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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<td>Setting auto backlight (ABR)</td>
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<td>Setting voiceguide (VOI)</td>
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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 by discarding the packing material. If any items are missing or have been damaged during shipment, notify your dealer.

Supplied accessories

![Supplied accessories diagram]

Transceiver  High gain antenna  Li-ion batterypack  Intelligent charger  Beltclip
Handstrap  User's manual  Service card

optional accessories

Trouble shooting 38-39
Technology parameter  40-42
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Technology specification  43
Optional accessories  44
Announce  45

Note: "**" means this function only be available in upgrade version.
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. Transmit Voiceprompt

11. 8 groups rolling voice encrypt

12. 105 groups DCS/50 groups CTCSS

13. Voice guide (English/Chinese)

14. Wide/Narrow bandwidth selection (25KHz/12.5KHz)

15. Distant urgency alarm function

16. Priority scan function

17. Multi scan function

18. FM radio function

19. High-/Lowpower selectable

20. Li-ion batterypack

21. Intelligent charger (warning sound and dualcolor light)

22. Busy channel lockout

23. Multidisplay mode when power on (full screen/Batt-V/others)

24. High-/Lowpower can changeable when transmitting

25. Lowvoltage batterypack voiceprompt

26. Setting transmit overtime voiceprompt

27. Keyboardlock (auto/manual)

28. Adding channelscan function

29. Wireclone function

30. Program by computer

31. Menu/reset

Note: "**" means this function only be available in upgrade version.
CD 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.

<table>
<thead>
<tr>
<th>Description</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth indicator</td>
<td></td>
</tr>
<tr>
<td>DCS</td>
<td></td>
</tr>
<tr>
<td>CT CSS</td>
<td></td>
</tr>
<tr>
<td>ANI code</td>
<td></td>
</tr>
<tr>
<td>Channel mode</td>
<td></td>
</tr>
<tr>
<td>Highpower transmit</td>
<td></td>
</tr>
<tr>
<td>Lowpower transmit</td>
<td></td>
</tr>
<tr>
<td>Busychannel light</td>
<td></td>
</tr>
<tr>
<td>DTMF encoding and decoding</td>
<td></td>
</tr>
<tr>
<td>VOX</td>
<td></td>
</tr>
<tr>
<td>Scrambler state</td>
<td></td>
</tr>
<tr>
<td>Batterypack status indicator</td>
<td></td>
</tr>
<tr>
<td>Menu order / Channel order</td>
<td></td>
</tr>
<tr>
<td>Keypadlock</td>
<td></td>
</tr>
</tbody>
</table>

Note:
- Batterypack capacity indicator (full)
- Batterypack capacity spare indicator
- Receive signal meter

Description of transceiver

Topkey: Distant urgency alarm and emergency calling
Antenna
Receivelight
Upkey
Screen-/LCDdisplay
Downkey
Powerswitch/VOLUMEcontrol
Transmitlight
Exitkey/Scankey
Functionkey
Lockkey
Shortcut operation sheet

<table>
<thead>
<tr>
<th>Function name</th>
<th>Enter function set</th>
<th>Screen display</th>
<th>Select parameter</th>
<th>Confirm Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting squelch level</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>Setting batterypack</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>savemode</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting transmit</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmit Voice Prompt</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>Prompt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting scrambler</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>Transmit over timer</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>Setting VOX</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
<tr>
<td>Setting bandwidth</td>
<td>1/2/3/4</td>
<td>0-9</td>
<td>0-9</td>
<td></td>
</tr>
</tbody>
</table>

PTT (Push-To-Talk) key

Sidekey 1: radio/scan/lamp

Speaker-/Microphonejacks

Batterypacklatches

Sidekey 2: monitor

Setting squelch level

Setting batterypack savemode

Selecting transmit power

Transmit Voice Prompt

Setting scrambler

Transmit over timer

Setting VOX

Setting bandwidth

Menu: Enter function set

Screen display: Select parameter

Confirm: Exit

Back: Exit
Shortcut operation sheet

High- /Low-power can changeable when transmitting. (See page P12)
All calls, group calls and selective calls (See page P21-23)
Priority Scan Function (See page P35)
Low-voltage battery pack voice prompt (See page P35)
Setting transmit overtime prompt (See page P35)
Adding channelscan (See page P36)
Ultrasound function (See page P36)
Receive and transmit frequency, CTCSS/DCS all program by computer.
Speed search
When setting each function or parameter, press the \( \Delta \) or \( \downarrow \) 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 lose communication in a fringe area.

NOTE

\( \Rightarrow \) 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) + \( \uparrow \) / \( \downarrow \) till the screen will display SQL.
Press (MENU) enter, press \( \uparrow \) / \( \downarrow \) to select the desired squelch level.
Press (MENU) and confirm, then press (EXIT) to return to standby.

Setting battery pack savemode (SAVE)
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) + \( \uparrow \) / \( \downarrow \) till the screen will display SAVE.
Press (MENU) enter, press \( \uparrow \) / \( \downarrow \) to select 1/2/3/4 to be on savemode or OFF.
Press (MENU) and confirm, then press (EXIT) to return to standby.
How to operate

Selecting transmit power (TXP)
This function can be edited only via software.
This transceiver has 5W, 1W to be available.

NOTE
> High/Low power can be changed during transmit. Press top key will change H/L power.

Transmit Voice Guide (ROG)
This function refers to the selection of transmit voice prompt ways.
OFF: Turn off all, not transmit voice prompt.
ON: Press PTT key to transmit voice prompt.
ONH: Release PTT key to transmit voice prompt.
ONH: Press or release PTT key, both can transmit voice prompt.

In standby, press [ } + [ / ] till the screen will display [ ]
Press [ ] enter, press [ / ] to select one of OFF/BOT/EO7/BOTH.
Press [ ] + [ / ] to return to standby.

8 groups rolling voice scrambler (SCR)
SCR: Use the scrambler, it can encrypt the communication and make the transceiver who do not 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 edited 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 [ } + [ / ] till the screen will display [ ]
Press [ ] enter, press [ / ] to select the level you need when on transmit.
Press [ ] and confirm, then press [ ] to return to standby.
How to operate

Setting VOX (VOX)
In standby, press [MENU] + [△] / [▼] till the screen will display [VOX].
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)
This function can be edited only via the programming software.

Setting auto backlight (ABR)
In standby, press [MENU] + [△] / [▼] till the screen will display [ABR].
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 [ENG].
Press [MENU] enter, press [△] / [▼] 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.

NOTE
- When select turn off voiceguide, the beeprompt function will be set at startup, if you want to turn off all keyboard prompts you must turn off voiceguide and beeprompt function at the same time.
How to operate

### Setting beeprompt function (BEP)

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

We kindly advice you to switch on this function.

His function will inform you for any possible malfunction.

In standby, press \( \text{MENU} + \uparrow / \downarrow \) till the screen will display \( \text{EEP} \).

Press \( \text{MENU} \) enter, press \( \uparrow / \downarrow \) to switch ON the beep or OFF when you want to switch off the beep. Press \( \text{MENU} \) and confirm, then press \( \text{EXIT} \) to return to standby.

**NOTE**

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

### Setting ANI ID CODE (ANI)

In standby, press \( \text{MENU} + \uparrow / \downarrow \) till the screen will display \( \text{ANI} \).

Press \( \text{MENU} \) enter, press \( \uparrow / \downarrow \) and select ON to switch on ANI or OFF to switch off ANI.

Press \( \text{EXIT} \) and confirm, then press \( \text{EXIT} \) to return to standby.

**NOTE**

- This function is only programmable with our software which can change the parameters.
- ID CODE is selectable in a range of 100-999.

### Setting calling ring (RIN)

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

In standby, press \( \text{MENU} + \uparrow / \downarrow \) till the screen will display \( \text{DTM} \).

Press \( \text{MENU} \) enter, press the \( \uparrow / \downarrow \) to select ON or OFF.

Press \( \text{MENU} \) and confirm, then press \( \text{EXIT} \) to return to standby.

**NOTE**

- This transceiver has 10 different steps of ringtime of which every step is 1 second difference.
How to operate

Setting ringtime (ART)

When the right DTMF signal is received, you will hear a clear ring.

In standby, press ( ) + / until the screen will display .

Enter, press / to select the time of the ring between 0 and 10.

and confirm, then press to return to standby.

NOTE

This transceiver has 10 different steps of ringtime of which every step is 1 second difference, this means that 0 will switch the ring off.

In upgrade version, this function only can be edited via programming software.

DTMF sidetone setting (DTS)

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

Transceiver has 4 different options:

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

ANI: Switch on the ANI sidetone when transmitting.

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

4. OFF: Turn off all.

In standby, press ( ) + / and the screen will display .

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

Press to confirm, then press 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 ( ) + / until the screen will display .

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

Press to confirm. Press to return to standby.
How to operate

Setting power on message (POM)

Transceiver power on message:

- OFF: Full display
- VOT: Display the current voltage of battery pack
- MSG: OK

In standby, press [POM] + [↑] / [↓] till the screen will display [POM].

Press [Enter], press [↑] / [↓] and select OFF/VOT/MSG,
and confirm, then press [Exit] to return to standby.

NOTE

In upgrade version, this function only can be edited via programming software.

Setting DTMF signal (OPT)

NOTE

This function only can be edited by programming software.

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 editing 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

Grouplist

<table>
<thead>
<tr>
<th>X</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grouplist</td>
<td>A unique ANI ID CODE</td>
</tr>
</tbody>
</table>

0 to 9 groups

From 0 to 99 and 100 groups maximum.

This is how to build up ANI.
How to operate

<table>
<thead>
<tr>
<th>X</th>
<th>A unique ANI ID CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group list</td>
<td>From 0 to 999 and 1000 groups maximum</td>
</tr>
<tr>
<td>0 to 9 groups</td>
<td>This is how to build up ANI ID CODE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>X</th>
<th>A unique ANI ID CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group list</td>
<td>From 0000 to 9999 and 10000 groups maximum</td>
</tr>
<tr>
<td>0 to 9 groups</td>
<td>This is how to build up ANI ID CODE</td>
</tr>
</tbody>
</table>

### NOTE

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

1. 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).

3. The mutemode must be set as AND. The details of setting method: See to MENU Setting Mutemod (SPMUTE)

4. Press PTT transmit: To select the way of transmit DTMF code. One of the BOT/EOT/BOOTH 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 selected. (Automatic dialing)

6. Setting ringtime(Set when needed): The details see to the MENU(18).

7. Setting PTT-LT: According to the actual situation, the signal can delay before transmitted, the details see to the MENU (25).

8. Setting ANI ID CODE switch(ANI-SW): This function means whether to display others’ ANI ID CODE (Set when needed).

9. 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.
How to operate

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.

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 S-C
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.
How to operate

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.

NOTE

This function only can be edited by programming software.

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 or and the screen will display Press to enter, press / to select one of BOT/EOT/BOT/OFF.
Press to confirm, press to return to standby.

Transmit information code plus delay (PLT)
This function means that to delay the ID code which will be transmitted.
1 30: Permit transmit information code delayed time, unit: 100ms.
0: Do not delay to transmit information code.
In standby, press and the screen will display Press to enter, press / to select from 1 to 30 for delay transmit information code or for not delay.
Press to confirm, then press to return to standby.
**How to operate**

**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 alarm 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: channel order display, channel name + channel order display.

Under frequency mode, press [MENU] + ▲ / ▼ and the screen will display [MDF].

1. **Channel order display**
   - Press [MENU] to enter, press ▲ / ▼ to select CH, then the screen will display [CH].

2. **Channel name + channel order display**
   - Press [MENU] to enter, press ▲ / ▼ to select NAME, then the screen will display [NAME].

**Channelname display way:** must be after finishing editing channel name, or else it still display as per channel order.

---

**Setting radio, lamp and scan function on sidekey 1(PF1)**

This key has 4 functions which are selectable:

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

1. **Selecting FM radio function:**
   - In standby, press sidekey 1 which will turn on the radio. The radio is for the FM band from 88-108MHz till the screen will display [FM].
   - When in radiomode, press ▲ to move up the channel, the screen will display [FM]
   - Press [ ], the radio will change frequency till the screen will display [FM].

   In radiomode:
   - a. When pressing PTT you will switch to transceiver and you will leave FM radio.
   - b. Press tokey or sidekey 2 to switch to relevant function.

**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 1 again.
How to operate

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 [OFF].
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 [BCL].
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 [▲] for more than 2 seconds.

OFF: This will switch off autolock.
How to operate

NOTE

MANUALLOCK: In standby press \( \text{fn} \) for 2 seconds and this will lock keyboard, to switch off press \( \text{fn} \) again for more than 2 seconds.

In standby, press \( \text{fn} \) \( + \) \( \text{a} / \text{v} \) till the screen display.
Press \( \text{fn} \) enter, press \( \text{a} / \text{v} \) and select ON for autolock or OFF to switch off autolock.
Press \( \text{fn} \) and confirm, then press \( \text{esc} \) to return to standby.

Selecting standby display color (WTL)
The transceiver has two kinds available:
1. ON 2. OFF
In standby, press \( \text{fn} \) \( + \) \( \text{a} / \text{v} \) and the screen will display \( \text{T} \).
Press \( \text{fn} \) enter, press \( \text{a} / \text{v} \) and select one of functions of ON / OFF.
Press \( \text{fn} \) to confirm, then press \( \text{esc} \) to return to standby.

Selecting receive display color (RXL)
The transceiver has two kinds available:
1. ON 2. OFF
In standby, press \( \text{fn} \) \( + \) \( \text{a} / \text{v} \) and the screen will display \( \text{T} \).
Press \( \text{fn} \) enter, press \( \text{a} / \text{v} \) and select one of functions of ON / OFF.
Press \( \text{fn} \) to confirm, then press \( \text{esc} \) to return to standby.

Selecting transmit display color (TXL)
The transceiver has two kinds available:
1. ON 2. OFF
In standby, press \( \text{fn} \) \( + \) \( \text{a} / \text{v} \) and the screen will display \( \text{T} \).
Press \( \text{fn} \) enter, press \( \text{a} / \text{v} \) and select one of functions of ON / OFF.
Press \( \text{fn} \) to confirm, then press \( \text{esc} \) to return to standby.
How to operate

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

MENU reset (VFO):
In standby, press [MENU] + [▲] / [▼] and the screen will display [PC].
Press [MENU] enter, press [▲] / [▼] select VFO, press [MENU] key and the screen will display [VF0].
Press [MENU] and the screen will display [SOU].
Press [MENU] again and the screen will display [H2].
When the reset has worked well the transceiver will auto power off and auto switch on again.

All message reset (ALL):
In standby, press [MENU] + [▲] / [▼] the screen will display [PES].
Press [MENU] enter, press [▲] / [▼] and select ALL, press [MENU] and the screen will display [ALL].
Press [MENU] and the screen will display [SOU].
Press [MENU] again and the screen will display [H2].
When reset has worked well, the transceiver will auto power off and auto switch on again.

Setting Priority Scan Function
If you want to monitor the other frequency and check the certain preferred frequency at the same time, you can set Priority scan function.
E.g.: Scan six channels: CH1, CH2, CH3, CH4 and CH5 as the common scanned channel, and CH6 set as the priority scanned channel. 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 its frequency.
Select the priority channels via programming software.

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)
**How to use the intelligent charger**

1. When the power adapter is connected to the intelligent charger, the power adapter should be plugged into the matching voltage. The intelligent charger will flicker once, then go into the standby mode which means that you can charge the battery pack. When you plug in the battery pack, the intelligent charger will switch to red LED which means that it has been charged.

2. When the green light flickers, the battery pack is fully charged. When the light turns red, it will go into the normal charge.

3. After you plug in the battery pack which the voltage is higher than 6V (it is lower than 6V if you cannot power on the transceiver), the red LED flickers. At this time, please confirm whether the battery pack is plugged in right with intelligent charger.

4. After you plug in the battery pack which the voltage is lower than 6V (it is higher than 6V if you cannot power on the transceiver), the red LED flickers. At this time, please confirm whether the battery pack is plugged in right with intelligent charger.

**Adding channelscan**

Edit method: Strictly via programming software. Only scan according to the programming list which has added channel scan on programming software.

**Target radio**

LED will switch OFF when cloning complete.

LED is flashing green during cloning.

4. After you plug in the battery pack which the voltage is higher than 6V (it is lower than 6V if you cannot power on the transceiver), the red LED flickers. At this time, please confirm whether the battery pack is plugged in right with intelligent charger.

LED will switch OFF when cloning complete.

LED is flashing green during cloning.

LED goes out in case of successful cloning.

LED glows continuous red in case of cloning failure.

Target radio LED is flashing green during cloning.

LED will switch OFF when cloning complete.

LED is flashing green during cloning.

LED goes out in case of successful cloning.

LED glows continuous red in case of cloning failure.

**Using wireclone function**

Switch source radio on, after you have connected the target radio to the source radio via the cloning cable, push the [MON] key and the source radio 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.
**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.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
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</thead>
<tbody>
<tr>
<td>Transceiver will not switch on.</td>
<td>1. Batterypack may be exhausted. Please change or recharge it. 2. Batterypack may be installed wrong. Please re-install it.</td>
</tr>
<tr>
<td>Batterypack cannot last long after charging.</td>
<td>1. The lifetime of batterypack is due. Please change the batterypack. 2. Batterypack is not charged fully. Please make sure to take off the batterypack after being charged fully.</td>
</tr>
<tr>
<td>The receiving light flickers continuously, and no sound from the speaker.</td>
<td>1. Confirm if the volume tunes to max. 2. Confirm if you set different mute from other group members. Please re-set it. 3. Confirm if you set the right mute way.</td>
</tr>
<tr>
<td>There is no response from keypad.</td>
<td>1. Confirm if the keypad is locked. 2. Confirm if there is any key to get stuck.</td>
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</table>

**Problem** | **Solution** |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Autotransmit when you are on standby.</td>
<td>Confirm if VOX function opened and the VOX level too low.</td>
</tr>
<tr>
<td>You can not store certain settings.</td>
<td>Confirm if the transceiver is in channel mode. Some menus can only be edited via programming software in channel mode.</td>
</tr>
<tr>
<td>During communication you receive other group(S) or receive distorted signal.</td>
<td>Change the setting of CTCSS/DCS tone.</td>
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## Technology parameter

### Appendix 1

<table>
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### Appendix 2

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# Technology parameter

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# Technology specification

**Frequency range**

- VHF: 136-174 MHz
- UHF: 350-390 MHz
- UHF: 400-470.9875 MHz

**Memory channels**

128 channels

**Voltage**

7.4V

**Working temperature**

-30°C (-22°F) to +50°C (140°F)

**Channels**

Co-channel or Dis-channel simplex

**Power output**

5W

**Mode**

F3E (FM)

**Maximum deviation**

≤ ±5 KHz

**Adjacent channel power**

< -60dB

**Stability**

±5 ppm

**Sensitivity**

< 0.2 μV

**Audio output power**

≥ 500mW

**Weight**

242g

**Size**

103 X 62 X 39 (mm)

**NOTE**

Specifications are subject to change without notice.
Optional accessories

Dual slot charger  "AA" batterypack  Eliminator  Programming cable  Ccharger
Wireclonecable  Headset  Speaker/MIC  Switching adapter  Programming Software

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.