

# KENWOOD

## INSTRUCTION MANUAL



VHF FM TRANSCEIVER

# TK-2407

UHF FM TRANSCEIVER

# TK-3407

JVCKENWOOD Corporation

© B62-2480-10 (M)

## THANK YOU

We are grateful you have chosen **KENWOOD** for your land mobile radio applications.

## NOTICES TO THE USER

- ◆ Government law prohibits the operation of unlicensed radio transmitters within the territories under government control.
- ◆ Illegal operation is punishable by fine and/or imprisonment.
- ◆ Refer service to qualified technicians only.

**Safety:** It is important that the operator is aware of, and understands, hazards common to the operation of any transceiver.

### Firmware Copyrights

The title to and ownership of copyrights for firmware embedded in KENWOOD product memories are reserved for JVC KENWOOD Corporation.

## PRECAUTIONS

- Do not charge the transceiver and battery pack when they are wet.
- Ensure that there are no metallic items located between the transceiver and the battery pack.
- Do not use options not specified by **KENWOOD**.
- If the die-cast chassis or other transceiver part is damaged, do not touch the damaged parts.
- If a headset or headphone is connected to the transceiver, reduce the transceiver volume. Pay attention to the volume level when turning the squelch off.
- Do not place the microphone cable around your neck while near machinery that may catch the cable.
- Do not place the transceiver on unstable surfaces.
- Ensure that the end of the antenna does not touch your eyes.
- When the transceiver is used for transmission for many hours, the radiator and chassis will become hot. Do not touch these locations when replacing the battery pack.
- Do not immerse the transceiver in water.
- Always switch the transceiver power off before installing optional accessories.
- The charger is the device that disconnects the unit from the AC mains line. The AC plug should be readily accessible.

**WARNING**

Turn the transceiver power off in the following locations:

- In explosive atmospheres (inflammable gas, dust particles, metallic powders, grain powders, etc.).
- While taking on fuel or while parked at gasoline service stations.
- Near explosives or blasting sites.
- In aircrafts. (Any use of the transceiver must follow the instructions and regulations provided by the airline crew.)
- Where restrictions or warnings are posted regarding the use of radio devices, including but not limited to medical facilities.
- Near persons using pacemakers.

**CAUTION**

- Do not disassemble or modify the transceiver for any reason.
- Do not place the transceiver on or near airbag equipment while the vehicle is running. When the airbag inflates, the transceiver may be ejected and strike the driver or passengers.
- Do not transmit while touching the antenna terminal or if any metallic parts are exposed from the antenna covering. Transmitting at such a time may result in a high-frequency burn.
- If an abnormal odor or smoke is detected coming from the transceiver, switch the transceiver power off immediately, remove the battery pack from the transceiver, and contact your **KENWOOD** dealer.
- Use of the transceiver while you are driving may be against traffic laws. Please check and observe the vehicle regulations in your area.
- Do not expose the transceiver to extremely hot or cold conditions.
- Do not carry the battery pack (or battery case) with metal objects, as they may short the battery terminals.
- When operating the transceiver in areas where the air is dry, it is easy to build up an electric charge (static electricity). When using an earphone accessory in such conditions, it is possible for the transceiver to send an electric shock through the earphone and to your ear. We recommend you use only a speaker/microphone in these conditions, to avoid electric shocks.

## Information concerning the battery pack:

The battery pack includes flammable objects such as organic solvent. Mishandling may cause the battery to rupture producing flames or extreme heat, deteriorate, or cause other forms of damage to the battery. Please observe the following prohibitive matters.



**DANGER**

- **Do not disassemble or reconstruct battery!**

The battery pack has a safety function and protection circuit to avoid danger. If they suffer serious damage, the battery may generate heat or smoke, rupture, or burst into flame.

- **Do not short-circuit the battery!**

Do not join the + and – terminals using any form of metal (such as a paper clip or wire). Do not carry or store the battery pack in containers holding metal objects (such as wires, chain-necklace or hairpins). If the battery pack is short-circuited, excessive current will flow and the battery may generate heat or smoke, rupture, or burst into flame. It will also cause metal objects to heat up.

- **Do not incinerate or apply heat to the battery!**

If the insulator is melted, the gas release vent or safety function is damaged, or the electrolyte is ignited, the battery may generate heat or smoke, rupture, or burst into flame.

- **Do not leave the battery near fire, stoves, or other heat generators (areas reaching over 80°C/ 176°F)!**

If the polymer separator is melted due to high temperature, an internal short-circuit may occur in the individual cells and the battery may generate heat or smoke, rupture, or burst into flame.

- **Do not immerse the battery in water or get it wet by other means!**

If the battery's protection circuit is damaged, the battery may charge at extreme current (or voltage) and an abnormal chemical reaction may occur. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not charge the battery near fire or under direct sunlight!**

If the battery's protection circuit is damaged, the battery may charge at extreme current (or voltage) and an abnormal chemical reaction may occur. The battery may generate heat or smoke, rupture, or burst into flame.

**DANGER**

- **Use only the specified charger and observe charging requirements!**

If the battery is charged in unspecified conditions (under high temperature over the regulated value, excessive high voltage or current over regulated value, or with a remodeled charger), it may overcharge or an abnormal chemical reaction may occur. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not pierce the battery with any object, strike it with an instrument, or step on it!**

This may break or deform the battery, causing a short-circuit. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not jar or throw the battery!**

An impact may cause the battery to leak, generate heat or smoke, rupture, and/or burst into flame. If the battery's protection circuit is damaged, the battery may charge at an abnormal current (or voltage), and an abnormal chemical reaction may occur. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not use the battery pack if it is damaged in any way!**

The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not solder directly onto the battery!**

If the insulator is melted or the gas release vent or safety function is damaged, the battery may generate heat or smoke, rupture, or burst into flame.

- **Do not reverse the battery polarity (and terminals)!**

When charging a reversed battery, an abnormal chemical reaction may occur. In some cases, an unexpected large amount of current may flow upon discharging. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not reverse-charge or reverse-connect the battery!**

The battery pack has positive and negative poles. If the battery pack does not smoothly connect with a charger or operating equipment, do not force it; check the polarity of the battery. If the battery pack is reverse-connected to the charger, it will be reverse-charged and an abnormal chemical reaction may occur. The battery may generate heat or smoke, rupture, or burst into flame.

**DANGER**

- **Do not touch a ruptured and leaking battery!**

If the electrolyte liquid from the battery gets into your eyes, wash your eyes with fresh water as soon as possible, without rubbing your eyes. Go to the hospital immediately. If left untreated, it may cause eye-problems.

**WARNING**

- **Do not charge the battery for longer than the specified time!**

If the battery pack has not finished charging even after the regulated time has passed, stop it. The battery may generate heat or smoke, rupture, or burst into flame.

- **Do not place the battery pack into a microwave or high pressure container!**

The battery may generate heat or smoke, rupture, or burst into flame.

- **Keep ruptured and leaking battery packs away from fire!**

If the battery pack is leaking (or the battery emits a bad odor), immediately remove it from flammable areas. Electrolyte leaking from battery can easily catch on fire and may cause the battery to generate smoke or burst into flame.

- **Do not use an abnormal battery!**

If the battery pack emits a bad odor, appears to have different coloring, is deformed, or seems abnormal for any other reason, remove it from the charger or operating equipment and do not use it. The battery may generate heat or smoke, rupture, or burst into flame.

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## UNPACKING AND CHECKING EQUIPMENT

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Carefully unpack the transceiver. If any of the items listed below are missing or damaged, file a claim with the carrier immediately.

### SUPPLIED ACCESSORIES

- Speaker/ microphone jack cover ..... 1
- Speaker/ microphone locking bracket ..... 1
- Belt clip (KBH-10)..... 1
- Screw (M3 x 8 mm) ..... 1
- Channel stopper ..... 1
- Instruction manual ..... 1

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**Note:** Refer to "PREPARATION" for accessory installation instructions.

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## PREPARATION

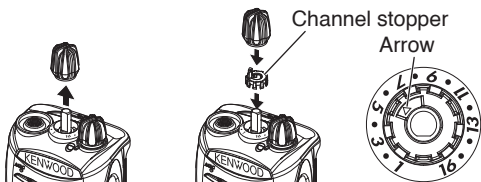
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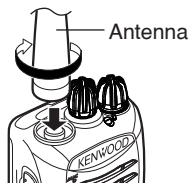
### INSTALLING THE CHANNEL STOPPER

For transceivers with less than 16 channels, insert a Channel stopper.

- 1 Set the Channel selector to channel 1, then pull the Channel selector knob off the transceiver.
  - If the Channel selector is not positioned at channel 1, the Channel selector knob may not install correctly and the channel may be unable to be changed.
- 2 Insert the channel stopper.
- 3 Set the arrow of the Channel stopper to the highest channel number for the transceiver.
  - You can set the Channel stopper position for channels 2, 4, 6, 8, 10, 12, and 14.
- 4 Reinsert the Channel selector knob.



### INSTALLING THE (OPTIONAL) ANTENNA



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

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**Note:** The antenna is neither a handle, a key ring retainer, nor a speaker/ microphone attachment point. Using the antenna in these ways may damage the antenna and degrade your transceiver's performance.

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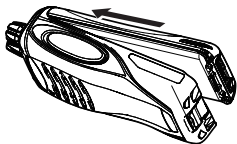


## INSTALLING/ REMOVING THE (OPTIONAL) BATTERY PACK



CAUTION

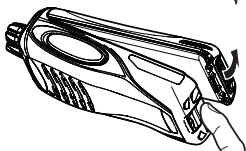
- ◆ Do not short the battery terminals or dispose of the battery by fire.
- ◆ Never attempt to remove the casing from the battery pack.



- 1 Align the battery pack with the back of the transceiver, then press the battery pack and transceiver firmly together until the release latch on the base of the transceiver locks.

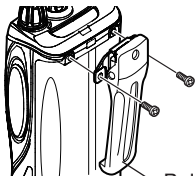


- 2 To remove the battery pack, lift the safety catch on the base of the transceiver, then press the release latch underneath the safety catch.



- 3 While pressing the release latch, pull the battery pack away from the transceiver.

## INSTALLING THE BELT CLIP



If necessary, attach the belt clip using the two supplied M3 x 8 mm screws.

**Note:** If the belt clip is not installed, its mounting location may get hot during continuous transmission or when left sitting in a hot environment.



CAUTION

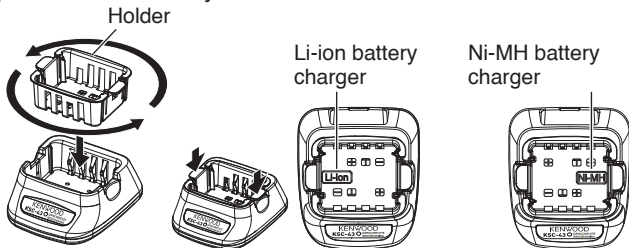
Do not use glue which is designed to prevent screw loosening when installing the belt clip, as it may cause damage to the transceiver. Acrylic ester, which is contained in these glues, may crack the transceiver's back panel.

## CHARGING THE BATTERY PACK (OPTIONAL BATTERY CHARGER)

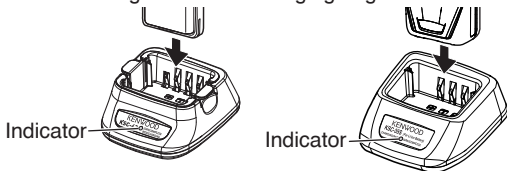
The battery pack is not charged at the factory; charge it before use.

**ATTENTION:** Always switch OFF a transceiver equipped with a battery pack before inserting the transceiver into the charger.

- 1 Plug the AC adapter cable into the jack located on the rear of the charger.
- 2 Plug the AC adapter into an AC outlet.
- 3 Match the Holder to the type of battery pack to be charged so that when inserting the Holder, the battery type name can be seen on the bottom of the charger. After inserting the Holder into the charger, press the locking tabs to secure it in place. <KSC-43 only>



- To remove the Holder, squeeze the locking tabs together then pull the Holder out of the charger. <KSC-43 only>
- 4 Slide a battery pack or a transceiver equipped with a battery pack into the charging slot of the charger.
    - Make sure the metal contacts of the battery pack mate securely with the charger terminals.
    - The indicator lights red and charging begins.



5 When charging is completed, the indicator lights green. Remove the battery pack or the transceiver from the charging slot of the charger.

- It takes approximately 3 hours to charge the battery pack.
- When the charger will not be used for a long time, unplug the AC adapter from the AC outlet.

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**Note:**

- ◆ When the indicator blinks red, the battery pack is either defective or the battery pack contacts are not properly mated with those of the charger.
  - ◆ When the indicator flashes green and orange, the battery pack has not satisfied the charging start temperature. Remove the battery pack from the charger and wait until it reaches a normal temperature before charging it again.
  - ◆ The ambient temperature should be between 41°F and 104°F (5°C and 40°C) while charging is in progress. Charging outside this range may not fully charge the battery.
  - ◆ The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the battery pack.
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## INSTALLING THE CAP OVER THE SPEAKER/ MICROPHONE JACKS

Install the cap over the speaker/ microphone jacks when not using an optional speaker/ microphone.

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**Note:** To keep the transceiver water resistant, you must cover the speaker/ microphone jacks with the supplied cap.

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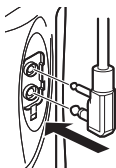
- 1 Place the cap over the jacks so that the locking tabs insert into the transceiver grooves.
- 2 While holding the cap in place, push it towards the bottom of the transceiver until the tabs on the cap click into place.



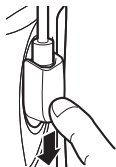
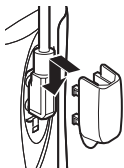
- To remove the cap, hold the top of the cap in place with your finger while inserting a 2 mm or smaller flat blade screwdriver under the bottom of the cap. Slowly slide the screwdriver in until its tip touches the tab inside the cap, then gently pry the cap up (handle of screwdriver moving away from the transceiver) to remove the cap.

## INSTALLING THE OPTIONAL SPEAKER/ MICROPHONE (OR HEADSET)

**Note:** The transceiver is not fully water resistant when using a speaker/ microphone or headset.



- 1 Insert the speaker/ microphone (or headset ) plugs into the speaker/ microphone jacks of the transceiver.



- 2 Place the locking bracket over the speaker/ microphone (or headset) plugs so that the locking tabs insert into the transceiver grooves.
  - Push down on the locking bracket to slide it into place.



- 3 While holding the locking bracket in place, push it towards the bottom of the transceiver until the tabs on the bracket click into place.
  - To remove the locking bracket, push the bracket up from the base.

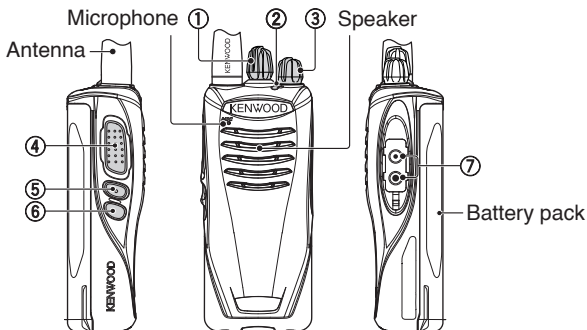
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## ORIENTATION

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### ① Channel selector

Rotate to change the operating channel.

- **Channel Annunciation:** When changing channels, the transceiver will announce the newly selected channel number (if enabled by your dealer).

### ② LED indicator

For the LED indicator status, refer to page 11.

### ③ Power switch/ Volume control

Turn clockwise to switch ON the transceiver. To switch OFF the transceiver, turn counterclockwise until a click sounds. Rotate to adjust the volume level.

### ④ PTT (Push to Talk) switch

Press and hold, then speak around the microphone area to transmit.

### ⑤ Side 1 key {refer to page 8}

Press to activate its programmable function.

### ⑥ Side 2 key {refer to page 8}

Press to activate its programmable function.

### ⑦ Speaker/ microphone jacks

Insert the Speaker/ microphone or Headset plug into this jack.

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## PROGRAMMABLE AUXILIARY FUNCTIONS

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Your dealer can program the **Side 1** and **Side 2** keys each with one of the following functions.

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**Note:** The duration of pressing a key to activate a function is dependent on your dealer setting. Your dealer may have set some keys to be held down for a short duration instead of being momentarily pressed. Ask your dealer for details on which keys need to be held down to activate their functions.

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■ **None**

No function has been programmed.

■ **2-Tone**

Press this key to transmit a 2-tone code.

■ **Autodial**

DTMF Autodial allows you to make a private call to another party.

■ **Calling Alert**

A calling alert tone allows you to alert party members that you are making a call. When making a call, first hold down this key.

- While holding down the key, the calling alert tone will sound. Release the key to end the tone, then hold down the **PTT** switch and speak into the microphone to transmit.

■ **Emergency**

Press and hold this key to enter Emergency mode.

■ **Key Lock**

Press this key to lock /unlock the transceiver keys. Without Status Memory, when the transceiver power is turned OFF and then ON again, the Key Lock function will be cancelled.

## ■ **Key Lock with Status Memory**

This operates the same as Key Lock except that when the transceiver power is turned OFF and then ON again, the keys remains locked.

## ■ **Lone Worker**

Lone Worker Mode is a safety feature built into the transceiver. If the transceiver is not operated for a pre-programmed period of time, the transceiver will emit a tone and automatically enter Emergency operation.

Press this key to toggle the Lone Worker function ON or OFF.

## ■ **Low Transmit Power**

Each channel is programmed with either high or low transmit power. On high transmit power channels, press this key to change the transmit power to low power (you cannot change low transmit power channels to use high power).

## ■ **Monitor**

Press this key to deactivate signaling (QT/DQT, FleetSync signaling, etc.). Press the key again to return to normal operation.

## ■ **Monitor Momentary**

Continuously hold down this key to deactivate signaling (QT/DQT, FleetSync signaling, etc.). Release the key to return to normal operation.

## ■ **Paging Call**

Press this key to send a FleetSync paging call to an ID from the ID list.

## ■ **Priority-channel Select**

If the scan priority type is “Operator Selectable”, press this key in normal mode to set the current channel as the priority channel.

## ■ **Scan**

Press this key to start scanning the transceiver channels.

## ■ **Scan + Temporary Delete**

Scan pauses at an undesired channel, you can remove that channel from the scanning sequence by press or hold this key.

## ■ **Scrambler**

The Scrambler function allows you to hold a conversation in complete privacy. When activated, any other party listening in on your channel will be unable to understand your conversation. Press this key to toggle the Scrambler function ON or OFF.

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**Note:** This function cannot be used in certain countries. Contact **KENWOOD** dealer for further information.

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## ■ **Send the GPS data**

Press this key when the GPS unit has been installed to send your positioning data to the base station.

## ■ **Speaker Switch**

Use this key to switch between the external speaker (earpiece speaker) or internal speaker (transceiver speaker). Press this key to activate the external speaker. Press again to deactivate.

## ■ **Squelch Off**

Press this key to hear background noise. Press the key again to return to normal operation.

## ■ **Squelch Off Momentary**

Continuously hold down this key to hear background noise. Release the key to return to normal operation.

## ■ **Status 1/ Status 2**

Press this key to send a status.

## ■ **Talk Around**

The Talk Around function allows you to communicate directly with other transceivers, without the use of a repeater. Press this key to toggle the Talk Around function ON or OFF.



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## BASIC OPERATIONS

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- 1 Turn the **Power** switch/ **Volume** control clockwise to switch the transceiver power ON.
  - A beep sounds if enabled by your dealer.
- 2 Press the key programmed with the **[Monitor]** or **[Squelch Off]** function to hear background noise, then rotate the **Power** switch/ **Volume** control to adjust the volume.
- 3 Rotate the **Channel** selector to select your desired channel.
  - When you receive an appropriate signal, you will hear audio from the speaker.
- 4 To make a call, press and hold the **PTT** switch, then speak around the microphone area using your normal speaking voice.
  - Hold the microphone approximately 1.5 inches (3 to 4 cm) from your lips.
- 5 Release the **PTT** switch to receive.

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**Note:** When the battery pack voltage becomes too low, transmission will stop and an alert tone will sound.

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### LED Indicator Status

Indicator Color	Meaning
Lights red	Transmitting
Lights green	Receiving a call
Blinks red	Battery power is low while transmitting
Blinks green	Scanning
Blinks orange/ blue *	Receiving an encoded call (FleetSync signaling, etc.)
Blinks red/orange	The selected channel has not been programmed and cannot be used.

\* Your dealer can set the LED to blink either orange or blue for FleetSync, DTMF, or 2-tone operation.

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## VOICE OPERATED TRANSMISSION (VOX)

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VOX operation allows you to transmit hands-free. This feature must first be activated by your dealer, and can only be used if you are using a supported headset. This function can be turned off for specific channels by your dealer.

To activate VOX and set the VOX Gain level, perform the following steps:

- 1 Connect the headset to the transceiver .
  - The VOX function does not activate when a headset is not connected to the accessory terminal of the transceiver.
- 2 With the transceiver power OFF, press and hold the **Side 1** key while turning the transceiver power ON.
- 3 Continue to hold the **Side 1** key until a beep sounds.
  - The LED indicator lights orange.
  - When the **Side 1** key is released, the transceiver will announce the VOX Gain level.
- 4 Press the **Side 1** key to select the VOX Gain level of the radio.
  - Press the **Side 2** key to enable or disable the VOX function for the current channel (you can change this setting for each channel by selecting a channel with the **Channel** selector). When turned ON, a beep sounds. When turned OFF, a double beep sounds.
- 5 Press the **PTT** switch to save the setting.
  - A beep will sound.
  - The transceiver announces the new VOX Gain level.
- 6 Turn the transceiver power OFF and the ON again to activate VOX.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
  - ◆ VOX Gain level 1 is the least sensitive and VOX Gain level is 10 is the most sensitive.
  - ◆ If a headset is connected to the transceiver while the VOX function is switched ON and the VOX Gain level is configured to a higher, more sensitive level, louder received signals may cause the transceiver to start transmission.
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## BACKGROUND OPERATIONS

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### TIME-OUT TIMER (TOT)

The Time-out Timer prevents callers from using a channel for an extended duration. If you continuously transmit for the duration programmed by your dealer (default is 1 minute), transmission will stop and an alert tone will sound. To stop the tone, release the **PTT** switch.

### BATTERY SAVER

When activated by your dealer, the Battery Saver function decreases the amount of power used after no signal is present and no operations are being performed for 5 seconds. When a signal is received or an operation is performed, Battery Saver turns off.

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**Note:** While the Battery Saver is operating, the LED may flash green when receiving a QT/DQT signal which does not match the QT/DQT tone/code set up in your transceiver.

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### LOW BATTERY WARNING

While operating the transceiver, the Low Battery Warning sounds an alert tone every 30 seconds and the LED indicator blinks red when the battery needs recharged or replaced.

### BUSY CHANNEL LOCKOUT (BCL)

When activated, BCL prevents you from interfering on a channel that is already in use. Pressing the **PTT** switch will cause an alert tone to sound and the transceiver will not transmit. Release the **PTT** switch to stop the tone.

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**Note:** Ask your dealer for an explanation on how BCL functions when using QT, DQT, DTMF, or FleetSync signaling.

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## SIGNALING

### ■ QT/ DQT

The Encoder/Decoder function uses QT/ DQT to segregate talk groups, so users only hear calls from their own group.

### ■ DTMF

A DTMF PTT ID is included for dispatch operations or simple remote control applications.

The DTMF decode capabilities include Selective Call ID, Transpond with ID, and “Wild Card” Group Calling.

### ■ FleetSync

Utilizing JVC KENWOOD’s FleetSync digital signaling protocol, this transceiver has PTT ID and Selective Calling capabilities for managed dispatch operations.

For hazardous/hostile duty environments, a **Side1** or **Side 2** key can be programmed for Emergency status to alert the dispatcher and/or operator in distress.

### ■ MDC-1200

The following features are available with the built-in MDC signaling: PTT ID Encode, Emergency Encode, Stun/ Revive Decode, and Radio Check Decode.

### ■ STUN

When a transceiver is lost or stolen (for example), your dispatcher can transmit a stun code to that transceiver to disable transmission or transmission/reception. Stun can be cancelled with a stun reset code.

## BEGINNING/ END OF TRANSMISSION SIGNAL

The Beginning/ End of Transmission identification signals are used to access some repeaters and telephone systems. The Beginning of Transmission ID signal is transmitted when you press the **PTT** switch and the End of Transmission ID signal is transmitted when you release the **PTT** switch.

# KENWOOD

## 使用説明書



VHF 調頻對講機

# TK-2407

UHF 調頻對講機

# TK-3407

JVCKENWOOD Corporation

# 致謝

謝謝您惠購 KENWOOD 對講機。

## 使用者須知

- ◆ 政府法令禁止在政府管轄地區範圍內未經許可進行無線電發射機的操作。
- ◆ 非法操作將受到罰款和/或拘留的處罰。
- ◆ 維修僅可由專業人員進行。

**安全性：** 使用者應瞭解和認識使用對講機的一般危險性。

### 固件版權

JVC KENWOOD Corporation保留KENWOOD產品存儲器內嵌固件的產權和版權的所有權。

## 注意事項

- 對講機和電池組潮濕時，請不要充電。
- 確保對講機和電池組之間沒有放置任何金屬物品。
- 請不要使用非 **KENWOOD** 指定的選購配件。
- 如果壓鑄機殼或其他對講機部件損壞，請不要觸摸受損部件。
- 如果頭戴式耳機或耳機連接到對講機，則請調低對講機音量。關閉靜噪時，請注意音量。
- 靠近可能纏住電纜的機器時，請不要將麥克風電纜纏繞在脖子上。
- 請不要將對講機放置在不平穩的表面上。
- 確保天線頂端不會碰到眼睛。
- 對講機用於對講多個小時後，輻射器和機殼將會變熱。更換電池時，請不要觸摸這些部位。
- 請不要將對講機浸入水中。
- 務必關閉對講機電源後方可安裝選購附件。
- 充電器是用於中斷交流電源線的裝置。交流電插頭必須靠近設備並且容易插拔。



### 警告

在下列情況下，請關閉對講機電源：

- 易爆環境 (易燃氣體、粉塵、金屬炸藥及粒狀炸藥等)。
- 在加油或者停車於加油站時。
- 靠近爆炸或爆破現場。
- 在飛行器中。(對講機的所有操作必須遵循空服員提供的指示和規定。)
- 黏貼了有關無線電設備 (包括但不限於醫療設備) 的使用限制或警告的地方。
- 在使用心律調節器系統的人員附近。



### 注意

- 不論有任何理由都不可拆卸或改裝對講機。
- 車輛正在行進時，請不要將對講機放在氣囊裝置上或附近。氣囊充氣時，對講機可能被彈出，撞擊駕駛員或乘客。
- 觸摸天線端子或天線蓋露出任何金屬部件時，請不要發射。否則，可能導致高頻灼傷。
- 如果發現從對講機發出異常氣味或者冒煙，應立即關閉對講機電源，然後從對講機中取出電池組，並且與當地 **KENWOOD** 經銷商聯繫。
- 駕車時使用對講機可能違反交通法規。請查看並遵守當地的交通法規。
- 請不要將對講機暴露於極冷或極熱的環境中。
- 由於金屬物品可能使電池端子短路，請不要隨電池組 (或電池盒) 一起攜帶。
- 在空氣乾燥的地區操作對講機時，容易產生電荷 (靜電)。在此類環境中使用耳機附件，對講機可能通過耳機對您的耳朵產生電擊。為了避免電擊，建議在此類環境中僅使用揚聲器/麥克風。

## 連接電池組的有關資訊：

此電池組含有諸如有機溶劑之類的易燃物。操作不當可能導致電池組爆裂並產生火焰和高溫，或者引起電池變質和其他形式的損壞。請遵守下列注意事項：



### 危險

- **請不要對電池組進行拆分和重組！**

電池組有安全保障功能和保護電路，以避免發生危險。如果這些功能和電路嚴重受損，電池組可能會過熱、冒煙、爆裂或突然起火。

- **請不要將電池組短路！**

請不要用任何金屬(如迴紋針、鐵絲等)連接電池組的正負兩極。請不要用裝有金屬物品(如鐵絲、項鏈、髮夾等)的容器攜帶或儲存電池組。如果電池組發生短路，將會產生過大電流，使得電池組過熱、冒煙、爆裂或突然起火。也會導致金屬部件過熱。

- **請不要焚燒電池組或對電池組加熱！**

如果絕緣體被熔化，排氣孔或安全保障功能被損壞，或者電解液被點燃，電池組可能會過熱、冒煙、爆裂或突然起火。

- **請不要在火焰、火爐和其他加熱器具的附近(溫度超過 80°C 的地方)使用或放置電池組！**

如果電池組內部的聚合體隔離物在高溫下熔化，則可能發生電池組內部個別電池短路，電池組可能會過熱、冒煙、爆裂或突然起火。

- **請不要將電池組浸入水中和用其他方法將它弄濕！**

如果電池組保護電路受損，則電池組可能產生過高的充電電流(或電壓)，從而產生異常化學反應。電池組可能會過熱、冒煙、爆裂或突然起火。

- **請不要在火焰附近對電池組充電，不要將電池組置於陽光直射之下！**

如果電池組保護電路受損，則電池組可能產生過高的充電電流(或電壓)，從而產生異常化學反應。電池組可能會過熱、冒煙、爆裂或突然起火。





## 危險

- **請一定要使用指定的充電器並請遵照充電操作的要求！**  
如果不是在規定條件下（超過規定值的高溫、過高的電壓或電流和使用改動過的充電器），則可能造成過度充電或發生異常化學反應。電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要將電池組刺穿，不要用器械敲打電池組，不要踩電池組！**  
這樣會使電池組破裂或變形而造成短路。電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要振動或摔擲電池組！**  
這種衝擊可能導致電池組洩漏、過熱、冒煙、爆裂和/或突然起火。如果電池組保護電路受損，則電池組可能產生異常的充電電流（或電壓），從而產生異常化學反應。電池組可能會過熱、冒煙、爆裂或突然起火。
- **不要使用有任何損壞的電池組！**  
電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要直接焊接到電池組上！**  
如果絕緣體被熔化，排氣孔或安全保障功能被損壞，則電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要將電池電極（和接線端）接反方向！**  
如果充電時將電池電極接反方向，則可能發生異常化學反應。在某些情況下，可能會釋放意想不到的大電流。電池組可能會過熱、冒煙、爆裂或突然起火。
- **不要將電池組反方向充電或反方向連接！**  
電池組有正極和負極。如果電池組未能順利地與充電器或操作裝置連接，請不要用力強行連接。請檢查電池組的電極是否接反方向。如果電池組與充電器反方向連接，則被反方向充電並可能發生異常化學反應。電池組可能會過熱、冒煙、爆裂或突然起火。
- **不要觸摸破裂並有洩漏的電池組！**  
如果電池組的電解液進入眼睛，馬上用清水沖洗眼睛，不要揉搓眼睛。立即去醫院。如果不進行處理，可能會造成眼睛損傷。



## 警告

- **請不要對電池組充電時間過長！**  
如果對電池組的充電在規定時間內仍未完成，請停止充電。電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要將電池組放入微波爐和高壓容器！**  
電池組可能會過熱、冒煙、爆裂或突然起火。
- **請不要讓破裂並有洩漏的電池組靠近火源！**  
如果電池組洩漏（或發出刺鼻的氣味），立刻將其遠離易燃區域。電池組洩漏的電解液容易起火，可能會導致電池組冒煙或突然起火。
- **請不要使用異常電池組！**  
如果電池組發出刺鼻的氣味，顏色看上去不同，變形或者因任何原因而表現異常，請將電池組從充電器或操作裝置上取下而不要使用。電池組可能會過熱、冒煙、爆裂或突然起火。

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## 開箱和裝置檢查

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請小心從包裝箱中取出對講機。如果發現以下所列的任何物品遺失或損壞，請立即向送貨人提交索賠書。

### 配備附件

- 揚聲器/麥克風插孔蓋 .....
- 揚聲器/麥克風鎖定架 .....
- 皮帶夾 (KBH-10) .....
- 螺絲 (M3 x 8 mm) .....
- 頻道截止環 .....
- 使用說明書 .....

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注：參見“準備工作”以瞭解附件安裝的說明。

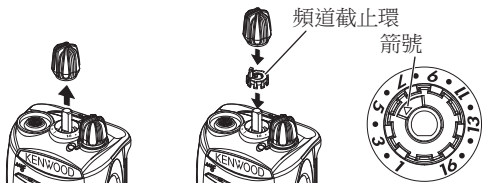
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## 準備工作

### 安裝頻道截止環

對於頻道數目少於 16 的對講機，請插入頻道截止環。

- 1 設定頻道選擇器至頻道 1，然後從對講機拉出頻道選擇器旋鈕。
  - 如果頻道選擇器未在頻道 1，表示頻道選擇器旋鈕安裝不正確，可能無法變更頻道。
- 2 插入頻道截止環。
- 3 設定頻道截止環的箭號至對講機的最大頻道編號。
  - 2，4，6，8，10，12和14信道可設定頻道截止環位置。
- 4 重新插入頻道選擇器旋鈕。



### 安裝天線 (選購件)



拿住天線底座，按順時針方向將天線旋入對講機頂部的接頭中，直到旋緊為止。

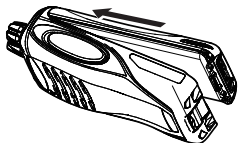
**注：**天線既非把手、鑰匙圈，也非揚聲器/麥克風安裝點。以此類方式使用天線可能導致其損壞並降低對講機性能。

## 安裝/取出電池組 (選購件)

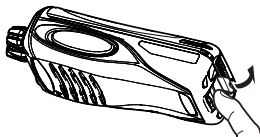


注意

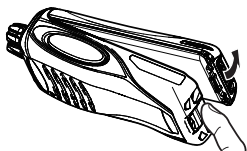
- ◆ 請不要將電池兩端短路和焚燒電池。
- ◆ 切勿試圖取下電池組的外殼。



1 將電池組與對講機背面對齊，然後用力按電池組和對講機，直到對講機底座上的釋放栓鎖定到位。

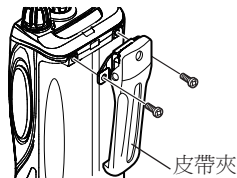


2 如需取出電池組，請提起對講機底座上的安全栓，然後按安全栓下面的釋放栓。



3 在按住釋放栓的同時，將電池組拉出對講機。

## 安裝皮帶夾



如有必要，請使用兩顆隨帶的 M3 x 8 mm 螺絲安裝皮帶夾。

**注：**如果不安裝皮帶夾，在連續發射或在高溫環境中作業時，其安裝位置可能會變熱。



注意

在安裝皮帶夾時不要使用專用於防止螺絲鬆動的黏膠，否則可能會損壞對講機。這些黏膠中含有丙烯酸酯，可能導致對講機的背面板裂縫。

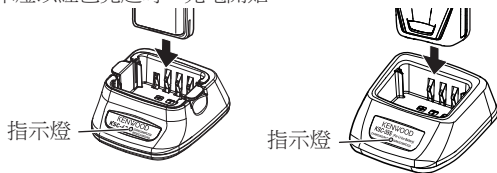
## 對電池組充電 (選購的電池充電器)

**注意：**在將對講機插入充電器之前，務必關閉裝有電池組的對講機電源。

- 1 將交流變壓器電纜連接到充電器背面的插孔上。
- 2 將交流變壓器連接到交流電插座。
- 3 使電池座與所要充電的電池組類型相符，以便在插入電池座時可在充電器底端看到電池類型的名稱。將電池座插入充電器後，按下鎖定片使其固定就位。<僅限於 KSC-43>



- 要取下電池座，請同時按壓兩個鎖定片，然後將電池座從充電器拉出。<僅限於 KSC-43>
- 4 將電池組或裝有電池組的對講機滑入充電器的充電槽。
    - 確保電池組的金屬接點與充電器接點緊密接觸。
    - 指示燈以紅色亮起時，充電開始。



- 5 充電完成時，指示燈將變成綠色。從充電器的充電槽中取出電池組或對講機。

  - 電池組充電過程約需 3 個小時。
  - 長時間不使用充電器時，請從交流電插座上拔下交流變壓器的連接線。

---

## 注：

- ◆ 如果指示燈以紅色閃爍，則表示電池組損壞或電池組接點未與充電器接點正確接觸。
  - ◆ 當指示燈閃爍綠色和橙色時，表示電池組未滿足充電開始溫度。請從充電器上取下電池組，稍等片刻，待其達到正常溫度後再重新開始充電。
  - ◆ 在充電過程中，周圍溫度應該在 5°C 與 40°C 之間。在超出此範圍的溫度下充電，可能導致電池無法充滿。
  - ◆ 在對電池組正確充滿電的情況下，如果其操作時間很短，則表示電池組使用壽命已盡。此時請更換電池組。
- 

## 安裝揚聲器/麥克風插孔蓋

不使用選購的揚聲器/麥克風時，請蓋上揚聲器/麥克風插孔蓋。

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注：為使對講機防水，必須用隨帶的蓋子蓋住揚聲器/麥克風插孔。

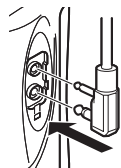
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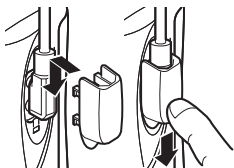
- 1 將此蓋放置在這些插孔上，使鎖定定位片插入對講機凹槽中。
- 2 蓋子放置到位時，將其推入對講機底部，直到蓋子上的定位片卡嗒一聲到位。
  - 如要取下蓋子，適當用手指按住蓋子頂部，同時將 2mm 或更小的平口螺絲起子插入蓋子底部的下方。慢慢地將螺絲起子滑入，直到螺絲起子尖端碰到蓋子內部的定位片，然後輕輕地將蓋子撬起（螺絲起子的把手從對講機移開），取下蓋子。

## 安裝選購的揚聲器/麥克風 (或頭戴式耳機)

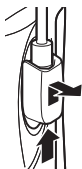
注：使用揚聲器/麥克風或頭戴式耳機時，對講機並非完全防水。



- 1 將揚聲器/麥克風(或頭戴式耳機)風插頭插入對講機的揚聲器/麥克風插孔。



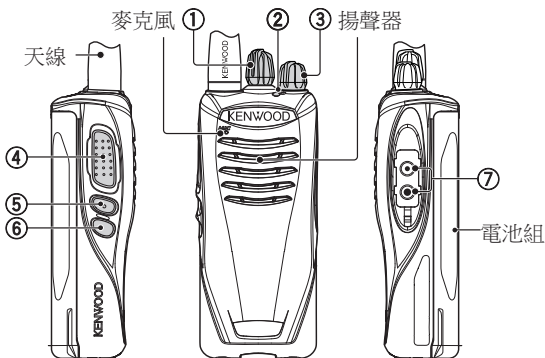
- 2 將鎖定架放置在揚聲器/麥克風(或頭戴式耳機)插頭上，使鎖定定位片插入對講機凹槽中。
  - 下壓鎖簧床，將其滑動到位。



- 3 鎖定架放置到位時，將其推入對講機底部，直到鎖定架上的定位片卡嗒一聲到位。
  - 如需取下鎖定架，請從底座提起鎖定架。



## 定向



### ① 頻道選擇器

旋轉此鈕可變更工作頻道。

- **頻道播報：**在變更頻道時，對講機將會播報新選擇的頻道編號。(此功能可由當地經銷商關閉。)

### ② LED 指示燈

有關 LED 指示燈的狀態，請參閱第 11 頁。

### ③ 電源開關/音量控制旋鈕

按順時針方向轉動它，打開對講機。要關閉對講機時，按逆時針方向旋轉直至聽到卡嗒聲。繼續轉動來調整音量。

### ④ PTT (按下通話) 開關

按住此開關，然後在麥克風鄰近區域講話可進行發射。

### ⑤ 側端 1 鍵 {請參閱第 8 頁}

按下此鍵可啟動其可程式編輯功能。

### ⑥ 側端 2 鍵 {請參閱第 8 頁}

按下此鍵可啟動其可程式編輯功能。

### ⑦ 揚聲器/麥克風插孔

將揚聲器/麥克風或頭戴式耳機插頭插入此插孔。

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## 可編程輔助功能

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當地經銷商可以設定**側端 1** 和**側端 2** 鍵，使其分別具有以下其中一項功能。

**注：**按住某鍵以啟動相應功能所需之時間取決於經銷商的設定。當地經銷商可能已將某些鍵設定為按住一段時間後，而非按一下。有關須按住方可啟動其功能的按鍵詳情，請詢問當地經銷商。

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### ■ 無

未設定任何功能。

### ■ 2-音

按下此鍵，即可發射 2-音代碼。

### ■ 自動呼叫

DTMF 自動呼叫可讓您與另一方進行個人通話。

### ■ 呼叫示警

呼叫示警音用於提示通話方，您正在呼叫。呼叫時，首先按住此鍵。

- 按住此鍵時，將響起呼叫示警音。放開此鍵結束呼叫示警音，然後按住 **PTT** 開關並對著麥克風講話進行發射。

### ■ 緊急

按下並按住此鍵可進入緊急模式。

### ■ 鍵鎖

按下此鍵，即可鎖定/解除鎖定對講機按鍵。如果沒有狀態存儲器，關閉對講機電源再開啟時，鍵鎖功能將取消。

### ■ 帶狀態存儲器的鍵鎖

其操作與鍵鎖基本相同，區別之處在於關閉然後再開啟對講機電源時，按鍵仍會保持鎖定。

## ■ 單獨工作者

單獨工作者模式是一個內建於對講機的安全功能。如果在預設時段內未操作對講機，對講機便會發出提示音並自動進入緊急操作狀態。

按下此鍵可切換單獨工作者功能的開啟/關閉狀態。

## ■ 低發射功率

通過編程可將每個頻道的發射功率設定為高或低。在高發射功率頻道上，按下此鍵可將發射功率變更為低功率（您無法變更低發射功率頻道以使用高功率）。

## ■ 監聽

按下此鍵，即可關閉信號（QT/DQT、FleetSync 信號等）。再次按下此鍵，則返回正常操作。

## ■ 暫態監聽

按住此鍵，即可關閉信號（QT/DQT、FleetSync 信號等）。放開此鍵，返回正常操作。

## ■ 尋呼

按下此鍵，即可向 ID 清單中的 ID 發送 FleetSync 尋呼。

優先頻道選擇

如果掃描優先類型為「使用者可選音調」，在正常模式下按下此鍵可將目前頻道設定為優先頻道。

## ■ 優先頻道選擇

如果掃描優先類型為「使用者可選音調」，在正常模式下按下此鍵可將目前頻道設定為優先頻道。

## ■ 掃描

按下此鍵，即可開始掃描對講機頻道。

## ■ 掃描暫時取消

掃描暫停於不需要的頻道時，您可以按下或按住此鍵，以將此頻道從掃描序列中移除。

## ■ 單獨通話

單獨通話功能可使您進行完全私密的通話。如果開啟此功能，則收聽您所使用的頻道的任何電臺都將無法理解您的通話內容。按下此鍵可切換單獨通話功能的開啟/關閉狀態。

## ■ 發送 GPS 數據

在安裝 GPS 裝置的情況下按下此鍵，即可將您的位置資料發送至基地電臺。

## ■ 揚聲器開關

使用此鍵可在外部揚聲器（耳機揚聲器）與內部揚聲器（對講機揚聲器）之間切換。按下此鍵可啟動外部揚聲器。再次按下此鍵將予關閉。

## ■ 靜噪取消

按下此鍵，即可聽到背景噪音。再次按下此鍵，則返回正常操作。

## ■ 暫態靜噪取消

按住此鍵可聽到背景噪音。放開此鍵，返回正常操作。

## ■ 狀態 1/狀態 2

按下此鍵，即可發送狀態資訊。

## ■ 離網通信

離網通信用於直接與其他對講機通訊，而無須使用轉發器。按下此鍵，切換打開或關閉離網通信。

## 基本操作

- 1 順時針轉動**電源**開關/**音量**控制旋鈕可開啟對講機電源。
  - 提示音響起 (如果當地經銷商啟用此功能)。
- 2 按下設定為具有**[監聽]**或**[打開靜噪]**功能的按鍵就可聽到周圍噪音，從而可通過旋轉**電源**開關/**音量**控制旋鈕來調整音量。
- 3 旋轉**頻道**選擇器可選擇所需的頻道。
  - 在接收到適當的信號後，您即可聽到揚聲器的聲音。
- 4 要進行通話，請按下並按住 **PTT** 開關，然後用平常的聲音在麥克風鄰近區域講話。
  - 使麥克風與您的嘴唇保持 3 至 4 公分的距離。
- 5 放開 **PTT** 開關進行接收。

**注：**當電池組電壓變得很低時，發射將停止並響起示警音。

### LED 指示燈狀態

指示燈顏色	含義
紅色亮起	發射
綠色亮起	接收呼叫
紅色閃爍	發射時的電池電量不足
綠色閃爍	正在掃描
橙色閃爍/ 藍色 *	正在接收編碼呼叫 (QT/DQT、FleetSync 信號等)
紅色/橙色閃爍	選定頻道未通過編程開通，不能使用它。

\* 當地經銷商可以為 FleetSync、DTMF 或 2-音操作設定 LED 是閃爍橙色，亦或閃爍藍色。

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## 聲控發射 (VOX)

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聲控功能可使您不必用手操作就可使用對講機。此功能必須先由當地經銷商啟動，並且僅在您使用支援的耳機時才可使用。

要開啟聲控功能並設定 VOX 等級，請按照下列步驟進行：

- 1 將頭戴式耳機與對講機連接。
  - 如果不將頭戴式耳機與對講機附帶的接線端子連接則不能開啟聲控功能。
- 2 在對講機電源關閉的情況下，按下並按住**側端 1** 鍵，同時開啟對講機的電源。
- 3 繼續按住**側端 1** 鍵，直至發出提示音。
  - LED 指示燈以橙色亮起。
  - 放開**側端 1** 鍵時，對講機將播報 VOX 增益等級。
- 4 按下**側端 1** 鍵，選擇無線電的 VOX 增益等級。
  - 按下**側端 2** 鍵可開啟或禁止目前頻道的 VOX 功能 (透過以**頻道選擇器**選擇頻道的方式可變更此設定)。開啟時，將響起提示音。關閉時，將響起雙提示音。
- 5 按下 PTT 開關可儲存設定。
  - 將發出提示音。
  - 對講機將播報新的 VOX 增益等級。
- 6 關閉對講機的電源然後再開啟，即可啟動 VOX。

注：

- ◆ 如果在 20 秒內未執行任何動作，對講機便會自動返回正常操作。
  - ◆ VOX 增益等級 1 為最低靈敏度，VOX 增益等級 10 為最高靈敏度。
  - ◆ 在開啟聲控功能並將 VOX 增益設定為比較高、比較靈敏的等級時，如果將耳機與對講機連接，則經耳機放大的接收信號可能引起對講機開始發射。
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## 周圍雜訊操作

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### 超時計時器 (TOT)

超時計時器防止呼叫方超時使用頻道。如果您連續發射由當地經銷商編程設定的時間 (默認為 1 分鐘)，發射將停止並發出嘟嘟的示警音。請放開 PTT 開關，使示警音停止。

### 電池省電

如果當地經銷商啟動了電池省電功能，此功能將在沒有信號或 5 秒鐘沒有進行操作時降低消耗的電力。當收到信號後或者進行了操作，將關閉電池省電功能。

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**注：**電池省電功能工作時，當接收到與您對講機中設定的 QT/DQT 音頻/代碼不一致的 QT/DQT 信號時，LED 指示燈會以綠色閃爍。

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### 電量不足示警

在使用對講機時，如果電池需要充電或更換，電量不足示警會每隔 30 秒發出示警音並且 LED 指示燈以紅色閃爍。

### 使用中頻道鎖定 (BCL)

啟動此功能，BCL 可防止您干擾正在使用的頻道。按下 PTT 開關將導致發出示警音並且對講機不進行發射。請放開 PTT 開關，使示警音停止。

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**注：**在使用 QT、DQT、DTMF 或 FleetSync 信號時如何使用 BCL 功能，有關情況請詢問當地經銷商。

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## 信號

### ■ QT/ DQT

編碼器/解碼器功能使用 QT/DQT 來隔離群體通話，因此使用者只能聽到他們所在群體中的通話。

### ■ DTMF

隨帶的 DTMF PTT ID 用於派送操作或簡單的遙控器應用程式。

DTMF 解碼功能包含選擇呼叫 ID、帶 ID 的發射回應、“Wild Card” 群體呼叫以及無線電死機。

### ■ FleetSync

此對講機使用 JVC KENWOOD 的 FleetSync 數位信號通訊協定，具有用於管理派送操作的 PTT ID 和選擇呼叫功能。對於危險/危害性環境，可以將側端 1 或側端 2 鍵設定為緊急狀態，以便在危難之時向派送者和/或使用者示警。

### ■ MDC-1200

以下功能可用於內建 MDC 信號：PTT ID 編碼、緊急編碼、死機/解除死機解碼以及無線電檢查解碼。

### ■ 死機

當對講機丟失或被偷時（假設），您的派送者可以向該對講機發射死機代碼以禁止發射或發射/接收。使用死機重設代碼可以取消死機。

## 發射開始/發射結束信號

發射開始/發射結束識別信號用於存取某些轉發器和電話系統。當您按下 PTT 開關時，將發射發射開始 ID 信號，當您放開 PTT 開關時，將發射發射結束 ID 信號。