4GLTE

Network Digital Trunking Radio
POC Radio

RECYCLABLE PACKAGING

USER'S MANUAL

IP-398 , IP-818,IP-398A,IP-229

单页尺寸：14x12.5cm

Thank you for purchasing the 4G LTE Radio.
Our radios have been designed with quality, reliability and efficiency in mind.
We hope that you are happy with your purchase, if you do have any queries or issues please do not hesitate to contact us.

Please read this user manual before using your radio.

Warning

Turn radio off completely when in a flammable environment (gas, dust, fog) e.g. gas station.

General information before use

Please observe the following instructions to prevent, fire, injury and damage to the radio.

The recommended use pattern is one minute of transmission and 4 minutes of reception.

Constant transmission over long periods of time will cause over heating on the back of the radio.

If this occurs, do not place the back of the radio on a plastic surface.

The radio must be remade under no circumstances.

Please do not expose the radio to direct sunlight or any other heat source for long periods of time.

Please do not expose the radio to dust, damp, spillages or objects that are unstable.

If abnormal odour or smoke is noted of the radio, please turn off the radio immediately, remove the battery unit and contact us.

Main function

PTT One touch communication, strong signal and long continuation talking

 Unlimited talking distance, cover a whole country

Private call/Group call/ Member list/ Parent Group call

Battery power voice prompt

Talk priority setting

Loud voice, High fidelity output

Software remote updated

List quick search

PTT Kibitz function

Talk Permit Tone

3 Quick call keys

GPS function (optional)

CONTENTS

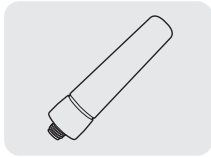Open the box and check the device

Preparation work

Open the box and check the device

Please remove the radio carefully from the box. We suggest you check the accessories thoroughly according to our list before discarding the packaging. If any part is missing or damaged when you receive it, please contact us.
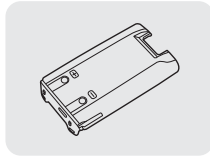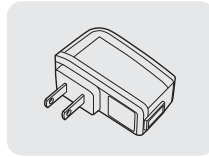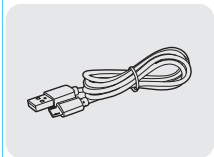
Supplied Accessories

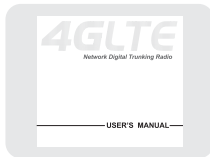|			
Radio body	Antenna	battery	Adapter

USB Cable	Belt clip and Screw	User Manual

Preparation work

Warning:

● Do not over charge the battery.
   If the battery charge is not completed in normal time, please stop charging. The battery may flame, smoke or crack due to an abnormal charging process.

● Do not put the battery in a microwave or high pressure container.
   The battery may flame, smoke or crack.

● Do not expose a broken battery to a flame.
   If the battery is broken or has an abnormal odour, please remove the battery from the radio and keep it away from any flammable environments. The battery fluid is extremely flammable.

● Do not use abnormal batteries
   If the battery is abnormal in odour, colour, shape or in any other form, please remove it from the charger or radio and do not use.

● Please only use charger and adaptor
   The charger and adaptor has been designed to be used exclusively with the Radio.
   It ensures safety and reliability when charging the battery.

User's Manual

Installing And Uninstalling Of the Accessories

Getting To Know The Radio

## Installing And Uninstalling Of the Accessories

Installing the Lithium battery

Charge before use.

To reduce electrical emission in the battery, please remove the battery from the radio when not in use and store the battery in a cool dry place. When storing the battery for long periods of time:

Remove battery from the radio. If possible, fully charge the battery before storage.

Store the battery in a cool dry place (temperature less than 25 Celsius).
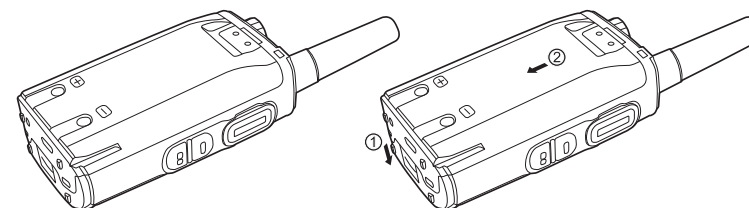
Attributes of Lithium battery

After repeated charging process, the battery capacity will decrease.

The battery degenerates gradually even without being used.

More time is required if charging the battery in cool conditions.

Charging and storage of the battery in relatively warm conditions will jeopardize its service life.

Please do not store the radio inside a vehicle or near heating equipment.

If the duration of the battery shortens significantly, please replace the battery immediately to prevent any fluid leaks.

Charging the Lithium battery

After the AC adaptor is connected and the battery is placed in the charger, the indicator will show red which means the battery is charging. The green light will indicate the battery is fully charged. The light will turn off if the temperature is too high or low, the battery is damaged, the charger is damaged or the connection is poor.
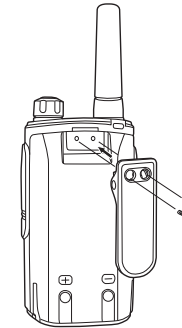
Installing antenna

Hold the radio and antenna, turn the antenna clockwise until it is tightened.
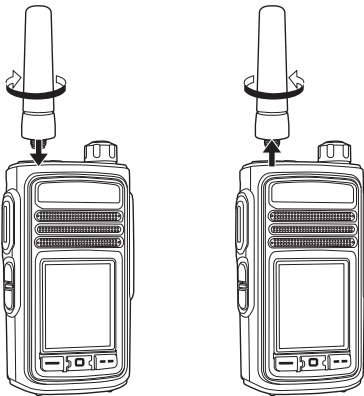

Installing belt clip

If required, screw the belt clip onto the back of the radios using the two screw holes shown on the image below.
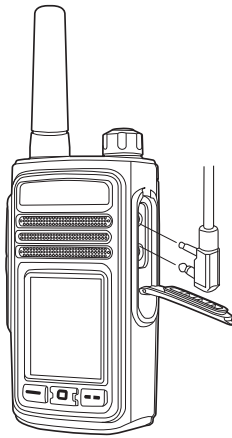

Installing SIM card

Please insert effective SIM card before use, make sure the SIM card can be effective in 4G/3G radio.
Revolve the volume button counter clockwise to switch OFF the radio.
Remove the battery by pulling down the latch, then pushing the battery backwards along the guides.
Lift SIM socket cover, place SIM card in the socket in the correct position.
Replace the battery.
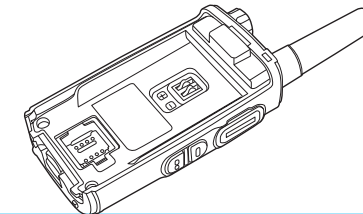
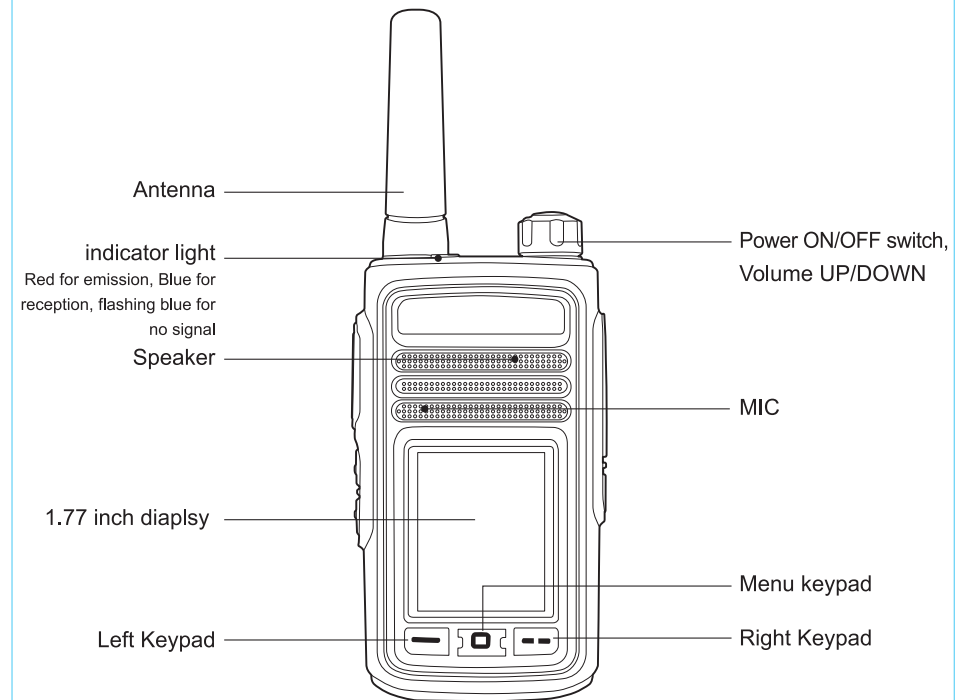## Installing headset

Open the cover on the side of the radio to show the headset sockets. Your headset will work immediately after being plugged in.

Getting to know the radio

Antenna

indicator light
Red for emission, Blue for reception, flashing blue for no signal

Speaker

1.77 inch diaplsy

Left Keypad

Power ON/OFF switch,
Volume UP/DOWN

MIC

Menu keypad

Right Keypad

PTT Push to talk
press the button then
speak to the mic

Side key one
short press for group
select,long press for
member select

Side key two
press for friend select

Belt Clip

MIC/SP
MIC/SP Sock, plug in speaker/
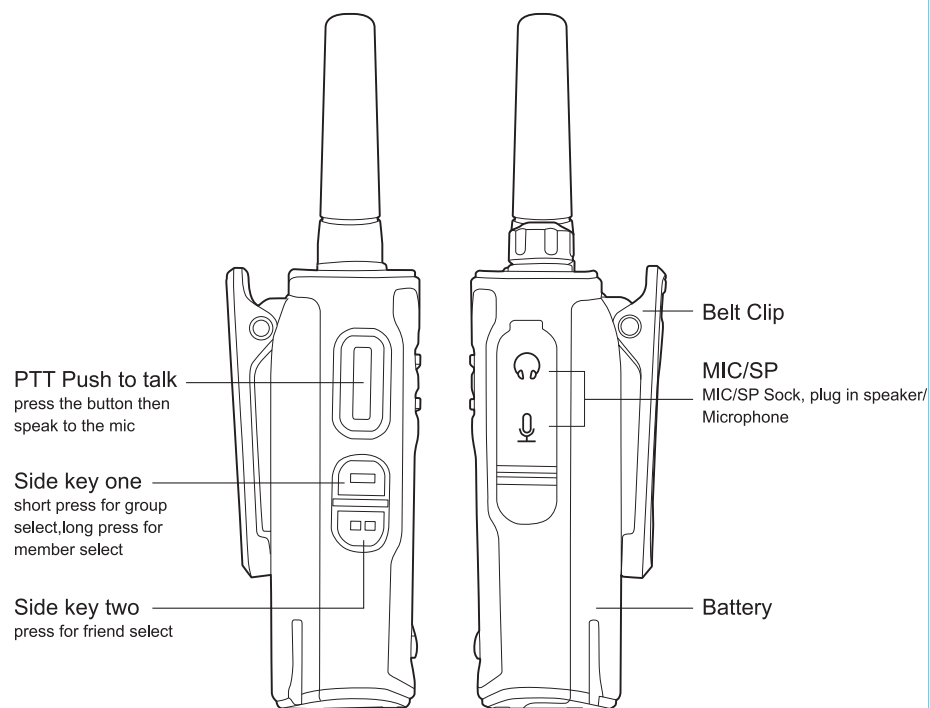Microphone

Battery

User's Manual

Introduction

Basic use

Menu Introduction

Simple troubleshooting

Introduction

Volume selector / ON/OFF switch

Clockwise for switch ON, counter clockwise for switch OFF
Clockwise for volume UP, counter clockwise for volume DOWN

Push To Talk (PTT) button

When the device is standing by(Blue light will flashing slowly), press PTT button to initiate a call
(red light will go on)
During the call, the blue light will go on to show successful reception. If not in reception, hold PTT
to apply for turn to talk (red light will go on) Release the PTT to end call and go back to standing by.
In channel selection, press PTT button to confirm the channel.

Group/member selector

Revolve the selector to choose the member. Press PTT button to confirm the current channel
with voice prompt.

Indicator light status

The blue light goes on after the device is switched on. The blue light flashes fast to indicate
network searching. In standby mode, the blue light flashes every five seconds. The blue light
remains on for reception, and the red light remains on for transmission.

Basic use

Switch ON

Revolve the volume button clockwise to switch ON the radio, there will then be a voice prompt.
After the radio is successfully switched on, the green light goes on first then flashes to indicate
network searching. After the network is connected, there will be a voice prompt.

Switch OFF

Revolve the volume button counter clockwise to switch OFF the radio, the light will turn off.
Note: Do not frequently switch between ON and OFF, it may affect the switch function.

Volume adjustment

Revolve clockwise for volume UP and counter clockwise for volume DOWN.

Headset

Plug in headset, press the PTT button on headset (if there is one) to initiate a call, release the
button to end the call.

Group/Member selection

Revolve the selector to channel 1 when turning the radio on (default channel is 1). Revolve
selector further to select other channels. If the channel is not available, there will be a voice
prompt.

Menu Instruction

When insert SIM and set the correct setting on the Platform:

turn on the radio, it will login in the platform automatically, with the voice: welcome to use PTT system/, if the account is added in the platform successfully, the radio will have the Voice with the Group and User's name.
Note: if turn on the TTS Mute(Text to Speech) function, the radio will not have voice.

Select the Group call

There are 3 methods to start the group call:
1. Revolve the channel knob to enter the group call menu
2. short press the side-key one to enter the group call menu
3. Press Menu key to enter the menu and revolve the channel knob, use ▭ or ▭ to choose the desired group.

Select the single call

There are 2 method to start the single call:
1. Long press the side-key one, to enter the member menu, if there is has member online, you can choose the desired one, if the member list is empty, please add the member first.
2. Using the Menu key to enter the menu and revolve the channel knob to enter the member list, confirm to choose the desired member, if there is member online.
   Press the PTT key to start the single call, press back key to exit.

Select the friend

1. Add the friend: enter the friend list, revolve the channel knob or ▭ ▭ key to move to the desired friend, then confirm , add the friend.
2. Choose the friend, there are two methods:1. short press the side-key two to enter the friend list 2. using the shortcut key, long press the pre-programmed shortcut key to enter the friend list, revolve the channel knob or key to choose the desired friend.Press PTT to start single call and back to exit.

Shortcut key

Shortcut key setting
Shortcut key detail checking:
Enter the Set up Menu to check the shortcut key detail, can be cover , not delete.

GPS

Checking GPS information: enter the menu, Revolve the channel knob or the ▭ ▭ key to GPS menu, confirm to check the latitude, longitude and satellite.
Note: GPS only working outside, if it is succeed open, the GPS icon will be white.

Setting

PTT Sound
OFF: When press PTT or release PTT, it will not have PTT sound
ON: when press PTT or release PTT, it will have PTT sound
OFF 2: Backlight: to choose 15s 20s 30s on
About: Version detail
Network: Auto: Suggested to choose this one.

4G mode

3G mode: if the 4G signal is not stable, please change to 3G.

Test mode: For the B5 test only.

Version: POC version: Updated

MCU version: updated

Factory: PASSWORD: checking with your local dealer

TTS mute: Tex to Speech, if it is set to be OFF, the radio will have the sound to speech, if set to

be ON, the radio will be silence.

Shortcut key:

Simple troubleshooting

If your radio shows and of the following problems, please check the instructions below and if the problem still persists then contact us.

Poor reception: Possible reasons are signal in your current location is weak or the line is busy. If this happens, please move somewhere with improved signal or wait a while before attempting again.

Echo or noise: A possible reason is that the quality of the network provider is flawed. Please restart the radio, this will let it automatically search for an available network with better quality.

Less battery duration: Possible reasons are using and charging the battery in high temperature conditions or searching for a network constantly in a weak network area. If you are in an area with a weak signal, please temporarily switch OFF the radio.

Unable to connect to a network: Possible reasons are that the SIM card is not effective, poor signal or being out of the network service area. Please try either replacing the SIM card or move to a position that is more open, i.e. if you are in a building, move nearer the window.

Software Instruction

Platform Instruction

Smart PTT dispatch Management Platform

Software Instruction

IP address

American: 47.254.88.91 / Singapore: 47.74.211.230

1. Create account in programming software

(1) Press the side key 1 then turn on the radio, you will find the screen:

```
COM write chip

NAME:4027EE8
HOST:114.141.132.4
STATE:
```

(2) Choose the port:

Account writing types
  ⦿ programming cable account writing
  ⦾ on-the-air account writing
MEID [   ]   server IP 114 .141 .132 . 4

Account writing management
  dealer password ******   4. read the account from the radio,
                             if the radio is blank account or need to
  account ID FIFA   change , please set it and write to radio.
                             Note: Different country use different IP.
  password 123456   Take American as example
  IP address [47 . 254 . 88 . 91]

  ☐ New password setting [   ]
  ☑ Private call   ☐ GPS on/off   ☐ Off line beep

  progress [   ]

  [Help]   [Read]   [Write]

Communication port Language setup
  port [COM3 ▾]   language [English ▾]
1. choose the correct com port
☐ Dealer password setup
  old password [   ]
  new password [   ]
           [Read]   [Write]
☑ GPS on/off setup
  ⦿ GPS Off   ⦾ GPS On
           [Read]   [Write]
☑ APN setup 2.set the APN, Take China net as
             example, please set as your provider
  name   [CTNET]   [Read]
  account ID [card]
  password [card   ]   [Write]
                       3. read the APN first,
☐ Change power-on screen then write
  [Select power-on screen file]
  [   ]
  password [   ]   [Change]

Port is off already!

(3) After finished set up, press write. Then you can see the radio name in the radio's screen.

Platform Instruction
4G LTE smart PTT management platform

Click: Platform website. Using the account and password to enter in, you will find the interface as below:

I: For second level admin, which can not add the device, can only creat the third admin or deal with the order issue.

II: for third level admin

1. Add the admin, and set the Terminal Number

1.1 for third level admin, add the group first, as below

2. Add the device

Note: Only third level admin can add the device, please kindly contact your upper admin for the Account. There are two method to add the device: add one by one and add in bulk.

Add the device one by one:

The ID which show in the back of radio

default is 1, do not need change

default is one , do not need change

if need change, please use the software

every 30 second to updated GPS information to platform

Lowest level is 1, higher level, can have transmit priority

Remote kill and call prohibition do not choose, every function will cost the data. please choose the function according to your requirment choose the group, and it will show in the left. click the group again, the default group will show the group ID

2.1 Add the device in bulk

3. Add the order

When the account number is not enough:

If the account quantity not enough support your radios quantity. You can add order then ask your upper level administrator to assign the account.

Click "Order management", then click "Add order"

4. Main group and Sub - group

4.1 Nested groups definitions

Every group can be merged into a new group; it can also be merged into a new group separately; or be combined with other subgroups. However, new groups that are combined by sub-groups cannot be merged.

The new group that merged by subgroups has all members of the subgroup.

Return the surplus account

When the quantity for account has exceed the radios, you can return the accounts to the upper level administrator.

5. Renew the account

When your account want to expand the valid time, you need renew the validity period by this order.

After that, click "Save", and you will find this order in the "Order list"

When the order type is "Return the surplus account, the previous administrator will approve this order automatic, so that the "order states" will shows "Admin approved" , this order is deal with. When the order type is " Add account or renew the account" , you need wait the previous administrator to approve your order.

1.6 File data

You can change the password in this interface.

Notice: when you want to delete the device in the device list, you need, you need to ask the first-level administrator to delete.

Smart PTT dispatch Management Platform

Note: If the Dispatch management platform has registered, The radio will off-line, The same to the radio on and dispatch management off.

we suggested that the Dispatch management account is different with PTT platform.

1. In the software, turn on the GPS function

Port is off already!

1.1 The dispatcher should selects the function for "Check Location" in the platform, so that the dispatcher can get the other radios GPS information.

1.2 The radio should selects the function for "Location" in the platform, and the radio should be outdoors to get the location. Also the programming software should be open the GPS

1.3 Set the IP address and GOOGLE/Baidu Map, and login in.
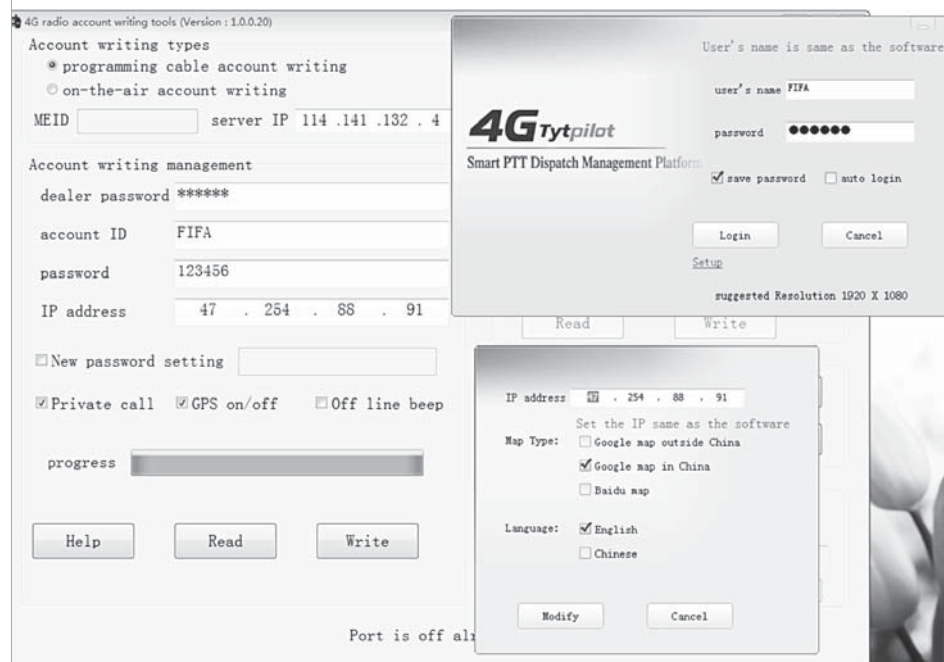
2. Menu in the Dispatch management platform

2.1Group list

Group list is in the left of the Dispatch platform, which can show the group available and the member, click the group can show all the member and statue. Right click, can start the Private call/Get location/Get track.

Note: The "P" means that the radio is in this group. When the radio is in the group same as dispatcher, it can receive a group call from dispatcher and transmit a group call to dispatcher.

Notice: the dispatcher will login the default group, if you want to login other group, you need modify the default group.

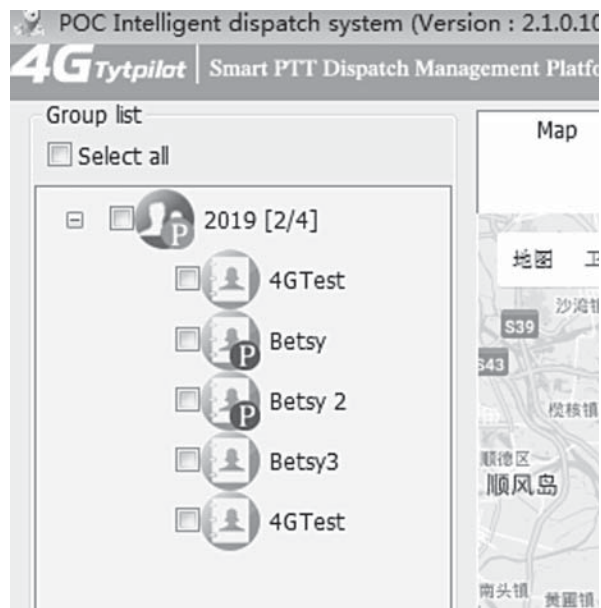| ID	Statue	Username	Account	Password	GPS	Level	Default group	Created time	Valid time	Remark	Users Functions	Edit member list	Operations
57	On line				30	1		2018-07-13	2019-07-13		Show	Edit	Modify

2.2 Temporary Group call

  This is in the right side of the Menu, which can show the all users which the dispatcher choose, can start the temporary call.

2.3 Group call

To start the group call

In the group call, choose the desired group and click twice to enter the group.

Long press the to start the group call

After you choose the private call, Press "PttDown" and you can transmit the radio, and release the "PttDown" to wait for replying. The radio can press "PTT" to reply.
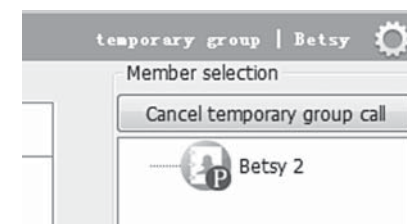
Notice: the continuous transmission maximum time is 50S, when you over 50S, it will exits transmit automatic.

To start the Temporary call

In the Group list, choose the desired member, right click the member, choose the Private call.

Click to cancel temporary group call
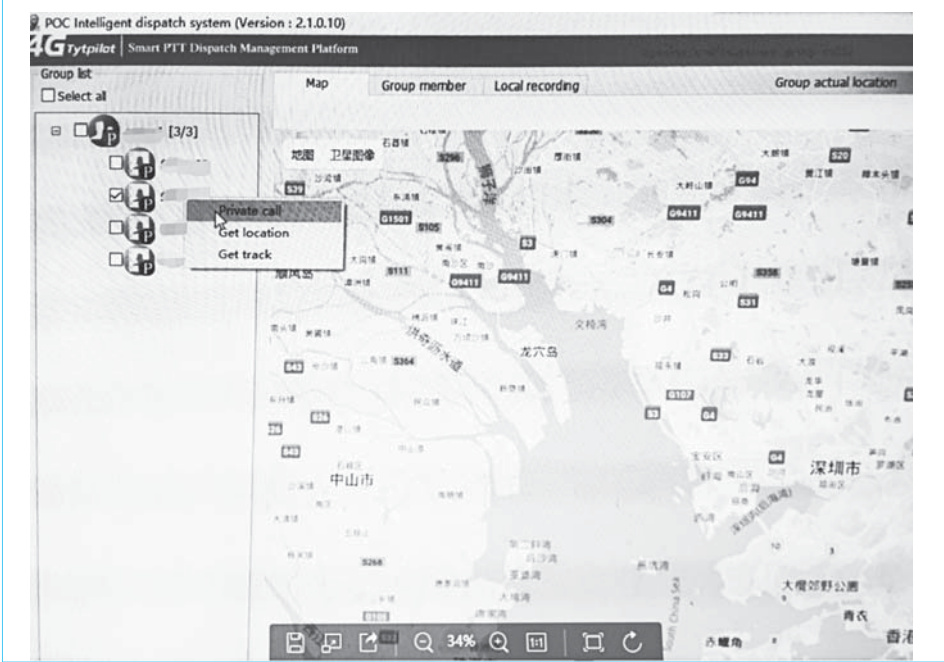If it is no one start talking within 10s, The
temporary will exit automatically.

2.4 To start the private call

Private call, when the dispatcher choose this function, it can transmit anyone in private call.

Operation:

click one radio you want to speak to, then right click, you can find three options: Private call/ Get location/Get track

2.5 Location in the MAP

Function	Instruction
🖑 ◯ ▣	Terminal Box selected, use the Rectangular Box or round box to choose the desired area
▷	Track replay
◉	Terminal Location
+	Map Zoom-in
-	Map Zoom-out

Note: The GPS function only work outside, in the common case, it will open within 1 minutes, the weather will affected.

If the GPS is succeed get the location, the GPS icon will be black, if not it will be red Icon.

2.6 Get track:

you can check the radio's activity trajectory within a period of time.

Operation:

1) Click one radio you want to speak to, then right click, you can find three options: Private call/ Get location/Get track

2) After you choose the get location, you can see the radio's trajectory on the map. You can also click the ▷ to get track

3. Interval: 5/10/20/50S

It means the radio will uploads the GPS information in the chosen time.

4. The activity trajectory records will be saved one month, and every time you can track the activity trajectory within 24 hours, for example, when the start time is 2018-7-18 14: 56: 45, the end time should be within 2018-07-18 14: 56: 46 to 2018-07-19 14: 56: 44
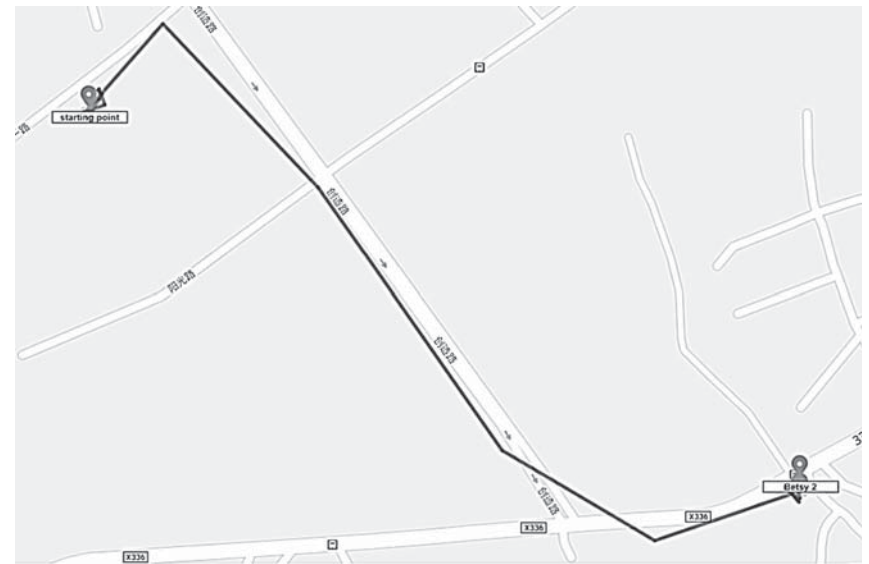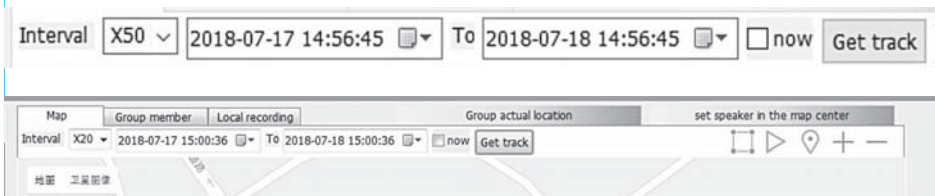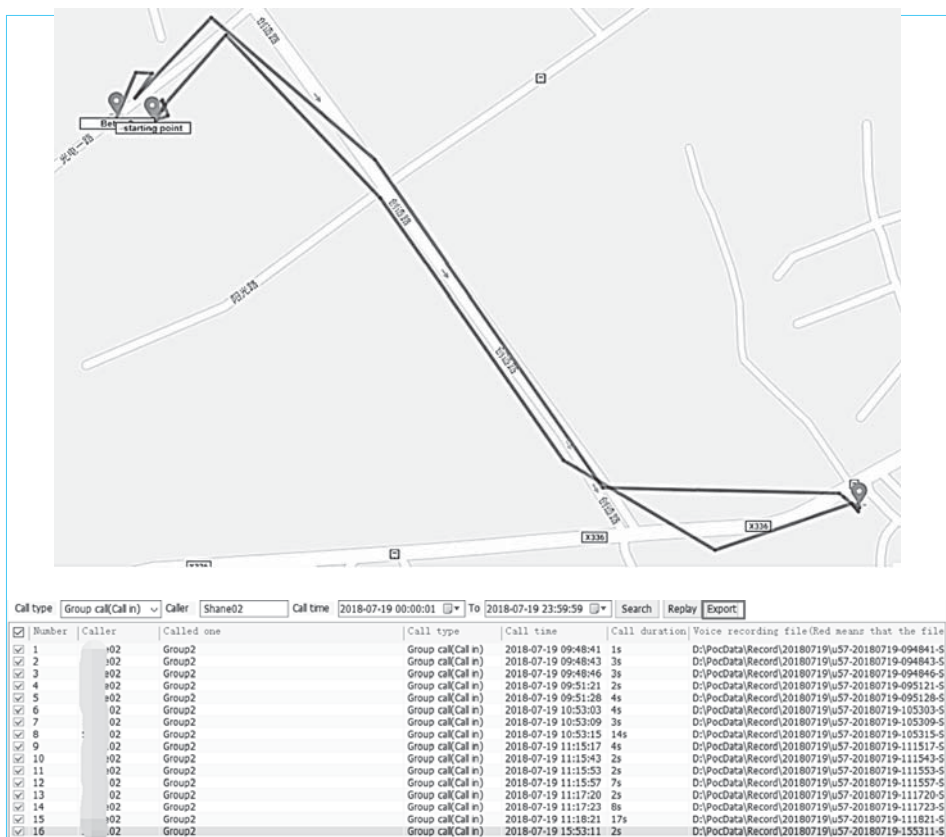
Specification

	Working voltage	3.7V
	Operation system	Linux
	Language	English
LTE FDD frequency	B1	Tx frequency：1920~1980MHz Rx frequency：2110~2170MHz
	B3	Tx frequency：1710~1785MHz Rx frequency：1805~1880MHz
	B7	Tx frequency：2500~2570MHz Rx frequency：2620~2690MHz
	B8	Tx frequency： 880~ 915MHz Rx frequency： 925~ 960MHz
	B20	Tx frequency： 832~ 862MHz Rx frequency： 791~ 821MHz
	B28	Tx frequency： 703~ 748MHz Rx frequency： 758~ 803MHz
LTE TDD frequency	B38	Tx frequency：2570~2620MHz Rx frequency：2570~2620MHz
	B40	Tx frequency：2300~2400MHz Rx frequency：2300~2400MHz
	B41	Tx frequency：2555~2655MHz Rx frequency：2555~2655MHz
WCDMA frequency	B1	Tx frequency：1920~1980MHz Rx frequency：2110~2170MHz
	B8	Tx frequency：880~915MHz Rx frequency：925~960MHZ
CDMA frequency		EVDO Rev.A800M
GSM frequency		900/1800MHz
	Antenna	all networks external antenna .Beidou/GPS.WIFI.bluetooth antenna built-in
	Screen	1.77 SPI color screen，Resolution：128*60
	Battery capacity	≧4000mA
	Rx sensibility	-106dbm
	Max. Tx power	23dBm~25dBm@All up bits
	Working temperature	-10---+35°C
	Storage temperature	-40---+85°C
	Audio output power	2W@10% distortion

AMERICAN VERSION (Tx:450-450MHz, Rx:400-470MHz, USA Version)		
LTE TDD B2	TX:1850–1910MHz	RX:1930–1990MHz
LTE TDD B4	TX:1710–1755MHz	RX:2110–2155MHz
LTE TDD B5	TX:824–849MHz	RX:869–894MHz
LTE TDD B12	TX:699–716MHz	RX:729–746MHz
LTE TDD B13	TX:777–787MHz	RX:746–756MHz
LTE TDD B14	TX:788–798MHz	RX:758–768MHz
LTE TDD B66	TX:1710–1780MHz	RX:2100–2200MHz
LTE TDD B71	TX:663–698MHz	RX:617–652MHz
WCDMA B2	TX:1850–1910MHz	RX:1930–1990MHz
WCDMA B4	TX:1710–1755MHz	RX:2110–2155MHz
WCDMA B5	TX:824–849MHz	RX:869–894MHz

FCC Warnin s and Statements

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the conditions that this deivce does not cause harmful interference.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

SAR tests are conducted using standard operating positions accepted by the FCC with the walkie talkie transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the walkie talkie while operating can be well below the maximum value. Before a new model is a available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC, tests for each product are performed in positions and locations as required by the FCC.

For body worn operation, this device has been tested and meets the FCC RF exposure when used with an accessory designated for this product or when used with an accessory that Contains no metal.
To maintaion compliance with the FCC RF exposure guideline, hold the transimitter and antenna at least 2.5 centimeters from your face and speak in a normal voice,with the antenna pointed up and away from the face.
This equipment comply with FCC radiation exposure limits set forth for an uncontrolled environment .
WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Guarantee

Model Number:_____

Serial Number: _____

Purchasing Date:_____

Dealer: _____   Telephone:_____

User's Name: _____   Telephone:_____

Address: _____   Post Code:_____

Remarks:

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.

Please cut along with this line