

Preface

Welcome to the world of Hytera and thank you for purchasing this product. This manual includes a description of the functions and step-by-step procedures for use. To avoid bodily injury or property loss caused by incorrect operation, please carefully read the *Safety Information Booklet* before use.

This manual is applicable to Jupiter TETRA radio.

Copyright Information

Hytera is the trademark or registered trademark of Hytera Communications Corporation Limited (the Company) in the People's Republic of China (PRC) and/or other countries or areas. The Company retains the ownership of its trademarks and product names. All other trademarks and/or product names that may be used in this manual are properties of their respective owners.

The product described in this manual may include the Company's computer programs stored in memory or other media. Laws in PRC and/or other countries or areas protect the exclusive rights of the Company with respect to its computer programs. The purchase of this product shall not be deemed to grant, either directly or by implication, any rights to the purchaser regarding the Company's computer programs. The Company's computer programs may not be copied, modified, distributed, decompiled, or reverse-engineered in any manner without the prior written consent of the Company.

Disclaimer

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 technological development. No part of this manual may be copied, modified, translated, or distributed in any manner without the prior written consent of the Company.

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 receive more information, 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. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Verification of harmful interference by this equipment to radio or television reception can be determined by turning it off and then 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 different circuit to that of the receiver's outlet.
- Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 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 radio 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 environmental 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) key. To receive calls, release the PTT key. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy only when transmitting (in terms of measuring for standards compliance).

- Keep the radio unit at least 2.5 cm away from the face. Keeping the radio at the proper distance is important as RF exposure decreases with distance from the antenna. The antenna should be kept away from the face and eyes.
- When worn on the body, always place the radio in a Hytera-approved holder, holster, case, or body harness or by use of the correct clip for this product. Use of non-approved accessories may result in exposure levels which exceed the FCC's occupational/controlled environmental RF exposure limits.
- Use of non-approved antennas, batteries, and accessories causes the radio to exceed the FCC RF exposure guidelines.
- Contact your local dealer for the optional accessories of the product.

ISED Statement

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

Après examen de ce matériel aux conformités 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 Innovation, Science and Economic Development Canada Compliance license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

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

EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the following directives: 1999/5/EC or 2014/53/EU, 2006/66/EC, 2011/65/EU, and 2012/19/EU.

Please note that the above information is applicable to EU countries only.

Contents

1. Product Overview	3
1.1 Product Controls	3
1.2 Radio Screens	4
2. Before Use	5
2.1 Charging the Battery	5
2.2 Installing the SIM Card	6
2.3 Installing the TF Card	6
2.4 Attaching the Battery	6
2.5 Attaching the Antenna	6
2.6 Attaching the Belt Clip	6
2.7 Attaching the Accessories	6
3. Basic Operations	8
3.1 Turning on or off the Radio	8
3.2 Adjusting the Volume	8
3.3 Operating the Main Screen	8
3.4 Locking and Unlocking the Main Screen	10
3.5 Switching the Operation Mode	10
4. Status Indications	12
4.1 LCD Icons	12
4.2 LED Indications	14
5. Call Services	16
5.1 Group Call	16
5.2 Individual Call	16
5.3 Broadcast Call (TMO Only)	17
5.4 All Call	17
5.5 Emergency Call	18
5.6 Phone Call	18
6. Message Services	20
6.1 Viewing a Message	20
6.2 Sending a Message	20
6.3 Deleting Messages	20
7. Supplementary Features	22
7.1 Basic Settings	22
7.2 Contact Management	23
7.3 Wireless and Network	24

7.4 APPs.....	25
7.5 Radio over IP (RoIP).....	31
7.6 Position.....	31
7.7 Encryption.....	32
7.8 Temporarily Disable.....	32
7.9 Permanently Disable.....	32
8. Troubleshooting.....	33
9. Care and Cleaning.....	35
10. Optional Accessories.....	36

Documentation Information

Icon Conventions

Icon	Description
 Note	Indicates references that can further describe the related topics.
 Caution	Indicates situations that could cause data loss or equipment damage.

Notation Conventions

Item	Description	Example
Boldface	Denotes menus, tabs, parameter names, window names, dialogue names, and hardware buttons.	To save the configuration, click Apply .
		The Log Level Settings dialogue appears.
		Press the PTT key.
" "	Denotes messages, directories, file names, folder names, and parameter values.	The screen displays "Invalid Battery!".
		Open "PDT_PSS.exe".
		Go to "D:/opt/local".
		In the Port text box, enter "22".
>	Directs you to access a multi-level menu.	Go to File > New .
<i>Italic</i>	Denotes document titles.	For details about using the DWS, refer to <i>Dispatch Workstation User Guide</i> .
Courier New	Denotes commands and their execution results.	To set the IP address, run the following command: vos-cmd - m name IP

Key Operations

Operation	Description
Short press	Press and release rapidly.
Long press	Press and hold for the preset duration (2s by default).
Double press	Press twice continuously and quickly.
Press and hold	Keep the key pressed.

Touch Screen Operations

Operation	Example
Tap	Tap  to launch the Camera app.
Touch and hold	Touch and hold  until it jiggles.
Swipe	Swipe down from the top edge of any screen to access the notification panel.
Drag	Touch and hold  until it jiggles, and then drag it to the proper position.

1. Product Overview

1.1 Product Controls



No.	Part Name	No.	Part Name
1	Side Key 1 (SK1)	17	Pressure Sensor
2	Push-to-Talk (PTT) Key	18	Front-facing Camera
3	Side Key 2 (SK2)	19	Speaker
4	Side Key 3 (SK3)	20	Accessory Connector
5	Top Key (TK)	21	Speaker
6	Microphone 3	22	Home Key

No.	Part Name	No.	Part Name
7	LED Indicator 1	23	On-Off/End Key
8	Top Screen	24	Battery Latch
9	Volume Control / Channel Selector / Contact Selector Knob	25	CARKIT RF Connector
10	Microphone 2	26	Strap Hole
11	Light Sensor	27	Rear-facing Camera
12	Main Screen	28	Flash
13	Microphone 1	29	Belt Clip
14	Back/Answer Key	30	Battery
15	LED Indicator 2	31	Charging Piece
16	Antenna	/	/

1.2 Radio Screens

The radio provides two screens: top screen and main screen.

1.2.1 Top Screen

The top screen shows information about narrow band (NB) services. It includes the following three areas from top to bottom: status bar, content bar, and information bar.



1.2.2 Main Screen

The main screen is a touch screen with Android Platform (AP). On the main screen, you can access the widgets, notification panel, quick setting panel, and application panel. For details, see [3.3 Operating the Main Screen](#).

2. Before Use

2.1 Charging the Battery

Caution

- Use the specified charger to charge the battery.
 - Read the *Safety Information Booklet* before charging.
-

The battery delivered with the radio is uncharged. To ensure optimum performance, fully charge the battery before initial use.

To charge the battery, do as follows:

1. Insert the output connector of the power adapter into the port on the bottom of the charger.
2. Place the battery into the charger.
3. Plug the power adapter into a power outlet that is off, and then switch the power outlet on.

To determine the charging status, check the LED indicator on the charger according to the following table:

LED Indicator on Charger	Charging Status
Flashes orange slowly	The charger is being activated.
Flashes red slowly	The battery fails to make proper contact with the charger.
Glowes red	The battery is charging.
Glowes green	The battery is charged to 95% or above.
Flashes red rapidly	The battery fails to be charged.

If the LED indicator flashes red slowly, take the battery out of the charger, and then place it into the charger for proper contact.

If the LED indicator flashes red rapidly, please contact your dealer to check whether the battery or power adapter is damaged.

Note

You can also charge the radio with battery attached. It is recommended that your radio remains powered off during charging.

2.2 Installing the SIM Card

1. Insert the removal tool into the hole on the SIM card tray, and push until the tray pops out.
2. Place the SIM card with the gold contacts facing up on the tray.
3. Slide the SIM card tray back into the slot.

2.3 Installing the TF Card

Insert the TF card into the TF card slot on the top of the battery compartment.

2.4 Attaching the Battery

1. Insert the top end of the battery into the top of the battery slot.
2. Press the bottom end of the battery until the latch snaps into place.



To remove the battery, turn off the radio, and then slide the battery latch upwards to unlock the battery.

2.5 Attaching the Antenna

1. Place the antenna in its receptacle.
2. Rotate the antenna clockwise until hand tight.



Do not hold the radio by the antenna, as it may reduce the radio performance and life span of the antenna.

2.6 Attaching the Belt Clip

1. Align the rails on the belt clip with the grooves on the battery.
2. Press the belt clip downwards into place.

2.7 Attaching the Accessories



For optimal waterproof and dustproof performance, close the accessory connector cover and fasten the screw when no accessory is attached.

1. Turn the screw on the accessory connector cover counterclockwise, and open the cover.
2. Insert the accessory plug into the top of the accessory connector.

3. Turn the screw on the accessory plug clockwise until hand tight.

3. Basic Operations

3.1 Turning on or off the Radio

To turn on the radio, press and hold the **On-Off** key until the splash screen appears.

To turn off the radio, do as follows:

1. Press and hold the **On-Off** key until the power-off selection screen appears.
2. Tap **Device Power Off**, and then tap **SURE**.

3.2 Adjusting the Volume

To increase or decrease the volume, rotate the **Volume Control** knob clockwise or counterclockwise.

3.3 Operating the Main Screen

3.3.1 Managing Widgets

On the home screen, you can access, add, remove, or reposition a widget.

Accessing a Widget

To access a widget on the home screen, swipe up or down to the widget, and then tap it.

Adding a Widget

To add a widget to the home screen, do as follows:

1. Touch and hold any widget on the home screen until the widget is highlighted.
2. Tap **ADD**, and then tap the required widget.
3. Tap **OK**.

Removing a Widget

To remove a widget from the home screen, do as follows:

1. Touch and hold any widget on the home screen until the widget is highlighted.
2. Swipe up or down to the widget to be deleted.
3. Tap  on the upper right corner of the widget, and then tap **OK**.



You cannot remove the widget showing NB service information.

Repositioning a Widget

To reposition a widget, do as follows:

1. Touch and hold the widget.
2. After the widget is highlighted, drag it up or down to the proper position.
3. Press the **Home** key to save your arrangement.

3.3.2 Using the Application Panel

The application panel provides shortcuts to frequently-used apps. In addition, you can tap  to view all apps.

- To access the application panel, swipe left or right from the right or left edge of the home screen.
- To add one or more shortcut to the application panel, tap **Add**, tap one or more shortcuts, and then tap **OK**.
You can add at most four shortcuts.
- To delete a shortcut from the edge panel, touch and hold the shortcut until it jiggles, and then tap .
- To reposition a shortcut, touch and hold the shortcut until it jiggles, and then drag the shortcut to the proper position.

3.3.3 Using the Notification Panel

The notification panel helps you keep track of what's new.

- To access the notification panel, swipe down from the top edge of any screen.
- To view details about a notification, tap the notification. After that, the notification is cleared from the notification panel.
- To clear a notification, swipe the notification left or right.
- To clear all notifications, tap **Clear** at the bottom of the notification panel.

The notification panel also contains a search bar. To search for an app, a message, or a contact, tap the search bar, and use the on-screen keypad to enter the keyword.

3.3.4 Using the Quick Setting Panel

The quick setting panel provides instant access to Settings, Camera, Flashlight, Calculator, and other handy features. You can also adjust the brightness, and turn on or off the airplane mode, Wi-Fi, NB network, Bluetooth, and so on.

- To access the quick setting panel, swipe up from the bottom edge of any screen. Then you can swipe left to view additional items.
- To rearrange an item, touch and hold the item, and drag the item to the proper position after it is highlighted.

3.3.5 Managing Running Apps

You can view and close running apps.

- To view running apps, double-press the **Home** key from any screen, and swipe up or down. You can tap an app in the list to access it.
- To close a running app, swipe it left or right.
- To close all running apps, tap .

3.4 Locking and Unlocking the Main Screen

When the main screen is not in use, it is recommended that you turn it off to save the battery and avoid unintended operations.

- To turn off the screen, long press **SK1**.
- To allow the main screen to be turned off automatically, go to **Settings > General > Device > Display > Main Screen > Sleep**, and then tap the required duration.
- To turn on the screen, press **SK1** or the **Home** key.

In addition, it is recommended that you secure your radio using a screen lock. The screen lock is triggered after the main screen is turned off.

To set the screen lock, do as follows:

1. Go to **Settings > General > Privacy & Security > Screen Lock**.
2. Tap **Unlock Pattern**, and then tap one of the following:
 - **None**: The screen will never be locked.
 - **Swipe**: Swipe up to unlock.
 - **Password**: Create a password for unlocking the screen.
 - **Pattern**: Create a pattern that you draw on the screen to unlock it.

3.5 Switching the Operation Mode

The radio can operate in NB mode or NB & broadband (BB) mode. The NB mode further includes the following two types:

- **Direct Mode Operation (DMO)**: supports half-duplex operation and allows radios to communicate directly, without using the network.

- Trunked Mode Operation (TMO): supports half-duplex or full-duplex operation and allows radios to communicate over the network. The radio must register with the network first, and then operates within the network coverage.

Upon power-on, the radio operates in NB & BB mode. To allow the radio to operate only in NB mode, do as follows:

1. Press and hold the **On-Off** key until the power-off selection screen appears.
2. Tap **AP Power Off**, and then tap **SURE**.

To switch the specific NB mode, go to **Settings > Private > Mode**, and then tap the required mode.

4. Status Indications

4.1 LCD Icons

Top Screen Icons

Icon	Radio Status
	This icon shows the battery level.
	The battery power is low.
	The radio is charging.
	The NB network is turned off.
	There is no signal from the NB network.
	The number of bars indicates the signal strength of the NB network.
	The number of bars indicates the signal strength when the radio operates in TMO mode and registers with a single BS.
	An accessory is connected.
	The Bluetooth feature is enabled.
	A Bluetooth device is connected.
	The Position feature is enabled, and the radio receives positioning data.
	The Position feature is enabled, but the radio receives no positioning data.
	Both Air Interface Encryption (AIE) and End-to-End Encryption (E2EE) features are enabled.
	The AIE feature is enabled.
	The E2EE feature is enabled.
	The radio operates in silent mode.
	The digit indicates the number of missed calls.
	The digit indicates the number of unread short messages.
	An emergency call is in progress.

	A private/group/all call is in progress on the NB network.
	An encrypted private/group/all call is in progress on the NB network.
	A private/group/all call is in progress on an RoIP network.
	A broadcast call is in progress.

Main Screen Icons

Icon	Radio Status
	This icon shows the battery level.
	The battery power is low.
	The radio is charging.
	The NB network is turned off.
	There is no signal from the NB network.
	The number of bars indicates the signal strength of the NB network.
	The number of bars indicates the signal strength when the radio operates in TMO mode and registers with a single BS.
	The number of bars indicates the signal strength of the BB network.
3G	A 3G network is available.
4G	A 4G network is available.
E	An EDGE network is available.
	No SIM card is detected.
	The radio operates in Do Not Disturb mode.
	The radio is downloading.
	The radio is connected to the Internet over a Wi-Fi network.

	The radio provides a personal hotspot.
	The radio operates in Airplane mode.
	The radio is set at low power.
	The radio is set at high power.
	An accessory is connected.
	The Bluetooth feature is enabled.
	A Bluetooth device is connected.
	The Position feature is enabled, and the radio receives positioning data.
	The Position feature is enabled, but the radio receives no positioning data.
	The Voice Recorder feature is enabled.
	The Alarm feature is enabled.
	The radio operates in silent mode.

4.2 LED Indications

LED Indicator 1

LED Indicator	Radio Status
Flashes blue	A Bluetooth device is connected.
Flashes red	There is/are unread short messages/notifications or missed calls.

LED Indicator 2

LED Indicator	Radio Status
Flashes green rapidly	Being turned on.
Flashes green slowly	Standby in TMO mode.
Glow green	Receiving.
Glow red	- During a call: Transmitting. - Standby: The battery runs low. Please recharge or replace the battery.
Flashes orange slowly	Registering in TMO mode.

Flashes orange rapidly	Establishing a call with hook signaling.
Glow orange	Call hang time: No voice is being transmitted or received during a call. Within such a period, you can press and hold the PTT key and speak.

5. Call Services

5.1 Group Call

A group call is a half-duplex call from an individual user in a group to other members in the group.

5.1.1 Initiating a Group Call

To initiate a call to the default group, press and hold the **PTT** key.

To initiate a call to a non-default group, do as follows:

3. Set the target group contact as the default group in one of the following ways:
 - Press the **Channel Selector/Contact Selector** knob, and then rotate it to select the target group.
 - Tap  > **Manage**, and then tap  next to the target group contact.
4. Press and hold the **PTT** key.

5.1.2 Receiving a Group Call

You can listen to an incoming group call without any operation.

During the call, you can press and hold the **PTT** key and speak in call hang time.

When your radio is assigned with the pre-emptive priority, you can press and hold the **PTT** key to interrupt the talking party and speak at any time.

5.1.3 Ending or Exiting a Group Call

To end an outgoing group call or exit an incoming group call, press the **End** key.



- The Called Party Exit Group Call feature must be enabled by your dealer for you to exit an incoming group call.
 - In TMO mode, your radio must be granted with the Call Owner permission by your dealer for you to end an outgoing group call. Otherwise, you can only exit an outgoing group call.
-

5.2 Individual Call

An individual call is a half-duplex (DMO and TMO) or full-duplex call (TMO only) initiated by one individual user to another. In a half-duplex call, only one party can speak at a time. In a full-duplex call, both parties can speak at the same time.

To set the calling mode in TMO mode, go to **Settings > Private > Default calling mode**, and then tap the

required mode.

5.2.1 Initiating an Individual Call

To initiate an individual call, do as follows:

1. Tap  > **Favorites/Private** and select the target contact, or tap  and enter the target number.
2. Press the **PTT** key.

5.2.2 Receiving an Individual Call

When receiving an individual call with direct signaling, you can listen to the call without any operation.

When receiving an individual call with hook signaling, press the **PTT** key to answer the call.

5.2.3 Ending an Individual Call

To end an individual call, press the **End** key.

5.3 Broadcast Call (TMO Only)

A broadcast call is a special group call. In a broadcast call, only the calling party can speak. You can initiate a broadcast call only when a broadcast group is preprogrammed.

5.3.1 Initiating a Broadcast Call

To initiate a broadcast call, do as follows:

1. Set the broadcast group as the default group in one of the following ways:
 - Press the **Contact Selector** knob, and then rotate the knob to select the broadcast group.
 - Tap  > **Manage**, and then tap  next to the broadcast group.
2. Press and hold the **PTT** key.

5.3.2 Receiving a Broadcast Call

You can listen to an incoming broadcast call without any operation.

5.3.3 Ending or Exiting a Broadcast Call

For details, see [Ending or Exiting a Group Call](#).

5.4 All Call

In DMO, an all call is a call from an individual user to other radios operating at the same frequency or operating at

the same frequency and network. In TMO, an all call is a call from an individual user to other radios in the system.

Your radio must be authorized by your dealer for you to initiate an all call.

5.4.1 Initiating an All Call

To initiate an all call, do as follows:

1. Tap  > **Group** and select the all call contact, or tap  and enter the all call number.
2. Press and hold the **PTT** key.

5.4.2 Receiving an All Call

You can listen to an incoming all call without any operation.

5.4.3 Ending or Exiting an All Call

For details, see [Ending or Exiting a Group Call](#).

5.5 Emergency Call

An emergency call is a call initiated to ask for help in case of emergency. The radio must be authorized by your dealer for you to initiate an emergency call.

5.5.1 Initiating an Emergency Call

To initiate an emergency call, press the **Emergency On** key.

5.5.2 Receiving an Emergency Call

You can listen to an incoming emergency call without any operation.

5.5.3 Ending or Exiting an Emergency Call

As the calling party, you can press the **Emergency Off** key or turn off the radio to end an emergency call.

As the called party, you can press the **End** key or tap the on-screen end button to exit an emergency call.

If you insert an SIM card, you can initiate a call to a phone number.

5.6 Phone Call

5.6.1 Initiating a Phone Call

To initiate a phone call, do as follows:

1. Tap  and enter the target number, or tap  > **Favorites/Private** and tap the target contact.
2. Tap the on-screen call button.

5.6.2 Receiving a Phone Call

When receiving a phone call, the radio displays the caller's number or name.

To answer the call, tap the on-screen answer button.

To reject the call, tap the on-screen reject button.

5.6.3 Ending a Phone call

To end a phone call, tap the on-screen end button.

6. Message Services

The Message feature allows you to send and receive messages.

6.1 Viewing a Message

To view a message, tap , and then tap the target message.

6.2 Sending a Message

You can create a message or send a quick text or status message.

6.2.1 Sending a New Message

To create and send a new message, do as follows:

1. Tap , and then tap  in the lower right corner.
2. Enter the target number in the **To** text box, or tap  to select a contact.
3. Tap the **Type message** text box, and enter the text.

You can also tap  to add the required attachment.

4. Tap  to send the message.



Note

If you do not tap , the created message will be saved as a draft.

6.2.2 Sending a Quick Text or Status Message

To send a quick text or status message, do as follows:

1. Tap , and then tap  in the lower right corner.
2. Enter the target number in the **To** text box, or tap  to select a contact.
3. Tap  in the front of the **Type message** text box.
4. Slide right to access the predefined message list.
5. Tap the required message, and then tap .

6.3 Deleting Messages

To delete messages, do as follows:

1. Tap .

2. Touch and hold a message until the delete screen appears.
3. Tap the messages to be deleted or tap **Select all** in the upper right corner.
4. Tap **Delete** > **DELETE**.

7. Supplementary Features

7.1 Basic Settings

You can tap **Settings > General** and then do the following operations:

If you want to...	Then...
Set SK2 , SK3 , and TK as shortcuts to radio features	Go to Device > Program Keys > SK2/SK3/Tkey > Short Press / Long Press / Double Click , and then tap the required feature.
Set the language	Go to System > Language & input > Language , and then tap the required language.
Set the wallpaper	1. Go to Device > Personalization > Wallpaper . 1. Tap the required picture, and then tap CONFIRM .
Adjust the brightness of backlight	Go to Device > Display > Main Screen / Top Screen , and then drag the brightness slider.
Set whether you can access the edge panel from the left edge or right edge of the home screen	Go to Device > Personalization > Side_fence , and then tap Left , Right , or Both .
Turn on or off vibration	Go to Device > Hytera Ringtones , and then tap Vibrate on Ring or Vibrate on Silent .
Set the profile	Go to Device > Hytera Ringtones > Profiles , and then tap Ring or Mute .
Set the ring, media, alarm, and call volume	Go to Device > Hytera Ringtones > Volume , and then drag the corresponding slider.
Set sound and vibration patterns	Go to Device > Hytera Ringtones > Sound and Vibration Patterns , tap the corresponding tone, and then tap the required pattern.
Clear cached data	Go to Device > Storage > Cached data , and then tap OK .
Set whether the main screen displays battery percentage in the status bar	Go to Device > Battery , and then tap Show Battery Usage .

If you want to...	Then...
Turn on or off the gloves mode	Go to Device > Assistance , and then tap gloves mode .
Set the date and time	Go to System > Date & time .

7.2 Contact Management

The Contact feature allows you to view and manage private and group contacts.

7.2.1 Adding a Private Contact

To add a private contact, do as follows:

1. Tap  > **Private** > .
2. Tap  and assign a picture to the contact by choosing one the following options:
 - **Take Photo:** use the camera to take a photo.
 - **Choose Photo:** choose a photo from the Gallery.
3. Tap the **Name** and **Add PMR Number** text boxes, and enter the name and Private Mobile Radio (PMR) number of the contact respectively.
4. Tap , and then tap the required type of phone number.
5. Tap the **Add Phone Number** text box and enter the phone number.
6. (Optional) Tap **Add Number** to add another phone number.
7. Tap the **Email**, **Address**, and **Note** text boxes and enter the related information.
8. Tap **Save** in the upper right corner.

7.2.2 Adding a Contact to Favorites

To add frequently used contacts to the **Favorites** list, do as follows:

1. Tap  > **Favorites** > .
2. Tap the required contacts, and then tap **OK**.

7.2.3 Deleting a Private Contact

1. Tap , and then tap **Private**.
2. Tap the contact to be deleted, and then tap .
3. Swipe up to the bottom, and then tap **Delete**.

4. Tap **OK**.

7.3 Wireless and Network

7.3.1 Wi-Fi

The Wi-Fi feature provides free Internet access.

To connect to a Wi-Fi network, do as follows:

1. Go to **Settings > General > Wireless & networks > Wi-Fi**.
2. Check whether Wi-Fi is on. If yes, go to the next step. If no, tap **Off** to turn on it.

When Wi-Fi is turned on, the radio automatically scans for available networks and displays them.

3. Tap the network you want to connect to.

When you select an open network, the radio automatically connects to it. Otherwise, enter a password to connect.

7.3.2 Bluetooth

The Bluetooth feature allows a wireless connection with another Bluetooth device for short-range communication.

To pair the radio with another Bluetooth device, do as follows:

1. Go to **Settings > General > Wireless & networks > Wi-Fi**.
2. Check whether Bluetooth is on. If yes, go to the next step. If no, tap **Off** to turn on it.
3. Tap the name of the target device.

7.3.3 Personal Hotspot

The Personal Hotspot feature allows you to share the radio's Internet connection with other devices.

To set up a hotspot, do as follows:

1. Go to **Settings > General > Wireless & networks > Personal Hotspot > Set up Wi-Fi hotspot**.
2. Enter the related information, and then tap **Save**.

To turn on or off the Bluetooth tethering feature, tap **Bluetooth tethering** under **Personal Hotspot**.

7.3.4 NFC

The Near Field Communication (NFC) feature allows data exchange when you touch the radio with another compatible device.

To turn on or off NFC, go to **Settings > General > Wireless & networks > More**, and then tap **NFC**.

7.4 APPS

On the AP, you can use embedded apps as you do on your mobile phone. To launch an app, tap the related app icon.

7.4.1 Camera

The Camera app allows you to take photos and record videos. It includes tabs for recording a video, taking an ordinary photo, or taking a panorama photo.

Taking an Ordinary Photo

To take an ordinary photo, do as follows:

1. Launch the Camera app.
2. Swipe left or right to the tab with .
3. Tap  to do the following basic settings:
 -  : Turn on or off the flash.
 - HDR: High Dynamic Range, helps you get a brighter and richer photo.
 -  : Take time-delayed photos
 -  : Switch between the front-facing camera and rear-facing camera.
4. Tap  in the upper right corner to do other settings, such as resolution, watermark, and face detection.
5. Aim the camera at the subject, and pinch the screen to zoom out or spread the screen to zoom in if required.
6. Tap .

Recording a Video

To record a video, do as follows:

1. Launch the Camera app.
2. Swipe left or right to the tab with .
3. Tap  to do the following basic settings:
 -  : Turn on or off the flash.
 -  : Switch between the front-facing camera and rear-facing camera.
4. Tap  in the upper right corner to do other settings, such as resolution and watermark.

5. Aim the camera at the subject, and pinch the screen to zoom out or spread the screen to zoom in if required.
6. Tap  to start recording.
7. (Optional) Tap  to pause, and then tap  to continue.
8. Tap  to stop recording.

Taking a Panorama Photo

To take a panorama photo, do as follows:

1. Launch the Camera app.
2. Swipe left or right to the tab for taking a panorama photo.
3. Tap the panorama camera icon.
4. Pan slowly in the required direction.

7.4.2 Gallery

The Gallery app allows you to view and manage pictures and videos.

Viewing Pictures and Videos

To view a picture or video, do as follows:

1. Launch the Gallery app.
2. Tap , and then tap one of the following options to select the view mode:
 - **All:** View pictures and videos organized by date.
 - **Albums:** View pictures and videos organized by album.
3. Depending on the view mode, either tap a picture or video to view it, or first tap an album or folder and then tap a picture or video.
4. (Optional) Swipe left or right to view the next or previous picture or video.

While viewing a picture, you can tap the screen, and then tap **More** to do the following operations:

- **Move to Folder:** Move the picture into an existing or a new folder.
- **Edit:** View and use the editing tools.
- **Set picture as:** Set the picture as a contact avatar or the wallpaper.
- **Slideshow:** Start a slideshow with the pictures and videos in the current folder.
- **Details:** View information about the picture, including the title, time, and properties.

Zooming In and Out

To zoom in or out a picture, do one of the following:

- Double-tap anywhere on the screen.
- Spread two fingers apart on any place to zoom in, and pinch the screen to zoom out.

Deleting Pictures and Videos

To delete an image or a video, tap **Delete** while viewing it.

To delete all pictures and videos in a folder, do as follows:

1. Tap , and then tap **Albums**.
2. Touch and hold the folder to be deleted until it is selected.
3. Tap **Delete**, and then tap **OK**.

7.4.3 Clock



The Clock app allows you to access alarms, view the world clock, set a stopwatch, and use a timer.

Alarm

The Alarm feature allows you to set an alarm to ring at a specific time.

To create an alarm, do as follows:

1. Launch the Clock app, and then tap .
2. Tap , and then drag the pointer to set the time for the alarm to sound.
3. Tap **OK**, and then tap the following items to set the alarm:
 - **Repeat**: Tap the days on which you want the alarm to ring.
 -  : Set the alarm tone.
 - **Vibrate**: Enable or disable alarm vibration.
 - **Label**: Add a label for the alarm.
4. Tap  > **Settings** to set the following options:
 - **Silence after**: Set the period after which the alarm stops ringing.
 - **Snooze length**: Set a duration for the alarm while snoozing.
 - **Volume buttons**: Set the function of the **Volume Control** knob when the alarm sounds. The following three options are available: **Snooze**, **Dismiss**, and **Do nothing**.

- **Start week on:** Set the beginning day of the week. The following three options are available: **Saturday**, **Sunday**, and **Monday**.

When the alarm sounds, swipe left to snooze or swipe right to dismiss the alarm.

To delete an alarm, tap , and then tap . If you want to cancel the deletion, tap **UNDO** instead.

World Clock

The World Clock feature allows you to keep track of the current time in multiple cities around the world.

- To access the world clock, launch the Clock app, and then tap .
- To list a city on the world clock screen, tap , and then tap the city to select it.
- To remove a city from the list, tap , and then tap the city to deselect it.

Timer

The Timer feature allows you to count down to an event based on a preset period.

To use a timer, do as follows:

1. Launch the Clock app, and then tap .
2. Tap the digits on the screen to set the length.
3. Tap  to start the timer.

After the timer starts, you can do the following operations:

- Tap  to pause the timer.
- Tap  to delete the timer.
- Tap the icon in the lower right corner to add another timer.

If you create more than one timers, swipe up or down to view the timers.

Stopwatch

The stopwatch feature allows you to measure intervals of time.

To use the stopwatch, do as follows:

1. Launch the Clock app, and then tap .
2. Tap  to begin timing.
3. (Optional) Tap the icon in the lower left corner to measure another interval of time.
4. Tap  to stop timing.

5. View the timing result on the screen, or tap  to share the result.
6. Click  to reset the stopwatch.

7.4.4 Calendar

The Calendar app allows you to consult the calendar by day, week, or month, create events, and set an alarm to act as a reminder.

Viewing the Calendar

To set the calendar view, do as follows:

1. Launch the Calendar app.
2. Tap the date in the upper left corner of the screen to display the following view options:
 - **Day:** Display the day view.
 - **Week:** Display the week view.
 - **Month:** Display the month view.
 - **Agenda:** Display the agenda view.

Setting the Calendar

To set the calendar, do as follows:

1. Tap  > **Settings** > **General settings**.
2. Set the related options.

Creating an Event

To create an event on the calendar, do as follows:

1. Tap  > **New event**.
2. Set the parameters as required.
3. Tap **DONE** in the upper right corner.

Deleting an Event

To delete an event from the calendar, do as follows:

1. Tap  > **Delete events**.
2. Tap the event to be deleted.
3. Tap , and then tap **OK**.

7.4.5 Browser

The Browser app allows you to access a web site.

- To set the browser, tap  > **Settings**, and set the parameters following on-screen instructions.
- To access a web site, tap the address bar, enter the web address, and then tap **Go** on the on-screen keypad.
- To open a new tab, tap  > , and enter the new web address.
- To close a tab, tap , swipe up or down to view the tab, and then tap .
- To bookmark the current web page, tap  > **Save to bookmarks**.
- To view bookmarks, tap  > **Bookmarks**.

7.4.6 Calculator

The Calculator app facilitates basic and advanced arithmetic operations.

To perform basic arithmetic operations, do as follows:

1. Launch the Calculator app.
3. Enter the first number using the on-screen numeric keypad.
4. Tap the appropriate arithmetic function key.
5. Enter the next number.
6. Tap the equal sign to view the result.

To perform advanced arithmetic operations, swipe left from the edge of the calculator screen.

7.4.7 Compass

The Compass app allows you to find a direction and see your latitude, longitude, and altitude.

To use the compass, do as follows:

1. Launch the Compass app.
2. Hold the radio flat in your palm.
3. Follow the on-screen instructions when prompted to calibrate.
4. View the information on the compass screen.

7.4.8 Sound Recorder

The Sound Recorder app allows you to record an audio file and share it.

To record an audio file, do as follows:

1. Launch the Sound Recorder app.
2. Tap **Record**, and then speak into the microphone.
3. Tap **Done** to stop recording.

To share an audio file, tap **File**, tap the audio file, and then tap **Share**.

7.4.9 App Store

The App Store allows you to download apps to your radio.

- To view app messages, tap **Messages**.
- To view apps, tap **App Store**, tap **Cat** in the upper left corner, and then tap **All**, **Top charts**, and **Latest** as required.
- To search an app, tap App Store > , and enter the keyword.
- To manage downloaded apps, tap **Management**.

7.5 Radio over IP (RoIP)

When the radio operating in TMO mode is out of the network coverage, the RoIP feature allows you to enjoy smooth TMO services over an RoIP network.

To turn on or off this feature, go to **Settings > Private > RoIP**, and then tap **RoIP**.

To set the RoIP network, go to **Settings > Private > RoIP Settings**. For details, please consult your dealer.

7.6 Position

The Position feature provides location information.

To turn on or off this feature, go to **Settings > General > Privacy & Security > Security > Location**, and then tap **GPS**.

To view your location information, go to **Settings > General > Privacy & Security > Security > Location > Location Service**.

Generally, a higher squelch level requires a higher RSSI value. If the squelch level is set to **Open**, the speaker will

always keep turned on.

7.7 Encryption

The Encryption feature prevents eavesdropping on calls and interception of data.

To turn on or off this feature, go to **Settings** > **Private**, and then tap **Security**.

7.8 Temporarily Disable

When being stunned, the radio displays . In this case, you can only power on or off the radio.

To restore normal operation, request your dealer to program the radio or send an Enable command.

7.9 Permanently Disable

When being killed, the radio displays . In this case, you can do no operation.

To restore normal operation, request your dealer to burn the radio.

8. Troubleshooting

Phenomenon	Analysis	Solution
The radio cannot be powered on.	The battery power gets too low to supply the radio.	Charge the battery.
Network registration fails or no network is found.	The radio is operating in DMO.	Switch to TMO.
	The radio gets out of the network coverage.	Check the signal strength. Make sure the radio is within the network coverage.
	The radio is not granted access to the network.	Contact the network operator for radio authorization.
Calls cannot be initiated.	The radio or the target radio (the called party) is not within the network coverage.	Check the signal strength. Make sure the radios are within the network coverage.
	The radio operates in an improper mode.	Check the operation mode. Make sure the radios work in the proper mode.
A group call cannot be initiated or received.	The radio is not a member of the group.	Contact your dealer to add the radio to the group.
	The radio is not authorized to access the target group.	Contact the network operator for radio 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 cannot be established.	The predefined time period for establishing a call expires.	Make sure the call is established within the predefined time period.
	The channel is occupied by another radio with higher call priority.	Wait until the channel becomes available and try again.
	The channel resources are allocated to other services due to overloaded	Wait until the channel becomes available and try again.

	network.	
Abnormal disconnection occurs during a call.	The radio gets out of the network coverage.	Check the signal strength. Make sure the radio is within the network coverage.
	The radio operates 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 radio.
As for the same status message ID, the content displayed at the receiving party is different from that displayed at the sending party.	The same status message ID has been assigned with different contents.	Make sure the status message ID is assigned 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.

9. Care and Cleaning

To guarantee optimal performance as well as a long service life of the product, please follow these tips.

Product Care

- Do not pierce or scrape the product.
- Keep the product far away from substances that can corrode the circuitry.
- Do not hold the product by the antenna or earpiece cable.
- Close the accessory connector cover when no accessory is in use.

Product Cleaning

Caution

Turn off the product and remove the battery 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, 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.
- If the radio is used in a harsh environment (such as sea and salt fog), periodically clean and dry the radio.
- Make sure the product is completely dry before use.

10. Optional Accessories

Contact your local dealer for the optional accessories used with the product.

Caution

Use the accessories specified by Hytera only; otherwise, the Company will not be liable for any loss or damage arising out of the use of any unauthorised accessories.

PLMRS:

Operation Frequency Range:	454~455 MHz, 456~460 MHz
Rated Output Power:	1.8 Watts (32.55dBm)
Modulation Type:	$\pi/4$ DQPSK
Channel Separation:	25kHz

TETRA:

Operation Frequency Range:	450MHz ~ 470MHz
Rated Output Power:	1.8 Watts (32.55dBm)
Modulation Type:	$\pi/4$ DQPSK
Channel Separation:	25kHz

Bluetooth:

Version:	Supported BT2.1+EDR/4.0+BLE
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79/40
Channel separation:	1MHz/2MHz

WIFI:

Supported type:	☒ 802.11b	☒ 802.11g	☒ 802.11n(H20)	-
Modulation:	DSSS for 802.11b OFDM for 802.11g/802.11n(H20)			
Operation frequency:	2412MHz~2462MHz for 802.11b/802.11g/802.11n(H20)			
Channel number:	11 for 802.11b/802.11g/802.11n(H20)			
Channel separation:	5MHz			

NFC:

Modulation:	FSK
Operation frequency:	13.56MHz
Channel number:	1

2G:

Support Network:	GSM, GPRS, EGPRS
Support Band:	GSM850, PCS1900
Modulation:	GSM/GPRS/EGPRS: GMSK EGPRS: 8PSK
Transmit Frequency:	GSM850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz
Receive Frequency:	GSM850: 869.20MHz-893.80MHz PCS1900: 1930.20MHz-1989.80MHz
GPRS Class:	12
EGPRS Class:	12

4G:

☒ FDD Band 2	
Operation Frequency:	Uplink:1850.7 MHz – 1909.3 MHz Downlink: 1930.7 MHz – 1989.3 MHz
Channel bandwidth:	☒ 1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☒ 15MHz
☒ FDD Band 4	
Operation Frequency:	Uplink:1710.7 MHz – 1754.3 MHz Downlink: 2110.7 MHz – 2154.3 MHz
Channel bandwidth:	☒ 1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☒ 15MHz ☒ 20MHz
☒ FDD Band 5	
Operation Frequency:	Uplink:824.7 MHz – 848.3 MHz Downlink: 869.7 MHz – 893.3 MHz
Channel bandwidth:	☒ 1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☐ 15MHz ☐ 20MHz
☒ FDD Band 7	
Operation Frequency:	Uplink:2502.5 MHz – 2567.5 MHz Downlink: 2622.5 MHz – 2687.5 MHz
Channel bandwidth:	☐ 1.4MHz ☐ 3MHz ☒ 5MHz ☒ 10MHz ☒ 15MHz ☒ 20MHz
☒ FDD Band 26	
Operation Frequency:	Uplink: :814.7 MHz – 823.3 MHz Downlink: 859.7MHz – 868.3 MHz
Channel bandwidth:	☒ 1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☒ 15MHz ☐ 20MHz
☒ TDD Band 41	
Operation Frequency:	Uplink:2496 MHz – 2690 MHz Downlink: 2496 MHz – 2690 MHz
Channel bandwidth:	☐ 1.4MHz ☐ 3MHz ☒ 5MHz ☒ 10MHz ☒ 15MHz ☒ 20MHz
Power Class:	☐ Class 1 ☐ Class 2 ☒ Class 3 ☐ Class 4
Modulation type:	☒ QPSK ☒ 16QAM ☐ 64QAM

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any 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.

RF Radiation Information

This product must be restricted to operations in an occupational/controlled RF exposure environment. Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

The information listed above provides the user with information needed to make him or her aware of a RF exposure, and what to do to assure that this radio operates within the FCC exposure limits of this radio.

- 1) PLMRS: The device complies with RF specifications when the device is used at 25mm from your front face and 0mm from your body. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Maximum SAR Value (1g): 2.04W/Kg.

- 2) CMRS/WLAN:

This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

FCC RF Exposure Information and Statement The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. This device was tested for typical body-worn operations with the back of the handset kept 10mm for body worn. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 10mm for body worn. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 10mm for body worn must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.