Thanks for buying the series transceiver.

This transceiver offers latest in design, multi-functionality, stable behaviour and easy operation. We believe you will be pleased with the high quality and dependable features for all your communication needs.

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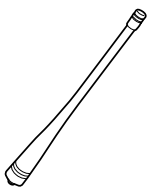
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Unpacking and checking of your equipment

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.

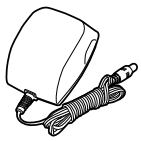
Supplied accessories

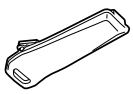

Transceiver


High gain antenna


Li-ion batterypack


Intelligent charger


Adapter


Beltclip


Handstrap


User's manual


Service card

Description of functions

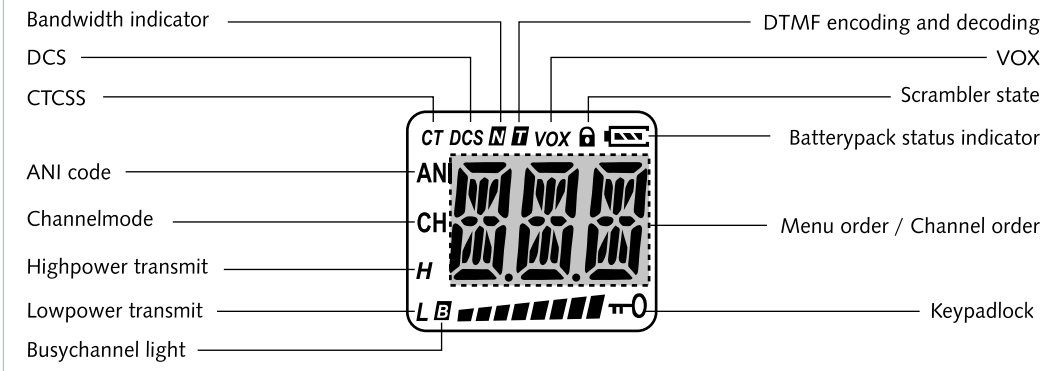
1. VHF: 136-174MHz
   UHF: 350-390MHz 400-470.9875MHz
2. Output power:5W/1W(VHF) 4W/1W (UHF)
3. 128 groups memory channels
4. Inspection, monitor, alarm, stun, kill, revive
5. DTMF encoding and decoding
6. ANI code (caller ID)
7. VOX
8. All calls, group calls and selective calls function(only for receive, but with call back function)
9. Callingring function
10. 8 groups rolling voice encrypt
11. 105 groups DCS/50 groups CTCSS
12. Voice guide (English/Chinese)
13. Wide/Narrow bandwidth selection (25KHz/12.5KHz)
14. Distant urgency alarm function
15. Multi scan function
16. FMradio function
17. High-/Lowpower selectable

18. Li-ion batterypack
19. Intelligentcharger (warning sound and dualcolor light)
20. Busy channel lockout
21. Multidisplay mode when power on (full screen/Batt-V/others)
22. High-/Lowpower can changeable when transmitting.
23. Lowvoltage batterypack voiceprompt
24. Setting transmit overtime voiceprompt.
25. Keyboardlock (auto/manual)
26. Adding channelscan function
27. Wireclone function
28. Program by computer
29. Menu/reset

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:

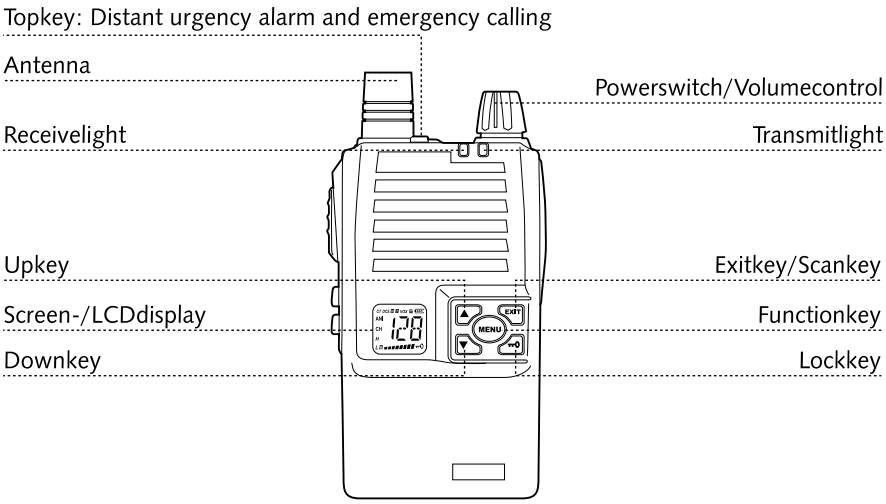
Batterypack capacity indicator (full)

Batterypack capacity is exhausted

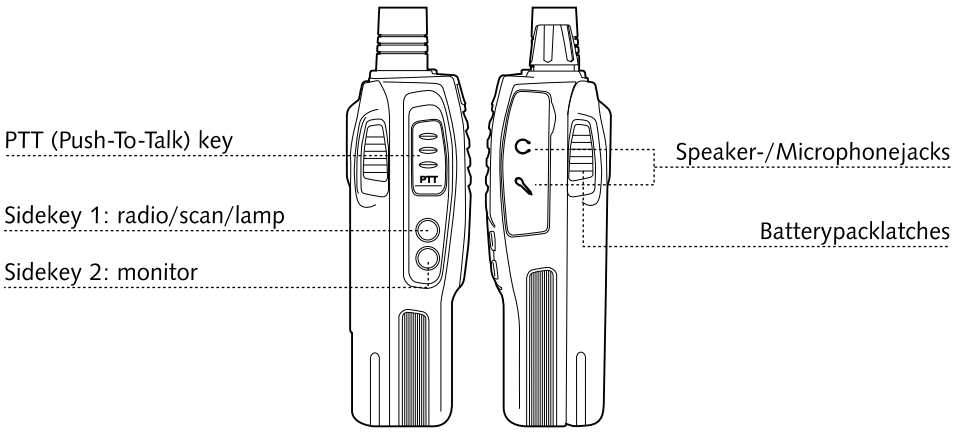
Batterypack capacity spare indicator

Receive signal meter

Description of transceiver



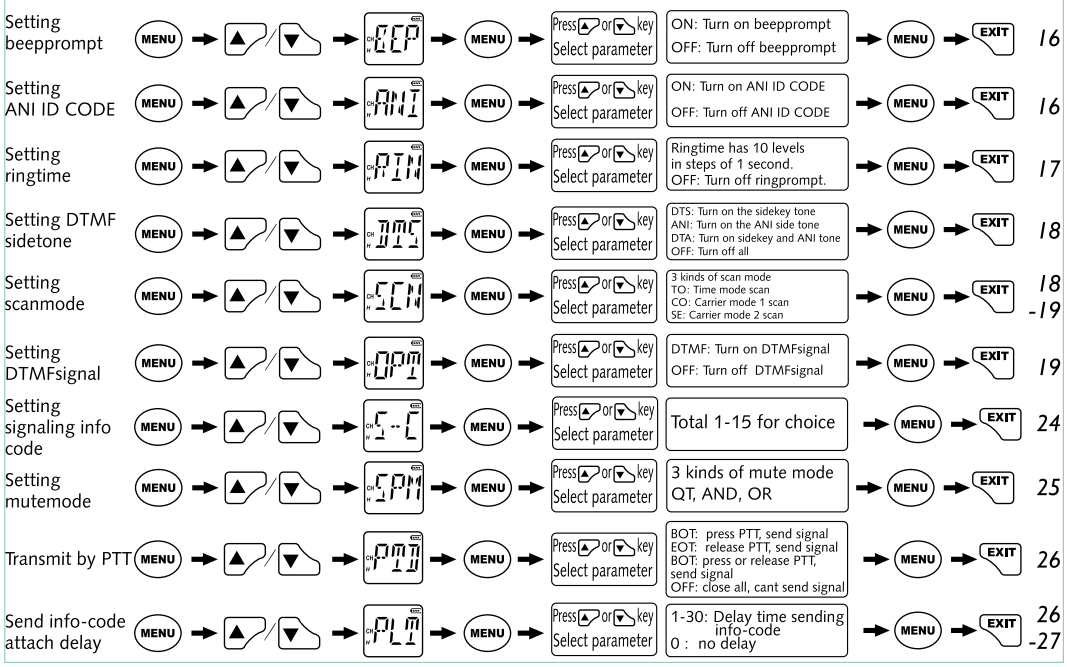
Getting started

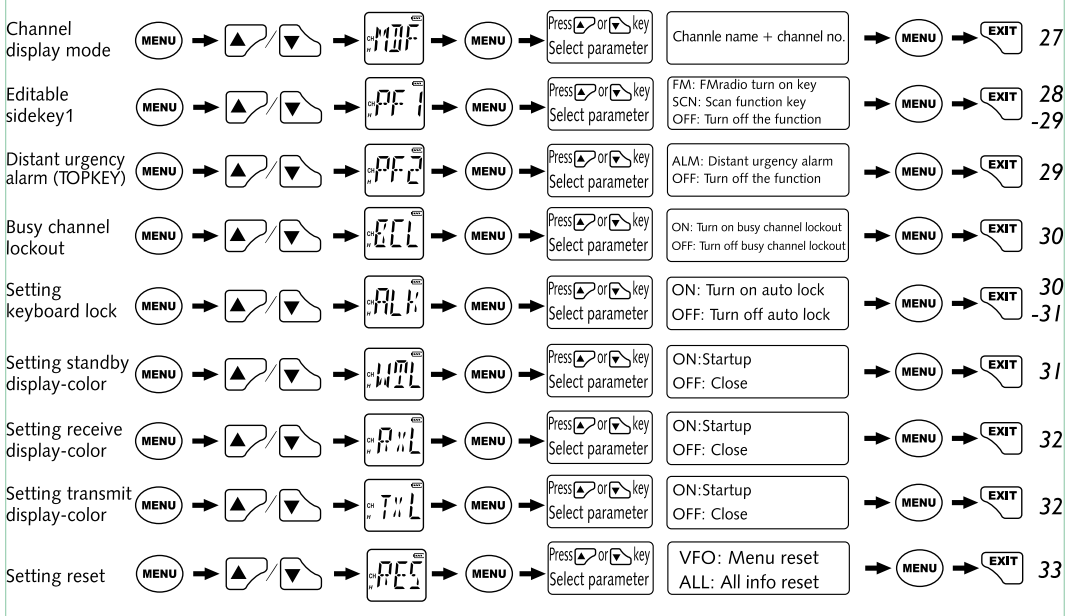


Shortcut operation sheet

Function name	Enter function set	Screen display	Select parameter	Confirm	Back	See page
Setting squelch level	MENU → ▲/▼	SQL	MENU → Press ▲ or ▼ key Select parameter	Squelch level from 0-9	MENU	EXIT	11
Setting batterypack savemode	MENU → ▲/▼	SAV	MENU → Press ▲ or ▼ key Select parameter	1/2/3/4: Turn on savefunction OFF: Turn off savefunction	MENU	EXIT	11
Selecting transmit power	MENU → ▲/▼	TXP	MENU → Press ▲ or ▼ key Select parameter	H: High power (5W) L: Low power (1W)	MENU	EXIT	12
Setting scrambler	MENU → ▲/▼	SCR	MENU → Press ▲ or ▼ key Select parameter	1 to 8: 8 kinds of scrambler mode OFF: Turn off scrambler	MENU	EXIT	12-13
Transmit over timer	MENU → ▲/▼	TOT	MENU → Press ▲ or ▼ key Select parameter	TOT has 40 levels in steps of 15 seconds. OFF: Turn off TOT.	MENU	EXIT	13
Setting VOX	MENU → ▲/▼	VOX	MENU → Press ▲ or ▼ key Select parameter	VOX has levels from 1 to 10. OFF: Turn off VOX.	MENU	EXIT	13-14
Setting bandwidth	MENU → ▲/▼	WN	MENU → Press ▲ or ▼ key Select parameter	W: 25KHz. N: 12.5KHz.	MENU	EXIT	14
Setting auto back-light	MENU → ▲/▼	ABR	MENU → Press ▲ or ▼ key Select parameter	Set 5 levels,1 second each level OFF: Turn off auto backlight	MENU	EXIT	15
Setting voiceguide	MENU → ▲/▼	VOI	MENU → Press ▲ or ▼ key Select parameter	CHN: Chinese ENG: English OFF: Turn off voiceguide	MENU	EXIT	15

Shortcut operation sheet





Shortcut operation sheet

- All calls, group calls and selective calls (See page P20-22)
- Low voltage batterypack voiceprompt (See page P34)
- Setting transmit overtime prompt (See page P34)
- High-/Lowpower can changeable when transmitting.(See page P12)
- Adding channelscan (See page P34)
- Wireclone function (See page P34)
- Receive and transmit frequency,CTCSS/DCS all program by computer.
- Speed search
  When setting each function or parameter, press the ▲ or ▼ key one time can speed search the function or parameter.

How to operate

Setting squelch level (SQL)

Select the level of squelch so that you will have no difficulty receiving the desired signal. When you set the level too high you will loose communication in a fringe area.

NOTE ⚠

» This transceiver has steps from 0-9, which step 0 is always open squelch. From 1 to 9 gives different levels of noise reduction.

In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ to select the desired squelch level.
Press MENU and confirm, then press EXIT to return to standby.

Setting batterypack savemode (SAV)

In order to reduce current consuming, this function will be turned off circuit for a minute, then it will turn on again to check signals.

In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ to select 1/2/3/4 to be on savingmode or OFF.
Press MENU and confirm, then press EXIT to return to standby.

How to operate

Selecting transmitpower (TXP)

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press ▲ / ▼ and you will select H or L power.

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

This transceiver has 5W, 1W to be available.

NOTE ⚠

» This menu permits to change the transmit power (H/L) of current channel in temporary.If you not press ▲ / ▼ key the data of channel will always store.Once you have pressed ▲ / ▼ key to change the channel,the parameter is set will return to the default of setting.

» High/Low power can be changed during transmit. Press PTT key and topkey at the same, this will channge H/L power.

8 groups rolling voice scrambler (SCR)

SCR: Use the scrambler, it can encrypt the communication and make the transceiver who do mot use the scrambler can't hear clear what you are talking, meanwhile you also can't hear clear others, who do not use the scrambler, what they are talking.

NOTE ⚠

» 8 groups scrambler selectable.

» To ensure effective communications the radio's must be set to the same voice encrypt.

» The function can be editted by programmed software.

Transmit over timer (TOT)

The TOT is designed to prevent your radio to transmit too long. When the transceiver is exceeding the preset time limit it will stop transmitting and give you a warning signal.

This transceiver can be set in 40 steps of 15 seconds,between 15 and 600 seconds.

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press ▲ / ▼ to select the level you need when on transmit.

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

Setting VOX (VOX)

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press ▲ / ▼ to select VOX OFF or to switch on the 1 to 10 different sensitivity-levels. Press MENU and confirm, then press EXIT to return to standby.

NOTE

» When level is too high the VOX needs more volume to get activated.
» Can not operate VOX under the status of radio.

Setting wide or narrow bandwidth (WN)

In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ and you can select W or N bandwidth.
Press MENU and confirm, then press EXIT to return to standby.

NOTE

» This menu only permits to change the parameter temporaraly,but can't store this.Once you have pressed ▲ / ▼ key to change the channel,the parameter is set and will return to the default setting.

Setting auto backlight (ABR)

In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ key and select 1-5 to turn on auto backlight or OFF to turn off auto backlight.
Press MENU and confirm, then press EXIT to return to standby.

NOTE

» Time of auto backlight of this transceiver has 5 levels of which 1 second difference .

Setting voiceguide (VOI)

This transceiver has a selectable voiceguide in English and Chinese. It will display ENG when it is English and CHN when it is Chinese.
In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ key to either select English or Chinese or OFF to switch off the voice guide. Press MENU and confirm, then press EXIT to return to standby.

NOTE

» When select turn off voiceguide,the beepprompt function will be set at startup, if you want to turn off all keyboard prompts you must turn off voiceguide and beepprompt function at the same time.

How to operate

Setting beepprompt function (BEP)

Beepprompt is to tell you if the transceiver is operating well or has a malfunction.

We kindly advice you to switch on this function.

This function will inform you for any possible malfunction.

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press ▲ / ▼ to switch ON the beep or OFF when you want to switch off the beep. Press MENU and confirm, then press EXIT to return to standby.

NOTE

» When MENU is switched on, the voice guide gets priority.

Setting ANI ID CODE (ANI)

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter,press the ▲ / ▼ and select ON to switch on ANI or OFF to switch off ANI.

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

ANI CODE edit (ID)

NOTE

» This function only can be editted via programming software .

» ID CODE is selectable in a range of 100-99999.

» This transciever has different of 3 bits ,4 bits or 5 bits , so the length of ANI CODE must keep the same bits as which used in group .

Setting callingring (RIN)

When the right DTMF signal is received from the speaker, it will sound a clear ring.

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press the ▲ / ▼ to select ON or OFF .

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

NOTE

» This transceiver has 10 different steps of ringtime of which every step is 1 second difference.

How to operate

DTMF sidetone setting (DTS)

Setting DTMF sidetone gives you the opportunity to switch on or off the speaker when transmit DTMF .

The transceiver has 4 different options :

1. DTS: Switch on the key-press sidetone when transmitting .

2. ANI: Switch on the ANI sidetone when transmitting .

3. DTA: key-press and ANI sidetone are both on.

4. OFF: Turn off all .

In standby, press MENU + ▲ / ▼ and the screen will display 

Press MENU enter, press ▲ / ▼ key to select one function of the DTS / ANI / DTA / OFF .

Press MENU to confirm, then press EXIT to return to standby .

Setting scanmode (SCN)

The transceiver has three scan modes.

TO: After signal in channel disappears the transceiver will start scanning within 5 seconds if you don't do any operation.

CO: After the transceiver stopped on a signal it will resume scanning again when signal disappears after 3 seconds.

SE: Scanning stops when a signal is received.

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU enter, press ▲ / ▼ and select one of TO/CO/SE.

Press MENU confirm. Press EXIT to return to standby.

Setting DTMF signal (OPT)

In standby , press MENU + ▲ / ▼ and the screen will display 

Press MENU to enter , press ▲ / ▼ and select DTMF to switch on DTMF or OFF to switch off DTMF .

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

NOTE ⚠

» This function only can be edited by programming software .

How to operate

■ *All calls, group calls and selective calls*

The transceiver offers transmit ANI ID CODE, edit ANI ID CODE and DTMF decoding functions, without by other tool user can achieve all calls, group calls and selective calls.

How to use all calls, group calls and selective calls

Automatic dialing

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

ANI ID CODE: ANI-XXX ANI-XXXX ANI-XXXXX (Total has three kinds of editting methods.)

XXX: means can program 3 bits ANI ID CODE

XXXX: means can program 4 bits ANI ID CODE

XXXXX: means can program 5 bits ANI ID CODE

X	XX
Grouplist	A unique ANI ID CODE
0 to 9 groups	From 0 to 99 and 100 groups maximum.

This is how to build up ANI .

X	XXX
Group list	A unique ANI ID CODE
0 to 9 groups	From 0 to 999 and 1000 groups maximum

This is how to build up ANI ID CODE

X	XXXX
Group list	A unique ANI ID CODE
0 to 9 groups	From 0000 to 9999 and 10000 groups maximum

This is how to build up ANI ID CODE

NOTE ⚠

» This function only can be edited via the DTMF encoding and decoding parameter of transceiver's ID code of programming software.

2. Every transceiver in the group must switch on the proper DTMF option signal.

The details of setting DTMF option signal see MENU Setting DTMF option signal (OPTSIG).

How to operate

3. The mutemode must be set as AND. The details of setting method:See to MENU Setting Mutemode (SPMUTE)
4. Press PTT transmit:To select the way of transmit DTMF code. One of the BOT/EOT/BOTH can be selected.(Automatic dialing)
5. Signal information code(S-CODE): To select the NO. of DTMF code. There are 1-15 kinds can be
6. selected. (Automatic dialing)
7. Setting ringtime(Set when needed): The details see to the MENU(18).
   Setting PTT-LT: According to the actual situation, the signal can delay before transmitted, the details
8. see to the MENU (25).
   Setting ANI ID CODE switch(ANI-SW): This function means whether to display others' ANI ID CODE
9. (Set when needed).
   Setting DTMF sidetone(DTMF-ST): This means can monitor the DTMF tone(Set when needed), the details see to the MENU(19).

NOTE ⚠

» All transceivers in the same group must set their radio to the same frequency, channel and parameter.
» The two-way radio only can select 3 ID codes to be edited.

Inspection, monitor, emergency alarm, stun, kill, revive (Through programming software)

Inspection:

Manager can use this function when he/she want to know whether their staff are on the working; manager send the inspection signal, and the member's transceiver in the group will reply to the manager automatically(what it replied is the ANI ID CODE).

Monitor:

Manager can use this function when he/she want to know what their staff are doing at the moment. When manager transmit the monitor signal, the member's transceiver in the group will transmit automatically, then manager can hear the member's voice.

Emergency alarm:

You can use this function when on duty, and meet some emergency situation; user can transmit the emergency alarm signal which the distant emergency alarm is turned on and can display the transmitter's ANI ID CODE in order to take the corresponding actions.

Stun:

Manager can use this function when he/she only want to let their member receive and can't transmit.

How to operate

Manager only need to stun the member's radio and after this over, to activate it through transmit the power on signal when needed.

Kill:

When the radio was lost or other special circumstance happened,in order to let others disable to transmit and receive ,manager can use this function to kill the radio.

Revive:

When the manager transmit the power on signal can activate the radio which is being stuned or killed.

Setting signal info code (S-C)

This function specifies DTMF code of " DTMF encoding and decoding parameter edit "

In standby , press MENU + ▲ / ▼ and the screen will display 

Press MENU to enter , press ▲ / ▼ and select one of 1-15 ,

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

NOTE ⚠

» This function only can be edited by programming software.

Setting mutemode (SPM)

The mutemode is to turn the speaker audio on/off according to your optional signal setting.

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

1. **QT:** When the transceiver receives a signal and matching CTCSS tone,it will switch on the speaker. When the transceiver has not set a CTCSS tone and a signal is received you will hear that through the loudspeaker.
2. **AND:** When the transceiver receives a matching QT and DTMF signal,it will switch on the speaker.
3. **OR:** When the transceiver receives a matching QT or Q+D,it will switch on the speaker.

In standby, press MENU + ▲ / ▼ till the screen will display 

Press MENU , press ▲ / ▼ and select one of QT or AND or OR.

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

How to operate

Setting PTT transmit (PTD)

This function means that the way of selecting to transmit information code or ID code.

①**BOT:** When press the PTT key, then ID code is transmitted.

②**EOT:** When release the PTT key, then ID code is transmitted.

③**BOT:** When press or release the PTT key, then ID code is transmitted.

④**OFF:** ID code can not be transmitted when turn off all.

In frequency mode, press MENU + ▲ / ▼ and the screen will display 

Press MENU key enter, press ▲ / ▼ select one of BOT/EOT/BOT/OFF.

Press MENU to confirm, press EXIT to return to standby.

Transmit information code plus delay (PLT)

This function means that to delay the ID code which will be transmitted.

①**1-30:** Permit transmit information code delayed time, unit:100ms.

②**0:** Do not delay to transmit information code.

In standby, press MENU + ▲ / ▼ and the screen will display 

Press MENU enter, press ▲ / ▼ to select from 1 to 30 for delay transmit information code or o for not delay.

Press MENU to confirm, then press EXIT to return to standby.

NOTE ⚠

» When alarming or the frequency has set DTMF signal, if the Menu has not be set as "0", but be set one of the number between 1 and 30, then the setting delayed time be delayed to transmit signal code and alam code or ANI code.

» If the repeater has not respond to the transmitted ID CODE of transceiver, you should adjust the parameter.

Display channel under channel mode (MDF)

There are two selectable display modes : channelorder display , channelname + channelorder display .

Under frequency mode , press MENU + ▲ / ▼ and the screen will display 

1. Channelorder display

Press MENU to enter , press ▲ / ▼ to select CH , then the screen will display 

Press MENU to confirm , press EXIT to exit .

2. Channelname + channelorder display.

Press MENU to enter , press ▲ / ▼ to select NAME , then the screen will display 

Press MENU to confirm , press EXIT to exit .

Channelname display way : must be after finishing editting channelname , or else it still display as per channelorder .

Sidekey 1 ediable (PF1)

This key has 4 functions which are selectable

FM: FM radio **SCN:** Scan **OFF:** Turn off this key function

1. **Selecting Scan function:**
   In standby, press the sidekey 1 and the transceiver will switch to scanningmode (depending on setting in scanmode). Pressing any key will stop scanning.
2. **Selecting FM radio function:**
   In standby, press sidekey 1 which will turn on the radio. The radio is for the FM band from 87-108MHz till the screen will display 
   Startup radio, press ▼ / ▲ to adjust radio band.
   In radiomode:
   a.When pressing PTT you will switch to transceiver and you will leave FMradio.
   b.Press sidekey 1 to switch to relevant function.
   c.For listening to the FMradio you must have the standard antenna connected to the transceiver.

NOTE ⚠

» When you are listening to the radio,the channel/frequency you are operating on will still function. At the moment your transceiver receives a signal the FMradio will stop and you will listen to your operating channel/ frequency. After the signal disappears 5 seconds the transceiver will switch back to radiomode.
If you want to exit the FMradio please press sidekey 1again.

In standby, press MENU + ▲ / ▼ and the screen will display 
Press MENU enter, press ▲ / ▼ and select one of the SCAN / FM.
Press MENU and confirm, then press EXIT to return to standby.

Setting distant urgency alarm and emergency calling function on topkey (PF2)

The topkey offers two kinds of functions:

ALM: Start up distant urgency alarm

OFF: Turn off this function

In standby, press MENU + ▲ / ▼ till the screen will display 
Press MENU enter, press ▲ / ▼ and select one of the functions of ALM / OFF.

Press (MENU) and confirm, then press [EXIT] to return to standby.
When you have selected ALARM, in standby: press topkey and from your speaker, an alarm will sound and the red and green lamp will flicker at the same time. press topkey again to exit.

Busy channel lockout (BCL)

This function is to prevent that interfere others who is on communicating. If the channel you have selected which is using by other radio, at this time, press PTT key the alarm prompt disappeared and return to receive mode.
In standby, press (MENU) + [▲] / [▼] till the screen will display 
Press (MENU) enter, press [▲] / [▼] and select between ON or OFF.
Press (MENU) and confirm, then press [EXIT] to return to standby.

NOTE ⚠

» The function only can be edited by programming software.

Setting keyboardlock (ALK)

The transceiver has two options, autolock and manuallock.
ON: When you set autolock the keyboard will be locked within 15 seconds if you don't do any operation.
To release keyboard press [0] for more than 2 seconds.
OFF: This will switch off autolock.

NOTE ⚠

» MANUALLOCK: In standby press [0] for 2 seconds and this will lock keyboard, to switch off press [0] again for more than 2 seconds.

In standby, press (MENU) + [▲] / [▼] till the screen display.
Press (MENU) enter, press [▲] / [▼] and select ON for autolock or OFF to switch off autolock.
Press (MENU) and confirm, then press [EXIT] to return to standby.

Selecting standby display color (WTL)

The transceiver has two kinds available :
1 . ON 2 . OFF
In stanby, press (MENU) + [▲] / [▼] and the screen will display .
Press (MENU) enter , press [▲] / [▼] and select one of functions of ON / OFF .
press (MENU) to confirm , then press [EXIT] to return to standby .

Selecting receive display color (RXL)

The transceiver has two kinds available :

1 . ON 2 . OFF

In stanby, press MENU + ▲ / ▼ and the screen will display .

Press MENU enter , press ▲ / ▼ and select one of functions of ON / OFF .

press MENU to confirm , then press EXIT to return to standby .

Selecting transmit display color (TXL)

The transceiver has two kinds available :

1 . ON 2 . OFF

In stanby, press MENU + ▲ / ▼ and the screen will display .

Press MENU enter , press ▲ / ▼ and select one of functions of ON / OFF .

press MENU to confirm , then press EXIT to return to standby .

Setting reset (RES)

The transceiver has a menu which resets VFO and ALL messages.

When you use RESET VFO all parameters of menu will return to factory detault.

When you use RESET ALL all menu and channel parameters will return to factory detault.

1. **MENU reset (VFO):**

In standby, press MENU + ▲ / ▼ and the screen will display 

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

Press MENU and the screen will display 

Press MENU again and the screen will display 

When the reset has worked well the transceiver will auto power off and auto switch on again.

2. All message reset (ALL):

In standby, press MENU + ▲ / ▼ the screen will display 

Press MENU enter, press ▲ / ▼ and select ALL, press MENU and the screen will display 

Press MENU and the screen will display 

Press MENU again and the screen will display 

When reset has worked well, the transceiver will auto power off and auto switch on again.

How to operate

Lowvoltage batterypack voiceprompt

When the batterypack has lowvoltage, the transceiver will sound "low batterypack" voiceprompt .

Setting transmit overtime prompt

When transmitter works longer than preset time, the transceiver will announce "transmit overtime" by voice and stops transmitting. If you want to transmit again, please press **PTT**.(Setting overtimeprompt please see P13)

Adding channelscan

Edit method: Strictly via programming software.

Only scan according programming list which had added channel scan on programming software.

Wireclone function

Using wireclone	Switch sourceradio on,after you have connected the targetradio to the sourceradio via the cloningcable,push the [MONI] key and the sourceradio starts cloning.	LED is flashing red during cloning. LED goes out in case of successful cloning. LED glows continuous red in case of cloning failure.
	Targetradio	LED is flashing green during cloning. LED will switch OFF when cloning complete.

How to use the intelligent charger

1. When the poweradapter is connected the intelligentcharger, the poweradapter should be plugged into the matchingvoltage. The intelligentcharger will flicker once, then go into the standby mode which means that you can charge the batterypack; When you plug in the batterypack, the intelligentcharger will switch to red LED which means that it has being charged.
2. When the green light flickers, the batterypack is fully charged.
3. After you plug in the batterypack which the voltage is lower than 6V (it is lower than 6V if you can not power on the transceiver), the red LED flickers which means that the batterypack is being trickle charged by intelligentcharger and this will last about 10 minutes. When the light turns red, it will go into the normal charge.
4. After you plug in the batterypack which the voltage is higher than 6V(it is higher than 6 V if you can power on the transceiver), the red LED flickers, at this time, please confirm whether the batterypack is plugged in right with intelligentcharger.

Trouble shooting

Please check carefully if your transceiver has problems by following this chart.
If you maintain to have trouble you can reset your transceiver and very often this will eliminate your problem.

Problem	Possible Cause	Possible Solution
Transceiver will not switch on.	**1.** The batterypack is not installed properly. **2.** The batterpack maybe exhausted. **3.** The batterypack is getting too old.	**1.** Re-install the batterypack. **2.** Charge the batterypack. **3.** Change the batterypack.
The receiverlight is on and there is no sound from the speaker.	**1.** The powerswitch is not adjusted well. **2.** Confirm if you use the right mutemode.	**1.** Turn the volumecontrol again. **2.** Reset the mutemode.
There is no reception	**1.** Check if you have installed your antenna right. **2.** The signal you are receiving is very weak.	**1.** Install the supplied antenna. **2.** Move the radio around till you receive the desired signal or press ▼ to reset the radio, then press the ▲ go to the right channel.

Problem	Possible Cause	Possible Solution
Keyboard and PTT switch do not work.	The keyboard is locked.	Set keyboard to free.
The receivelight is on and you can not transmit.	If you have set transceiver to busychannel lockout.	Switch off busychannel lockout.
Autotransmit when you are in standby.	The VOX level too LOW.	Switch off VOX or set VOX to a HIGHER level.

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

Technology 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

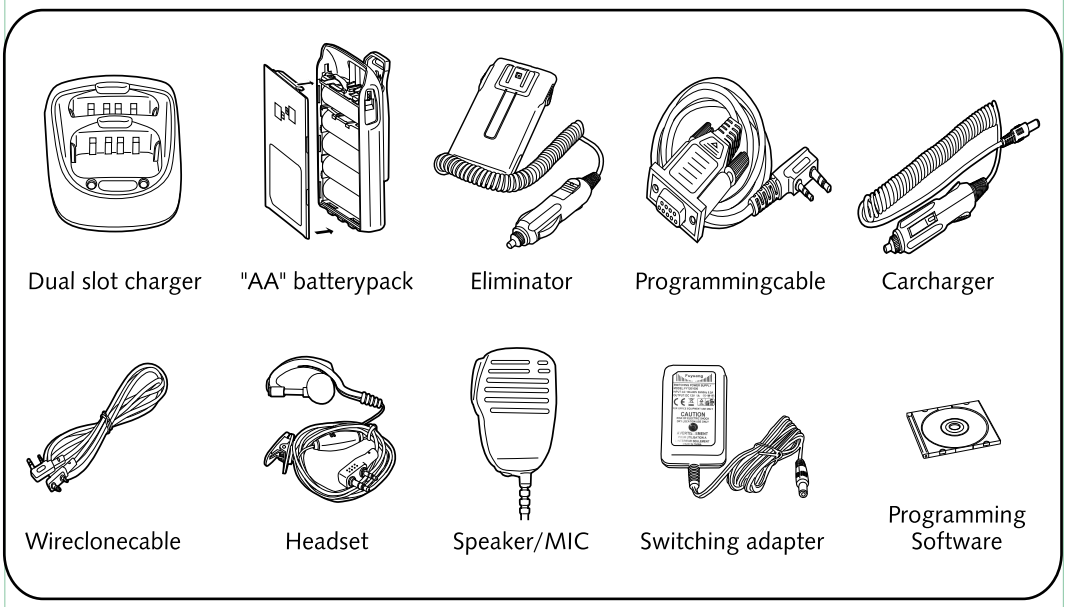
Technology specification

Frequencyrange	VHF: 136-174MHz
	UHF: 350-390 MHz
	UHF: 400-470.9875 MHz
Memorychannels	128 channels
Voltage	7.4V
Working temperature	-30℃(-22F) to +60℃(140F)
Channels	Co-channel or Dis-channel simplex
Poweroutput	5W
Mode	F3E(FM)
Maximum deviation	⩽ ±5KHz
Adjacent channel power	< -60dB
Stability	±5 ppm
Sensitivity	< 0.2 μV
Audio output power	⩾500mW
Weight	260g
Size	105 X 58 X 38 (mm)

NOTE ⚠

» Specifications are subject to change without notice.

Optional accessories



Announce

Endeavors to achieve the accuracy and completeness of this manual, but is not liable for any possible omission and printing errors. All the above specifications are subject to change without prior notice.

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