

RT28 Manual

Function Introduction

◆ Frequency

FRS 462.5625~462.7125, 462.5500 ~462.7500 MHz (RX/TX)

◆ Up to 16 Channels

◆ Commercial FM radio

◆ 50 Groups CTCSS, 105 Groups of standard DCS

◆ Time-out timer(TOT)

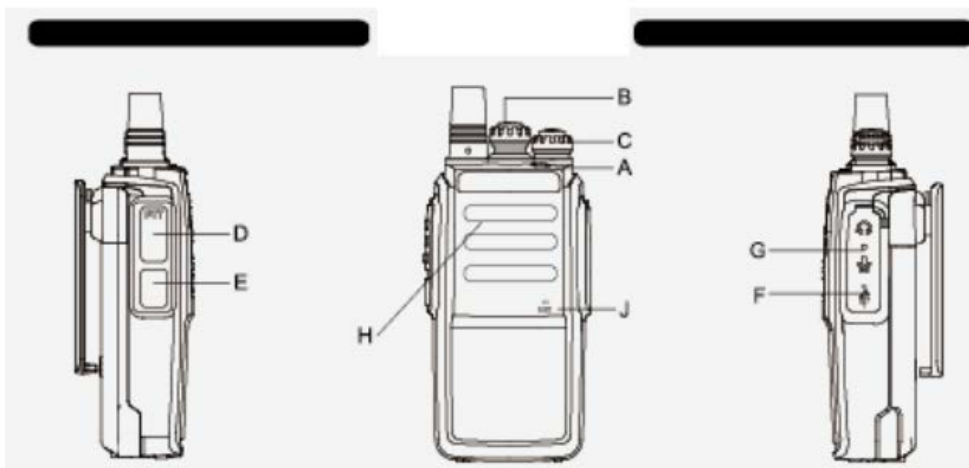
◆ Battery saving function

◆ Alarm function

◆ USB rapid charge

◆ Programmable by PC

Item Description



Note: The radio outlook based on the real radio.

A.LED Indicator: Green LED flashes when receive the signal, Red LED flashes when transmission.

B. Channel knob: Rotate the knob to choose the channel (CH1-CH15), CH16 is scan channel.

C.ON/OFF knob/Volume knob: Rotate the knob clockwise to turn on the radio, anticlockwise to turn off the radio.

By rotating to control the volume.

D.PTT switch: Press PTT and speak to the microphone to call, listen when release.

E. Monitor: When press Monitor key, the squelch opened and the background noise comes out; the squelch close when release the monitor key.

F.USB Rapid charge plug.

G. Speaker/Microphone rubber plug: Please cover when not use the speaker and microphone.

H. Insert loudspeaker.

J. Microphone

Battery Charging

1. Take out the charger, plug the AC (100-240V) 50/60Hz, then Green LED flashes;
2. Plug the battery or the radio with battery on the charger; make sure the battery is connected with the charger.
3. The charging process initiates when the red LED lights, the charging time based on the battery capacity.
The green LED lights indicating the battery is fully charged.
4. Use the USB cable to plug to the radio, red LED lights when charging, green LED lights when fully charged.

Function Operation

SWITCHING POWER ON/OFF

Turn the power switches volume control clockwise. You will hear a beep and speech, indicating the transceiver is ON.

ADJUSTING THE VOLUME

Hold Monitor button down to listen to audio level while rotating the Power switch/Volume control. Rotate clockwise to increase and counter-clockwise to decrease volume.

SELECTING THE CHANNEL

Turn the channel switch to select your desired channel. NO.16 is Scanning Channel

PTT TRANSMIT

To transmit, press and hold [PTT] and speak into the microphone in your normal tone of voice.

SQUELCH LEVEL

The purpose of Squelch is to mute the speaker when no signals are present (Squelch OFF). With the squelch level correctly set, you will hear sound only while actually receiving signals (Squelch ON). The squelch level can be adjusted via program software.

The frequency of squelch is 0 (on) -9 (deep), steps: 1.

SCANNING SWITCH

When radios is set as scan via software, turn the channel selector to channel 16, the transceiver will automatically detect the activity of scanning channel from CH1 to CH15 channel (each channel can be set scan or not via software), When the signal is scanned channel, the transceiver will automatically stop on the channel for the call.

- a. Walkie-talkie will stay on the signal channel, when the signal disappears and then after 15s, continue scanning the next channel.
- b. If there are less than 2 channels, it cannot scan.
- c. On channel 16, press and hold the PTT and MONI key, it will turn on the SCAN or turn off the SCAN.
- d. If the FM radio function is activated, it cannot scan.

VOICE PROMPT

- a. Voice Prompt is effective when the function is turned on.
- b. VOX gain level: When the sound level is higher than the set level of sound control gain, VOX automatically transmits. The gain level can be adjusted from 1 to 9 levels.
- c. When a signal is received, VOX will not transmit even if the sound level is higher than the set gain level.
- d. On channels CH1 ~ CH5, press and hold the PTT and MONI, then switch on the transceiver, thus to activate the VOX function ON/OFF.

MONITOR

When you are receiving and no signals are present, the squelch function can mute the speaker, so you cannot hear the background noise. If you want to switch the squelch function OFF, press and hold (MONI) button. It is very helpful when you want to adjust the volume level

and receive the week signals.

Battery Saving

- a.ON: Entering into the battery saving state automatically without any operation for 10 seconds,
- b.OFF: Battery saving is off.

Busy Channel Lockout (BCL)

Switch on or off each effective channel busy lockout function via PC programming software. When open this setting, signal from the current channel is banned to transmit.

Beep

- a. The beep is on, and the "Di" sounds is emitted for every rotation of the channel
- b. The beep is off, and no "Di" sounds for every rotation of the channel

Low Battery Voltage Warning

When the voltage is lower than the preset value, a prompt "Please change battery" is issued every 5 seconds, press the PTT button is in valid and makes "Di" sounds.

Time-out timer

The function of the time-out timer is to prevent the speaker from using a channel too long and continuously, and the interphone emits continuously too long and the body heats up. If you continuously transmit the interphone, the TOT limit time set by the machine is exceeded; the transceiver will stop transmitting (the time can be programmed by computer while the factory setting time is 1 minute). Release the PTT button and press PTT again to resume transmitting.

QT / DQT

The radio's QT/DQT for each channel can be program by software. When the channel set the QT/DQT, the radio squelch open only if it receives a signal that uses the same QT or DQT. The radio squelch does not turn on if the same channel uses different QT / DQT calls, only lights in green, sub-CTCSS 50 groups, and digital sub-audio DCS 105 groups.

Note: Although using a channel with CTCSS / DCS sub-audio may be preferable to receiving unwanted calls, it does not mean your call is a secret.

Technical Specification

General:

Frequency range	FRS 462.5625~462.7125, 462.5500 ~462.7500 MHz(RX/TX)
Memory channels	16 Groups
Operation voltage	DC3.7V
Frequency stability	±2.5ppm
Operation temperature	-20℃~+50℃
Mode of operation	Simplex
Antenna impedance	50Ω

Transmitter:

RF Power	≤2W
Spurious emission	≤7.5uW
Adjacent channel power	≤-65dB/≤-60dB
SNR	≥-40dB
QT/DQT	0.4±0.1KHz

Modulation sensitivity	8—12mV
Transmission current	≤1.2A

Receiver:

Sensitivity	-122dBm (12dB SINAD)
Audio power	0.4W (8R Load)
Audio distortion	≤10%
Intermodulation	≥60dB
Adjacent channel selectivity	≥60dB
Clutter suppression	≥65dB
Receiver current	≤380mA

Channel No.	Center frequency (MHz)	Channel No.	Center frequency (MHz)
1	462.5625	9	462.7125
2	462.5875	10	462.5500
3	462.6125	11	462.5750
4	462.6375	12	462.6000
5	462.6625	13	462.6500
6	462.6250	14	462.5750
7	462.7250	15	462.7250
8	462.6875		

FCC Statement

For a Class B digital device or peripheral, the instructions furnished to the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

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.

- This radio is designed for and classified as “General population/uncontrolled Use”
- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.
- DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF

exposure compliance requirements to be exceeded.

- This transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-worn configurations. RF exposure compliance is limited to the specific belt-clip and accessory configurations as documented in this filing and the separation distance between user and the device or its antenna shall be at least 2.5 cm.

This device complies with 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.