

Operation instructions

USER'S MANUAL



Professional wireless intercom
PROFESSIONAL FM TRANSCEIVER

Introduction to Walkie-Talkie Functions

Version: V1.0

1. Main Functions of Walkie-Talkie

- Supports full-band transmission and reception (128 - 580MHz).
- CTCSS/DCS encoding and decoding function, supporting full 亞音 (sub-audio) encoding and decoding.
- Supports standard and non-standard sub-audio (CTCSS: 60Hz - 260Hz, DCS: 000N - 777I).
- Has a scrambler function, and the scrambler frequency can be selected at will to encrypt your communication.
- Companding function, which can make the walkie-talkie sound clear without noise.
- Frequency hopping function, which allows you to only receive legal calls.
- Frequency measurement function, which can quickly communicate with 95% of other walkie-talkies on the market.
- Has a super frequency hopping password anti-cracking function. This super frequency hopping password cannot be cracked, improving communication security.
- Wireless cloning function, which can quickly synchronize multiple walkie-talkies on one channel bringing convenience to multi-person team travel. ◇ Channel scanning and priority scanning functions can make communication unobstructed in time.
- Emergency alarm function.
- VOX voice control function.
- Channel name announcement function, which allows you to know the name of each channel.
- Customizable multi-function keys.
- Computer programming and upgrade function.
- ▲▲▲ Optional waterproof model.
- ▲▲▲ Optional noise reduction function.
- ▲▲▲ Optional recording and playback function.

2. Walkie-Talkie Information

1. Read-write password: You must enter the password in advance to read and write data with the walkie-talkie. The default password is empty.
2. Set a new password: Users can set a new password to suit their own habits.
3. New password: When setting a new password, enter the password here. Can be entered: 0 - 9, A - Z, etc.

Channel Information

1. Receiving Frequency

The "receiving frequency" is used to configure the receiving frequency of the transceiver. The selected model name and available frequency range appear in the title bar of the channel editing window. Enter the required receiving frequency directly in the edit box.

2. Transmitting Frequency

The "transmitting frequency" is used to configure the transmitting frequency of the transceiver. The selected model name and available frequency range appear in the title bar of the channel editing window. Enter the required transmitting frequency directly in the edit box.

3. QT/DQT Decoding

4. "QT/DQT Decoding" allows you to select the required value from the QT/DQT decoding drop-down list or enter the value directly in the edit box to configure the QT audio frequency and DQT code used for decoding.

5. When multiple groups (talk groups) share the same communication channel, QT/DQT encoding and decoding commands facilitate effective communication within the same group. If the received QT audio frequency or DQT code does not match the QT audio frequency or DQT code pre-configured for the transceiver, the transceiver will mute unnecessary calls. Usually, the QT audio frequency or DQT code configured for each group is unique. When users in the same group communicate with each other, they will not hear conversations in other groups.

6. Range:

QT: None or 67.0 Hz to 254.1 Hz (step size 0.1 Hz).

DQT: None, D002N to D777N or D002I to D777I.

7. QT/DQT Encoding

8. "QT/DQT Encoding" allows you to select the required value from the QT/DQT encoding drop-down list or enter the value directly in the edit box to configure the QT audio frequency and DQT code used for encoding.

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DQT code configured for each group is unique. When users in the same group communicate with each other, they will not hear conversations in other groups.

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11. Transmitting Power

"Transmitting power" is used to configure the transmitting power of each channel to high or low transmitting power.

12. Wide Band/Narrow Band

"Wide band/narrow band" is used to configure the channel spacing of the transceiver.

13. Scan

"Scan" is used to configure whether to allow or prohibit adding channels to the scan list on the transceiver.

The transceiver scans in sequence starting from the lowest channel number added to the scan list to search whether the transceiver is called by another transceiver.

14. Busy Channel Lock

15. "Busy channel lock" is used to configure the conditions for releasing the busy state and starting transmission by selecting the required option from the drop-down list or entering the characters to be selected.

If the user attempts to transmit on a channel used by another transceiver, this function will prohibit the transceiver from transmitting to avoid interference with the communication of other transceivers.

3. Range

- **Off/Disable:** "Busy channel lock". Carrier wave: When receiving a carrier wave, the user cannot start transmitting.
- **QT/DQT:** When a carrier wave with an incorrect QT tone or DQT code is detected on the channel, the user cannot start transmitting. However, if the QT audio frequency or DQT code is correct, the transceiver is allowed to transmit.

9. Voice Control

"Voice control" is used to configure whether the user can transmit by speaking directly into the microphone without pressing the PTT switch. This function is very useful when the user cannot press the PTT switch (for example, when driving or working with both hands).

10. Scrambler

"Scrambler" can be selected: No/Yes. When the scrambler is turned on, the content of the call can be kept confidential. The receiver can only receive the correct sound if it turns on the scrambler and sets the same scrambler frequency.

11. Scrambler Frequency

"Scrambler frequency" can be selected: 2700 - 3400.

12. Comanding

"Comanding" can be selected: No/Yes. When comanding is turned on, the sound quality of the walkie-talkie can be made clear without noise.

13. Angle Elimination

"Angle elimination" can be selected: None/120 degrees/180 degrees/240 degrees.

14. Frequency Hopping

"Frequency hopping" can be selected: No/Yes. When frequency hopping is turned on, the walkie-talkie can be protected from call interference from other walkie-talkies.

15. Frequency Hopping Password

"Frequency hopping password" can be selected: Disabled/Enabled. When the frequency hopping password is turned on, this frequency hopping password cannot be cracked, and the walkie-talkie can be protected from call interference from other walkie-talkies.

16. Channel Name

After the "channel name" is set, when the walkie-talkie switches channels, the current channel name will be announced.

17. Digital Service

"Digital service" can be selected: No/Yes. When the digital service is turned on, the receiving walkie-talkie can identify the caller.

18. Frequency Measurement Code

The "frequency measurement code" consists of 8 digits 0 - 9 or letters A - F. The frequency measurement code is used to crack the communication code of other walkie-talkies.

19. Special Code

The "special code" consists of 4 digits 0 - 9 or letters A - F. The special code can enhance communication encryption.

20. Cracking Code

"Cracking code" can be selected: No/Yes. When displayed as "Yes", it means that this channel is the communication code of a cracked walkie-talkie.

IV. General Settings

1. Timeout Timer (TOT)

You can set the maximum time allowed for the walkie-talkie to transmit continuously. When the preset timer expires, the walkie-talkie will emit a warning sound and stop transmitting.

2. VOX Level

Set the VOX gain threshold. When the level generated by the speaking voice is higher than this VOX gain threshold, the VOX function is activated.

3. Voice Notification

It can be set: None, Power-on tones 1 - 7-5: Squelch level

1. The squelch level is an analog reference level used to set the internal squelch threshold in the walkie-talkie CPU. You can preset the squelch level. When in user mode, the squelch level can be adjusted.

2. Range: 0 (squelch open) -- 9 (deep) (step size 1)

3. Priority Scan Type

"Priority" is used to configure the "priority channel" that is scanned first in the scan sequence.

4. None: "Priority channel" is not configured.
5. Fixed: The channel with the priority scan channel signal is taken as the "priority channel".
6. Selected: Select the current channel as the channel of the "priority channel".

7. Priority Scan Channel Signal

You can select a specified channel as the priority channel.

8. Scrambler Frequency

You can set the frequency of the scrambler.

9. Power-on Tone

When checked, turn on the walkie-talkie power, and it will report "power on".

10. Prompt Tone

You can turn on or off the "prompt tone" function.

11. Transmission End Tone

When checked, the end tone can be sent to notify the receiving party that this call is over.

12. Quick Team Formation (Wireless Cloning)

When checked, the walkie-talkie is allowed to perform wireless cloning for quick group communication.

13. Frequency Hopping Function

When checked, you can only receive legal calls.

14. Set Frequency Hopping Password (Digital Coding)

Only walkie-talkies with the same frequency hopping password (digital coding) can communicate with each other. Its range is 1 - 49999, and the default value is 33168.

15. Allow Frequency Measurement Function

When checked, you can enable the frequency measurement function.

16. Enable Frequency Hopping Password (Digital Mode)

When checked, you can enable the frequency hopping password function.

V. Key Settings

1. **None**

No side key function.

2. **Scan**

Switch between starting and stopping scanning.

3. **VOX**

This function enables you to start transmission by voice without pressing the PTT key.

4. **Squelch Cancel**

Pressing the squelch cancel key turns on the squelch and cancels the mute when a carrier is received.

5. **Instant Squelch Cancel**

When pressing the instant squelch cancel key, if a carrier is received, the squelch will be turned on and the mute will be canceled. Short-pressing the key has no such function.

6. **Adjust Power Level**

Switch the transmission power level of the walkie-talkie to convert between low and high.

7. **Emergency Alarm**

Activate the emergency alarm. After the emergency alarm is activated, press the PTT key to turn off the emergency alarm.

8. **Broadcast Battery Level**

Broadcast the battery level, level 10: lowest battery, level 100: highest battery.

9. **Broadcast Channel Number**

Broadcast the current channel number.

10. **Reminder Function: Green Light Flashes**

When the transmitter has a transmission reminder function, the receiver will have a green light flashing reminder.

11. Reminder Function: Red Light Flashes

When the transmitter has a transmission reminder function, the receiver will have a red light flashing reminder.

12. Broadcast Channel Name, Power, and Battery Level

It will broadcast the current channel name, high or low power, and battery level.

VI. Frequency Measurement Function

1. Ordinary Frequency Measurement (This method is used by default)

2. Switch the frequency meter to channel 1, then press and hold side key 2 and turn on the frequency meter power. At this time, the frequency meter will emit a "beep" sound, and the green light will keep flashing.
3. The transmitter presses and holds PTT to transmit. In about 1 second, the frequency meter will "beep" once, indicating that the frequency measurement is successful and saved to the channel. At this time, the frequency meter and the transmitter can talk to each other.
4. Switch to the next channel, press side key 2 again to restart the frequency measurement function, and perform frequency measurement according to the previous steps 1 and 2.
5. **Special Frequency Measurement (Used when ordinary frequency measurement cannot detect)**

1: Cut the frequency measuring machine to channel 1, then press and hold the PTT key and the side key 2 and turn on the power supply of the frequency measuring machine. At this time, the frequency measuring machine emits a "drop".
 -Drop" twice, and the green light will keep flashing

2: The transmitter presses and holds the PTT to transmit, first release the transmitter PTT when the red light of the frequency measuring machine is on, and press again when the red light of the frequency measuring machine is off.
 Transmitter PTT, until the frequency measurement opportunity "drops", indicating that the frequency measurement is successful and saved to the channel, then the frequency measuring machine and the transmitter
 The machine can intercom 3: Switch to the next channel, then press the side button 2 to restart the frequency measurement function, and follow the previous steps 1 and 2 to measure the frequency

Seven anti-cracking functions

■ By setting the frequency hopping password (digital coding), the anti-cracking function can be realized, and the "frequency hopping password" option in the channel information can be enabled to avoid receiving illegal signals.



基本配置

QT/DQT解码	QT/DQT编码	功率	宽/窄	扫描	遇忙禁发	声控	扰频	扰频频率	压扩	角度消除	跳频	跳频密码	信道名	数字服务	测频码	特殊码	破解码
无	无	高功	宽带	有	关	否	否	0~3400	否	无	否	启用		是			否

■ In Basic configuration->Configuration, go to "Set frequency hopping password [digital encoding]", and tick "Enable frequency hopping password [Digital mode]" as shown in the figure below.:

设置跳频密码[数字编码] 33168 ☒ 启用跳频密码[数字模式]

■ Only the same frequency hopping password [digital code] can be interoperable. Its range is 1-49999, and the default value is 33168.

八.Digital services (for amateur machines)

Using the digital service function, the alias display function of the walkie-talkie can be realized. The target walkie-talkie can display the name of the call initiator in the channel information. The digital service selection is

信道	接收频率	发射频率	QT/DQT解码	QT/DQT编码	功率	宽/窄	扫描	遇忙禁发	声控	扰频	扰频频率	压扩	角度消除	跳频	跳频密码	信道名	数字服务	测频码	特殊码	破解码
1	400.35000	400.35000	无	无	高功	宽带	有	关	否	否	0~3400	否	无	否	禁用		是			否

In the digital configuration, tick to enable the digital service and display the speaker's name

☒ 启用数字服务
☒ 显示讲话者名称
 本机所属群组: 00—Group 0 组 0
 本机名称: L0
 本机身份码: 000—L0 000
 语音加密的密码[1000-8999]: 4321

序号	群组名称
▶ 组 0	Group 0
组 1	Group 1
组 2	Group 2
组 3	Group 3
组 4	Group 4
组 5	Group 5
组 6	Group 6
组 7	Group 7
组 8	Group 8
组 9	Group 9
特权组	Priority G

序号	用户名称
▶ 用户 0	L0
用户 1	L1
用户 2	L2
用户 3	L3
用户 4	L4
用户 5	L5
用户 6	L6
用户 7	L7
用户 8	L8
用户 9	L9
用户 10	

- The group to which this machine belongs: only those who are set to the same group can talk to each other
- Local name: After setting, the recipient can display the name of the caller
- Password for voice encryption: You can set 0001-8999, only if the password is the same can you intercom

九: Wireless replication

Using wireless replication, multiple walkie-talkie devices can be quickly synchronized in one channel, which brings a lot of convenience when multiple people travel in teams. Wireless copy operation method:

- 1: Receiver: Cut the walkie-talkie to channel 2, press and hold the side button 2 and turn on the power of the walkie-talkie to enter the wireless copy reception, at this time there will be a “drop” sound and a green light flashing every 2 seconds
- 2: Transmitter: Cut the walkie-talkie to channel 2, press and hold the PTT key and the side button 2 and turn on the power of the walkie-talkie: enter the wireless copy transmission
- 3: After the wireless replication is complete, the walkie-talkie will restart, and the intercom can be performed at this time.