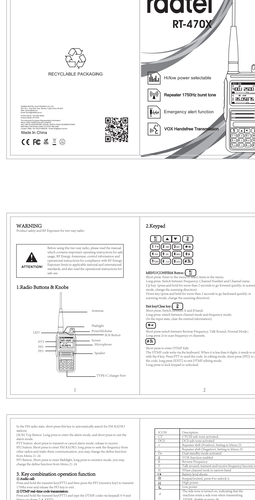


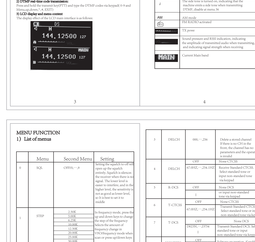

1

## WARNING

Product safety and RF Exposure for non-stop radio

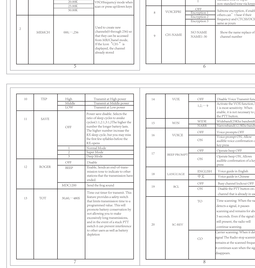
**ATTENTION!** Before using this non-stop radio, please read the manual carefully, which contains important operating instructions for safe and effective operation. The manufacturer is not responsible for any operational malfunctions for compliance with RF Energy Exposure Regulations, or any damage to the radio, accessories, and other equipment, and the potential interactions from such use.

### 1.Radio Buttons & Knobs




2

### 2.Keypad

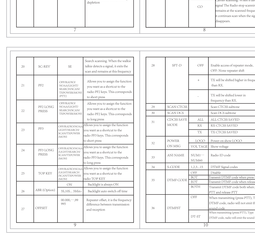



3

In the FM radio mode, short press this key to automatically search for FM RADIO STATIONS.
The PTT key, Power, Long press to turn the device mode, and short press to cut the call in the call mode.
PTT button: short press to transmit a signal under mode, release to receive.
Emergency button: Long press the button to send an emergency signal to other radios and radio dispatchers, and short press the button to cancel the alarm.
Flashlight button: Long press to turn on/off the flashlight, long press to monitor mode, you may change the relevant function (Menu 21-3).

**5. Key combination operation function**

**1) radio off**
Press and hold the monitored key(PTT) and then press the PTT (monitor key) to transmit the radio frequency signal of the radio.
**2) TTP/Off and Dual-wire transmission**
Press and hold the monitored key(PTT) and type the TTP/off-wire/on keypad(0-9 and #,*) to transmit the signal.
**3) LCD display and menu control**
Press and hold the monitored key(PTT) and type the LCD/menu/keypad(0-9 and #,*) to control the menu.




4

## MENU FUNCTION

### 1) List of menus

| Menu | Second Menu | Setting |
|---|---|---|
| 1 | SQL | OFF(1)~9 |
| 2 | SCAN DEL | CHANNEL NAME |
| 3 | BATT SAVE | OFF |
| 4 | BEEP | OFF |
| 5 | SCAN | OFF |
| 6 | VOICE | OFF |
| 7 | STEP | 2.5K |
| | | 5.0K |
| | | 6.25K |
| | | 10.0K |
| | | 12.5K |
| | | 25.0K |
| 8 | MEMCH | 001 ~ 256 |

Squelch level. When the radio receives signals below the set level, it will stay silent and not emit any sound.

Delete channel names from the scan list.

Enter battery saver mode. After a period of inactivity, the system will switch to a low-frequency sleep mode, reducing power consumption and extending battery life.

Turn off the keypad beep sound.

Enable channel scanning. When the radio receives a signal, it will automatically stop on the current channel and wait for a period before resuming the scan.

Enable voice prompts. The system will announce key presses and menu operations via voice.

Set the frequency step size for channel tuning and scanning.

Select a memory channel to store the current settings.

| 9 | TDR | OFF<br>DUAL WATCH<br>DUAL STANDBY | Dual-band Dual-standby<br>Dual-band Dual-receive<br>Dual-band Dual-transmit |
|---|---|---|---|
| 10 | SFT-D | OFF | Enable Scramble Frequency Inversion Encryption Communication. |
| 11 | PTI | OFF<br>ON | Enable PTI (Private Talk Interface) function. When enabled, it is not necessary to press the PTT button to initiate a call. |
| 12 | PRI(TOT) | OFF<br>15<br>30<br>45<br>60<br>90<br>120<br>180<br>240<br>300 | Set the maximum transmission time limit. When the transmission duration exceeds the set value, the system will automatically stop transmitting and prompt the user. |
| 13 | PRI(VOICE) | OFF<br>ON | Enable Priority Voice Prompts. When a call is received, the system will prioritize the voice prompt for the incoming call. |
| 14 | PRI(TDR) | OFF<br>ON | Enable Priority Dual Standby. When both channels are active, the system will prioritize the dual-standby function. |
| 15 | PRI(SCAN) | OFF<br>ON | Enable Priority Scan. When a signal is received during scanning, the system will prioritize the current channel. |
| 16 | VOX | OFF<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9 | Enable Voice Activated Transmission (VOX). When the microphone detects voice, the system automatically starts transmitting. |
| 17 | BEEP PROMPT | OFF<br>ON | Enable or disable key tone prompts. When enabled, you will hear a beep when pressing keys. |
| 18 | CONTACT | 001~016 | Enable quick dialing. Assign a frequently used channel to a specific number for quick access. |
| 19 | SCAN | OFF<br>ON | Enable or disable the scan function. |
| 20 | SCAN-DEL | CHANNEL NAME | Delete channel names from the scan list. |
| 21 | SCAN-ADD | CHANNEL NAME | Add channel names to the scan list. |
| 22 | SCAN-TYPE | OFF<br>ON | Enable or disable scan type selection. |
| 23 | STMF-CONT | OFF<br>ON | Enable or disable STMF (Short Text Message Function) control. When enabled, the system will automatically send predefined short text messages. |
| 24 | STMF-EDIT | OFF<br>ON | Enable or disable STMF (Short Text Message Function) editing. When enabled, the system will allow users to edit short text messages. |

| 25 | AC-REF | 50 | Search sensitivity. When the radio receives signals below the set level, it will stay silent and not emit any sound. |
|---|---|---|---|
| 26 | PRI | OFF<br>ON | Allow you to assign the function you want as a shortcut in the radio PRI(Menu). The corresponding function is short press. |
| 27 | PRI(LONG PRESS) | OFF<br>ON | Allow you to assign the function you want as a shortcut in the radio PRI(Menu). The corresponding function is long press. |
| 28 | PRI | OFF<br>ON | Allow you to assign the function you want as a shortcut in the radio PRI(Menu). The corresponding function is short press. |
| 29 | PRI(LONG PRESS) | OFF<br>ON | Allow you to assign the function you want as a shortcut in the radio PRI(Menu). The corresponding function is long press. |
| 30 | TOP KEY | OFF<br>SOS<br>MONITOR | Allow you to assign the function you want as a shortcut in the radio TOP KEY. |
| 31 | SIDE GEAR | OFF<br>ON | Flashlight switch. |
| 32 | OPMODE | MODE<br>CHANNEL | Adjustment of the frequency/channel mode of the radio. |

| 33 | STMF | ASCII | Text transmitting (press PTT), STMF (Short Text Message Function) will be sent. |
|---|---|---|---|
| 34 | PTT | OFF<br>ON | Text transmitting (press PTT), STMF (Short Text Message Function) will be sent automatically. |
| 35 | SCAN-ADD | OFF<br>ON | Add or delete the current channel to the scan list. |
| 36 | NOAA | OFF<br>ON | To receive and search weather stations and alerts. |
| 37 | PTT-ID | OFF<br>ON | Enable or disable the PTT-ID function. When enabled, the system will automatically transmit a digital signal (PTT-ID) when the PTT button is pressed. |
| 38 | MIC-SENS | 1~10 | Adjust the microphone sensitivity. |
| 39 | VOICE-PROMPT | OFF<br>ON | Enable or disable voice prompts. When enabled, the system will announce key presses and menu operations via voice. |
| 40 | ALL-CALL | 1~999 | Set the ALL-CALL ID. |
| 41 | MT-OFF | OFF<br>1<br>2<br>3<br>4<br>5 | Set the time for automatic shutdown of the radio. When the set time is reached, the system will automatically shut down to save power. |

| 42 | MT-ON | OFF<br>ON | Allow the set time of timer(1~24). |
|---|---|---|---|
| 43 | MIC-F | 300~3000 | Adjust the frequency response of the microphone. |
| 44 | MIC-G | 1~10 | Adjust the microphone gain. |
| 45 | SPK-F | 300~3000 | Adjust the frequency response of the speaker. |
| 46 | SPK-G | 1~10 | Adjust the speaker gain. |
| 47 | TX-OFF | OFF<br>1<br>2<br>3<br>4<br>5 | Set the time for automatic shutdown after the last transmission. When the set time is reached, the system will automatically shut down to save power. |
| 48 | OFF | OFF<br>ON | Enable or disable the shutdown function. When enabled, the system will automatically shut down at the set time. |
| 49 | ON | OFF<br>ON | Enable or disable the boot function. When enabled, the system will automatically boot at the set time. |
| 50 | TIME | 00:00~23:59 | Set the time. |
| 51 | DUAL WATCH | OFF<br>ON | Enable or disable dual-band dual-receive mode. When enabled, the system will simultaneously receive signals from two different channels. |
| 52 | STMF-EDIT | OFF<br>ON | Enable or disable STMF (Short Text Message Function) editing. When enabled, the system will allow users to edit short text messages. |

| 53 | SQ-TYPE | OFF<br>CTCSS<br>DCS | Enable or disable CTCSS/DCS. |
|---|---|---|---|
| 54 | DTMF-ST | OFF<br>ON | Enable or disable DTMF signal. |
| 55 | DTMF-DT | 1~100 | Set the DTMF signal duration. |
| 56 | DTMF-GT | 1~100 | Set the DTMF signal interval. |
| 57 | DTMF-LT | 1~100 | Set the DTMF signal length. |
| 58 | DTMF-TX | OFF<br>ON | Enable or disable DTMF signal transmission. |
| 59 | DTMF-ST | OFF<br>ON | Enable or disable DTMF signal. |
| 60 | DTMF-DT | 1~100 | Set the DTMF signal duration. |
| 61 | DTMF-GT | 1~100 | Set the DTMF signal interval. |
| 62 | DTMF-LT | 1~100 | Set the DTMF signal length. |
| 63 | DTMF-TX | OFF<br>ON | Enable or disable DTMF signal transmission. |

| 64 | SQ-TYPE | OFF<br>CTCSS<br>DCS | Enable or disable CTCSS/DCS. |
|---|---|---|---|
| 65 | CTCSS | 67.0~254.1 | Set the CTCSS frequency. |
| 66 | DCS | 023~754 | Set the DCS code. |
| 67 | SQ-TYPE | OFF<br>CTCSS<br>DCS | Enable or disable CTCSS/DCS. |
| 68 | CTCSS | 67.0~254.1 | Set the CTCSS frequency. |
| 69 | DCS | 023~754 | Set the DCS code. |
| 70 | CTCSS/DCS | OFF<br>ON | Enable or disable CTCSS/DCS. |
| 71 | SCRAMBLE | OFF<br>ON | Enable or disable scrambling. |
| 72 | RESET | CHANNEL<br>ALL | Reset channel or all settings. |

### 2)Menu function operation instructions:

1) Press the [MENU] key and use the UP/DOWN keys to select the menu you want to set.

2) Press the [MENU] key again to enter the menu.

3) Use the UP/DOWN keys to select the parameter you want to set.

4) Press the [MENU] key to confirm and save the settings.

5) Press [EXIT] to exit the menu and return to normal operation mode.

Note: Frequency Step, Repeater shift direction, and frequency difference are only valid in frequency mode.

### 3) Other function descriptions and settings

**1. Dual PTT function**

When the radio has PTT is selected at PTTR, the radio enters the dual PTT mode. Press PTT to transmit or receive. A and PTT/PTTR is transmit and receive.

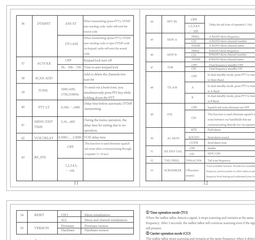
**2. Add wire**

Wire-to-wirepairing frequency range is between 18MHz and 108MHz, the radio automatically enters the full receiver mode, and the received stereo displays AM.

This mode is mainly used to receive AM modulated signals.

**3. Scan mode**

Use the side key to turn on or press and hold [ ] for more than 2 seconds to enter frequency or channel scanning. You can choose one of the following modes:



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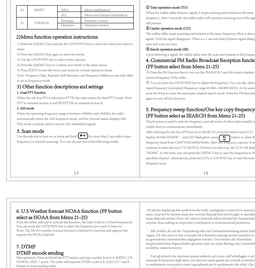

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**① Time operation mode (TO)**

When the radio receives a signal, it stops scanning and remains at the same channel. The radio will resume scanning after a specified time or when the signal is lost.

**② Carrier operation mode (CO)**

The radio will stop scanning and remain at the same frequency when it detects a signal. Unlike the signal disappears, There is a 2 second delay between signal disappear and the resumption of scanning.

**③ Search operation mode (SO)**

After detecting a signal, the radio will stop scanning and remain at the frequency.

## 4. Commercial FM Radio Receiver Function Settings (FP button select from Menu 21-23)

The radio supports commercial FM radio reception (76-108MHz) and the screen displays the current frequency and channel.

① You can press the UP/DOWN keys to adjust the frequency. You can also directly enter the desired frequency using the keypad. The radio will automatically save the frequency to the current channel. Press the PTT button key again to turn off the function.

## 5. Frequency sweep function/Clear key copy frequency (FP button select from Menu 24-25 or Menu 21-23)

The radio has a built-in frequency sweep function, which allows users to quickly find the frequency of a nearby signal. The sweep range is 136-174MHz, and the sweep speed is 0.5 seconds per channel. If a valid signal is detected, the radio will automatically stop at the current channel and display the frequency. If no valid signal is detected, the radio will continue to scan and return to the starting channel. Alternatively, press the PTT button to stop the sweep manually.

## 6. U.S Weather forecast NOAA function (FP button select as NOAA Channel Menu 36)

The radio can receive NOAA weather broadcasts, the radio defaults 10 fixed frequency channels, and the user can manually search for other channels that can receive signals. Note: The NOAA weather broadcast function is limited to countries and regions that support the NOAA channel.

## 7. DTMF

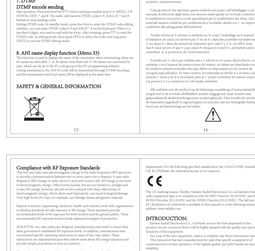
### DTMF encode sending

The radio supports DTMF encoding and decoding functions. The DTMF encoding function allows you to send DTMF signals to other radios or dispatch systems. Note: The DTMF decoding function is limited to countries and regions that support the NOAA channel.

## 8. ANI name display function (Menu 33)

The radio supports ANI (Automatic Number Identification) encoding transmitting. Note: ANI names are selectable 1 - 8 characters (default Dual 2) 16 numbers are numerous for dialing, and the ANI code of the dispatch system can be set in the radio. During transmission, the ANI ID code will be transmitted through DTMF encoding, and the transmission and local name will be displayed at the same time.

## SAFETY & GENERAL INFORMATION



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## Compliance with RF Exposure Standards

This non-stop radio uses electromagnetic energy in the radio frequency (RF) spectrum to communicate via radio waves. Voice or other data signals are sent across this frequency (RF) energy to radio waves to and and receive radio. RF energy is a form of electromagnetic energy. Other forms include, but are not limited to, sunlight and X-rays. The FCC has established a set of guidelines based on the safety standards developed by independent scientific organizations through the evaluation of research data. These guidelines are expressed in terms of the maximum permissible exposure limits.

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 RATOS, two way radios are designed, manufactured, and tested to ensure they comply with the federal government's RF exposure limits. When properly used and in accordance with the operating instructions in series of two way radios. These instructions are based on federal government and scientific research, which provide simple procedures on how to control it.

Please refer to the following website for more information on what RF energy exposure is and how to control your exposure to assess compliance with established RF exposure limits. http://www.fcc.gov/oet/rfsafety

## Local Government Regulations

Some local governments, in addition to federal regulations, the Local Government Agency Regulations are subject to the use of two-way radios in certain areas and may be in more or operational requirements. Exposure measures can be facilitated by the use of a two-way radio in a vehicle or a remote antenna system. Please check with the local two-way radio for RF Exposure Product Guide, also, your Radio user manual, or inquire with your local government agencies and operating authorities regarded to control your RF exposure and to comply with applicable local regulations.

## Radio License

Operation of this radio is subject to classification, most of the classified radios when used in accordance with the instructions, provide a license is obtained. The detailed instructions are included, the use of your two radios, please contact your local government radio management department. For the following government radio management department, the following are the relevant information:

1. Contact the local government radio management department.
2. Contact the equipment seller or contact a professional consultant.
3. Contact the equipment seller or contact a different firm that is which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

## Safety Information for Radios

Your radio is a radio transmitter and receiver, operating on low power intervals. When the radio is turned on, it sends or receiv radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for handheld portable devices.

## Important

Read the following information. For Radio owners operation, the radio has been tested and certified to the FCC RF exposure guidelines when used with accessories supplied or recommended by the manufacturer. Failure to comply with operating instructions may violate FCC RF exposure guidelines. Use only the supplied antenna. Unauthorized antennas, modifications or attachments could damage the transmitter and may violate FCC

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regulations and cause harm.

Do not hold any part of the transmitter or of their battery charger (such as hands, pockets, etc.) ,neck off ,or unauthorized or modified battery charger of the FCC radio and contact to the Telephone.

Do not use the radio in the vicinity of blasting caps or in explosive atmosphere.

Operation of any radio transmitter may interfere with the functionality of inadequately protected implantable medical devices. Consult a medical device manufacturer if you have questions.

Do not operate the radio near electrical blasting caps or in explosive atmospheres, including areas where blasting is in progress, areas where explosive atmospheres may be present, and areas where you are asked to turn off your two-way radios.

Don't operate the transmitter while it is driving a vehicle, an hands-free mobile or remote mounted antenna is required for safe operation.

To clean the equipment and/or the battery charger,Setup OFF and with an antenna, use only a moistened cloth.

Do not operate the radio with any damaged antenna. If a damaged antenna comes in contact with your skin, a burn may result. Do not operate the radio with any damaged battery or charger. Damaged batteries and chargers may explode.

Replace only with a replacement antenna or battery pack. Use only the battery and charger approved for use with this equipment.

Do not open the equipment or attempt to disassemble the equipment or battery pack. Contact your local dealer for assistance.

Do not short circuit the battery pack.

Do not dispose of the battery pack in a fire or with other flammable materials. Dispose of the battery pack in accordance with local regulations.

Do not use the equipment in conjunction with transmitters or other equipment not specified for compliance could void the user ' s authority to operate the equipment.

Prior to copy, or modify ' equipment ' a copy or a copy is RF exposure Upon discretion ( ' equipment ' ) ' discretion ' ' '