2. Enter number you need.

You can disable DTMF tone by turning off all radio tone and prompts.

Secrecy

You can activate or kill any radio in the system. For example, you might want to disable a stolen radio, to prevent thieves use it, and enable it when you get it back.

Note: radio kill or activation is limited to activate the radios with these functions.

Radio Disable

Use menu mode

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to Contacts, and then press [key to select, entries are in alphabetical order.
- 3. Move [or] key to the required alias or ID, and press [lime] key to select.

Or move [or or or] key to Manual Dial, then press twice [we] key to enter a user alias or ID, and press [we] key to select.

- 4. Move [or or] key to radio disable, and then press [menu] key to select.
- 5. The display shows the radio disable: <user alias or ID> and the LED indicator light is red.
- 6. Wait for confirmation.
- 7. If successful, emit a beep and the screen displays radio disable successfully.

Or if it fails, emit a beep and the screen displays radio fail to disable.

Radio Enable

Use menu function:

- 1. Press [MENU] key to enter the menu mode.
- 3. Move [▲ or ☑] key to the required alias or ID, and press [■] key to select.

Or move [or or] key to Manual Dial, then press twice [wew] key to enter a user alias or ID, and press [wew] key to select.

- 4. Move [or] key to radio enable, and then press [en] key to select.
- 5. The display shows the radio enable: <user alias or ID> and the LED indicator light is red.
- Wait for confirmation.
- 7. If successful, emit a beep and the screen displays radio enable successfully.

Or if it fails, emit a beep and the screen displays radio fail to enable.

Scaning List

Create a scan list and assign to a single channel / talkgroup, your radio can support up to 250 scan lists, each up to 16 members. Each scan list support mixed analog and digital channels. You can edit the scan list to add / delete channels or set the priority channel.

Check members of list

- 1. Use the channel knob to select a channel with pre-programmed scan list;
- 2. Press the [REND] key to enter the menu mode;
- 3. Move [or or] key to scan, and then press the [exp] key to select;
- 4. Move [or] key to Viewlist the list, and then press the [lime] button to select;
- 5. Use [or] key to see members of list.

If you set the priority, the priority icon is displayed in the left of member alias, indicating that the member is the Priority or Priority channel; if the priority is set to , no priority icon.

In a scan list, you can not have more than one Priority or Priority channel.

Scanning Instruction

When scanning, your radio can view if there is a voice activity in current channel through circulating pre-programmed scan list. LED lights flashing for a red light, and the scan icon appears on the screen.

When scanning in dual mode, if you're in a digital channel and your radio locking an analog channel, radio will switch automatically from digital mode to analog mode throughout the

duration of the call. And vice versa.

There are two scanning methods

- Manual Scan: According to a pre-programmed scan on / off key or menu function to start the scan, when you start scanning, radio will detect all channels / contact groups on preprogrammed scan list.
- Auto Scan: When you select an already activated auto scan channels / contact groups,
 radio scans from the activated auto scan channel

Start/Stop Scan

Press Pre-programmed Scan On / Off KeyOr Enter The Scan Menu Function

- 1. Using the channel knob to select a channel of pre-programmed scan list;
- 2. Press [MENU] to enter menu mode;
- 3. Move [or v] to scan, and then press [ENU] to select;
- 4. If the scan is disabled, the screen displays on or if the scan is activated, the screen displays off.
- 5. Press [MENU] to select
- 6. When the scan is activated, LED indicator flashes red and displays scan icon ; or when scanning is disabled, LED light goes out and does not display the scan icon.

Scanning reply

Radio detect active channel/contact group when scanning, at this time radio will stay in the channel/ contact group, which is called "Scan hang time" pre-programmed time.

Procedure:

- 1. Hold the radio in a vertical position and keep one to two inches (2.5 to 5.0 cm) distance from the mouth. If you enable the "channel idle tone" function, when transmitting radio release [PTT] key, you will hear a short beep, indicating that the channel is idle, waiting for your respond.
- 2. Within the hang time by pressing [PTT] button, LED indicator light is red.
- 3. Release [PTT] key to respond.
- 4. If you do not respond within the hang time, radio will continue down the scan

Utilities

Utilities includes the following contents:

- Radio settings
- Radio Info
- Program Radio

Radio Settings

Radio Setting includes:

- Talkaround
- Tones/Alerts
- Power
- Backlight
- Squelch
- Intro Screen
- Keypad Lock
- Language
- LED Indicator
- VOX
- Passwd Lock
- Clock
- Mode

Talkaround

When the transponder does not work, or when the radio located outside the range of the transponder but located within the range of other radios call, you can continue to communicate. This is called "talk around."

Press Pre-programmed repeater / talk around button, you can switch between repeater / talk around mode.

Use the menu function

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [wew] key to select.
- 3. Move [or] key to radio settings, and then press the [we] key to select.
- 4. Move [or v] key to talk around, and then press [vey to select.
- 5. If radio is currently in repeater mode, you can see the open, or if radio is currently in talk around you can see the close.
- 6. Press [MENU] key to select.
- 7. Screen showing turn on talk around [new] or turn off talk around.
- 8. The screen automatically returns to the previous menu.

Even after the shutdown, still remains talk around.

Tones/Alerts

including the following contents:

All Tones
 Talk Permit
 Keypad Tones

All Tones

If desired, you can enable or disable all radio tone and prompts (except emergency incoming tone).

Press pre-programmed all Beep ON / OFF to turn on or off all radio tones.

Use the menu function:

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [www] key to select.
- 3. Move [♠ or ▶] key to radio settings, and then press the [♠ lev to select.
- 4. Move [or] key to tones/alerts, and then press [NEW] key to select.
- 5. Move [or] key to all tone, and then press [NEW] key to select.

Keypad Tones

If desired, you can activate and deactivate call admission tone.

- 1. Press [NEW] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [level] key to select.
- 3. Move [or] key to radio settings, and then press the [limit] key to select.
- 4. Move [or or or leading] key to tones/alerts, and then press [or leading] key to select.

- 5. Move [or] key to keyboard tone, then press [lev to select.
- 6. Press [(key to select Open, then enable the keyboard tone, the screen shows keyboard tone is turned on.

Press [] key to select off, then turn off the keyboard sound, the screen shows keyboard tone is turned off.

Power

You can set each channel power level to high or low. Setting: High-power radio implement communications with relatively far distance radios. Low-power radio implement communications with relatively close distance radios.

Press pre-programmed high / low power selection key, you can switch high / low transmit power.

Using the menu function:

- 1. Press the [MEND] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [wew] key to select.
- 3. Move [or] key to radio settings, and then press the [wew] key to select.
- 4. Move [▲ or ☑] key to power, and then press [♠] key to select.
- 5. Follow the on-screen instructions to change the current settings.
- 6. Press [MENU] key to select the new power level.
- 7. Return to the previous menu screen.

Press [ssc] to return to the main screen, the screen displays the power level icon.

Backlight

You can turn on or off the screen backlight according to the need. This setting also affects the menu button and the keyboard backlight.

Press a pre-programmed automatical backlight key to switch backlight settings Using the menu function:

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [▲ or ▶] key to utilities, and then press [♠] key to select.
- 3. Move [or] key to radio settings, and then press the [limit] key to select.
- 4. Move [or] key to backlight, and then press [menu] key to select.

Squelch

You can adjust radio squelch level, thus filtering low signal intensity useless call or channel higher than normal value. Setting: Normal is the default, strict filtering (useless) call or background noise. However, a call from a remote location may also be filtered out.

Press pre-programmed strict / normal squelch button to switch between normal and strict squelch level.

Using the menu function:

1. Press [MENU] key to enter the menu mode.

- 2. Move [or] key to utilities, and then press [lev] key to select.
- 3. Move [▲ or ▶] key to radio settings, and then press [♠] key to select.
- 4. Move [or] key to squelch, and then press [MENU] key to select.
- 5. Select strict or normal, and then press [MENU] key to select.
- 6. The screen returns to the previous menu.

Intro Screen

If desired, you can enable and disable the Intro Screen display.

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [www] key to tight.
- 4. Move [or or leading likely to Intro Screen, then press [□ lead likely likely to select.
- 5. The screen is on, press [[key to enable the Intro Screen display, the screen displays the boot screen display on.

Keypad Lock

You can lock the keypad to prevent accidental key input. Ways include manual and automatic keypad lock, which includes 5S, 10S, 15S three options.

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [key to select.
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- 3. Move [or] key to radio settings, and then press [wey to select.
- 4. Move [or] key to keypad lock, then press [NEW] key to select.
- 5. Move [or] key to manual, and then press [www] key to select, screen show to select Manual, you need to long press [ve) key to lock keypad on the main interface.
- 6. Move [or] key 5S, 10S, 15S, the screen shows to select the corresponding time, then keypad will be locked and return to the main screen if user have not any keypad operation after corresponding period of time.
- 8. Screen shows unlock keyboard, and then return to the main screen.

Language

Radio supports the following languages:

- English
- Chinese
- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [or v] key to radio settings, and then press [NEW] key to select.
- 4. Move [or or] key to the language selection, then press [key.
- 5. Move [or v] key to the corresponding language option, then press [MENU] key.
- Screen displays to select corresponding language, and then jump back to the main interface.

LED Indicator

If desired, you can activate and deactivate the LED.

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [lime] key to select.
- 3. Move [or] key to radio settings, and then press [lev to select.
- 4. Move [or or] key to LED indicator, and press [em] key to select.

Or The screen displays off, press [🕬] button to turn off the LED light, screen shows to turn off the LED light.

If you disable the LED light, buttons and keyboard backlight automatically turns off.

VOX

This function allows you to initiate voice-activated hands-free calls on pre-programmed channels. Whenever a microphone with VOX function detect voice, radio will automatically transmit signals within pre-programmed period of time.

During radio operation press [PTT] key will disable VOX function, to re-enable the VOX function, do one of the following:

- Turn off and return on radio
- Through the channel knob to change the channel, or
- Perform the following procedure:

Note: Enabling or disabling this function is limited to activate radios of these function.

Press pre-programmed VOX on / off key, to turn on or off this function.

Using the menu function:

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [em] key to select.
- 3. Move [or] key to radio settings, and then press the [key to select.
- 4. Move [♠or ▶] key to VOX, and then press [♠ lev to select.

Passwd Lock

- 1. Press [NEW] key to enter the menu mode.
- 2. Move or key to utilities, and then press [NEW] key to select.
- 3. Move[♠or ▶] key to radio settings, and then press [♠ lev lo select.
- 4. Move or w key to passwd lock password, and then press [key.
- If the password is incorrect, the screen displays an error code. If the password is correct, the screen displays options.
- 8. Move [or v] key to change power-on password, and then press [well] key to select.
- 9. Enter 8 digits new password, and then press [MENU] key to select.
- 10. Once again, enter 8 digits new password, and then press [MEND] key to select.
- 11. Screen displays that password was successfully changed.

Note: The power-on password must be set to eight digits.

Clock

Clock settings are divided into:

- Time
- Date

Time

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [▲ or ▶] key to utilities, and then press [♠] key to select.
- 3. Move [or v] key to radio settings, and then press [vev] key to select.
- 4. Move [▲ or ☑] key to clock, and then press [] key.
- 5. Move [♠ or ▶] key to time, and then press [♠] key to display the current time.
- 6. Press [NEW] key to enter time setting interface.
- 8. Press [MENU] key to save, the screen displays the time has been saved.

Date

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NENU] key to select.
- 3. Move [or or] key to radio settings, and then press [www] key to select.
- 4. Move [or] key to clock, and then press [key.
- 5. Move [or] key to date, and then press [key to display the current date.

- 8. Press [Rep] key to save, the screen displays the date has been saved.

Mode

Mode settings are divided into:

- CH Mode
- MR Mode
- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [or] key to radio settings, and then press [NEW] key to select.
- 4. Move [or] key to mode and then press [MENU] key.

corresponding mode, the screen displays this mode is selected.

6. The main screen will show channel name or frequency (receiving frequency) according to the selected mode.

Radio Info

Radio contains the following information:

- My Number
- Versions

My Number

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [▲ or ▶] key to utilities, and then press [♠] key to select.
- 3. Move [▲ or ▶] key to radio information, and press [♠] key to select.
- 5. The display shows radio ID and name.

Versions

Display radio firmware version.

- 1. Move [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [▲ or ▶] key to radio information, and press [] key to select.

- 4. Move [▲ or ☑] key to radio versions, and then press [♠] key.
- 5. The screen will display the current firmware version, Codeplug version.

Program Radio

Radio configuration mainly includes editing the channel contents

Channel contents can be edited include:

- RX Frequency
- TX Frequency
- Channel Name
- Time out Timer
- CTC/DCS
- Color Code
- Repeater Slot

Rx Frequency

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NENU] key to select.
- 3. Move [or] key to program radio, and then press [lev to select.
- 4. Use the keypad to enter the correct Program radio password (programmed by software), and then press [key to select.
- 5. Move [or or] key to receiving frequency, and then press [lev] key to select.

to select.

- 7. Press the number keys to enter the corresponding number, press [] key to delete the last number, press [] to return to the previous menu.
- 8. After finish the change, press [REW] key, the screen displays receiving frequency has been saved.
- Note: Editing frequency will be limited within the frequency range setted by programming software, if less than the write frequency range setted by software, the final change result will be the minimum frequency of frequency range setted on software, otherwise it is maximum.

Tx Frequency

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [▲ or ▶] key to program radio, and then press [] key to select.
- Use the keypad to enter the correct Program radio password (programmed by software), and then press [] key to select.
- 5. Move [or] key to transmitting frequency, and then press [) key to select.
- 6. The screen displays transmitting frequency of the current channel, and then press [www] key to select.

Note: Editing frequency will be limited within the frequency range setted by programming software, if less than the write frequency range setted by software, the final change result will be the minimum frequency of frequency range setted on software, otherwise it is maximum.

Channel Name

- 1. Press [NENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [or] key to program radio, and then press [www] key to select.
- 5. Move [or] key to the channel name and press [key to select.
- 6. The screen displays the current channel name, press the [] key to switch the input method to enter the relevant letters, numbers or characters, the same as the input method and text editing.

TOT

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or or] key to utilities, and then press [NEW] key to select.
- 3. Move [or or or or left] key to program radio, and then press [or left] key to select.
- Use the keypad to enter the correct Program radio password (programmed by software), and then press [| key to select.
- 5. Move [or] key to TOT, and then press [em] key to select.
- 6. The screen displays infinite, 15S, 30S ... 555S and other options (increasing 15S each time), move [or or or] key to the corresponding option, then press [or or or] key to select; if you choose infinite, the screen displays transmit time close, if you select others, the screen display corresponding time selected.

CTC/DCS

CTCSS/DCS can only be set on analog mode, including:

- CTCSS/DCS encoding
- CTCSS/DCS decoding

Encode

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [key to select.
- 3. Move [or] key to program radio, and then press [wew] key to select.

- 5. Move [or] key to CTCSS/DCS, and then press [) key to select.
- 6. Move [or] key to CTCSS/DCS encoding, and then press [www] key to select.
- 7. Screen display off and a set of CTCSS/DCS encoding value, move [or] key to off, and then press [] key to select, and there will be no CTCSS/DCS encoding value, screen displays CTCSS/DCS encoding value off; move [or] key to CTCSS/DCS encoding value, and then press [] key to select, then set the corresponding value, screen displays the corresponding CTCSS/DCS encoding value.

Decode

- 1. Press [NEW] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [lev] key to select.
- 3. Move [♠ or ▶] key to program radio, and then press [♠] key to select.
- 5. Move [or] key to CTCSS/DCS, and then press [] key to select.
- 6. Move [▲ or ▶] key to CTCSS/DCS decoding, and then press [] key to select.
- 7. Screen display off and a set of CTCSS/DCS decoding value, move [or] key to off, and then press [www] key to select, and there will be no CTCSS/DCS decoding value, screen displays CTCSS/DCS decoding value off; move [or] key to CTCSS/DCS

Color Code

Color code only can be set on digital channels.

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [NEW] key to select.
- 3. Move [or] key to program radio, and then press [key to select.
- 5. Move [▲ or ▶] key to color code, then press [♠] key to select.
- 6. Move [or] key to select color code values, and then press [key to select. Screen shows X(the selected color code value) is selected.

Repeater Slot

Repeater slot only can be set on digital channels.

- 1. Press [MENU] key to enter the menu mode.
- 2. Move [or] key to utilities, and then press [www] key to select.
- 3. Move [or or] key to program radio, and then press [key to select.

- 5. Move [or] key to repeater slot, and then press [key to select.
- 6. Move [or or or] key to select repeater slot values, and then press [www] key to select.

 Screen shows X(the selected repeater slot value) is selected.

VOX level

- 1. Press [MENU] to enter menu mode
- 2. Move [or] to Utilities, then press the [www] key
- 3. Move [or] to radio Programming Radio, then press [NEW]
- 4. Input the correct password of radio (set by software) , press [MEND]
- 5. Move [or] to VOX, then press [MENU]
- 6. Move [or] to set the VOX level you need, there are level 1-10 to be selected.

Tx Contact

- 1. Press [MENU] to enter menu mode
- 2. Move [or] to Utilities, then press the [key
- 3. Move [△or ☑] to radio Programming Radio, then press [Ⅲ□]
- 4. Input the correct password of radio (set by software), press [[]
- 5. Move [or] to TxContact, then press [MENU]
- 6. Move [or] to select the Contacts you need, radio will show the info "TxCotact Selected"

GroupList

- 1. Press [MENU] to enter menu mode
- 2. Move [or] to Utilities, then press the [key
- 3. Move [or] to radio Programming Radio, then press [NOTE]
- 5. Move [or] to GroupList, then press [MENU]
- 6. Move [♣or♥] to GroupList, you will be able to add and delete group members from the selected group list. Or you can move [♣or♥] to select to add group list

Export/Import the Digital Contact

- 1 Click the Digital Contact on the programming software
- 2 If you click "Export" after read the radio's digital contact, you can export the corresponding digital contact from radio.
- If you want to import the digital contacts which have been edited in advance, just click "Import" to select the pre established digital contacts into radio. Additional functions

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Record(Be able to record for more than 8 hours when it's 3000 channels & 10000 contacts)

Record On/ Off

Note: Record function is only available on digital mode

- 1. You can set one of the Buttons Definitions to turn on/off the record
- 2. Menu operations
 - (1)Press [MENU] to enter menu mode
 - (2) Move [⚠or ☑] to Utilities, then press [Ⅲ] to select
 - (3) Move [or] to select Radio Settings,
 - (4) Move [or] to Record
 - (5) Move [▲or ☑] to Turn On/ Turn Off
 - (6) Press [MENU] to select

When the record function is turned on, each digital call will be recorded and stored in the Call Log submenu

Record Check/Playback

- 1 Press [MENU] to enter menu mode
- 2 Move [or] to Call Log, press [NEW] to select
- 3 Move [⚠or ☑] to Record, press [] to select
- 4 Move [or] to record Directory (records will be stored each day), press [or
- 5 Move [or] to select the record you need
- 7 Press [I to select

Specifications

General Specifications	
Frequency	136-174 & 400-480MHz
Channels	3000
Frequency Stability	± 1ppm
Operating Temperature	-30°C~+60°C
Operating Voltage	7.4V DC
Dimension(Hxwxd	131.5*36.8*64
Weight	300g(with battery)
Battery Type	Li-in
Battery Capacity	2200mAh
Antenna Impedence	50Ω
Audio Output Power	1W @ 16Ω
Channel Spacing	12.5KHz
Digital Data rate	9600bps

Digital Protocol	Audio Response	Adjacent Channel Power		Line and Noise	Modulation distortion		ti Oix Digital Hioda	AROK Digital mode		FM Modulation Mode	Standby current	Transmit current	Power	Transmitter
ETSI-TS102 361-1,-2,-3	+1~-3dB	≤60dB@12.5KHz	/≥40dB@12.5KHz	≥ 45dB @ 25KHz	<5%	7K60FXW	12.5KHz(data and voice):	7K60FXD	12.5KHz(data only0:	11K0F3E @ 12.5KHz	0.18A	Analog ≤1.6A Digital≤0.9A	High: ≤5W (HI) Low: ≤1W (Low)	

Receiver

110001101	
Analog Sensibility	0.2μV @ 12dB SINAD
Digital Sensibility	0.25µV(BER:5%)
Adjacent Channel Selectivity	≤-60dB@12.5KHz
Co-Channel Rejection	≥65dB
Spurious Response	≥70dB
Audio Response	+1~-3dB
Rated Audio distortion	<5%
Audio Power	1W
Modulation Noise	≥45dB@25KHz
	/≥40dB@12.5KHz

Note: Specifications will be revised without notice due to technical improvement. Thank you.

Guarantee

Model Number:	
Serial Number:	
Purchasing Date:	
Taronaoning Bato.	
Dealer:	Telephone:
	·
User's Name:	Telephone:
Address:	Post Code:

Remarks:

Please cut along with this line

- **1** This guarantee card to be kept by the user, no replenishment if lost.
- **2** This guarantee card to be filled & chopped by the dealer, or it is invalid.
- **3** Don't alter the guarantee card, please coufirm the serial number on the guarantee card is same as that on the machine.
- 4 One-year guarantee, charger, battery, ear-phone, antenna and cable are not under guarantee.
- 5 The user can get repairing service from the followingways:
- Go to the shop where you buy the machine.
- Our local repairing agents.
- Send back to our company.

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