

THE USER'S MANUAL

User Safety, Training, and General Information

READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR **BFDX** PORTABLE TWO-WAY RADIO.

Compliance with RF Energy Exposure Standards

The two-way radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environment at duty cycles of up to 50% talk-50% listen and should be used for occupational use only. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

Note: The approved batteries supplied with this radio are rated for a 5-5-90 duty cycle (5% talk-5% listen-90% standby), even though this radio complies with the FCC occupational RF exposure limits at duty cycles of up to 50% talk.

Complies with the following of RF energy exposure standards and guidelines:

United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J

American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992

Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1999 Edition International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

Operational Instructions

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:

Hand-held radio operation

Hold the radio in a vertical position with the microphone 5 cm away from the lips and let the antenna farther away from your head.

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 or imprisonment or both.
- Refer service to qualified technicians only.

WARNING: It is important that the operator is aware of and understand hazards common to the operation of any transceiver. Explosive environment(such as gases, dust, fumes, etc). Turn off your transceiver while talking on fuel, or while parked in gasoline service stations.

If you require this machine to be developed or some changed, pleased connect with BFDX or your BFDX dealer.

FCC Caution:

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 radiate 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 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 into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Requirements

Your radio must be properly licensed Federal Communications Commission prior to use. Your Wireless dealer can assist you in meeting these requirements. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands.

Precautions

Only qualified technicians are allowed to maintain this product.

Do not use the radio or charge a battery in explosive areas such as coal gas, dust, steam, etc.

Switch OFF the radio while refueling or parking at gas station.

Do not modify or adjust this radio without permission.

Do not expose the radio to direct sunlight over a long time, nor place it close to heating source.

Do not place the radio in excessively dusty, humid areas, nor on unstable surfaces.

Safety: It is important that the operator is aware of and understands hazards common to the operation of any radio.

CE Caution:

Hereby, **Fujian Quanzhou Beifeng Telecom Systems Co., Ltd.** declares that this Two-way radio is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC and the COUNCIL RECOMMENDATION of 12 July 1999 on the limitation of exposure by the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC).

A copy of the DoC may be obtained through the following address.

Puren Industrial Area, Beimen Quanzhou, Fujian, China

Training Guidelines

- 1.Only qualified technicians are allowed to maintain this product.
- 2.To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any place where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy. When on aircraft, turn off your radio when airline crew instruct you to do so.
3. When in vehicles with an airbag, do not place a portable radio in the area over an airbag or in the airbag deployment area.
- 4.Turn off your radio prior to entering any area with a potentially explosive atmosphere. Do not remove, install, or charge batteries in such areas.
- 5.To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps.
- 6.Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn may result.
- 7.Do not expose the radio in direct sunlight for a long time or place it close to a heating source.
- 8.When transmitting with a portable radio, hold the radio in a vertical position with its microphone about 5 centimeters away from your mouth.
- 9.The communication range will be impacted in rainy or cloudy days or when you are in forest.

We are grateful you chose **BFDX** for your land mobile radio applications. We believe this easy-to-use transceiver will provide dependable and reliable communication to personal operating at peak efficiency.

BFDX transceiver incorporated the latest in advanced technology. As a result, we feel strongly that you will be pleased with the quality and features of this product!

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Technology Specification

Unpacking and Checking Equipment

Note: the following explain for unpacking is aim to **BFDX** dealer, promised **BFDX** service institution or factory.

Please carefully unpack the transceiver. We recommend you identify the items listed in the following table. If any items are missing or have been damaged, please immediately contact your **BFDX** dealer.

Supplied Accessories:

Item	Quantity
Antenna	1
Hand strap	1
User Manual	1

PREPARATION

INSTALLING/ UNPACKING THE BATTERY PACK

Note: Because the battery pack is provided uncharged, you must charge the battery pack before using it with the transceiver. To charge the battery pack, refer To CHARGING THE BATTERY PACK.



Position the two grooves on the edge and two hooks at the bottom of the battery over the corresponding guides on the back of the transceiver.

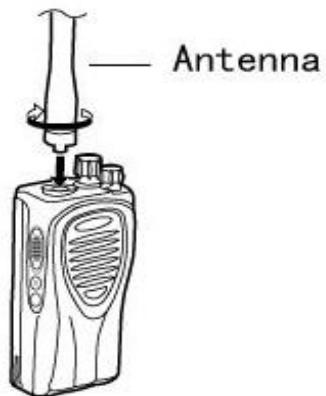


Slide the battery pack along the back of the transceiver until the release latch on the top of the transceiver locks the battery pack in place.



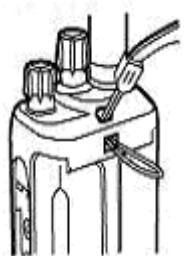
To remove the battery pack, push the release latch on top, then slide the battery pack down.

INSTALLING THE ANTENNA



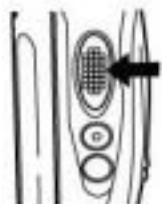
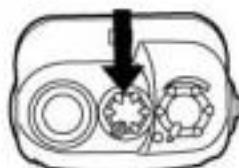
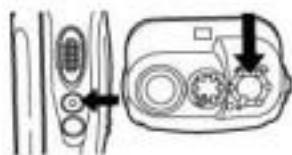
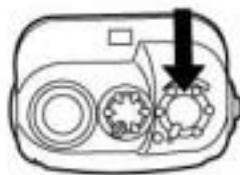
Hold the base of the supplied antenna, then screwing the antenna into connector on the top panel of the transceiver until secure

INSTALLING THE HAND STRAP



Loop the hand strap through the ring on the back of the transceiver.

BASIC OPERATION



1. Turn the [power]/ [volume control] switch clockwise to turn ON the transceiver.

2. Press the [monitor] or Squelch to receive the noise. Then turn power switch/volume control to adjust the volume.

3. Turn the selector to choose channels.

When receive the right signals, you will listen a sound from the speaker.

4. To transmit, hold the transceiver approximately 3-4cm from your mouth, then press and hold the PTT switch and speak into the microphone in your normal tone of voice.

5. releasing PTT switch to receive.

Note: if battery voltage is low, it will stop transmitting, and alert.

GETTING ACQUAINTED

Antenna

LED display

When transmitting, it displays red. When receiving, it displays green. It displays activated red, when appears low voltage.

Speaker

Microphone



Channel selector

Turn the channels from channel 1 to 16 channel.

Power switch/ volume control bottom

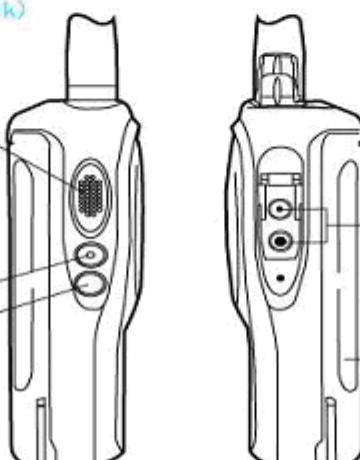
Turn the [POWER] switch clockwise to turn ON the transceiver. To turn OFF the transceiver, turn the [power] switch counter-clockwise until it clicks, please turn to adjust volume.

PTT (press to talk)

ON/OFF

Press ON/OFF to call other people. It receives when release.

Monitor Scan



Channel/Frequency
programming jack for
manufacture internal
use only

Battery jack

Senior operation

Auto-call function

After turning on the power switch, when turn the selector, it with tone calling, from 1 channel to 16 channels, which enables you to select the channel conveniently.

Monitor/squelch function OFF.

To receive the weak signals, the channels doesn't work or no signals to adjust the volume by this function.

Instant squelch function OFF: press to receive the background noise, release to get back the operation station.

Scan

1. If transceiver was set up at least 2 channels to scan, after pressing scan key for 1 second, the transceiver will check the channels automatically until check the signal to stop. Meanwhile it stay this channel until the signal disappear, if the signal disappear at once, the transceiver will stay for 5 second then scan.
2. when scan, LED glitters green, if receive signal, LED displays green(not glitter). If you want to stop scan, press scan switch for 1 second again. The channel of transceiver will stay the coder's channel.
3. press PTT keypad to transmit, the transceiver will choose the channels, which is the latest used.

QT/DQT

QT/DQT signals would be set up by the dealer. QT/DQT coder is mute volume/ coder, it enables you ignore the same channel to call other people.

If one channel is set up the QT/DQT coder, it just can receive the exact frequency or coder's signal to use squelch. So, QT/DQT mode same as your transceiver of the broadcast station just receive your signal. The squelch would not opened, if other use different QT/DQT in the same channel to call, so you will not listen the call, it enables you ignore these calls. It seems like you have personal channels with QT/DQT, but, if others set up the same QT/DQT, they still can hear your call.

Time-out timer

The Time-out Timer (TOT) limits the time of each transmission. The built-in time-out timer limits each transmission time to a maximum of 300seconds. Just before the transceiver stops the transmission, a warning beeps sounds. It is necessary to protect the transceiver from thermal damage. You can turn this function OFF.

Battery power-saving

When it doesn't receive the signal or doesn't operate (don't press keypad, don't turn switch), the battery power-saving can reduce power. When the channels is not busy and not operated for 5 seconds, the battery power-saving turned on, when

receive the signals or operate, battery power-saving turn off.

Low power alert

It appears when need charger or change the battery. If battery power is lower than 6V to receive or transmit, LED displays red and appears "DU" sound.

Busy channel locked

When turn on the keypad, in the same channel, when it is busy, if press PTT keypad, it will appears "DU" sound to alert and prohibit to transmit. Release PTT switch to stop alert sound and back to the receive mode.

QT FREQUENCY CHART (39 FREQUENCIES)

QT NO	Frequency HZ						
1	67.0	11	94.8	21	131.8	31	186.2
2	69.3	12	97.4	22	136.5	32	192.8
3	71.9	13	100.0	23	141.3	33	203.5
4	74.4	14	103.5	24	146.2	34	210.7
5	77.0	15	107.2	25	151.4	35	218.1
6	79.7	16	110.9	26	156.7	36	225.7
7	82.5	17	114.8	27	162.2	37	233.6
8	85.4	18	118.8	28	167.9	38	241.8
9	88.5	19	123.0	29	173.8	39	250.3
10	91.5	20	127.3	30	179.9		

DCS (83 CODES)

023	114	174	315	445	631
025	115	205	331	464	632
026	116	223	343	465	654
031	125	226	346	466	662
032	131	243	351	503	664
043	132	244	364	506	703
047	134	245	365	516	712
051	143	251	371	532	723
054	152	261	411	546	731
065	155	263	412	565	732
071	156	265	413	606	734
072	162	271	423	612	743
073	165	306	431	624	754
074	172	311	432	627	

Technical Specifications

Model	BF-5208UHF
Frequency range	430-470MHz Low frequency range 430.185-430.560MHz Middle frequency range from 450.185-450.560MHz High frequency range from 469.610-469.985MHz (The channel/frequency is capable of operating on any specified frequency of the band listed.)
Channels	16
Channel space	25KHz
Operating temperature range	-20 to +60
Power supply	7.2V DC (±20%)
Volume	55(L)×33(W)×123(H)mm
Weight	350g(including the battery pack)
Transmitter	UHF
Power output	3.13W (Conducted)
Frequency stability	±5ppm
Modulated mode	16K $\frac{1}{2}$ F3E
Spurious emissions	-70dB
FM noise	-40dB
FM distortion	5%
Maximum frequency deviation	±5KHz
Receiver	UHF
Frequency stability	±5ppm
Selectivity (at 12dB SINRAD)	Better than 0.25μV
Receiving FM bandwidth	±7KHz
Adjacent channel selectivity	65dB
Intermodulation rejection ratio	60dB
Anti interfere of spurious wave	60dB
Audio output power	500mW