

FASHION, DEXTEROUS
USERS MANUAL



User Manual

Two way radio

TG-K88mini

FCC ID:XBPTG-K88MINI



Thank you for purchasing this **Quansheng** Radio.

We believe this easy-to-use radio will provide reliable and dependable communication.

Quansheng Radio incorporates the latest advanced technology.

As a result, we know that you will be pleased with the quality and features of this product.

FEATURES

- PC programmable
- Voice prompt (Chinese or English)
- Jacklight
- CTCSS/DCS
- PTT-ID & DTMF
- Channel scan
- Time-out-timer(TOT)
- Low power alarm
- Squelch level adjustable
- Dual-watch operation
- 1750Hz call tone
- Tail tone elimination

PRECAUTIONS BEFORE USING

- ❶ Please read the User's Manual before using . It gives you important information about how to operate the portable radio.
- ❷ Please put the radio and accessories where the children can not touch.
- ❸ Maintenance can only be performed by professional technicians.
- ❹ Please use the standard battery pack and charger in order not to destroy the radio.
- ❺ Please use the standard antenna , in order not to shorten the distance.
- ❻ Do not expose the radio to sunlight for a long period of time , nor put it near the heat , nor use it in a high temperature environment.
- ❼ Keep it dry . (Rain or moisture will erode the electronic board) .
- ❽ Do not transmit when the antenna is not installed .
- ❾ If you find bad smell or smog , please turn off the radio immediately . And take the battery off the radio , then contact with **Quansheng** agent.

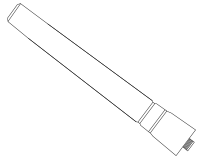
Warning:

- Easily exploded environment(gas,dust and mist,etc)
- Cut off the power supply while refueling or parking at the gas station.

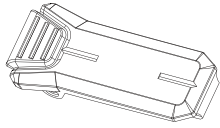
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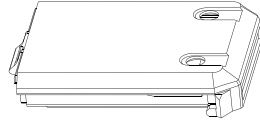
⚠ Carefully unpack the portable radio. We suggest that you check the following items before you throw away the packing materials.



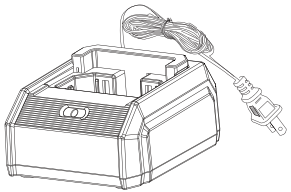
Antenna



Belt Clip



Li-ion Battery (3.6V)



Charger



User's Manual

CHARGING NOTES (1)

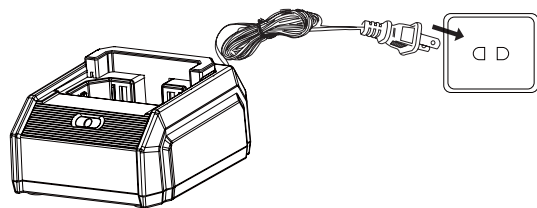
- Battery packs are not charged when they are shipped. Charge them before use.
- Initially charging the battery pack after purchased or extended storage (longer than 2 months) will not bring the battery pack to its greatest capacity or its normal charge, which can be done only after repeatedly charging and discharging for two or three times.

[CAUTIONS]

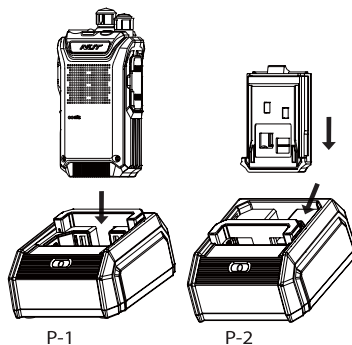
- After the battery is charged to its highest capacity, don't charge anymore. Otherwise it will effect the life of the battery , please take it from the charger.
 - Do not short-circuit the battery terminals or throw the battery into fire.
 - Never attempt to remove the casing from the battery pack.
-
- Please turn the power off before charging .
 - If the radio still shows low power after the normal charge, please change a new battery.
 - The average usage time of battery pack is 12 hours. Average usage time is 5% for transmitting, 5% for receiving and 90% for standby.

CHARGING NOTES (2)

- 1 Plug the AC adapter into the back of the charger. Then plug the power cable of the adapter into city electric power.

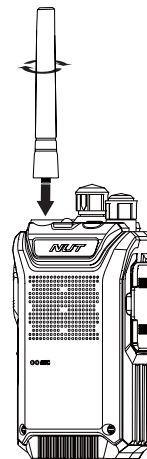


- 2 Slide the Li-ion battery pack or radio with a Li-ion battery pack into the charger.
 - ⊗ Make sure the battery pack is in connected with the charging terminals. (As P-1)
 - ⊗ When charging begins, the RED LED light displays. (As P-2)
 - ⊗ When the battery pack is charged to its greatest capacity, GREEN LED light displays.



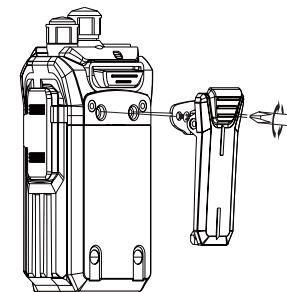
INSTALLING ANTENNA

- 1 Attach the antenna to the radio as illustrated on the right.



INSTALLING BELT CLIP

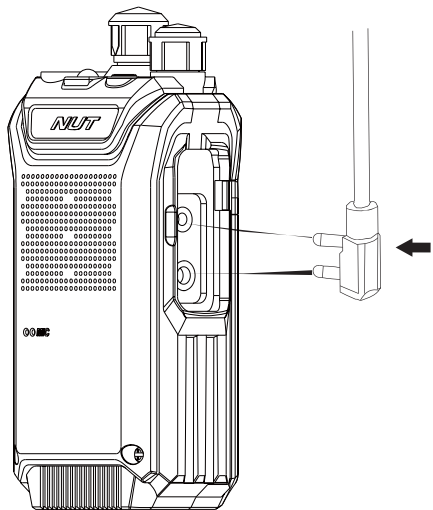
- 1 Attach the belt clip with the supplied screws using a phillips screw driver.



To attach the belt clip

INSTALLING EXTERNAL SPEAKER/MICROPHONE

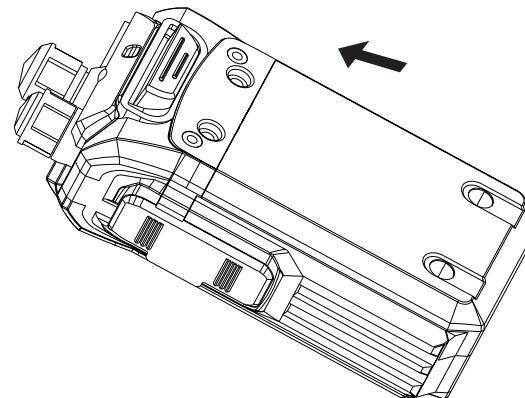
- ▶ Insert the speaker/microphone plugs into the speaker/microphone jacks.



PS: The radio is not fully rain-resistant while using the external speaker/microphone.

ATTACHING THE BATTERY PACK

- ▶ Slide the battery pack into the back of the radio in the direction of arrow. Slide the battery pack until the battery release button makes a "clicking" sound.



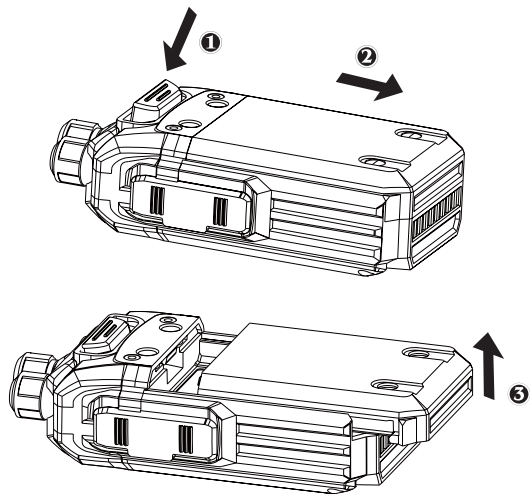
RELEASING THE BATTERY PACK

▶ Turn off the radio before releasing the battery pack.

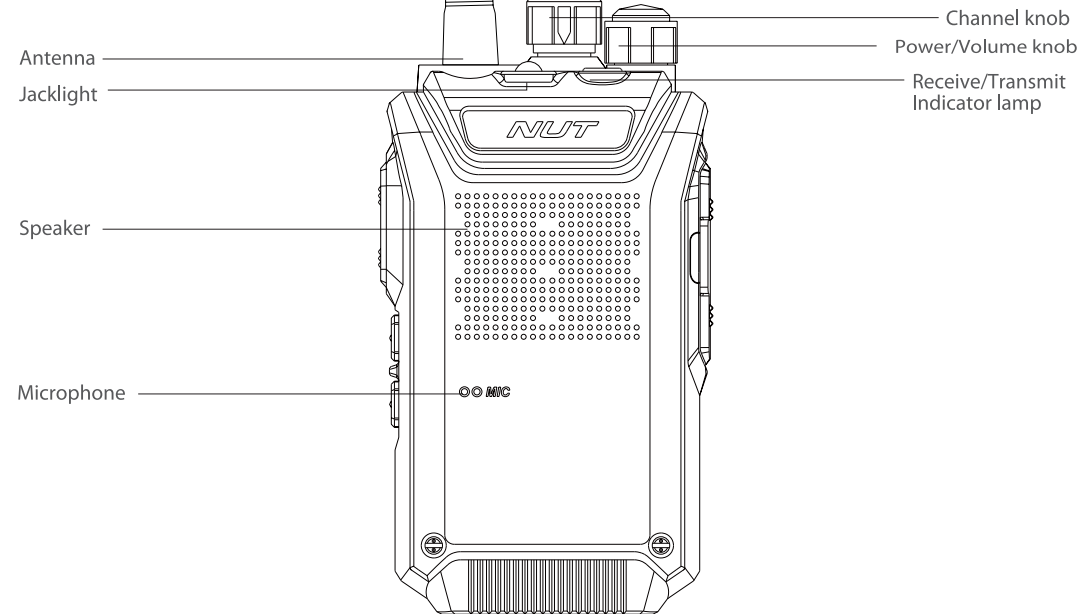
☒ Press the battery release button in the direction of the arrow **1** show below.

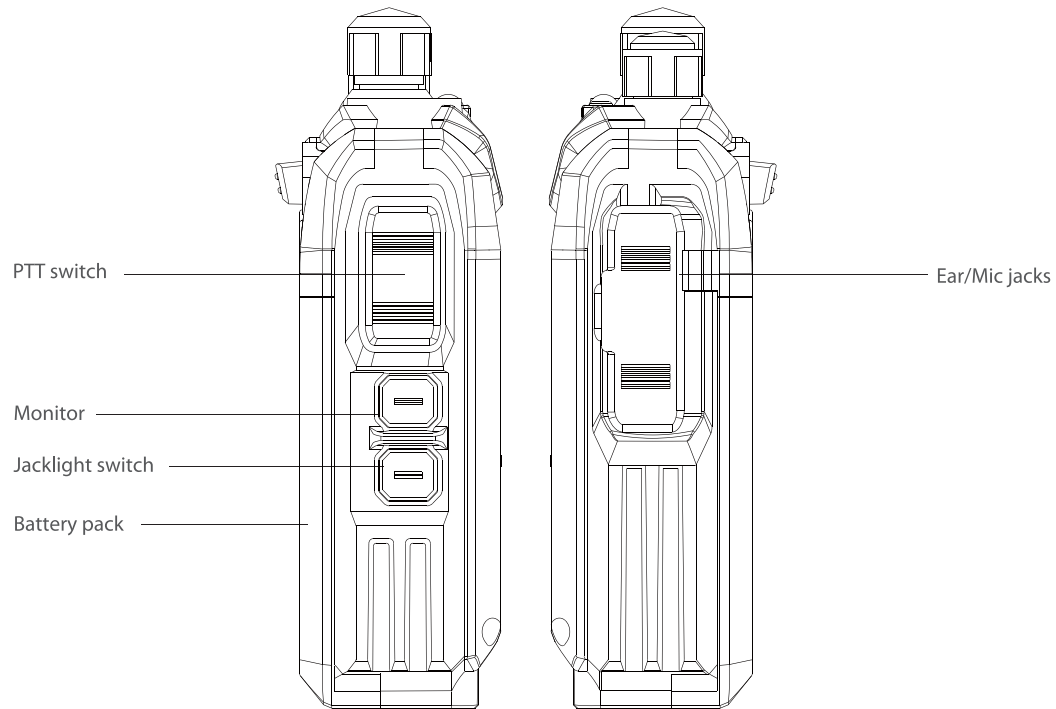
☒ Then push the battery in the direction of the arrow **2**

☒ And then release the battery pack **3**



DIAGRAM

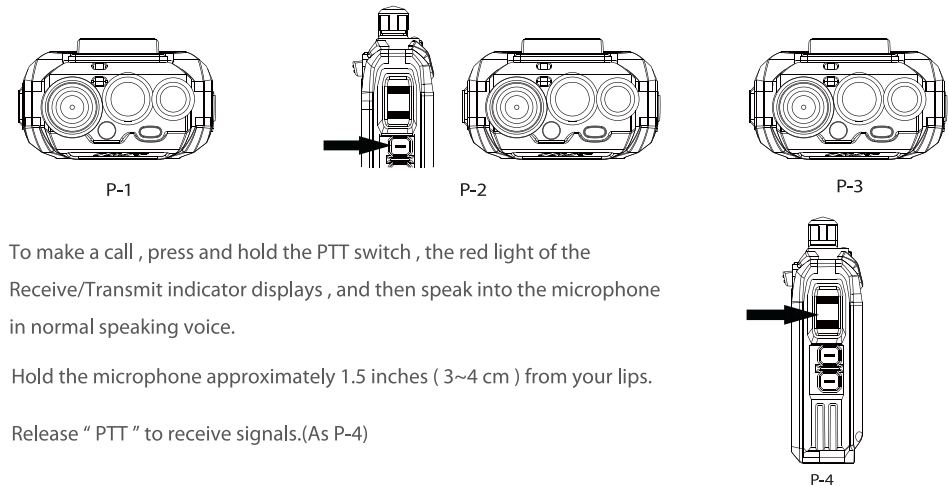




BASIC OPERATION

- Turn the Power/Volume knob clockwise to power on, the radio will beep and remind the current channel (As P-1)
- Pressing the "Monitor" key, turn the power/volume knob at same time to adjust volume (As P-2)
- Turn the channel knob to choose the wanted channel . (As P-3)

• When you receive signal, the speaker will sound.



- To make a call , press and hold the PTT switch , the red light of the Receive/Transmit indicator displays , and then speak into the microphone in normal speaking voice.
- Hold the microphone approximately 1.5 inches (3~4 cm) from your lips.
- Release " PTT " to receive signals.(As P-4)

PC programmable

the product could program the frequency on computer through interface by manufacturer, is incapable of tuning, or readily being altered, by the end-user.

Jacklight

Press(Jacklight key), the jacklight is ON. Press it again, the jacklight is OFF.

CTCSS/DCS

Set up workgroups/users with unique CTCSS/DCS to prevent disturbance in the same frequency.

CTCSS: 50 groups DCS: 208 groups.

Channel Scan

Rotate the channel knob to channel 16, press Monitor key to turn on the radio, you will hear the voice prompt of "Scan". It will scan from channel 1 to channel 16. Turn off the radio to exit.

NOTE: There must be frequency in channel 16.

Voice Prompt (Chinese or English)

You could set Chinese or English as the voice prompt by programming software.

Time-Out-Timer (TOT)

To limit the calling time, the radio will stop transmitting, and you will hear the warning tone if it transmits over the set time.

Low Power Alarm

Audible tone will remind you when the battery is running down.

Squelch Level Adjustable

There are 10(0-9) levels 0: Lowest 9: Highest

Too high squelch level may result in failing to receive in weak signals. Too low squelch level will make it be disturbed by other signals.

Dual-watch Operation

"Dual-watch"between the current working channel and channel 16.

The current working channel can receive its own frequency as well as the frequency of channel 16.

NOTE: There must be frequency in channel 16.

The operation steps are as follows:

- Press Monitor key to turn on the radio, and you will hear the voice prompt of"scan". Rotate the channel knob to the channel you want to set, the channel will be in"dual-watch"with channel 16.
- It could transmit only the frequency of the current channel by pressing PTT without receiving the signal of channel 16, and it could communicate with the16th channel only after receiving the signal of channel 16.

-
- After the signal disappears for 5s, it comes back to "dual-watch". Turn off the radio to exit.

PTT-ID & DTMF

This function can set the sound when you press key PTT to transmit or release to send PTT-ID.

- Set up parameters in the programming software.
- Connect the computer and the radios by specified programming cable, then read the information from the radio; Open "toolbar", click "edit", then click "optional functions", then to set the parameter.
 - A. DTMF CODE: sending the DTMF characters.
 - B. PTT: setting the sending mode (Press: TX; Release: TX; Both)
 - C. PTT-Prolong: setting the prolong time of the radio's PTT-ID (100ms - 1000ms) Pls click PTT-ID "ON" or "OFF" when setting the parameter (Note: Select "OFF" when using in case of affecting the radio)

1750Hz Call Tone

- Read the information from the radio, open "toolbar", click "edit", then click "optional functions", then select "ON" or "OFF" in the PTT.
- Press PTT+BAND to send 1750Hz call tone. (This function is for the repeater of European market.)

Tail Tone Switch

The radio will send closing command of tail tone squelch to receiving radio when call is end, the receiving end won't hear "beep" tail tone.

-
- Please click "Edit" and select open or close tail tone elimination in "Option function" box after read-in radio.
 - Pls open it in normal use, at least there is always "beep" when the call is end. (Note: The "Tail tone elimination" and "Tail tone test" are valid only when you open it.)

Tail Tone Elimination

To make a delay in closing receiving channel after receiving close command of tail tone squelch function.

- You can select the tail tone elimination in "Option function" box after click "Edit" in PC program, then set 100ms -1000ms to adjust the length in closing receiving channel.

Tail Tone Test

To make a delay in closing transmitting command after the radio send close command of tail tone squelch function automatically.

You can select the tail tone elimination in "Option function" box after click "Edit" in PC program, then set 100ms -1000ms to adjust the length of delay in closing transmitting command.

CTCSS									
01	67.0	11	94.8	21	131.8	31	171.3	41	203.5
02	69.3	12	97.4	22	136.5	32	173.8	42	206.5
03	71.9	13	100.0	23	141.3	33	177.3	43	210.7
04	74.4	14	103.5	24	146.2	34	179.9	44	218.1
05	77.0	15	107.2	25	151.4	35	183.6	45	225.7
06	79.7	16	110.9	26	156.7	36	186.2	46	229.1
07	82.5	17	114.8	27	159.8	37	189.9	47	233.6
08	85.4	18	118.8	28	162.2	39	192.8	48	241.8
09	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

DCS											
01	D023N	18	D115N	35	D212N	52	D306N	69	D431N	86	D546N
02	D025N	19	D116N	36	D223N	53	D311N	70	D432N	87	D565N
03	D026N	20	D122N	37	D225N	54	D315N	71	D445N	88	D606N
04	D031N	21	D125N	39	D226N	55	D325N	72	D446N	89	D612N
05	D032N	22	D131N	39	D243N	56	D331N	73	D452N	90	D624N
06	D036N	23	D132N	40	D244N	57	D332N	74	D454N	91	D627N
07	D043N	24	D134N	41	D245N	58	D343N	75	D455N	92	D631N
08	D047N	25	D143N	42	D246N	59	D346N	76	D462N	93	D632N
09	D051N	26	D145N	43	D251N	60	D351N	77	D464N	94	D654N
10	D053N	27	D152N	44	D252N	61	D356N	78	D465N	95	D662N
11	D054N	28	D155N	45	D255N	62	D364N	79	D466N	96	D664N
12	D065N	29	D156N	46	D261N	63	D365N	80	D503N	97	D703N
13	D071N	30	D162N	47	D263N	64	D371N	81	D506N	98	D712N
14	D072N	31	D165N	48	D265N	65	D411N	82	D516N	99	D723N
15	D073N	32	D172N	49	D266N	66	D412N	83	D523N	100	D731N
16	D074N	33	D174N	50	D271N	67	D413N	84	D526N	101	D732N
17	D114N	34	D205N	51	D274N	68	D423N	85	D532N	102	D734N

DCS											
103	D743N	121	D114I	139	D212I	157	D311I	175	D445I	193	D612I
104	D754N	122	D115I	140	D223I	158	D315I	176	D446I	194	D624I
105	D023I	123	D116I	141	D225I	159	D325I	177	D452I	195	D627I
106	D025I	124	D122I	142	D226I	160	D331I	178	D454I	196	D631I
107	D026I	125	D125I	143	D243I	161	D332I	179	D455I	197	D632I
108	D031I	126	D131I	144	D244I	162	D343I	180	D462I	198	D654I
109	D032I	127	D132I	145	D245I	163	D346I	181	D464I	199	D662I
110	D036I	128	D134I	146	D246I	164	D351I	182	D465I	200	D664I
111	D043I	129	D143I	147	D251I	165	D356I	183	D466I	201	D703I
112	D047I	130	D145I	148	D252I	166	D364I	184	D503I	202	D712I
113	D051I	131	D152	149	D255I	167	D365I	185	D506I	203	D723I
114	D053I	132	D155I	150	D261I	168	D371I	186	D516I	204	D731I
115	D054I	133	D156I	151	D263I	169	D411I	187	D523I	205	D732I
116	D065I	134	D162I	152	D265I	170	D412I	188	D526I	206	D734I
117	D071I	135	D165I	153	D266I	171	D413I	189	D532I	207	D743I
118	D072I	136	D172I	154	D271I	172	D423I	190	D546I	208	D754I
119	D073I	137	D174I	155	D274I	173	D431I	191	D565I		
120	D074I	138	D205I	156	D306I	174	D432I	192	D606I		

SPECIFICATIONS			
GENERAL			
Frequency range	UHF: 400-480MHz		
Rated voltage	DC 3.6V (Rechargeable Li-ion battery)		
Memory channel	16 channels		
Antenna impedance	50Ω		
Working manner	Same frequency single operation or different frequency single operation		
Dimensions	101mmX52mmX30mm		
TRANSMITTER		RECEIVER	
Output power	2W	Sensitivity	-122dBm(12dB SINAD)
Modulation mode	11KΦ F3E	Modulation receive bandwidth	5KHz
Maximum frequency deviation	<2.5KHz	Audio power	≤ 0.5W
Spurious radiation	<7uW	Audio distortion	<10%
Preemphasis character	6dB/per fold	Blocking	≥85dB
Emission current	≤ 1.9A	Intermodulation	≥55dB
CTCSS/DCS frequency deviation	0.37KHz±30Hz	Adjacent channel selectivity	≥60dB
Modulation sensitivity	12mV	Spurious radiation	≥65dB
Modulation distortion	≤5%		

○ All stated specifications are subject to change without notice or obligation.

SAFETY TRAINING INFORMATION



Your Fujian Nanan Quansheng Electronics Co.,Ltd. radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the “General Population” in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only”. In addition, your Fujian Nanan Quansheng Electronics Co.,Ltd. radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- ▮ FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ▮ American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ▮ American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields– RF and Microwave.



The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, your Fujian Nanan Quansheng Electronics Co.,Ltd. radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Attention:

This radio complies with IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environment at operating duty factors of up to 50% and is authorized by the FCC for occupational use only. An appropriate warning label is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip).

Do not use this device when antenna shows obvious damages

Only the headset reported in test report can be used.