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EP3620 U 1

Digital Portable Radio

User Manual

SAFETY TRAINING INFORMATION

Electromagnetic Interference/Compatibility

During transmissions, our Shenzhen Excera Technology Co., Ltd. radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Attention:

This radio complies with IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating duty factors of up to 50% and is authorized by the FCC for occupational use only. An appropriate warning label is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip).

Do not use this device when antenna shows obvious damages

RF Exposure Information:

This product is compliance to FCC RF Exposure requirements and refers to FCC website <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> search for FCC ID:2AE6CEP3620U1 to gain further information include SAR Values.

SAFETY TRAINING INFORMATION



Our Shenzhen Excera Technology Co., Ltd. radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the “General Population” in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only”. In addition, our Shenzhen Excera Technology Co., Ltd. radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- ▮ IEEE Std. 1528:2013 and KDB 447498 Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ▮ American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ▮ American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields— RF and Microwave.



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

SAFETY INFORMATION

EXCERA transceiver is excellently designed with advanced technology. Please observe the following precautions to perform your obligation, prevent personal injury and ensure the safety of transceiver usage.

- 1. Keep the transceiver and accessories away from children.
- 2. Please do not try to open or modify the transceiver without permission, non-professional process may also cause damage.
- 3. Please use assorted battery and charger to avoid damage.
- 4. Please use assorted antenna to ensure the communication distance.
- 5. Please do not expose the transceiver to long period of direct sunlight, nor place it close to heat sources.
- 6. Please do not put the transceiver in excessively dusty or humid areas.
- 7. Do not use harsh chemicals, cleaning solvents to clean the transceiver.
- 8. Do not transmit without antenna.
- 9. When using this transceiver, we recommend transmitting for 1 minute then receiving for 4 minutes. Continuous transmitting for long time or working in high power will heat the back of the transceiver. Do not place the transceiver's hot back close to any plastic surface.
- 10.If any abnormal odor or smoke detected coming from the transceiver, turn off the power and take off the battery pack and its case. Then contact local **EXCERA** dealers.
- 11.We and our distributors will offer safetyRFexposure trainings to the users after purchasing the devices.

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UNPACKING

Carefully unpack the transceiver. We recommend you to identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact dealers immediately.

《《 **Supplied Accessories**

Item	Number	Quantity
Antenna	QA13U1(400-480MHz)	1
Li-ion Battery Pack	QB-44L	1
Battery Charger	QBC-44L	1
AC Adaptor	QPS-01	1
Belt Clip	BC09	1
Hand Strap	GS01	1
User Manual		1

STANDARD/OPTIONAL ACCESSORIES

Standard Accessories



User Manual

BATTERY INFORMATION

Charging Operation

The battery pack is not charged at the factory; please charge it before use.

Charging the battery pack for the first time after purchase or extended storage (more than 2 months) may not bring the battery pack to its normal operating capacity. After fully charging / discharging cycle for two or three times, the operating capacity will reach its best performance. The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the battery pack.

Charger Applied

Please use the specific charger appointed by our company. Other models may cause explosion and personal injury. After installing the battery pack, if the radio displays low battery with red flashing lamp or voice prompt, please charge the battery.

Notice for Charging Battery

- ▼ Do not short circuit the battery terminals or throw the battery into fire. Never attempt to remove the casing from the battery pack, we show no responsibility for any results caused by modifying freely without permission of our factory.
- ▼ The ambient temperature should be between 5°C and 40°C while charging is in progress. Charging outside this range may not fully charge the battery.
- ▼ Always switch OFF the transceiver equipped with a battery pack before charging. Otherwise, it will interfere with correct charging.
- ▼ To avoid interfering the charging, please do not cut off the power or take out the battery during charging.

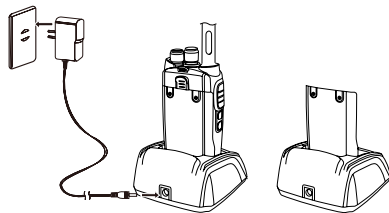
BATTERY INFORMATION

- ▼ Do not recharge the battery pack if it is already fully charged. This may shorten the life of the battery pack or damage the battery pack.
- ▼ Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

WARNING: When keys, ornamental chain or other electric metals contact with the battery terminal, the battery may cause damage or hurt bodies. If the battery terminal short circuit, it will generate a lot of heat. Take care when carrying and using the battery. Remember to put the battery or radio into insulated container. Do not put it into metal container.

How to Charge

1. Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the charger. The Indicator lights orange (1s) and then goes out---waits to charge.
2. Plug the battery or transceiver into the charger. Make sure that the battery terminals are in contact with charging terminals well. The Indicator turns into twinkling red---Pre-charging begins.
3. After pre-charging for about 5 minutes, the red indicator will stop twinkling---charging begins.
4. It takes approximately 5 hours to fully charge the battery. When the lamp lights green, the charging is finished. Remove the battery or the transceiver equipped with battery from socket.



BATTERY INFORMATION

NOTE: When charging a power-on transceiver equipped with battery, the indicating lamp will not turn into green to show the fully charged status. Only when the transceiver is switched off, can the lamp indicate normally. The transceiver consumes energy when it is powered on, and the charger can not detect the voltage when the battery has been fully charged. So the charger will charge battery in constant voltage and fail to indicate correctly whether the battery has been charged fully.

5. Charging Process

Charging Status	Indicator Status
Standby (Self-examine lights orange 1 second when power on)	None
Pre-charging (Pre-charging stage)	Red light twinkles for about 5 minutes
Charging (Charge in a constant current)	Lights red for about 5 hours
Fully charged (Charge in a constant voltage)	Lights green

6. LED Indicator

STATUS	Self-Examine When Power on	No Battery	Pre-charging	Charge Normally	Fully Charged	Fault
LED	Orange (for 1 second)	None	Red light twinkles for 5 minutes.	Red	Green	Red twinkles for a long time

NOTE: Fault means battery heating, battery short-circuit or charger short-circuit.

BATTERY INFORMATION

Normal Charging Tips

1. **Self- Examination:** When charging, orange light twinkles for 1 second and goes out, which means the charger has passed its self-examination and it can charge the battery normally. If the light remains orange or the red light twinkles, it means the charger can not pass its self-examination or charge the battery.
2. **Trickle Pre-Charging:** If red light twinkles when battery is inserted into the charger, it means the remnant voltage is low and the charger is trickle-charging the battery (Pre-Charging Status). The charger will automatically turn into normal charging when the battery reaches a certain electric quantity. If the red light stops twinkling, it means the remnant voltage meets a certain electric quantity, the charger will charge the battery normally.

NOTE: Trickle charging (Pre-Charging Status) time can not exceed 30 minutes. If the indicating lamp still twinkles after 30-minute trickle-charging, it means that the charger can not charge the battery. Please check whether the battery or charger is damaged.

How to Store the Battery

1. If the battery needs to be stored, keep it in status of 80% discharged.
2. It should be kept in low temperature and dry environment.
3. Keep it away from hot places and direct sunlight.

BATTERY INFORMATION

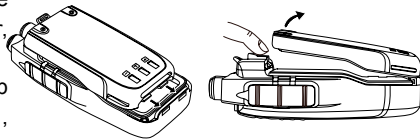
WARNING:

- ▼ Do not short circuit battery terminals.
- ▼ Never attempt to remove the casing from the battery pack.
- ▼ Never assemble the battery in dangerous surroundings, spark may cause explosion.
- ▼ Do not put the battery in hot environment or throw it into fire, it may cause explosion.

■ PREPARATION

(((Installing / Removing the Battery

1. Match the two grooves of the battery pack with the corresponding guides on the back of the transceiver, and then push it.
2. Press the battery pack until the release latch on the top of the transceiver locks. After hearing a “click” sound, the battery has been locked.
3. To remove the battery pack, slide up the release latch and remove the pack away from the transceiver.



NOTE: Please turn off the transceiver before removing the battery.

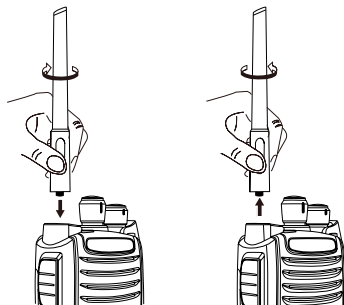
(((Installing / Removing the Antenna

■ Installing the Antenna:

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise to secure it.

■ Removing the Antenna:

Turn the antenna anticlockwise to remove it.



■ PREPARATION

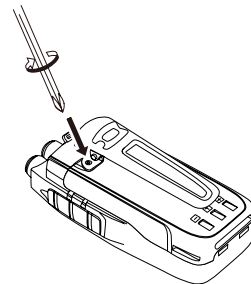
(((Installing / Removing the Belt Clip

■ Installing the Belt Clip:

Place the belt clip to the corresponding grooves on the back of the transceiver, and then clockwise screw it.

■ Removing the Belt Clip:

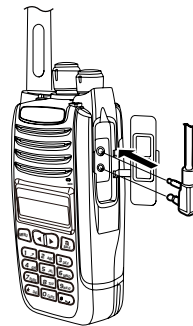
Turn anticlockwise the screws to remove the belt clip.



(((Installing the Additional Speaker/ Microphone

Unveil the MIC-SP jack cover and then insert the Speaker/Microphone plug into MIC-SP jack.

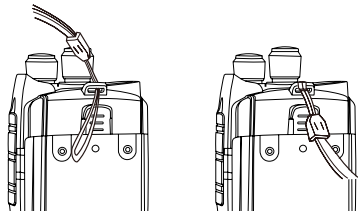
NOTE: Using the additional speaker/ microphone will influence the waterproof performance of the transceiver.



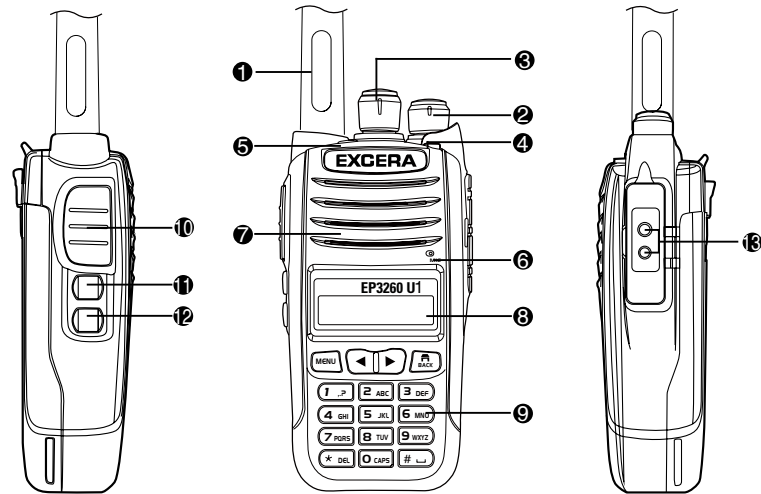
■ PREPARATION

(((Installing / Removing the Hand Strap

Slide the loop of the hand strap through the eyelet on the upper rear of the transceiver, then pull the entire hand strap through the loop to secure the hand strap in place and tighten the hand strap.



■ PRODUCT OVERVIEW



PRODUCT OVERVIEW

① Antenna

② POWER / VOLUME Switch:

Turn clockwise to switch on the transceiver, and turn anticlockwise till hearing “click” to switch off the transceiver. After switching on the transceiver, turn clockwise to increase the volume and anticlockwise to decrease the volume.

③ Channel Selector Knob

Turn the selector knob to select desired channel. Turn clockwise to increase channel, anticlockwise to decrease channel.

④ Indicator

Indicate different working status

⑤ Top Key

It can realize different functions

⑥ MIC

⑦ Speaker

⑧ Display

⑨ Keypad

⑩ PTT Key

When you are making a call, please press and hold this key to speak into the microphone, release the key to receive.

⑪ PF1 Key

It can realize different functions

⑫ PF2 Key

It can realize different functions

⑬ Additional Microphone / Speaker Jack

PRODUCT OVERVIEW

NOTE: The PF1 and PF2 key's function can be defined functions as below:

Side key:

- | | |
|---------------------------|---------------------------|
| 1. Unassigned | 10. One Touch Access 6 |
| 2. All Alert Tones On/Off | 11. Scan On/Off |
| 3. Emergency Call | 12. Tight/ Normal Squelch |
| 4. Monitor | 13. Privacy On/Off |
| 5. One Touch Access 1 | 14. VOX On/Off |
| 6. One Touch Access 2 | 15. Zone Toggle |
| 7. One Touch Access 3 | 16. Low Battery Indicator |
| 8. One Touch Access 4 | 17. Private Work On/Off |
| 9. One Touch Access 5 | |

SUMMARY

Power on the radio

Turn on the radio by turning the Volume switch clockwise till a “click” is heard, and you will hear a Power up beep if the dealer has set it. Then the screen displays DMR and the radio name you have edited. LED lights green, if the backlight have been set auto open, then the screen lights up.

NOTE: If all LED lights have set off, then the screen will not light up when power on. The transceiver sounds beep to indicate radio is successfully powered on. If the user disable volume/voice prompt function, no voice for power on.

Adjust Volume

Rotate the Power/Volume knob to adjust the volume. Turn clockwise to increase the volume and counterclockwise to decrease the volume.

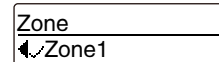
BASIC OPERATIONS

Receiving or Making a Call

1. Selecting a Zone

A zone is a group of channels. Your radio supports up to 250 zones, with a maximum of 16 channels per zone. This transceiver has 1000 channels by software. Use the following procedure to select a zone.

1. Press [] to access menu mode.
2. Press [ / ] to zone, then press [] to select.
3. The current zone is displayed the name of the zone.
4. Press [ / ] to the required zone and press [] key to select.
5. The display shows <Zone> Selected momentarily, then back to the zone.



2. Selecting a Radio Channel, Subscriber ID, or Group ID

Once the required zone is displayed, if you have multiple zones in your radio, turn the channel selector knob to select the channel, subscriber alias or ID, or group alias or ID.

3. Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as member of that group. Procedure:

When you receive a Group Call (while in the home screen);

1. The green LED lights.
2. The first line of the display shows the caller alias and the RSSI icon. The second line displays the

BASIC OPERATIONS

group alias and the Group Call icon (in digital mode only).

3. Press the [PTT] button to respond to the call and the red LED turns on.
4. Release the [PTT] button to listen.
5. If there is no voice activity for a predetermined period of time, the call ends.

4.Receiving and Responding to a Private Call

A Private call is a call from an individual radio to another individual radio. There are two types of Private Calls. The first type is where a radio presence check is performed prior to setting up the call. The other type sets up the call immediately.

Procedure:

1. The green LED turns on.
2. The first line of the display shows the subscriber alias or ID, and the RSSI icon. The second line displays Private Call and the Private Call icon.
3. Press the [PTT] button to respond to the call, and the red LED turns on.
4. Release the [PTT] button to listen.
5. If there is no voice activity for a predetermined period of time, the call ends.

5.Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring the user's full attention.

Procedure:

When you receive an All Call:

BASIC OPERATIONS

1. The green LED turns on.
2. The first line of the display shows the caller alias or ID, and the RSSI icon. The second line displays All Call and the All Call icon.

NOTE: The radio stops receiving the All Call if you switch to a different channel while receiving the call.

6.Making a Radio Call

You can select a channel, subscriber ID, or group by using:

- The Channel Selector Knob
- One Touch Call button
- The Contacts list
- Manual Dial (via Contacts)--This method is for Private Calls only and is dialled using the keypad.

(((Making a Call by the Channel Selector Knob

1.Making a Group Call

To make a call to a group of users, your radio must be configured as member of that group.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active group alias or ID.
2. Press the [PTT] button to make the call. The green LED turns on when the target radio responds.
The display shows the group call icon, the group alias or ID and transmitting radio alias or ID.

BASIC OPERATIONS

3. If there is no voice activity for a predetermined period of time, the call ends. Radio returns to the previous screen you were on priority.

2. Making a Private Call

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active subscriber alias or ID.
2. Press the [PTT] button to make the call. The first line displays the subscriber alias or ID. The second line displays Private Call and the private Call icon.
3. Release the [PTT] button to listen. When the target radio responds, the screen displays subscriber alias or ID, and private call and private call icon.
4. If there is no voice activity for a predetermined period of time, the call ends. Radio returns to the previous screen you were on priority.

3. Making an All Call

This feature allows you to transmit to all users on the channel.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active All Call group alias or ID.
2. Press the [PTT] button to make the call. The display shows the All Call group alias or ID and the All Call icon. Users on the channel cannot respond to an All Call.

BASIC OPERATIONS

4. Making a Group or Private Call with the One Touch Call Button

This feature allows you to transmit to all users on the channel.

Procedure:

The One Touch Call feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long button press.

Procedure:

1. Press the One Touch Call button to make a Group or Private Call to the predefined alias or ID.
2. Press the [PTT] button to make the call. The display shows the group/subscriber alias or ID, and the Group/Private Call icon.
3. Release the [PTT] button to listen. When the target radio responds, the green LED turns on.
4. If there is no voice activity for a predetermined period of time, the call ends. Radio returns to the previous screen you were on priority.

5. Emergency Alarm

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an emergency at any time on any screen display even when there is activity on the current channel.

Your radio supports below types:

- Disable: This radio can not send emergency alarm, but can receive the emergency call from other radios.

BASIC OPERATIONS

- Regular: The radio sends an emergency alarm with audio or visual indicator.
- Silent: The radio sends an emergency alarm without any audio or visual indicator.
- Silent with Voice: In the state of emergency alarm, press the [PTT] button to send the call and voice.

6.Exiting an Emergency Mode

Your radio exits Emergency mode when one of the following occurs:

- Emergency Alarm acknowledgement is received. (for Emergency Alarm only)
- All retries to send the alarm have been exhausted.
- Press the button for emergency off.
- Press the [PTT] button.

NOTE: If your radio is powered off, it exits the Emergency mode. The radio will not reinitiate the Emergency mode automatically when it is turned on again.

FUNCTION MENU INTRODUCTION

Character Input

You can check the radio features by 3*4 alphabet button. Use the buttons to input the subscriber alias or ID and message. You need to press the buttons few times for many characters. Below sheet shows the press times to get the required character.

Key	1 2 3 4 5 6 7 8 9 10 11 12 13
1	1 , ? @ & : % : * #
2	A B C 2
3	D E F 3
4	G H I 4
5	J K L 5
6	M N O 6
7	P Q R S 7
8	T U V 8
9	W X Y Z 9
0	0 note: press and input "0", long press active capital, long press again inactive capital.
*	Press this button to delete the character.
#	Press this button for a space.

Menu Manual

1. Press [] to access menu mode, then press [ / ] to visit menu function;
2. Press [] to select or access the sub-menu;
3. Press [] to back to priority menu.

NOTE: The radio will auto exit the menu and back to the home screen after a period without any activity

Call Log and Text Message only valid for digital channels. Or else the above operation is invalid.

Radio Check

If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.

This feature is only applicable to subscriber aliases or IDs.

Sending a Radio Check.

Procedure: Use the menu.

Radio Check:
Call 1

1. Press [] to access the menu.
2. Press [ / ] to Contacts and press [] to select.
3. Press [ / ] to the required subscriber alias or ID and press [] to select. Or press [ / ] to Manual Dial and press [] twice. Input the subscriber alias or ID and then press [].
4. Press [ / ] to Radio Check and press [] to select.
5. Screen displays radio checking: < subscriber alias or ID>, indicating that the radio is on checking, LED turns red.
6. If the target radio is active in the system, a tone sounds and the display briefly shows Target Radio Available.
Or if the target radio is not active in the system, a tone sounds to show Target Radio Not Available.
7. Radio returns to the subscriber alias or ID screen. If the transceiver is waiting for acknowledgement, it stops all retries and exits the checking mode.

FUNCTION MENU SETUP

Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio (subscriber alias or ID only). No audible or visual indication is given to the target radio. You can use this feature to monitor, remotely, any audible activity surrounding the target radio.

Remote Monitor:
Call 1

Initiating Remote Monitor

Procedure:

1. Press [MENU] to access the menu.
2. Press [◀/▶] to Contacts and press [MENU] to select.
3. Press [◀/▶] to the required subscriber alias or ID and Press [MENU] to select or press [◀/▶] to Manual Dial and press [MENU] twice to select. Input the subscriber alias or ID and press [MENU] to select.
4. Press [◀/▶] to Remote Monitor and press [MENU] to select.
5. Screen displays Remote Monitor :< subscriber Alias or ID>, indicating that is on Remote Monitor. LED turns red.
6. The display shows Remote Monitor Successful. Or the display shows Remote Monitor Failed.
7. If successful, the radio starts receiving audio from the monitored radio for a duration. Once the timer expires, LED lights out.

FUNCTION MENU SETUP

Contacts Settings

Contacts provides "address-book" capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.

Each entry within Contacts displays the following information:

- Call Type
- Call Alias
- Call ID

Contact 1/12
◀Call 1▶

NOTE: You can add, delete, or edit subscriber IDs for the Digital Contacts list. This transceiver can save at most 1000 contacts.

Making a Group Call from Contacts

Procedure:

1. Press [MENU] to access the menu.
2. Press [◀/▶] to Contacts and press [MENU] to select.
3. Press [◀/▶] to the required group alias or ID.
4. Press the [PTT] button to make the call, release the [PTT], if any of the radios in the group responds, LED turns green, and the group call icon displays in the screen.

Making a Private Call from Contacts

Procedure:

FUNCTION MENU SETUP

1. Press [] to access the menu.
2. Press [ / ] to Contacts and press [] to select.
3. Press [ / ] to the required subscriber alias or ID. Or press [ / ] to Manual Dial and press [] twice to select. Use the keypad to enter a new subscriber ID.
4. Press the [PTT] button to make the call. The first line displays subscriber alias or ID. The second line displays private call or private call icon.
5. Release [PTT] button to listen, when the target radio responds, LED turns green and screen displays target ID.
6. If there is no audio activity in duration, the call ends.

Call Log Features

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the Call log feature to view and manage recent calls.

Viewing Recent Calls

The lists are Missed, Answered, and Outgoing.

Procedure:

1. Press [] to access the menu.
2. Press [ / ] to Call Log and press [] to select.
3. Press [ / ] to preferred list and press [] to select.
4. The display shows the most recent entry at the top of the list.
5. Press [ / ] to view the list.

FUNCTION MENU SETUP

Storing an Alias or ID from the Missed Call List

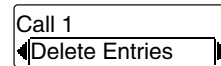
Procedure:

1. Press [ / ] to access the menu.
2. Press [ / ] to Call Log and press [] to select.
3. Press [ / ] to Missed call and press [] to select.
4. Press [ / ] to the required missed call alias or ID and press [] to select.
5. Press [ / ] to Store and press [] to select.
6. A blinking cursor appears. If needed, input the alias for that ID and press [] .
7. The display shows Contact Saved. You can also store an ID without an alias.

Deleting a Call from a Call List

Procedure:

1. Press [] to access the menu.
2. Press [ / ] to Call Log and press [] to select.
3. Press [ / ] to the required list and press [] to select.
4. Press [ / ] to the required alias or ID and press [] to select.
5. Press [ / ] to Delete Entry, and press [] to select “Yes” or “No”.
6. Select “Yes”, press [] to delete the entry and screen displays the entry deleted.
Or select “No”, press [] to back to previous screen. When you select a call list and it contains no entries, the display shows List Empty.



FUNCTION MENU SETUP

Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so. This feature is applicable to subscriber aliases or IDs only and is accessible through the menu via Contacts or manual Dial.

Receiving and Acknowledging a Call Alert

Procedure:

1. LED blinks red light.
2. Press and release the [PTT] button to acknowledge the alert. Or press [MENU] to select Ignore and to exit the Call Alert.

Making a Call Alert from the Contacts List

1. Press [MENU] to access the menu.
2. Press [◀/▶] to Contacts and press [MENU] to select.
3. Press [◀/▶] to the required subscriber alias or ID and press [MENU] to select. Or press [◀/▶] to Manual Dial and press [MENU] twice to select. A blinking cursor appears. Enter the subscriber ID you want to page and press [MENU].
4. Press [◀/▶] to Call Alert and press [MENU] to select. The display shows Call Alert: <SubscriberAlias or ID>, indicating that the Call Alert has been sent.
5. The red LED turns on when your radio is sending the Call Alert.

Call Alert:
Call 4

FUNCTION MENU SETUP

6. If the Call Alert acknowledgement is received, a tone sounds and the display shows Call Alert Successful.
Or if the Call Alert acknowledgement is not received, a tone sounds and the display shows Call Alert Failed.

Text Message Features

Your radio is able to receive data, for example a text message, from another radio or an e-mail application. The maximum length of characters for a text message, including the subject line is 164.

NOTE: Press [BACK] at any time to return to the previous screen.

Writing and Sending a Text Message

Procedure:

1. Press [MENU] to access the menu.
2. Press [◀/▶] to Messages and press [MENU] to select.
3. Press [◀/▶] to Write and press [MENU] to select.
4. A blinking cursor appears. Use the keypad to type your message. Press [◀] to move one space to the left. Press [▶] or the [#] key to move one space to the right. Press the [*DEL] key to delete any unwanted characters.
5. Press [MENU] once message is completed to select send or save.
6. Press [◀/▶] to the required alias or ID and press [MENU] to send. Or press [◀/▶] to Manual Dial and press [MENU] to key in the subscriber ID and press [MENU].

FUNCTION MENU SETUP

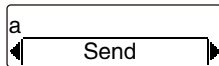
- The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
- If the message is sent, a tone sounds and the display shows Message Sent. Or if the message is not sent, a high tone sounds and the display shows Message Send Failed. If the message fails to be sent, the radio returns to the Resend option screen.

☞ Sending a Quick Text Message

Your radio supports a maximum of 50 Quick Text messages

Quick Text messages are predefined, you can edit each message before sending it.

- Press [] to access the menu.
- Press [ / ] to Messages and press [] to select.
- Press [ / ] to Quick Text and press [] to select.
- Press [ / ] to the required Quick Text and press [] to select.
- A blinking cursor appears. Use the keypad to edit the message, if required. Press [] to move one space to the left. Press [] or the [] key to move one space to the right. Press the [] key to delete any unwanted characters.
- Press [] once message is composed to send or save.
- Press [ / ] to the required alias or ID and press [] to select. Or press [ / ] to Manual Dial and press [] to select. Input the subscriber ID and press [] .
- The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.



FUNCTION MENU SETUP

- If the message is sent, a tone sounds and the display shows Message Sent. Or if the message is not sent, a high tone sounds and the display shows Message Send Failed. If the message fails to be sent, the radio returns to the Resend option screen. You can also press a call button to send a quick message to a subscriber alias or ID.

☞ Managing Fail-to-Send Text Messages

You can select one of the following options while at the Resend Option screen:

- Resend
- Forward
- Edit

☞ Resending a Text Message

Procedure:

- Press [] to resend the same message to the same subscriber/group alias or ID.
- If the message is sent, a tone sounds and the display shows Message Sent. **Or** if the message is not sent, the display shows Message Send Failed.

☞ Forwarding a Text Message

Select Forward to send the message to another subscriber/group alias or ID.

Procedure:

FUNCTION MENU SETUP

1. Press [◀/▶] to Forward and press [MENU] to select.
2. Press [◀/▶] to the required alias or ID and press [MENU] to select. Or press [◀/▶] to Manual Dial and press [MENU] button, input the subscriber ID and press [MENU].
3. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
4. If the message is sent, a tone sounds and the display shows Message Sent. Or if the message is not sent, a high tone sounds and the display shows Message Send Failed.

Editing a Text Message

Select edit to edit the message before sending.

1. Press [◀/▶] to edit and press [MENU] to select.
2. A blinking cursor appears. Use the keypad to type your message. Press [◀] to move one space to the left. Press [▶] or the [#] key to move one space to the right. Press the [* DEL] key to delete any unwanted characters.
3. Press [MENU] once message is completed to select send or save.
4. Press [◀/▶] to the required alias or ID and press [MENU] to send. Or press [◀/▶] to Manual Dial and press [MENU] to key in the subscriber ID and press [MENU].
5. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
6. If the message is sent, a tone sounds and the display shows Message Sent. If the message is not sent, a high tone sounds and the display shows Message Send Failed.

FUNCTION MENU SETUP

Managing Sent Text Messages

Once a message is sent to another radio, it is saved in Sent Items. The most recent sent text message is always added to the top of the Sent Items list. The Sent Items folder is capable of storing a maximum of 50 last sent messages. When the folder is full, the next sent text message automatically replaces the oldest text message in the folder.

NOTE: Press [BACK] anytime can back to the priority screen.

Viewing a Sent Text Message

Procedure:

1. Press [MENU] to access the menu.
2. Press [◀/▶] to Messages and press [MENU] to select.
3. Press [◀/▶] to Sent Items and press [MENU] to select.
4. Press [◀/▶] to the required Message and press [MENU] to select.

Sending a Sent Text Message

You can select one of the following options while viewing a sent text message:

- Resend
- Forward
- Edit
- Delete

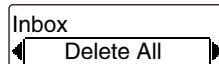
FUNCTION MENU SETUP

1. Review the text message, press [] again.
2. Press [ / ] to resend, then press [] to resend again.
3. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent to correct target radio. If the message is sent, a tone sounds and the display shows Message Sent. If the message is not sent, a high tone sounds and the display shows Message Send Failed. The radio back to the resend screen, press [] to resend the message to the same subscriber/group alias or ID.
 - Forward, send the text message to other group/subscriber alias or ID.
 - Edit, rewrite the selected message before sending.
 - Delete, delete the selected message.

☞ Deleting all Sent Text Messages from Inbox

Procedure:

1. Press [] to access the menu.
2. Press [ / ] to Messages and press [] to select.
3. Press [ / ] to Inbox and press [] to select.
4. Press [ / ] to Delete All and press [] to select.
5. At Delete Message press [] to select "Yes". The display shows Inbox Cleared. Or at Delete Message Press [ / ] to No and press [] to return to the previous screen. When you select inbox and it contains no text messages, the display shows List Empty.



FUNCTION MENU SETUP

☞ Receiving a Text Message

When your radio receives a message, the display shows the alias or ID of the sender and the message icon at the far left of the screen.

You can select one of the following options when receiving a text message:

- Read?
- Read Later
- Delete

☞ Reading a Text Message

Procedure:

1. Press [ / ] to Read? and press [] to select.
2. The text message is open, and press [] back to the main screen. Or press [ / ] to access the Read Later or Delete option screen:
 - Select Read Later to return to the screen you were in previously.
 - Select Delete to delete the text message.

☞ Managing Received Text Messages

Use the Inbox to manage your text messages. The Inbox is capable of storing a maximum of 50 messages. Your radio supports the following options for text messages:

- Reply
- Forward

FUNCTION MENU SETUP

- Delete
- Delete All

Text messages in the Inbox are sorted according to the most recently received.

NOTE: Press [] anytime to back to priority screen.

⏮️ Viewing a Text Message from the Inbox

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Messages and press [] to select.
3. Press [ / ] to Inbox and press [] to select.
4. Press [ / ] to view the messages.
5. Press [] to select the current message, and press [] again to reply, delete, or forward that message. Unread messages are indicated with an exclamation mark (!)

⏮️ Replying a Text Message from the Inbox

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Messages and press [] to select.
3. Press [ / ] to Inbox and press [] to select.

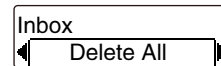
FUNCTION MENU SETUP

4. Press [ / ] to the required message and press [] to select.
5. Press [] once more to access the sub-menu.
6. Press [ / ] to Reply and press [] to select.
7. Press [ / ] to Write and press [] to select. A blinking cursor appears. Use the keypad to write your message. Or press [ / ] to Quick Text and press [] to select. A blinking cursor appears. Use the keypad to edit your message, if required.
8. Press [] to select and again for sending once message is composed.
9. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
10. If the message is sent, a tone sounds and the display shows Message Sent. Or if the message is not sent, the display shows Message Send Failed and back to resend screen.

⏮️ Deleting a Text Message from the Inbox

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Messages and press [] to select.
3. Press [ / ] to Inbox and press [] to select.
4. Press [ / ] to the required message and press [] to select.
5. Press [] once more to access the sub-menu.
6. Press [ / ] to Delete and press [] to select.
7. At Delete Message? Press [ / ] to Yes and press [] to select delete message.



FUNCTION MENU SETUP

Deleting All Text Messages from the Inbox

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Messages and press [] to select.
3. Press [ / ] to Inbox and press [] to select.
4. Press [ / ] to Delete All and press [] to select.
5. At Delete Message? Press [ / ] to Yes and press [] to select.
6. The Display shows Inbox Cleared. When you select the Inbox and it contains no text messages, the display shows List Empty.

Privacy

If enabled, this feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software based scrambling solution.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission.

To unscramble a privacy-enabled call or data transmission, your radio must have the same Privacy Key (for Basic Privacy), the same key value and key ID (for Enhanced Privacy) as the transmitting radio.

If your radio receives a scrambled call that is of a different Privacy Key, you will either hear a garbled transmission. You can preset at most 16 privacy groups, privacy key (4 Bytes), press the privacy button to turn on/off scramble.

If the radio with privacy type, the main display shows scramble or none scramble icon.

FUNCTION MENU SETUP

Dual Tone Multi Frequency (DTMF) (Analog)

The Dual Tone Multi Frequency (DTMF) have four received/transmit systems, you can set 32 groups encode, every group with 30 characters.

The called party: the called party can set below decode respond by software:

Disable: When the radio receives disable code, then the radio is forbidden to receive/transmit.

Enable: In disable state the radio receives an enable code and back to normal.

Disable/ Enable

You can enable or disable any radio in the system. For example, you might want to disable a stolen radio, to prevent the thief from using it, and enable that radio, when it is recovered.

NOTE: Performing Radio Disable and Enable is limited to radios with these functions enabled.

Radio Disable

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Contacts and press [] to select.
3. Press [ / ] to the required alias or ID and press [] to select. Or press [ / ] to Manual Dial and press [] twice to select. Input the subscriber alias or ID and press [].
4. Press [ / ] to Radio Disable and press [] to select.

Radio Disable:
Call 1

FUNCTION MENU SETUP

5. The display shows Radio Disable: <Subscriber Alias or ID> and the LED turns red.
6. If successful, a tone sounds and the display shows Radio Disable Successful. Or if not successful, a tone sounds and the display shows Radio Disable Failed. When disabling the radio, do not press [], because you will not get the acknowledge info.

Radio Enable

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Contacts and press [] to select.
3. Press [ / ] to the required alias or ID and press [] to select. Or press [ / ] to Manual Dial and press [] twice to select. Input the subscriber alias or ID and press [].
4. Press [ / ] to Radio Enable and press [] to select.
5. The display shows Radio Enable: <Subscriber Alias or ID>.
6. If successful, a tone sounds and the display shows Radio Enable Successful. Or if not successful, a tone sounds and the display shows Radio Enable Failed. When enabling the radio, do not press [], because you will not get the acknowledge info.

Radio Enable:
Call 1

Scan Lists

Scan lists are created and assigned to individual channels/groups. Your radio can support up to 250 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of both analog and digital entries. You can add, delete, or prioritize channels by editing a scan list.

FUNCTION MENU SETUP

View the scan list

1. Select a channel with scan list by channel selector knob;
2. Press [ / ] to access the menu.
3. Press [ / ] to Scan and press [] to select.
4. Press [ / ] to View List and press [] to select.
5. Press [ / ] to view each member in the list.

If you set priority scan, the priority icon will appear on the left of the member alias, meaning this member is priority channel 1 or 2. In the scan list, you can only have one priority channel 1 or priority channel 2.

If non priority scan, then will not show the priority icon.

Scan instructions

When you start a scan, your radio cycles through the scan list looking for voice activity.

The LED blinks red, and scan icon shows in the screen while in scan mode.

There are two ways of initiating scan:

- Manual Dial (Manual): Your radio scans all the channels/groups in your scan list. On entering scan, you may use, depending on the settings, the can on/off button or by the menu function to start scan.
- Auto Scan (Automatic): Your radio automatically starts scanning when you select a channel/group that has Auto Scan enabled.

FUNCTION MENU SETUP

Starting and Stopping Scan

Press the Scan button or follow the scan menu.

1. Use the Channel Selector Knob to select a channel with a scan list.
2. Press [] to access the menu.
3. Press [ / ] to Scan and press [] to select.
4. The display shows Turn Off if scan is disabled. Or the display shows Turn On if scan is enabled.
5. Press [] to select.
6. The LED blinks red and shows scan icon when Scan is enabled. Or the LED turns off and without scan icon when Scan is disabled.

Responding to a Transmission During a Scan

During scanning, your radio stops on a channel/group where activity is detected. The radio stays on that channel for a time period known as "hang time".

Procedure:

1. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth. If digital channel and the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the [PTT] button, indicating the channel is free for you to respond.
2. Press the [PTT] button during hang time. The red LED turns on.
3. Release the [PTT] button to listen.
4. If you do not respond within the hang time, the radio returns to scanning other channels/groups.

ADVANCED OPERATIONS

Locking and Unlocking the Keypad

You can lock your radio's keypad to avoid inadvertent key entry.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to Keypad Lock and press [] to select.
5. The display shows Keypad Locked and returns to the Home screen.
6. To unlock the keypad, press [], then press [ DEL].
7. The display shows Keypad Unlocked and returns to the Home screen.

Turning Keypad Tones On or Off

You can enable and disable keypad tones if needed.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to Tones/Alerts and press [] to select.
5. Press [ / ] to Keypad Tones and press [] to select.

ADVANCED OPERATIONS

6. The display shows Turn On. Press [] to enable keypad tones. The display shows Keypad Tone On. Or the display shows Turn Off. Press [] to disable keypad tones. The display shows Keypad Tone Off.

Setting the Squelch Level (Analog)

You can adjust your radio's squelch level to filter out unwanted calls with low signal strength or channels that have a higher than normal background noise.

Settings: Normal is the default. Tight filters out (unwanted) calls and/or background noise. However, calls from remote locations may also be filtered out.

Press the Squelch button to toggle squelch level between normal and tight.

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to Squelch and press [] to select and access sub-menu.

ADVANCED OPERATIONS

Turning the VOX Feature On or Off

This feature allows you to initiate a hands-free voice activated call on a channel.

NOTE: Turning this feature on or off is limited to radios with this function enabled.

Press the VOX button to toggle the feature on or off.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to VOX and press [] to select.
5. The display shows VOX On. Press [] to enable VOX, and screen shows VOX transmit application. The display shows VOX Off. Press [] to disable VOX, and screen shows VOX transmit cancel.

Controlling the Display Backlight

You can enable or disable the radio's display backlight as needed. The setting also affects menu and keypad backlight accordingly.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to Backlight and press [] to select.
5. The display shows Auto On. Press [] to enable the display backlight. The display shows Backlight Auto On. Or the display shows Turn Off. Press [] to disable the display backlight. The display shows Backlight Turn Off. The display backlight and keypad backlight are automatically turned off if the LED indicator is disabled.

Turning the Radio Tones / Alerts On or Off

You can enable or disable the radio tones and alerts (except for the incoming Emergency alert tone) if needed.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.

4. Press [ / ] to Tones/Alerts and press [] to select and access sub-menu.
5. Press [ / ] to All Tones and press [] to select.
6. The display shows Turn On. Press [] to enable all tones and alerts. The display shows All Tones On. Or the display shows Turn Off. Press [] to disable all tones and alerts. The display shows All Tones Off.

Switch Chinese and English

You can switch Chinese or English language if needed.

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to radio setting and press [] to select.
4. Press [ / ] to language selection and press [] to sub-menu.
5. Press [ / ] to select Chinese or English, then press [] to select.

Turning the LED Indicator On or Off

You can enable or disable the LED Indicator if needed.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [ / ] to LED Indicator and press [] to select.

ADVANCED OPERATIONS

5. The display shows Turn On. Press [] to enable the LED Indicator. The display shows All LEDs On.

Or the display shows Turn Off. Press [] to disable the LED Indicator. The display shows All LEDs Off. The display backlight, buttons, and keypad backlight are automatically turned off if the LED indicator is disabled.

☞☞ Turning the Introduction Screen On or Off

You can enable or disable the Introduction Screen if needed.

Procedure:

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio Settings and press [] to select.
4. Press [] to Intro Screen and press [] to select.
5. The display shows Turn On. Press [] to enable the Introduction Screen. The display shows Intro Screen On. Or the display shows Turn Off. Press [] to disable the Introduction Screen. The display shows Introduction Screen Off.

☞☞ Accessing General Radio Information

Your radio contains information on the following:

- Radio ID
- Software Version
- Codeplug Version

ADVANCED OPERATIONS

NOTE: Press [] at anytime to back to priority screen.

☞☞ Check radio ID

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio info, then press [] to select.
4. Press [ / ] to Self Number and press [] to select.
5. Screen shows radio alias and ID.

☞☞ Check Software Version

Display radio software version

1. Press [] to access menu.
2. Press [ / ] to Utilities and press [] to select.
3. Press [ / ] to Radio info, then press [] to select.
4. Press [ / ] to Software version and press [] to select.
5. Screen shows current software version.

☞☞ Check Codeplug Version

Display radio Codeplug version.

1. Press [] to access menu.

ADVANCED OPERATIONS

2. Press [◀/▶] to Utilities and press [MENU] to select.
3. Press [◀/▶] to Radio info, then press [MENU] to select.
4. Press [◀/▶] to CP version and press [MENU] to select.
5. Screen shows current Codeplug version.

☞☞ Voice Recording (Optional)

When enable recording, you can record in communication or remote monitoring. This radio supports 18 hours recording. You can play and delete the recording, etc. See attachment for details.

☞☞ Man Down (Optional)

With this function enabled, if the angle of radio inclination is bigger than angle, the radio will alarm. If lift the radio up and the angle bigger than recover angle, the radio stop alarm. See attachment for details.

TROUBLESHOOTING

Phenomena	Solution
The radio cannot be switched on or no display after being switched on.	A. Battery pack may not be installed properly. Remove the battery pack and install it again. B. Battery power may be insufficient. Recharge or replace the battery pack.
The battery doesn't last for long after being charged.	The battery life is over. Please replace it with a new battery pack.
Cannot talk to or hear other members in your group.	1. Make sure the frequency and CTCSS are the same as those of other members. 2. Make sure you are in the efficiency range, cannot too far away from other members. 3. Make sure you are set in correct digital mode, and frequency. 4. In digital mode, make sure set correct code and encrypt group in current channel. 5. In digital mode, make sure set correct receiving contacts and receiving group.
Voices from non-group members are heard on the channel.	Analog: Change the CTCSS/DCS tone and then change all radios' tones in your group.

■ TECHNICAL SPECIFICATIONS

General	
Frequency Range	Digital: 400-480Mhz Analog: 400-480Mhz
Channel Capacity	1000 channels
Channel Spacing	12.5KHz
Phase-locked Step	5KHz, 6.25KHz
Operating Voltage	7.4V DC $\pm 20\%$ /(2000mAh)
Frequency Stability	± 2.5 ppm
Operating Temperature	-20℃~ +55℃
Size	111×61×40mm (with battery pack)
Weight	257g (with battery pack, antenna)

Receiving Part	
Sensitivity(12dB SINAD)	$\leq 0.35\mu V$
Digital Sensitivity	0.3uV/-117.4dBm (BER 5%) 0.7uV/-110dBm (BER 1%)
Adjacent Channel Selectivity	≥ 60 dB

Intermodulation	≥ 60 dB
Spurious Rejection	≥ 70 dB
Blocking	84db
Hum & Noise	≥ 40 dB
Audio Distortion	$\leq 5\%$
Audio Power Output	1000mW/16Ω

Transmitting Part	
Power Output	Digital: 5W, Analog:5W
Modulation	± 2.5 KHz@12.5KHz
Adjacent Channel Power	≥ 60 dB
Hum & Noise	≥ 36 dB
Spurious Emission	≤ -36 dB
Digital Emission Designator	12.5KHz (data) 7K60FXD 12.5KHz (data+voice) 7K60FXW
Analog Emission Designator	FM 12.5KHz: 11K0F3E
Audio Distortion	$\leq 5\%$
Error Rate	$\leq 3\%$
Digital Data rate	9600bps

■ Limited Warrantry

What This Warranty Covers and for How Long

Shenzhen Excera Technology Co., Ltd. warrants the Excera manufactured products listed below against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

Digital Portable Radio	One Year
Accessories	Six Months

How to Get Warranty Service

You must provide a completely filled warranty card, purchase invoice, and receipt in order to get warranty services. The purchase invoice or receipt should indicate the radio, accessories, radio serial number, purchase date, and purchase amount.

What This Warranty Does Not Cover

- Defect or damage resulting from use of the product in other than its normal and customary manner
- Defect or damage caused by unauthorized product disassembly, repair, or modification
- Damage due to force majeure, such as flood, lightning strike, earthquake, tsunami, fire, and abnormal voltage
- Product that does not have a valid warranty certificate, such as warranty card, purchase invoice, or receipt
- Product which has had the serial number and the tamper-proof label removed or made illegible
- Normal and customary wear and tear
- Rechargeable batteries if:
 - any of the seals on the battery enclosure of cells is broken or shows evidence of tampering.
 - the damage or defect is caused by charging or using the battery in equipment or service other than the product for which it is specified.

Warranty Card

Purchase Information

Customer Name: _____

Customer Phone: _____

Customer Address: _____

Purchase Date: _____

Radio Information

Model Number: _____

Serial Number: _____



Note:

- This warranty card applies to after-sale and maintenance services for the product and accessories described above.
- You must provide this warranty card and purchase invoice in order to get warranty services.
- The Company does not assume liability for damages caused by human factors. For more details, contact your local dealer.



Please tear from the Dotted line



