

# KENWOOD

## INSTRUCTION MANUAL



**ProTalk**

UHF FM TRANSCEIVER

# TK-3501

JVCKENWOOD Corporation

B62-2606-00/01

## THANK YOU

We are grateful you have chosen **KENWOOD** for your PMR 446 applications.

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This Instruction manual covers only the basic operations of your PMR446 (Private Mobile Radio). Ask your dealer for information on any customized features they may have added to your radio.

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## OPERATING CONDITIONS

Open locations (no obstructions) : Up to 9.0 km

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### Note:

- ◆ The above range is based on field testing and may vary with your operating conditions and individual transceiver.
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## NOTICES TO THE USER

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.

This equipment complies with the essential requirements of Directive 1999/5/EC.

### Information on Disposal of Old Electrical and Electronic Equipment and Batteries (applicable for countries that have adopted separate waste collection systems)



Products and batteries with the symbol (crossed-out wheeled bin) cannot be disposed as household waste.

Old electrical and electronic equipment and batteries should be recycled at a facility capable of handling these items and their waste byproducts.



Contact your local authority for details in locating a recycle facility nearest to you.



Proper recycling and waste disposal will help conserve resources whilst preventing detrimental effects on our health and the environment.

Notice: The sign "Pb" below the symbol for batteries indicates that this battery contains lead.

### 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 (flammable 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 aircraft. (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 with metal objects, as they may short the battery terminals.
- Danger of explosion if the battery is incorrectly replaced; replace only with the same type.
- When attaching a commercial strap to the transceiver, ensure that the strap is durable. In addition, do not swing the transceiver around by the strap; you may inadvertently strike and injure another person with the transceiver.
- If a commercially available neck strap is used, take care not to let the strap get caught on nearby machine.
- 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 the 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-necklaces 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.
- **Avoid immersing the battery in water or getting it wet by other means!**  
If the battery becomes wet, wipe it off with a dry towel before use. 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**

- **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.
- **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.

**DANGER**

- **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.
- **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

- Battery charger/ AC adapter (KSC-35S)..... 1
- Li-ion Battery pack (KNB-63L)..... 1
- Cap..... 1
- Belt clip..... 1
- Quick Reference Guide..... 1

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#### Note:

- ◆ Refer to “PREPARATION” {p.2} for accessory installation instructions.
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## PREPARATION

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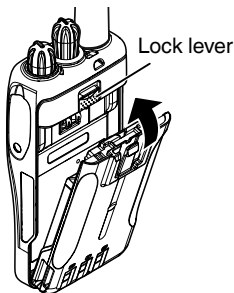
### INSTALLING/ REMOVING THE BATTERY PACK



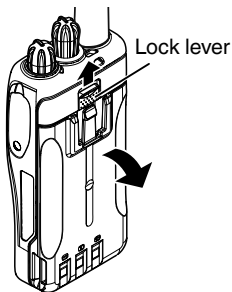
#### CAUTION

- ◆ Do not short the battery terminals or dispose of the battery by fire.
- ◆ Never attempt to remove the casing from the battery pack.
- ◆ Install the battery pack after cleaning the battery pack contacts and the transceiver terminals.

- 1 To install the battery pack, align the base of the battery pack with the transceiver, then press the battery pack into place until the lock lever is secure.

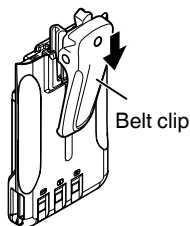


- 2 To remove the battery pack, push the lock lever up, then pull the battery pack away from the transceiver.

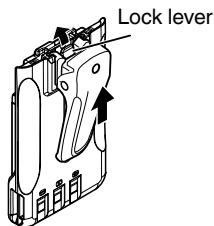


## INSTALLING THE BELT CLIP

- 1 Remove the battery pack. {p. 2}
- 2 To install the belt clip, align the guides of the belt clip with the grooves on the rear of the battery pack, then slide the belt clip into place until the lock lever is secure.



- 3 To remove the belt clip, push the lock lever towards the transceiver while sliding the belt clip up.



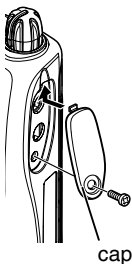
## INSTALLING THE CAP OVER THE SPEAKER/ MICROPHONE JACKS

If you are not using a speaker/ microphone or Headset, install the cap over the speaker/ microphone jacks using the supplied M3 x 6 mm screws.

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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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## CHARGING THE BATTERY PACK

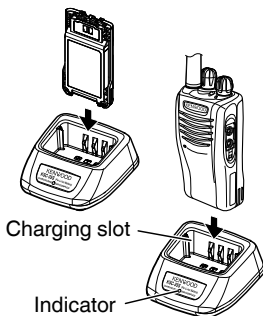
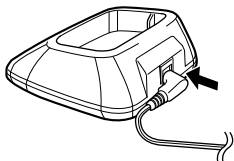
The battery pack is not charged at the factory; charge it before use.

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

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- 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 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.
- 4 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 an abnormality occurs during charging, the indicator performs as follows:
    - Blinks Red:** The battery pack is either defective or the battery pack contacts are not properly mated with those of the charger.
    - Alternates Flashing 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 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.
  - ◆ While operating the transceiver using a Li-ion battery pack in areas of an ambient temperature of -10°C and lower, operating time may be shortened.
  - ◆ Attention should be drawn to the environmental aspects of battery pack disposal.
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## BATTERY LIFE

The operating times listed in the table below are measured under the following cyclic conditions:

Calculated using 5% transmit time, 5% receive time, and 90% standby time.

Battery Type	Operating Time/ Hours (Approx.)	
	Battery Saver On	Battery Saver Off
KNB-63L	20 h	14 h
KNB-65L	26 h	18 h

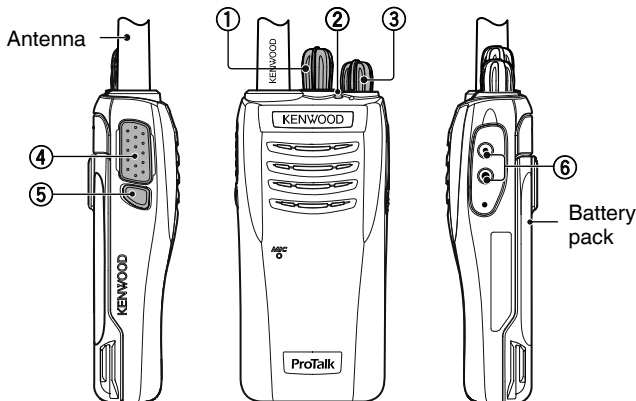
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# ORIENTATION

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## ① Channel selector

Rotate to change the operating channel.

- To change the operating frequency or QT/DQT settings of a channel, refer to “CHANNEL SETUP MODE” {p.11}.
- If enabled by your dealer, setting the Channel selector to the “S” position begins Scan. Refer to Scan for details on how Scan operates. {p.17}



## ② LED indicator

Refer to the LED indicator status. {p.7}

## ③ Power switch/ Volume control

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

## ④ PTT (Push to Talk) switch

Press and hold, then speak into the microphone to transmit.

### ⑤ Side key

Press to activate its programmable function. The default press setting is **[Squelch Off Momentary]**. The default hold setting is None (no function).

- Refer to “PROGRAMMABLE FUNCTIONS” {p.16}.

### ⑥ Speaker/ microphone jacks

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

## LED Indicator Status

Indicator Color	Meaning
Lights red	Transmitting
Lights green	Receiving a call
Blinks red	Battery power is low
Blinks green	Scanning
Blinks red/orange	The selected channel has not been programmed and cannot be used.

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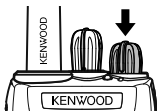
## BASIC OPERATIONS

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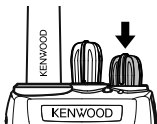
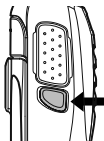
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- 1 Turn the **Power** switch/ **Volume** control clockwise to switch the transceiver power ON.

- A beep sounds if enabled by your dealer.

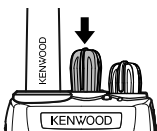


- 2 Press the key programmed with [**Monitor/ Monitor Momentary**] or [**Squelch Off/ Squelch Off Momentary**] (**Side** key default) to hear background noise, then rotate the **Power** switch/ **Volume** control to adjust the volume.



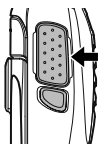
- 3 Rotate the Channel selector to select your desired channel. Refer to the channel list. {p.14}

- When you receive an appropriate signal, you will hear audio from the speaker.
- If enabled by your dealer, setting the Channel selector to the “S” position begins Scan. Refer to Scan for details on how Scan operates. {p.17}



- 4 To make a call, press and hold the **PTT** switch, then speak into the microphone using your normal speaking voice.

- Hold the microphone approximately 3 to 4 cm (1.5 inches) 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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## VOICE OPERATED TRANSMISSION (VOX)

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If enabled by your dealer, VOX operation allows you to transmit hands-free. VOX 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** key while turning the transceiver power ON.
  - Continue to hold the **Side** key until the LED blinks green and red, and a beep sounds.
- 3 Rotate the **Channel** selector to set the VOX Gain level.
  - The VOX Gain level can be adjusted from level 1 to 10 and OFF. Channel numbers 1 to 10 represent VOX Gain levels 1 to 10. Channel numbers 11 to S set the VOX Gain to OFF.
  - To turn the VOX function off, set the VOX Gain level to OFF.
- 4 Press and hold the **Side** key for 2 seconds to save the setting.
  - A beep will sound.
  - To test the setting, speak into the microphone in your normal voice. The LED will light orange when the VOX function is operating.
- 5 Turn the transceiver power OFF and then ON again to activate VOX.

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### Note:

- ◆ 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.
  - ◆ The VOX Gain Level can only be adjusted if it is activated by your dealer.
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## BACKGROUND OPERATIONS

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### TIME-OUT TIMER (TOT)

The Time-out Timer prevent callers from using a channel for an extended duration. If you continuously transmit for the duration programmed by your dealer (default is 60 seconds), 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

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 or DQT signaling.

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### PROCEED TONE

If enabled by your dealer, when transmitting by pressing the **PTT** switch, the Proceed tone will sound.

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## CHANNEL SETUP MODE

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This transceiver allows you to reprogram each of the channels with different frequencies and QT (Quiet Talk)/ DQT (Digital Quiet Talk) settings. The table below lists the default channel settings.

Channel Number	Channel Setup Number	Frequency (MHz)	Tone Number	QT/DQT Setting
1	1	446.00625	10	94.8 Hz
2	8	446.09375	08	88.5 Hz
3	3	446.03125	13	103.5 Hz
4	6	446.06875	05	79.7 Hz
5	4	446.04375	17	118.8 Hz
6	2	446.01875	18	123.0 Hz
7	7	446.08125	19	127.3 Hz
8	5	446.05625	07	85.4 Hz
9	1	446.00625	14	107.2 Hz
10	8	446.09375	15	110.9 Hz
11	3	446.03125	16	114.8 Hz
12	6	446.06875	06	82.5 Hz
13	4	446.04375	27	D132N
14	2	446.01875	28	D155N
15	5	446.05625	29	D134N
16	7	446.08125	30	D243N

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### Note:

- ◆ You must first select an operating frequency for a channel before you can select a QT/ DQT setting for that same channel.
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## CHANNEL OPERATING FREQUENCIES

To change the operating frequency of a channel:

- 1 Select your desired channel using the **Channel** selector.
- 2 With the transceiver power OFF, press and hold the **PTT** switch while turning the transceiver power ON.
  - Continue to hold the **PTT** switch until the LED lights orange (approximately 2 seconds).
- 3 Release the **PTT** switch.
  - The transceiver emits a morse code of the current channel setting. Refer to the table below for the morse code output.
- 4 Press the **Side** key to change the Channel Setup number, to select the new channel frequency.
  - Channel Setup numbers and their corresponding operating frequencies are provided in the table. {p.13}
  - To set the 0 (OFF), press the **Side** Key for more than 2 seconds.
  - After 1 second, the transceiver will emit a morse code of the current Channel Setup setting.
- 5 Press the **PTT** switch to save the setting.
  - The LED will blink red and a beep will sound.
  - The transceiver will automatically return to normal operation when no action is performed for approximately 6 seconds.

Setting Number	Morse Code	Setting Number	Morse Code
0	—	5	•••••
1	•—	6	—••••
2	••—	7	—•••
3	•••—	8	—••
4	••••—	9	—•

<b>Channel Setup Number</b>	<b>Operating Frequency</b>	<b>Channel Setup Number</b>	<b>Operating Frequency</b>
<b>0</b>	OFF		
<b>1</b>	446.00625 MHz	<b>5</b>	446.05625 MHz
<b>2</b>	446.01875 MHz	<b>6</b>	446.06875 MHz
<b>3</b>	446.03125 MHz	<b>7</b>	446.08125 MHz
<b>4</b>	446.04375 MHz	<b>8</b>	446.09375 MHz

## QT/ DQT SETTINGS

Quiet Talk (QT) and Digital Quiet Talk (DQT) are functions that reject undesired signals on your channel. You will hear a call only when you receive a signal that contains a matching QT tone or DQT code. If a call containing a different tone or code is received, squelch will not open and you will not hear the call. Likewise, when transmitting using QT or DQT, the receiving station must have a matching tone or code to hear your call.

Be aware that other parties can still hear your calls if they set up their transceiver with the same tone or code.

The default QT/DQT settings for each channel are provided in the table. {p.11}

To change the QT/DQT settings of a channel:

- 1 Select your desired channel using the **Channel** selector.
- 2 With the transceiver power OFF, press and hold the **Side** key while turning the transceiver power ON.
  - Continue to hold the **Side** key until the LED lights orange (approximately 2 seconds).
- 3 Release the **Side** key.
  - The transceiver emits a morse code of the current channel setting (refer to the table for the morse code output). {p.12}
- 4 Press the **Side** key to change the 10's digit of the Tone number (0 ~ 3).
  - Tone numbers and their corresponding QT tones/ DQT codes are provided in the table below.
  - After 1 second, the transceiver will emit a morse code of the current 10's digit Tone number setting.
- 5 Press the **Side** key to change the 1's digit of the Tone number (0 ~ 9).
  - After 1 second, the transceiver will emit a morse code of the current 1's digit Tone number setting.
- 6 Press the **PTT** switch to save the setting.
  - The LED will blink red and a beep will sound.
  - The transceiver will automatically return to normal operation when no action is performed for approximately 6 seconds.

<b>Tone Number</b>	<b>QT/DQT Setting</b>	<b>Tone Number</b>	<b>QT/DQT Setting</b>	<b>Tone Number</b>	<b>QT/DQT Setting</b>
<b>01</b>	67.0 Hz	<b>14</b>	107.2 Hz	<b>27</b>	D132N
<b>02</b>	71.9 Hz	<b>15</b>	110.9 Hz	<b>28</b>	D155N
<b>03</b>	74.4 Hz	<b>16</b>	114.8 Hz	<b>29</b>	D134N
<b>04</b>	77.0 Hz	<b>17</b>	118.8 Hz	<b>30</b>	D243N
<b>05</b>	79.7 Hz	<b>18</b>	123.0 Hz	<b>31</b>	D311N
<b>06</b>	82.5 Hz	<b>19</b>	127.3 Hz	<b>32</b>	D346N
<b>07</b>	85.4 Hz	<b>20</b>	131.8 Hz	<b>33</b>	D315N
<b>08</b>	88.5 Hz	<b>21</b>	136.5 Hz	<b>34</b>	D351N
<b>09</b>	91.5 Hz	<b>22</b>	141.3 Hz	<b>35</b>	D423N
<b>10</b>	94.8 Hz	<b>23</b>	146.2 Hz	<b>36</b>	D664N
<b>11</b>	97.4 Hz	<b>24</b>	151.4 Hz	<b>37</b>	D431N
<b>12</b>	100.0 Hz	<b>25</b>	156.7 Hz	<b>38</b>	D723N
<b>13</b>	103.5 Hz	<b>26</b>	162.2 Hz	<b>00</b>	OFF

## CHANNEL CONFIRMATION MODE

To confirm your channel frequency setting:

- 1 With the transceiver power OFF, press and hold the **PTT** switch while turning the transceiver power ON.
  - Continue to hold the **PTT** switch until the LED lights orange (approximately 2 seconds).
- 2 Release the **PTT** switch.
  - The transceiver emits a morse code of the current channel setting. Refer to the table for the morse code output. {p.12}
- 3 Rotate the **Channel** selector to your desired channel within 6 seconds, otherwise the operation will cancel.
  - The transceiver emits a morse code of the current channel setting.
  - The transceiver will automatically return to normal operation when no action is performed for approximately 6 seconds.

To confirm your channel QT/DQT setting:

- 1 With the transceiver power OFF, press and hold the **Side** key while turning the transceiver power ON.
  - Continue to hold the **Side** key until the LED lights orange (approximately 2 seconds).
- 2 Release the **Side** key.
  - The transceiver emits a morse code of the current channel setting. Refer to the table for the morse code output. {p.12}
- 3 Rotate the **Channel** selector to your desired channel within 6 seconds, otherwise the operation will cancel.
  - The transceiver emits a morse code of the current channel setting.
  - The transceiver will automatically return to normal operation when no action is performed for approximately 6 seconds.



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## PROGRAMMABLE FUNCTIONS

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Your dealer can program the **Side** key with a “Press” function and a “Hold” function. The default Press function is [**Squelch Off Momentary**] and the default Hold function is None (no function). Following is a list of programmable functions with details on how they operate.

### ■ Calling Alert

Calling alert tones help identify yourself to party members and inform them that you are calling. Your dealer can set up your transceiver with 1 of 10 calling alert tones. If each party member uses a different tone, it is easy to know who is calling. To make a call, press and hold the key programmed as Calling Alert. Release the key to end the tone.

### ■ Key Lock

Hold this key for 1 second to lock/ unlock the transceiver keys. While Key Lock is active, the following operations cannot be performed:

- Channel Setup mode
- VOX Setup mode
- All Reset mode
- Channel selector
- Channel selector S position (Scan)
- Scan
- Scan Temporary Delete

### ■ Monitor

Press this key to deactivate QT or DQT signaling. Press the key again to return to normal operation.

### ■ Monitor Momentary

Press and hold this key to deactivate QT or DQT signaling. Release the key to return to normal operation.

## ■ Scan

Press this key to start scanning the transceiver channels. (If enabled by your dealer, setting the **Channel** selector to the “S” position will also begin Scan.)

**Priority Scan:** If enabled by your dealer, the Priority channel is a channel that is given first priority while scanning. The Priority channel is set by your dealer.

**Selected Priority Scan:** If enabled by your dealer, the Selected Priority channel is a channel that is given first priority while scanning. The Selected Priority channel is the channel you have selected with the **Channel** selector, before beginning Scan. (Selected Priority Scan cannot function when beginning Scan by setting the **Channel** selector to the “S” position.)

**Revert Channel:** During Scan, pressing the **PTT** switch will automatically select the transceiver’s Revert channel and you will begin transmitting. Your dealer can program the Revert channel using one of the following methods:

- **Selected:** You will always transmit on the channel selected prior to beginning Scan.
- **Selected + Talkback:** Same as “Selected”, but if you are currently paused at a channel, you will transmit on the current channel.
- **Priority:** You will always transmit on the Priority channel.
- **Priority + Talkback:** Same as “Priority”, but if you are currently paused at a channel, you will transmit on the current channel.
- **Fixed Channel + Talkback:** This setting is used only when Scan begins by using the **Channel** selector “S” position. You will always transmit on a preselected fixed channel (set by your dealer), but if you are currently paused at a channel, you will transmit on the current channel.

### ■ **Scan Temporary Delete**

When Scan pauses at an undesired channel, you can remove that channel from the scanning sequence by pressing this key.

### ■ **Squelch Off**

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

### ■ **Squelch Off Momentary**

Press and hold this key to hear background noise. Release the key to return to normal operation.

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## ALL RESET MODE

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This function allows you to reset all frequencies, QT/DQT settings, and the VOX Gain level to their original values.

To reset the transceiver:

- 1 With the transceiver power OFF, press and hold the **PTT** switch and **Side** key while turning the transceiver power ON.
  - Continue to hold the **PTT** switch and **Side** key until the LED lights orange (approximately 2 seconds).
- 2 Release the **PTT** switch and **Side** key.
  - A beep will sound and all channel frequencies and QT/DQT settings, or the VOX Gain level return to their original values.

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### Note:

- ◆ The channel frequencies and QT/DQT settings cannot be reset at the same time as the VOX Gain level.
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## TROUBLESHOOTING GUIDE

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Problem	Solution
Cannot turn the transceiver power ON.	<ul style="list-style-type: none"><li>• The battery pack is discharged. Recharge the battery pack or replace the batteries.</li><li>• The battery pack may not be installed correctly. Remove the battery pack and install again.</li></ul>
Battery deterioration occurs when a battery pack is charged repeatedly.	<ul style="list-style-type: none"><li>• The battery pack life is finished. Replace the battery pack with a new one.</li></ul>
Cannot talk to or hear other members in your group.	<ul style="list-style-type: none"><li>• Make sure you are using the same frequency and QT/DQT settings as the other members in your group.</li><li>• Other group members may be too far away. Make sure you are within range of the other transceivers.</li></ul>
Other voices (besides group members') are present on the channel.	<ul style="list-style-type: none"><li>• Change the QT/DQT settings. Make sure all group members change the settings on their transceivers to match the new QT/DQT setting.</li></ul>

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### Note:

- ◆ If the problem persists, contact a KENWOOD authorized service center for repairs. You may return your transceiver for service to the authorized KENWOOD dealer from whom you purchased it or any authorized KENWOOD service center.
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## OPTIONAL ACCESSORIES

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- KSC-35S (Rapid charger)
- KSC-356 (Multiple charger)
- KMB-35 (Six unit charger adapter)
- KNB-63L (Li-ion battery pack)
- KNB-65L (Li-ion battery pack)
- KBH-18 (Belt clip)
- KHS-1 (Headset)
- KHS-21 (Headset)
- KMC-21 (Speaker/ microphone)
- KMC-45 (Speaker/ microphone)
- EMC-11 (Clip microphone with earphone)
- EMC-12 (Clip microphone with earphone)
- KVC-22 (DC vehicular charger adapter)
- KPG-22U (Programming interface cable: USB)
- BT-16 (Alkaline battery case)
- KWR-1 (Water resistant bag)



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