

**Two Way Radio**

**Model: NR-F88S**

**User's Manual**

## IMPORTANT NOTICE



**WARNINGS:** Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by ALERVITES may cause a violation of the technical regulations of part 95 of the FCC rules, or violation of type acceptance requirements of part 2 of the rules. Your radio is set up to transmit a regulated signal on an assigned frequency. Any adjustment to your radio must be made by qualified technicians.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.



### FCC & RSS WARNINGS:

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/ISED 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 available for sale to the public, it must be tested and certified to the FCC/ISED that it does not exceed the exposure limit established by the FCC/ISED. Tests for each product are performed in positions and locations as required by the FCC/ISED.

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

To maintain compliance with the FCC/ISED'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/ISED radiation exposure limits set forth for an uncontrolled environment. In order to comply with the FCC/ISED 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 ISED 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 ariel est conforme aux CNR d'ISED licables aux arels radio exemprs 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.

Les tests SAR sont effectués à l'aide d'une position de fonctionnement standard acceptée par l'ISED, où l'équipement transmet à son niveau de puissance certifié le plus élevé dans toutes les bandes de fréquences testées, et bien que le SAR soit déterminé au niveau de puissance certifié le plus élevé, le niveau de SAR réel de l'équipement en fonctionnement peut être bien inférieur au maximum. Les véhicules neufs doivent être testés et certifiés à l'ISED avant d'être vendus au public et ne doivent pas dépasser les limites d'exposition fixées par l'ISED. Les tests de chaque produit sont effectués aux endroits et aux endroits requis par l'ISED.

Pour une utilisation sur le corps, l'appareil est testé et conforme aux directives d'exposition aux RF de l'ISED lorsqu'il est utilisé avec les accessoires spécifiés pour ce produit ou avec des accessoires sans métal.

Pour rester en conformité avec les directives d'exposition aux RF de l'ISED, maintenez l'émetteur et l'antenne à au moins 1 pouce (2,5 cm) du visage et parlez d'une voix normale, l'antenne étant dirigée vers le haut et éloignée du visage.

L'appareil est conforme aux limites d'exposition aux rayonnements spécifiées par l'ISED pour les environnements non contrôlés. Pour être conforme aux exigences d'exposition aux RF de l'ISED, l'installation de l'antenne doit répondre aux exigences suivantes:

Les utilisateurs doivent être pleinement conscients des dangers de l'exposition et être en mesure de contrôler leur exposition aux RF afin de se conformer aux limites d'exposition plus élevées. Votre émetteur - récepteur portatif sans fil contient un émetteur de faible puissance. Ce produit émet un signal de radiofréquence (RF). Lorsque vous appuyez sur le bouton Push to talk (PTT), l'installation est autorisée à fonctionner avec un facteur d'occupation ne dépassant pas 50%.

## Operating Prohibitions

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

1. Do not operate the product in a location containing fuels, chemicals, explosive atmospheres and other flammable or explosive materials. In such location, only an approved Ex-protection model is allowed for use, but any attempt to assemble or disassemble it is strictly prohibited.
2. Do not operate the product near or in any blasting area.
3. Do not operate the product near any medical or electronic equipment that is vulnerable to RF signals.
4. Do not hold the product while driving.
5. Do not operate the product in any area where use of wireless communication equipment is completely prohibited.

## Precautions for Radios

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### Important Tips

To help you make better use of the product, be sure to observe the following instructions:

1. Do not use any unauthorized or damaged accessory.
2. Keep the product at least 2.5 centimeters away from your body during transmission.
3. Do not keep the product receiving at high volume for a long time.
4. For vehicles with an air bag, do not place the product in the area over the air bag or in the air bag deployment area.
5. Keep the product and its accessories out of reach of children and pets.
6. Please operate the product within the specified temperature range.
7. Continuous transmission for a long time may lead to heat accumulation within the product. In this case, please keep it at a proper location for cooling.
8. Handle the product with care.
9. Do not disassemble, modify or repair the product and its accessories without authorization.

### Note

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.

## **Precautions for Batteries**

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### **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.

## Recycle Battery

Local, state or federal laws may prohibit disposal of batteries in ordinary trash. Consult your local waste authority for information regarding available recycling and/or disposal options.

## Package Contents

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|--|-------------|
| • NR-F88S Radios                           | • belt clip |
| • 1500mAh Li-ion rechargeable battery pack | • headset   |
| • User Manual                              | • Adapter   |

## Main characteristics

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|---|---|
| • FRS Transceiver (No license required) | • Output power: 462.5500-462.7250MHz: 32.06 dBm 467.5625-467.7125MHz: 26.22 dBm |
| • Channel spacing: 12.5 KHz             | • Channel Scan  |
| • Vocal tuning                          | • Battery save  |
| • Channel Monitor                       | • Squelch   |
| • Flashlight                            | • 2pin Kenwood accessory jack   |
| • 50 CTCSS tones and 210 DCS codes      | • Li-Ion 1500mAh battery pack   |
| • TOT (Time out timer)                  |   |

## Battery recharge

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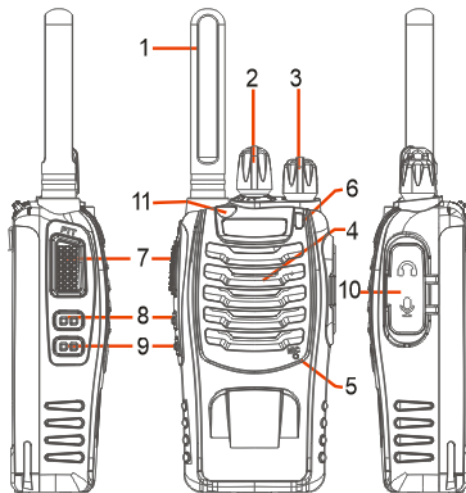
NR-F88S is equipped for using a 3.7V Li-ion rechargeable battery pack which can be recharged connecting the socket of the AC/DC wall adaptor to a mains power socket and inserting the jack of the wall adaptor into the desktop charger plug. It takes 4-5 hours to fully recharge the radio. For maximum battery life, we recommend charging the battery pack when the NR-F88S 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. Power saving can be disabled only through Programming software.

## **Main controls and parts of the radio**

1. Antenna
1. Encoder: rotate clockwise or counter-clockwise to select the desired channel
2. 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

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### 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 16, 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 channel. Channel 16 is the priority channel; therefore if you don't pick up any signal when you press PTT, the radio will transmit on channel 16.

### Squelch

The Squelch function suppresses noises on free channels and allows receiving even weak signals. NR-F88S has 10 different Squelch levels that can be set by programming software: 0 means that the Squelch is turned off; from level 1 to level 9 you will have different levels of noise reduction. The higher is the level, the louder will be the Squelch. By default, the Squelch level of NR-F88S is set on level 4. Make sure you do not set an excessively high squelch level because in this case you may not be able to receive weaker signals. On the other hand an excessively low Squelch value could enable the Squelch even when no signals are present. Squelch must always be adjusted when no signals are present. The Time Out timer is settable from 30 sec to 270 sec. only through the programming software. This feature is disabled by default.

### 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 NR-F88S 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.

## Emergency alert function

If necessary, you can pre-program the **Side Key 1** into the Alarm function via CPS programming software. Turn on the radio, short press the **Side Key 1** to turn on the alarm function. Press the **Side Key 1** again to release the emergency alarm status.

## VOX

The VOX feature enables hands free conversations without using PTT: just speak in the direction of the microphone and the communication will be automatically activated. The VOX sensitivity can be adjusted in 5 different levels (1...5) through the programming software:

Level 2 is set by default and has the lowest VOX sensitivity, 5 is the lowest one.

With the programming software you can enable/disable the VOX feature and select the sensitivity levels.

## Quick operation radio

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Without CPS programming software, you can perform the following quick operations through the combination of **PTT + Side Key 1**:

- On channels 1-5, press and hold the **PTT + Side Key 1** key to turn on the radio and turn the VOX function on or off. The VOX sensitivity is level 1-5, the level 1 sensitivity is the highest, and the level 5 sensitivity is the lowest. Accompanied by a voice prompt VOX ON or VOX OFF.
- On the 10th channel, press and hold the **PTT + Side Key 1** to turn on the radio and turn on or off the prompt voice function.
- On the 15th channel, press and hold the **PTT + Side Key 1** to turn on the radio and switch the prompt language between Chinese and English.

## 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.
	The speaker maybe blocked.	Clean the surface of the speaker.
You cannot communicate with other group members.	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.

**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

Frequency Range	FRS
Memory Channel	22
Operation Voltage	DC 3.7 V $\pm 10\%$
Battery Capacity	1500mAh (Li-Ion)
Transmission current	$\leq 1000\text{mA}$
Receive Sensitivity	$0.25\mu\text{V}$ (12dB SINAD)
Emission Designator	11k0F3E
Audio Power Output	1W @8 ohms
Receive current	$\leq 380\text{mA}$
Rated Audio Distortion	$\leq 5\%$
Connection for accessories	2 pin Kenwood jack
Antenna impedance	50 Ohm

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

## Disclaimer

The Company endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the specifications and designs are subject to change without notice due to continuous technological development. No part of this manual may be copied, modified, translated, or distributed in any manner without the prior written consent of the Company.

We do not guarantee, for any particular purpose, the accuracy, validity, timeliness, legitimacy or completeness of the third-party products and contents involved in this manual.



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