changeable when transmitting
22. Intelligent charger
23. High capacity Li-ion batterypack
24. Offset frequency setting (0-69.950MHz)
25. Frequency shift direction setting
26. Stopwatch timer function
27. Busy channel lockout
28. Low voltage prompt
29. Transmitting voice prompt
30. Keypad lock (Auto/Manual lock)
31. Transmitting overtime prompt
32. Adding scanning channel function
33. Priority scan function
34. Programmable by computer
35. Menu/Channel reset
36. Wire-clone function

Getting started

LCD display

On the display you will see various indicators that show what function you have selected. Sometimes you may not recall what those indicators mean, or how to select them, in such a case, you can refer to the table below.



Note:

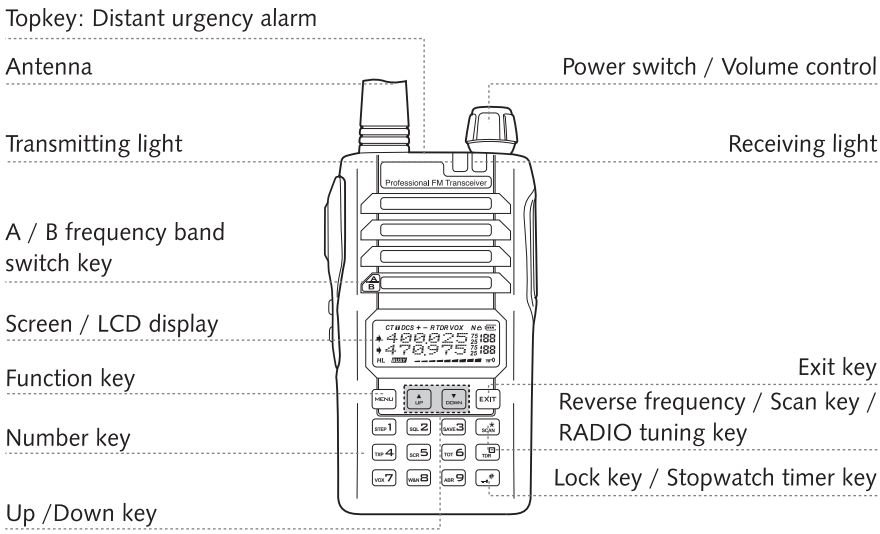
Battery capacity indicator (full)

Battery capacity is exhausted

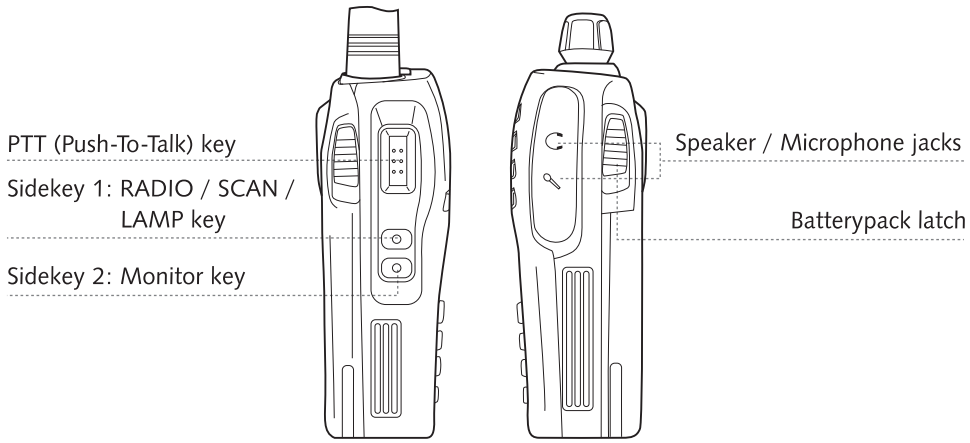
Battery capacity spare indicator

Receiving signal meter

Descriptions of transceiver



Getting started



Quick search

Press the [▲ UP] or [▼ DOWN] key one time to search the function or parameter when setting for each function or parameter, while keeping pressing [▲ UP] or [▼ DOWN] key to quickly search.

DTMF encoding

This transceiver has the DTMF encoding function. When inputing the number keys or other menu key in frequency mode, there will be transmitted with DTMF code accordingly. The transmitted DTMF code for this transceiver is as below:

MENU	▲ UP	▼ DOWN	EXIT
A	B	C	D

Switch working mode

Channel mode ← [MENU] + [* SCAN] → Frequency mode

1750Hz Burst Tone

Sometimes, 1750Hz burst tone is required to carry out some other specified functions.
This transceiver has 1750Hz Burst Tone to help you.

How to use

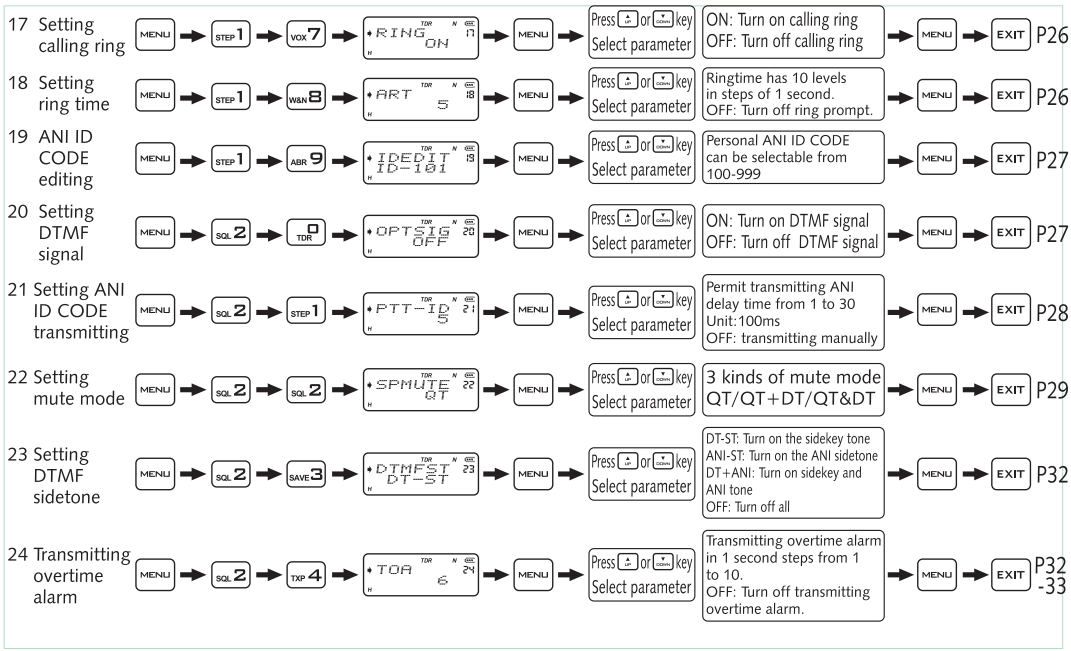
In transmitting, press side key PF1, the transceiver will transmit 750Hz Burst tone.
The time keeping pressing the side key PF1 determines the 1750Hz Burst tone transmitting time.
Releasing the side key PF1 is to finish transmitting the 1750Hz Burst tone.

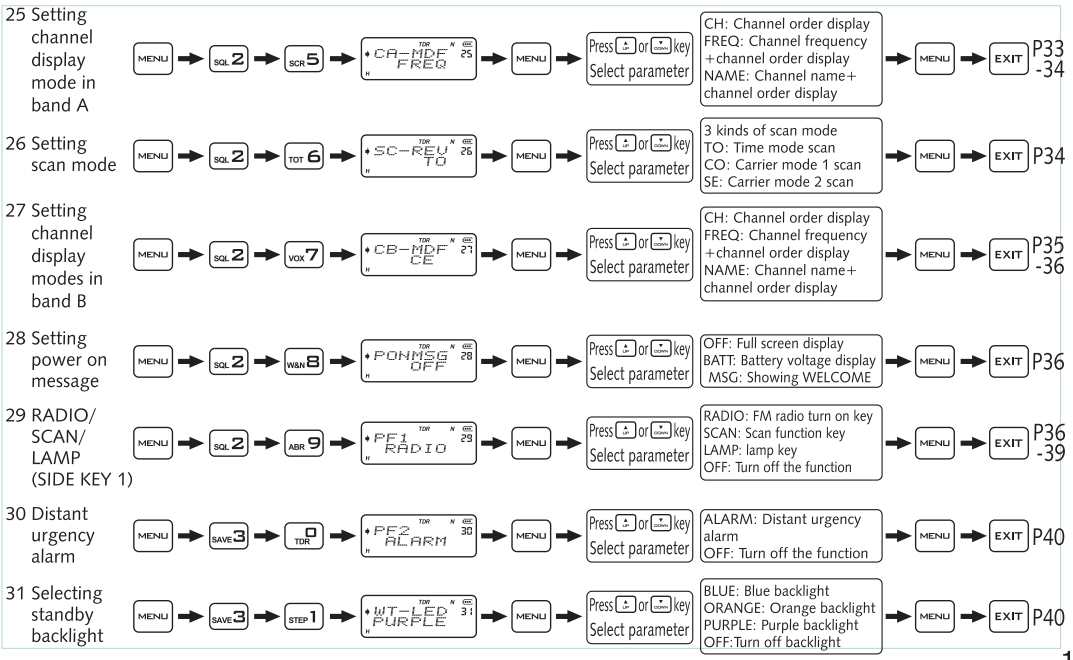
Shortcut operation sheet

Function order	Function name	Enter function set	Screen display	Select parameter	Selectable parameter-explanation	Confirm	Back	See page
0	Setting dual standby	MENU → 0 TDR	TDR ON	Press ▲ or ▼ key Select parameter	ON: Turn on dual standby OFF: Turn off dual standby	MENU	EXIT	P15 -16
1	Setting frequency step	MENU → STEP 1	STEP 12.50K	Press ▲ or ▼ key Select parameter	5 kind of frequency steps 5K/6.25K/10K/12.5K/25K	MENU	EXIT	P16
2	Setting squelch level	MENU → SQL 2	SQL-LE 5	Press ▲ or ▼ key Select parameter	Squelch levels from 0-9	MENU	EXIT	P16 -17
3	Setting power saver mode	MENU → SAVE 3	SAVE ON	Press ▲ or ▼ key Select parameter	ON: Turn on save function OFF: Turn off save function	MENU	EXIT	P17
4	Selecting transmitting power	MENU → TXP 4	TXP HIGH	Press ▲ or ▼ key Select parameter	H: High power (VHF:5W/UHF:4W) L: Low power (1W)	MENU	EXIT	P17 -18
5	Transmitting voice prompt	MENU → SCR 5	ROGER OFF	Press ▲ or ▼ key Select parameter	OFF/BOTH/EOT/BOT selectable	MENU	EXIT	P18 -19
6	Time-out timer	MENU → TOT 6	TOT 60	Press ▲ or ▼ key Select parameter	TOT has 40 levels in steps of 15 seconds. OFF: Turn off TOT.	MENU	EXIT	P19
7	Setting VOX	MENU → VOX 7	VOX OFF	Press ▲ or ▼ key Select parameter	VOX has levels from 1 to 10. OFF: Turn off VOX.	MENU	EXIT	P19 -20
8	Setting bandwidth	MENU → W&N 8	WN VIDE	Press ▲ or ▼ key Select parameter	WIDE: 25KHz. NARR: 12.5KHz.	MENU	EXIT	P20

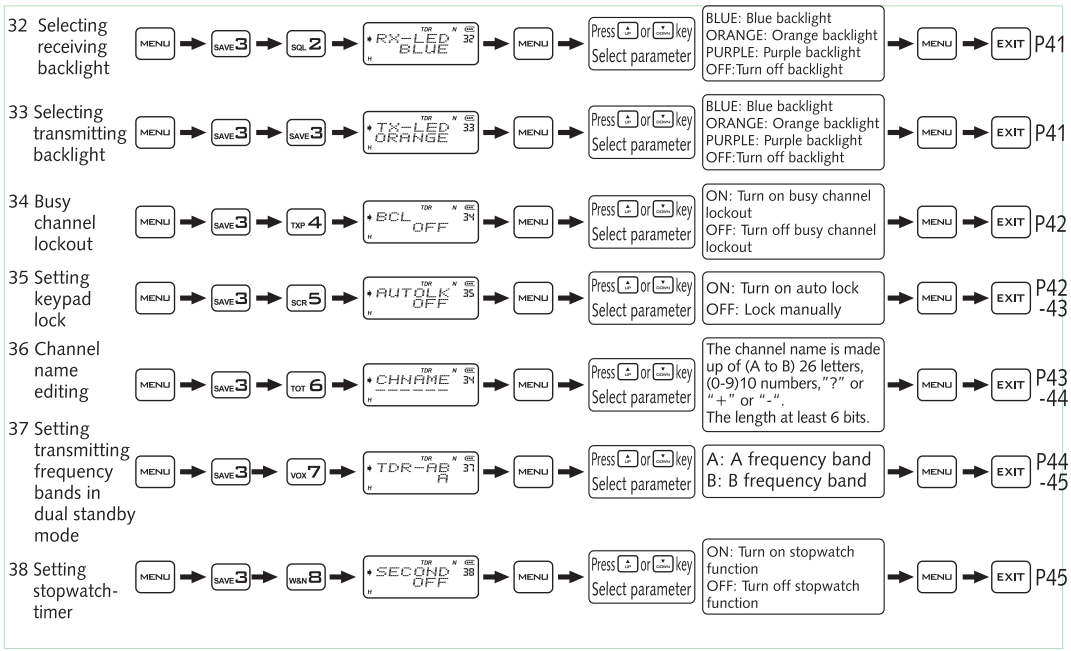
9	Setting auto backlight	MENU → ABR 9	ABR ON	Press ▲ or ▼ key Select parameter	ON: Turn on auto backlight OFF: Turn off auto backlight	MENU	EXIT	P20 -21
10	Setting receiving CTCSS	MENU → STEP 1 → 0 TDR	R-CTC OFF	Press ▲ or ▼ key Select parameter	50 groups receiving CTCSS (67 to 254.1Hz) OFF: Turn off R-CTCSS	MENU	EXIT	P21
11	Setting transmiting CTCSS	MENU → STEP 1 → STEP 1	T-CTC OFF	Press ▲ or ▼ key Select parameter	50 groups transmitting CTCSS (67 to 254.1Hz) OFF: Turn off T-CTCSS	MENU	EXIT	P22
12	Setting receiving DCS	MENU → STEP 1 → SQL 2	R-DCS OFF	Press ▲ or ▼ key Select parameter	105 groups receiving DCS (D023N-D754N) OFF: Turn off R-DCS	MENU	EXIT	P22
13	Setting transmiting DCS	MENU → STEP 1 → SAVE 3	T-DCS OFF	Press ▲ or ▼ key Select parameter	105 groups transmitting DCS (D023N-D754N) OFF: Turn off T-DCS	MENU	EXIT	P22
14	Setting voice guide	MENU → STEP 1 → TXP 4	VOICE CHINES	Press ▲ or ▼ key Select parameter	CHINES: Chinese ENGLSH: English OFF: Turn off voice guide	MENU	EXIT	P22 -23
15	Setting beep prompt	MENU → STEP 1 → SCR 5	BEEP ON	Press ▲ or ▼ key Select parameter	ON: Turn on beep prompt OFF: Turn off beep prompt	MENU	EXIT	P24
16	ANI ID Switch	MENU → STEP 1 → TOT 6	ANI OFF	Press ▲ or ▼ key Select parameter	ON: Turn on ANI ID CODE OFF: Turn off ANI ID CODE	MENU	EXIT	P25

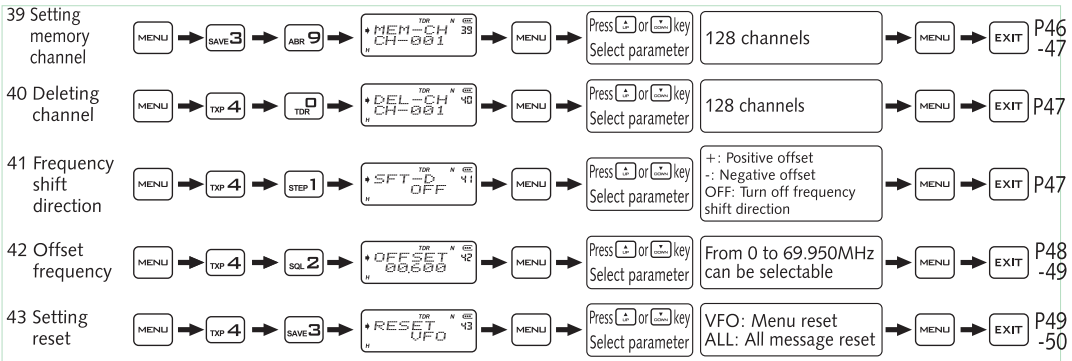
Shortcut operation sheet





Shortcut operation sheet





- Quick search (See page 7)
- Menu lock function (See page 14-15)
- HIGH/LOW power changeable when transmitting (See page 17)
- All calls, selective calls and group calls (See page 30-31)
- Setting priority scan function (See page 50-51)
- Setting reverse frequency function [*SCAN] (See page 51)
- Low voltage prompt (See page 51-52)
- Setting transmitting overtime prompt (See page 52)
- Adding scanning channel function (See page 52)
- Wire-clone function (See page 53)
- Working with repeater function (See page 53-54)

How to operate

Menu lock function

If you don't need operate menu functions frequently, you can turn it off by programming software.

The steps are as following:

1. Set the password to switch between channel mode and frequency mode.
2. Set channel mode as the working mode.
3. Turn off the operating menu function in the channel mode.

It is programmable to input the password manually and switch to the frquency mode to activate the keypad options if the operating menu is needed.

NOTE

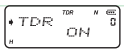
- It shows " TDR " character on the top of the display screen when the transceiver is in the dual standby mode.
- Basic frequency setting: Please set the transceiver to transmit in A/B band selectable in dual standby mode via the matching programming software.
- This series transceiver has the dual freuqency display function.In frequency mode, it can display two different frequencies for transmitting and receiving. while in channel mode, it can display two different channels.
- In frequency/channel mode, it is available to switch A and B band via pressing A/B key. When the arrowhead aims at A/B band, all the operations are based on the A/B band.

NOTE

- In frequency mode, it is available for the settings respectively in A/B band to the Frequency Step, Squelch Level, Transmitting Output, Channel Bandwidth, Receiving CTCSS, Transmitting CTCCSS, Receiving DCS, Transmitting DCS, DTMF Signaling, Mute Mode, Busy Channel Lockout, Frequency Shift Direction, Offset Frequency etc. functions.
- In channel mode, it is invalid for the settings to the Frequency Step, Squelch Level, Transmitting Output, Channel Bandwidth, Receiving CTCSS, Transmitting CTCSS, Receiving DCS, Transmitting DCS, DTMF Signaling, Mute Mode, Busy Channel Lockout, Frequency Shift Direction, Offser Frequency etc. functions.

Setting dual standby (TDR) --- MENU O

When the dual standby function is on, the transceiver will be in standby in A/B two frqeuncies/channels at the same time. While receiving signals in any one of these two frequencies/channels, the transceiver will switch to the receiving frequency/channel automatically, and the arrow indicator will change accordingly. If there are no any other operations 5 seconds affter the signal in this frequency/channel disappears, the transceiver will switch to the original standby mode automatically,with the arrowhead aims at the frequency/channel orginally specified by the tran selection in Dual standby. (Please set the transmitting selection in dual standby via the matching programming software.) In standby, press MENU

and number [TDR] and the screen will display 

Press [MENU] to enter, arrowhead aims at ON position, and press [UP] / [DOWN] select ON turn on dual standby or OFF turn off dual standby. Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting frequency step (STEP) ---- MENU 1

In standby, press [MENU] and number [STEP 1] and the screen will display

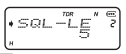
Press [MENU] enter, arrowhead aim at "12.50K" and press [UP] / [DOWN] to select the frequency step you want.
Press [MENU] and confirm, then press [EXIT] to return to standby.
This transceiver has the options of 5KHz, 6.25KHz, 10KHz, 12.5KHz and 25KHz selectable.

Setting squelch level (SQL-LE) --- MENU 2

Squelch level is about when the signal is strong enough to turn on the squelch function, and when it is weak enough to turn off the squelch function. When the squelch is on, there is voice from the loudspeaker for all of the signaling set by the transceiver. When the squelch level is set too high, the weaker signals may be missed, while the squelch level is set too low, the transceiver maybe disturbed by some noice or other needless signals.

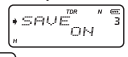
NOTE ⚠

» The squelch level for this transceiver has 0-9 levels selectable, and level 0 is to turn off the squelch function. The higher level the squelch is set, the stronger receiving signal is needed.

In standby, press [MENU] + number [SQL 2] and the screen will display 

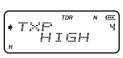
Press [MENU] enter, arrowhead aim at "5" position by going [UP] / [DOWN] to choose the desired squelch level.
Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting power saver mode (SAVE)--- MENU 3

When the power saver function is ON, the receiver circuit will be cut off for the moment, then reopen to detect the signals for a while, in order to reduce the power consumption.
In standby, press [MENU] + number [SAVE 3] and the screen will display 

Press [MENU] enter, arrowhead aim at "ON" position, press [UP] / [DOWN] select ON or OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

Selecting transmitting power (TXP)--- MENU 4

In frequency mode, press [MENU] + number [TXP 4] and the screen will display 

How to operate

Press [MENU] enter, arrowhead aim at "HIGH" position, press [▲ UP] / [▼ DOWN] to select HIGH or LOW power.
Press [MENU] and confirm, then press [EXIT] to return to standby.
This transceiver has 5W/VHF, 4W/UHF as HIGH transmitting power, and 1W as the LOW transmitting power.

NOTE

- There is 5W/4W for the HIGH transmitting power, and 1W for the LOW transmitting power selectable for this series transceiver.
- The switch for the transmitting power is temporary. In transmitting mode, press the topkey to quick switch the HIGH/LOW transmitting power temporarily.Once the transceiver is resumed, the transmitting power reverts to the original output power.

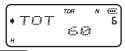
Setting transmitting voice prompt (ROGER) --- MENU 5

This function is to choose the options of voice prompt for transmitting:
OFF: No voice prompt for the beginning/ending transmitting.
BOT: Press PTT key, voice prompt for the beginning transmitting.
EOT: Release PTT key, voice prompt for the ending transmitting.
BOTH: Press and release PTT key, voice prompt for the beginning/ending transmitting.

In standby, press [MENU] + number [SCR 5] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select OFF/BOT/EOT/BOTH.
Press [MENU] and confirm, then press [EXIT] to return to standby.

Time-out timer (TOT) ---- MENU 6

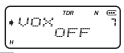
This function is to prevent the transceiver from transmitting for too long time. When the transceiver is exceeding the preset time limit, it will stop transmitting with an overtime alarm.
This transceiver can be set in 40 steps of 15 seconds,between 15 and 600 seconds.
In standby, press [MENU] + [TOT 6] and the screen will display 

Press [MENU] enter, arrowhead aim at "60" and press [▲ UP] / [▼ DOWN] to select the desired level.
Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting VOX (VOX) ---- MENU 7

This transceiver will switch to the transmitting mode when detecting the voice signal.
The transmitting operation will somewhat be delayed, and the voice signal informaiton may be not transmitted at the first beginning, since there needs some time for the VOX circuit to detect the voice signal.

How to operate

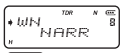
There are 10 levels selectable for the VOX this transceiver.
In standby, press [MENU] + number [VOX 7] and the screen will display 

Press [MENU] enter, arrowhead aim at "OFF" position, press [UP] / [DOWN] to select VOX OFF or to choose from 1 to 10 VOX levels. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

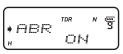
- The higher level of VOX is set, the higher volume is needed.
- In RADIO/SCAN mode, the VOX function is not available, but just showing on the upper right of the display screen.

Setting wide and narrow bandwidth (WN) ---- MENU 8

In standby, press [MENU] + number [W&N 8] and the screen will display 

Press [MENU] enter, arrowhead aim at "WIDE" position , press [UP] / [DOWN] and you can select WIDE or NARROW bandwidth. Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting auto backlight (ABR) ---- MENU 9

In standby, press [MENU] +number [ABR 9] and the screen will display 

Press [MENU] enter, arrowhead aim at "ON" position, press [UP] / [DOWN] key and select ON to turn on auto backlight or OFF to switch OFF the auto backlight. Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting receiving CTCSS (R-CTCSS) ---- MENU 10

Sometimes, when you only want to receive calls from the specified individual or group, please use CTCSS/DCS to ignore the needless calls from others, which are also using the same frequency. ONLY the same CTCSS/DCS signals are received, the transceiver can release the squelch function.
In frequency mode, press [MENU] + number [STEP 1] [TDR] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [UP] / [DOWN] and select OFF to switch off R-CTCSS or one of the tones between 67.0Hz and 254.1Hz. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

- This transceiver has 50 groups CTCSS, please see appendix (1) CTCSS sheet.

How to operate

Setting transmitting CTCSS (T-CTCSS) ---- MENU 11

In frequency mode, press [MENU] + number [STEP 1] [STEP 1] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select OFF to switch off T-CTCSS or one of the tones between 67.0Hz and 254.1Hz. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» This transceiver has 50 groups CTCSS, please see appendix (1) CTCSS sheet.

Setting receiving DCS (R-DCS) ---- MENU 12

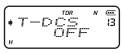
In frequency mode, press [MENU] + number [STEP 1] [SQL 2] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select OFF to switch off R-DCS or one of the steps from D023N to D754I. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» This transceiver has 105 DCS codes, please see appendix (2) DCS frequency sheet. In it DXXXN (between D023N and D754N) means Positive code while DXXI (between D023I and D754I) means Negative code.

Setting transmitting DCS (T-DCS) ---- MENU 13

In frequency mode, press [MENU] + number [STEP 1] [SAVE 3] and the screen will display 

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select OFF to switch off R-DCS or one of the steps from D023N to D754I. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» This radio has 105 DCS codes, please see appendix (2) DCS frequency sheet. In it DXXXN (between D023N and D754N) means Positive code while DXXXI (between D023I and D754I) means Negative code.

Setting voice guide (VOICE) ---- MENU 14

This transceiver has Chinese and English selectable for voice guide.

In standby, press [MENU] + number [STEP 1] [TXP 4] and the screen will display

Press [MENU] enter, arrowhead aim at "CHINES", press [▲ UP] / [▼ DOWN] key to either select English or Chinese or OFF to switch off the voiceguide. Press [MENU] and confirm, then press [EXIT] to return to standby.

How to operate

NOTE

» Please turn off MENU 14 VOICE function and MENU 15 BEEP function together, to turn off all the voice prompt for this transceiver.

Setting beep prompt function (BEEP) ---- MENU 15

Beep prompt function is for the transceiver operating confirmation, error status prompt or faulty condition reminders. We faithfully advise you to turn on this function, so that you can detect or check the errors and faults.

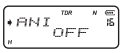
In standby, press [MENU] + number [STEP 1] [SCR 5] and the screen will display

Press [MENU] enter, arrowhead aim at "ON" then press [▲ UP] / [▼ DOWN] to switch on the beep or OFF to switch off the function. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» When VOICE function and BEEP function are on, the VOICE function is prioritized.

Setting ANI ID ON/OFF (ANI) ---- MENU 16

In standby, press [MENU] + number [STEP 1] [TOT 6] and the screen will display 

Press [MENU] enter, aim arrow at "OFF" position, press the [▲ UP] / [▼ DOWN] and select ON to switch on ANI or OFF to switch off ANI. Press [MENU] and confirm, then press [EXIT] to return to standby.

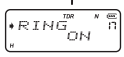
Setting steps are as following:

MENU+16	→ ANI	→ MENU	→ ON	→ MENU	→ EXIT	
MENU+17	→ RING	→ MENU	→ ON	→ MENU	→ EXIT	
MENU+18	→ ART	→ MENU	→ RING TIME (1-10)	→ MENU	→ EXIT	
MENU+19	→ IDEDIT	→ MENU	→ ID-XXX (100-999)	→ MENU	→ EXIT	
MENU+20	→ OPTSIG	→ MENU	→ DTMF	→ MENU	→ EXIT	
MENU+21	→ PTT-ID	→ MENU	→ DELAY TIME (1-30)	→ MENU	→ EXIT	
MENU+22	→ SPMUTE	→ MENU	→ QT+DT	→ MENU	→ EXIT	
MENU+23	→ DTMFST	→ MENU	→ DT+ANI	→ MENU	→ EXIT	

How to operate

Setting calling ring (RING) ---- MENU 17

There will be a calling ring when the transceiver receives the matching DTMF signaling. The ring time is set in MENU 18, and the speaker will be on when the ring time is up to the preset time limit.

In standby, press [MENU] + number [STEP 1] [VOX 7] and the screen will display 

Press [MENU] enter, arrowhead aim at "ON" position, press the [▲ UP] / [▼ DOWN] to select ON or OFF .

Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting ring time (ART) ---- MENU 18

The speaker sounds out as a calling ring according to the preset ring time, when the transceiver receives the matching DTMF signaling.

In standby, press [MENU] + number [STEP 1] [W&N 8] and the screen will display

Press [MENU] enter, arrowhead aim at "5" position, press [▲ UP] / [▼ DOWN] to select the time of the ring between 0 and 10. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» The ring time setting for this transceiver has 10 steps of 1 second selectable, which step 0 means turning off the calling ring function.

ANI ID CODE editing (IDEDIT) ---- MENU 19

In frequency mode, press [MENU] + number [STEP 1] [ABR 9] and the screen will display

Press [MENU] enter, arrowhead aim at "ID-101" position, directly input 3 digit number for the specified ANI ID CODE.

Press [MENU] to confirm, press [EXIT] to return radio to standby.

NOTE

» ID CODE is selectable in a range of 100 to 999.

Setting DTMF signal (OPTSIG) ---- MENU 20

In frequency mode, press [MENU] +number [SQL 2] [TDR] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select ON to switch on DTMF or OFF to switch off DTMF. Press [MENU] to confirm, press [EXIT] to return radio to standby.

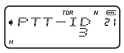
How to operate

Setting ANI ID CODE transmitting (PTT-ID) ---- MENU 21

ANI ID CODE is transmitted together when pressing PTT to transmit according to the ANI ID CODE transmitting settings.

1-30: permitted delay time for ANI ID CODE transmitting. Unit :100ms

OFF: transmitting ANI ID CODE manually.

In standby, press [MENU] + number [SQL 2] [STEP 1] and the screen will display 

Press [MENU] enter, arrowhead aim at "1" position, press [▲ UP] / [▼ DOWN] to select 1 to 30 for the transmitting delay time or OFF to transmit ANI ID CODE manually. Press [MENU] to confirm, press [EXIT] to return radio to standby.

NOTE ⚠

» If this function is OFF, which means manually transmitting the ANI ID CODE, you need to input the ANI ID CODE through the keypad manually when pressing PTT to transmit.

Setting mute mode (SPMUTE) ---- MENU 22

The mute mode is to turn on/off the speaker audio acccording to your optional signal setting.

This transceiver has three kinds of modes which can be selected.

1. **QT:** When the transceiver receives a signal which can open the squelch and matching CTCSS tone it will switch on the speaker output. When the transceiver does't set a CTCSS tone but still receives a signal, the loudspeaker will be switched on, too.
2. **QT+DT:** When the transceiver receives the desired signal by QT and the matching DTMF singaling, the loudspeaker will be switched on.
3. **QTxDT:** When the transceiver receives one of the desired signals by QT or QT+DT, the loudspeaker will be switched on.

In frequency mode, press [MENU] + number [SQL 2] [SQL 2] and the screen will display

Press [MENU] , arrowhead aim at "QT" position, press [▲ UP] / [▼ DOWN] and select one of QT or QT+DT or QTxDT. Press [MENU] to confirm, press [EXIT] to return radio to standby.

How to operate

All calls, selective calls and group calls

This transceiver offers ANI ID CODE transmitting, ANI IN CODE editing and DTMF decoding functions, and the users can achieve all calls, selective calls and group calls in groups without any other communication apparatus.

How to program all calls, selective calls and group calls

1. ID CODE edit ***NOTE:*** Every transceiver in the group needs a unique ANI ID CODE.

ANI ID CODE: ID---XXX

ID	X	XX
ANI ID CODE sign	Group number sign	the unique ANI ID
	1 to 9 groups Maximum: 9 groups	00 to 99 Maximum unit: 100

Above makes up the ANI ID CODE.

The detailed ANI IN CODE editing methods, please see MENU (19) ANI ID CODE editing (IDEDIT).

2. Setting DTMF signaling

NOTE: Every transceiver in the group must be set with the DTMF additional signalling on.

The detailed settings for DTMF additional signaling, please see MENU (20) Setting DTMF signal (OPTSIG).

3. The detailed settings for ANI ID ON/OFF, please see MENU(16) Setting ANI ID ON/OFF (ANI).

4. Set the mute mode to QT+DT. The detailed steps, please see MENU (22) Setting mute mode (SPMUTE).

5. Set the calling ring with the ring time (if necessary). The setting mothods, please see MENU (17) Setting calling ring (RING) and MENU (18) Setting ring time (ART).

NOTE ⚠

» All the frequency points or the channels and the parameters for any the transceivers in the group should be accordant with each other.

a. **Using all calls function:**

Press **PTT** , input [SCAN] + [#] directly through the keypad.

b. **Using group calls function:**

Press **PTT** , input group number [*SCAN] + [*SCAN] directly through the keypad.

c. **Using selective calls function:**

Press **PTT** , input the ANI ID CODE you want through the keypad directly.

How to operate

Setting DTMF sidetone (DTMFST) ---- MENU 23

DTMF sidetone setting is whether there is key pressing or ANI IN CODE transmitting sidetone when transmitting DTMF signaling. There are 4 modes selectable for this transceiver as following:

DT-ST: Activate the key pressing sidetone when transmitting.

ANI-ST: Activate the ANI ID CODE transmitting sidetone when transmitting.

DT+ANI: Acitivate the key pressing and ANI ID CODE transmitting sidetone when transmitting.

OFF: Turn off the DTMF sidetone function.

In standby, press [MENU] + number [SQL 2] [SAVE 3] and the screen will display

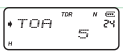
Press [MENU] enter, press [▲ UP] / [▼ DOWN] and select one function of DT-ST/ANI-ST/DT+ANI or OFF.

Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting transmitting overtime alarm (TOA) ---- MENU 24

There are voice prompt and the transmitting indicator flashing when the transceiver keeps transmitting almost up to the limit time set by Time-out timer (TOT).

The transceiver can be set from 1 to 10 TOA in steps of 1 second.

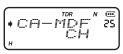
In standby, press [MENU] + number [SQL 2] [TXP 4] and the screen will display 

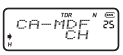
Press [MENU] enter, arrowhead aim at "5" position, press [▲ UP] / [▼ DOWN] to select OFF or to set 1 to 10 for the overtime alarm. Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting channel display mode in band A (CA-MDF)---MENU 25

This transceiver has three kinds of channel display modes selectable as:

channel order number/channel frequency+channel order number/channel name+channel order number.

In standby, press [MENU] + number [SQL 2] [SCR 5] and the screen will display 

1. **Channel-order-number display mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] select CH and the screen will display 

   Press [MENU] and confirm, then press [EXIT] to return to standby.
2. **Channel-frequency + Channel-order-number display mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] select FREQ and the screen will display

   Press [MENU] and confirm, then press [EXIT] to return to standby.
3. **Channel-name + Channel-order-number display mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] select NAME and the screen will display

How to operate

Press [MENU] and confirm, then press [EXIT] to return to standby. To operate this function you need to edit the channel name first. See details about the channel name editing.

NOTE

» Channel-name display mode: The transceiver displays with the channel name only after the channel name is successfully edited. Please refer to MENU 36 about the channel name editing.

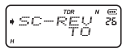
Setting scan mode (SC-REV) ---- MENU 26

There are three scan modes available for this transceiver:

TO: After detecting a signal on a channel, the transceiver will continue scanning if no operation is performed within 5 seconds.

CO: The transceiver stops scanning when there is a signal, three seconds after the signal disappears, it will resume scanning.

SE: Scanning stops when a signal is received.

In standby, press [MENU] + number [SQL 2] [TOT 6] and the screen will display 

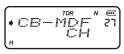
Press [MENU] enter, arrowhead aim at "TO" position, press [▲ UP] / [▼ DOWN] and select TO, CO or SE.

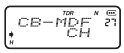
Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting channel display mode in band B (CB-MDF)---MENU 27

This transceiver has three kinds of channel display modes selectable as:

channel order number/channel frequency + channel order number/channel name + channel order number.

In standby, press [MENU] + number [SQL 2] [VOX 7] and the screen will display 

1. **Channel-order-number dispay mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] select CH and the screen will display 

   Press [MENU] and confirm, then press [EXIT] to return to standby.
2. **Channel-frequency + Channel-order-number display mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] selcet FREQ and the screen will display

   Press [MENU] and confirm, then press [EXIT] to return to standby.
3. **Channel-name + Channel-order-number display mode**
   Press [MENU] enter, press [▲ UP] / [▼ DOWN] select NAME and the screen will display

   Press [MENU] and confirm, then press [EXIT] to return to standby.
   To operate this function you need to edit the channel name first. See details of editing the channel name in MENU 34.

How to operate

NOTE

» Channel-name display mode: The transceiver displays with the channel name only after you finishes editing the channel name. Please refer to MENU 36 about the channel name editing.

Setting power on message (PONMSG) ---- MENU 28

This transceiver has 3 display methods available when power on as below:

OFF: Full screen display **BATT-V:** Battery voltage display **MSG:** displaying "WELCOME"

In standby, press [MENU] + number [SQL 2] [W&N 8] and the screen will display

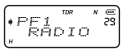
Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select OFF/BATT-V/MSG,

Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting FM radio, SCAN and LAMP function on side key 1 (PF1) ---- MENU 29

SCAN: Scan key **RADIO:** Digital FM radio key **LAMP:** Lamp key

OFF: Disable the side key 1 function

In standby, press [MENU] + number [SQL 2] [ABR 9] and the screen will display 

***1.* Selecting SCAN function:**

Press [MENU] enter, arrowhead aim at "RADIO" position, press [▲ UP] / [▼ DOWN] and select SCAN function from RADIO/LAMP/SCAN/OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

In standby, press sidekey 1 to switch to SCAN mode (Please refer to MENU 26 about the scan mode setting). The transceiver starts scanning, and stops scanning by pressing any keys.

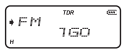
NOTE

» Holding press [* SCAN] for 2 seconds to quickly switch to the scan mode.

2. Selecting RADIO function:

a. Turning on the FM Radio

Press [MENU] enter, arrowhead aim at "RADIO" position, press [▲ UP] / [▼ DOWN] and select RADIO function form RADIO/LAMP/SCAN/OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

In standby,press PF1 to turn on RADIO function,the screen will display. 

At this time,the receiving light flickers green and it starts tuning the radio station automatically.

When it searches,the green light stops and starts up the radio listenning.

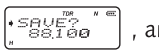
NOTE

» The default of the side key 1 function is RADIO function.

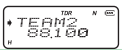
b. Tuning the FM radio station

In radio mode, press [SCAN] key, the transceiver will atomatically tune the frequency, and LED light flashes green, until it detects a radio station. Of course, you can also press [UP] / [DOWN] to slightly adjust the radio station tuning.

c. Storing radio frequency

After detecting a radio station, press [MENU] , the screen will display 

, and then press one of the number key from [STEP 1] to [ABR 9] , the detected radio station frequency will be stored into the chip for future use.

This transceiver has two group radio channels for storing, and the default is in the first storage. For example, if you want to store frequency 88.1MHz into channel eight in group one, you should only press [MENU] and number key [W&N 8] . If you want to store this frequency into channel eight in group two, firrstly, choose the second storage, then press [#] , the screen will display 

, in this case, the transceiver will be switched into the second storage. At this time,

press [MENU] and number key [W&N 8] , the frequency will be stored into channel eight, group two.

For the stored radio stations, in radio mode, press any number key from [STEP 1] to [ABR 9] to invoke them, you can use [#] key to switch the two storage group and invoke one of the stored radio stations.

d. Exiting from the radio mode

In radio mode, press PF1 again to exit.

NOTE

» When you are listening to the radio, the current frequency or channel is in standby mode, it will automatically switch to the Transmitting/Receiving mode. After the signal disappears for 5 seconds without any other operations, it will switch back to the radio mode automatically. In radio mode, It is available to directly press PTT to transmit, 5 seconds after the operation, the transceiver will be back to the radio mode.

3. Selecting LAMP function:

In standby, press [MENU] + number [SQL 2] [ABR 9] and the screen will display

Press [MENU] enter, press [UP] / [DOWN] and select LAMP function from SCAN/RADIO/LAMP/OFF.

Press [MENU] and confirm, then press [EXIT] to return to standby.

How to operate

Setting distant urgency alarm function on topkey (PF2) ---- MENU 30

The top key has two functions selectable:

① **ALARM:** Turn on the distant alarm function ② **OFF:** Turn off this function

In standby, press [MENU] + number [SAVE 3] [TDR] and the screen will display

Press [MENU] enter, arrowhead aim at "ALARM", press [▲ UP] / [▼ DOWN] and select one of the functions of ALARM/ OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

After selecting ALARM function, in the standby mode, press top key to transmit the alarm code, and the speaker sounds out with the alarm call. Meanwhile, the left-hand LED light flashes RED, and the right-hand LED light flashes GREEN by turns. Please press the top key again to exit.

Selecting standby backlight (WT-LED) ---- MENU 31

The transceiver has three LED backlight colors selectable:

BLUE / ORANGE / PURPLE / OFF

In standby, press [MENU] + number [SAVE 3] [STEP 1] and the screen will display

Press [MENU] enter, arrowhead aim at "PURPLE" position, press [▲ UP] / [▼ DOWN] and select the desired color of BLUE / ORANGE / PURPLE/ OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

Selecting receiving backlight (RX-LED) ---- MENU 32

The transceiver has three LED backlight colors selectable:

BLUE / ORANGE / PURPLE / OFF

In standby, press [MENU] + number [SAVE 3] [SQL 2] and the screen will display

Press [MENU] enter, arrowhead aim at "BLUE" position, press [▲ UP] / [▼ DOWN] and select the desired color of BLUE / ORANGE / PURPLE/ OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

Selecting transmitting backlight (TX-LED) ---- MENU 33

The transceiver has three LED backlight colors selectable:

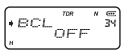
BLUE / ORANGE / PURPLE / OFF

In standby, press [MENU] + number [SAVE 3] [SAVE 3] and the screen will display

Press [MENU] enter, arrowhead aim at "ORANGE" position, press [▲ UP] / [▼ DOWN] and select the desired color of BLUE / ORANGE / PURPLE/ OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

Busy channel lockout (BCL) ---- MENU 34

This function is to prevent the interference from the other communicating channels. When the selected channel is occupied by others, press PTT and there will be alarm prompt for BCL, while release PTT, the alarm prompt disappears and the transceiver will be back to the receiving mode.

In frequency mode, press [MENU] + number key [SAVE 3] [TXP 4] and the screen will display 

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select between ON or OFF.

Press [MENU] and confirm, then press [EXIT] to return to standby.

Setting Keypad lock (AUTOLK) ---- MENU 35

The transceiver has two options, automatical lock (auto lockout) and manual lock selectable.

AUTOLK: When the AUTOLK is on, there are no operations within 15 seconds, the transceiver will be locked automatically. Press [*#] for 2 seconds to unlock it.

OFF: Turn off the AUTOLK function, but lock the transceiver manually.

NOTE

» According to the Manual lock, press [*#] for 2 seconds in standby mode, and press [*#] again for more than 2 seconds to unlock it.

In standby, press [MENU] + number [SAVE 3] [SCR 5] and the screen will display

Press [MENU] enter, arrowhead aim at "OFF" position, press [▲ UP] / [▼ DOWN] and select AUTO for autolock or OFF to switch off autolock. Press [MENU] and confirm, then press [EXIT] to return to standby.

Channel name editing (CHNAME) ---- MENU 36

Channel name editing:

1. Channel name can be made up of 26 letters (A to Z), 10 numbers (0 to 9) or any of the 3 (?) (+) (-), symbols.
2. Channel name can have a maximum length of 6 bits or can be edited with 1-6 bits.
3. When you select the (-) symbol it means that the bit is blank.

Editing method:

1. Via the matching programming software.
2. Manually through the transceiver keypad.

When you are editing a channel name:

1. The tranceiver has stored at least one channel.
2. The transceiver is working in channel mode.

3. press [UP] to select character, and press [DOWN] to select editing position after entering into the channel name editing function.

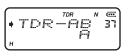
Editing steps:

1. If the transceiver works in frequency mode, set NAME as the working mode. Please press [MENU] + [SCAN] to quickly switch the working mode and resume the transceiver. If the transceiver workds in channel mode, directly set the channel display mode to NAME.

2. Select the desired channel, press [MENU] + [SAVE 3] + [TOT 6] + [MENU] and then the screen will display 6 digits cross-bar, press [UP] to select the character, then press [DOWN] to select the digit, press [UP] again to select another charater for another digit, and so on. When the all six digits are selected, press [MENU] to confirm, and press [EXIT] to exit.

3. In stanby mode,the screen will display with the channel name, and the channel order number displays on right corner.

Setting transmitting frequency bands in dual standby mode (TDR-AB) ---- MENU 37

In frequency mode, press [MENU] + number [SAVE 3] [VOX 7] and the screen will display 

Press [MENU] enter, press [UP] / [DOWN] selected A or B. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

» This function is set in dual standby mode.
» In dual standby mode, the arrowhead aim at band A or band B.

Setting stopwatch timer (SECOND) ---- MENU 38

In standby, press [MENU] + number [SAVE 3] [W&N 8] and the screen will display

Press [MENU] enter, arrowhead aim at "QT" position, press [UP] / [DOWN] to select ON or OFF.

Press [MENU] and confirm, then press [EXIT] to return to standby.

Using the stopwatch timer:

When the stopwatch timer is on, press [#] one time and the stopwatch starts to calculate and press any key to stop calculating. Press [#] to re-start calculating.

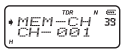
NOTE

» When the stopwatch timer is paused, press any key (except [#]) to exit from the function.

How to operate

Setting memory channel=Setting co-channel and dis-channel (MEM-CH) ---- MENU 39

In working mode and standby mode, it is available to input the memory frequency and parameter for this transceiver.

Press [MENU] + number [SAVE 3] [ABR 9] and the screen will display 

Press [MENU] enter, press [UP] / [DOWN] to select channel, press [MENU] to store and there will be voice prompt for the receiving memory. Press [EXIT] to exit, and the co-channel memory is set.

When you need to store dis-channel, repeat the above procedure. After the memory confirmation, there is voice prompt for the transmitting memory.

For example:

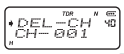
If you want to set 450.025MHz for the receiving frequency, 460.025MHz for the transmitting frequency and store it into CH-20, the steps are as following:

1. When the transceiver works in frequency mode, input [TXP 4] [SCR 5] [TDR] [TDR] [SQL 2] [SCR 5], [MENU] + [SAVE 3] + [ABR 9] + [MENU], then press [SQL 2] [TDR] or [UP] / [DOWN] key select CH-20, press [MENU] key to confirm, voice prompt will remind of the receiving memory, press [EXIT] to exit;

2. Then input [TXP 4] [TOT 6] [TDR] [TDR] [SQL 2] [SCR 5] + [MENU] + [SAVE 3] + [ABR 9] + [MENU] + [MENU] and voice prompt will remind of the transmitting memory, press [EXIT] to exit.

3. The dis-channel is stored.

Deleting channel (DEL-CH) ---- MENU 40

In standby, press [MENU] + number [TXP 4] [TDR] and the screen will display 

Press [MENU] enter, press [UP] / [DOWN] to select the channel you want to delete, press [MENU] to confirm.

After the channels or paramter are deleted, press [EXIT] to return to standby.

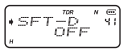
Setting frequency shift direction (SFT-D) ---- MENU 41

Setting frequency shift direction for this transceiver is as following:

1. The transmitting frequency is higher than receiving frequency. This is called positive offset (+)

2. The transmitting frequency is lower than receiving frequency. This is called negative offset.(-)

3. Turn off this function.

In standby, press [MENU] + number [TXP 4] [STEP 1] and the screen will display 

Press [MENU] enter, press [UP] / [DOWN] and select +/-/OFF. Press [MENU] and confirm, then press [EXIT] to return to standby.

How to operate

Setting offset frequency (OFF-SET) ---- MENU 42

Offset frequency is the differential value between the transmitting frequency and the receiving frequency. The offset range of this transceiver can be from 0 to 69.950MHz.

In standby press [MENU] + number [TXP 4] [SQL 2] and the screen will display

Press [MENU] enter, press [▲ UP] / [▼ DOWN] to select offsetfrequency. Press [MENU] and confirm, then press [EXIT] to return to standby.

NOTE

- The transceiver cannot transmit if the offset transmitting frequency is beyond the local frequency range.
- Please adjust the receiving frequency or the frequency deviation, so that the transmitting frequency can work within the available frequency range.

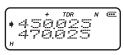
Follow the next steps:

1. Set frequency mode as the working mode.
2. Set the offset direction and the offset frequency.

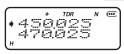
Example: In frequency mode, the transceiver will receive in 450.025MHz, and will transmit in 460.025MHz. Using the OFF-SET function, input the 450.025MHz as the receiving

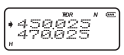
frequency, set the offset directio as "+", then the transmitting frequency will be in 460.025MHz.

In frequencymode, order input [TXP 4] [SCR 5] [TDR] [TDR] [SQL 2] [SCR 5] key in sequence, press [MENU] + [TXP 4] + [STEP 1] + [MENU] and select positive offset (+); press [MENU] + [EXIT] , then press [MENU] + [TXP 4] + [SQL 2] + [MENU] , [▲ UP] / [▼ DOWN] to select 10.000+ [MENU] + [EXIT] and the offset direction and frequency are set.

The screen display 

Press PTT key to transmit, the screen will display

Release PTT key, the screen will display 

Now, the transceiver is working on receiving frequency 

and the transmitting frequency is

Setting reset ---- MENU 43

The transceiver has two options MENU reset (VFO) and the all model reset (ALL) selectable.

VFO reset means all the parameters are reset to the Default Value.

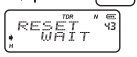
ALL reset means all the parameter and the channel settings are reset to the Default Value.

How to operate

1. MENU reset (VFO):

In standby, press [MENU] + number [TXP 4] [SAVE 3] and the screen will display

Press [MENU] enter, press [▲ UP] / [▼ DOWN] select VFO, press [MENU] key and the screen will display

Press [MENU] again and the screen will display 

After the reset operation, the transceive will power off and resume automatically.

2. All message reset (ALL):

In standby, press [MENU] + number [TXP 4] [SAVE 3] the screen will display

Press [MENU] enter, press [▲ UP] / [▼ DOWN] and select ALL, press [MENU] and the screen will display

Press [MENU] again and the screen will display

After the reset operation, the transceiver will power off and resume automatically.

Setting priority scan function (PRIORITY CHANNEL)

If you want to monitor other channels and check the certain preferred channel at the same time, you can set Priority scan function.

E.g.: Scan six channels CH1, CH2, CH3, CH4, CH5 and the priority channel CH6. Scanning sequence as following chart:

CH1 → CH6 → CH2 → CH6 → CH3 → CH6 → CH4 → CH6 → CH5 → CH6

If the transceiver checks the signal on Priority Channel, it will call out this channel first.

Select the desired priority channels via the programming software.

Setting reverse frequency function

When using the reverse frequency function, the transmitting and receiving frequency of this transceriver will interchange, together with all settings for CTCSS/DCS encoding and decoding.

Operating the reverse frequency function:

In standby, press [* SCAN] to activate reverse frequency function, while press [* SCAN] again to switch it off.

In channel mode, it is avaiable for

1. MENU setting **2.** RESET function

The editing method: via the matching programming software.

Low voltage prompt

When the batterypack is in low voltage, there will be voice prompt to remind of being charged timely.

Setting transmitting overtime alarm

When the transmitting time is exceeding the preset time, there will be an alarm to remind of the transmitting overtime to stop the tranceiver from transmitting. If you want to re-start transmitting, please press PTT to transmit. (Please see MENU 6 about the Time-out timer (TOT)).

Adding scanning channel

NOTE ⚠

» Only the added scanning channel can be listed to scan.
» Editing method: Strictly via the matching programming software.

Wire-clone function

Using wire-clone	a. Installing batterypacks on source radio and target radio and connect them via wire-clone cable. b. And then power target radio on. c. Power on the source radio and hold on the MONI key at the same time. d. Red LED on the source radio flashes, while the green LED on the target radio flashes, it shows the wire cloning is completely starts up.	Transmitting red LED flashing means transmitting data when wire cloning. Transmitting red LED distinguishes after completing wire-clone, and the transceiver returns to standby. Trasnsmitting red LED lasting flashing means the wire-clone is failed and the transceiver returns to standby mode.
	Target radio	Receiving green LED flashing means receiving data when wire cloning. Receiving green LED extinguishes after completing wire-clone, and the transceiver returns to standby.

Working with repeater function

Most repeaters are working by the pilot frequency methods, so there is a standard and off-standard slip frequency between the transmitting and receiving frequency. Meawhile, the repeater can be forwarded via the matching CTCSS/DCS or DTMF signaling.

It is necessary to set different parameters for the transmitting frequency and receiving frequency. Therefore, you need to set the parameter for this transceiver and store them into the specified channels, which will be used for communication.

How to operate

E.g.

The transmitting frequency in the repeater station 450.025MHz with the CTCSS value 67Hz, and the receiving frequency is 460.025MHz, with the CTCSS value 254.1Hz.

When the transceiver needs to join this repeater, you need to follow the following steps:

1. Set the receiving frequency, CTCSS value and store this in specified channel, e.g. channel 20. In frequency mode, set the receiving frequency to 460.025MHz, CTCSS value 254.1Hz, and store into channel 20. The operating is as following:
   In frequency mode, input [TXP 4] + [TOT 6] + [TDR] + [TDR] + [SQL 2] + [SCR 5] , [MENU] + [STEP 1] + [TDR] + [MENU] , press [UP] / [DOWN] and select the receiving CTCSS value to 254.1Hz, press [SAVE 3] + [ABR 9] to enter into MENU 30 (MEM-CH), press [MENU] to confirm, the input [SQL 2] + [TDR] to choose CH-20, then press [MENU] to confirm. After there is voice prompt for the receiving memory, press [EXIT] to standby.
2. Set the transmitting memory frequency, CTCSS Value and store them into CH-20. In frequency mode, this transciver is set to transmit in 450.025MHz, with the CTCSS value 67Hz, and with the memory channel CH-20.
   In frequency mode, input [TXP 4] + [SCR 5] + [TDR] + [TDR] + [SQL 2] + [SCR 5] , [MENU] + [STEP 1] + [STEP 1] + [MENU] , press [UP] / [DOWN] abd select the transmitting CTCSS value to 67Hz, press [SAVE 3] + [ABR 9] to enter

into MENU 30 (MEM-CH), press [MENU] to confirm then input [SQL 2] + [TDR] to choose CH-20, then press [MENU] to confirm. After there is voice prompt for the receiving memory, press [EXIT] to standby.

3. Press [MENU] , turn on the power at the same time, now the transceiver is working in the channel mode. Please press [UP] / [DOWN] to select channel CH-20, and enter into the repeater station for the communication.

How to use the intelligent charger

1. Insert the AC plug into the electric fence outlet (AC: 90-240W), the indicator flashes, it means the charger is in the charging standy mode.
2. Insert the battery into the charger, the RED LED lasts flashing, it measns charging is on the progress. While GREEN LED lasts flashing, it means the charging completes.

NOTE ⚠

» When inserting the exhausted batterypack into the charger, it will pre-charge the batterypack in trickle power. Meanwhile, the RED LED keeps flashing until 10-20 minutes later. After that it enters into the normally charging mode, the RED LED lasts flashing, and when it is fully charged, the light turns green.

» Charging the exhausted batterypack in trickle power can protect the lithium batterypack better.

Trouble shooting

Before the transceiver is regarded as being faulty, please double check according to the main problems as following chart. If the problems are still happening, please reset it to avoid some misfunctional operation.

Problem	Solution
Transceiver will not be switched on, no power	**1.** The batterypack maybe exhausted, please recharge it. **2.** The batterypack is not installed properly, please re-install it.
The batterypack cannot be used for the regular time.	**1.** The batterypack lifetime is over, please change a new one. **2.** Please double check with the charger or charge the batterypack for enough time.
The receiving light flashes but there is no sound from the speaker.	**1.** The powerswitch is not adjusted well. **2.** Confirm if the transmitting/receiving CTCSS/DCS is matching. Reset the CTCSS/DCS. **3.** Confirm if you use the right mute mode.

Problem	Solution
Keyboard and PTT switch do not work.	**1.** Confirm if the keboard is locked. **2.** Confirm if other keyboard is jammed.
The transceiver transmits automatically without pressing PTT in standby mode.	Please double check if the VOX function is on, and the VOX level is set too low.
Some functions cannot be stored normally.	Please confirm if the transceiver is working in channel mode, since some functions are ONLY set in channel mode via programming software.
There are other distored signals or noices (from other groups) in the channel.	Please change the CTCSS/DCS frequency.

Appendix 1

CTCSS

1	67.0	11	94.8	21	131.8	31	171.3	41	203.5
2	69.3	12	97.4	22	136.5	32	173.8	42	206.5
3	71.9	13	100.0	23	141.3	33	177.3	43	210.7
4	74.4	14	103.5	24	146.2	34	179.9	44	218.1
5	77.0	15	107.2	25	151.4	35	183.5	45	225.7
6	79.7	16	110.9	26	156.7	36	186.2	46	229.1
7	82.5	17	114.8	27	159.8	37	189.9	47	233.6
8	85.4	18	118.8	28	162.2	38	192.8	48	241.8
9	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

Appendix 2

DCS

1	D023N	16	D074N	31	D165N	46	D261N	61	D356N
2	D025N	17	D114N	32	D172N	47	D263N	62	D364N
3	D026N	18	D115N	33	D174N	48	D265N	63	D365N
4	D031N	19	D116N	34	D205N	49	D266N	64	D371N
5	D032N	20	D122N	35	D212N	50	D271N	65	D411N
6	D036N	21	D125N	36	D223N	51	D274N	66	D412N
7	D043N	22	D131N	37	D225N	52	D306N	67	D413N
8	D047N	23	D132N	38	D226N	53	D311N	68	D423N
9	D051N	24	D134N	39	D243N	54	D315N	69	D431N
10	D053N	25	D143N	40	D244N	55	D325N	70	D432N
11	D054N	26	D145N	41	D245N	56	D331N	71	D445N
12	D065N	27	D152N	42	D246N	57	D332N	72	D446N
13	D071N	28	D155N	43	D251N	58	D343N	73	D452N
14	D072N	29	D156N	44	D252N	59	D346N	74	D454N
15	D073N	30	D162N	45	D255N	60	D351N	75	D455N

Technical parameter

DCS

76	D462N	82	D516N	88	D606N	94	D645N	100	D723N
77	D464N	83	D523N	89	D612N	95	D654N	101	D731N
78	D465N	84	D526N	90	D624N	96	D662N	102	D732N
79	D466N	85	D532N	91	D627N	97	D664N	103	D734N
80	D503N	86	D546N	92	D631N	98	D703N	104	D743N
81	D506N	87	D565N	93	D632N	99	D712N	105	D754N

Technical Specification

Professional FM Transceiver

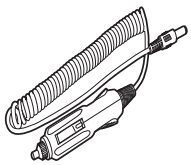
Frequency range	VHF: 66-88MHz
	VHF: 136-174MHz
	UHF: 350-390 MHz
	UHF: 400-470.975 MHz
Memory channel	128 channels
Voltage	7.4V DC
Working temperature	-30C(-22F) to +60C(140F)
Output power	VHF: 5W / UHF:4W
Mode	F3E(FM)
Maximum deviation	⩽±5KHz
Adjacent channel power	<-60dB
Stability	±5 ppm
Sensitivity	<0.2 μV
Audio output power	>500mW
Weight	258g(0.57lbs)
Size	62 X 105 X 39 (mm) 2.44x4.13x1.54(inch)

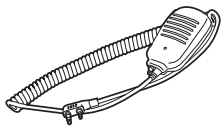
NOTE ⚠

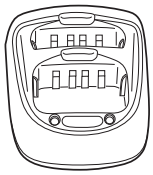
» Specification is subject to be revised without prior notice.

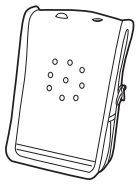
Optional accessories

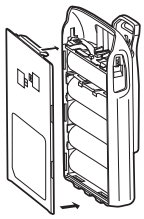
Eliminator


Car charger

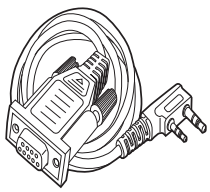

Speaker/MIC


Dual slot charger

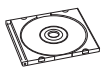

Leather case


"AA" battery case

Wire-clone cable


Programming cable

Headset


Programming software

Announcement

We endeavor to achieve the accuracy and completeness of this manual, but is still not perfect for any possible omission or printing errors. All the above specification is subject to be revised without prior notice.

English Version:8999-1008-V2