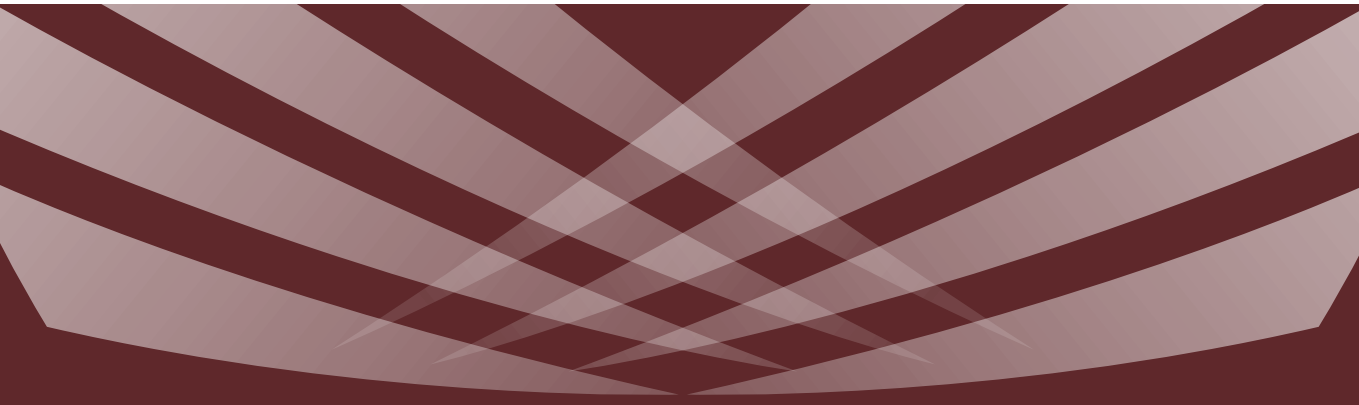




PT580H Plus
TETRA PORTABLE TERMINAL
USER GUIDE





Preface

Thanks for your favor in our product. To derive optimum performance from the product, please read this manual, the corresponding *TETRA Terminal Series Feature Book* and the *Safety Information Booklet* carefully before use.

This manual is applicable to the following product:

PT580H Plus TETRA Portable Terminal

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If you have any suggestions or would like to learn more details, please visit our website at: <http://www.hytera.com>.

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.

Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy

exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:

Your terminal radiates measurable RF energy only when it is transmitting, not when it is receiving or in standby mode.

EU Regulatory Conformance

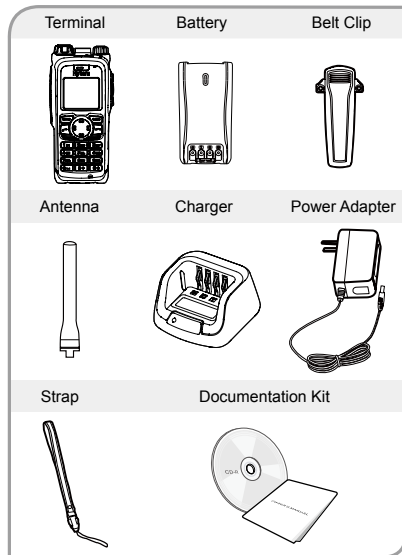
As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC. Please note that the above information is applicable to EU countries only.

Contents

Items in the Package	2	Emergency Call	6
Product Overview	2	Message Service	6
Product Controls	2	DMO Service	7
LCD Icon	2	Individual Call	7
LED Indicator	3	Group Call	7
Before Use	3	Emergency Call	7
Attaching the Antenna	3	Message Service	7
Attaching the Battery	4	Troubleshooting	8
Installing the SIM Card	4	Care and Cleaning	9
Attaching the Belt Clip	4	Optional Accessories	9
Attaching the Accessories	4		
Charging the Battery	4		
Basic Operations	5		
Turning On/Off the Terminal	5		
Switching Operation Mode	5		
Adjusting the Call Volume	5		
Selecting a Group	5		
Inputting via Keypad	5		
Locking/Unlocking the Keypad	5		
PIN Enable	5		
Managing the PhoneBook	5		
TMO Service	5		
Individual Call	5		
Group Call	6		
PABX/PSTN Call	6		

Items in the Package

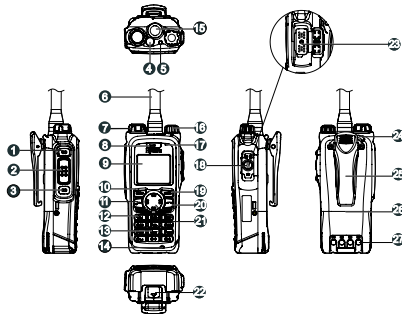
Please unpack carefully and check if all items listed below are received. If any item is missing or damaged, please contact your dealer.



Note : The 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

Product Controls



No.	Part Name	No.	Part Name
1	SK1 (Side Key 1)	15	Antenna Connector
2	PTT (Push-to-Talk) Key	16	Power On-Off/Volume Control Knob
3	SK2 (Side Key 2)	17	Half-duplex Microphone
4	Emergency Key	18	Accessory Connector Cover
5	LED Indicator	19	Options/Back Key
6	Antenna	20	End Key
7	Group Selector Knob	21	Navigation Key
8	Full-duplex Receiver	22	Battery Latch
9	LCD Display	23	Accessory Connector





















No.	Part Name	No.	Part Name
10	Func/OK Key	24	Strap Hole
11	Answer/Call Key	25	Belt Clip
12	Half-duplex Speaker	26	Battery
13	Numeric Keypad	27	Charging Piece
14	Full-duplex Microphone	/	/






















Note : For enhanced convenience, you may request your dealer to program the numeric keys 0-9, * key, # key, navigation keys, **Call** key, **OK** key, **Back** key, **SK1** and **SK2** key as shortcuts to certain features. For the detailed introduction, please refer to the corresponding *TETRA Terminal Series Feature Book*.

LCD Icon

Icon	Terminal Status
	The terminal is not registered with the system (applicable for TMO only).
	The terminal is registered with the system, and more bars indicate stronger signal strength.
	The terminal is not registered with the system while the WAP browser is running.
	The terminal is registered with the system while the WAP browser is running, and more bars indicate stronger signal strength.
	There is(are) unread message(s).
	The Inbox is full.
	The terminal is operating in TMO.

Icon	Terminal Status
	The terminal is operating in DMO.
	The terminal is operating in fallback mode.
	The scan feature is enabled in TMO.
	The scan feature is enabled in fallback mode.
	The terminal is operating in silent mode.
	The terminal is operating in normal (ring and vibration) mode.
	The terminal is operating in vibration mode.
	An audio accessory is connected.
	An audio accessory is connected but not available for use.
	A palm microphone with keypad is connected.
	The GPS feature is active, and valid GPS or GLONASS data is received.
	The GPS feature is active, but no valid GPS or GLONASS data is received.
	A wireless accessory is connected and available for use.
	The BT feature is enabled but no wireless accessory is connected.
	A wireless accessory is connected but not available for use.
	A call is in progress.
	The terminal is selecting a group.
	A gateway device is available and connected in DMO.
	A gateway device is available but not connected in DMO.
	A repeater is available and connected in DMO.

Icon	Terminal Status
	A repeater is available but not connected in DMO.
	The keypad is locked.
	The SIM card E2EE is in use.
	The microphone is disabled.
	AIE (Air Interface Encryption) is in use.
	E2EE (End-to-End Encryption) is in use.
	Both AIE and E2EE are in use.
	The ongoing call enjoys a pre-emptive priority.
	The ongoing call enjoys a higher priority.
	The ongoing call enjoys a lower priority.
	The terminal is prohibited from transmitting.
	A call via gateway is in progress.
	An E2EE call via gateway is in progress.
	A call via repeater is in progress.
	An E2EE call via repeater is in progress.
	An AIE call via repeater is in progress.
	The AIE and E2EE call via repeater is in progress.
	An Emergency call is in progress.
	A broadcast call is in progress.

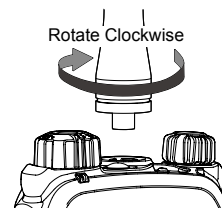
LED Indicator

LED Indication	Terminal Status
Glows red	Transmitting
Flashes red slowly	Low battery voltage Please replace or recharge the battery
Glows green	Receiving
Flashes green slowly	Channel idle in DMO
Glows orange	Channel busy in DMO The terminal is prohibited from transmitting.
Flashes orange slowly	The BS with which the terminal is registered is out of service in TMO.

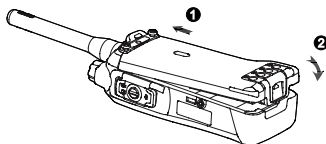
Before Use

Attaching the Antenna

Caution: Do not hold the terminal by its antenna, otherwise the performance and lifespan of the antenna will be reduced.



Attaching the Battery

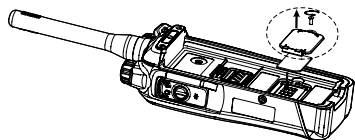


Note: To remove the battery, turn off the terminal first. Then lift the battery latch and remove the battery.

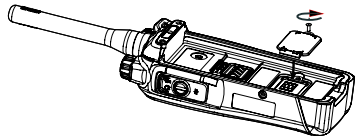
Installing the SIM Card

If you have purchased the End-to-End Encryption (E2EE) feature which is realized via a SIM card, please buy a SIM card and install it first.

1. Remove the battery.
2. Loosen the screw fixing the SIM card cover, open the cover, and then place the card into the slot properly, as shown in the figure below.

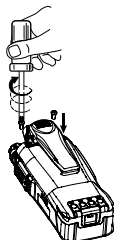


3. Replace the cover and tighten the screw as shown in the figure below.



Attaching the Belt Clip

1. Remove the two screws on the back of the terminal.
2. Align the screw holes on the belt clip with those on the terminal, and then tighten the screws, as shown in the figure below.



Attaching the Accessories

1. Loosen the screw on the accessory connector cover, and open the cover as the arrow shows in the figure below.



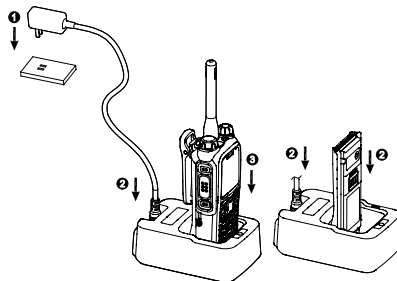
2. Align the accessory (such as audio accessory and programming cable) plug with the accessory connector.
3. Secure the screw of the accessory.

Charging the Battery



Caution

- Use the charger specified by the Company to charge the battery.
- Make sure the terminal is powered off before charging. Read the Safety Information Booklet in advance to get necessary safety information.
- Charge a new battery for at least 5 hours before initial use for best performance.

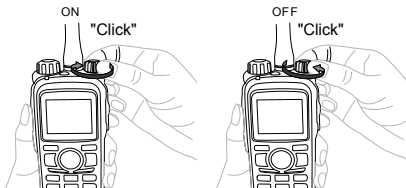


Charging status indication on charger:

LED Indication	Charging Status
Flashes red slowly	Standby (no load)
Glow red	Charging
Glow orange	90% charged
Glow green	Fully charged
Flashes red rapidly	Charging failed

Basic Operations

Turning On/Off the Terminal



Switching Operation Mode

This terminal can operate in either TMO or DMO.

Press the **Func/OK** key on the home screen to enter the "Mode" menu, and then select "TMO" or "DMO" to switch the operation mode.

Adjusting the Call Volume



Selecting a Group



Inputting via Keypad

You can input alias, call numbers and messages via the keypad. In the editing mode, you may do as follows.

- Press **[#*]** to switch the text input methods between alphabetic mode and numeric mode
- In the alphabetic mode, press **[1<]** to input the special characters. In the numeric mode, long press **[1<]** to input the special characters.
- Press **[*#]** to input the character "*".
- Long press **[*#]** to enter a space.

Locking/Unlocking the Keypad

When you do not use the keypad, you can lock it to avoid misoperations.

- Enable the Auto Lock feature
On the home screen, press the **Func/OK** key and go to "Settings -> Radio -> Keypad -> Auto Lock -> On".

- Lock/unlock the keypad.

Press the **Func/OK** key and then press **[*#]** to lock or unlock the keypad.

PIN Enable

PIN code can protect your terminal against unauthorized use.

- Enable or disable the PIN Enable feature
To enable the feature, press the **Func/OK** key on the home screen and go to "Settings -> Function -> Security -> PIN Enable -> On", and then input the PIN code (default PIN code: 1234).

To disable the feature, press the **Func/OK** key on the home screen and go to "Settings -> Function -> Security -> PIN Enable -> Off", and then input the PIN code.

With this feature enabled, each time you turn on the terminal, PIN code is required. If you input wrong code for continuous three times, the terminal will be locked. In this case, you will need to enter the correct PUK code

(default PUK code: 12345678) to reset the PIN code.

- Change the PIN code

Press the **Func/OK** key on the home screen and go to "Settings -> Function -> Security -> PIN Edit", input the correct current PIN code and input the new PIN code twice.

Managing the PhoneBook

PhoneBook is used to save the individual call number and PABX/PSTN number.

You can press the **Func/OK** key and go to "PhoneBook" menu to add, view, search, modify or delete a contact.

TMO Service

The trunked mode operation (TMO) supports either half-duplex or full-duplex operation and allows the terminals to communicate with each other via the TETRA network infrastructure. Thus features that require network access are available. To operate in TMO mode, the terminal must be authorized by your service provider, and must register with the network and stay within the network coverage.

Individual Call


An individual call is a half-duplex or full-duplex call initiated by an individual user to another individual user. You can initiate and receive an individual call to/from an individual contact.

Initiating an Individual Call

- Half-duplex Individual Call
 1. Press the **Func/OK** key and go to "PhoneBook" menu to select an individual contact.
 2. Hold down the **PTT** key to initiate a half-duplex individual call.

3. Hold down the **PTT** key to talk after the call is established.

- Full-duplex Individual Call

1. Press the **Func/OK** key and go to "PhoneBook" menu to select an individual contact.
2. Press  to initiate a full-duplex individual call.
3. Both parties can talk at any time without any operation after the call is established.

Answering an Individual Call

- Half-duplex Individual Call

- » In case of an incoming call with Direct Signaling, the terminal will emit an alert tone to indicate that the call is established successfully. At this time, no operation is required to answer the call.
- » In case of an incoming call with Hook Signaling, the terminal will ring and vibrate to indicate this incoming call. At this time, press **PTT** to answer the call.


Hold down the **PTT** key to talk after the call is established.

- Full-duplex Individual Call

- » In case of an incoming call with Direct Signaling, the terminal will emit an alert tone to indicate that the call is established successfully. At this time, no operation is required to answer the call.
- » In case of an incoming call with Hook Signaling, the terminal will ring and vibrate to indicate this incoming call. At this time, press **PTT** to answer the call.

Both parties can talk at any time without any operation after the call is established.

Ending an Individual Call

Press  to end the call.

Group Call

A group call is a half-duplex call initiated by an individual user to other members in a predetermined group. You can initiate a group call to the default group, and receive group calls from the members of the group.



Initiating a Group Call

On the home screen, rotate the **Group Selector** knob to select a group and hold down the **PTT** key to initiate a group call to this group, whose number is displayed on the home screen.

Answering a Group Call

You can answer a group call without any operation.

Ending/Exiting a Group Call


- The calling party can press  to end the group call.
- The called party can press  to exit the group call.

PABX/PSTN Call

A PABX/PSTN call is a full-duplex individual call with Hook Signaling established between an individual user and a PABX or PSTN user outside the TETRA network.

The operations for initiating a PABX/PSTN call are as follows. For operations of answering or ending a PABX/PSTN call, refer to Individual Call.

Initiating a PABX/PSTN Call

- 1 On the home screen, press the **Func/OK** key to go to "Settings -> Network" and select "PSTN GW" or "PABX GW".
- 2 Return to the home screen and input a PABX or PSTN number.
- 3 Press the **Func/OK** key to select "PABX" or "PSTN" if **otype** appears on the screen.
Skip this step if **otype** does not appear on the screen.
- 4 Press  to initiate the call.

Emergency Call

An Emergency call is a call initiated by an individual user to the predefined contact for summoning help in urgent situations. With the highest priority, it can interrupt any other ongoing calls with lower priority if no resource is available.

Initiating an Emergency Call

Hold down the **Emergency** key for the preset time to initiate an emergency call to the predefined contact which can be the individual, group, PABX or PSTN user.

Answering an Emergency Call

You can answer an emergency individual call or emergency group call without any operation.

As for an emergency PABX/PSTN call, you need to press the **PTT** key to answer the call.

Ending/Exiting an Emergency Call

For ending operation, refer to Individual Call, Group Call or PABX/PSTN Call according to the predefined contact.

Message Service

Message Service allows you to send and receive a message, which includes Status Message and User Message. Status Message is programmed by your dealer only while User Message allows you to create, edit and send a text message.

Sending a Message

1. Press the **Func/OK** key to go to "Message -> New Msg" and select "Status Msg" or "User Msg".
2. For status message, select "View -> Options" and then select "Individual" or "Group"; for user message, press **Func/OK** key to select "Individual" or "Group" after editing the message.
3. Enter the individual number or select a group contact, and press the **Func/OK** key to send the message.

Viewing a Message

1. On the home screen, press the **Func/OK** key to go to "Message -> Inbox", and select the appropriate message.
2. Press the **Func/OK** key to view the content.

DMO Service

The direct mode operation (DMO) supports half-duplex operation and allows the terminals to communicate directly with each other, without using a TETRA network infrastructure. Thus features that require network access will be unavailable.

Individual Call

An individual call is a half-duplex call initiated by an individual user to another individual user. You can initiate and receive an individual call to/from an individual contact.


Initiating an Individual Call

- 1 Press the **Func/OK** key and go to "PhoneBook" menu to select an individual contact.
- 2 Hold down the **PTT** key to initiate the call.
- 3 Hold down the **PTT** key to talk after the call is established.

Answering an Individual Call

You can answer the call without any operation.

Ending an Individual Call

Press  to end the call.

Group Call

The group call operations in DMO are similar to those in TMO. Refer to Group Call for details.

Emergency Call

An Emergency call is a call initiated by an individual user to the default group for summoning help in urgent situations. With the highest priority, it can interrupt any other ongoing calls with lower priority if no resource is available.



Initiating an Emergency Call

Hold down the **Emergency** key for the preset time to initiate an emergency call to the default group.

Answering an Emergency Call

You can answer an emergency individual call or group call without any operation.

Ending/Exiting an Emergency Call

- The calling party can press  to end the Emergency call.
- The called party can press  to exit the Emergency call.

Message Service

The message operations in DMO are similar to those in TMO. Refer to Message Service for details.

Troubleshooting

Phenomenon	Analysis	Solution
Terminals cannot be powered on.	The battery power may be too low to power on the terminal.	Charge the battery.
Network registration fails or network cannot be found.	The terminal may be operating in DMO.	Switch to TMO.
	The terminal may be out of the network coverage in TMO.	Check the signal strength. Make sure the terminal is within the network coverage.
	The terminal may not be granted network access.	Contact the network operator for the terminal authorization.
Calls cannot be established.	The terminal or the called party may be out of the network coverage.	Check the signal strength. Make sure the terminal is within the network coverage.
	The terminal may operate in an improper mode.	Check the operation mode. Make sure the terminal works in the right mode.
A certain group call cannot be initiated or received.	The terminal may not be a member of the target group.	Check whether the terminal is a member of the group. If not, contact your dealer to add the terminal to the group.
	The terminal may not be authorized to access the target group.	Contact the network operator for the terminal authorization.
Calls are always interrupted.	The current channel may be assigned to emergency calls or other calls with higher priority.	Wait until the channel becomes available and try again.
A half-duplex call cannot be established.	The predefined time period for establishing a call may expire.	Make sure the call is established within the predefined time period.
	The channel may be occupied by another terminal with higher call priority.	Wait until the channel becomes available and try again.
	The channel resources may be allocated to other services due to overloaded network.	Wait until the channel becomes available and try again.
Abnormal disconnection occurs during a call.	The terminal may be out of the network coverage in TMO.	Check the signal strength. Make sure the terminal is within the network coverage.
	The terminal may operate at an unfavorable position where communication may be blocked by high buildings or frustrated in the underground areas in DMO.	Move to an open and flat area, and restart the terminal.
As for the same status message ID, the content displayed at the receiving party is different from that of the sending party.	The parties may have associated the same status message ID with different contents.	Make sure the status message ID is associated with the same content.

If the above solutions cannot 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 the product, please follow the tips below.

Product Care

- Do not pierce or scrape the product.
- Keep the product far away from substances that can corrode the circuit.
- Do not hold the product by its antenna or earpiece cable directly.
- Attach the accessory connector cover when the product is not in use.

Product Cleaning



Caution : Power off the product and disconnect the power supply before cleaning.

- Clean up the dust and fine particles on the product surface and charging piece with a clean and dry lint-free cloth or a brush regularly.
- Use neutral cleanser and a non-woven fabric to clean the keys, control knobs and front case after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations, so as to avoid surface case damage.
- Make sure the product is completely dry before use.

Optional Accessories

Please contact your local dealer or us for more details on the main optional accessories of the product.



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



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