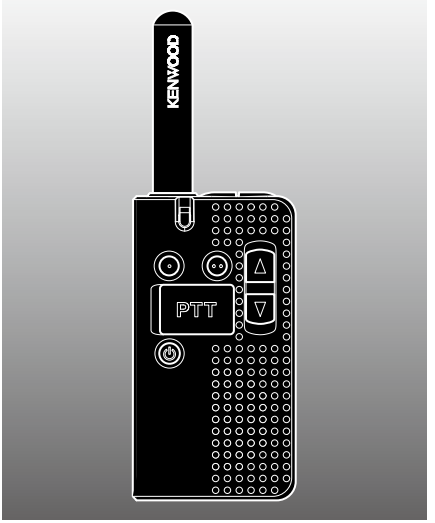
KENWOOD

INSTRUCTION MANUAL



UHF FM TRANSCEIVER

PKT-23

JVCKENWOOD Corporation

09 08 07 06 05 04 03 02 01 00

THANK YOU

We are grateful for your purchase of this **KENWOOD** product and welcome you to the Business Radio Service (BRS).

Your **KENWOOD** 2-way Business Radio is called a "transceiver", meaning "transmitter & receiver". We believe this easy-to-use transceiver will provide you with dependable and reliable communications. This **KENWOOD** transceiver is a precision device. Treat it with care, and you will enjoy years of reliable operation.

FEATURES

- 4 channels with 90 UHF operating frequencies. Each channel can be set up with a QT tone or DQT code allowing you to ignore unwanted calls.
- Built in voice scrambler gives you complete privacy for your conversations.
- Hands free operation when using an optional headset.
- Voice announcement lets you know which channel you have selected and which settings you have made when reassigning key functions and channel settings.

OPERATING CONDITIONS

Condition	Transmission Range
Open locations (no obstructions)	Up to 5 miles (8 km)
In steel/ concrete reinforced buildings	Up to 225,000 square feet (20,900 m^2)
In high rises	Up to 17 floors

Note: The listed ranges are based on field testing and may vary with your operating conditions and individual transceiver.

FCC LICENSE INFORMATION

Your **KENWOOD** transceiver operates on communications frequencies which are subject to FCC (Federal Communications Commission) Rules & Regulations. FCC Rules require that all operators using Private Land Mobile radio frequencies obtain a radio license before operating their equipment. Application for license must be made on FCC form 601, schedules D and H, and Remittance form 159.

FAX: Forms can be obtained by fax from the FCC Fax-On-Demand system. Call 1-202-418-0177 from your fax machine and request document number 000601 for the form, schedules, and instructions.

MAIL: Forms can be ordered by telephone, and will be sent to you by first class mail. Call the FCC Forms Hotline at 1-800-418-FORM (1-800-418-3676).

INTERNET: Form 601 and instructions can be downloaded from the FCC Forms website at *http://www.fcc.gov/formpage.html*

Before filling out your Form 601 application Technical Data section, you must decide on which frequencies you will operate. See the frequency charts on pages 12 and 13.

QUESTIONS? Call the FCC for license application questions at 1-888-CALL-FCC (1-888-225-5322).

One or more of the following statements may be applicable:

FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can generate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for technical assistance.

ATTENTION:

The RBRC Recycle seal found on **KENWOOD** lithium-ion (Li-ion) battery packs indicates **KENWOOD**'s voluntary participation in an industry program to collect and recycle Li-ion batteries after their operating life has expired. The RBRC program is an alternative to disposing Li-ion batteries with your regular refuse or in municipal waste streams, which is illegal in some areas.

For information on Li-ion battery recycling in your area, call (toll free) 1-800-8-BATTERY (1-800-822-8837).

KENWOOD's involvement in this program is part of our commitment to preserve our environment and conserve our natural resources.

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 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 any 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. 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.
- 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 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 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.
- 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/microphone 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.

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.

- **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 60°C/ 140°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 the 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.

CONTENTS

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 ACCESSORIES

- Battery charger (KSC-44CR)/ AC adapter (KSC-44SL) 1
- Li-ion battery pack (KNB-71L) 1
- Belt clip (KBH-20) 1
- Screw (M3 x 5 mm) 2
- Warranty card 1
- Instruction manual 1

Note: Refer to “PREPARATION” for accessory installation instructions.

PREPARATION

CHARGING THE BATTERY PACK

The battery pack is not charged at the factory; charge it before use. Average battery pack life (calculated using 5% transmit time, 5% receive time, and 90% standby time) is 17 hours.

Note:

- The ambient temperature should be between 32°F and 104°F (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.

ATTENTION: Switch OFF a transceiver equipped with a battery pack before charging.

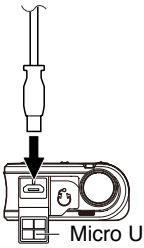
■ Charging with a USB Cable

- Use a commercially available USB cable (Micro USB B Type).
- Charge the transceiver through a commercially available PC or AC adapter power source.

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

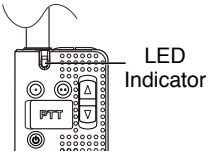
2 Connect the USB cable to your PC or AC adapter.

- The LED indicator lights blue.
- The transceiver power turns OFF automatically.



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

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



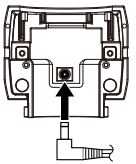
■ Charging with the KSC-44CR Charger

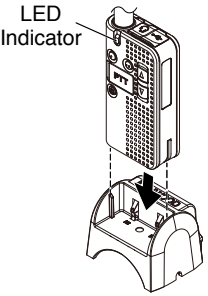
1 Plug the AC adapter cable into the jack located on the bottom of the charger.

2 Plug the AC adapter into an AC outlet.

3 Slide a transceiver equipped with a battery pack into the charging slot of the charger.

- Make sure the metal contacts of the transceiver mate securely with the charger terminals.
- The LED indicator lights blue.





4 When charging is complete, the LED indicator turns off. Remove the transceiver from the charging slot of the charger.

- It takes approximately 4 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.

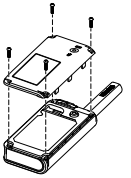
REPLACING THE BATTERY PACK

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

CAUTION

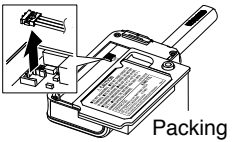
- Do not disassemble the battery pack.
- Be sure to follow local laws concerning the disposal of battery packs.

1 Lift and remove the back panel.



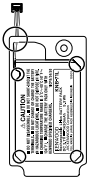
2 Remove the packing containing the old battery pack from the transceiver.

- Lift the battery pack cable and remove the connector from the PCB terminal.



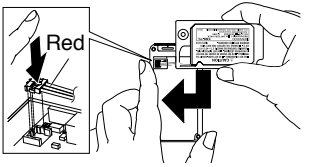
3 Remove the old battery pack from the packing and insert the new battery pack.

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



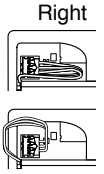
4 Insert the connector of the new battery pack into the PCB terminal by pressing down on it, then lay the battery pack into position.

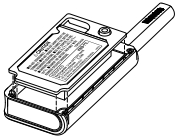
- Match the direction of the connector and insert it vertically.



- Wire the battery pack cable and route it around the packing.
- Confirm the routing of the cable with the 4 points of the packing.

5 Place the back panel over the battery pack.

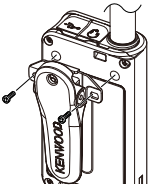




INSTALLING THE BELT CLIP

If necessary, attach the belt clip using the two supplied M3 x 5 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.



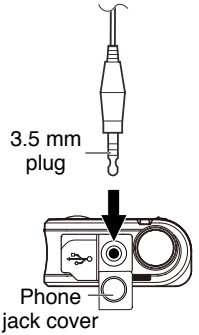
CAUTION

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.

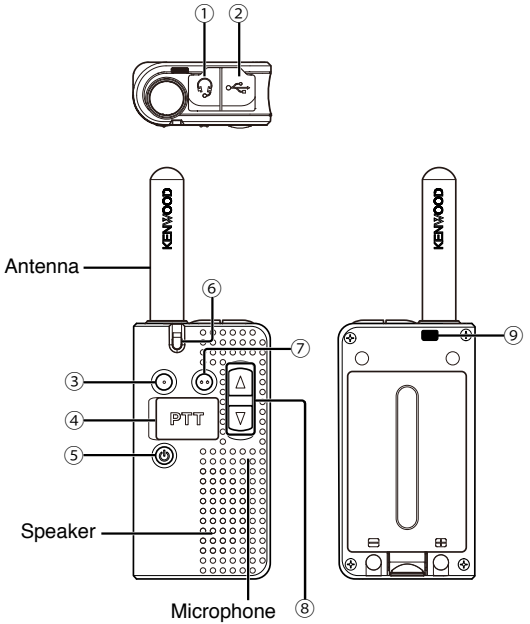
CONNECTING AN EARPHONE/ MICROPHONE (OR HEADSET)

Connect an earphone/ microphone to the phone jack on the top of the transceiver.

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



ORIENTATION



① **3.5 mm phone jack**

Connect the earphone/ microphone plug to this jack.

② **Micro USB jack (B Type)**

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

③ **Function-1 key**

Press or hold this key for 1 second to activate its programmable functions. The default settings are **[Scan]** (press) and **[Super Lock]** (hold).

- For function descriptions and details on how to change the key functions, refer to "KEY ASSIGNMENT MODE" on page 17.

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 on page 9.

⑥ **LED indicator**

Refer to the "LED INDICATOR STATUS" table on page 9.

⑦ **Function-2 key**

Press this key to toggle the function of the Up/Down keys between Volume Adjustment mode and Channel Select mode. Hold this key for 1 second to activate its programmable function. The default setting is **[Monitor]**.

- For function descriptions and details on how to change the key functions, refer to "KEY ASSIGNMENT MODE" on page 17.

⑧ **Up/Down keys**

Press these keys to adjust the volume and change the channel.

- Press the **Function-2** key to toggle the function of the Up/Down keys between Volume Adjustment mode and Channel Select mode.
- To change the operating frequency or QT/DQT settings of a channel, refer to "CHANNEL SETUP MODE" on page 11.

⑨ **Strap hole**

Connect a commercially available strap here.

BASIC OPERATIONS

POWER AND VOLUME

1 Hold the **Power** switch for 1 second to switch the transceiver power ON.
- A beep sounds and the LED indicator blinks blue a number of times as described in the “BATTERY LEVEL GUIDE” table on page 9.
- To turn the power OFF, hold the **Power** switch for 2 seconds.

2 In Volume Adjustment mode, press the **Up/Down** keys to adjust the volume.
- Press the key programmed as **[Squelch Off]** to hear background noise.
- Press the **Function-2** key to switch between Volume Adjustment mode and Channel Select mode.

TRANSMITTING AND RECEIVING

1 In Channel Select mode, press the **Up/Down** keys 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.
- Press the **Function-2** key to switch between Volume Adjustment mode and Channel Select mode.

2 To make a call, press and hold the **PTT** switch, then speak into the microphone using your normal speaking voice.
- Hold the microphone approximately 1.5 inches (3 to 4 cm) from your mouth.

3 Release the **PTT** switch to receive.

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	Meaning
Red	Transmitting
Green	Receiving a call
Blinking green	Scanning
Blinks light blue 2 times	Standby state *
Blinking red	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	Battery Level
Blinks 3 times	High
Blinks 2 times	Medium
Blinks 1 time	Low

TIME-OUT TIMER (TOT)

The Time-out Timer prevents callers from using a channel for an extended duration (60 seconds). If you continuously transmit for the duration, transmission will stop and an alert tone will sound. To stop the tone, release the **PTT** switch.

VOICE OPERATED TRANSMISSION (VOX)

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. 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 **Up** key while turning the transceiver power ON.
- The LED indicator lights yellow and "VOX" is announced.

3 Press the **Function-1** key to select the VOX Gain level of the radio (from 1 ~ 5 or Off).
- When the **Function-1** key is pressed, the transceiver will announces the VOX Gain level (the default level is OFF, so a double beep sounds).
- Press the **Function-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 **Up/Down** keys). When VOX is turned ON, a beep sounds. When it is turned OFF, a double beep sounds.

4 Press the **PTT** switch to save the setting.
- A beep will sound.
- The transceiver announces the new VOX Gain level.

5 Turn the transceiver power OFF and then ON again to activate VOX.

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 5 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 transmitting.

CHANNEL SETUP MODE

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	Table Number	Frequency	QT/DQT Setting
1	2	464.5500 MHz	67.0 Hz
2	8	467.9250 MHz	67.0 Hz
3	9	461.0375 MHz	67.0 Hz
4	10	461.0625 MHz	67.0 Hz

OPERATING FREQUENCY AND QT/ DQT SETTING

To change the operating frequency of a channel:

1 With the transceiver power OFF, press and hold the **PTT** switch and **Up** key while turning the transceiver power ON.
- Continue to hold the **PTT** switch and **Up** key until the LED indicator lights yellow and the transceiver announces “Self”.

2 Release the **PTT** switch and **Up** key.
- The transceiver announces “Channel Number”.

3 Press the **Up/Down** key to select your desired channel, then press the **PTT** switch to confirm the selected channel.
- Upon releasing the **PTT** switch, a beep will sound and the transceiver announces “Channel”.

4 Press the **Up/Down** key to increment/ decrement the Table number, to select the new channel frequency.
- Press and hold the **Up/Down** key to continuously increment/ decrement the number.
- Table numbers and their corresponding operating frequencies are provided in the tables on pages 12 and 13.
- A voice announcement will inform you of the selected Table number.

5 Press the **PTT** switch to save the setting and switch to the QT/ DQT setting.
   - A beep will sound and the transceiver announces “QT”.

6 Press the **Up/Down** key to select QT or DQT, then press the **PTT** switch to confirm the selection.

7 Press the **Up/Down** key to increment/ decrement the QT/ DQT number, to select the new value.
   - Press and hold the **Up/Down** key to continuously increment/ decrement the QT/ DQT number.
   - QT/ DQT numbers and their corresponding settings are provided in the tables on pages 14 to 16.
   - A voice announcement will inform you of the selected QT/ DQT number.

8 Press the **PTT** switch to save the setting.
   - A beep will sound and the transceiver announces “Channel”.
   - Repeat steps 3 to 8 to set up another channel.

9 Hold the **Function-2** key and **PTT** switch to store the settings and return to normal operation.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

Table Number	Operating Frequency (MHz)	Table Number	Operating Frequency (MHz)
0	OFF	**13**	461.1375
1	464.5000	**14**	461.1625
2	464.5500	**15**	461.1875
3	467.7625	**16**	461.2125
4	467.8125	**17**	461.2375
5	467.8500	**18**	461.2625
6	467.8750	**19**	461.2875
7	467.9000	**20**	461.3125
8	467.9250	**21**	461.3375
9	461.0375	**22**	461.3625
10	461.0625	**23**	462.7625
11	461.0875	**24**	462.7875
12	461.1125	**25**	462.8125

Table Number	Operating Frequency (MHz)	Table Number	Operating Frequency (MHz)
26	462.8375	**59**	462.4875
27	462.8625	**60**	462.5125
28	462.8875	**61**	467.1875
29	462.9125	**62**	467.4625
30	464.4875	**63**	467.4875
31	464.5125	**64**	467.5125
32	464.5375	**65**	451.1875
33	464.5625	**66**	451.2375
34	466.0375	**67**	451.2875
35	466.0625	**68**	451.3375
36	466.0875	**69**	451.4375
37	466.1125	**70**	451.5375
38	466.1375	**71**	451.6375
39	466.1625	**72**	452.3125
40	466.1875	**73**	452.5375
41	466.2125	**74**	452.4125
42	466.2375	**75**	452.5125
43	466.2625	**76**	452.7625
44	466.2875	**77**	452.8625
45	466.3125	**78**	456.1875
46	466.3375	**79**	456.2375
47	466.3625	**80**	456.2875
48	467.7875	**81**	468.2125
49	467.8375	**82**	468.2625
50	467.8625	**83**	468.3125
51	467.8875	**84**	468.3625
52	467.9125	**85**	468.4125
53	469.4875	**86**	468.4625
54	469.5125	**87**	468.5125
55	469.5375	**88**	468.5625
56	469.5625	**89**	468.6125
57	462.1875	**90**	468.6625
58	462.4625		

QUIET TALK (QT)/ DIGITAL QUIET TALK (DQT)

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.

Follow the steps described in “OPERATING FREQUENCY AND QT/ DQT SETTING” on page 11 to change the QT/DQT settings of a channel

QT Channel Settings:

QT Number	QT Frequency	QT Number	QT Frequency	QT Number	QT Frequency
1	67.0 Hz	**17**	118.8 Hz	**33**	210.7 Hz
2	71.9 Hz	**18**	123.0 Hz	**34**	218.1 Hz
3	74.4 Hz	**19**	127.3 Hz	**35**	225.7 Hz
4	77.0 Hz	**20**	131.8 Hz	**36**	233.6 Hz
5	79.7 Hz	**21**	136.5 Hz	**37**	241.8 Hz
6	82.5 Hz	**22**	141.3 Hz	**38**	250.3 Hz
7	85.4 Hz	**23**	146.2 Hz	**39**	69.3 Hz
8	88.5 Hz	**24**	151.4 Hz	**40**	67.0 Hz
9	91.5 Hz	**25**	156.7 Hz	**41**	67.0 Hz
10	94.8 Hz	**26**	162.2 Hz	**42**	67.0 Hz
11	97.4 Hz	**27**	167.9 Hz	**43**	67.0 Hz
12	100.0 Hz	**28**	173.8 Hz	**44**	67.0 Hz
13	103.5 Hz	**29**	179.9 Hz	**45**	67.0 Hz
14	107.2 Hz	**30**	186.2 Hz	**off**	OFF
15	110.9 Hz	**31**	192.8 Hz		
16	114.8 Hz	**32**	203.5 Hz		

DQT Channel Settings:

DQT Number	DQT Code	DQT Number	DQT Code	DQT Number	DQT Code	DQT Number	DQT Code
1	D023N	**31**	D223N	**61**	D503N	**91**	D047I
2	D025N	**32**	D226N	**62**	D506N	**92**	D051I
3	D026N	**33**	D243N	**63**	D516N	**93**	D054I
4	D031N	**34**	D244N	**64**	D532N	**94**	D065I
5	D032N	**35**	D245N	**65**	D546N	**95**	D071I
6	D043N	**36**	D251N	**66**	D565N	**96**	D072I
7	D047N	**37**	D261N	**67**	D606N	**97**	D073I
8	D051N	**38**	D263N	**68**	D612N	**98**	D074I
9	D054N	**39**	D265N	**69**	D624N	**99**	D114I
10	D065N	**40**	D271N	**70**	D627N	**100**	D115I
11	D071N	**41**	D306N	**71**	D631N	**101**	D116I
12	D072N	**42**	D311N	**72**	D632N	**102**	D125I
13	D073N	**43**	D315N	**73**	D654N	**103**	D131I
14	D074N	**44**	D331N	**74**	D662N	**104**	D132I
15	D114N	**45**	D343N	**75**	D664N	**105**	D134I
16	D115N	**46**	D346N	**76**	D703N	**106**	D143I
17	D116N	**47**	D351N	**77**	D712N	**107**	D152I
18	D125N	**48**	D364N	**78**	D723N	**108**	D155I
19	D131N	**49**	D365N	**79**	D731N	**109**	D156I
20	D132N	**50**	D371N	**80**	D732N	**110**	D162I
21	D134N	**51**	D411N	**81**	D734N	**111**	D165I
22	D143N	**52**	D412N	**82**	D743N	**112**	D172I
23	D152N	**53**	D413N	**83**	D754N	**113**	D174I
24	D155N	**54**	D423N	**84**	D645N	**114**	D205I
25	D156N	**55**	D431N	**85**	D023I	**115**	D223I
26	D162N	**56**	D432N	**86**	D025I	**116**	D226I
27	D165N	**57**	D445N	**87**	D026I	**117**	D243I
28	D172N	**58**	D464N	**88**	D031I	**118**	D244I
29	D174N	**59**	D465N	**89**	D032I	**119**	D245I
30	D205N	**60**	D466N	**90**	D043I	**120**	D251I

DQT Number	DQT Code	DQT Number	DQT Code	DQT Number	DQT Code	DQT Number	DQT Code
121	D261I	**135**	D411I	**149**	D546I	**163**	D731I
122	D263I	**136**	D412I	**150**	D565I	**164**	D732I
123	D265I	**137**	D413I	**151**	D606I	**165**	D734I
124	D271I	**138**	D423I	**152**	D612I	**166**	D743I
125	D306I	**139**	D431I	**153**	D624I	**167**	D754I
126	D311I	**140**	D432I	**154**	D627I	**168**	D645I
127	D315I	**141**	D445I	**155**	D631I	**169**	D023N
128	D331I	**142**	D464I	**156**	D632I	**170**	D023N
129	D343I	**143**	D465I	**157**	D654I	**171**	D023N
130	D346I	**144**	D466I	**158**	D662I	**172**	D023N
131	D351I	**145**	D503I	**159**	D664I	**173**	D023N
132	D364I	**146**	D506I	**160**	D703I	**174**	D023N
133	D365I	**147**	D516I	**161**	D712I	**off**	OFF
134	D371I	**148**	D532I	**162**	D723I		

CHANNEL CONFIRMATION MODE

To confirm your channel settings:

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 indicator lights yellow and the transceiver announces “Confirm”.

2 Release the **PTT** switch.

- The transceiver announces the channel table number and QT/DQT number of the selected channel.

3 Press the **Up/Down** keys to confirm additional channels within 20 seconds, otherwise the operation will cancel.

- The transceiver announces the channel table number and tone number of the selected channel.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

KEY ASSIGNMENT MODE

This transceiver allows you to reprogram the **Function-1** key (press/hold) and **Function-2** key (hold only) with any of the functions listed in the table below. Explanations on the use of each function are provided under “PROGRAMMABLE FUNCTIONS”, on page 19.

Table Number	Function Name
0	None (no function)
1	Low Transmit Power
2	Monitor (**Function-2** key hold default)
3	RX/TX Frequency Scan *
4	Scan (**Function-1** key press default)
5	Squelch Off
6	Super Lock (**Function-1** key hold default)
7	Tone Alert

* To use this function, Repeater mode must be activated through Programming Software.

To change the functions of the **Function-1** and **Function-2** keys:

1 With the transceiver power OFF, press and hold the **Up** and **Function-2** keys while turning the transceiver power ON.
- Continue to hold the **Up** and **Function-2** keys until the LED indicator lights yellow and the transceiver announces “Setup”, followed by “Table Zero”.

2 Press the **Up/Down** keys to increment/ decrement the number, to select the new key function.
- Table numbers and their corresponding functions are provided in the table above.
- A voice announcement will inform you of the currently selected Table number.

3 Press the **Function-1** key or hold the **Function-1** or **Function-2** key to program the new function onto the desired key.
   - A tone sounds after pressing the **Function-1** key, confirming that the function has been stored to the **Function-1** press operation.
   - Two tones sound after holding the **Function-1** key, confirming that the function has been stored to the **Function-1** hold operation.
   - Three tones sound after holding the **Function-2** key, confirming that the function has been stored to the **Function-2** hold operation.
   - The press operation of the **Function-2** key cannot be reprogrammed.

4 Repeat steps 2 and 3 to reprogram additional functions.

5 Hold the **PTT** switch for 3 seconds to save the settings and exit Setting mode.

Note: The transceiver will automatically return to normal operation if no action is performed for 20 seconds.

PROGRAMMABLE FUNCTIONS

■ **None**

No function is programmed for the key.

■ **Low Transmit Power**

Press to toggle the transmit power between high and low.

■ **Monitor**

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

■ Scan

Press this key to turn the Scan function on and off. Scan is useful for monitoring signals on the transceiver channels. When scanning, the transceiver checks for a signal on each channel and only stops if a signal is present. If the QT/DQT matches, the transceiver stops at the channel and opens the squelch so you can listen to the call. If the QT/DQT does not match, the call is ignored and scanning continues.

■ Squelch Off

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

■ Super Lock

Press this key to lock the transceiver keys. Super Lock locks the transceiver keys to prevent accidental operation. Turning the transceiver power OFF and then ON again will not disable Super Lock. To deactivate Super Lock, with the transceiver power OFF, press and hold the **Function-2** key while turning the transceiver power ON.

- When the LED lights yellow, release the **Side 2** key.

■ Tone Alert

Press this key to toggle Tone Alert on and off. Tone Alert provides an audible alarm when signals are received on the frequency you are monitoring.

- When Tone Alert turns ON, the LED indicator color cycles through green, light blue, blue, purple, red, and yellow, and white approximately every 30 seconds.
- When a signal is received, the LED indicator color cycles through green, light blue, blue, purple, red, yellow, and white approximately every 5 seconds.
- 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.

TROUBLESHOOTING GUIDE

Problem	Solution
Cannot turn the transceiver power ON.	• The battery pack may be dead. Recharge or replace the battery pack. • The battery pack may not be installed correctly. Remove the battery pack and install again.
Battery power dies shortly after charging.	• The battery pack life is finished. Replace the battery pack with a new one.
Cannot talk to nor hear other members in your group.	• Make sure you are using the same frequency and QT/DQT settings as the other members in your group. • Other group members may be too far away. Make sure you are within range of the other transceivers.
Other voices (besides group members') are present on the channel.	• Change the QT/DQT settings. Make sure all group members change the settings on their transceivers to match the new QT/DQT setting.

ALL RESET MODE

At some point in time, you may desire to reset the transceiver settings to their default values. This function will reset all channels to their default frequencies and QT/DQT, the VOX function to its default status, and all keys to their default functions.

To reset the transceiver:

1 With the transceiver power OFF, press and hold the **PTT** switch, the **Up** key, and the **Down** key while turning the transceiver power ON.
- Continue to hold the keys for 2 seconds, until the LED indicator lights yellow.

2 Release the keys.
- The transceiver announces “Confirm” and returns to normal operation.
- If the keys are released before the LED indicator lights yellow, All Reset mode will cancel.

KENWOOD

RADIO FREQUENCY ENERGY SAFETY INFORMATION

This **KENWOOD** transceiver has been tested and complies with the standards listed below, in regards to Radio Frequency (RF) energy and electromagnetic energy (EME) generated by the transceiver.

- FCC RF exposure limits for *Occupational Use Only*. RF Exposure limits adopted by the FCC are generally based on recommendations from the National Council on Radiation Protection and Measurements, & the American National Standards Institute.
- FCC OET Bulletin 65 Edition 97-01 Supplement C
- American National Standards Institute (C95.1 – 1992)
- American National Standards Institute (C95.3 – 1992)

WARNING

This **KENWOOD** transceiver generates RF EME while transmitting. RF EME (Radio Frequency Electric & Magnetic Energy) has the potential to cause slight thermal, or heating effects to any part of your body less than the recommended distance from this radio transmitter's antenna. RF energy exposure is determined primarily by the distance to and the power of the transmitting device. In general, RF exposure is minimized when the lowest possible power is used or transmission time is kept to the minimum required for consistent communications, and the greatest distance possible from the antenna to the body is maintained. The transceiver has been designed for and is classified for *Occupational Use Only*. Occupational/ controlled exposure limits are applicable to situations in which persons are exposed to RF energy as a consequence of their employment, and such persons have been made aware of the potential for exposure and can exercise control over their exposure. This means you can use the transceiver only if you are aware of the potential hazards of operating a transceiver and are familiar in ways to minimize these hazards. This transceiver is not intended for use by the general public in uncontrolled environments. Uncontrolled environment exposure limits are applicable to situations in which the general public may be exposed to RF energy, or in which the persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

The following list provides you with the information required to ensure that you are aware of RF exposure and of how to operate this transceiver so that the FCC RF exposure limitations are not exceeded.

- While transmitting (holding the **PTT** switch or speaking with **VOX** enabled), always keep the antenna and the radio at least 3 cm (1 3/16 inches) from your body or face, as well as from any bystanders. A LED on the top of the radio shows red when the transmitter is operating in both **PTT** and **VOX** modes.
- Do not transmit for more than 50% of the total transceiver use time; transmitting over 50% of the total use time may exceed the limits in accordance to the FCC RF exposure requirements. Nominal transceiver operation is 5% transmission time, 5% reception time, and 90% stand-by time.
- Use only the specified antenna for this transceiver; this may be either the antenna provided with the transceiver or another antenna authorized by **KENWOOD**.

Use only **KENWOOD** authorized accessories (antennas, battery packs, belt clips, Speaker/ Mics or headsets etc.): When worn on the body, always place the radio in a **KENWOOD** recommended clip or carrying case meant for this product. The use of other than recommended or approved body- worn accessories may result in RF exposure levels which exceed the FCC's occupational/ controlled environment RF exposure limits.

CAUTION

To ensure that your exposure to RF EME is within the FCC limits for occupational use, you must observe and adhere to the above points.

Electromagnetic Interference Compatibility

Electronic devices are susceptible to electromagnetic interference (EMI) if they are not adequately shielded or designed for electromagnetic compatibility. Because this transceiver generates RF energy, it can cause interference to such equipment.

- Turn OFF your transceiver where signs are posted to do so. Hospitals and health care facilities use equipment that is sensitive to electromagnetic radiation.
- Turn OFF your transceiver while on board an aircraft when so instructed. Use of the transceiver must be in accordance with airline regulations and/or crew instructions.