Thank you!

Thank you for choosing Belfone series professional wireless communication products! Since 1989, Belfone has been engaged in research and exploration in the field of radio communication technology for decades, and has a global leading position in the field of private network communication technology. Based on research and development design, adapt to the modern complex communication environment, It is able to customize specific communication solutions according to different industry characteristics. High-performance, high-quality products that can control the overall situation, while providing smart dispatching and command communication.

This manual is applicable to

BF-TD588UV series

Notice to user

FCC Caution

Operation is subject to the following two conditions:
1) This device may not cause harmful interference.
2) This device must accept any interference received, including interference that may causeundesired operation.

Note: Changes or modifications to this unit not expressly approved by the party responsible for compliance couldvoid the user's authority to operate the equipment.

RF Exposure Compliance and Control Guidelines

andOperating Instructions

To control your exposure and ensure compliance with the occupational/controlled environmental exposure limits,always adhere to the following procedures.
Guidelines:
● Do not remove the RF Exposure Label from the device.
● User awareness instructions should accompany device when transferred to other users.
● Do not use this device if the operational requirements described herein are not met.

Operating Instructions:
● This radio is designed for and classified as"Occupational/Controlled Use Only", meaning it must beused only during the course of employment by individuals aware of the hazards,

and the ways to minimizesuch hazards; NOT intended for use in an General population/uncontrolled environment

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) key. To receive calls, release the PTT key. Transmitting 50% of the time, or less, is important because the radiogenerates measurable RF energy only when transmitting (in terms of measuring for standards compliance).
- Keep the radio unit at least 2.5 cm away from the face. Keeping the radio at the proper distance is important asRF exposure decreases with distance from the antenna. The antenna should be kept away from the face andeyes.
- When worn on the body, always place the radio in a approved holder, holster, case, or body harness or by use of the correct clip for this product. Use of non-approved accessories may result in exposure levels which exceed the FCC's occupational/controlled environmental RF exposure limits.
- Use of non-approved antennas, batteries, and accessories causes the radio to exceed the FCC RF exposureguidelines.
- Contact your local dealer for the optional accessories of the product.

The highest reported SAR values for Face-held, body-worn are 1.31W/Kg, 1.55W/Kg.

Warning！

◆In explosive atmospheres(inflammable gas, dust particles, much powder area，etc.), please turn the power off.

Instructions before Use

It's important for the operator to be aware of and understand hazards common to the operation of any radio .Please observe the following safety precautions to prevent radio damage and personal injury. The following precautions shall be observed during operation, service and repair of this radio.

◆It is recommended to use 1 minute for TX and 4 minutes for RX, when the radio is used in the transmission mode for many hours continuously, the radiator and chassis will become hot, allow the rear panel of the radio to contact a surface of low melting point /low Ignition point.

◆Don't expose the radio to direct sunlight for a long periods of time. Also，do not place the radio on sources of extremely heat, humid, dusty area, or unstable surfaces.

◆In areas where the use of radio devices is restricted or warned, please obey the regulation and turn off the radio.

◆Use of the radio while driving may be against traffic laws in some countries, please check local traffic laws before using the radio while driving.

◆If there is any problems with the radio, please turn the radio off immediately. Then contact the local dealer/technician. Do not modify this radio unless instructed by this manual. Please find a certified technician to repair it.

◆If secondary development is required, please contact BelFone or the local dealer for technical assistance.

◆Please keep the surface of radio clean and dry. To clean the radio, use a damp fabric soaked in mild washing liquid.

Contents

Unpacking and Device Inspection

Note: The following instructions regarding unpacking are only for BelFone's distributors, and service agencies or factories authorized by BelFone.
After carefully unpacking the radio, identify the items listed in the table below. If any items are missing or have been damaged during shipment please contact dealer or BelFone immediately.

Standard Accessories

project	quantity
Antenna	1
Strap	1
Belt Clip	1
Screw Set	1
Charging line	1
Write frequency line	1
Li-Ion Battery	1
User Manual	1
Warranty Card	1
Certificate	1
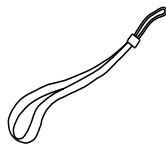
Antenna   **Strap**   **Belt Clip**   **Screw Set**
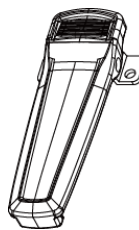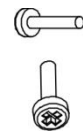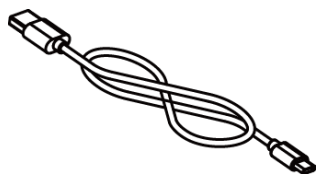
Charging Cable   **Programming Cable**   **Li-Ion Battery**
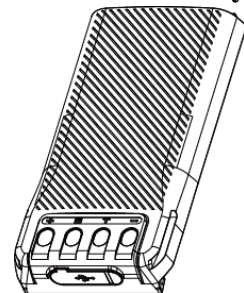
Accessories Installation

Install/Remove the Antenna

Hold the base of the antenna and screw the antenna clockwise into the interface on the top of the radio until it is tightened.
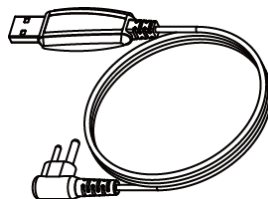Turn the antenna anti-clockwise to remove it

Install/Remove the Belt Clip

Secure the belt clip with two M3×7mm screws.
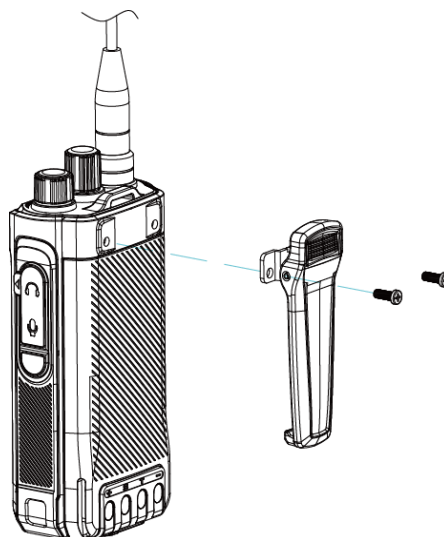
Attach the Strap

Thread the hand strap into the loop on the top of the back of the Radio.
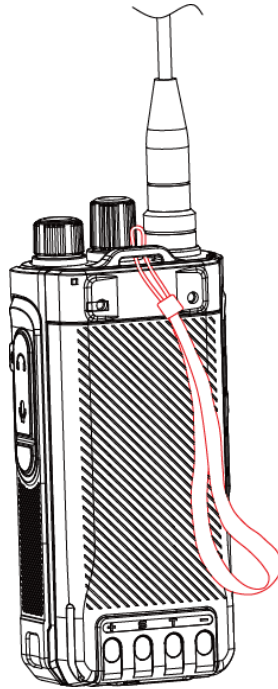
Install/Remove Battery

Warning!
◆ Do not short-circuit the battery contacts, which may cause the battery to burn out or catch fire;
◆ Do not attempt to remove the battery casing to prevent the battery from short-circuiting;
◆ Batteries are flammable and explosive objects. Please do not throw batteries into fire or use them in dangerous areas such as gas stations.

Push down the latch at the bottom of the radio, align the battery with the corresponding grooves on the back of the radio, then push up the bottom of the battery in a parallel manner until a 'click' is heard to lock it in place .
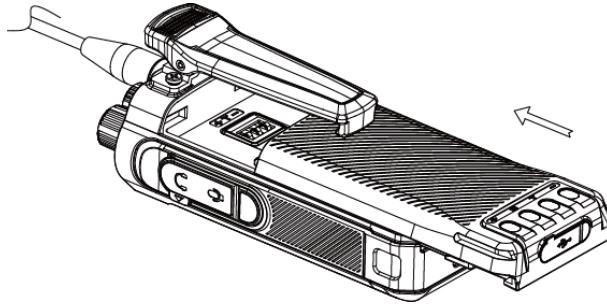
To remove the battery, please turn off the Radio and push up the latch on the bottom of the back of the Radio, then push down the upper end of the battery horizontally until removing the battery.
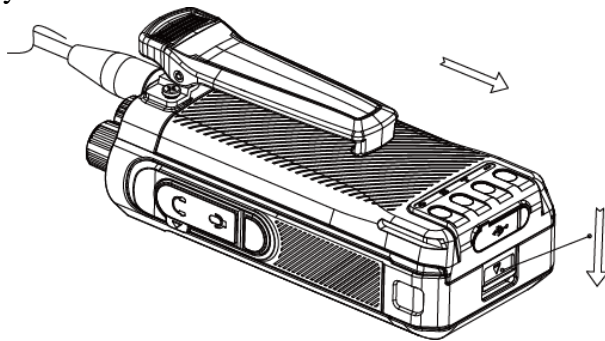
Note: Do not insert or remove the battery when the radio is powered on.

Battery Information

The new battery not being fully charged before shipment, please charge the new battery before use. Generally, the battery needs to be charged for 5 hours when it is used for the first time. The first three full charge and discharge cycles will optimize the battery capacity. When the battery power is low, it needs to be charged or replaced.

Applicable battery

To reduce the risk of injury, please only use the battery and charger specified by Belfone, other batteries may burst, causing bodily injury and property damage.

Battery Tips

1. When charging the battery, keep it at a temperature among 4℃—40℃. Temperature out of the limit may cause battery leakage or damage.

2. Prior to charge a battery with the radio, it is recommended to turn the radio off.

3. Avoid cutting off the power supply or removing the battery during charging.

4. Please ensure that the battery is charged in a dry state before charging.

5. Please change the battery when working time is shorten than normal performance even if the battery is fully charged.

Extend Battery Life

1. The battery performance will be decreased under 0℃. Please prepare a spare battery in cold weather. A battery not work properly in a cold environment does not mean that it is damaged. Please keep the battery and reconfirm at room temperature.
2. The dust on the battery contact point may cause battery faulty, please cleaning it by a dry cloth before using.

Battery Storage

1. Fully charge a battery before storing it for a long time, to avoid battery damage due to over-discharge.
2. Recharge a battery after several months' storage, to avoid battery capacity reduction due to over-discharge.(NI-MH batteries:3 months, Li-Ion& Li-polymer batteries: 6 months)
3. Store the battery in a cool, dry place under room temperature, to reduce self-discharge.

Charge the Battery
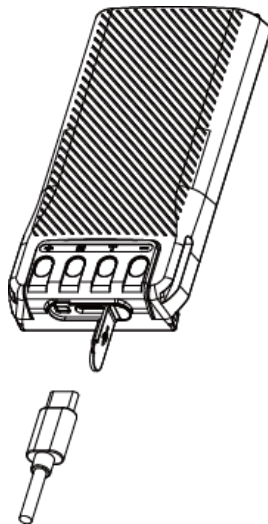
1. Plug the charger into the 220VAC power outlet.
2. Insert the charging cable into the USB Type-C interface of the battery.
3. Ensure that the battery is properly connected to the charging terminal, the charging indicator turns red, and charging begins.
4. The indicator turns green, indicating that the charging is complete.

Attach the Speaker/Microphone

Open the earphone cover and plug the speaker/microphone earphone directly into the speaker/microphone jack.
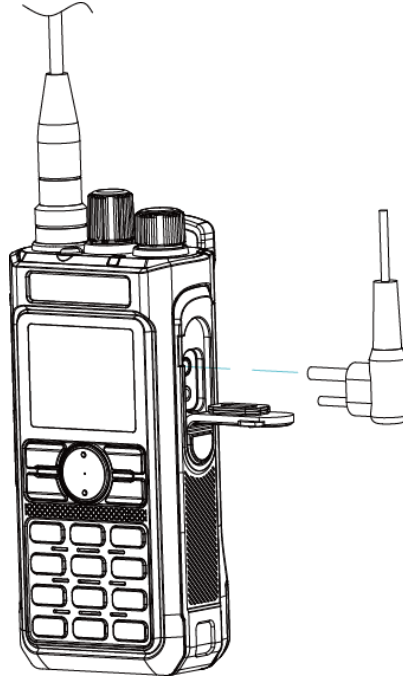
Getting Aquainted
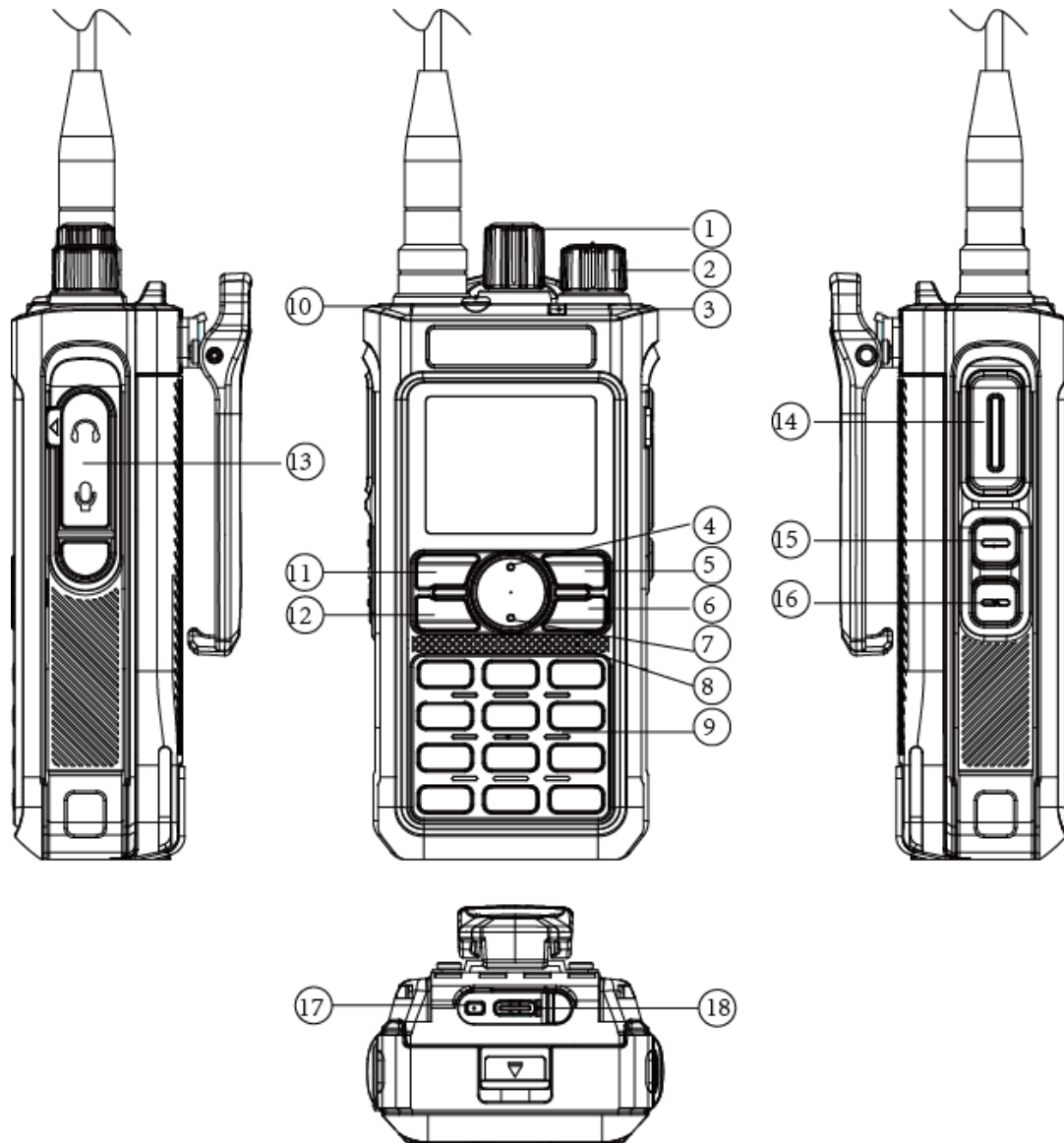
①	Channel Switch Knob	⑩	Orange Key P1
②	Power Switch/Volume Adjustment Knob	⑪	OK key
③	LED indicator	⑫	Pick up button
④	Up key	⑬	MIC-SP-USB interface
⑤	Return key	⑭	PTT key
⑥	Hang-up button	⑮	S1 key
⑦	Down key	⑯	S2 key

⑧	Microphone	⟲	Charging indicator light
⑨	Speaker	⟲	TYPE-C charging interface

Basic Operation

LCD icon

Y. Y. Y.ll	Signal intensity	✆!	Missed call	⦿	Location function on
H M L	High/Medium/Low/Automatic Power	✉	Unread SMS	⚷	Keyboard lock
⊓	Digital Mode	✉	SMS box full	|→|	Direct mode
		✉	SMS read	🔇	Mute All
		✉	SMS unread	🔋	battery level
		✉	SMS sent successfully		
👤	private call	✉	Message sending failed		
👥	Group call	📶	Main channel		
👥👥	All call	📶	Secondary channel	•	Recording on
⌂	Emergency Alert	👂	In monitoring	✆!	Call prompt
↻	Scan open	🔌	USB connected	▤	Encryption off
◁	Roaming open	Ⓥ	VOX		

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Power on/ Power off

Rotate the Power switch/Volume adjustment knob clockwise to turn on the radio.

Rotate the Power switch/Volume adjustment knob counterclockwise to turn off the radio.

Note: When the radio is configured with a startup password, the correct 6-digit password must be entered each time it is turned on to access the normal working interface. When the password is entered incorrectly three times, the radio will self-destruct and clear all data except for the device ID, device name, and voice environment. It can only be used normally by rewriting the frequency. Users are advised to use the startup password with caution.

Adjust volume

In the powered-on state, rotate the Power switch /Volume adjustment knob to adjust the volume. Rotate clockwise to increase the volume, and rotate counterclockwise to decrease the volume.

Select a channel

Select the desired channel by rotating the channel encoder. Rotate clockwise to scroll up the channels, and rotate counterclockwise to scroll down the channels.

Select a zone

The radio supports up to 64 zones, each area can contain up to 64 channels, and 64 zones can support up to 4000 channels. You can enter the zone menu to select the corresponding zone, or press the [Zone Switch] shortcut key to switch zones.

Single/Dual standby switching

Press the [Standby Switch] shortcut key to switch between single/dual standby mode.

In single standby mode, the main working frequency band A is displayed, and the secondary working frequency band B is displayed in gray. In dual standby mode, both A and B bands are displayed simultaneously.

Main/Secondary channel switching

In dual-standby mode, press the [Main Channel Switch] shortcut key to switch the main operating frequency band, and the main operating frequency band A will display in blue. The single-band version is divided into single UHF or single VHF, and the channel frequency can only be set within the frequency range of UHF or VHF. The channel frequency of the UV dual-band version can be set freely within the frequency range of U/V bands.

Note: If the radio is working in single standby mode, short press the [Main Channel Switch] key to switch the working main frequency band.

VFO/channel mode switch

Press the shortcut key [VFO mode on/off] to switch between VFO mode and channel mode. In VFO mode, rotate the channel encoder to adjust the frequency or directly enter the frequency through the numeric keypad.

A/D switching

When the channel mode is D/A compatible, press the [A/D Switch] shortcut key to switch the channel mode. If the current channel is D/ A mode, press the key to switch to A/D mode; if the current channel is A/D mode, press the key to switch to D/ A mode.

Note: The digital analog switching function can only temporarily switch the channel mode. Switching channels or restarting the radio will return to the default channel mode.

Call

In digital mode, you can initiate private call, group call or All call; in Analog mode, press the PTT button to initiate a call directly; in dual standby mode, press the PTT button to initiate a call on the main operating frequency band A, and the interface displays the icon: ; in single standby mode, press the PTT button to initiate a call on the current working channel. When calling, hold down the PTT button and speak with a normal tone at a distance of 3~4cm from the microphone. The LED indicator light is red, indicating that it is transmitting.

Private call

The radio supports private call acknowledgement. If private call acknowledgement is selected, the called party needs to press the answer key to establish the call.

（1） When the default communication address of the current digital channel is set to private call ID, you can press the PTT button to initiate a call to the current contact;

（2） In the contact menu, select private call contact and press the PTT key to initiate a call to the selected private call contact;

（3） When the keyboard allows input, directly enter the number or enter manual dialing and enter the call ID to be dialed, which can initiate a call to a specific single call contact;

（4） Select a private call contact from the missed/received/called number in the communication record, and press the PTT button to initiate a private call.

（5） The single key function call is set to private call, and it can also initiate private call.

Group call

（1） When the default communication address of the current digital channel is set to group call ID, pressing the PTT key can initiate a group call;

（2） In the contact menu, select the group call ID and press the PTT button to initiate a group call;

（3） When the keyboard allows input, directly enter the number or enter the manual dialing menu. Press the # key to switch the group call type and enter the group call ID to be dialed. Press the PTT key to initiate the group call.

（4） Select group call from the dialed numbers in the communication record, and press the PTT button to initiate a group call;

（5） The single-key function is set to group call, and it can also initiate group call.

All call

（1） When the default communication address of the current digital channel is set to All call ID, you can press the PTT button to initiate an All call;
（2） In the contact menu, select the general call ID and press the PTT button to initiate a general call.
（3） Select the full call ID from the dialed numbers in the communication record, and press the PTT button to initiate a full call.

Long press the numeric keypad to call

In digital mode, the number keys 0-9 can be set as long-press call function, and private call or group call contacts are assigned to the corresponding number keys. In the standby interface, long press the corresponding number key to enter the call interface and then press the PTT key to initiate a call or directly send a pre-made text message.

Receiving and responding to calls

In digital mode, when a private call is received, the interface displays private call received. Within the private call hold time, pressing the PTT key allows responding to the current private call. If the hold time is exceeded, it is recorded as an unanswered call. When a group call is received, the interface displays group call received. Within the group call hold time, pressing the PTT key allows responding to the current group call. When an All call is received, the interface displays all call received. There is no hold time for an all call, so it is not possible to respond to an All call. In dual-standby mode, if the main operating frequency band A receives a signal, the interface displays the icon:

. If the auxiliary operating frequency band B receives a signal, the interface

displays the icon: . Within the hold time, pressing the PTT key allows calling back to the current call (except for digital all calls). In single-standby mode, the current channel is locked to the main operating frequency band A. When receiving, the

interface displays the icon: . Within the hold time, pressing the PTT key allows

calling back to the current call (except for digital All calls).

Button configuration

All keys in the key definition can be programmed through the programming software to configure the corresponding functions to different function keys.

The programmable buttons include the following functions:

number	Define Name	Function Description
1	Undefined	No function is assigned to the programmable keys.
2	One Touch Call 1-6	Quickly initiate digital group calls, digital private calls, call alerts, or send pre-composed text messages.
3	Preset Channel 1~4	Quickly switch to the preset channel.
4	Emergency On	Activate the emergency alarm.
5	Emergency off	Disable the emergency alarm.
6	Monitoring	Quickly turn on or turn off the monitoring function.
7	Permanent monitoring	Quickly turn on or off the permanent monitoring function.
8	Keyboard lock	Quickly turn on or off the keyboard lock function.
9	Battery indicator	Quickly check the battery level.
10	Current Date Prompt	Quickly check the current date and time.
11	Zone Toggle	Quickly switch zones, and the zone number increases.
12	Channel up	Quickly switch channels, and the channel number increases.
13	Channel down	Quickly switch channels, and the channel number decreases.
14	Priority interrupt	Forcibly interrupt the current activity on the channel.
15	AD on/off	In the digital and analog compatible channel, one key temporarily switches the channel mode.
16	Power switching	Enter the power switch menu with one key.
17	Repeater/Talk around	Quickly enable or disable the offline function.

18	Nuisance delete	Temporarily delete the unnecessary active channels received during scanning.
19	Radio enable	One key to enter the radio enable function.
20	Radio disable	One key to enter the radio disable function.
21	Radio check	One key to enter the radio check function.
22	Remote monitor	Enter the remote monitoring function with one key.
23	Backlight auto on/off	Quickly switch the backlight to automatic or always-on mode.
24	All alert tones on/off	Quickly turn on or disable all alert tones.
25	Scan On/Off	Quickly activate or deactivate the scanning function.
26	VOX on/off	Quickly turn on or off the VOX function.
27	Satellite Positioning On/Off	Quickly turn on or turn off the satellite positioning function.
28	Record on/off	Quickly turn on or off the recording function.
29	Work Alone On/Off	Quickly activate or deactivate individual work functions.
30	Upend off/on	Quickly turn on or off the upend function.
31	Roam on/off	Quickly turn on or off the roaming function.
32	Site lock on/off	Quickly turn on or off the site locking function.
33	Manual site roam	Quickly perform manual site navigation.
34	Covert mode on/off	Quickly turn on or off the hidden mode.
35	Encrypt On/Off	Quickly turn on or off the voice encryption function.
36	Bluetooth on/off	Quickly turn on or turn off the Bluetooth function.
38	Channel lock	Quickly turn on or turn off the channel locking function.
39	De-noise On/Off	Quickly activate to turn on or off the noise reduction function.
40	VFO mode on/off	Quickly activate to turn on or off the VFO mode.
41	FM mode on/off	Quickly activate to turn on or off FM mode.
42	FM Search	One key search FM channel.
43	Main channel switch	Quickly switch the main working channel to A or B.

44	Inversion On/Off	One key exchange receive transmission frequency.
45	Standby switching	Quickly switch the current working mode to single standby or dual standby.
46	Open main menu	Enter the main menu with one key.
47	Return to main interface	One key to return to the main interface.
48	Manual dial UI	Enter the [Manual Dialing] menu with one key.
50	Contact List	One key to enter the [Contact List] menu.
51	Short message	Enter the [Short Message] menu with one key.
52	New short message	One key to enter the [New SMS] menu.
53	Inbox	Enter the [Inbox] menu with One key.
54	Outbox	Enter the Sent Messages menu with one key.
55	Preset short message	Enter the [Pre-set SMS] menu with one key.
56	Call log	Enter the [Call Log] menu with one key.
57	Missed call	Enter the [Missed Call] menu with one key.
58	Received call	Enter the [Received Call] menu with one key.
59	Dialed call	Enter the [Dialed Numbers] menu with one key.
60	Zone	Enter the [Zone] menu with one key.
61	Device config	Enter the [Settings] menu with one key.
62	Channel settings	Enter the [Channel Settings] menu with one key.
64	Record	Enter the [Recording] menu with one key.
65	Recording List	Enter the [Recording List] menu with one key.

Functions and Operations

Contact

Enter the contact through the main menu. The contact menu includes contact list, contact group, manual dialing, add contact and group management options. The contact can add up to 2000 contacts.

1. Group call type

When the selected contact type is group call, you can view details, send SMS, edit name or number, delete, add to group and other operations for this contact.

2. Private call type

When the selected contact type is private call, you can view details, send SMS, send control services, edit name or number, delete, add to group and other operations for private call contacts. Control services include the following functions:

Control business	describe
Call prompt	Send a call reminder to the designated single call contact, requesting a reply when they are available to communicate.
Radio check	Detect whether the other party is powered on or using the current channel without displaying any indication to the Radio user.
Remote monitoring	Send a remote monitoring request, if a remote monitoring confirmation is received, the other party's microphone will be activated to secretly monitor the other party's voice or background sound information.
Radio enable	Activate the remotely disabled device to restore it to normal working condition.
Radio disable	Send a remote kill command to make its radio be remotely killed and unable to be used normally. The remotely killed radio can be remotely monitored, but other functions cannot be used. It can only be woken up by activating the command or reprogramming and activating through programming software.
Ranging	After both parties obtain valid positioning data, they can query each other's distance and direction.

Editing: Modify the name or number of the private call contact. Press * key to delete

when editing, press # key to switch input method when editing the name, ID input range is 1~16776415, name input should not exceed 16 characters.

● **Delete:** Delete the private call contact from the contact, and it is not allowed to be deleted when the contact is set as a single key call or added as a default contact address.

● **Add to group:** Add a private call contact to a group.

3. All call type

When the selected contact type is All call, you can view the All call ID: 16777215 or add it to the group.

4. Contact groups

View the list of groups, and each group can add up to 150 contacts.

5. Manual dialing

Manual dialing is convenient for calling private call or group call contacts who are not in the contact list. In the manual dialing interface, press the # key to switch the call type to private call or group call, enter the ID code and press PTT to initiate the call, or press the confirm key to send an SMS. For private call contacts, you can also perform call prompt, radio check, remote monitoring, radio enable, radio disable, ranging and other operations.

6. Add contacts

The radio allows adding private call and group call type contacts. Press * key to delete when editing name, # key to switch input method, and enter up to sixteen characters; after entering the name, press the confirm key to edit the number (1~16776415), then press confirm to save. The newly added contact can be found in the contact list.

7. Group Management

In the group management menu, you can create a new group, edit the group name, or delete a group. You can create up to 16 contact groups.

Scan

Scan On/Off

The scanning function can only be activated when a scanning group is added to the current channel and the scanning group contains at least 2 channels. After scanning is activated, the screen displays the " 🗘 " icon, and the LED indicator flashes red. During scanning, the radio listens to the channels in the scanning list in a loop (both analog channels and digital channels are supported), checking whether there are activities such as voice on each channel. If scanning priority is set, priority channels are scanned first and then ordinary channels are scanned to ensure the service reception of high-priority channels. Enhanced scanning function is supported to improve scanning efficiency. When scanning a channel with activity, it stays on the channel for reception, and the LED indicator light is constantly green. If an unwanted call is received, press the [Nuisance Delete] shortcut key to temporarily remove the current channel from the scanning list. To turn off scanning, enter the scanning menu to select "Scan Off", Switch Channel, or press the [Scan On/Off] shortcut key to exit.

Note: Once scanning is initiated, entering the menu list will stop the scanning process. Exiting the menu and re-entering will restart the scanning.

If the channel is selected with the automatic scanning function, when switching to this channel, the radio will automatically enter the scanning state;

You can directly start scanning by pressing the shortcut key [Scan On/Off].

2. Edit List

Users can edit the scan list through the menu. In the "View Members" menu, users can view the members in the current scan group list or delete a channel from the scan group. The "Add Members" menu allows users to add new scan members to the current scan list, with a maximum of 16 channels per list. For scan group member channels, the first and second priority channels can be edited, with a maximum of two priority channels set in each scan list.

Roam

Digital channels support roaming function, with multiple Repeater IP interconnections, to achieve a wider range of system coverage. The roaming function can be configured through the menu only after the current channel has been added to the roaming group.

1. Roaming on/off

The roaming function can only be activated when the current channel has been added to a roaming group, and the roaming group contains at least two channels. The screen displays the icon: . The roaming function can be activated through the roaming menu. When entering the roaming search, the LED indicator flashes red. After searching for an active site, it will stay at that site for reception. To turn off the roaming function, you can enter the roaming menu and select "Roaming Off", switch channels, or press the [Roaming On/Off] shortcut key to exit.

2. Edit list

Users can edit the roaming list through the menu. In the "View Members" menu, users can view all members in the current roaming group list or delete a channel from the roaming group. The "Add Members" menu allows users to add new roaming members to the current roaming list, with a maximum of 16 channels per list. Only channels with different frequencies and enabled "IP Site Connection" can be added to the roaming group.

Note: Each channel can only be configured with either scanning or roaming function, and cannot be enabled with both functions simultaneously.

Zone

The radio supports up to 64 zones, each zone can contain up to 64 channels, and 64 zones can support up to 4000 channels. Users can select the required zone through the area list.

Note: Zone switching can only be performed when two or more zones are written.

Short message

1.New message

Users can write text messages and send them to other users via the radio. When editing a text message, press the # key to switch input methods, press the * key to delete, and press the up and down keys to switch the input cursor position. In Pinyin or alphabet mode, the 1 key is for punctuation marks, and the 0 key is for the space bar. The maximum length of a text message is 140 characters. Users can choose to manually dial or select a private call or group call number from the contact list to send.

2. Inbox

The inbox can store up to 50 received SMS messages, and it is displayed with (*/*) in the inbox menu. The front number indicates the number of unread received SMS messages, and the back number indicates the total number of SMS messages in the inbox. Upon entering the inbox, unread SMS messages are displayed as: , and read SMS messages are displayed as: . Inbox SMS messages support reply, forward, and delete operations.

3. Pre-set SMS

Add some common text information through the programming software, up to 100 preset text messages can be added, each message can contain up to 140 characters. The preset text messages can be edited and sent again or sent directly.

Note: You can assign preset messages to single-key function calls, and then send the preset messages through shortcut keys.

4. Sent message

The sent messages can store up to 50 SMS records. Upon entering the sent messages, successful messages will display: , while failed messages will display: . The sent messages support forwarding, resending, and deleting operations.

5. Clear SMS

The SMS Clear function is designed to delete all messages in the inbox or sent messages at once, eliminating the hassle of deleting individual messages. Clearing all

messages will simultaneously delete all messages in the inbox and sent messages, but pre-set messages will not be deleted.

Communication records

1. Missed call

The radio will record all recent missed calls, with a maximum storage capacity of 50 records. When the missed call number is full and there are new records, the oldest record will be automatically cleared. The calling party, called party, and call duration can be viewed through the details menu.

2. Received number

The radio will record all the recent received calls, and the maximum number of received numbers is 50 records. When the received number is full, the earliest record will be automatically cleared when there are new records. The calling, called, and call time can be viewed through the details menu.

3. Dialed number

The radio will record all recent private calls, group calls and all calls, and the maximum number of dialed numbers is 50 records. When the dialed number is full, the earliest record will be automatically cleared when there is a new record. The calling, called and call time can be viewed through the detail menu.

4. Clear records

Clearing communication records allows you to separately clear missed calls, received calls, and dialed calls. Clearing all records will simultaneously clear all call logs.

Setting

1. Radio settings

This function provides users with basic settings of some radios to meet different user needs.

●**Talk around:** When the radio is working in repeater mode but the relay service is

unavailable, it can switch to talk around mode for communication. When the Talk around function is enabled, the screen displays:⊩➔⎸ , and the radio uses the receiving frequency for transmission to achieve direct communication between two terminals. When switching channels, enabling scanning, or restarting, the talk around function automatically turns off.

Note: To enable this function, the transmission frequency and the receiving frequency must be different, and the channel must be selected to allow the talk around function through the programming software.

The Talk around function can be enabled through the [Repeater/Talk around] shortcut key.

● **Tone/Prompt:** Allows users to turn on or off all tones, call ring tones, SMS ring tones, and keyboard tones through the menu. All tone controls include all prompt tones, including voice number announcements. If all prompt tones are turned off, alarm tones can still be played normally.

● **Transmission power:** Users are allowed to adjust the radio transmission power through the menu, which includes high, medium, or low options. High power display: H , medium power display: M , low power display: L .

● **Backlight:** Allows users to change the backlight settings through the menu. The backlight controls both the screen and keyboard lights. Select Auto, and the backlight will turn off when the radio is not operated by any button within the suspend time; select On, and the backlight will be always on.

● **Boot interface:** Users are allowed to enable or disable the boot interface through the menu. Opening the boot interface will display the Belfone LOGO when the device is powered on.

● **Keyboard Lock:** Allows users to lock the keyboard through the menu. When the keyboard is locked, the screen displays: � and no other key operations are possible except for PTT. Press and hold the # key to unlock.

●**Channel lock:** allows users to lock the channel through the menu. After the channel is

locked, the screen displays: ☒, the radio will remain on the current channel, and rotating the channel knob cannot switch to other channels.

● **LED indicator:** Allows users to turn on or off the LED indicator through the menu. When the LED indicator is turned off, both the backlight and keyboard light will be disabled, and the LED indicators for transmission, reception, scanning, etc. will not light up.

● **Power-on password:** When the radio is set with a power-on password, the password can be modified through the menu. The old password must be entered correctly before setting a new password. The new password must be entered twice to ensure consistency, and the password modification is successful.

Note: Only when the power-on password is set through the programming software, the password modification option is valid.

● **Language selection:** Supports both Chinese and English languages.

● **VOX:** After activating the VOX function, the status bar will display an icon: ⓥ , users do not need to press the PTT button, directly speaking into the microphone can start Transmission, and it will automatically end Transmission after the voice stops. The VOX function and setting VOX delay can be opened through the menu, you can choose VOX level 1~9 or close it; VOX delay can be set from 0.5~10 seconds.

Note: VOX is not available when headphones are plugged in.

● **Time settings:** Allows users to set the time zone, date, and time through the menu.

● **Location switch:** Allows users to turn on or off location through the menu, and set power-saving and high-performance modes. The power-saving mode can extend battery life. When the location function is turned on, an icon ⊙ will appear in the status bar.

● **Work alone:** Allows users to turn on or off the independent work function through the menu.

● **Upend:** Allows users to turn on or off the upend function through the menu.

● **Convert Mode:** Allows users to turn on or off the convert mode through the menu.

●**Noise Reduction:** Allows users to turn on or off the noise reduction function through the menu.

2. Radio information

View the relevant information of the radio, including battery power, serial number, device number, device name, firmware version, CP version, hardware version, field strength information, date and time, positioning information, sending positioning SMS, etc.

● **Location data:** When location is enabled and valid data is received, you can view longitude, latitude, time, date, speed, altitude, and satellite count.

● **Sending location information:** After activating the location function, the location data can be sent to the desired contacts.

3. Channel Settings

Support to modify the current channel parameters through the menu. In digital mode, you can modify the channel name, transmission time limit, transmission and reception frequency, color code, slot selection, transmission contact, and reception group list; in analog mode, you can only modify the channel name, transmission time limit, frequency, and CTCSS/CDCSS.

●**Channel Name:** Set the current channel alias, supporting up to 16 characters.

● **TOT:** Set the current channel transmission time limit duration.

●**Color Code**: Set the current channel color code, range: 0~15. When the channel is in TDMA direct mode, the color code range is 0~14.

● **Time slot selection:** Set the current channel time slot, you can choose time slot one, time slot two, virtual time slot none, virtual cluster time slot one, and virtual cluster time slot two.

● **Transmission contact:** Set the default contact for the current channel, select private

call or group call or general call contact from the contact.

● **Receiving group list:** Set the receiving group for the current channel.

Recording

1. Recording switch

After the radio is enabled with the recording function, the screen will display the icon:

, and it will automatically record during Transmission or reception.

2. Recording file

Enter the recording date in the recording file menu to view or play the recording.

Recording files can also be read by programming software and played on the PC side.

3. Delete all recordings

Delete all recording files through the menu.

2. My device

View the Bluetooth address, version and other information of the radio, and you can

also view or modify the Bluetooth name.

3. Earphone pairing

Bluetooth headsets need to be paired when used for the first time. The steps are as

follows:

1) Turn on the Bluetooth headset and it will automatically enter a state of waiting for

connection and pairing. At this time, the LED indicator light will flash alternately in red

and blue;

2) The radio enters the "Search for Headphones" menu to search for devices, and selects

the paired Bluetooth headphones in the "Search List". After pairing is successful, the

status bar displays an icon: . The connection record can be viewed in the

"Connected Devices" menu. The name of the connected device can be viewed in the

"Connected Devices" menu. Press the PTT button on the Bluetooth headset to speak

and transmit, or release the PTT button to receive voice.

3) Disconnect the Bluetooth headset in the "Exit pairing" menu.

4. PTT pairing

When using the Bluetooth ring PTT for the first time, pairing is required. Here are the steps to follow:

1) Turn on the Bluetooth ring PTT, and it will automatically enter a state of waiting for connection and pairing. At this time, the LED indicator light will flash blue;

2) The radio enters the "PTT pairing" menu to search for devices. After successful pairing, the status bar displays an icon: . In the "PTT information" menu, you can view the name and battery information of the connected device. Press the PTT button on the Bluetooth ring to speak and transmit, or release the PTT button to receive voice. Turn on the "PTT hold" function, and there is no need to long press the PTT during the call. Press the PTT once and release it to enter and maintain the transmission state, and press the PTT again to exit the transmission.

Note: Bluetooth function is an optional feature

Digital emergency alert

The emergency mode is used to indicate an emergency situation, and an emergency alarm can be initiated at any time on any screen to enter the emergency mode. The radio supports 3 types of alarms, and 3 emergency alarm modes:

Type of Alarm:

Normal: After the radio initiates an emergency alarm, the alarm mode is displayed on the screen and the alarm bell sounds continuously.

Silent: After the radio initiates an emergency alarm, there is no prompt on the screen, no alarm sound is played, and no voice call that matches the recipient is played.

Silent and voice: After the radio initiates an emergency alarm, there will be no prompt on the screen nor will the alarm sound be played, but any voice call that meets the reception criteria will be played.

Alarm mode:

Emergency alarm: The radio enters the alarm mode, and exits the alarm mode when it receives confirmation or when the number of attempts reaches the limit.

Emergency alarm and call: The radio enters the alarm mode, and pressing the PTT key can initiate an alarm call.

Emergency alarm and voice: The radio enters the alarm mode and automatically sends an alarm call.

1.Send an emergency alert

When the channel is equipped with an emergency system, you can initiate an emergency alarm by pressing the [Emergency Mode On] shortcut key. The LED indicator will light up in red, and the screen will display an icon ⌂ .

2.Receive emergency alerts

When the channel is selected with emergency alarm indication, after receiving the alarm, the radio enters the alarm mode, and the interface displays: ⌂ , ID or name of the alarm initiator, and continuously plays the alarm prompt tone.

3.Exit emergency alarm

Press the shortcut key [Emergency Mode Off] to exit the alarm. In regular + emergency alarm mode, the alarm mode will automatically exit when the sender receives an alarm confirmation or the attempt times are reached; in irregular alarm mode, pressing the PTT key will also exit the alarm mode.

Analog emergency alarm

If the analog channel has five-tone signaling or DTMF signaling, it supports the analog emergency alarm function.

1. Send or exit emergency alarm

If the signaling type of the current channel is five-tone or DTMF, and an Analog alarm

system is added, pressing the [Emergency Mode On] shortcut key can initiate an emergency alarm, and pressing the [Emergency Mode Off] shortcut key can exit the emergency alarm.

2. Receive emergency alarms

After receiving the signaling, if the device decodes successfully and the decoding type is "emergency alarm", the interface will display "alarm received".

Working alone

The independent working function is applicable to the personnel who work independently and encounter unexpected situations during work. If they cannot perform keystrokes or voice transmission on the radio within the preset time, the radio will automatically send an emergency alarm to get help.

Man-down

When the user is in a relatively isolated environment, the reverse alarm function can be activated to send an alarm signal to the outside world for help in case of an unexpected fall and inability to continue the operation. The reverse triggering method can be selected as tilt or motion detection. If the triggering method is tilt, the radio will emit a prompt tone when tilted to the set angle. If it is not righted within the preset time, the radio will automatically send an emergency alarm. If the triggering method is motion detection, the radio will remain stationary for the preset time and emit a prompt tone. If there is no movement within the preset time, the radio will automatically send an emergency alarm. If the tilt is caused by a mistake, the radio will give the user a prompt tone a certain period before sending an emergency alarm, which can be handled within the duration of the prompt tone to prevent false alarms.

Convert Mode

When the radio is working in covert mode, it will block all external UI instructions and

disable all sounds. When the radio is connected to headphones and covert mode is turned on, voice can be received through the headphones.

Satellite positioning

The radio supports satellite positioning functions, including GPS, Beidou, GLONASS, and Galileo. This feature allows you to query the location information of the radio, including: time, date, longitude, latitude, altitude, speed, and the number of satellites. The positioning mode can be selected between power-saving mode and high-performance mode. When satellite positioning is activated, an icon will be displayed in the status bar. If the number of call connections or PTT times reaches the set value, the radio will automatically send its location information to the center. It can also send location information to a specified number through the "Send Location SMS" menu. After receiving the data, the target radio will store it in the form of an SMS, which can be viewed in the inbox.

Querying positioning data of other radios: Set the query command through the programming software, and you can use the SMS to query the positioning data of the target radio. The operation steps are as follows:

① Turn on the positioning of radio A and set the "query command" in the satellite positioning settings of the programming software to: ABC.
② Radio B enters the SMS mode, edits the SMS content to "ABC", and sends it to radio A.
③ After receiving the SMS sent by radio B, radio A sends its positioning information to radio B's machine.
④ If radio A has no positioning data, radio B will receive a text message prompt: "Invalid positioning data".

VFO mode

The VFO mode supports two channels, VFOA and VFOB, and allows frequency adjustment between the U/V bands. In channel mode, pressing the shortcut key [VFO Mode On/Off] switches the main channel to VFO mode. If the main channel is above the interface, it switches to the VFOA channel; if below, it switches to the VFOB

channel. Rotating the channel encoder adjusts the frequency according to the set step value, or you can directly enter the frequency on the numeric keypad.

VFO scanning

The VFO scanning function can be activated by scanning the menu or the [Scan On/Off] shortcut key. The status bar displays the icon: ↻ . The radio will automatically adjust the scanning frequency within the set scanning start and end frequency range according to the set step value, and stay on the channel for receiving when scanning a certain frequency with activity.

The radio supports 3 VFO scanning modes:

TO: Scan for the signal, pause for a while, and then continue scanning;

CO: Signal detected, continue scanning 2 seconds after the signal disappears;

SE: Stop scanning when a signal is detected. +

Voice encryption

The encryption function can encrypt the voice and data sent on the current channel to ensure the security of voice and data. The radio supports encryption types such as XOR, enhanced XOR, ARC4, AES256, advanced encryption ARC4, and advanced encryption AES. Among them, XOR, enhanced XOR, ARC4, and AES256 only encrypt voice. When the channel encryption function is enabled, both the sender and receiver must set the same encryption type and encryption key to communicate. When the digital channel does not have encryption enabled, the status bar displays an icon:

▤ .

Note: The voice encryption function is only valid in digital mode.

Priority interrupting

The radio supports forced disconnection and forced insertion of calls. Calls with higher voice priority can interrupt calls with lower priority to seize the floor. There are 4 levels of voice priority, with level 0 being the lowest and level 3 being the highest. Alarms

have the highest priority. To forcefully interrupt, press the [Priority Interrupt] shortcut key to interrupt the call currently in progress on the channel, allowing for new voice or data services.

Note: The priority interrupt function is only valid in digital mode.

TDMA direct mode

When TDMA direct mode is enabled, radios within the same group must use the same time slot for communication. The same frequency under TDMA direct mode supports two different time slot calls at the same time, which are time slot 1 and time slot 2, so as to ensure that the two groups of conversations will not interfere with each other.
Note: TDMA direct mode is only valid in digital mode.

Location display for voice call

When the sender's channel is configured with the "Voice with Position Display" feature, location information will be sent along with the voice transmission. If both parties receive valid location data, the receiver's call interface will display the other party's location information.

Alias display

The radio supports the alias display function. When receiving a call from a contact not in the contact, the device alias of the sender will be automatically displayed, and it also supports automatically adding the stranger to the contact list.

Device ID editing

The radio can store multiple device IDs, and can freely choose the ID to be used for working on each channel.

Pesudo Trunk

When the radio "slot" selects "pseudo trunk", slot 1 or slot 2 can receive. In the direct pseudo trunk mode, either slot can be used for voice transmission and data transmission. When selecting the pseudo trunk in repeater mode, a free slot can be randomly selected for transmission. The time slot for initiating a call in pseudo trunk mode can be set. When the " Pseudo Trunk Transmission Slot" is "None", transmission occurs in whichever time slot is free; when the " Pseudo Trunk Transmission Slot " is "1", the radio initiating a call can only transmit in fixed time slot 1; when the " Pseudo Trunk Transmission Slot " is "2", the radio initiating a call can only transmit in fixed time slot 2. The transmission time slot set here has no effect on the response. When the user presses the PTT to respond, the radio always transmits in the time slot where the call is being received. "Time slot" selection

Note: When using the pseudo trunk option, it is recommended that both the transmitting and receiving sides pair up to use this function.
When the digital channel is selected with networking function, it is recommended to select pseudo trunk as the time slot.

Direct mode in different frequency

When the transmitter and receiver are both configured with direct pass-through mode and the transmission and reception frequency values correspond, the repeater can be directly forwarded without activating the repeater, enabling direct communication between two terminals with different frequencies.

Time Out Timer (TOT)

The TOT function can prevent the current channel from being occupied by a single user for too long. For busy channels, a shorter TOT can be set. If the continuous transmission time exceeds the set value, the radio will emit a "beep" warning sound and automatically end the transmission.

Transmission permission

Digital channel

The transmission permission limits the transmission situation when pressing the PTT button while there is activity on the current channel. In the "always" condition, regardless of the channel situation, transmission occurs directly when the PTT is pressed; in the " color code free" condition, if the color code of the current channel is occupied, pressing the PTT prompts that the channel is busy and transmission is prohibited; in the "channel free " condition, if there is activity on the current channel, pressing the PTT prompts: the channel is busy and transmission is prohibited.

Power saving mode

To enable this feature, the radio will automatically enter power-saving mode when idle. Power-saving mode can extend the battery life, but it will also result in a delay in response time. Users can set the sleep-wake time ratio when the radio enters power-saving mode, the smaller the ratio, the more power-saving the radio will be.

Low battery prompt

When the battery is low, the radio will give a "low battery" prompt tone. Please charge or replace the battery in time to avoid affecting normal use. Otherwise, the radio will automatically shut down when the battery is too low.

Reject strange calls

Turn on the function to reject calls from strangers, the user is not allowed to make or receive calls from contacts that do not exist in the contact. When a strange number is entered and a call is initiated, the radio will prompt: invalid number. When a strange number calls in, the LED indicator light is green, but there is no voice. (If receiving group call or full call, the calling device ID does not exist in the contact and cannot be accessed)

Monitoring

Both digital channels monitoring function. Digital channels can be set to monitor whether they need to match color codes or call numbers. Press the [Monitor] shortcut key to start monitoring, and the status bar will display the icon: . Switching channels will automatically exit monitoring; long press the [Permanent Monitor] shortcut key to turn on monitoring, and only manually press the key again to exit monitoring.

Squelch Level

The Analog channel supports squelch level adjustment, which adjusts the signal strength required for receiving signals. Under normal circumstances, if the communication distance of the radio is relatively close and the signal is strong, the squelch level can be raised. If the communication distance of the radio is relatively far and the signal is weak, the squelch level can be lowered. This not only suppresses noise but also allows for the reception of voice signals.

Specifications

General	Frequency Range	400-480 MHz 136-174 MHz

	Channels	4000
	Zone	64
	Channel Spacing	12.5KHz
	Working Voltage	DC 7.4V (±20%)
	Battery Capacity	2000 mAh
	Average battery operating time (5/5/90)	Analog 15 hours 21 hours
	Frequency Stability	±1ppm
	Antenna Impedance	50Ω
	Dimensions	58 (L) * 36 (W) * 121 (H) mm
	Weight	288g (including battery)
Transmitter	RF Output power	High power: 5W Low power: 1W
	4FSK Modulation Mode	12.5kHz data only: 7K60FXD 12.5kHz data and voice: 7K60FXE
	Transmission stray	-36 dBm≤1GHz/-30 dBm≥1GHz
	Adjacent Channel Power	≥60dB
	Frequency response	+1/-3 dB
	Audio Distortion	3%
	Digital voice encoder	AMBE
Receiver	Digital sensitivity	5% BER: 0.22uV
	Intermodulation	≥60dB
	Adjacent Channel Selectivity	≥60dB
	Stray suppression	≥65 dB
	FM noise	-40dB
	Frequency response	+1/-3 dB
	Rated Audio Output Power	500mW
	Maximum Audio Output Power	1.75V
	Rated audio distortion	3% (typical)
	Conducted radiation	-57dBm

Environmental indicators	Operating temperature range	-20℃—+60℃
	Storage temperature range	-30℃—+85℃
	Moisture proof	MIL-STD-810C/D/E/F/G standard
	Shock and vibration	MIL-STD-810C/D/E/F/G standard
	Dustproof and Waterproof	IP54

Note: The above specifications are tested according to the trial standard. Due to the continuous development of technology, the above index data may be subject to change without further notice.

Statement

In the process of compiling this manual, we have strived for accuracy and completeness in its content. If you have any doubt, please contact us promptly, and we will provide you with detailed answers immediately. Due to the rapid development of wireless communication technology, Belfone reserves the right to modify product design and specifications without further notice. We appreciate your understanding.