Preface

Thank you for purchasing Hytera PT580H Plus F4 TETRA digital terminal. The terminal

has a large translucent TFT color display, and supports both TMO and DMO modes. The

benefits that PT580H Plus F4 can deliver you will dramatically improve your working

efficiency.

To derive optimum performance from the terminal, please read the Safety Information

Booklet and Owner's Manual carefully before use.

Icon Information

The following icons are available through this manual:

⚠ **Caution:** indicates situations that could cause damage to your terminal.

📓 **Note:** indicates tips that can help you make better use of your terminal.

Term Explanation

Key Operation

Short press: to press a key and release it quickly.

Long press: to press and hold down a key for above 1.5 seconds.

Hold down: to press a key and remain holding it down.

Individual Call

Individual call is a simplex or duplex call initiated by a single user to another user, involving the calling party and the called party only.

Group Call

Group call is a simplex call initiated by a single user to a group of users, involving the calling party and all the group members.

Telephone Call

Telephone call is usually a full duplex call initiated between PT580H Plus F4 and a PSTN subscriber (such as telephone user or mobile phone user).

To send or receive telephone calls, the terminal must operate in TMO mode, and must be authorized to access public network through PSTN gateway. Telephone call is a network service. For more details and availability of the service, please contact your service provider.

Emergency Call

Emergency call has the highest priority, and is very helpful for the user to request help when emergency occurs. Generally, it is set to group call type. Emergency call can break off any non-emergency calls in progress.

DMO (Direct Mode Operation)

DMO mode allows terminals to communicate directly with each other in simplex mode, without network restriction. But functions that require network access, such as telephone call and short message, will be disallowed.

TMO (Trunked Mode Operation)

TMO mode allows terminals to communicate with each other via the TETRA network, in half duplex or full duplex mode. Functions that require network access are supported.

To operate in TMO mode, the terminal must be granted authorization by your service provider, and must be within the network coverage.

Air Interface Encryption

An encryption method helpful for protecting message transmitted over the air. It encrypts data and signaling transmitted between the base station and terminal, to protect the message from eavesdropping.

Full Duplex

Full duplex allows the ability to communicate in both directions simultaneously.

Half Duplex

Half duplex, also known as simplex, allows the ability to communicate in only one direction, at a time. Two-way communication is possible, but not simultaneously.

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RF Radiation Information

RF Radiation Profile

Radio Frequency (RF) is a frequency of electromagnetic radiation in the range at which radio signals are transmitted. RF technology is widely used in communication, medicine, food processing and other fields. It may generate radiation during use.

RF Radiation Safety

In order to ensure user health, experts from relevant industries including science, engineering, medicine and health work with international organizations to develop standards for safe exposure to RF radiation. These standards consist of:

The device complies with RF Exposure requirements when the device used at 25 mm held-to-face

➢ United States Federal Communications Commission, Code of Federal Regulations; 3 47CFR part 2 sub-part J;

- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992;

- Institute of Electrical and Electronic Engineers (IEEE) C95. 1 – 1999;

- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998;

FCC Regulations

Federal Communication Commission (FCC) requires that all radio communication products should meet the requirements set forth in the above standards before they can be marketed in the U.S, and the manufacturer shall post a RF label on the product to inform users of operational instructions, so as to enhance their occupational health against exposure to RF energy.

As a conscientious company centering on users, Hytera strictly complies with the forgoing requirements from design, production and test.

Contents

Checking Items in the Package

Please unpack carefully and check that all items listed below are received. If any item is missing or damaged, please contact your dealer.

Battery   Charger   Power Adapter

Antenna   Belt Clip   Strap
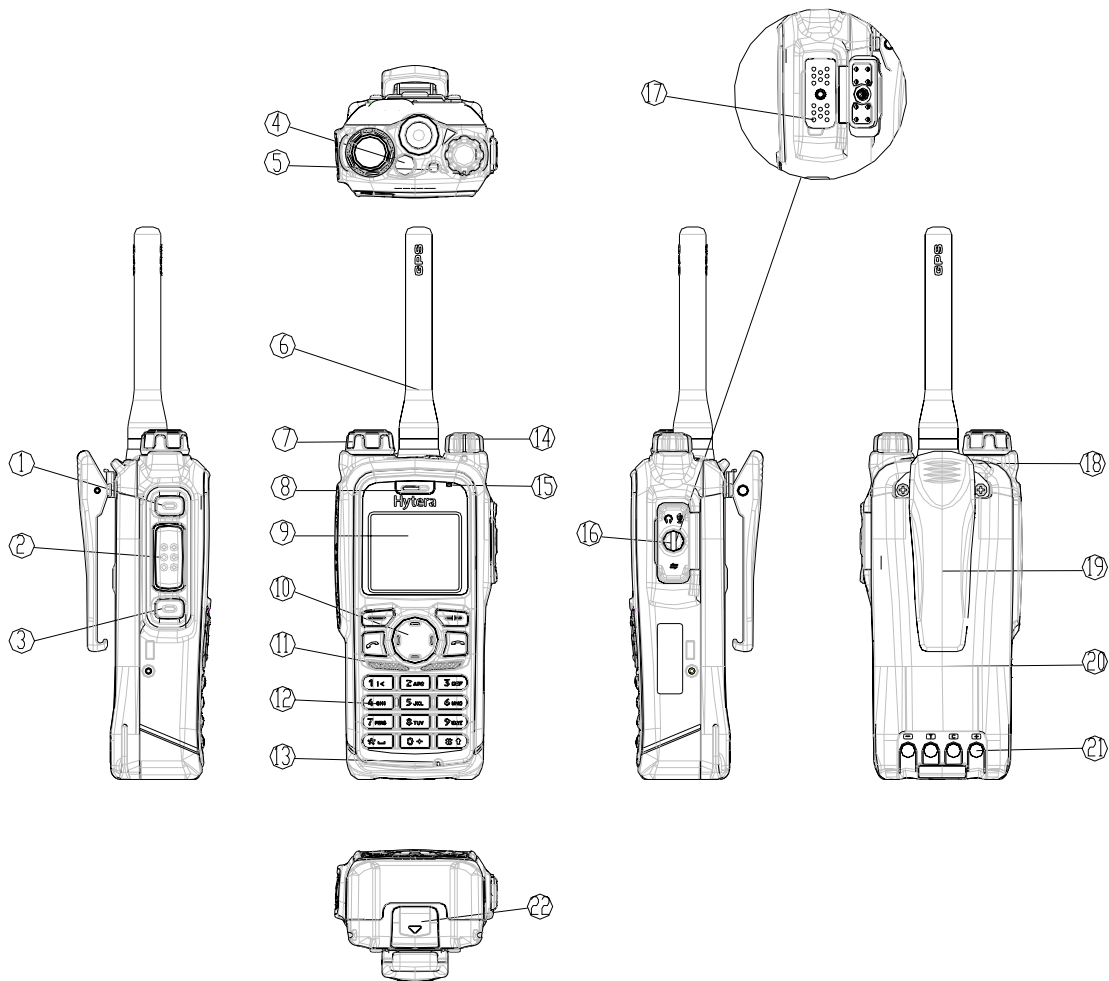
Owner's Manual   Safety Information Booklet   Quick Reference Guide

Portable Terminal

Note: Frequency band is marked on the label of antenna; if not, please refer to the label on the terminal for frequency band information.

Product Overview

Terminal Controls

No.	Part Name	No.	Part Name
①	SK1 (programmable)	②	PTT Key
③	SK2 (programmable)	④	Emergency Key
⑤	LED Indicator	⑥	Antenna

⑦	Encoder/channel selector knob	⑧	Receiver
⑨	Translucent TFT Color Display	⑩	Function Keypad
⑪	Speaker	⑫	Numeric Keypad
⑬	Duplex Microphone	⑭	Volume Control knob
⑮	Simplex Microphone	⑯	Accessory Jack Cover
⑰	Accessory Jack	⑱	Strap Hole
⑲	Belt Clip	⑳	Battery
㉑	Battery Charging pole	㉒	Battery latch

Function Keypad
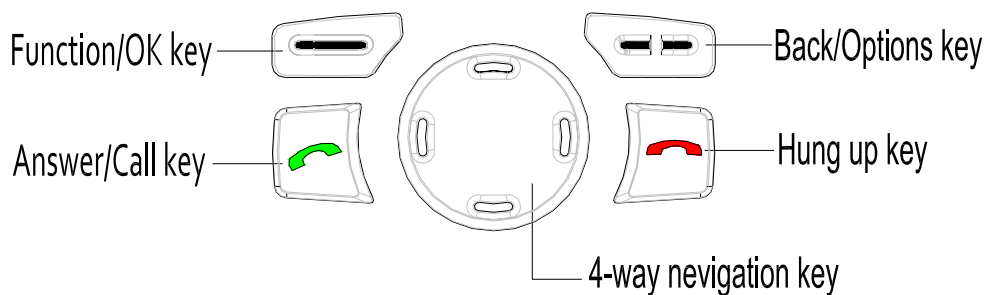
Programmable Keys

Most of the terminal's keys including SK1, SK2, four Navigation Keys, Call Key, numeric

keys 1-9, ⌨ and ⌨ , can be set as shortcuts to terminal functions or menus.

Then you may quickly access menus or features through press of a key.

Available options are:

● PhoneBook

● Create Message

- Inbox

- Outbox

- Drafts

- Dialed Calls

- Received Calls

- Missed Calls

- Profiles

- Date&Time

- Keypad Lock

- Display Saver

- PIN Code

- Change PIN Code

- My Info

- Calendar

- Select Mode

Note: Long and short press of **SK1** or **SK2** can be assigned with different functions.

Before Use

Charging the Battery

Only use the charger and battery specified by Hytera. The charge LED will indicate the charging progress.
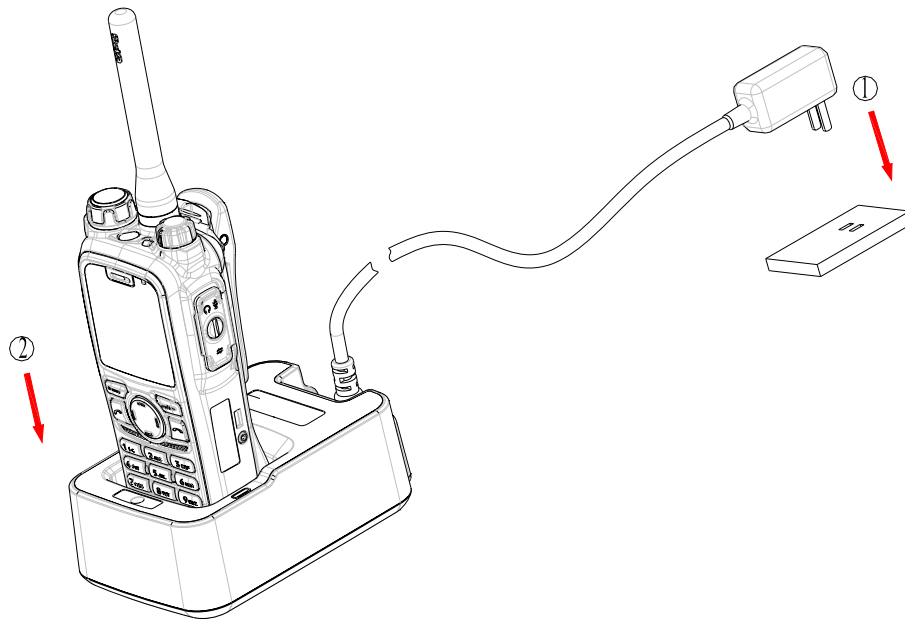
Procedures

1. Connect the power adapter to an AC source socket. See arrows ①.

2. Place the terminal with the battery attached into the charger. See arrow ②. Make sure the battery's charging pieces are in good contact with the charger's terminals.

3. The charging process begins when the charger LED solidly glows red.

4. When charging is complete, green LED glows. Then remove the battery or the terminal from the charger.

The standard 1800mAh Li-Ion battery may take 3 hours for an ordinary charge. But before initial use, please charge it for 5 hours to achieve optimal battery performance.

LED Indications and Charging Progress

LED Indicator	Status
LED flashes red slowly.	Standby (no load)
LED solidly glows red.	Charging
LED solidly glows orange.	Charging (above 85%)
LED solidly glows green.	Fully charged

LED flashes red rapidly.	Failure

Note: Be sure to read the Safety Information Booklet, to get necessary safety information.

Assembly and Disassembly

Attaching the SIM Card

1. Open the SIM card cover by loosening screw, and insert the SIM card properly into the holder.
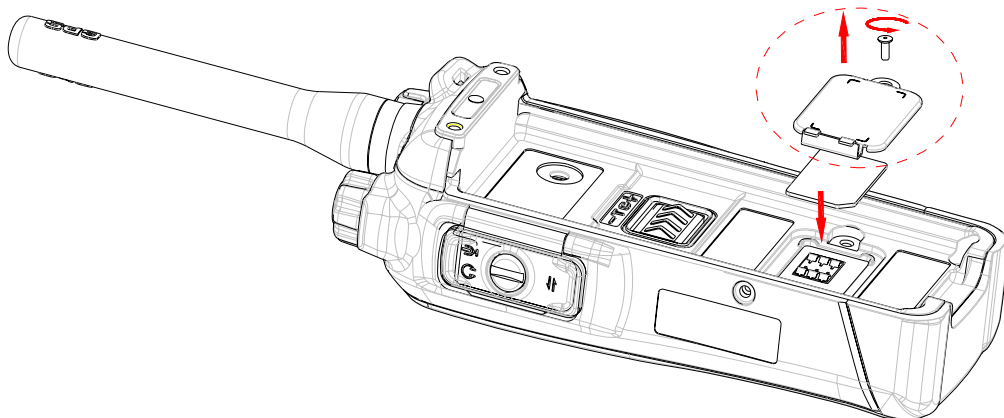
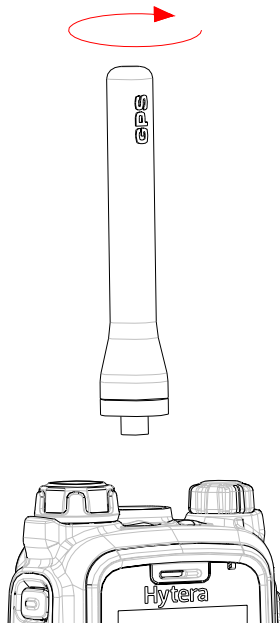2. Close the SIM card cover ,and fasten the screw tightly .
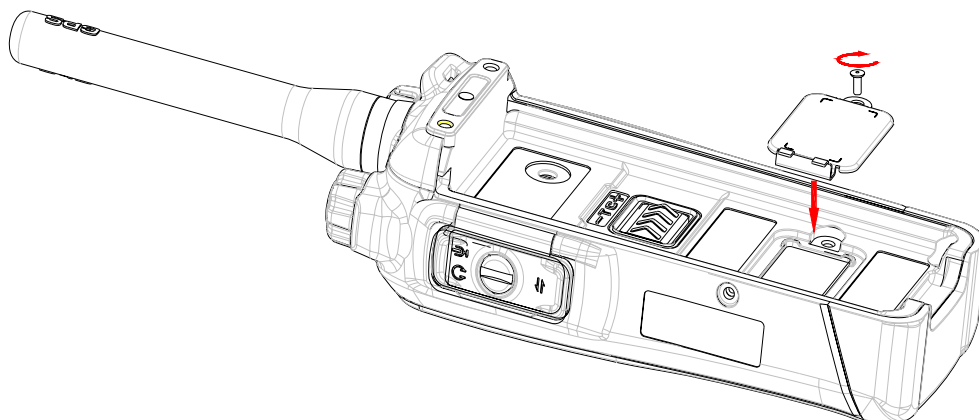
Apply step 1 when you need to take out the SIM card.

 Note: SIM card related services are not supported by the terminal currently, and require future software upgrade.

Attaching the Antenna

Turn the antenna clockwise to fasten it.

To remove the antenna, rotate it counter-clockwise.

Attaching the Battery

1. Fit the extensions at the top of the battery into the slot at the top of the terminal's body.

2. Slightly press the bottom of the battery until a click is heard,

 Note: If the battery is loose or unsecured, please remove and attach it again.
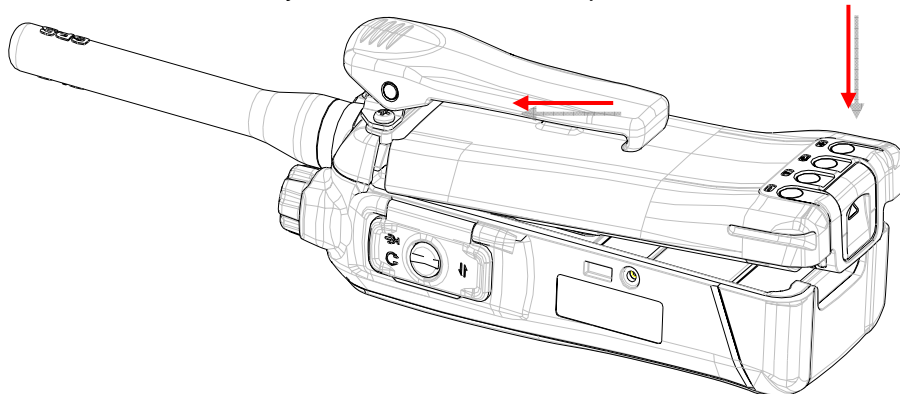
To remove the battery, turn off the terminal first. Then slide the battery latch upwards to unlock the battery.

Attaching the Belt Clip

1. Remove the screws in the main radio.
2. Align the screw holes on the belt clip with those on the terminal's body, and then tighten the screws.
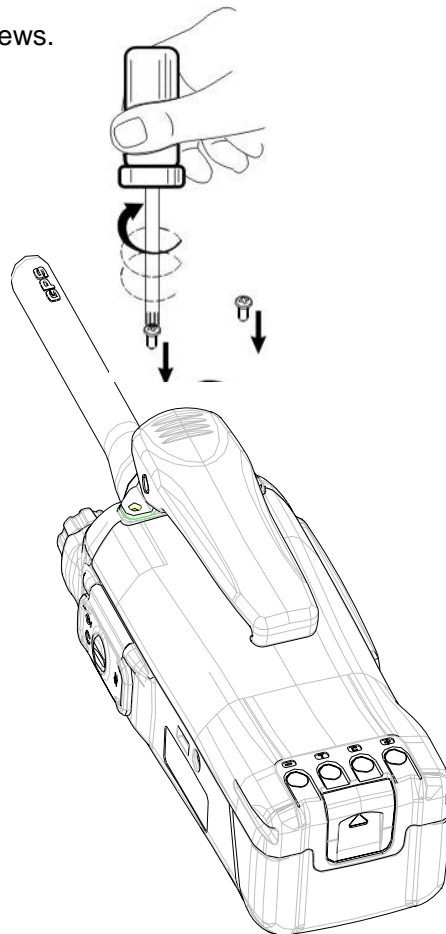
To remove the belt clip, loosen the screws.

Attaching Accessories

1. Open the accessory jack cover as the arrow shown.
2. Align the plug with the accessory jack.

3. Tighten the screw on the plug.
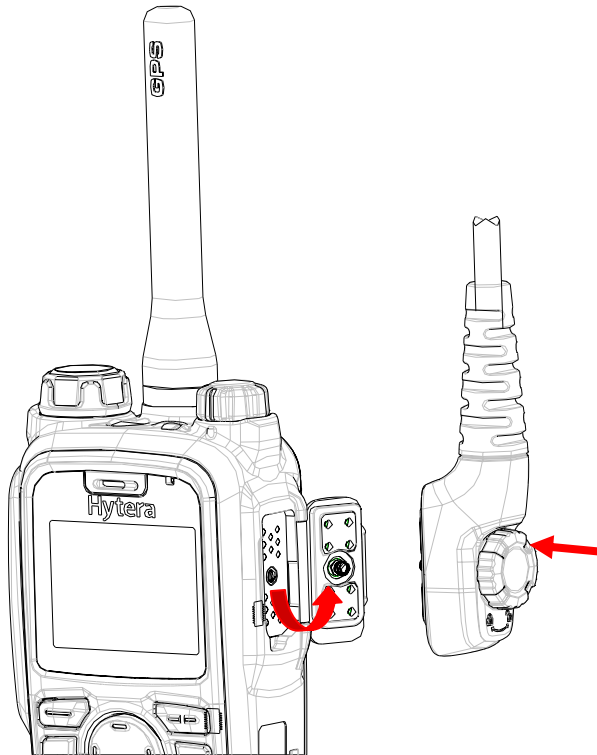
To remove accessories, loosen the screw.

Important Instructions

⚠️**Caution:**

1. If audio quality deteriorates after the terminal is exposed to water, ingress of water into the speaker holes may be the reason.

2. To solve this problem, smack the terminal against your palm with the front cover facing your palm, so that water can flow out of the speaker holes. Then wipe the terminal with a lint-free dry cloth. After the terminal is totally air dried, the audio quality will recover.

3. To avoid serious damage due to water intrusion into the terminal, DO NOT destroy or tear down the label on the chassis, especially the label covering the air vent.

4. To avoid serious damage due to water intrusion into the battery, DO NOT destroy or tear down the label on the battery, especially the label covering the air vent.

5. If the battery is damaged as a result of accidental drop, water protection (IP56) will

not be guaranteed unless you replace it with a new and approved one.

Below texts should be deleted

IP Code --

The IP Code is a designation that indicates the level of protection against ingress of solid

foreign objects and water. It consists of the letters IP (International Protection) followed by

two numerals. Take IP56 for example:

I P 5 6

Code Letters
International Protection

Degree of protection against the
ingress of solid foreign objects.
5 = Dust-protected

Degree of protection against the
ingress of water with harmful effects.
6 = Protection against the effects of
powerful water jets
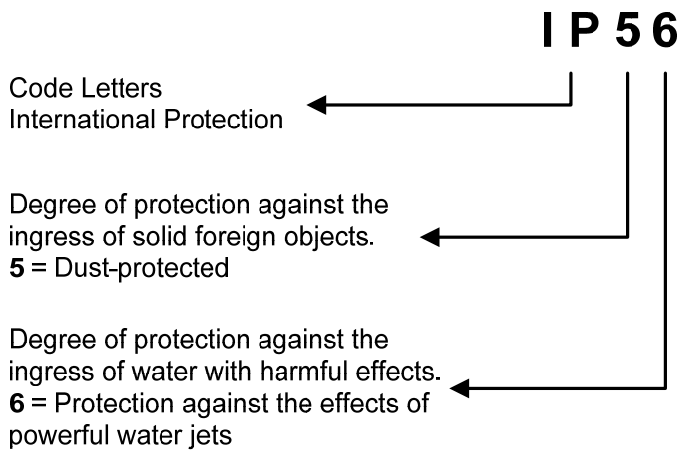
Status Indicators

LCD Icons

The LCD of your terminal displays the terminal status, text entries, and menu items. The

following are the icons that appear on the terminal's display.

■　Standby Interface

Operating Mode ——　Status Icons

—— SSI (Short Subscriber Identity)

—— Talk Group

—— Function Keys
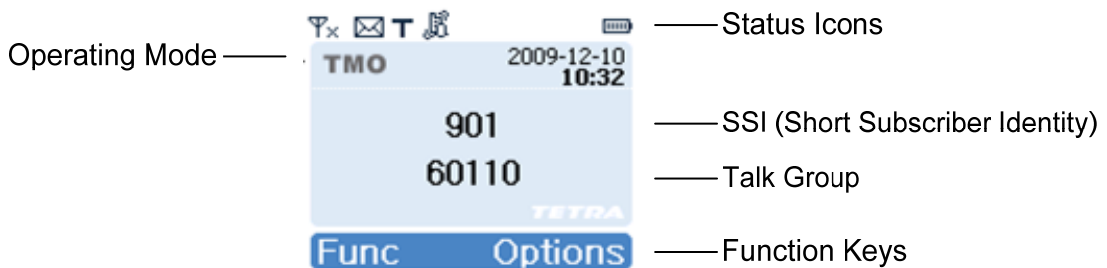
■ Status Icons (TMO and DMO)

Icon Name	Icon	Terminal Status
Battery Strength Icons	▭	Low battery
	▭	More bars indicate more battery power
RSSI	⊽ₓ	No signal
	⊽ᵢₗₗ	More bars indicate better signal strength
Message Icons	✉	Unread message
	✉	Inbox is full and all are unread messages
Operation Mode Icons	T	The terminal currently operates in TMO mode
	D	The terminal currently operates in DMO mode
Profiles Icons	▨	Silent
	▨	Normal (ring and vibration)
	▨	Vibration only
Accessory Icon	⌒	An audio accessory is connected
Call Icon	⌞	A call is in progress
Talkgroup Selection Icon	▫	Selecting a talk group

LED Indicator

The top LED indicator will help you easily identify current terminal status.

Terminal Status	LED Indicator
Transmitting a call	LED solidly glows red.
Receiving a call	LED solidly glows green.
Telephone Call	LED solidly glows red on both parties.
Low battery	LED flashes red slowly.
DMO mode channel free	LED flashes green slowly.
DMO mode channel busy	LED solidly glows orange.

Basic Operations

Turning the Terminal On/Off

To turn the terminal on, hold down the **Power On/Off** key until the terminal shows the power-up screen.

To turn the terminal off, long press the **Power On/Off** key.

Adjusting the Volume

You may adjust call volume through the knob. Rotate the knob clockwise to increase the volume, or counter-clockwise to decrease the volume. Then press **OK** to save the volume.

To adjust alert tone volume, go to "Profiles->Normal->Settings->AlertVolume".

Selecting a Talk Group

1. In the home screen, press the knob to switch it to talk group selection mode (the terminal displays the icon 🖵).
2. Then rotate the knob to select your desired talk group.
3. Name of the current talk group will appear on the home screen.

You may also set a talk group as the default group. Go to "Options->Talk Group->Selected List". See Selected List for more details.

📝Note: Pressing **PTT** in the home screen will transmit a group call to the current talk group.

Locking/Unlocking the Keypad

To lock or unlock the keypad, press **OK** and then ✴↵.

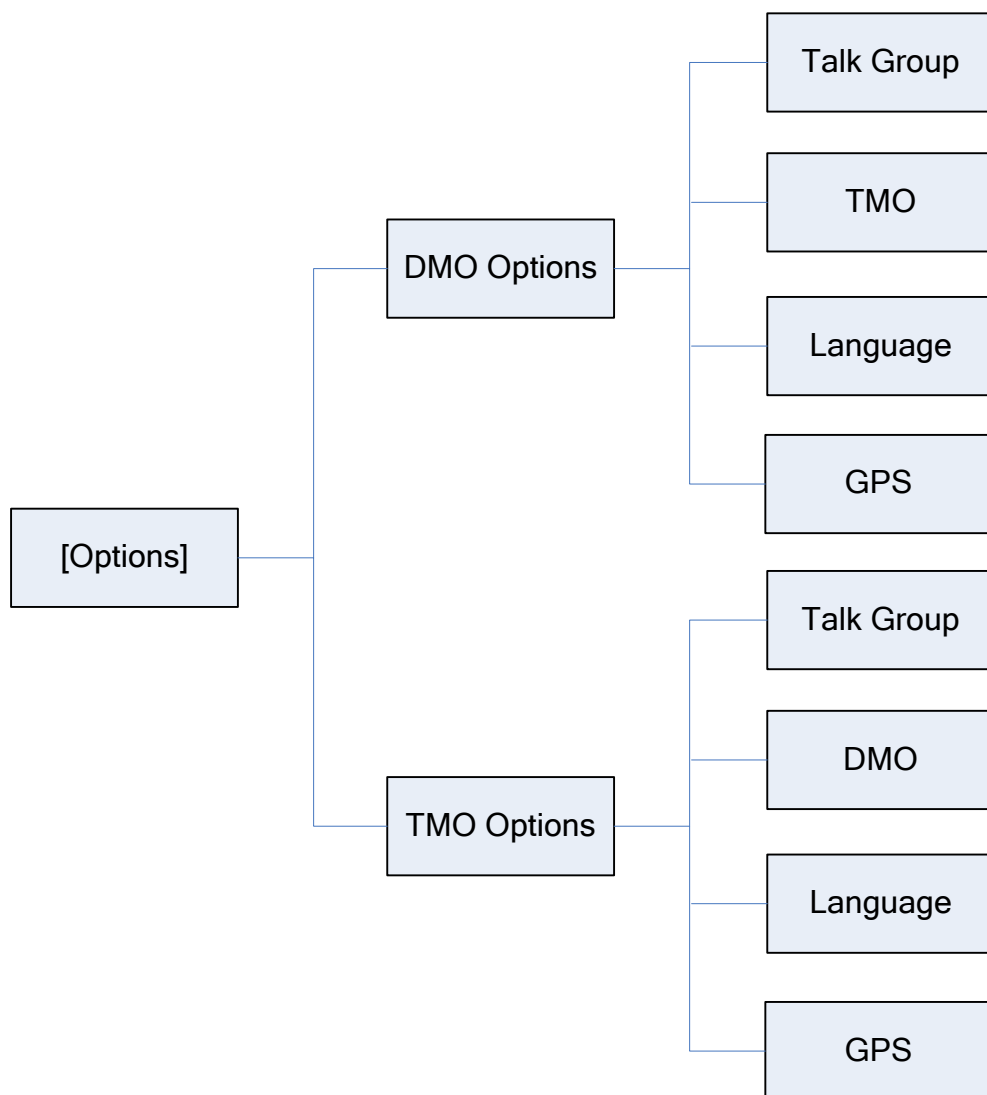When the keypad is locked, you can also answer and reply to calls. After a call is

completed, the keypad will return to be locked.

Switching Operation Mode

You may switch the terminal between TMO and DMO through any of the following methods:

1. Menu selection

Press the **Options** key to access the menu, and then select TMO or DMO.

2. Function key press

In the home screen, press the **Select Mode** key to switch between TMO and DMO.

Call

Individual Call

➢ **Transmitting an Individual Call**

DMO Mode

1. Input the number you want to call through the keypad, or go to the menu PhoneBook or Call Log to select the contact you want to call.

2. Then hold down the **PTT** and speak into the microphone, to transmit a simplex call.

TMO Mode

■ Transmitting a call through menu

1. Go to the menu PhoneBook or Call Log to select the contact you want to call.

2. Hold down the **PTT** to transmit a simplex call, or press to transmit a duplex call.

■ Transmitting a call through Manual Dial

1. Input the number you want to call through the keypad.

2. Press Ctype to select Private No (it will appear on the screen).

3. Hold down the **PTT** to transmit a simplex call, or press to transmit a duplex call.

Note: Entry of private number must comply with the SSI&TSI dialing rules. See Appendix 2 SSI&TSI Dialing Rules for more details.

➢ **Receiving and Responding to an Individual Call**

DMO Mode

When the **PTT** is in released state, the terminal is always ready to receive calls.

When the other party stops talking, you can hold down the **PTT** to call back.

TMO Mode

■ Simplex Call

When a simplex call is received, you can receive without any operation, unless the

LCD prompts you to press the **PTT** to answer a call. When the other party stops talking, you can hold down the **PTT** and speak into the microphone to call back.

■ Duplex Call

When a duplex call is received, you can press to receive. And both parties can speak simultaneously without any operation.

Group Call

Available talk groups are preset by your dealer. DMO mode supports up to 1024 talk groups, and TMO mode supports up to 2048 talk groups. Both DMO and TMO support group call, and operations are the same in both modes.

➢ **Transmitting a Group Call**

1. In the home screen, press the knob to switch it to talk group selection mode (the terminal displays the icon).
2. Rotate the knob to select a talk group you want to call.
3. Press the knob again or press **OK** to confirm.
4. Hold down the **PTT** to transmit a group call.

Note:

In TMO mode, you can transmit a group call to a talk group only after it is attached successfully. If you failed to attach a talk group, the reason may be that the group does not exist in the network, or you are out of the network coverage.

➢ **Receiving and Responding to a Group Call**

When a group call is received, you need not make any operation. When the calling party stops talking, you can hold down the **PTT** and speak into the microphone to call back.

Telephone Call

➢ **Transmitting a Telephone Call**

1. Input the number you want to call through the keypad.

2. Press Ctype to select PABX or PSTN (it will appear on the screen).

3. Press [icon] to transmit a telephone call.

➢ **Answering a Telephone Call**

When a telephone call is received, you can press [icon] to answer the call. And both parties can speak simultaneously without any operation.

To reject or to hang up a telephone call, press [icon].

[icon] Note: The terminal must be set with appropriate Gateway No. Please contact your network operator for more details.

Emergency Call

Both DMO and TMO support emergency call, and operations are the same in both modes. Long press the top **Emergency** key to transmit an emergency call. To terminate the call, press [icon].

In DMO mode, emergency calls are transmitted to the default talk group. And in TMO mode, the target receiver is programmable through the programming software.
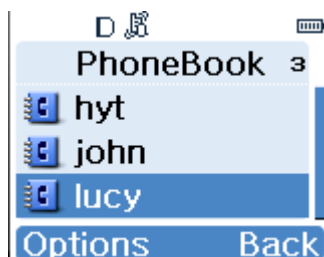
[icon] Note: Please speak into the duplex microphone when sending a duplex call, or the simplex microphone when sending a simplex call.

Menu Navigation
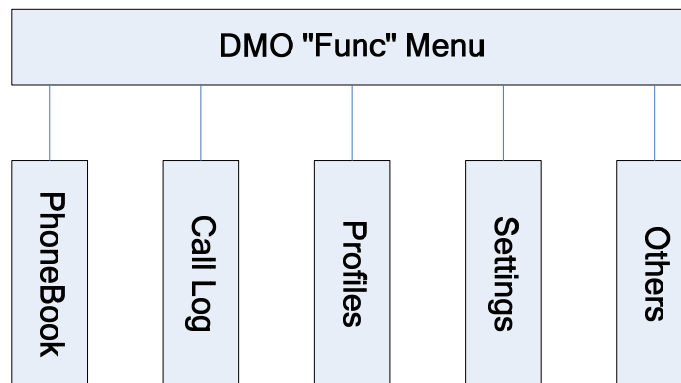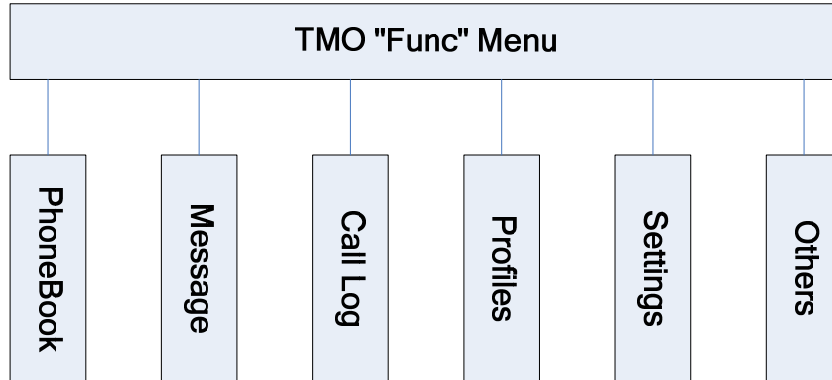
Press the **Function** key to access the menu list. The operations in TMO mode are the same as that in DMO mode. Here we are going to introduce all menu items based on TMO mode.

PhoneBook

This menu is used to store your contact information. It can contain up to 512 entries. Each entry consists of contact name and contact number. To access this menu, press "Func -> PhoneBook" in idle mode, and then you can perform these operations:

■Create new contact

■View a contact

■Modify a contact

■Delete a contact

■Delete all contacts

■View phonebook memory

■Search a contact (by name)

■Call a contact

With this menu, you can make a duplex (for TMO only) or simplex call to a contact. The method is as follows:

1. Select a contact from the menu;

2. Press and hold down **PTT** key to make a simplex call, or press to make a duplex call.

   Alternatively, you can make a duplex call by selecting "Options -> Call".

Message
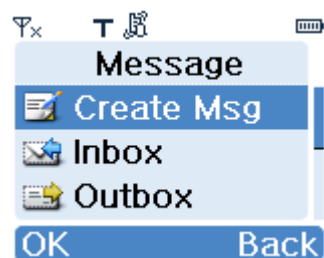
■**Create Message**

(1) Status Message

Status Message is predefined by your dealer. You can choose to read and send them, but no editing is available.

(2) User Message

This option allows you to create a new text message with 140 bytes at most. The receiving party can either be an individual or a group.

■Inbox

All received messages are saved here. It can contain up to 50 entries. When a new message arrives, the icon ✉ will appear in the status bar. Press **View** to read the new message right away or press **Back** to view it later. When the inbox is overflowed with unread messages, the icon ✉ will appear in the status bar. Please sort your inbox in time to receive more messages. For any message, you can perform these operations:

Reply: to reply to the message sender;

Delete: to delete the current message;

Delete All: to delete all received messages;

Individual: to forward the message to an individual user;

Group: to forward the message to a group;

Edit: to edit the content of the message;

Extract No.: to extract the number;

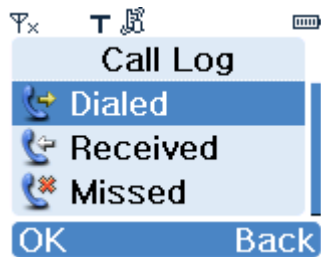**Call:** to call the message sender.

■Outbox

The outbox can save up to 20 sent messages. The operations available for any message in outbox are: Delete, Delete All, Individual, Group, Edit (available to User Message only) Extract No., and Call.

■Drafts

You can save up to 10 drafted messages here. For any message, you can choose to delete, edit or send it.
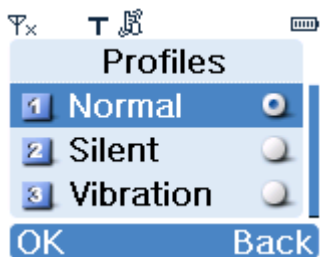
Call Log

This terminal can save up to 20 entries in the option Dialed Calls, Received Calls and Missed Calls respectively. When there is a missed call, appropriate indications will be given on the display.

After selecting an entry, these options are available: Call, View, Save, Delete, Delete All.
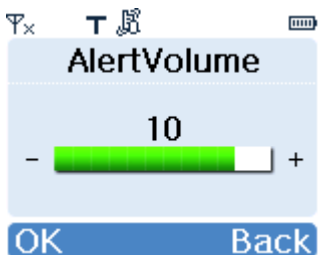
Profiles

■**Normal**

In this mode, the terminal will alert you to an incoming call or a new message by giving ring or vibration indication. To match your actual needs and preferences, you can customize the following parameters:
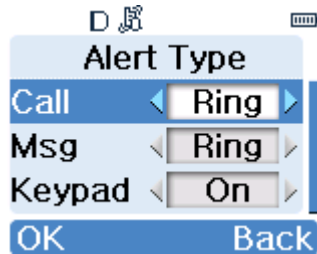
➤ Alert Volume

You can decrease or increase the volume level using **Left** or **Right** navigation key.

➤ Alert Type

You can use **Left** or **Right** key to select your desired alert type for an incoming call, a new message or keypad press. For an incoming call or a new message, the available options include: Off, Ring, Vibra and Rg&Vb; for keypad press, the available options include On and Off.

➢ Ring Tone

You can use **Left** or **Right** key to select your desired alert tone for an incoming call or a new message.
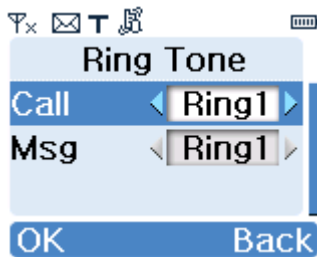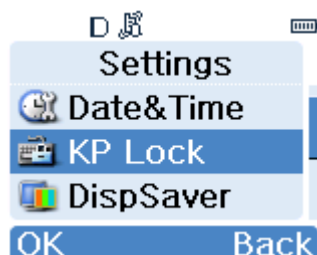

■Silent

In this mode, no ring or vibration indication will be given when a new call or new message arrives.

■Vibration

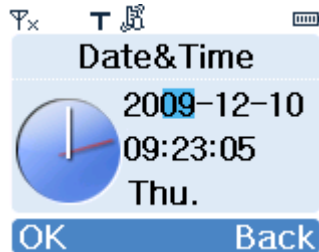In this mode, only vibration indication will be given when a new call or new message arrives.
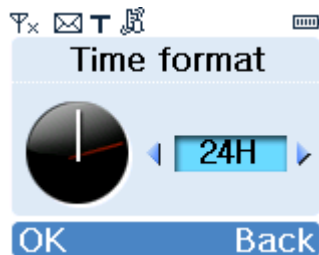
Settings

■Date&Time

This option allows you to set the current date, time and time format. The method is as follows:

➢ To set date and time

Press **Left** or **Right** key to select the item to be set, and then input the right value through keypad. When the current time is displayed in 12 Hour format, press **Up** or **Down** key to toggle it between AM and PM.

➢ To set time format

You can toggle the time format between 24H and 12H using **Left** or **Right** key. When all settings are done, press **OK** to make them take effect.

**■KP Lock**

This option allows you to enable or disable the Auto Keypad Lock feature. If it is enabled, the keypad will be locked automatically after the programmed time (10 seconds by default) elapses.

■DispSaver

This option allows you to enable or disable the screensaver. If enabled, it will be activated automatically after the programmed time (15 seconds by default) elapses.

■Display
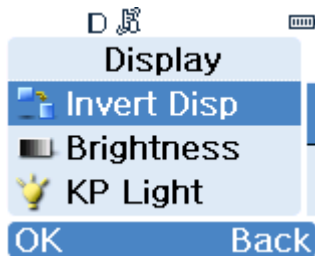
> Invert Disp

This option allows you to invert the displayed information by 180° so that you can access it easily.

Note: when the display is inverted, the function of **OK** key and **Back** key exchanges.

> Brightness

You can use **Left** or **Right** key to adjust the brightness level.

> KP Light

This option allows you to enable or disable keypad light. The lighting duration is programmable with the programming software.

> Light Sense

When this feature is enabled, the terminal will sense the ambient lighting conditions automatically to determine the brightness of backlight.

■**Security**
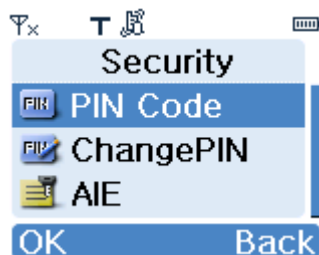
> PIN Code

To set PIN code On or Off, you will be required to input the PIN code. The terminal will be locked when wrong PIN code is entered up to the predefined times. To unlock it, you need to enter the right PUK code. Then the terminal will bring you to an interface, where you can reset your PIN code or press **Back** key to restore it to default value. However, when wrong PUK code is entered up to the predefined times, the terminal will be disabled

temporarily and shows "Radio Disabled".

Note: the number of times that you are allowed to input wrong PIN or PUK code is programmable through the programming software. When the terminal is disabled, contact your dealer to activate it. The default PIN code is 1234, and the default PUK code is 12345678.

➢ Change PIN code

This option allows you to change the PIN code. Before changing it, you need to enter the old PIN code correctly. Then you will be asked to input your new PIN code twice. Please make sure the codes you entered are identical; otherwise, you have to reset it again.

■Man Down

When this feature is enabled, the terminal will send an emergency call to the predefined ID automatically once it falls over or tilts by 45°. At the same time, it would sound sharp alarm tone. With this feature, you can enjoy enhanced personal protection.

■Reset All

This option allows you to restore all settings to default value. To perform this operation, you need to input the right PIN code.
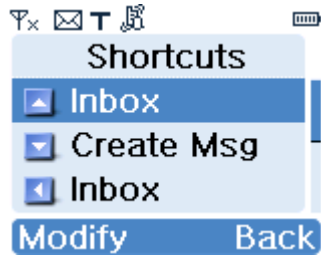
Others

■My Info

Under this option you can view some basic information about the terminal, including MCC, MNC and ISSI.

■Shortcuts

To enhance operation convenience, you can assign your desired function to a specific key as shortcut. Then you can press the key to access a function easily.

➤ **To create a shortcut**

1. Select Shortcuts to access the list of shortcut keys;

2. Select your desired key, and press **Modify** to access the list of assignable functions;

3. Select your desired function, and press **OK** to confirm.

➤ **To cancel a shortcut**

1. Select Shortcuts to access the list of shortcut keys;

2. Select the shortcut key to be cancelled, and press **Modify** to access the list of assignable functions;

3. Select Empty, and press **OK** to confirm.

■Calendar

This option allows you to view calendar information.
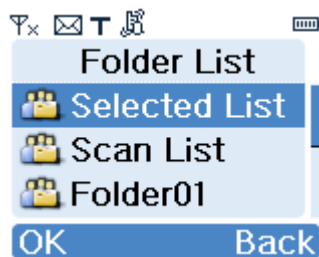
Options

【Options】Menu for TMO

【Options】Menu for DMO

In the home screen, press **Options** to access this menu. Here we are going to introduce all menu items based on TMO mode.

■ **Talk Group**

Under this option, you will see Selected List, Scan List, and one or more static folders created through programming software, as shown in following picture:

➢ **Selected List**

Under this option, you can set a talk group as the default group. Alternatively, you can do so by rotating the knob in the home screen. The default group is indicated by the icon

, as shown in following picture.

In the home screen, you can make a group call to the default group by pressing PTT key directly.

To add groups to the Selected List, enter a static folder, and select "As SltList" from Options.

> **Scan List**

You can receive calls only from groups that are included in the scan list and have been

attached successfully (indicated by the icon). But you can always receive from the

default group and the emergency group, regardless of the foregoing condition.

After entering the scan list, you can perform the following operations:

Scan On: to enable Scan feature and to attach all talk groups in the scan list;

Scan Off: to disable Scan feature and to detach all talk groups except background group,

default group and emergency group.

Scan: to attach all talk groups in the scan list.

To add groups to the Scan List, enter a static folder, and select "As ScanList" from

Options.

 Note: Scan List is available for TMO mode only.
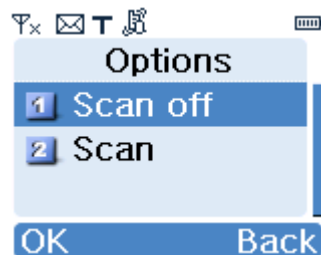
> **Static Folder**

After accessing any of the folders, you can perform the following operations:

Add: to include a talk group into the current folder;

Delete: to remove a talk group from the current folder;

Delete All: to remove all talk groups from the current folder.

As SltList: to add all talk groups in the current folder to Selected List;

As Scan List: to add all talk groups in the current folder to Scan List.
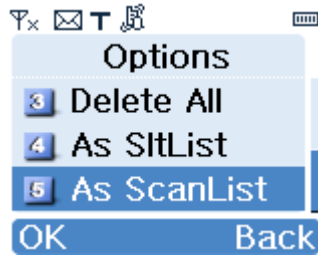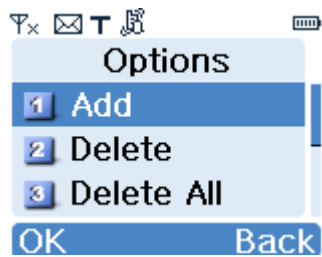
■ **DMO**

You can use this option to make your terminal work in DMO mode. In DMO mode, this option shall be TMO. Likewise, you can use it to make your terminal work in TMO mode.

■ **Language**

This option allows you to select your favorable language. Currently, this terminal only supports English and Simplified Chinese.

■ **GPS**
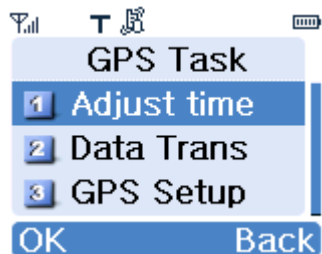
➢ **Display of GPS Data**

GPS data includes date, time, longitude, latitude, altitude, and number of satellites. Date and time are correlative to the selected time zone.

➢ **Adjust Time**

This option allows you to calibrate the time currently displayed on your terminal with GPS time, and is correlative to the Time Zone option.

➢ **Data Transmit**

You may choose to transmit GPS data to an individual user, a group of users, or the control center. This option is correlative to the Send Mode option.

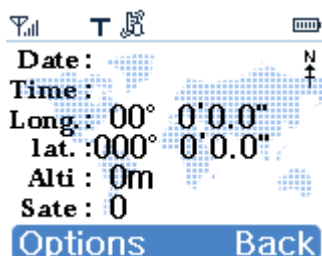Operations to send GPS data are similar to that of short message. Received GPS data are saved in "Message->Inbox".

Individual

To transmit GPS data to an individual user.

Group

To transmit GPS data to all users included in a certain group.

Note: To implement the Data Transmit function, the terminal must operate in TMO mode. And GPS data is deemed valid only when the GPS receiver has received data from at least 3 satellites.

Otherwise, "GPS data invalid" will appear on the screen when you attempt to transmit GPS data.

➢ **GPS Setup**

You may set the time zone and select a method to transmit GPS data.

Time Zone

You may select a time zone according to terminal location or your preference. There are 25 available time zones, used for time calibration.

Send Mode

You may choose whether to send GPS data to a specified target periodically. The transmission interval is programmable by your dealer. There are two transmission modes available:

● **Manual Send**

To manually transmit GPS data to other terminals.

● **Auto Send**

To periodically transmit GPS data to other terminals.

Troubleshooting

Symptom	Solution
The terminal can not be powered on.	Please check whether battery power is too low or whether the battery fails to function.
Network registration fails or network can not be found.	1. Please check the signal strength and see whether your terminal is within the network coverage. 2. Contact the network administrator, and confirm whether the terminal has acquired appropriate authorization. 3. Check whether your terminal is in TMO mode.
Unable to make a call	1. Please check the signal strength and see whether your terminal is within the network coverage. 2. Check whether the called party is within the network coverage.
Unable to call or receive from a specific group.	1. Check whether your terminal is a member of the target group. 2. Check whether your terminal is authorized to access the target group.
Unable to make a call in DMO mode	1. The called party is out of coverage. 2. The called party is not in DMO mode.
Half duplex transmission is terminated.	Overlong time of transmission makes the timer expire.
Normal call is interrupted.	Check whether a terminal is making a pre-emptive priority call or emergency call.
For the same status message, the content displayed at the sending party and at the	Please check whether both parties have assigned the same content for this status message ID.

receiving party varies.	
Abnormal disconnection during a call	1. Check the signal strength in TMO mode. 2. Check whether you are in a place where the signals can be shielded (such as basement and tunnel) and whether the other party is out of coverage. 3. Check the battery strength.

Note: If the above solutions can not fix your problems, or you may have some other queries, please contact us or your local dealer for more technical support.

Care and Cleaning

To guarantee optimal performance as well as a long service life of your terminal, please follow the tips below.

Terminal Care

- Keep the terminal far away from substances that can corrode the electronic circuit;
- Do not hold the terminal by its antenna or earpiece cable directly;
- Attach the accessory jack cover when accessory is not connected.

Terminal Cleaning

- Clean up the dust and fine particles on the terminal parts with a clean and dry lint-free cloth or a brush regularly.
- Use a non-woven cloth with neutral cleanser to clean the keys, control knobs, LCD and jacks after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations. Make sure the terminal is completely dry before use.

⚠️**Caution:** Power off the terminal and remove the battery before cleaning.

Optional Accessories

The following items are the main optional accessories for the terminal, and please consult your local dealer for more other accessories.

Remote Speaker Microphone (IP57) SM18N1	Earbud with on-MIC PTT ESN10	D-earset with in-line Microphone EHN12	Earpiece with on-MIC PTT & Transparent Acoustic Tube EAN16
3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN17	Vehicle Adapter CHV09	Leather Carrying Case (swivel) LCY002	Programming Cable (USB to serial port) PC36

Note: Use the accessories specified by Hytera only. If not, Hytera shall not be liable for any losses or damages arising out of use of unauthorized accessories.

Appendix 1 Input Method

You can enter aliases, numbers or messages using the keypad. This terminal supports these input methods: Simplified Chinese Pinyin (拼), English (**ABC/abc**) and Number

(**123**).

■ **Switch of Input Method**

In input mode, press ⌨ to switch to your desired input method. The appropriate

symbol will appear on top right corner of the screen;

■ **Simplified Chinese Pinyin**

Enter the pinyin through alphanumeric keys; then a list of possible combinations and

corresponding characters will appear; For example, to input the Chinese character

"间":

1. Press ⑤, ④, ② and ⑥ in order;

2. Press **OK** to move the cursor from Pinyin area to Chinese character area;

3. Use the navigation keys to scroll to the target character "间";

4. Press the **OK** key to enter the selected character.

■ **Switch between Uppercase and Lowercase**

In input mode, press ⌨ to switch to your desired input method. All English

letters are distributed among 8 alphanumeric keys. Press appropriate key repeatedly

to get and enter your desired letter

■ **Number**

When the input method is switched to Number, press appropriate key to enter your

desired number.

■ **Punctuation**

In Simplified Chinese Pinyin/English mode, press ① to enter your desired

punctuations; while in Number mode, it is not allowed to enter any punctuation.

■ **Space**

In English/Number mode, long press ⟨*␣⟩ to enter a space, and short press it to enter "*";

To enter a space in Simplified Chinese Pinyin mode, press ⟨1!<⟩ and then select the space (the first one).

Note: short press **Back** key to delete the entered character one by one, or long press it to delete all entered characters at a time.

Appendix 2 SSI&TSI Dialing Rules

This terminal supports these dialing methods: SSI&TSI, PABX and PSTN. Each method shall follow a specific dialing rule. Currently, this terminal is only capable of checking SSI&TSI dialing rules. When you want to call a PABX or PSTN subscriber, please input the target number directly through the keypad. SSI&TSI dialing rules are as follows:

● For target number less than 8 digits, input it directly;

For example, when MCC = default value, MNC = default value and ISSI = 504, you just need to input 504 or 00000504 to make the call;

● For target number with 9-13 digits, input MNC+ISSI;

In this case, ISSI must be 8 digits long, and add 0 before the first digit to supplement the balance when it is less than the said length. For MNC, input it as it is.

For example, when MCC=default value, MNC=20 and ISSI=504, you need to input 2000000504 or 0002000000504 to make the call;

● For target number over 13 digits, input MCC+MNC+ISSI;

In this case, ISSI must be 8 digits long, MNC must be 4 or 5 digits long and MCC must be 3 digits long. Add 0 before the first digit to supplement the balance when any of them is less than the said length;

For example, when MCC = 460, MNC = 20 and ISSI = 504, you need to input 4600002000000504 or 460002000000504 to make the call.

Note: MCC stands for Mobile Country Code, MNC stands for Mobile Network Code and ISSI stands for Individual Short Subscriber Identity.