



RECYCLABLE PACKAGING

USER'S MANUAL

4GLTE



4G LTE IP radio

IP-590

Thank you for purchasing the 4G LTE IP 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

Main function

SOS function

Voice records playback

TOT

Mic Gain Level

AGC

One key mute

Low power alert

GPS function

Group call / private call / Nested-group call

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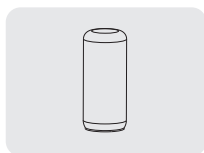
Open the box and check the device

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.

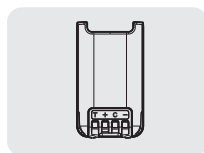
Packing list as below:



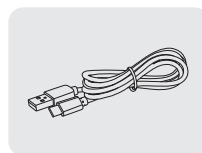
Radio body*1



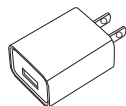
Antenna*1



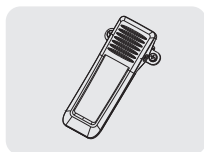
battery*1



Type-C Cable*1



Adapter*1



Belt clip*1



User Manual*1

Preparation work

Warning:

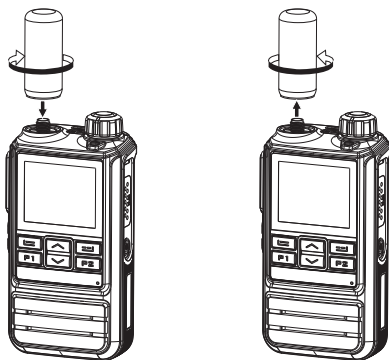
- Do not over charge the battery.
If the battery charge is not completed in normal time, please stop charging. The battery may flame, smoke or crack due to an abnormal charging process.
- Do not put the battery in a microwave or high pressure container.
The battery may flame, smoke or crack.
- Do not 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 radio and do not use.
- Please only use adaptor
The adaptor have been designed to be used exclusively with the Radio. It ensures safety and reliability when charging the battery.

Charging the Lithium battery

After the AC adaptor is connected, 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 adaptor is damaged or the connection is poor.

Installing antenna

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

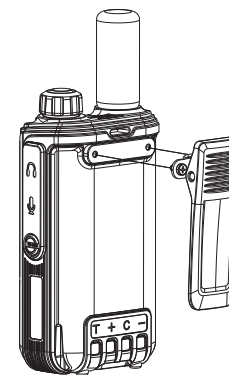


Please do not store the radio inside a vehicle or near heating equipment.

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

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.



Uninstalling belt clip

Remove the two screws to disassemble belt clip

Installing SIM card

Please insert effective SIM card before use, make sure the SIM card can be effective in 4G radio.

Remove 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.

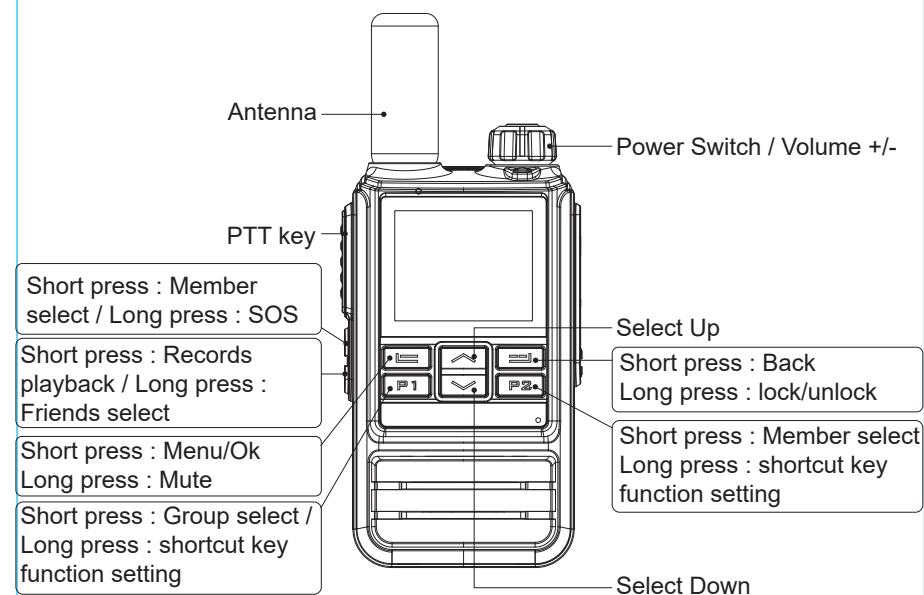
Replace the battery.



Tips:

Please turn off the radio before lifting battery out of the battery compartment to avoid data losing.

Getting to know the radio



*Shortcut key: enter group list/member list, choose one of them, long press shortcut key to define the button. Under the desktop page, radios can quickly go to the group/member which was defined.

Introduction

Switch on / off

Clockwise press the power switch to turn on/off radio .

Note: if the keypad is locked, please unlock the radio before turning it off .

Adjust Volume

When radio on , Clockwise press the power switch to adjust the volume + or - .Max volume level : 10 .

Push to Talk (PTT) Button

When you Press the PTT key. the display will show: I speaking 120 seconds ,The indicator will keep in red at the same time.

When receive Group member call, the display will show: Calling ID / Name and the indicator will keep in green.

Group Select (Group call)

You can change the current group in this function:Enter menu-Group selection/ press Menu key to enter group list, press the Up/Down key to choose your group, press Menu Key to confirm and enter your group.

Member Select (Single call)

You can select the members which are online to make temporary call. Short press Down select key/enter menu-member selection, and then select the member which is online by the Up and

Down selection key Press Menu Key to confirm Member and start to call.

Lock/Unlock Keyboard

Long press the red key to lock or unlock the keyboard.

Mic Gain level

Press Menu key and select the Setting . press the Mic gain level to adjust the mic gain level (+ or - 1.2.3) . make sure communication quality .

AGC

Press Menu key and select the Setting . press the AGC to adjust the AGC RX voice , make sure RX voice quality .

Playback (Voice Records)

Press Menu key and select the Setting. Then Press the No.4 Record playback. Switch on the Record Voice Records will save recently 1 Calling record. You can enjoy more voice records if you put the TF-card in radio back slot .

Location information

Using the radio outside and waiting for around 1 minutes.Switch on location information : radio will show current Latitude and longitude and Satellite

Menu

Unlock the keyboard, and choose following functions by Up and down select key

Group select

Member select

Friend Select

Playback (voice records)

Location information(GPS)

Setting

Software Instruction

IP Server address:

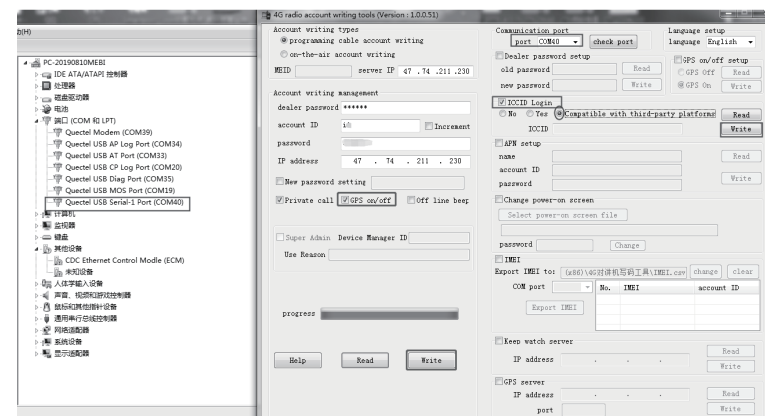
American: 47.254.88.91 /Singapore :47.74.211.230

1.Create account in programming software

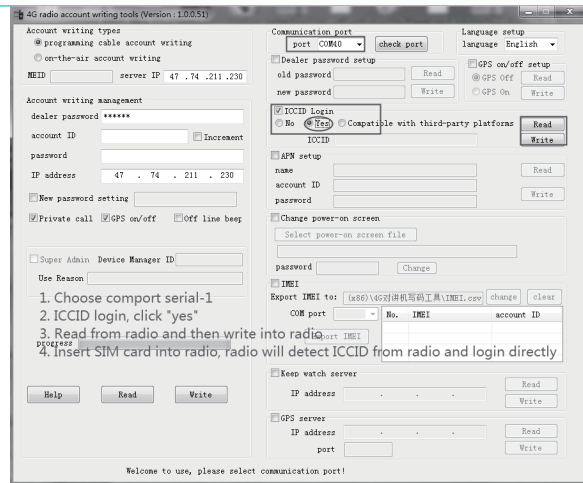
1.Programming account by Cable

Turn on the radio Normally. Connect the programming cable with computer for programming USB cable also the same programming cable:

Read account first. When finished all the account information then write as follow:



1. choose com. port serial-1 port
2. input your account & password, write into radio
3. click ICCID login-Compatible with third party platform, and write into radio



2. Programming Account on the air

Turn on radio and press menu key, select the setting No 5. Firmware Update

Choose OTA Upgrade, and checking the MEID code: such as: 7EEA8BA

Then Open the software

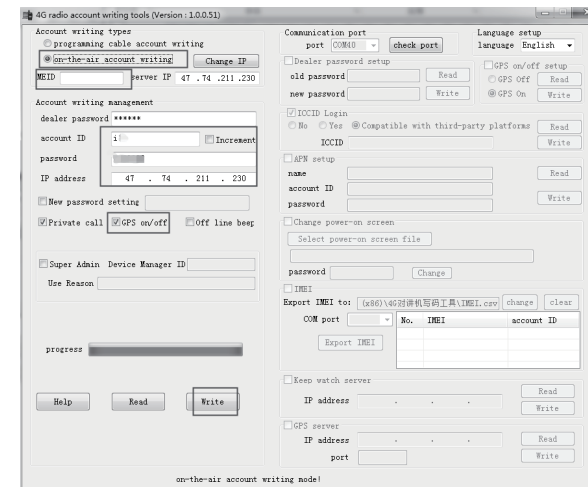
Click the On-the- air account writing

Input the MEID code such as: 7EEA8BA. Read the data first.

Finally input the account and password which one you have setting it on the platform website

Also you need change the IP address what server you use

Write the data and turn on radio again

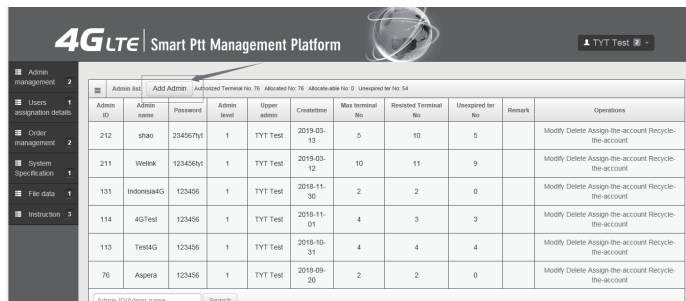


Platform Instruction

4G LTE smart PTT management platform

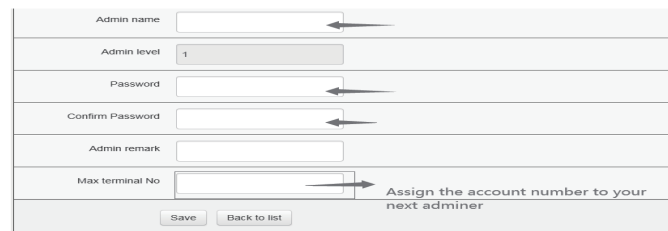
Click: Platform website. Using the account and password to log in, you will find the interface as below:

I: For second level admin, which cannot add the device, can only create the third admin or deal with the order issue



Admin ID	Admin name	Password	Admin level	Upper admin	Creation time	Max terminal No.	Reserved Terminal No.	Unregistered for No.	Remark	Operations
212	shao	234567yt	1	TYT Test	2019-03-13	5	10	5		Modify Delete Assign-the account Recycle-the account
211	Wetuk	123456yt	1	TYT Test	2019-03-12	10	11	9		Modify Delete Assign-the account Recycle-the account
131	Indomsi4G	123456	1	TYT Test	2018-11-30	2	2	0		Modify Delete Assign-the account Recycle-the account
114	4GTest	123456	1	TYT Test	2018-11-01	4	3	3		Modify Delete Assign-the account Recycle-the account
113	Test4G	123456	1	TYT Test	2018-10-31	4	4	4		Modify Delete Assign-the account Recycle-the account
76	Aspera	123456	1	TYT Test	2018-09-20	2	2	0		Modify Delete Assign-the account Recycle-the account

1.Add the admin, and set the Terminal Number



Admin name

Admin level

Password

Confirm Password

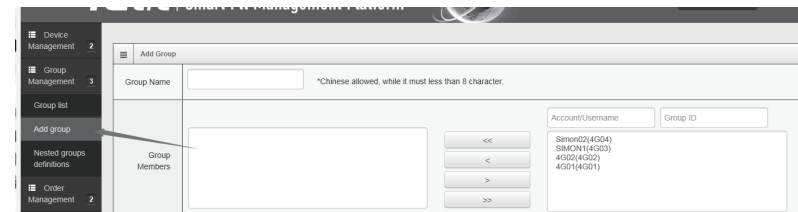
Admin remark

Max terminal No

Assign the account number to your next admin

2.Log in Third Admin and Create the account and Group

Frist add a group



Group Name *Chinese allowed, while it must less than 8 character.

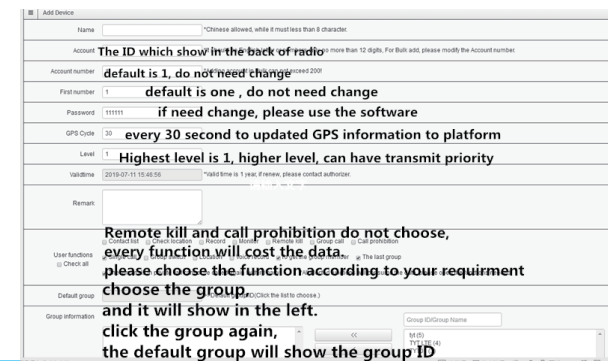
Account/Username Group ID

Group Members

Then: Add the device

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

Add the device one by one:



Name *Chinese allowed, while it must less than 8 character

Account *Chinese allowed, while it must less than 12 digit. For Bulk add, please modify the Account number:
The ID which show in the back of radio

Account number **default is 1, do not need change**

First number **default is one, do not need change**

Password **if need change, please use the software**

GPS Cycle **every 30 second to updated GPS information to platform**

Level **Highest level is 1, higher level, can have transmit priority**

Valid time *Add time is 1 year, if renew, please contact authorizer

Remark

User functions ☐ Check all **Remote kill and call prohibition do not choose, every function will cost the data.**

Default group **please choose the function according to your requirement**

Group information **choose the group, and it will show in the left. click the group again, the default group will show the group ID**

Or If you want Add the device in bulk

As follow :

E11 電 力					
	A	B	C	D	E
1	Name	Password (Special characters other than the underline "_" can not be included)	Account (Only letter and numbers)	Default Group ID	User functions (* multiple functions to fill in the corresponding number, separated by a vertical line") [Contact list:1; Check location:2; Record:3; Monitor:4; Remote kill:5; Group call:6; Call prohibition:7; Single call:8; Group switch:9; Location:10; Voice record:11; To get the group member:12; The list group: 13; (The terminals in private call cannot be called again by third party:14)
2	M-1	111111	MPK01	1004	1004_1 2 3 4 6 8 9 10 11 12 13 14
3	M-2	111111	MPK02	1004	1004_1 2 3 4 6 8 9 10 11 12 13 14
4	M-3	111111	MPK03	1004	1004_1 2 3 4 6 8 9 10 11 12 13 14
5	M-4	111111	MPK04	1004	1004_1 2 3 4 6 8 9 10 11 12 13 14

Finally input the excel documents on website

4GLTE | Smart Ptt Management Platform

Device Management 2

Group Management 3

Order Management 2

Admin management 2

Secondary Management 2

File Data 1

Instruction 3

Add Device

Name

4G

*Chinese allowed, not more than 16 character.

User type

ICCID

①

ICCID number

ICCID

②

*SIM card number, unique identification number of IC card, length cannot be longer than 20

Account number

1

③

To register by SIM-card ICCID:
1. choose ICCID Adding account in Bulk can not exceed 2001
2. Input your ICCID number

First number

1

④

To register in bulk:
3. say total number you want to register
4. that number is for the latest digit of ICCID number

GPS Cycle

30

*Add note > PTT Priorities level 1 ~ 10, High number is high priorities (Default: 1)

Level

1

*Valid time is 1 year, if renew, please contact authorizer.

Validtime

2024-03-27 10:55:22

Remark

Noted: when you want to login the device by ICCID, please do not forget to choose login by ICCID on the programming software

User functions

☒ Contact list

☒ Check location

☒ Record

☒ Monitor

☐ Remote kill

☒ Group call

☐ Call prohibition

☐ Check all

☒ Single call

☒ Group switch

☒ Location

☒ Voice record

☒ To get the group member

☒ The list group

☒ The terminals in private call cannot be called again by third party

*All elected functions will consume the data, please open the functions needed.

3.Order Management

Add Account

Add number

Return the surplusaccount

The returned number

The unassigned account number: 0

Renew the account

Please choose the renew account:

Account/Username

Group ID

Simon02(4G04) (2019-5-09) (2021-5-09)

SIMON7(4G03) (2019-5-06) (2021-5-06)

4G02(4G02) (2018-10-31) (2021-11-01)

4G01(4G01) (2018-10-31) (2021-11-01)

Please choose the renew time:

months (Please input the integer). *Note: The renew time will start from that date the account is approved and renew time is 12 months in maximum.

Save

Back to list

1.add order :

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”

2.Return order : return the useless accounts

3.Renew the account.

Normally the radio usage is 12 months. Once the usage Invalid, you need submit the Renew account number and Usage to your upper admin.

4.Main group and Sub- group

4G LTE Smart Ptt Management Platform

Nested groups definitions

Choose group: 2019 (16) * Main group can be set as sub group of other groups this is main group

Sub-groups management

there are sub- groups, When main group talking, all sub-groups can hear, Sub-group A and B can not communication to each other, Sub- group can add more than one main group, which ever groups transmit, all sub-group can hear. Main group A and B can not communication.

Group ID/Group Name

2019(16)
2018(15)
A0160

Save Back to list

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

Friend Select

You can select the friends which are online to achieve temporary call

First we should add the friends (searching or edit) on the platform website :

4G LTE Smart Ptt Management Platform

Device List

ID	Status	Username	Account	Password	GPS	Level	Default group	Created time	Valid time	Secondary	Remark	Users	Edit member list	Operations
4381	On line	Simon02	4G04	111111	30	1	4G	2019-05-06	2021-05-06	Secondary		Show	Edit	Modify
4380	On line	SIMON1	4G03	111111	30	1	4G	2019-05-06	2021-05-06	Secondary		Show	Edit	Modify
904	Off Line	4G02	4G02	111111	30	1	4G	2018-10-31	2021-11-01	Secondary		Show	Edit	Modify
903	Off Line	4G01	4G01	111111	30	1	4G	2018-10-31	2021-11-01	Secondary		Show	Edit	Modify

Member list

4G01 (903) (4G01)

4G0

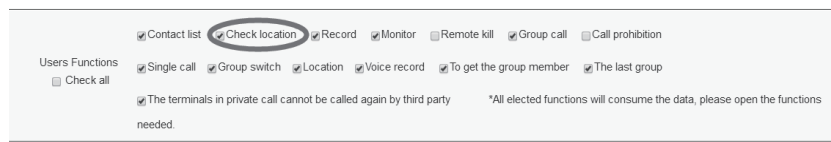
SIMON1 (4380) (4G03)
4G02 (904) (4G02)

Save Back to list

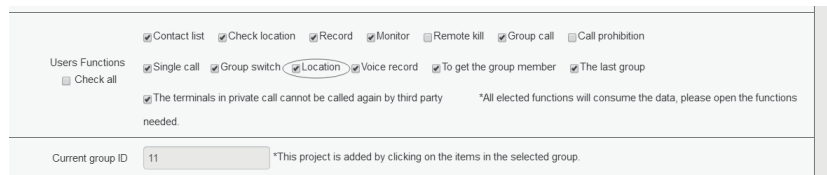
Short press Up select key or press Menu key and select the Friend Select . Select the friends and press Menu key for Temporary call, press Exit key to hang up calling.

Dispatch management platform Instruction

1.The dispatcher should select the function for “Check Location” in the platform, so that the dispatcher can get the other radios GPS information.



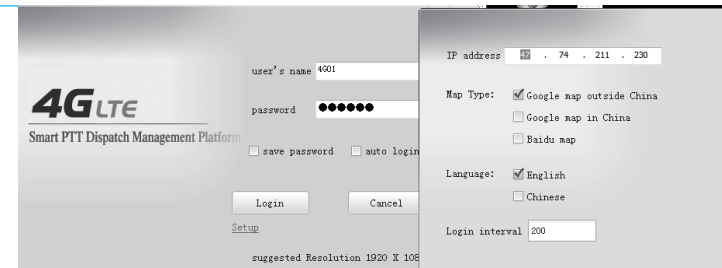
2.The radio should select the function for “Location” in the platform, and the radio should be outdoors to get the location. Also the programming software should be open the GPS



3.Set the IP address and Google Map, and login in.

Use the account and password to log in.

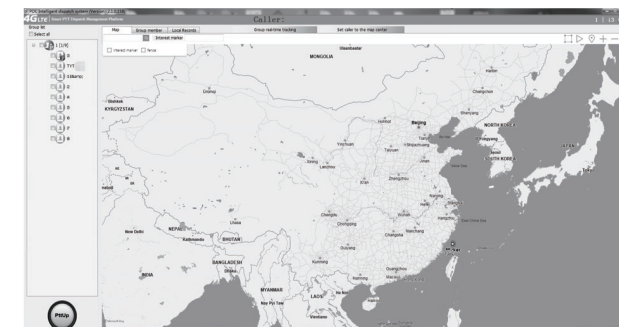
△: Caution : Once you log in the dispatch. Radio account must log out Dispatch and radio Cannot be using same time



3.Menu in the Dispatch management platform

1.Group 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.

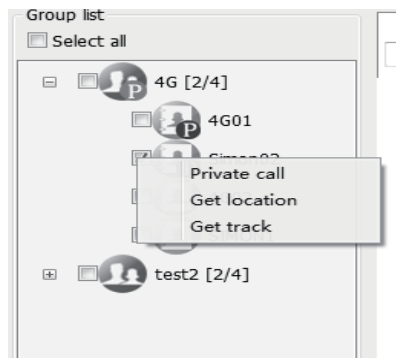


Note: The "P" means that the radio is in this group. When the radio is in the group same as dispatcher, it can receive a group call from dispatcher and transmit a group call to dispatcher.
 Notice: the dispatcher will login the default group, if you want to login other group, you need modify the default group.

ID	Status	Username	Account	Password	GPS	Level	Default group	Created time	Valid time	Remark	Users Functions	Edit member list	Operations
57	On line	4G000000	4G000000	4G000000	30	1	4G000000	2018-07-13	2019-07-13		Show	Edit	Modify

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.



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.

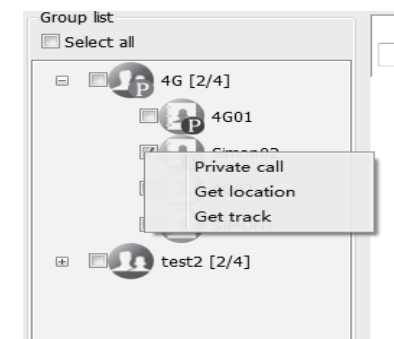
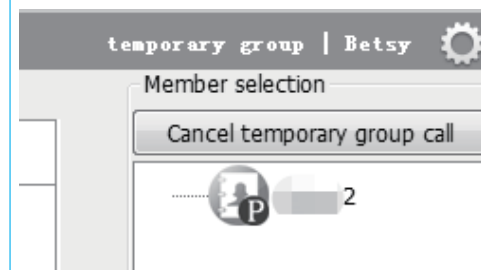
Notice: the continuous transmission maximum time is 50S, when you over 50S, it will exits transmit automatic.

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/



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

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 works 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/

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

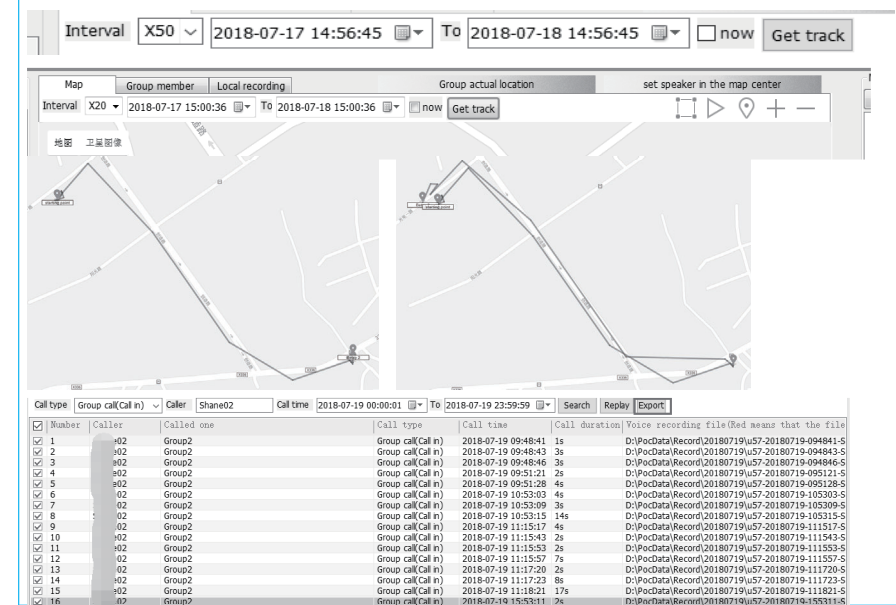
2.After you choose the get location, you can see the radio's trajectory on the map.

3.You can also click the  to get track

4.Interval: 5/10/20/50S,

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

5.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



Call type	Group call (Call n)	Caller	Shane02	Call time	2018-07-19 00:00:01	To	2018-07-19 23:59:59	Search	Replay	Export
1	02	Group2		Group call (Call n)	2018-07-19 09:48:41	1s				
2	02	Group2		Group call (Call n)	2018-07-19 09:48:43	3s				
3	02	Group2		Group call (Call n)	2018-07-19 09:48:46	3s				
4	02	Group2		Group call (Call n)	2018-07-19 09:51:21	2s				
5	02	Group2		Group call (Call n)	2018-07-19 09:51:28	4s				
6	02	Group2		Group call (Call n)	2018-07-19 10:53:03	4s				
7	02	Group2		Group call (Call n)	2018-07-19 10:53:09	3s				
8	02	Group2		Group call (Call n)	2018-07-19 10:53:15	14s				
9	02	Group2		Group call (Call n)	2018-07-19 11:15:17	4s				
10	02	Group2		Group call (Call n)	2018-07-19 11:15:43	2s				
11	02	Group2		Group call (Call n)	2018-07-19 11:15:53	2s				
12	02	Group2		Group call (Call n)	2018-07-19 11:15:57	7s				
13	02	Group2		Group call (Call n)	2018-07-19 11:17:29	2s				
14	02	Group2		Group call (Call n)	2018-07-19 11:17:23	8s				
15	02	Group2		Group call (Call n)	2018-07-19 11:18:21	17s				
16	02	Group2		Group call (Call n)	2018-07-19 15:52:11	2s				

System Specification

Working voltage	3.7V
Operation system	RTOS
Language	English
Antenna	FPC
Display size	113*60*35.5mm
Weight	215g(with battery)
Battery	4000mAh
Receiving sensitivity	-106dbm
Max transmitting power	23dBm±2dBm@Aklubts
Working temperature	-20°C~+60°C
Storage temperature	-20°C~+60°C
Audio output power	2W@10% distortion
Earphone	M6 customized pins

European version

LTE-FDD	B1: Tx frequency: 1920~1980MHz Rx frequency: 2110~2170MHz
	B3: Tx frequency: 1710~1785MHz Rx frequency: 1805~1880MHz
	B5: Tx frequency: 824~849MHz Rx frequency: 869~894MHz
	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	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
GSM	B2: Tx frequency: 1850~1910MHz Rx frequency: 1930~1990MHz
	B3: Tx frequency: 1710~1785MHz Rx frequency: 1805~1880MHz
	B5: Tx frequency: 824~849MHz Rx frequency: 869~894MHz
	B8: Tx frequency: 880~915MHz Rx frequency: 925~960MHz

Latin America Version

LTE-FDD	B2: Tx frequency: 1850~1910MHz Rx frequency: 1930~1990MHz
	B4: Tx frequency: 1710~1755MHz Rx frequency: 2110~2155MHz
	B5: Tx frequency: 824~849MHz Rx frequency: 869~894MHz
	B7: Tx frequency: 2500~2570MHz Rx frequency: 2620~2690MHz
	B66: TX frequency: 1710~1780 MHz, RX frequency: 2110~2180MHz

FCC Statement:

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 following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

SAR tests are conducted using standard operating positions accepted by FCC with the device 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 device while operating can be well below the maximum value. Before a new model is 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.

To control your exposure and ensure compliance with the Population/Uncontrolled environmental exposure limits, always adhere to the following procedures.

Guidelines:

- 1) User awareness instructions should accompany device when transferred to other users.
- 2) Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

- 1) Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), press the Push-to-Talk (PTT) key. To receive calls, release the PTT key.

Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy only when transmitting (in terms of measuring for standards compliance).

2) Keep the radio unit at least 2.5 cm away from the face. Keeping the radio at the proper distance is important as RF exposure decreases with distance from the antenna.

The antenna should be kept away from the face and eyes.

3) When worn on the body, always place the radio in an 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 Population/Uncontrolled environmental RF exposure limits.

4) Use of non-approved antennas, batteries, and accessories causes the radio to exceed the FCC RF exposure guidelines.

5) Contact your local dealer for the product's optional accessories.

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.

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

