Two way radio

KD-C51

USER'S MANUAL

- Super receive
- Strong anti-interference
- Vox
- Monitor
- Scanning
- TOT
- CDCSS/DCS

EN

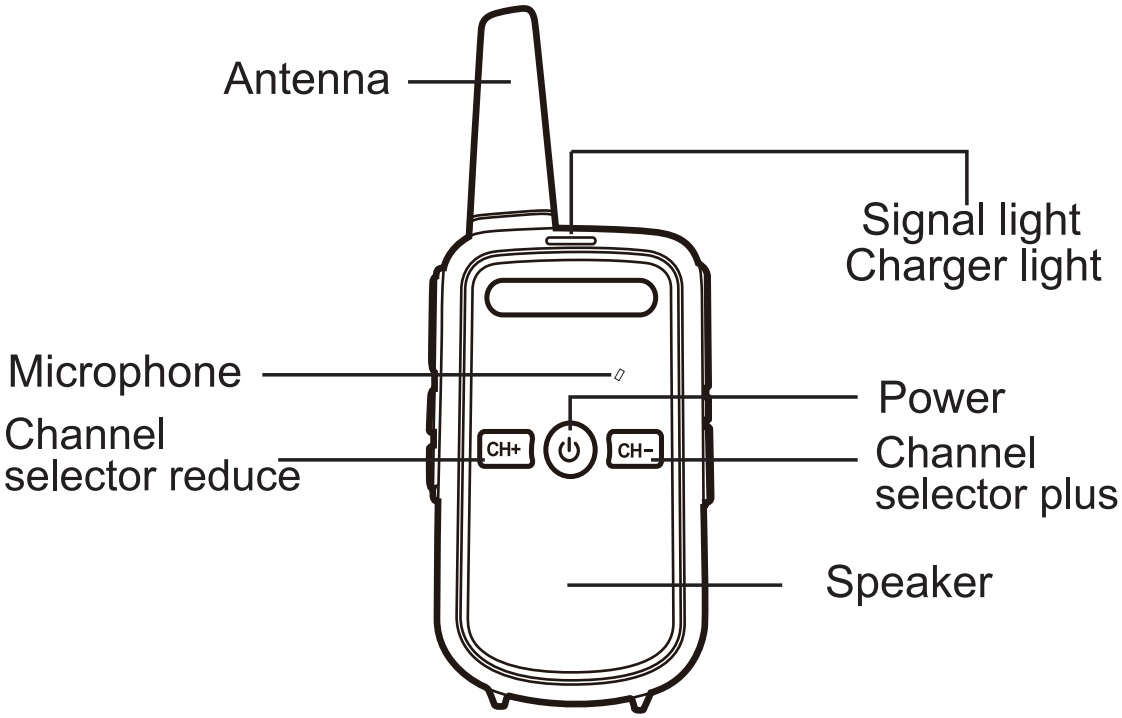
WARNNINGS

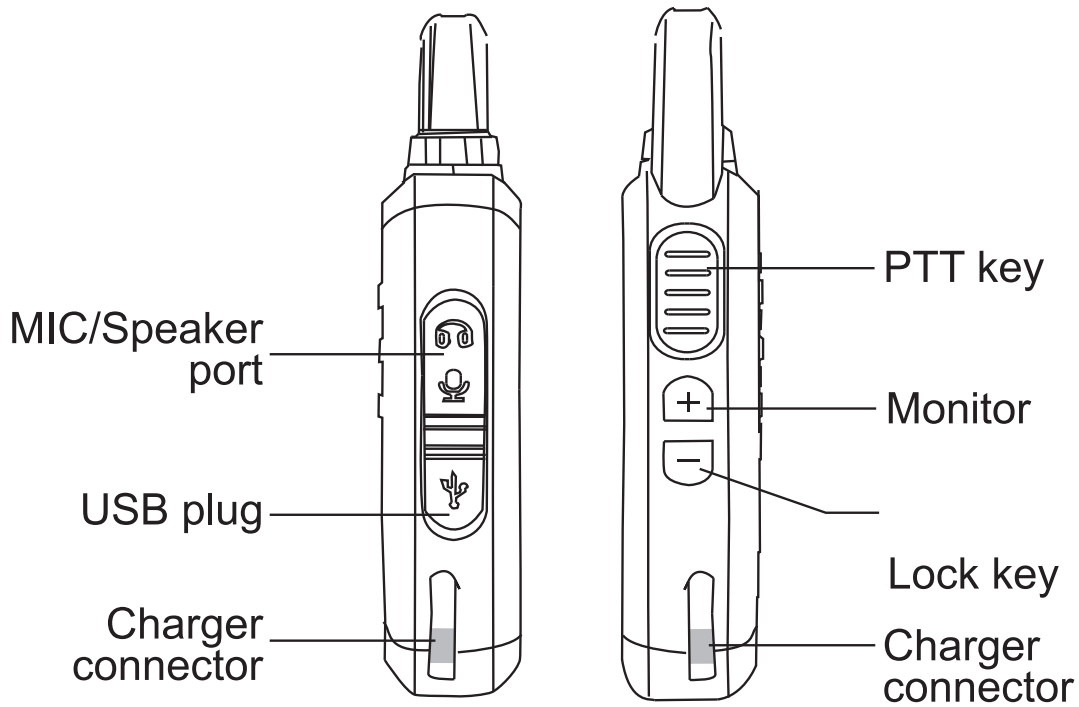
Product safety and RF Exposure for two way radio:

 **ATTENTION!**	Before using this two way radio, please readthe manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards, and also read the operational instructions for safe use.

◇◇ Contents

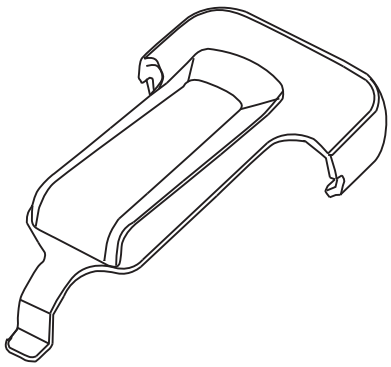
◇◇ Function Operations



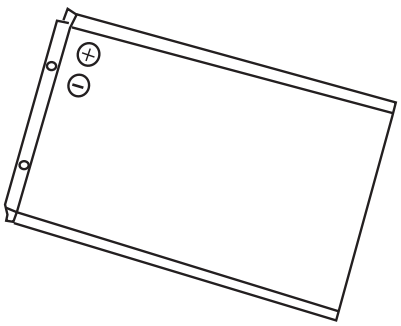


◇◇ Standard Accessorles

Radio body



Belt clip



Battery

◇◇ Optional Functions

1. Long press the power key for 2 seconds to turn on/turn off the radio.
2. CH+/CH-: adjusting the Channel
3. Side Key+/Side Key-: adjusting the volume level,the volume has a total of 8 levels.
4. PTT: while pressing the PTT launch button, keeping the microphone 3-8cm away from the mouth.

•Scanning

It is convenient for users to search for calls from other channels. Long press the side key【-】for 2 seconds to enter the scan state,operate again to exit.

•Keyboard Lockout

Long press the side key【-】for 2 seconds to lock the keyboard,operate it again to unlock.

◇◇ Optional Functions

•Monitor

Long press the side key【+】to enter the monitor mode,release it to exit.

•VOX

VOX is a function that voice can be launched without pressing the PTT key, Operation details:

Operation details： Switch to channel 7 first, then turn off the radio. Press“CH+”key, turn on the radio at the same time. There will be a voice "VOX ON" or "VOX OFF".

•Time Out Timer(TOT)

The purpose of the TOT is to prevent any single person from using a channel for an extended period of time.If the transmission continues beyond the set time,the transceiver will stop transmission and give out alarms.To stop the alarms,please release the PTT switch and the transceiver will resume to the state of standby.

◇◇ Optional Functions

•Busy Channel Lockout

The function can prevent interfering other intercom calls from the same channel,it needs to be set up by the writing frequency software.

•Battery Power Saving

The radio would reduce its power consumption if there is no signal or no operation.When the channel is unoccupied or no operated,the battery power-saving function is activated.When signal is received or with operation,the battery saving function would be off automatically.

•Low Battery Warning

If the battery power falls to the predetermined value during transmission, the radio will send out a voice prompt. Please replace the battery or charge it!

•Scrambling

It is a voice encryption mode which is different from sub audio.

◇◇ Optional Functions

•Companding

It is a function setting which prevents the inter-channel interference.

•CTCSS/DCS

The purpose is to avoid the mutual interference among different users,to avoid hearing the irrelevant calls and the interference signals.The radio has 50 CTCSS and 208 DCS,also non-standard subaudio can be set!

•CDCSS Mode

It is valid only when you set the CDCSS on the channels. This function has two selections: "normal signaling" and "special signaling". Normal Signaling refers to the CDCSS codes on the channels is ordinary codes, we can talk to each other with the same CDCSS; Special Signaling refers to the CDCSS codes on the channels is special processed codes,only with the same CDCSS and while setting a special signaling,then we can talk to each other,it can avoid the signal interference from the radios of the other manufacturers.

◇◇ Technical Parameters

SPECIFICATIONS	
Frequency Range	FCC:462.5500 - 467.7125 MHz IC:462.5625-467.7125MHz
Supply Power	DC3.7V
Memory Channel	22 channels for FCC; 14 channels for IC
Antenna Configuration	Integral Antenna
Max Antenna Gain	2.15dBi
Dimension	136×59×21mm
TRANSMITTER	
Max Output Power	26dBm
Modulation Mode	FM(F3E)
Max.Frequency Deviation	≤±2.5KHz
Sparious Radiation	≤7.5μW
Preemphasis Character	Per Octave 6dB
Emission Current	≤1000mA
RECEIVER	
Sensitivity	＜0.16μV（12dB SINAD）
Audio Power	≥300mW
Audio Distortion	＜5%
Intermodulation Interference Resistance	≥60dB
Receiving Current	≤300mA
Standby Current	≤20mA

◇◇ WARNNINGS

This two way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one form of electromagnetic energy. Other forms include, but are not limited to, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly, can cause biological damage. Very high levels of x-rays, for example, can damage tissues and genetic material.

Experts in science, engineering, medicine, health, and industry work with organizations to develop standards for safe exposure to RF energy. These standards provide recommended levels of RF exposure for both workers and the general public. These recommended RF exposure levels include substantial margins of protection.

All the two-way radios are designed, manufactured, and tested to ensure they meet government-established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of two-way radios. These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits:

Local Government Regulations

When two-way radios are used as a consequence of employment, the Local Government Regulations requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your two way radio has a RF Exposure Product Label. Also, your user manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

Radio License

Governments keep the radios in classification, most of the classified walkie-talkie need to get local government License, and operation is allowed. The detailed classification and the use of your two radios, please contact the local government radio management departments. For the following specified classification: the USA FRS, Australian CB, the individual license is not required.

◇◇ WARNNINGS

CE

The CE marking means: Hereby, QUANZHOU KAILI ELECTRONICS CO.,LTD. declares that the radio equipment type is in compliance with the RED Directive 2014/53/EU and the ROHS Directive 2011/65/EU and the WEEE Directive 2012/19/EU.

RF energy exposure standards and guidelines (if appropriate)

The FCCID means: This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environments at operating duty factors of up to 50% talk-50% listen and is approved for occupational use only.Your two way radio complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission (FCC), Code of Federal Regulations; 47 CFR part 2 sub-part J.
- American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE) C95. 1-2005
- IEEE Std. 1528:2013 and KDB447498, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- Institute of Electrical and Electronic Engineers (IEEE) C95.3-2002
- International Commission on Non-Ionizing Radiation Protection (ICNIRP)
- Ministry of Health (Canada) Safety Code 6 & Industry Canada RSS-102.
- International Electrotechnical Com-mission IEC62209-2:2010

Guidelines

•User awareness instructions should accompany the device when transferred to other users.
•Do not use this device if the operational requirements described herein are not met.

Operating Instructions

•Transmit no more than the rated duty factor of 50% of the time. To Transmit (Talk), push the Push To Talk (PTT) button. To receive calls (listen), release the PTT button. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance.
•Transmit only when people outside the vehicle are at least the recommended minimum lateral distance away from a properly installed according to installation instructions, externally mounted antenna.
•When operating in front of the face, worn on the body, always place the radio in a approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of None approved accessories may result in exposure levels, which exceed the IEEE/ICNIRP occupational/controlled environment RF exposure limits.
•If you are not using a body worn accessory and are not using the radio in the intended use position, in front of the face or at the body in the PTT mode or alongside of the head in the phone mode, then ensure-

the antenna and the radio are kept 2.5 cm(one inch) from the body when transmitting. Keeping the radio at a proper distance is important because RF exposures decrease with increasing distance from the antenna

Hand-held Mode

• Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least 2.5 cm (one inch) away from the nose or lips. The antenna should be kept away from the eyes. Keeping the radio at a proper distance is important as RF exposure decreases with increasing distance from the antenna.

Phone Mode

•When placing or receiving a phone call, hold your radio product as you would a wireless telephone. Speak directly into the microphone.

Electromagnetic Interference/Compatibility

NOTE: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

Avoid Choking Hazard

Small Parts. Not for children under 3 years.

◇◇ WARNNINGS

WARNING

Turn off your radio power in the following conditions

•Turn off your radio before removing (installing) a battery or accessory or when charging battery.
•Turn off your radio when you are in a potentially hazardous environments: Near electrical blasting caps, in a blasting area, in explosive atmospheres (inflammable gas, dust particles, metallic powders, grain powders, etc.).
•Turn off your radio while taking on fuel or while parked at gasoline service stations.

To avoid electromagnetic interference and/or compatibility conflicts

•Turn off your radio in any facility where posted notices instruct you to do so, hospitals or health care facilities (Pacemakers, Hearing Aids and Other Medical Devices) may be using equipment that is sensitive to external RF energy.

•Turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Note:
Pacemakers

◇◇ WARNNINGS

Defibrillators or other Implanted Medical Devices Persons with pacemakers, Implantable Cardioverter-Defibrillators (ICDs) or other active implantable medical devices (AIMD) should:

- ALWAYS keep the radio more than 15 cm from their pacemaker when the radio is turned on.
- Consult with their physicians regarding the potential risk of interference from radio frequency transmitters, such as portable radios (poorly shielded medical devices may be more susceptible to interference).
- Turn the radio OFF immediately if they have any reason to suspect that interference is taking place.
- Do not carry the radio in a chest pocket or near the implantation site, and carry or use the radio on the opposite side of their body from the implantable device to minimize the potential for interference.

Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

WARNING

◇◇ WARNNINGS

Protect your hearing

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Turn down the volume before adding headset or earpiece.
- Limit the amount of time you use headsets or earpieces at high volume.
- When using the radio without a headset or earpiece, do not place t he radio's speaker directly against your ear.

Note: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio's volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

WARNING

Avoid Burns

Antennas

•Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a minor burn can result.

Batteries (If appropriate)

•When the conductive material such as jewelry, keys or chains touch exposed terminals of the batteries, may complete an electrical circuit (short circuit the battery) and become hot to cause bodily injury such

as burns. Exercise care in handling any battery, particularly when placing it inside a pocket, purse or other container with metal objects.

Long transmission

•When the transceiver is used for long transmissions, the radiator and chassis will become hot.

WARNING

Safety Operation

Forbid

•Do not use charger outdoors or in moist environments, use only in dry locations/conditions.
•Do not disassemble the charger, that may result in risk of electrical shock or fire.
•Do not operate the charger if it has been broken or damaged in any way.
•Do not place a portable radio in the area over an air bag or in the air bag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the air bag inflates.

To reduce risk

•Pull by the plug rather than the cord when disconnecting the charger.
•Unplug the charger from the AC outlet before attempting any maintenance or cleaning.
•Contact Kaili for assistance regarding repairs and service.

Use of Communication Devices While Driving

•Always check the laws and regulations on the use of radios in the countries and areas where you drive.
•Give your full attention to driving and to the road.
•If available, use the hands-free facility.
•If driving conditions or regulations require it, pull off the road and park before making or answering a call.

WARNING

Approved Accessories

•This radio meets the RF exposure guidelines when used with the accessories supplied or designated for the product. Use of other accessories may not ensure compliance with the RF exposure guidelines and may violate regulations.

GUARANTEE

Model Number: _ ----------

Serial Number: _ ----------

Purchasing Date: _ ----------

Dealer: ---------- Telephone: ----------

Country: _ ----------

Address: _ ----------

Post Code: ---------- Email: ----------

Remarks:

1.This guarantee card should be kept by the user, no replacement if lost.
2.Most new products carry a two-year manufacturer's warranty from the date of purchase.

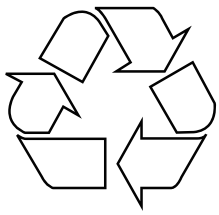
3.The user can get warranty and after-sales service as below:

- Contact the seller where you buy.
- Products Repaired by Our Local Repair Center.

4.For warranty service, you will need to provide a receipt proof of purchase from the actual seller for verification.

Exclusions from Warranty Coverage:

1.To any product damaged by accident.
2.In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
3.If the serial number has been altered, defaced, or removed.



QUANZHOU KAILI ELECTRONICS CO.,LTD.

Kaili Electronic Industrial Park(Photoelectric Information Base),Xiamei Town,Nanan,Quanzhou City,Fujian Province,China

FCC& RSS Warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SAR tests are conducted using standard operating positions accepted by the FCC/ISEDC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is a available for sale to the public, it must be tested and certified to the FCC/ISEDC that it does not exceed the exposure limit established by the FCC/ISEDC. Tests for each product are performed in positions and locations as required by the FCC/ISEDC.

For body worn operation, this device has been tested and meets the FCC/ISEDC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that Contains no metal.

To maintain compliance with the FCC/ISEDC's RF exposure guidelines, hold the transmitter and antenna at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away from the face.

This equipment complies with FCC/ISEDC radiation exposure limits set forth for an uncontrolled environment. In order to comply with the FCC/ISEDC RF exposure requirements, the antenna installation must comply with following:

Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

Your wireless hand-held portable transceiver contains a low power transmitter. This product sends out radio frequency (RF) signals when the Push-to-Talk (PTT) button is pressed.

The device is authorized to operate at a duty factor not to exceed 50%.

This device complies with ISEDC licence-exempt RSS standard (s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference,including interference that may cause undesired operation of the device.

Le présent areil est conforme aux CNR d'ISEDC licables aux areils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

(1) l'areil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISEDC exposition aux radiations

Cet équipement est conforme avec ISEDC les limites d'exposition aux rayonnements définies pour un contrôlé environnement.

Cet émetteur ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou émetteur.

Cet équipement doit être installé et utilisé avec un minimum de 2.5cm de distance entre le radiateur et votre corps.