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 model:

Z1p TETRA Portable Terminal

Term

Individual Call	A half-duplex or full-duplex call initiated by an individual user to another individual user.
Group Call	A half-duplex call initiated by an individual user to a group.
Half-duplex	Half-duplex communication is also called “two-way alternate communication”. It indicates the communication is provided in both directions, but only one direction at a time, that is, only one party is allowed to transmit or receive at a time.
Full-duplex	Full-duplex communication is also called “full-duplex synchronous communication”. It indicates the communication is allowed in both directions simultaneously, that is, both parties can transmit and receive at the same time.
Direct Mode Operation (DMO)	DMO supports half-duplex operation and allows the terminals to communicate directly with each other, without using a TETRA network infrastructure. Thus functions that require network access, such as telephone call, will be unavailable.
Trunked Mode Operation (TMO)	TMO supports either half-duplex or full-duplex operation and allows the terminals to communicate with each other via the TETRA network infrastructure. Thus functions that require network access are available. To operate in TMO mode, the terminal must be granted authorization by your service provider, and must stay within the network coverage.

Disclaimer

Hytera Communications Co., Ltd. (the Company) endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the specifications and designs are subject to change without notice due to continuous technology development. No part of this manual may be copied, modified, translated, or distributed in any manner without the express written permission of us.

We do not guarantee, for any particular purpose, the accuracy, validity, timeliness, legitimacy or completeness of the Third Party products and contents involved in this manual.

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

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates 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

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.

Note:" Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment."

Compliance with RF Exposure Standards

Hytera's TETRA Terminal complies with the following RF energy exposure standards and guidelines:

• United States Federal Communications Commission, Code of Federal Regulations; 47 CFR § 1.1307, 1.1310 and 2.1093

• American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1:2005; Canada RSS102 Issue 5 March 2015.

• Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005 Edition

RF Exposure Compliance and Control Guidelines and Operating Instructions

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

Guidelines:

• Do not remove the RF Exposure Label from the device.

• User awareness instructions should accompany device when transferred to other users.

• Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

• Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50 % of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).

• Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.

• When worn on the body, always place the radio in a Hytera's approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of Hytera's or other manufacturer's non-approved accessories may result in exposure levels, which exceed the FCC's occupational/controlled environment RF exposure limits.

• Use only manufacturer's name approved supplied or replacement antennas, batteries, and accessories. Use of non-manufacturer-name approved antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.

•For a list of Hytera's approved accessories (see the user manual), or (visit the following website which lists approved accessories: http: add website address), or(The manufacturer should include the appropriate bracketed item{s} in the manual.)

• For a list of Hytera's approved accessories (see the user manual), or (visit the following website which lists approved accessories: www.hytera.cn

IC statement

The device has been tested and compliance with SAR limits, users can obtain Canadian information on RF exposure and compliance

Après examen de ce matériel aux conformité aux limites DAS et/ou aux limites d'intensité de champ RF, les utilisateurs peuvent sur l'exposition aux radiofréquences et la conformité and compliance d'acquérir les informations correspondantes

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

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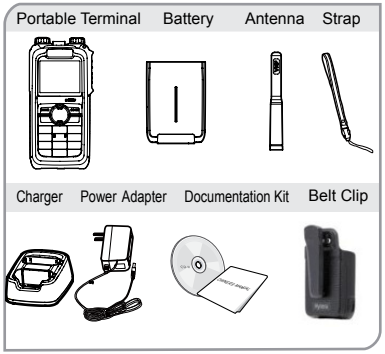
Items in the Package

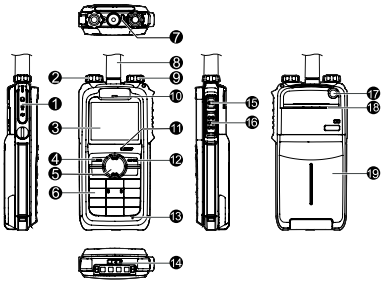
Please unpack carefully and check that all items listed below are received. If any item is missing or damaged, please contact your dealer.



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

Product Overview

Product Controls



No.	Part Name	No.	Part Name
1	Accessory Connector	11	Half-duplex Call Microphone
2	Power On-Off/Volume Control Knob	12	Options/Back Key
3	LCD Display	13	Full-duplex call Microphone
4	Func/OK Key	14	Battery Latch
5	Navigation Key	15	Mode Switch/ Hand-free Key
6	Numeric Keypad	16	PTT (Push-To-Talk) Key
7	LED Indicator	17	Emergency Key
8	Antenna	18	Speaker
9	Group Selector Knob	19	Battery
10	Full-duplex Receiver	/	/

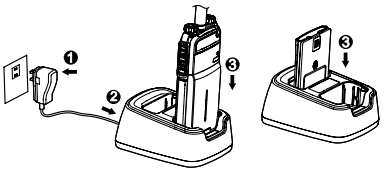
Programmable Keys

To derive enhanced convenience, you can request your dealer to set the navigation key, , numeric keys 1-9, and as the shortcuts to needed functions and menus. For detailed introduction, please refer to the corresponding TETRA Terminal Series Feature Book.

Before Use

Charging the Battery

Only use the charger and battery specified by the Company. The charger LED will indicate the charging process. The figure below shows you how to charge the battery.



The charger LED indicates you the charging process. When the charger LED glows red, the charging begins. When charging is complete, the charger LED glows green.

The table below shows you the details.

Note

- To achieve optimal battery performance, please charge the battery for 5 hours before initial use.
- Please refer to the Safety Information Booklet for the detailed information on battery use.

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

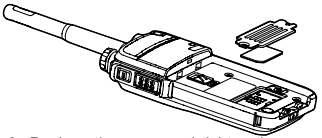
Attaching the Accessories

Installing the SIM Card

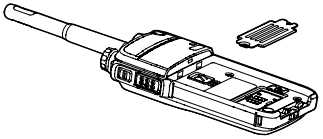
If a SIM card is required to realize the End-to-End Encryption (E2EE) feature which should be purchased separately, please install the SIM card first.

Step 1 Slide the battery latch in the way as the arrow shows (see 1), and then lift the battery from its bottom (see 2).

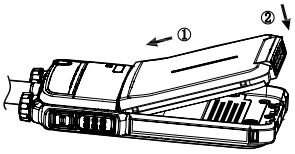
Step 2 Loosen the screws fixing the SIM card cover, open the cover, and then place the card into the slot properly, as shown in the figure below.



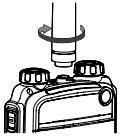
Step 3 Replace the cover and tighten the screw as shown in the figure below.



Attaching the Battery



Attaching the Antenna



Caution: Do not shake the product by holding the antenna; otherwise the work performance and lifespan of the antenna will be lowered.

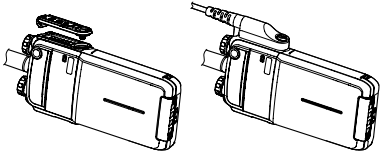
Attaching the Audio Accessory/ Programming Cable

Caution: The audio accessory/programming cable should be attached properly; otherwise the waterproof performance of the product will be affected.

Step 1 Loosen the screw on the accessory connector cover, and uncover the connector.

Step 2 Align the accessory plug with the product accessory connector.

Step 3 Secure the accessory plug with screw.



Status Indication

Status Icon

Name	Icon	Terminal Status
Battery Strength Icon		The battery strength is low.
		More bars indicate more battery strength.
RSSI Icon		The terminal has not registered with the network (applicable for TMO only).
		More bars indicate a stronger signal.
Message Icon		Unread message(s).
		The Inbox is full.
Operation Mode Icon		The terminal is operating in TMO.
		The terminal is operating in DMO.
		The terminal is operating in fallback mode.
Profile Icons		Silent
		Normal
		Vibration
Accessory Icon		The audio accessory is connected.

Name	Icon	Terminal Status
GPS Icon		A GPS module is connected and the valid GPS data is received.
		Valid GPS data can be received, and the audio accessory has been connected.
		A GPS module is connected and no valid GPS data is received.
		No valid GPS data can be received, and the audio accessory has been connected.
BT Icon		The BT feature is enabled but the product is not connected to BT device.
		The product is connected to BT device.
Call Icon		A call is in progress.
Group Selection Icon		Select a talkgroup.

Name	Icon	Terminal Status
Gateway Icon		A gateway device is available and connected in DMO.
		A gateway device is available but unconnected in DMO.
Repeater Icon		A repeater is available and connected in DMO.
		A repeater is available but unconnected in DMO.

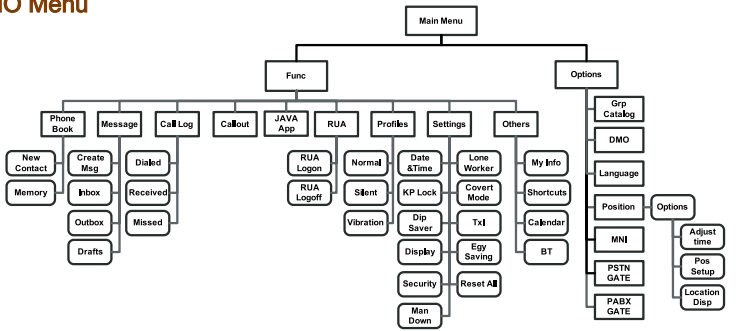
LED Indicator

LED Indication	Terminal Status
Glows red	Transmitting
Glows green	Receiving
Flashes green slowly	Channel free in TMO
Flashes blue slowly	Channel free in DMO
Glows orange.	Channel busy in DMO

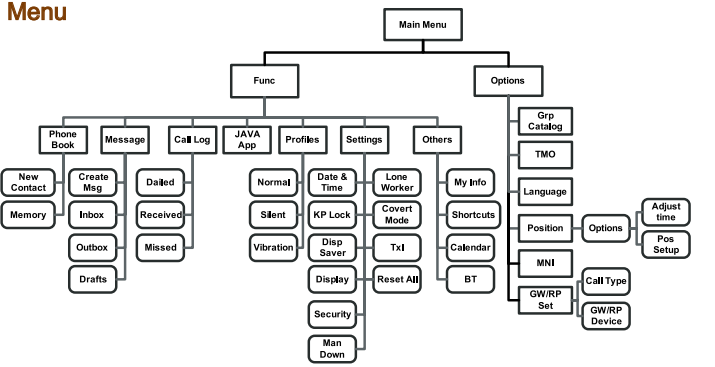
Menu Navigation

The following menu lists show the full menus of the terminal in TMO and DMO. You can select your needed menus to be displayed via your dealer. To select and confirm the options in the menu, operate as follows: in the home screen, you can press the **Func/OK** key to enter the "Func" menu, or press the **Options/Back** key to enter the "Options" menu; then press the **Up/Down** key on the **Navigation** key to select the needed menu, finally press the **Func/OK** key. In sections introducing operations, a menu path is provided for your convenience, e.g. Message -> Create Msg.

TMO Menu



DMO Menu



Basic Operations

Turning On/Off

To turn on the terminal, rotate the **Power On-Off/ Volume Control** knob clockwise. Then the LED indicator flashes green, and the terminal shows the power-up screen and sounds power-up alert. Upon successful powering on, the terminal enters the home screen. In TMO, after being turned on; the terminal will register with the network. In DMO, the terminal will be ready for use after being turned on.

To turn off the terminal, rotate the **Power On-Off/ Volume Contro**l knob counter-clockwise until a click is heard.

Switching Operation Mode

This terminal can operate in either TMO or DMO. To switch the operation mode, press the **Options/Back** key in the home screen to enter the "Options" menu, and then select "TMO" or "DMO". Or, in the home screen, press the **Mode Switch/Hand-free** Key.

Adjusting the Call Volume

Rotate the **Power On-Off/Volume Control** knob clockwise to increase the call volume, or counter-clockwise to decrease the volume. After the adjustment, the terminal will save the settings and return to the former screen automatically.

Inputting through Keypad

You can use the numeric keypad to enter user alias and number, edit messages, etc. The terminal supports these input methods: English and Number. To switch the input method, press the [# ⇧] key on the numeric keypad. In English/Number input method, you can enter special characters and common punctuations by pressing [1 !<], enter "*" by pressing [* ␣] and enter a space by long pressing this key. As for other language input methods (depending on your customization), operate accordingly.

Locking/Unlocking the Keypad

To enable the keypad lock, enter the Function menu by pressing the **Func/OK** key in the home screen, and then go to "Settings -> KP Lock -> On". After this feature is enabled, keypad will get locked automatically when the preset time (preset by the dealer) expires. Then you can press the **OK** key and then [* ␣] to unlock the keypad.

Apart from locking the keypad via menu, you can lock the keypad manually by pressing the **Func/OK** key and then [* ␣] directly on the home screen.

PIN Code Security and Changing

PIN code can prevent unidentified user from using your terminal. To enable or disable the PIN Code feature, enter the Function menu from the home screen by pressing the **Func/OK** key , and then go to "Settings -> Security -> PIN Code". Every time you need to change the settings, it is required to input the PIN code first (default PIN code: 1234, preset by the dealer).

With this feature enabled, you will need to enter the correct PIN code prior to operating the terminal after turning it on. If you input the wrong code for 3 times (predefined by the dealer) in a row, the terminal will be locked. Then you will need to enter the correct PUK code (default PUK code: 12345678) to reset the PIN code.

To change the PIN code, go to "Settings -> Security -> ChangePIN", and input the correct current PIN code prior to changing the code.

Managing the Contacts

Contact List

To view the list, press the **Func/OK key** to enter the Function menu and then go to the "PhoneBook" menu.

New Contact

To add a new contact, you can enter the Function menu by pressing the **Func/OK** key and go to "PhoneBook". Then press the **Func/OK** key to enter "Options -> New Contact" to add a new contact: enter the contact's alias in the editing screen, and press the **OK** key to enter the "Input No." screen to input the contact number. At last, press the **OK** key again to select the call type ("Private No.", "PABX" or "PSTN").

Viewing the Memory Capacity

To view the memory capacity, you can enter the

Func menu by pressing the **Func/OK** key, and go to "PhoneBook" menu; then press **Func/OK** to enter "Memory".

Using BT Device

As soon as the product gets successful connection to the BT device, the audio signal will be transmitted via the BT device instead of the microphone and speaker of the product.

Caution:

- To derive the optimum audio quality, you should use BT devices specified by The Company: wireless headset, wireless remote speaker microphone and wireless finger PTT. For the details, please refer to Chapter 12. Refer to the corresponding manual for the detailed operations of the BT devices.
- If used with other company's BT earpiece, the product must connect to the wireless finger PTT specified by the Company. Otherwise, the audio will not be transmitted via the BT earpiece.

Do place the product in the way described below; otherwise, the audio quality will be lowered.

- When wearing the product, be sure to wear it on the same side with the BT devices and its LCD display faces outwards.
- If the product is not with you, be sure that the distance between it and the BT device is within 10 meters and its LCD display faces the BT device.

You are recommended to connect the product to the BT device in the ways below:

Initial Connection

Step 1 Enable the BT feature: press the shortcut key; or go to "Func -> Others -> BT -> Switch". The icon will appear in the status bar with the feature enabled.

Note: The BT PTT and the earpiece are to be connected in the same way separately. Here we take how to connect the BT PTT as an example.

Step 2 Turn on the BT device and set it in connection mode. Please refer to the corresponding manual for detailed operations.

Step 3 Search for the PTT: go to "Func -> Others -> BT -> Match -> PTT Search", the product will search for the BT PTT.

Step 4 Select "Stop" when the product has searched the PTT.

Step 5 Connect to the BT PTT: go to "Options -> Connect". After getting connected, the product LCD display goes from "Connecting …" to connected interface with the in the status bar.

Non-initial Connection

If a BT device is up to the two conditions: once connected to and reserved in the Device List (under the menu Func -> Others -> BT -> Match), it is ready for connection. You can select the BT device from the Device List and try connecting. If the connecting is failed, please do the operations stated in Initial Connection. Moreover, if the product powers off without the BT feature disabled, the BT feature will be enabled automatically upon the product power-on next time. And if the once connected BT device is powered on, it will automatically connect to the product.

Note: The Device List will be updated as long as you perform "PTT Search" or "EP Search".

Enabling/Disabling Covert Mode

The covert mode is applied to conceal the product from being discovered. When the product is in covert mode, there will be no audible or visible indication, such as no indicators or no LCD backlight, and the terminal will enter silent mode or vibration mode (which is preset by the dealer).

Note: If the product in covert mode has been connected to an audio accessory, the audio signal can only be transmitted via the audio accessory.

- Enable the covert mode: press the shortcut key, or go to "Func -> Settings -> CovertMode".
- Disable the covert mode: first press Func/OK key and then press [# ⇑].

Call Services

TMO

Individual Call

In TMO mode, an individual call can be initiated either as a half-duplex call or full-duplex call, which can be received without pressing any key (Direct Signaling) or by pressing or **PTT** (Hook Signaling). Contact your dealer for such programming as well as more details.

Initiating an Individual Call

- Via Menu

  In the home screen, press Func/OK key to enter the "PhoneBook" or "Call Log" submenu, and select a contact. Then press PTT to initiate a half-duplex call, or press to initiate a full-duplex call.
- Via Manual Dial

  In the home screen, to initiate a half-duplex individual call, input the number you want to call through the keypad, and then press PTT. To initiate a full-duplex individual call, input the number you want to call through the keypad, and press Otype repeatedly to select the call type "Private No.". Then press to initiate a full-duplex call.

Note:

- Entry of individual numbers must comply with the SSI&TSI dialing rules. See "SSI&TSI Dialing Rules" in "Appendix" for more details.
- Calls will end automatically if the predefined call timer expires.

Answering an Individual Call

- Half-duplex Individual Call
  - » If it is an incoming call with Direct Signaling, there will be an alert tone to inform the called party that a call is received.
  - » If it is an incoming call with Hook Signaling, the terminal sounds alert and vibrates to inform the called party that there is an incoming call. And to receive the call, the **PTT** or **Func/OK** key should be pressed.

    To take the talk rights during the call, there are two situations:

    1) If you have no pre-emptive priority, hold down **PTT** to talk after the talking party stops talking and releases its **PTT**;

    2) If you have already been programmed with pre-emptive priority, hold down **PTT** to talk at any time.
- Full-duplex Individual Call
  - » If it is an incoming call with Direct Signaling, there will be an alert tone to inform the called party that a call is received.
  - » If it is an incoming call with Hook Signaling, the terminal sounds alert and vibrates to inform the called party that there is an incoming call. And to receive the call, the PTT, Func/OK key or should be pressed.

  After the call is established, both parties can talk at any time, with no need to use any key.

Hanging up/ Rejecting an Individual Call

When initiating the individual call, press the **Options/Back** key or to terminate it. In the presence of an incoming individual call, press the **Options/Back** key or to reject it. In the process of an individual call, any party can press to terminate it.

Group Call

Initiating a Group Call

In the home screen, you can initiate a group call to the default group by pressing **PTT**. To call other groups, please do as follows:

Step 1 In the home screen, rotate the Group Call Selector knob to select a group. Please perform this step as soon as the icon appears; otherwise, you may fail to select.

Step 2 Press the Func/OK key to confirm your selection.

Step 3 Press PTT to initiate a group call to this group.

Answering a Group Call

You can receive a group call without any operation. To take the talk rights during the call, there are two situations:

1) if you have no pre-emptive priority, hold down **PTT** to talk after the talking party stops talking and releases its **PTT**;

2) if you have already been programmed with pre-emptive priority, hold down **PTT** to talk at any time.

Hanging up a Group Call

The calling party can press to exit a group call. And for the called parties in a group call, only those enabled with "Hang Up" feature (programmable by the dealer) can press to exit a group call.)

Telephone Call

The telephone call is a full-duplex individual call with Hook signaling. To initiate the call, follow the steps below. To answer or hang up/reject the call; see the "Individual Call" in "TMO".

Initiating a Telephone Call

Step 1 Select a gateway. On the home screen, press Options/Back key to enter the "PSTN GATE" or "PABX GATE" submenu. Select an appropriate gateway, and press Func/OK key to confirm.

Step 2 Input a telephone number. Return to the home screen. Input a PABX or PSTN number, which is composed of a prefix (specified by the gateway, please contact the system administrator) and the telephone number of the target contact.

Step 3 Select a call type. Select "PABX" or "PSTN" through the Func/OK key with a screen-label Ctype.

Step 4 Press to initiate the call.

Emergency Call

Initiating an Emergency Call

Press the **Emergency** key and you can initiate an emergency call to the predefined contact. Any individual contact, group contact, default group, PSTN or PABX contact can be predefined as the emergency contact. There are two levels for emergency call: emergency priority and pre-emptive priority 3, which can be programmed by your dealer. The emergency priority is endowed with the higher privilege; thus a call with such priority can break any other call with pre-emptive priority 3, as well as calls with lower priorities.

Answering an Emergency Call

The emergency call is always received automatically. During an emergency call, the calling party can talk with no need to use any key. If another member needs to talk, he/she should hold down **PTT** only after the calling party stops talking and releases its **PTT**.

Hanging up a Emergency Call

See the corresponding part of "Individual call" or "Group call" in accordance with the call type of the predefined contact.

DMO

Individual Call

In DMO mode, an individual call can be initiated only as a half-duplex call.

Initiating an Individual Call

In the home screen, directly input the number you want to call through the keypad, or press **Func/OK** key to enter the "PhoneBook" or "Call Log" submenu, and select a contact. Then press **PTT** to initiate the call.

Note: Entry of individual numbers must comply with the SSI&TSI dialing rules. See "SSI&TSI Dialing Rules" in "Appendix" for more details.

Answering an Individual Call

You can receive an individual call in DMO automatically. During the call, you can hold down **PTT** to talk after the initiating party stops talking and releases its **PTT**.

Hanging up an Individual Call

The calling party can press to terminate the call. And the called party can press to exit the call.

Group Call

Group calls in DMO mode is the same as that in TMO mode. Please refer to operation method described in "Group Call" in the above "TMO" section.

Emergency Call

In DMO mode, emergency calls are endowed with emergency priority only. Please refer to operation method described in" Emergency Call" in the above "TMO" section.

Status Message

Status message, which should be programmed by your dealer only, can facilitate instant messaging of the frequently-used messages. You can only send or view rather than edit the status messages. When the message is sent successfully, for the receiving terminal, it will receive either the status ID of the status message (if the terminal has not predefined the message text) or the predefined text of the status ID (if the terminal has predefined the message text).

Note: The Send StatusMsg function and the status message are predefined by the dealer via the CPS.

Sending a Status Message

- Press the **Func/OK** key and go to “Message -> Create Msg -> StatusMsg -> Sel Msg”. Select a desired status message, and press the **Func/OK** key to proceed. Choose either an individual or a group as the target contact, input the appropriate number and press **Func/OK** to send the message.
- Long press the programmed **Send StatusMsg** key to send the preset status message directly.

Viewing the Status Message

When the icon appears in the status bar, it indicates there is/are unread message(s). Do as follows to view it:

- In the prompt screen for an unread message, press the **Func/OK** key to enter the Inbox, and press **Func/OK** key again to read.
- In the home screen, press the **Func/OK** key and navigate to “Message -> Inbox -> Inbox”. Then you can view the unread message.

User Message

TMO

Editing a User Message

- Press the **Func/OK** key and navigate to “Message -> Create Msg -> User Msg”. Press **Func/OK** key again to edit a user message.

Sending a User Message

- After editing, press **Func/OK** key to confirm. Then select the target contact and decide whether to send it as a flash message.

Note: If the message is sent as a flash message, the receiving party can preview all the content in a predefined time period without any operation. Once the time period expires, the terminal will go back to the former screen, with the icon displaying on the status bar.

Viewing the User Message

When the icon appears in the status bar, it indicates there is/are unread message(s). Do as follows to view it:

- In the prompt screen for an unread message, press the **Func/OK** key to enter the Inbox, and press **Func/OK** key again to read.
- In the home screen, press the **Func/OK** key and navigate to “Message -> Inbox -> Inbox”. Then you can view the unread message.

DMO

Editing a User Message

Press the **Func/OK** key and navigate to “Message -> Create Msg -> User Msg”. Press **Func/OK** key again to edit a user message.

Sending a User Message

After editing, press **Func/OK** to confirm. Then choose either an individual or a group as the target contact, input the appropriate number and press **Func/OK** to send the message.

Viewing the User Message

Operate in the same way as that described in”Viewing the User Message” in the above “TMO” section.

Troubleshooting

Phenomenon	Analysis	Solution
Network registration fails or network can not be found.	The terminal may be operating in DMO.	Switch to TMO mode.
	The terminal may get out of the network coverage (in TMO mode).	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 initiated.	The terminal or the called party may not be within 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 can not be initiated or received.	The terminal may not be a member of the 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 is assigned to emergency calls or other calls with higher priority.	Wait until the channel becomes available and try again.
A half-duplex call can not 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 get out of the network coverage (in TMO mode).	Check the signal strength. Make sure the terminal is within the network coverage.
	The terminal might operate at an unfavorable position where communication may be blocked by high buildings or frustrated in the underground areas (in DMO mode).	Move to an open and flat area, and restart the terminal.

Phenomenon	Analysis	Solution
As for the same status message, the content displayed at the receiving party is different from that of the sending party .	The parties have associated the same status message ID with different contents.	Make sure the status message ID is associated with the same content.
The BT device can not connect to the product.	The BT device battery may be low.	Charge the BT device.
	The distance between the BT device and the product may be out of 10 meters.	Be sure that the distance between the BT device and the product is within 10 meters.

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 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 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

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

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

Power Supply

- BL1103 Li-Ion Battery(1100mAh)
- BL1809 Li-Ion Battery(1800mAh)
- CH04L01 Portable Charger
- CHV09 Vehicle Adapter for Charger
- MCA05-X Battery Optimizing System
- MCA10 MCU Multi-unit Rapid-rate Charger (for Li-Ion Batteries)

Audio Accessory

- EWN08 Digital Wireless Covert Earpiece (Flatpack Sensor)
- ESN14 Remote Earbud
- EHN20 Remote Swivel Earset
- EHN21 Remote C-Earset
- EAN22 Detachable Earset with Transparent Acoustic Tube
- EAN21 3-Wire Surveillance Earpiece with Transparent Acoustic Tube (Beige)
- EAN24 2-Wire Surveillance Earpiece with Transparent Acoustic Tube (Black)
- SM26N1 Waterproof Remote Speaker Microphone(IP67)
- SM26N2 Waterproof Remote Speaker Microphone(IP54)
- POA47 Wireless Finger PTT
- EHW02 Wireless Earpiece With Dual-PTT

Others

- PC66 Programming Cable
- NCN009 Covert Shoulder Harness
- PCN005 Belt Clip

Appendix

SSI&TSI Dialing Rules

In the TETRA system, subscribers are distinguished by different identities. Each subscriber is assigned with a unique short subscriber identity (SSI), which serves a part of the TETRA subscriber identity (TSI). And TSI is generally composed in this way: Mobile Country Code (MCC) + Mobile Network Code (MNC) + SSI. To initiate an individual call, please dial the SSI or TSI in compliance with the rules below.

- SSI Dialing
  Make sure there are not more than 8 digits.
- TSI Dialing
  - » MNC+SSI:
    1) Input the MNC as it is;
    2) SSI must be 8 digits long. Add 0 before the first digit of SSI which is shorter than 8 digits. For example, when MNC is 20 and SSI is 504, you need to input 2000000504.
  - » MCC+MNC+SSI:
    1) MCC must contain 3 digits. Add 0 before the first digit of MCC which is shorter than 3 digits;
    2) MNC must contain 4 or 5 digits. When the MNC is shorter than 4 digits, add 0 before its first digit; when it is 5 digits long, use it directly;
    3) SSI must be 8 digits long. Add 0 before the first digit of SSI which is shorter than 8 digits.
    For example, when MCC is 460, MNC is 20 and SSI is 504, you need to input 460002000000504.