Preface

Thanks for your favor in our product. This manual provides guidance for you to quickly know how to use the product.

This manual is applicable to the following product:

PD982 U(5) Digital Portable Radio

Copyright Information

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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 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.

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: 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.

ISEDC 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 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 Innovation, Science and Economic Development Canada 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'Innovation, Sciences et Développement économique 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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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.

Notational 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**.
Italic	Denotes document titles.	For details about using the DWS, refer to *Dispatch Workstation User Guide*.
`Courier New`	Denotes commands and their execution results.	To set the IP address, run the following command: `vos-cmd - m name IP`

1. Packing List

Please unpack carefully and check that you have received the following items. If any item is missing or damaged, please contact your dealer.

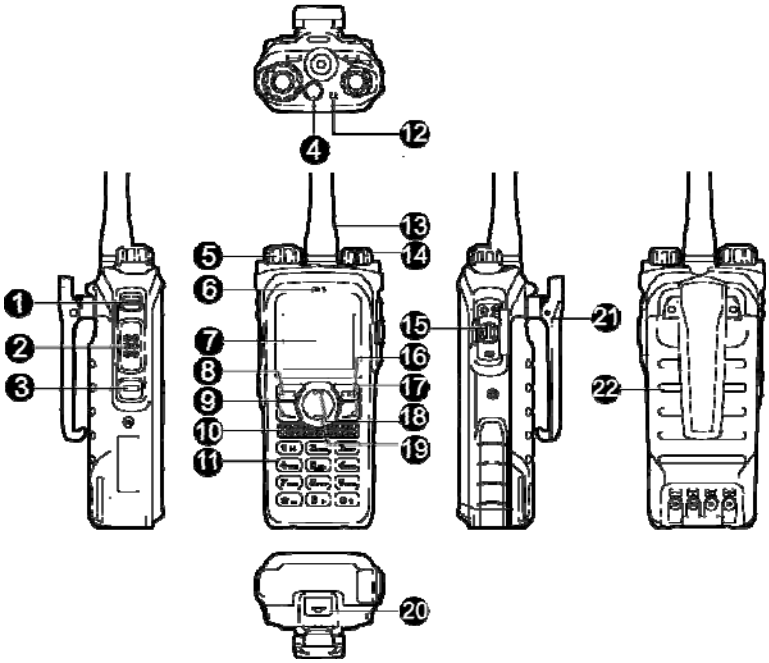
Item	Quantity (PCS)	Item	Quantity (PCS)
Radio	1	Antenna	1
Battery	1	Belt Clip	1
Charger	1	Strap	1
Power Adapter	1	User Manual	1

Note

Check whether the frequency band marked on the antenna label matches that on the radio label. If not, please contact your dealer.

2. Product Overview

2.1 Product Layout



No.	Part Name	No.	Part Name
1	Side Key 1 (SK1)	12	LED Indicator
2	Push-to-Talk (PTT) Key	13	Antenna
3	Side Key 2 (SK2)	14	On-Off/Volume Control Knob
4	Top Key (TK)	15	Accessory Connector
5	Channel/Group Selector Knob	16	Back/Subgroup Key
6	Microphone	17	P2/BackDial/End/Home Screen Key
7	LCD Display	18	Up Key
8	OK/Menu Key	19	Down Key
9	P1/Answer/Redial/Call Key	20	Battery Latch
10	Speaker	21	Belt Clip
11	Numeric Keypad	22	Battery

Note

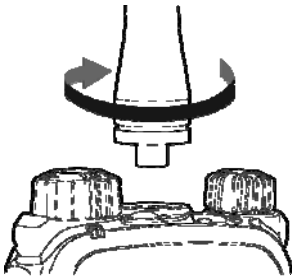
For enhanced convenience, you may request your dealer to program the **TK**, **P1**, **P2**, **SK1**, and **SK2** as shortcuts to radio features.

3. Before Use

3.1 Attaching the Antenna

Caution

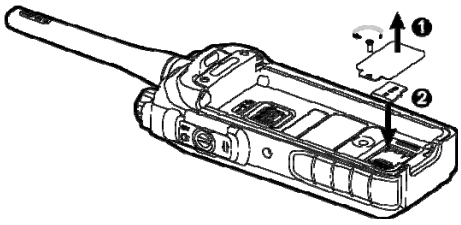
- Rotate the antenna clockwise until hand tight; if over tightened, the antenna or its connector may be damaged.
- Do not hold the radio by its antenna as it may reduce the radio performance and life span of the antenna.



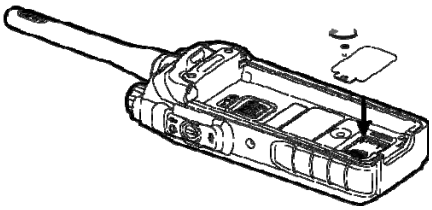
3.2 Installing the Micro-SD Card

Install the Micro-SD card as follows if required:

Step 1 Loosen the screw fixing the Micro-SD card cover, remove the cover, and then place the card in the holder correctly.



Step 2 Put the cover back and tighten the screw.

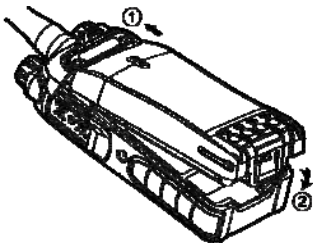


3.3 Attaching the Battery

Note

- Upon power-on, the radio automatically checks whether the battery is approved by the Company and gives a corresponding indication.

- Using an unapproved battery makes the battery power indication inaccurate and reduces the radio performance.

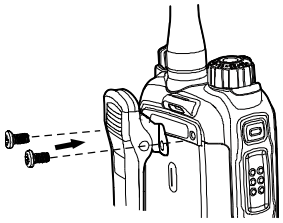


3.4 Attaching the Belt Clip

Step 1 Unfasten the two screws on the back of the radio.

Step 2 Align the screw holes on the belt clip with those on the back of the radio.

Step 3 Tighten the screws.

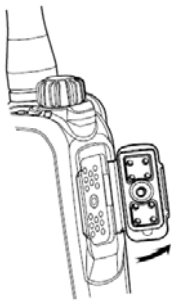


3.5 Attaching the Accessories

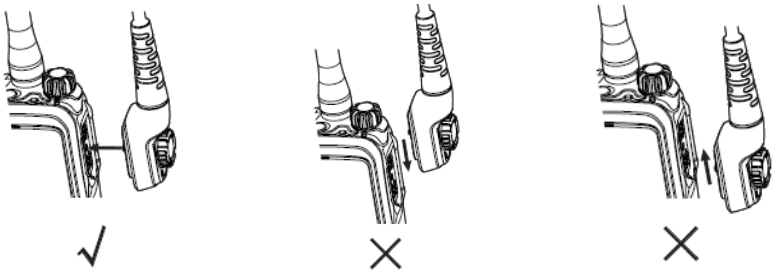
⚠**Caution:** For optimal waterproof and dustproof performance:

- Do not scrape the silicone waterproof pad surrounding the screw hold of the accessory connector.
- Do close the accessory connector cover and fasten the screw after removing the accessory.

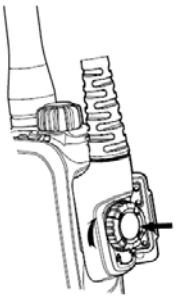
Step 1 Loosen the screw fixing the accessory connector cover, and open the cover.



Step 2 Align the accessory (such as an audio accessory or a programming cable) plug with the accessory connector.



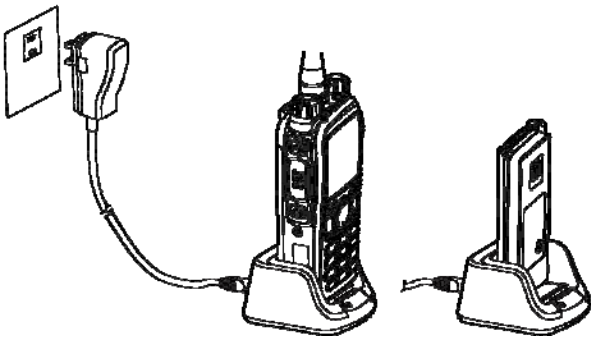
Step 3 Tighten the screw on the accessory plug.



3.6 Charging the Battery

Caution: Use the charger specified by the Company to charge the battery.

Charge the battery fully before initial use because reduction of state of charge may lead to low battery alarm. You can charge the standalone battery or the radio with battery attached. It is recommended that your radio remain powered off during charging.



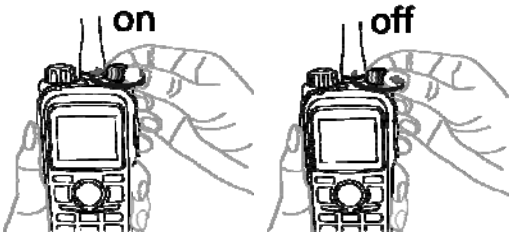
The LED indicator on the charger shows the charging status. For details, see the following table.

LED Indication	Charging Status
Flashes red slowly	The battery is inserted incorrectly.
Glows red	The battery is being charged.
Glows orange	The battery is charged to 90% or more.
Glows green	The battery is fully charged.

LED Indication	Charging Status
Flashes red rapidly	The battery fails to be charged.

4. Basic Operations

4.1 Turning the Radio On/Off



4.2 Adjusting the Volume

4.3 Checking the Battery Power

You can check the current battery power by holding down the preprogrammed **Battery Power Indicator** key, and release the key to exit. Battery power indications and alert tone are listed below:

Icon	LED Indication/Tone
	The LED Indicator glows green.
	The LED Indicator glows orange.
	The LED Indicator glows red.
	The LED Indicator glows red and an alert tone sounds. The battery runs low. Please recharge or replace the battery.

4.4 Locking or Unlocking the Keypad

When the keypad is not in use, it is recommended that you lock it to avoid unintended operations. To

lock or unlock the keypad, do one of the following:

- Automatically lock or unlock the keypad

  The Keypad Lock feature allows the keypad to be locked automatically if no operation is performed within the preset time period.

  To enable this feature, go to **Menu > Settings > Radio Set > Keypad Lock**, select **Enable**, and set **Delay Time(s)** by pressing the **Up** or **Down** key.

  To disable this feature, select "Disable" under the "Keypad Lock" menu.

- Manually lock or unlock the keypad

  To manually lock or unlock the keypad, do one of the following on the home screen:

  - Press the **Keypad Lock** key programmed by your dealer.
  - Press the **OK/Menu** key and then press *␣ .

Note

You can go to **Menu > Settings > Radio Set > Optional Key** to set whether the keys and knobs still function when the keypad is locked.

4.5 Using the Keypad

You can use the keypad to enter user aliases or IDs and text messages.

- To switch the input method between alphabetic mode and numeric mode, press #↑ .
- To enter special characters, press 1!< in the alphabetic mode or *␣ in the numeric mode.
- To enter the space, press *␣ in the alphabetic mode.

4.6 Switching the Operation Mode

The radio can operate in conventional or trunking mode. In conventional mode, you can receive and transmit voice and data after selecting the required channel. In trunking mode, you can receive and transmit voice and data after the radio registers successfully.

To manually switch the operation mode, do one of the following:

- Go to **Menu -> Mode -> Manual Switch**, select the required mode, and then press the **OK/Menu** key.
- Press the preprogrammed **Operation Mode Switch** key.

To allow the radio to automatically switch to conventional mode when the signal drops below the preset level in trunking mode, go to **Menu -> Mode -> Auto Switch**, and then select **Enable**.

4.7 Selecting a Zone and Channel (Conventioal)

In conventional mode, the radio receives and transmits data and voice on the selected channel. A zone is a group of channels within the same operational area. To select a zone and then a channel contained in it, do as follows:

Step 1 Select a zone in one of the following ways:

- Go to **Menu > Zone**, and then select the required zone.
- Press the preprogrammed **Zone Up** or **Zone Down** key.

Step 2 Select a channel in one of the following ways:

- Rotate the **Channel Selector** knob.
- Press the preprogrammed **Channel Up** or **Channel Down** key.

4.8 Registering with BS (Trunking)

Upon power-on, the radio automatically hunts the control channels to find an available BS for registration. During hunting, the radio displays "Out of Range" with the icon , the LED indicator flashes orange slowly, and the radio emits the hunt tone.

The radio automatically registers with the found BS for communication. If you want the radio to register with another BS, press the programmed **Manual Current Hunt** key to hunt again.

5. Status Indication

5.1 LCD Icon

The following tables list icons that may appear on the radio's liquid-crystal display (LCD).

Operation Mode Icons

Icon	Radio Status
DM	Direct Mode: The radio transmits and receives directly.
RM	Repeater Mode: The radio transmits and receives through a repeater.
TDMA	TDMA Direct Mode: If one time slot is occupied, the radio can transmit and receive through the other time slot.
TM-DW	Trunking Mode-Digital Wide: The radio operates under multiple interconnected BSs.
TM-DL	Trunking Mode-Digital Local: The radio operates under a single BS.
	The Mode Automatic Switch feature is enabled.

Basic Status Icons

Icon	Radio Status
	The dual-tone multi-frequency signaling (DTMF) keypad is enabled.
	The number of bars indicates the charge left in the battery.
	There is no signal in conventional or TM-DW mode.
	The number of bars indicates the signal strength in conventional or TM-DW mode.
	There is no signal in TM-DL mode.
	The number of bars indicates the signal strength in TM-DL mode.
	The radio operates in high power mode.
	The radio operates in low power mode.
	An accessory is connected.
	The Global Positioning System (GPS) feature is enabled, and the radio receives GPS data.
	The GPS feature is enabled, but the radio receives no GPS data.

	The radio is in emergency mode.
	The radio is roaming.
	The Scrambler or Encrypt feature is enabled.
	The radio is scanning or hunting.
	The radio stays on a non-priority channel.
	The radio stays on priority channel 1.
	The radio stays on priority channel 2.
	The Voice Operated Transmit (VOX) feature is enabled.
	The Monitor feature is enabled.
	The speaker is turned on.
	The radio operates in silent mode.
	The Loudness and Quality Optimizer (LQO) feature is enabled.

Short Data Icons

Icon	Radio Status
	There is/are unread short message(s).
	The Inbox is full.
	There is/are unread work order(s).
	The work order list is full.

Call Icons

Icon	Radio Status
	There is/are alert call(s).
	There is/are missed call(s).
	The Call Divert feature is enabled.
	A private call is in progress or a private contact is on the contact list.
	A group call is in progress or a group contact is on the contact list.
	An all call is in progress or an all call contact is on the contact list.

	An include call is in progress.

5.2 LED Indicator

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

LED Indicator	Radio Status
Flashes green	Being turned on.
Flashes green slowly	Standby in trunking mode.
Glows green	Receiving.
Glows red	Transmitting.
Flashes red	Establishing a call in trunking mode. This indication is applicable only to the calling radio.
Flashes orange slowly	Scanning, hunting, or roaming.
Flashes orange rapidly	● Conventional mode: Working in emergency mode. ● Trunking mode: Establishing a Full Off Air Call Set-Up (FOACSU) call. This indication is applicable only to the called radio.
Glows orange	Call hang time: No voice is being transmitted or received on the channel during a call. Within such a period, you can press and hold the **PTT** key and speak.

6. Call Services

You can initiate various types of calls in different manners.

When initiating a call in Manual Dial manner in trunking mode, you need to enter a number complying with the dial rule. For the detailed dial rule, please consult your dealer.

When you are speaking during a call, keep the microphone about 2.5 to 5 cm away from your mouth. This ensures optimal voice quality on the receiving radio.

6.1 Group Call

A group call is a call from an individual user in a group to all the other members in the group.

6.1.1 Initiating Group Calls

The following table describes how to initiate a group call in conventional mode and trunking mode.

Mode	Manner	Operation
Conventional	Preset Contact	1. Rotate the Channel **Selector** knob to select the channel associated with the required group contact. 2. Press and hold the **PTT** key.
	Contact List/Favorites	1. Go to Menu > **Contact** > **Contact List**/**Favorites**. 2. Select the required group contact. 3. Press and hold the **PTT** key.
	Manual Dial	1. Go to Menu > Contact > Manual Dial. 2. Press # to switch the input mode to **Group ID**. 3. Enter the required group ID. 4. Press and hold the **PTT** key.
Trunking	Preset Contact	1. Rotate the **Group Selector** knob to select the required group contact.

Mode	Manner	Operation
		2. Press and hold the **PTT** key.
	Favorites	1. Go to **Menu** > **Contact** > **Favorites**. 2. Select the required group contact. 3. Press or press and hold the **PTT** key.
	Subgroup	1. Press the preprogrammed **Subgroup** key or go to **Menu** > **Subgroup**. 2. Select the required subgroup, and then select **Member**. 3. Select the required group contact. 4. Press or press and hold the **PTT** key.
	Manual Dial	1. Go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **Enable**. 2. From the home screen, enter the group call number. 3. Press or or press and hold the **PTT** key.
	ReDial/Back Dial Call Log	1. From the home screen, press or (if preprogrammed as the **ReDial** or **BackDial** key). 2. Select the required group contact from the list. 3. Press or press and hold the **PTT** key.
	Call Log	1. Go to **Menu** > **Call Logs** > **Outgoing/Incoming** > **Outgoing List/Incoming List**. 2. Select the required group contact. 3. Press or press and hold the **PTT** key.

6.1.2 Receiving Group Calls

When you receive a group call in conventional mode, the radio displays . The call is established automatically. In trunking mode, the radio displays after the call is established successfully.

6.1.3 Ending Group Calls

In conventional mode and trunking mode, a group call automatically ends when the call hang time expires.

In trunking mode, a group call also ends in any of the following cases:

- The calling party ends the call by pressing the **End** key or preprogrammed **Clear Down** key.
- The call duration preset by your dealer expires.

- A preemptive or emergency call interrupts the call.
- The base station signal is lost.

6.2 Private Call

A private call is a call from an individual user to another individual user.

6.2.1 Initiating Private Calls

The following table describes how to initiate a private call in conventional mode and trunking mode.

Mode	Manner	Operation
Conventional	Preset Contact	1. Rotate the **Channel Selector** knob to select the channel associated with the required private contact. 2. Press and hold the **PTT** key.
	Contact List/Favorites	1. Go to **Menu** > **Contact** > **Contact List/Favorites**. 2. Select the required private contact. 3. Press and hold the **PTT** key.
	Manual Dial	1. Go to **Menu** > **Contact** > **Manual Dial**. 2. Press # to switch the input mode to **Private ID**. 3. Enter the required private ID. 4. Press and hold the **PTT** key.
Trunking	Preset Contact	1. Rotate the **Group Selector** knob to select the required private contact. 2. Press and hold the **PTT** key to initiate the call.
	Favorites/Private Contact	1. Go to **Menu** > **Contact** > **Favorites**/ **Private Contact**. 2. Select the required private contact. 3. Press or press and hold the **PTT** key.
	Manual Dial	1. Go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **Enable**. 2. From the home screen, enter the private call number. 3. Press or # or press and hold the **PTT** key.
	ReDial/BackDial Call Log	1. From the home screen, press or (if preprogrammed as the **ReDial** or **BackDial** key). 2. Select the required private contact from the list. 3. Press or press and hold the **PTT** key.

Mode	Manner	Operation
Conventional/ Trunking	Call Log	1. Go to **Menu** > **Call Logs** > **Outgoing/Incoming/Missed** > **Outgoing List/Incoming List/Missed List**. 2. Select the required private contact. 3. Press or press and hold the **PTT** key.

6.2.2 Receiving Private Calls

Conventional Mode

When you receive a private call, the radio displays. The call is established automatically.

Trunking Mode

Depending on the system settings, you can answer a private call in one of the following ways:

- FOACSU

  When you receive a private call, the radio rings and vibrates, and displays. Press or press and hold the **PTT** key within the preset period to answer the call. After the call is established successfully, the radio displays.

- Off Air Call Set-Up (OACSU)

  When you receive a private call, the radio displays. The call is established automatically.

6.2.3 Ending Private Calls

In conventional mode and trunking mode, a private call automatically ends when the call hang time expires.

In trunking mode, a private call also ends in any of the following cases:

- The calling or called party ends the call by pressing the **End** key or preprogrammed **Clear Down** key.
- The call duration preset by your dealer expires.
- A preemptive or emergency call interrupts the call.
- The base station signal is lost.

6.3 Phone Call

In conventional mode, you can initiate a call to or receive a call from a Public Switched Telephone Network (PSTN) terminal.

In trunking mode, you can initiate a call to or receive a call from a PSTN or Private Automatic Branch eXchange (PABX) terminal.

6.3.1 Initiating Phone Calls

The following table describes how to initiate a phone call in conventional mode and trunking mode.

Mode	Manner	Operation
Conventional	Manual Dial	1. Go to **Menu** > **Phone** > **DTMF Keypad**, and then select **Enable**. 2. Access the phone system in one of the following manner: ➢ If the One-Key Connect feature is enabled, press to transmit the connect code. ➢ If the One-Key Connect feature is not enabled, enter the preprogrammed connect code from the home screen, and then press and hold the **PTT** key. 3. After accessing the phone system successfully, the radio enters the DTMF Dial mode. 4. From the home screen, enter the phone number. 5. Press and hold the **PTT** key.
	Contact List	1. Enable the DTMF keypad and access the phone system as described in the first two steps above. 2. Go to **Menu** > **Phone** > **Phone Contact**, and then select the required phone contact. 3. Press and hold the **PTT** key.
Trunking	Preset Contact	1. Rotate the **Group Selector** knob to select the required phone contact. 2. Press and hold the **PTT** key.
	Favorites/Private Contact	1. Go to **Menu** > **Contact** > **Favorites**/**Private Contact**. 2. Select the required phone contact. 3. Press or press and hold the **PTT** key.
	Manual Dial	1. Go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **Enable**. 2. From the home screen, enter the phone number. 3. Press or # or press and hold the **PTT** key.
	Call Log	1. Go to **Menu** > **Call Logs** > **Outgoing**/**Incoming**/**Missed** > **Outgoing List**/**Incoming List**/**Missed List**. 2. Select the required phone contact. 3. Press or press and hold the **PTT** key.

Mode	Manner	Operation
	ReDial/Back Dial Call Log	1. From the home screen, press or (if preprogrammed as the **ReDial** or **BackDial** key). 2. Select the required phone contact from the list. 3. Press or press and hold the **PTT** key.

6.3.2 Receiving Phone Calls

Conventional Mode

When receiving a phone call, you need to transmit the preprogrammed connect code to access the telephone system as described in 6.3.1 Initiating Phone Calls

After the radio accesses the telephone system successfully, the call is established automatically.

Trunking Mode

When you receive a phone call, the radio displays . To answer the call, press or press and hold the **PTT** key within the preset period. After the call is established successfully, the radio displays .

6.3.3 Ending Phone Calls

In conventional mode, a phone call ends in any of the following cases:

- You transmit the preprogrammed disconnect code in the same way as the connect code.
- The phone user hangs up.

In trunking mode, a phone call ends in any of the following cases:

- The calling or called party ends the call.
- The call duration exceeds the period preset by your dealer.
- A preemptive or emergency call interrupts the call.
- The base station signal is lost.

6.4 All Call

Conventional Mode

An all call is a call from an individual user to all other users on the current channel.

Trunking Mode

An all call is a call from an individual user to all other users in a specific BS, area, or system.

According to whether the called party can respond, an all call is classified into the following two types:

- Broadcast All Call: The called party cannot respond to the call.

- General All Call: The called party can respond to the call.

To set the type, go to **Menu** > **Settings** > **Radio Set** > **All Call**, and then select **Broadcast Call** or **General Call**.

6.4.1 Initiating All Calls

Your radio can initiate an all call only after being authorized by your dealer.

The following table describes how to initiate an all call in conventional mode and trunking mode.

Mode	Manner	Operation
Conventional	Preset Contact	1. Rotate the **Channel Selector** knob to select the channel associated with the all call contact. 2. Press and hold the **PTT** key.
	Contact List	1. Go to **Menu** > **Contact** > **Contact List**. 2. Select the all call contact. 3. Press and hold the **PPT** key.
Trunking	Manual Dial	1. Go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **Enable**. 2. From the home screen, enter the all call number. 3. Press or or press and hold the **PTT** key.
	ReDial Call Log	1. From the home screen, press (if preprogrammed as the **ReDial** key). 2. Select the all call log from the list. 3. Press or press and hold the **PTT** key.

6.4.2 Receiving All Calls

When you receive an all call, the radio displays , and the call is established automatically.

6.4.3 Ending All Calls

In conventional mode and trunking mode, an all call ends when the Time-out Timer (TOT) expires.

In trunking mode, an all call also ends in any of the following cases:

- The calling party ends the call.
- The call duration exceeds the period preset by your dealer.
- The base station signal is lost.

6.5 Broadcast Call (Trunking Only)

A broadcast call is a special group call to which the called party cannot respond. Your radio can initiate a broadcast call only after being authorized by your dealer.

6.5.1 Initiating Broadcast Calls

The following table describes how to initiate a broadcast call.

Manner	Operation
Favorites	1. Go to **Menu** > **Contact** > **Favorites**. 2. Select the required group contact, and then press the **OK/Menu** key. 3. Select **Call Type**, and then select **Broadcast Call**. 4. Press or press and hold the **PTT** key.
Subgroup	1. Press the preprogrammed **Subgroup** key or go to **Menu** > **Subgroup**. 2. Select the required subgroup, and then select **Member**. 3. Select the required group contact, and then press the **OK/Menu** key. 4. Select **Call Type**, and then select **Broadcast Call**. 5. Press or press and hold the **PTT** key.
Manual Dial	1. Go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **Enable**. 2. From the home screen, enter the broadcast call number. 3. Press or or press and hold the **PTT** key.
Call Log	1. Go to **Menu** > **Call Logs** > **Outgoing/Incoming** > **Outgoing List/Incoming List**. 2. Select the required group contact, and then press the **OK/Menu** key. 3. Select **Call Type**, and then select **Broadcast Call**. 4. Press or press and hold the **PTT** key.
ReDial/BackDial Call Log	1. From the home screen, press or (if preprogrammed as the **ReDial** or **BackDial** key). 2. Select the target group contact from the list, and then press the **OK/Menu** key. 3. Select **Call Type**, and then select **Broadcast Call**. 4. Press or press and hold the **PTT** key.

6.5.2 Receiving Broadcast Calls

In conventional mode, when you receive a broadcast call, the radio displays . The call is established

automatically. In trunking mode, the radio displays after the call is established successfully.

6.5.3 Ending Broadcast Calls

A broadcast call ends in any of the following cases:

- The calling party ends the call.
- The call duration exceeds the period preset by your dealer.
- A preemptive or emergency call interrupts the call.
- The base station signal is lost.

6.6 Include Call (Trunking Only)

An include call is a special group call initiated to another group in call hang time of an ongoing group call, so that the group joins the ongoing call. Your radio can initiate an include call only after being authorized by your dealer.

For operations of the include call, see "Group Call".

6.7 Call on Analog Channel (Conventional Only)

You can initiate or receive a call on an analog channel with or without signaling.

6.7.1 Call Without Signaling

A call without signaling is a call initiated to all the other users on an analog channel without signaling.

To initiate a call without signaling, do as follows:

Step 1 Rotate the **Channel Selector** knob to select the required channel.

Step 2 Press and hold the **PTT** key, and speak into the microphone.

6.7.2 Call With Signaling

On an analog channel with signaling, you can initiate a call to a specific contact on the channel. Do as follows:

Step 1 Rotate the **Channel Selector** knob to select the required channel.

Step 2 Press the **OK/Menu** key, and go to **Contact** > **Contact List**.

Step 3 Select the required contact.

Step 4 Press and hold the **PTT** key, and speak into the microphone.

7. Message Services

The Message feature allows you to send and receive the following types of messages in trunking mode or on a digital channel in conventional mode:

- New messages: messages created using the keypad.
- Quick text messages: frequently used messages predefined by your dealer but editable.
- Status messages (trunking only): frequently used messages predefined by your dealer and not editable.

7.1 Viewing Messages

To view a newly received message, directly press the **OK/Menu** key.

To view a message from the Inbox, a sent message, or a saved message, go to **Menu** > **Message** > **Inbox**/**Outbox**/**Drafts** > **Inbox List**/**Outbox List**/**Drafts List**, and then select the required message.

7.2 Sending Messages

7.2.1 Sending New Messages

Step 1 Go to **Menu** > **Message** > **New Msg**, and then type the text.

Step 2 Press the OK/Menu key, and then select **Send**.

Step 3 Select the required contact, and then press the **OK/Menu** key.

Note

Instead of directly sending the new message, you can also select **Save** in conventional mode or select **Save to Drafts** or **Save to QuickText** in trunking mode to save the new message, and send it later.

7.2.2 Sending Quick Text Messages

Step 1 Go to **Menu** > **Message** > **Quick Text**, and then select the required quick text message.

Step 2 (Optional) Edit the message, and then press the **OK/Menu** key.

Step 3 Select **Send**, and then select the required contact.

Step 4 Press the **OK/Menu** key.

7.2.3 Sending Status Messages

Step 1 Go to **Menu** > **Message** > **Status Msg**, and then select the required status message.

Step 2 Press the **OK/Menu** key, and then select the required contact.

Step 3 Press the **OK/Menu** key.

7.3 Deleting Messages

To delete a message from the InBox, OutBox, or Drafts, do as follows:

Step 1 Go to **Menu** > **Message** > **InBox**/**OutBox**/**Drafts** > **Inbox List**/**Outbox List**/**Drafts List**.

Step 2 Select the required message, and then press the **OK/Menu** key.

Step 3 Select **Delete**, and then press the **OK/Menu** key.

To delete all messages from the InBox, OutBox, or Drafts, do as follows:

Step 1 Go to **Menu** > **Message** > **InBox**/**OutBox**/**Drafts**.

Step 2 Select **Delete All**, and then press the **OK/Menu** key.

8. Supplementary Features

The supplementary features of the radio vary with the operation mode. For details, see the following table.

Feature	Conventional		Trunking
	Digital	Analog	
Basic Settings	√	√	√
Contact Management	√	√	√
Mic Automatic Gain Control (AGC)	√	√	√
Treble Boost	√	√	√
3-Band Equalizer	√	√	√
LQO	√	√	√
Audio Feedback Suppression	√	×	√
MIC & SPK	√	√	√
One Touch Call/Menu	√	√	√
Scan	√	√	×
Hunt	×	×	√
Roam	√	×	√
Talk Around	√	√	×
Time-out Timer	√	√	√
VOX	√	√	√
Call Divert	×	×	√
Call Priority	×	×	√
Dynamic Group Number Assignment (DGNA)	×	×	√
GPS	√	√	√
Work Order	√	×	√

Feature	Conventional		Trunking
	Digital	Analog	
Data Query	×	×	√
Control Services	√	×	×
Analog Services	×	√	×
Personal Security Services	√	√	√
Encrypt	√	×	√
Scrambler	×	√	×
Erasing Data in Emergency	√	√	√
Stun	×	√	√
Kill	√	×	√

8.1 Basic Settings

You can go to **Menu** > **Settings** > **Radio Set** and then do the following operations:

If you want to...	Then...
Set the language	Select **Language**, and then select the required language.
Turn the power-on password on or off	1. Go to **Password** > **On/Off**, and then select **On** or **Off**. 2. Enter the password (**88888888** by default), and then press the **OK/Menu** key.
Change the password	1. Go to **Password** > **Password Set**. 2. Enter the old password (**88888888** by default), and then press the **OK/Menu** key. 3. Enter the new password under **Input Password** and **Checkout**, and then press the **OK/Menu** key.
Verify the battery	Select **Battery**. The radio displays "Certificated Battery" if the battery is an authorized one.
Set the backlight	Select **Backlight**, and select one of the following as required: ➢ **Off**: The backlight remains off.

If you want to...	Then...
	➢ **On**: The backlight remains on. ➢ **Timed**: The backlight will automatically be off if no operation or activity is performed within the preset period.
Adjust the brightness of the backlight	Select **Brightness**, and then press the **Up** or **Down** key.
Set the LCD mode	Select **Day/Night**, and then select **Day Mode** or **Night Mode**.
Turn the LED indication on or off	Select **LED**, and then select **Enable** or **Disable**.
Turn the silent mode on or off	Go to **Tone** > **Radio Silent**, and then select **Silent On** or **Silent Off**.
Turn a specific tone on or off	Select **Tone**, and then select the required tone. Select **On/Off**, and then select **Enable** or **Disable**.
Adjust the volume of a specific tone	Select **Tone**, and then select the required tone. Select **Tone Volume**, and then select the required level.
Turn the Vibration feature on or off	Go to **Vibration** > **On/Off**, and then select **Enable** or **Disable**.
Set a specific vibration type	Select **Vibration**, and then select the required vibration type. Select **Settings**, and then set **Duration**, **Cycles**, or **Interval Time** as required.
Adjust the power level	Select **Power Level**, and then select one of the following as required: ➢ **High Power**: Enables long-distance communication but consumes more battery power. ➢ **Low Power**: Enables short-distance communication and saves battery power.
Set the time zone	1. Go to **Date & Time** > **Time Zone**, and then press the **OK/Menu** key. 2. Press the **Up** or **Down** key to change the time zone, and then press the **OK/Menu** key.
Set the time format (trunking only)	Go to **Date & Time** > **Time Format**, and then select **24 Hour** or **12 Hour**.
Check the remaining rental period	Go to **Rent** > **Rent Query**.

If you want to...	Then...
Turn all visible and audible indications off	Select **Covert Mode**, and then select **On**.
Allow or disallow the radio to send its alias during voice transmission	Select **Send Alias**, and then select **On** or **Off**.

8.2 Contact Management

8.2.1 Adding Contacts

You can add a contact to the following lists:

- Conventional: Contact, Phone Contact, and Favorites
- Trunking: Private Contact and Favorites

Adding Contacts to the Contact List or Phone Contact List

Step 1 Go to **Menu** > **Contact**/**Phone** > **New Contact** > **Input ID**/**Edit ID**.

Step 2 Enter the ID, and then press the **OK/Menu** key.

Step 3 Select **Input Alias**/**Edit Alias**, and enter the alias.

Step 4 Press the **OK/Menu** key, and then select **Save**.

Adding Contacts to the Private Contact List

Step 1 Go to **Menu** > **Contact** > **New Contact** > **Input ID**.

Step 2 Enter the ID, and then press the **OK/Menu** key.

Step 3 Select the contact type (**Private ID**, **PABX**, or **PSTN**).

Step 4 Select **Input Alias**, and enter the alias.

Step 5 Press the **OK/Menu** key, and then select **Save**.

Adding Contacts to the Favorites List

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

- In conventional mode, go to **Menu** > **Contact** > **Favorites** > **Add Contact**, and then select the required contact.
- In trunking mode, go to **Menu** > **Contact** > **Favorites** > **Folder Management** > **Add Contact**, and then select the required contact.

8.2.2 Deleting Contacts

To delete a contact from Favorites list, Phone Contact list (conventional only), and Private Contact list

(trunking only), do as follows:

Step 1 Select the required contact from the corresponding list.

Step 2 Select **Delete** or **Del Contact**, and then press the **OK/Menu** key.

8.2.3 Creating Folders Under Favorites (Trunking Only)

Step 1 Go to **Menu** > **Contact** > **Favorites** > **Folder Management** > **Add Folder**.

Step 2 Use the keypad to enter the folder name, and then press the **OK/Menu** key.

After creating the folder, you can go to **Folder Management** > **Add Contact** under the folder to add contacts to the folder.

8.3 Audio Optimization

The features described in this section help optimize voice quality.

8.3.1 Turning the Mic AGC feature On or Off

The Mic AGC feature allows the radio to automatically keep the microphone gain within a proper range during transmission. This provides optimized voice with proper volume for the receiving party.

To turn this feature on or off, go to **Menu** > **Settings** > **Audio Set** > **Digital Mic AGC**/**Analog Mic AGC**, and then select **On** or **Off**.

8.3.2 Turning the Treble Boost feature On or Off

The Treble Boost feature allows the radio to output louder voice for better audio clarity.

To turn this feature on or off, go to **Menu** > **Settings** > **Audio Set** > **Audio Optimization** > **Treble Boost**, and then select **On** or **Off**.

Note

If this feature is enabled, the LQO feature and 3-Band Equalizer feature are unavailable.

8.3.3 Setting the 3-Band Equalizer Feature

The 3-Band Equalizer feature allows the radio to automatically adjust the sound effect of received voice according to preset frequency gains.

To turn this feature on or off, go to **Menu** > **Settings** > **Audio Set** > **Audio Optimization** > **3-Band Equalizer** > **Equalizer Switch**, and then select **On** or **Off**.

To set the low, mid, or high frequency gain, do as follows:

Step 1 Go to **Menu** > **Settings** > **Audio Set** > **Audio Optimization** > **3-Band Equalizer** > **Low Freq. Gain**/**Mid Freq. Gain**/**High Freq. Gain**, and then press the **OK/Menu** key.

Step 2 Press the **Up** or **Down** key to change the value, and then press the **OK/Menu** key.

It is recommended that you set the frequency gains according to the following table:

Scenario	Low Frequency Gain (dB)	Mid Frequency Gain (dB)	High Frequency Gain (dB)
Square	0	3	5
Indoor	3.5	1.5	–1.5
Downtown	2	2	8

8.3.4 Turning the LQO Feature On or Off

The LQO feature allows the radio to automatically adjust the volume and improve the quality of received voice in different environments.

To turn this feature on or off, go to **Menu** > **Settings** > **Audio Set** > **LQO**, and then select **On** or **Off**.

8.3.5 Turning the Audio Feedback Suppression Feature On or Off

The Audio Feedback Suppression feature helps reduce the noises arising from short-distance communication.

To turn this feature on or off, go to **Menu** > **Settings** > **Audio Set** > **Audio Feedback Suppressors**, and then select **On** or **Off**.

8.4 MIC & SPK

The MIC & SPK feature allows you to select the microphone and speaker used by the radio for transmitting and receiving voice.

8.4.1 Selecting the Microphone

To set the way in which the radio uses the external or internal microphone, go to **Menu** > **Settings** > **Radio Set** > **MIC & SPK** > **MIC Selection**, and then select one of the following as required:

- **Follow PTT**: When you transmit by pressing and holding the radio's PTT key, the radio uses the internal microphone; When you transmit by pressing and holding the PTT key on external device, it uses the external microphone.
- **Only Internal**: The radio uses only the internal microphone.
- **Only External**: The radio uses only the external microphone.
- **External First**: When an audio accessory is connected, the radio uses the external microphone; otherwise, it uses the internal microphone.

8.4.2 Selecting the Speaker

To set the way in which the radio uses the external or internal speaker, go to **Menu** > **Settings** > **Radio Set** > **MIC & SPK** > **SPK Selection**, and then select one of the following as required:

- **External First**: When an audio accessory is connected, the radio uses the external speaker; otherwise, it uses the internal speaker.
- **Only Internal**: The radio uses only the internal speaker.
- **Only External**: The radio uses only the external speaker.

8.5 One Touch Call/Menu

The One Touch Call/Menu feature allows you to press the preprogrammed **One Touch Call/Menu** key to quickly access a service assigned by your dealer. The services available for assignment are as follows:

Service Type	Description
Voice and data services in conventional mode	Analog Channel: Call to a 5-tone or 2-tone contact.
	Digital Channel: ➢ Group call, quick text or GPS message to a group contact. ➢ Private call, radio check, remote monitor, radio enable, radio disable, quick text message, alert call, or GPS message to a private contact. ➢ All call to an all call contact. Note: To initiate a one touch call on the digital channel in conventional mode, you need to press the **PTT** key after pressing the preprogrammed **One Touch Call/Menu** key.
Voice and data services in trunking mode	➢ Private call, emergency call, preemptive call, text or status message to a private contact. ➢ Group call, broadcast call, emergency call, preemptive call, preemptive broadcast call, emergency broadcast call, text or status message to a group contact. ➢ All call to an all call contact.
Menu	Direct access to the designated menu. Check with your dealer for specific menus.

Note

If the preprogrammed **One Touch Call/Menu** key is a numeric key, you need to go to **Menu** > **Settings** > **Radio Set** > **Keypad Mode**, and then select **One Touch Call/Menu**.

8.6 Scan

In conventional mode, the Scan feature allows you to listen to activities on other channels, keeping track of your team members. With this feature enabled, the radio searches the scan list preset for the current channel and stays on a channel with activities.

8.6.1 Turning the Scan Feature On or Off

To turn the Scan feature on or off, go to **Menu** > **Scan** > **Scan On/Off**, and then select **On** or **Off**.

With the Scan feature enabled, the radio displays , and the LED indicator slowly flashes orange. When detecting activities on a channel, the radio stays on it, and the LED indicator glows green.

Note

If you do not want to listen to the activities on a channel, press the preprogrammed **Nuisance Temporary Delete** key to temporarily remove the channel from the scan list.

8.6.2 Adding a Channel to a Scan List

Step 1 Go to **Menu** > **Scan** > **Scan List**, and then select the required scan list.

Step 2 Select **Edit/View**, and then select **Add CH**.

Step 3 Select the required channel.

8.6.3 Setting a Priority Channel

You can set a channel on the scan list as priority channel 1 or 2, which will be scanned with priority than a non-priority channel.

To set a priority channel, do as follows:

Step 1 Go to **Menu** > **Scan** > **Scan List**, and then select the required scan list.

Step 2 Select **Edit/View**, and then select the required channel.

Step 3 Select **Edit Prio CH** > **Set PrioCH-1**/**Set PrioCH-2**.

To change a priority channel to a non-priority channel, select the priority channel marked with P1 or P2, and then select **Edit Prio CH** > **Disable PrioCH**.

8.6.4 Deleting a Channel from a Scan List

Step 1 Go to **Menu** > **Scan** > **Scan List**, and then select the required scan list.

Step 2 Select **Edit/View**, and then select the required channel.

Step 3 Select **Delete CH**.

8.7 Hunt

In trunking mode, the radio must register with a BS for normal operation. The Hunt feature allows the radio to:

- Hunt through the Trunked Station Control Channels (TSCCs) for an available BS for registration.
- Always work under a BS with higher signal strength after registration, ensuring smooth communication.

8.7.1 Selecting the Mode for Fixed TSCC Hunt

If the radio is preprogrammed by your dealer to use the Fixed TSCC hunt for registration, you can go to **Menu** > **Hunt** > **TSCC Hunt**, and then select one of the following modes as required:

- **Comprehensive Hunt**: allows the radio to hunt all TSCCs within the preset frequency range.
- **Short Hunt**: allows the radio to hunt the TSCCs in the fixed TSCC list predefined by your dealer.
- **Team Hunt**: allows the radio to hunt the TSCCs in the team hunt list predefined by your dealer.

8.7.2 Turning the Background Hunt Feature On or Off

The Background Hunt feature allows the radio in standby mode to keep detecting the signal strength of the current BS. If the signal strength drops below the preset threshold, the radio switches to another BS with higher signal strength.

To turn this feature on or off, go to **Menu** > **Hunt** > **Background Hunt**, and then select **Enable** or **Disable**.

8.7.3 Turning the Homestation Hunt Feature On or Off

The Homestation Hunt feature allows the radio operating on another channel to switch back to the homestation channel if the signal strength of the homestation channel reaches the preset threshold. This ensures smooth communication in an overlapping area. It is recommended that you request the dealer to set the frequently used channel as the homestation channel and enable this feature.

To turn this feature on or off, go to **Menu** > **Hunt** > **Homestation Hunt**, and then select **Enable** or **Disable**.

8.7.4 Turning the Handover Feature On or Off

The Handover feature allows the radio to automatically switch to another BS with higher signal strength if the signal strength of the current BS drops below the preset threshold during a call. This prevents call

drops or discontinuous voice caused by low signal strength.

To turn this feature on or off, go to **Menu** > **Hunt** > **Handover** > **Handover On/Off**, and then select **Enable** or **Disable**.

8.8 Roam

The Roam feature allows you to enjoy seamless communication across sites or networks.

In conventional mode, you can turn this feature on or off as follows:

Step 1 Go to **Menu** > **Roam** > **Roam On/Off**.

Step 2 Select **On** or **Off**.

In trunking mode, only your dealer can turn on or off this feature.

8.9 Talk Around

The Talk Around feature allows your radio to continue transmitting and receiving when the repeater is not operating, or when your radio is out of the repeater's coverage but within other radio's coverage.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **Talk Around**, and then select **Enable** or **Disable**.

8.10 Time-out Timer

The Time-out Timer (TOT) feature allows the radio to automatically stop transmission and keep beeping when the period preset by your dealer expires. To stop beeping, release the PTT key. You need to wait for a certain period (also preset by your dealer) to initiate transmission again.

This feature aims to prevent a radio user from occupying a channel for an extended period. It also avoids potential radio damage caused by overheating.

8.11 VOX

The VOX feature allows you to transmit voice without pressing and holding the PTT key. The radio automatically transmits voice when the volume reaches the preset level.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **VOX** > **On/Off**, and then select **On** or **Off**. When this feature is enabled, the radio displays Ⓥ

After enabling this feature, you can set the sensitivity of the external or internal microphone. Do as follows:

Step 1 Go to **Menu** > **Settings** > **Radio Set** > **VOX** > **Gain Level** > **External/Internal**.

Step 2 Select the appropriate level.

A higher gain level indicates lower sensitivity, which requires higher volume for triggering transmission.

8.12 Call Divert

The Call Divert feature allows you to divert an incoming half-duplex private call to a designated radio.

To turn this feature on, do as follows:

Step 1 Go to **Menu** > **Settings** > **Radio Set** > **Call Divert** > **On/Off**, and then select **On**.

Step 2 Select **Divert ID**, and enter the ID.

Step 3 Press the **OK/Menu** key.

To turn this feature off, select **Off** under **Call Divert**.

8.13 DGNA

The DGNA feature allows you to join a dynamic group added by the authorized dispatcher over the air interface according to temporary task requirements. The dispatcher can also delete the dynamic group from your radio.

The radio displays "DGNA Success!" when the dynamic group is added successfully and "DGNA Deleted" when the dynamic group is deleted. The added dynamic group is saved on a dynamic subgroup list under **Subgroup** on your radio.

8.14 GPS

The GPS feature allows you to view your location information, query location information of another radio user, and send your location information to the dispatch station or another radio.

8.14.1 Turning the GPS Feature On or Off

In conventional mode, go to **Menu** > **Accessories** > **GPS** > **GPS On/Off**, and then select **On** or **Off**.

In trunking mode, only your dealer can turn on or off this feature.

8.14.2 Viewing Location Information

You can view location information of your radio and another radio.

Viewing Location Information of Your Radio

Go to **Menu** > **Accessories** > **GPS** > **Position**.

Viewing Location Information of Another Radio

- Trunking Mode

To view location information of the nearest radio in a designated group, go to **Menu** > **Accessories** > **GPS** > **Query Neighbors** > **Group Contact**, and then select the required group contact.

- Digital Channel in Conventional Mode

To view the location information of another radio, go to **Menu** > **Accessories** > **GPS** > **Query Location** > **Contact List**, and select the required private contact.

8.14.3 Sending Location Information

In conventional mode, you can send your location information to the required contact as follows:

Step 1 Go to **Menu** > **Accessories** > **GPS** > **Position**, and then press the **OK/Menu key**.

Step 2 Select **Contact List**, and then select the target contact.

In trunking mode, you can send your location information to the dispatch station as follows:

Step 1 Go to **Menu** > **Accessories** > **GPS** > **Msg with Position**.

Step 2 Edit the message, and then press the **OK/Menu** key.

8.14.4 Turning the Voice with GPS Feature On or Off

The Voice with GPS feature allows the radio to automatically send GPS data during voice transmission.

To turn this feature on or off, go to **Menu** > **Accessories** > **GPS** > **Voice with GPS**, and then select **Enable** or **Disable**.

8.15 Work Order

The Work Order feature allows you to receive a task from the dispatcher and report the latest task state to the dispatcher at each stage of the task.

8.15.1 Viewing a Task

To view a task in any state, go to **Menu** > **Work Orders** > **All Task**, select the required task, and then select **Details**.

To view a task that has not been processed, go to **Menu** > **Work Orders** > **New Task**, select the required task, and then select **Details**.

After a task is processed and the task state is updated, the task is moved from the **New Task** list to the list of the corresponding state. To view a task in a specific state, do as follows:

Step 1 Go to **Menu** > **Work Orders**, and then select the corresponding list.

Step 2 Select the required task, and then select **Details**.

8.15.2 Reporting the Task State

To report the latest state of a task, do as follows:

Step 1 Select the required task as described above.

Step 2 Select the state to be reported, and then press the **OK/Menu** key.

If the corresponding task state is associated with a numeric key by your dealer, you can also press the numeric key to report the state after selecting the required task.

8.16 Data Query

The Data Query feature allows you to query related information from a third party by sending the keyword, for example, a vehicle number.

To query information, do as follows:

Step 1 Go to **Menu** > **Query**, and then select the required item.

Step 2 Enter the keyword, and then press the **OK/Menu** key.

Step 3 (Optional) Enter the password for data query, and then press the **OK/Menu** key.

8.17 Control Services

On a digital channel in conventional mode, you can initiate the following control services to a private contact.

<table>
<tr><th>Feature</th><th>Description</th><th>Operation</th></tr>
<tr><td>Alert Call</td><td>Allows you to alert a private contact to call you back.</td><td rowspan="3">To trigger the corresponding feature, do one of the following:
➢ Through Favorites/Contact List
1. Go to Menu > Contact > Favorites/Contact List.
2. Select the target private contact.
3. Go to Ctrl Services > Alert Call/Radio Check/Remote Monitor/Radio Enable/Radio Disable.
➢ Through Keypad Mode
1. Go to Menu > Settings > Radio Set > Keypad Mode, and then select Enable.
2. Press # to switch the input mode to Private ID.
3. From the home screen, enter the target private ID, and then press the OK/Menu key.</td></tr>
<tr><td>Radio Check</td><td>Allows you to check whether another radio is operating on the current channel without disturbing that radio user.</td></tr>
<tr><td>Remote Monitor</td><td>Allows you to remotely monitor activities surrounding another radio.</td></tr>
</table>

Feature	Description	Operation
Radio Enable	Allows you to remotely enable a disabled radio for normal operation.	4. Go to **Ctrl Services** > **Alert Call**/**Radio Check**/**Remote Monitor**/**Radio Enable**/**Radio Disable**.
Radio Disable	Allows you to remotely disable another radio.	

8.18 Analog Services

The following features are available only on an analog channel in conventional mode.

8.18.1 Turning the Compandor Feature On or Off

The Compandor feature allows the radio to compress transmitted voice signals, which suppresses ambient noise and improves audio quality.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **Compandor**, and then select **Enable** or **Disable**.

8.18.2 Turning the Monitor Feature On or Off

The Monitor feature allows the radio to receive weak signals.

To turn this feature on, press the preprogrammed **Monitor** key or press and hold the preprogrammed **Monitor Momentary** key. In this case, the radio displays .

To turn this feature off, press the preprogrammed **Monitor** key again or release the preprogrammed **Monitor Momentary** key.

8.18.3 Turning the Squelch Off Feature On or Off

The Squelch Off feature allows the radio's speaker to keep turned on no matter whether the squelch condition is satisfied.

To turn this feature on, press the preprogrammed **Squelch Off** key or press and hold the preprogrammed **Squelch Off Momentary** key. In this case, the radio displays .

To turn this feature off, press the preprogrammed **Squelch Off** key again or release the preprogrammed **Squelch Off Momentary** key.

8.18.4 Setting the Squelch Level

The squelch level refers to the squelch threshold required for the radio's speaker to be turned on.

To set the squelch level, go to **Menu** > **Settings** > **Radio Set** > **Squelch**, and then select **Open**, **Normal**,

or **Tight** (from low to high) as required. Generally, a higher squelch level requires higher signal strength. If the squelch level is set to **Open**, the speaker will always keep turned on.

8.18.5 Setting the CTCSS/CDCSS Feature

The Continuous Tone-Coded Squelch System (CTCSS)/Continuous Digital-Coded Squelch System (CDCSS) feature allows the radio to filter out unwanted voice on the current channel. With this feature enabled by your dealer, the radio's speaker is turned on only when the CTCSS/CDCSS code received matches the CTCSS/CDCSS code set for the radio.

To set the CTCSS/CDCSS type and code, go to **Menu** > **Programming** > **Channel** > **TX CTCSS/CDCSS**/**RX CTCSS/CDCSS**.

8.19 Personal Safety Services

The features described in this section ensure personal safety.

8.19.1 Using the Emergency Feature

The Emergency feature allows you to ask for help from your companion or the control centre in case of emergency.

In emergency mode, the radio gives different indications according to the preset emergency type. The available emergency types are as follows:

Emergency Type	Description
Siren Only	The radio sounds shrill alarm tones with visible indications.
Regular	The radio gives audible and visible indications.
Silent	The radio gives no audible or visible indication, and you cannot listen to a received call.
Silent w/ Voice	The radio gives no audible or visible indication, but you can listen to a received call.
Alarm w/ Siren	The radio sends an alarm and sounds shrill alarm tones with visible indications.

In addition, you can request your dealer to set one of the following emergency modes:

Emergency Mode	Description
Alarm	Allows you to send an emergency alarm.
Call Only	Allows you to initiate an emergency call.
Alarm W/Call	Allows you to send an emergency alarm and initiate an emergency call.

The three emergency modes can be combined with any of the following emergency types: **Regular**, **Silent**, and **Siren w/ Voice**.

8.19.2 Triggering the Emergency Mode

To trigger the emergency mode, press the preprogrammed **Emergency On** key. The radio then enters the preset emergency mode with or without indications depending on the preset emergency type.

In trunking mode, you can also initiate an emergency call as follows:

Step 1 Go to **Menu** > **Contact** > **Favorites**, and then select the required group contact.

Step 2 Select **Call Type**, and then select **Emergency Call**.

Step 3 Press and hold the **PTT** key to initiate the call.

If the Call to Follow feature is enabled by your dealer, the radio will transmit automatically. You can directly speak into the microphone in the preset period.

8.19.3 Exiting the Emergency Mode

To exit the emergency mode (as the initiating party) or emergency alert mode (as the receiving party), press the preprogrammed **Emergency Off** key or turn the radio off.

8.19.4 Turning the Man Down Feature On or Off

The Man Down feature allows the radio to enter the emergency mode when it tilts at an angle greater than the specified angle or stays motionless for a preset period.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **Man Down**, and then select **Enable** or **Disable**.

8.19.5 Turning the Lone Worker Feature On or Off

The Lone Worker feature allows the radio to enter the emergency mode when no operation is detected for a preset period.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **Lone Worker**, and then select **Enable** or **Disable**.

8.20 Communication Security Services

The features described in this section ensure communication security.

8.20.1 Using the Encrypt Feature

The Encrypt feature prevents eavesdropping and ensures communication privacy. It allows the radio to automatically encrypt transmitted voice or data. Only the receiving radio with the same key value or ID can decrypt the voice or data.

8.20.2 Turning the Encrypt Feature On or Off

Go to **Menu** > **Settings** > **Radio Set** > **Encrypt** > **On/Off**, and then select **On** or **Off**.

Setting the Encrypt Key (Conventional Only)

You can add, edit, or select an encrypt key.

Adding an Encrypt Key

Go to **Menu** > **Settings** > **Radio Set** > **Encrypt** > **New Key**, set the related parameters, and then select **Save**.

The related parameters are as follows:

- **Key ID**: a unique key index ranging from 1 to 255.
- **Key Alias**: a string containing up to 16 characters.
- **Key Length**: the number (10, 32, or 64) of characters in the key.
- **Key Value**: a string containing digits and letters A to F.

Selecting an Encrypt Key

Step 1 Go to **Menu** > **Settings** > **Radio Set** > **Encrypt** > **Key List**.

Step 2 Select the required key, and then select **Select**.

Editing an Encrypt Key

Step 1 Go to **Menu** > **Settings** > **Radio Set** > **Encrypt** > **Key List**.

Step 2 Select the required key, and then select **Edit**.

Step 3 Edit the ID, alias, or value, and then select **Save**.

Selecting Encrypted Service (Trunking Only)

In trunking mode, you can set which kind of service will be encrypted. Do as follows:

Step 1 Go to **Menu** > **Settings** > **Radio Set** > **Encrypt** > **Encrypt Service**.

Step 2 Select **Only Voice**, **Only Data**, or **Voice and Data** as required.

8.20.3 Turning the Scrambler Feature On or Off

The Scrambler feature allows the radio to invert the frequency spectrum of transmitted audio signals. Only the receiving radio with the same scrambler setting can restore the audio signals. This prevents eavesdropping and ensures communication privacy.

To turn this feature on or off, go to **Menu** > **Settings** > **Radio Set** > **Scrambler**, and then select **Enable** or **Disable**.

8.20.4 Erasing Data in Emergency

In case of emergency, you can erase encryption data from the radio to prevent the data from unauthorized access.

To erase the data, press the **SK1** and **PTT** key by turns twice, and make sure the press interval is less than 1.5 seconds. Then, press **SK1** to confirm.

8.20.5 Restoring the Stunned Radio

When being stunned, the radio displays "Radio Stunned!" In this case, you cannot initiate services such as call or message services.

To restore normal operation, request your dealer to program the radio or send a Revive command. When being enabled by a Revive command, the radio displays "Revive Success!"

8.20.6 Restoring the Killed Radio

When being killed, the radio displays "Radio Killed!" In this case, you can only turn the radio on or off.

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

9. Troubleshooting

Phenomena	Analysis	Solution
You cannot turn the radio on.	The battery may be installed improperly.	Remove and reattach the battery.
	The battery power may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
The radio cannot register.	The radio may not be detecting signals from the BS.	Make sure the radio is within the coverage of the BS.
	The radio may not be authorized.	Contact the BS manager to check if the radio is authorized in the network management system.
During receiving, the voice is weak or intermittent.	The battery voltage may be low.	Recharge or replace the battery.
	The volume level may be low.	Increase the volume.
	The antenna may be loose or may be installed incorrectly.	Turn the radio off, and then remove and reattach the antenna.
	The speaker may be blocked.	Clean the surface of the speaker.
You cannot communicate with other group members.	The frequency or signaling type may be inconsistent with that of other members.	Verify that your TX/RX frequency and signaling type are correct.
	The channel type (digital or analog) may be set incorrectly.	Verify that you are on the correct digital or analog channel.
	You may be too far away from other members.	Move towards other members.
You hear unknown voices or noise.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio in analog mode may be set with no signaling.	Request your dealer to set signaling for the current channel to avoid interference.
You are unable to	You may be too far away from other	Move towards other members.

Phenomena	Analysis	Solution
hear anyone because of too much noise and hiss.	members.	
	You may be in an unfavourable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, restart the radio, and try again.
	It may be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The GPS cannot locate your position.	The radio may not receive GPS signals due to unfavourable position.	Move to an open and flat area, and try again.
The called party disconnects repeatedly during communication.	The signal may be intermittent or weak.	Make sure the radio is within the coverage of the BS.
You cannot use the keys.	The keypad may not work temporarily.	Restart the radio.
The LCD does not display any information.	The LCD may not work temporarily.	Restart the radio.
The radio registers repeatedly.	The signal may be intermittent.	Make sure the radio is within the coverage of the BS.
The radio cannot establish a call.	The signal may be weak.	Make sure the radio is within the coverage of the BS.
The voice is unclear.	The signal may be weak.	Make sure call participants are within the communication range.

If the above solutions cannot fix your problems, or you may have some other queries, please contact your dealer for more technical support.

10. Care and Cleaning

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

10.1 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.

10.2 Product Cleaning

Caution

Turn the product off 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 frog), periodically clean and dry the radio.
- Make sure the product is completely dry before use.

11. Optional Accessories

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

Caution

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

Abbreviations

Abbreviation	Full Name
AGC	Automatic Gain Control
BS	Base Station
CDCSS	Continuous Digital-coded Squelch System
CTCSS	Continuous Tone-coded Squelch System
DGNA	Dynamic Group Number Assignment
DTMF	Dual-tone Multi-frequency
FOACSU	Full Off Air Call Set-up
GPS	Global Positioning System
LCD	Liquid-crystal Display
LED	Light-emitting Diode
LQO	Loudness and Quality Optimizer
OACSU	Off Air Call Set-up
PABX	Private Automatic Branch eXchange
PSTN	Public Switched Telephone Network
PTT	Push-to-Talk
SK	Side Key
TM-DL	Trunking Mode-Digital Local
TM-DW	Trunking Mode-Digital Wide
TK	Top Key
TOT	Time-out Timer
TSCC	Trunked Station Control Channel
VOX	Voice Operated Transmit