

# KENWOOD

UHF FM TRASCEIVER

# PKT-03

## INSTRUCTION MANUAL

JVCKENWOOD Corporation

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### 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.

### PRECAUTIONS

- Do not charge the battery pack when they are wet.
- Ensure that there are no metallic items located between the transceiver and the battery pack.
- If the transceiver part is damaged, do not touch the damaged parts.
- If an earphone is connected to the transceiver, reduce the transceiver volume. Pay attention to the volume level when turning the squelch off.
- Do not place the earphone cable around your neck while near machinery that may catch the cable.
- Do not place the transceiver on unstable surfaces. If the transceiver switches OFF/ON as a result of falling or hard impact, the volume and channel configurations may reset.
- Ensure that the end of the antenna does not touch your eyes.
- Do not immerse the transceiver in water.
- Always switch the transceiver power off before installing optional accessories.
- Do not look directly at the LED light while it is lit.

### 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 60°C)!**  
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.
- **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.

#### **! 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 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 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.
- Danger of explosion if the battery is incorrectly replaced; replace only with the same type.
- 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. Do not use an earphone accessory in areas where static electricity can be easily generated.
- 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.

#### **! DANGER**

- **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.
- **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.

#### Firmware Copyrights

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

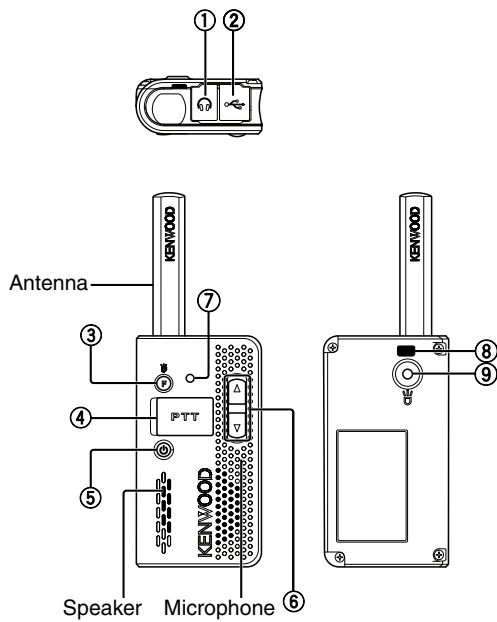
## UNPACKING AND CHECKING EQUIPMENT

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

### SUPPLIED ITEMS

- Transceiver ..... 1
- Instruction manual ..... 1

## ORIENTATION



- ③ **Function key**
- Press this key to change the function of the Up/Down keys as follows:  
Volume Adjustment mode →  
Channel Select mode →  
Programmable Function mode

**Note:** When the LED indicator lights purple, the transceiver is in Programmable Function mode.

- Hold this key for 1 second to activate its programmable function.

- ④ **PTT (Push to Talk) switch**  
Press and hold, then speak into the microphone to transmit.

- ⑤ **Power switch**
- Hold for 1 second to turn the transceiver power ON. Hold for 2 seconds to turn the transceiver power OFF.
  - Momentarily press this key while the transceiver power is ON to activate the Battery Level Guide. Refer to the Battery Level Guide table.

- ⑥ **Up/Down key**  
Press these keys to adjust the volume, change the channel, and operate their programmable functions.

- ⑦ **LED indicator**  
Refer to the LED Indicator Status table.

- ⑧ **Strap hole**  
Connect a commercially available strap here.

- ⑨ **LED light**  
This LED lights up for use as a flashlight.

- ① **Earphone jack (3.5mm Mono Type)**

Connect the earphone plug to this jack.

- ② **Micro USB jack (B Type)**

Connect a USB cable to this jack to charge the transceiver battery pack.

## PREPARATION

### CHARGING THE BATTERY PACK

- The battery pack is not charged at the factory; charge it before use.
- To charge the transceiver, use a commercially available USB cable (Micro USB B Type).
- Charge the transceiver through a commercially available PC or AC adapter power source.

1 Always switch OFF a transceiver equipped with a battery pack before charging.

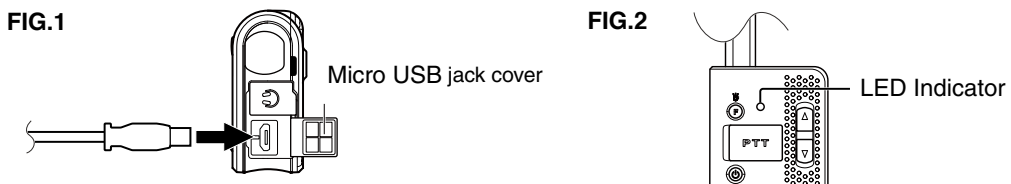
2 Plug the USB cable (B Type) into the Micro USB jack (FIG.1).

3 Connect the USB cable to your PC or AC adapter.

- The LED indicator lights blue (FIG.2).

4 When charging is complete, the LED indicator turns off.

- It takes approximately 4 hours to charge the battery pack.



#### Note:

- ◆ The ambient temperature should be between 0°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 (approximately 500 cycles). Replace the battery pack.
- ◆ While operating the transceiver using a Li-ion battery pack in areas with an ambient temperature close to 0°C, the operating time may be shortened.

## REPLACING THE BATTERY PACK

Replace an expired battery pack with a newly purchased KNB-71L battery pack.

#### CAUTION

- ◆ Do not disassemble the battery pack.
- ◆ Be sure to follow local laws concerning the disposal of battery packs.

1 Using a #1 size Phillips screwdriver, remove the 4 screws, then lift the back panel (FIG.1).

2 Remove the packing containing the old battery pack from the transceiver (FIG.2).

- Lift the battery pack cable and remove the connector from the PCB terminal (FIG.2).

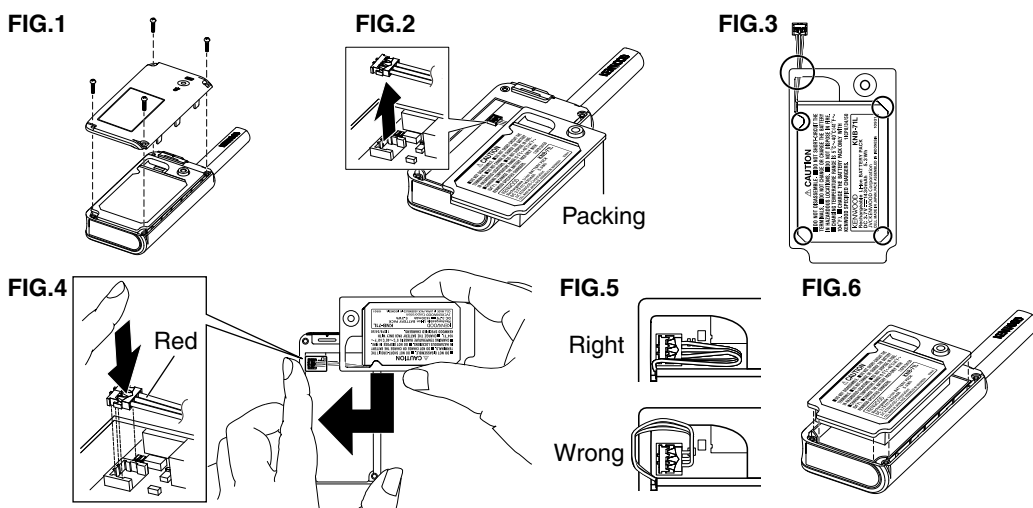
3 Remove the old battery pack from the packing and insert the new battery pack.

- Pass the battery pack cable through the hole in the packing (FIG.3).
- Attach it so that the 4 points are on the battery pack (FIG.3).

4 Insert the connector of the new battery pack into the PCB terminal by pressing down on it, then lay the battery pack into position (FIG.4).

- Match the direction of the connector and insert it vertically (FIG.4).
- Wire the battery pack cable (FIG.5) and route it around the packing (FIG.6).
- Confirm the routing of the cable (FIG.5) with the 4 points of the packing (FIG.3).

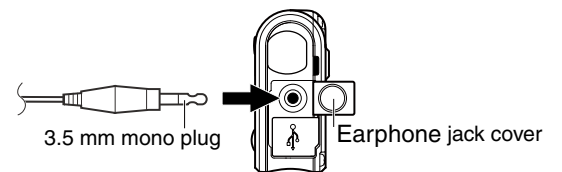
5 Place the back panel over the battery pack and connect it using the 4 screws.



## CONNECTING AN EARPHONE

Connect an earphone to the earphone jack on the top of the transceiver.

**Note:** To keep the transceiver water resistant, the earphone jack cover must remain closed.



## PROGRAMMABLE AUXILIARY FUNCTIONS

Your dealer can program the **Function** key and the **Up/Down** key each with one of the following functions.

Function	Meaning
None	No function has been programmed. (Default setting for the <b>Up/Down</b> key.)
Monitor	Press this key to deactivate QT or DQT signaling. Press this key again to return to normal operation.
Squelch Off	Press this key to hear background noise. Press this key again to return to normal operation.
Flashlight	Press this key to turn on the LED light on the rear of the transceiver. Press this key again to turn off the LED light. <ul style="list-style-type: none"> <li>• The LED light will automatically turn off after approximately 30 seconds, if it is not turned off manually. (Default setting for the <b>Function</b> key.)</li> </ul>
Tone Alert	Press this key to activate Tone Alert. Tone Alert provides an audible alarm when signals are received on the frequency you are monitoring. Press this key again to return to normal operation. <ul style="list-style-type: none"> <li>• When Tone Alert turns ON, the LED indicator color cycles through green, light blue, blue, purple, red, yellow, and white approximately every 30 seconds.</li> <li>• When a signal is received, the LED indicator color cycles through green, light blue, blue, purple, red, yellow, and white approximately every 5 seconds.</li> <li>• Tone Alert ends once a signal is received. To reactivate Tone Alert, press this key again. Press any key to stop the 5 second LED indicator cycle.</li> </ul>

## BASIC OPERATIONS

### TRANSMITTING AND RECEIVING

- Hold the **Power** switch for 1 second to switch the transceiver power ON.
  - A beep sounds and LED Indicator blinks blue a number of times as described in the Battery Level Guide table.
- In Channel Select mode, press the **Up/Down** key to select your desired channel.
  - After selecting a channel, the transceiver announces the channel number and the LED indicator blinks yellow for a number of times corresponding to the channel number. For example, when selecting channel 3, "three" is announced and the LED indicator blinks yellow 3 times.
- 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 mouse.
- Release the **PTT** switch to receive.
- In Volume Adjustment mode, press the **Up/Down** key to adjust the volume.
  - Press the key programmed as [**Squelch Off**] to hear background noise.

#### Note:

- ◆ When the battery pack voltage becomes too low, transmission will stop and an alert tone will sound. (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.)
- ◆ Even when setting the volume to 0, the transceiver will continue to emit beep sounds and channel announcements.
- ◆ Continuously transmitting when the transceiver becomes too hot will cause the output power to decrease and may eventually stop transmission. Stop transmitting for a while to allow the transceiver to cool down.
- ◆ You may sometimes hear noise during communications, depending on the caller's transceiver.

## LED INDICATOR STATUS

Indicator Color	Red	Green	Blinks Light Blue 2 Times	Blinking Red
Meaning	Transmitting	Receiving a call	Standby state*	Battery power is low

\* The transceiver has not been used for at least 10 seconds.

## BATTERY LEVEL GUIDE

You can determine the remaining battery power level by pressing the **Power** switch while the transceiver power is ON. The LED indicator will blink blue a number of times corresponding to the battery power remaining.

Indicator Status	Blinks 3 Times	Blinks 2 Times	Blinks 1 Time
Battery Level	High	Medium	Low

## SQUELCH LEVEL SETTING

To adjust the Squelch level, perform the following steps:

- Turn the transceiver power OFF.
- While holding down the **Up/Down** key, turn the transceiver power ON.
- Continue to hold the Up and Down keys until a beep sounds.
  - The LED indicator alternates between red and green.
- Release the **Up/Down** key.
- Press the **Up** key to increase the Squelch level and the **Down** key to decrease the Squelch level.
  - The Squelch level can be adjusted from levels 0 to 5. The higher the level, the stronger the signals must be to receive.
  - After selecting a Squelch level, the transceiver beeps a number of times corresponding to the selected level. For example, when selecting Squelch level 3, the transceiver will beep 3 times. When selecting Squelch level 0, the transceiver will sound 1 low short beep.
- Press and hold the **Function** key for 2 seconds to save the setting.
  - A beep will sound.
- Turn the transceiver power OFF and then ON again to activate the new settings.

## BACKGROUND OPERATIONS

### 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.

**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.

### 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.

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

### QT/ DQT SIGNALING

QT/ DQT is used to segregate talk groups, so users only hear calls from their own group.