

User Manual (FCC&IC) Draft

Model: BF-88A



ATTENTION

Your BF-88A is a multi-task FRS transceiver. Combining the latest technology in radio communication along with a sturdy mechanical frame, BF-88A is the ideal and effective solution for the professionals who need to stay in touch with the working team (in construction sites, buildings, shows, trade fairs or hotels) or for leisure users that just want to keep up with friends and family.

To help you ward off bodily injury or property loss that may arise from improper operation, please read all the information carefully before using our products.

Intended Use

Our products are designed to provide reliable wireless communication services for users across many industry sectors. In order to use the products safely and to achieve the best performance, they must be used as intended. The operator of the product is responsible for damage to the product or damage caused by the product if the product was used beyond the intended use instructions.

Intended use includes that:

- The product is used by users who have full knowledge of its RF exposure and can exercise control over their RF exposure to meet the occupational limits in FCC/ICNIRP and international standards.
- All the security instructions set forth in this document are always heeded.
- The general, national and in-house safety regulations are heeded.
- The product is exclusively used with the frequencies licensed by the respective authority.
- The product is configured appropriately by the dealer.

Besides, intended use also requires the product operator to be well-trained and to be familiar with the applicable standards, regulations and provisions.

REGULATORY Information

Important: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by qualified technicians.

To be safe and sure:

- Never open your radio's case.
- Never change or replace anything in your radio except the battery.
- Any attempt to change frequencies or output power of the radio invalidates the approval

Your radio might cause TV or radio interference even when it is operating properly. To determine whether Your radio is causing the interference, turn it off. If the interference goes away, your radio is causing it. Try to eliminate the interference by moving your radio away from the receiver. If you cannot eliminate the interference, the FCC requires that you stop using the radio.

Hazardous Environments: Do not operate the radio in hazardous environments. Explosion or fire may result.

Do not operate the radio near unshielded electrical blasting caps.

Under certain conditions, radios can interfere with blasting operations and may cause an explosion. Turn your radio OFF to prevent accidental transmission when in a blasting area or in areas posted: "Turn off two-way radio." Construction crews often use remote control RF devices to set off explosives.

Note: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

RF EXPOSURE INFORMATION

WARNING! Read this information before using the radio. In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human Exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and International standards bodies. The design of the radio complies with the FCC guidelines and these international standards. Never allow children to operate the radio without adult supervision and the knowledge of the following guidelines.

WARNING! It is up to the user to properly operate this radio transmitter to insure safe operation. Please adhere to the

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following:

Use only the supplied or an approved antenna.

Unauthorized antennas, modifications, or

Attachments could impair call quality, damage the radio, or result in violation of FCC regulations.

Do not use the radio with a damaged antenna.

If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for a replacement antenna.

Any attempt to change frequencies or output power of the radio invalidates the approval.

■ FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

Our radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "General Population", 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 "Occupational Use Only" in an uncontrolled environment. This radio has been tested and complies with the FCC RF exposure limits for "General Population". In addition, our 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:

---IEEE Std. 1528:2013 and KDB447498, 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 as-sure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmissions, The 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 General Population RF exposure environment at operating duty factors of up to 75% and is authorized by the FCC for General Population. An appropriate warning label is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5 cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip), a minimum distance of 0 cm. Do not use this device when antenna shows obvious damages.

■ IC COMPLIANCE

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(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.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) cet appareil ne doit pas causer d'interférences nuisibles et

(2) il doit pouvoir accepter les interférences, incluant celles pouvant nuire à son fonctionnement normal.

Tout changement ou modification non approuvé expressément par la partie responsable pourrait annuler le droit à l'utilisateur de faire fonctionner cet équipement.

This EUT is compliance with SAR for uncontrolled exposure limits in IC RSS-102 at operating duty factors of up to 50% and

had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with a minimum distance of 2.5 cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip), a minimum distance of 0 cm. Cet EUT est conforme au SAR pour les limites d'exposition incontrôlées dans IC RSS-102 à des facteurs de service allant jusqu'à 75% et a été testé conformément aux méthodes et procédures de mesure spécifiées dans IEEE 1528 et IEC 62209. Cet équipement doit être installé et utilisé avec une distance minimale de 2,5 cm doit être maintenu lorsqu'il est tenu face à face, et les opérations portées sur le corps sont limitées aux accessoires d'origine approuvés (clip de ceinture), une distance minimale de 0 cm.

Precautions for Batteries

■ Charging Prohibitions

To protect you against any property loss, bodily injury or even death, be sure to observe the following safety instructions:

1. Do not charge or replace your battery in a location containing fuels, chemicals, explosive atmospheres and other flammable or explosive materials.
2. Do not charge your battery that is wet. Please dry it with a soft and clean cloth prior to charge.
3. Do not charge your battery suffering deformation, leakage and overheat.
4. Do not charge your battery with an unauthorized charger.
5. Do not charge your battery in a location where strong radiation is present.
6. Overcharge shall always be prohibited for it may shorten the life of your battery.

■ Maintenance Instructions

To help your battery work normally or prolong its life, be sure to observe the following instructions:

1. Accumulated dust on charging connector may affect normal charging. Please use a clean and dry cloth to wipe it on a regular basis.
2. It is recommended to charge the battery under 5°C~40°C. Violation of the said limit may cause battery life reduction or even battery leakage.
3. To charge a battery attached to the product, turn it off to ensure a full charge.
4. Do not remove the battery or unplug the power cord during charging to ensure a smooth charging process.
5. Do not dispose of the battery in fire.
6. Do not expose the battery to direct sunlight for a long time nor place it close to other heating sources.
7. Do not squeeze and penetrate the battery, nor remove its housing.

■ Transportation Instructions

1. Damaged batteries must not be transported.
2. To avoid short circuit, separate the battery from metal parts or from each other if two or more batteries are transported in one packaging.
3. The radio must be switched off and secured against switch-on, if the battery is attached.

The content of the shipment must be declared in the shipping documents and by a Battery Shipping Label on the packaging. Contact your hauler for the local regulations and further information.

Precautions for Disposal

Once the service life of our products (including but not limited to radios and batteries) has ended, they shall not be disposed as household garbage. Their recycling and disposal shall satisfy your local regulations.

Care and Safety

Your BF-88A was designed to fulfill any warranty obligations and to enjoy this product for many years.

As for all the electronically devices, we recommend you to follow this few suggestions:

- Do not attempt to open the unit. Non-expert handling of the unit may damage it and/or annul the warranty.
- When using regulated power supply, take notice of power voltage that must be 5V to avoid damages.
- High temperatures can shorten the life of electronic devices, and warp or melt certain plastics. Do not store the radio in dusty or dirty areas.
- Keep the Radio dry. Rainwater or damp will corrode electronic circuits.
- If it appears that the Radio diffuses peculiar smell or smoke, please shut off its power immediately and take off the charger or battery from the Radio.

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- Do not transmit without antenna.
- To clean the radio, use a soft cloth dampened with water. Do not use cleaners or solvents because they can harm the body of the unit and leak inside, causing permanent damage.
- Use a dry, lint-free cloth to clean the battery contacts.

Package Contents

- 1 BF-88A transceiver
- 1 1500mAh Li-ion rechargeable battery pack
- 1 User Manual
- 1 belt clip
- 1 desktop charger

Main characteristics

- 14ch FRS Transceiver (No license required)
- Channel spacing: 12.5 KHz
- Vocal tuning
- Monitor
- 2pin Kenwood accessory jack
- 50 CTCSS tones and 210 DCS codes
- Output power: Max 2W
- Channel Scan
- Battery save
- Flashlight
- TOT (Time out timer)
- Li-Ion 1500mAh battery pack

Coverage/Range

The maximum range depends on terrain condition and is obtained during use in an open space. The only limitation to maximum possible range are environmental factors such as blockage caused by trees, buildings, or other obstructions. Inside a car or a metallic constructions, the range can be reduced. Normally the coverage in the city, with buildings or other obstructions is about 1 or 2 Km. In open space but with obstructions like trees, leaves or houses the maximum possible range is about 4-8 Km. In open space, without obstructions and in sight, like for example in mountain, the coverage can be more than 10Km.

Battery recharge

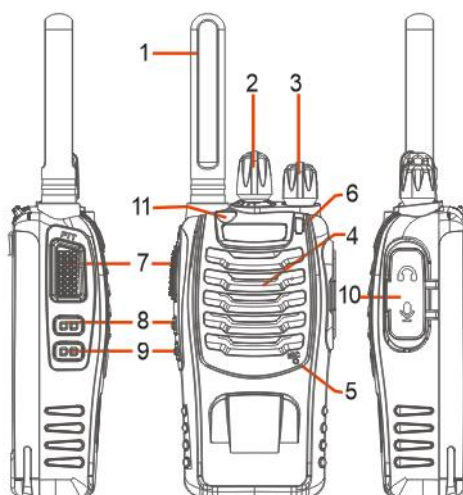
BF-88A is equipped for using a 3.7V Li-ion rechargeable battery pack which can be recharged connecting the socket of the AC/DC wall adaptor to a mains power socket and inserting the jack of the wall adaptor into the desktop charger plug. It takes 4-5 hours to fully recharge the radio. For maximum battery life, we recommend charging the battery pack when the BF-88A is off and the battery pack is fully discharged.



Using a different battery charger other than the one specified can cause damage to your device or may even cause explosions and personal injuries.

The Battery power saving feature enables a reduction in consumption of up to 50%. If it has been set, it automatically activates when the transceiver does not receive any signal for more than 5 seconds in order to save the battery life.

Main controls and parts of the radio



1. Antenna
2. Encoder: rotate clockwise or counter-clockwise to select the desired channel
3. Power/volume knob-turn clockwise to power on and increase the volume level.
Turn counter-clockwise to decrease the volume level and power off.
4. Speaker
5. Built-in microphone
6. Led indicator: RED: TX; GREEN: RX.
7. PTT: push this button to transmit, release it to receive.
8. Side key 1: hold down this button to activate the Monitor function.
9. Side key 2: shortly press this button to turn on/off the flashlight at the top side of the radio.
10. External Speaker/Mic Jack- allows the connection with external devices such as headsets, microphones.
11. Flashlight

Operations

Power on/off and volume adjustment

Rotate the Power/Volume knob clockwise to turn the radio on. Rotate the control clockwise /counter-clockwise to adjust the volume level as you prefer. To turn the radio off, rotate the control counter-clockwise till hearing a mechanical “click”.

Transmission

To communicate, all radios in your group must be set to the same channel. Briefly press the Side key 1 to enable the Monitor feature in order to make sure that the frequency is not busy, and then press the PTT button. Release the PTT key to receive. Only one user at a time can talk during radio communications. Therefore, it is important not to transmit when you are receiving a communication and use the transmission mode sparingly to allow other users to talk. Transmission consumes a significant amount of energy and should therefore be used sparingly to prolong the battery life. If you are unable to contact a station that you have no problems in receiving, the station may be using CTCSS tones or DCS codes.

Monitor

The Monitor feature is for excluding (opening) the Squelch, in order to listen to signals that are too weak to keep the Squelch permanently opened. Hold down the **Side key 1** to enable such function.

Scan

This function can be activated only by means of the optional programming software. To enable the Scan function, all 16 channels must be programmed. If you turn on the radio on channel 14, the scanning will automatically start. Whenever any signal is detected, the scanning will stop on a busy channel. If the PTT is pressed, you will transmit on the latest busy

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channel. Channel 14 is the priority channel; therefore if you don't pick up any signal when you press PTT, the radio will transmit on channel 14.

CTCSS/DCS tones

CTCSS and DCS tones are similar to access codes and enable the radio to communicate only with the users that are tuned on the same channel and have set the same code. For each channel, you can set up to 50 CTCSS tones and 210 DCS codes. The CTCSS/DCS tones are a sort of "access codes" and enable the radio to communicate only with the other users set on the same frequency and on the same CTCSS/DCS tone. Undesired signals coming from other stations set on the same frequency but with different CTCSS/DCS tones won't be received.

Flashlight

With BF-88A turned on, shortly press the **Side key 2** to turn on/off the flashlight at the top side of the radio.

Prompt voice switch settings

The encoder is selected to the **10th** channel. Press and hold the **PTT** and **Side Key 1** to turn on the radio, and turn the prompt voice on or off.

Turn on the prompt voice function, and there will be voice prompts when the encoder is turned on or operated. If you turn off the prompt voice function, there is only a "beep" prompt when you turn on or operate the encoder.

On-line service and support

The Pofung website provides additional information about obtaining service or support for the Pofung line of two-way radios and accessories. Visit: www.pofungshop.com Mail: service@pofungshop.com

FCC Licensing Information This pofung radio operates on Commercial/ Land Mobile frequencies which require a license from the Federal Communications Commission (FCC) for business, personal, education and recreational use. To obtain forms, call the FCC forms hotline at: 1-800-418-3676 or go to <http://www.fcc.gov> For questions concerning commercial licensing, contact the FCC at 1-888CALL-FCC (1-888-225-5322).

Appendix A. – Trouble shooting guide

Phenomena	Analysis	Solution
You cannot turn on the radio.	The battery may be installed improperly.	Remove and reattach the battery.
	The battery power may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
During receiving, the voice is weak or intermittent.	The battery voltage maybe low.	Recharge or replace the battery.
	The volume level may be low.	Increase the volume.
	The antenna maybe loose or maybe installed incorrectly.	Turnoff the radio, and then remove and reattach the antenna.
You cannot communicate with other group members.	The speaker maybe blocked.	Clean the surface of the speaker.
	The frequency or signaling type maybe inconsistent with that of other members.	Verify that your TX/RX frequency and signaling type are correct.
	You may be too far away from other members.	Move towards other members.
You hear unknown voices or noise.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio in analog mode maybe set with no signaling.	Request your dealer to set signaling for the current channel to avoid interference
You are unable to hear anyone because of too much noise and hiss.	You may be too far away from other members.	Move towards other members.
	You may be in an unfavorable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, restart the radio, and try again.
	It may be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The radio keeps transmitting.	VOX may be turned on or the headset is not installed in place	Turn off the VOX function. Check that the headphones are in place.

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You cannot use the keys.

The keypad may not work temporarily.

Restart the radio.

NOTE: If the above solutions cannot fix your problems, or you may have some other queries, please contact your dealer for more technical support.

Appendix B. – Technical Specifications

General Part

Frequency Range	462.5625 to 462.7125MHz 467.5625 to 467.7125MHz
Working temperature	-10°C to +40°C
Operation Voltage	DC 3.7 V ±10%
Operation Mode	Simplex
Dimensions	168mm×57mm×34.5mm (with Antenna)
Weight	150g (Battery pack included)
Antenna Impedance	50ohm
Duty cycle	5/5/90%
Category	B

Transmitter Part

RF Output Power	2W /0.5W (Max)
FM Modulation	11K0F3E@12.5KHz
Spurious Emission	-13dBm < 1GHz , -13dBm > 1GHz
Adjacent Channel Power	60dB @ 12.5KHz
Transmission current	≤1000mA

Receiver Part

Receive Sensitivity	0.25μV (12dB SINAD)
Adjacent Channel Selectivity	≥55dB@12.5KHz
Inter Modulation and Rejection	≥55dB@12.5KHz
Conducted Spurious Emission	≤-57dB@12.5KHz
Rated Audio Power Output	0.5W @8 ohms
Receive current	≤380mA
Rated Audio Distortion	≤5%

NOTE: All specifications may be modified without prior notice or liability.

Appendix C. – FRS Channels and Frequencies

CH.No	CH.Freq.	Power
1	462.5625	2W
2	462.5875	2W
3	462.6125	2W
4	462.6375	2W
5	462.6625	2W
6	462.6875	2W
7	462.7125	2W
8	467.5625	0.5W
9	467.5875	0.5W
10	467.6125	0.5W
11	467.6375	0.5W
12	467.6625	0.5W
13	467.6875	0.5W
14	467.7125	0.5W

Disclaimer

The accuracy and completeness of the contents are sought in the process of compilation, but we do not bear any

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responsibility for the possible errors or omissions. With the continuous development of technology, we reserve the right to change the design and specification of the product without notice. No copy, modification, translation and dissemination of this handbook may be made in any form without the prior written authorization of our department.

PO FUNG ELECTRONIC(HK) INTERNATIOANL GROUP COMPANY

Address: 3/F FULOK BLDG 131-133 WING LOK ST SHEUNG WAN, Hong Kong

Telephone: +86-595-86752889

Fax: +86-595-86754889

Mail: sales@pofungshop.com

Http://www.pofungshop.com