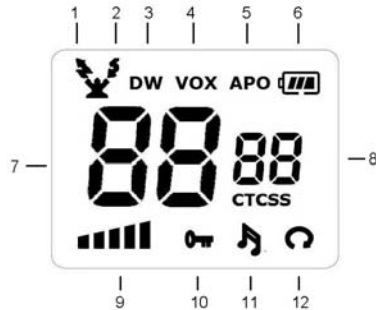


1. LCD display
2. Earphone & Charger Jack
3. PTT key
4. Up key
5. Down key
6. Power On/Off key
7. Scan key
8. Menu / Key lock key
9. Call Tone key
10. Microphone
11. Speaker
12. Antenna

**LCD DISPLAY ICONS**



1. RX
2. TX
3. Dual Watch
4. VOX
5. APO (Auto Power Off)
6. Battery Level
7. Main Channel Number
8. CTCSS Code
9. Speaker Volume
10. Key Lock
11. Call ToneScan

**MAIN FEATURES**

- Frequency: 462~467MHz
- Power output < 0.5W
- 10 channels
- 3 CTCSS code
- 83 DSC code
- 10 km optimal range
- Dual Watch
- 3 VOX levels
- 10 Call tones
- 5 levels Speaker volume
- Scan
- Key lock function
- Auto Power Off

**PRECAUTIONS**

- Read this manual before use the radio.
- Avoid the direct exposure to solar rays and/or in front of heat.
- Do not use adaptor and/or batteries diverged from that specified on instructions manual.
- Do not operate the radio in hazardous environments, explosion or fire may result.
- Do not operate the radio in high humidity, dusty or explosive environment.
- Clean by using a cloth slightly dampened. Do not use alcohol,

- solvents or abrasives etc.
- Do not attempt to modify the radio. The radio is designed to comply with CE and R&TTE.
- The LCD display is made of glass and maybe damaged if dropped or impacted.

#### INSTALLING / REMOVING BELT CLIP

##### Installing Belt Clip

- Slide the Belt clip into the slot as shown in Figure 1. A "click" indicates the Belt Clip is locked into position.

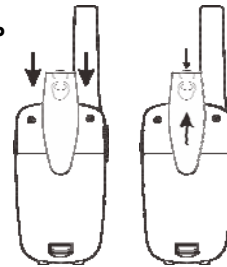


Figure 1

Figure 2

##### Removing Belt Clip

- Pull the belt clip latch forward
- While pulling the belt clip latch, push up the belt clip as shown in Figure 2.

#### INSTALLING BATTERIES

- Slide down the Battery compartment cover.
- Install the rechargeable batteries by following the orientation as shown in Figure 3.
- Replace the Battery compartment cover.

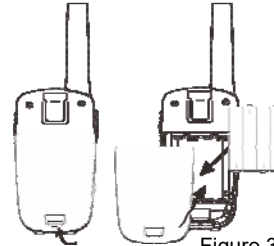



Figure 3

#### ⚠WARNING

- Follow the polar directions and insert 4 x AAA Ni-MH rechargeable batteries.
- Incorrect positioning can damage both the batteries and unit.
- Don't try to recharge non-rechargeable batteries.
- Make sure the battery compartment cover is securely locked in place when you are charging the batteries.
- Dispose of used batteries safely and in a way that will not harm the environment, never try to burn them or put them anywhere, they could get burnt or punctured.
- Don't leave dead batteries in you unit. They might leak if you do.

#### CHARGING BATTERIES

When the "Battery level  icon is low, you need to charge the battery with the enclosed AC/DC adaptor .

##### Charging with AC/DC adaptor

- Plug the adaptor into the wall socket and the other end into the earphone jack on the right side of the radio.
- The unit will automatically turn off and the LCD "Battery" Icon will flash.
- Each adaptor can connect 2 sets of radio for charging.

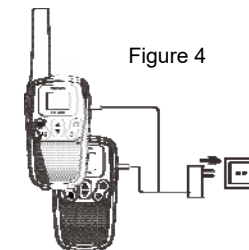


Figure 4

- To charge fully from empty require about 8 ~ 10 hours.
- After charged, unplug the adaptor from the socket and the radio will automatically turn on.

#### ⚠WARNING

- To avoid damage to the radio use only original accessories.

- The radio will be slightly warm during charging.

## GENERAL OPERATIONS

### 1. TRANSMITTING RANGE

- The talk range depends on the environmental and terrain. It will be reach (up to about 10km) in wide open spaces, without obstructions such as hills or buildings. Don't try to use two PMR units which are less than 1.5m (5feet) apart. If you do, you may have experience interference.

### 2. POWER ON/OFF

- To power On the radio, press Power On/Off Key  $\odot$  for 2 seconds until a beep is heard and the LCD display turn on.
- To power Off the radio, press Power On/Off key  $\odot$  for 2 seconds until LCD display turns off.

### 3. MAKING COMMUNICATIONS

The radio has 8 main frequencies and 38 CTCSS codes or 83 DCS codes effectively giving you 968 channels. You can communicate with any other user who is using the same combinations, providing they are within range.

### 4. SPEAK TO OTHER RADIO

- Press & hold the PTT key, LCD TX icon indicating the radio is transmitting.
- Hold the radio in a vertical position with the microphone 3-5 cm from your mouth and then speak.
- When you finish speaking, release the PTT key and a beep tone will be heard.

### 5. LISTEN TO OTHER RADIO

- The radio will automatically sound received signal from the other radio with the same channel and LCD shows the icon  $\times$ .
- When you press the PTT key, you can't listen to other radios. Make sure you do not press PTT key for listening.
- Adjust volume control if necessary.

### 6. ADJUSTING SPEAKER VOLUME (5 LEVELS)

- Press the Up key  $\blacktriangle$  to increase the volume.
- Press the Down key  $\blacktriangledown$  to decrease the volume.

### 7. TALK TIME-OUT FUNCTION

- Time-out function can avoid transmitting by chance and prolong the battery life.
- The radio will stop transmitting and sound a warning tone when PTT is held over 3 minutes. You then need to release PTT and press again for further transmission.
- In VOX mode, the unit will stop transmitting and sound a warning tone after continuous talk for 3 minutes. You can re-activate VOX after the time-out. (Please refer to VOX function for detailed VOX operation).

### 8. MENU FLOW CHART

Press Menu key  $\square$  once to enter main channel selection, press  $\square$  again for next function selection etc.

Main Screen  $\rightarrow$  Main Channel  $\rightarrow$  CTCSS  $\rightarrow$  Dual Watch  $\rightarrow$  VOX  $\rightarrow$  Call Tone  $\rightarrow$  Beep Tone  $\rightarrow$  Roger Beep  $\rightarrow$  Auto Power Off  $\rightarrow$  Main Screen

### 9. SELECT CHANNEL




To select the main channel

- Press the  $\square$  key once, Main channel number displayed will flash.
- Press  $\blacktriangle$  or  $\blacktriangledown$  key to select your desired main channel number.
- Press the PTT key to confirm and quit or press  $\square$  to continue next function setting.
- You have 10 seconds to decide before auto-reverting back to

the main screen.





#### 10. CTCSSCODE FUNCTION

This function can help you select your group (3 CTCSS codes) of users on the same channel. Only the users with the same CTCSS code can listen and talk to each other. Please note that selecting a CTCSS code does not assure total privacy. In radio communication, any FRS radio can listen to all communications on the same channel when using the default standard setting with CTCSS = 0 (OFF).

- Press the  key twice, CTCSS code display will flash.
- Press  or  key to select your desired CTCSS code from 1 to 3, 0 is OFF.
- Press the PTT key to confirm and quit.




#### 11. DUAL WATCH

The unit has dual watch function. You can monitor two channels, the current and another (dual watch) channel. If the unit detects a signal on either channel, it will stop and receive the signal.

- Press the  key 4 times, LCD display **DW** icon.
  - Press  or  key to select the dual watch channel (1-8, except the current channel), LCD display OF is OFF.
  - After turning on the function, LCD will display **DW** icon
- Press the PTT key to confirm and quit or press  to continue next function setting.

#### 12. VOX (Hands-Free Function)




The unit has a built-in Voice Activated Circuit (VOX) function. You can enjoy talking and listening without pressing PTT key. To have better performance, you can use this function with the external earphone (optional accessories).

- Press the  key 5 times, LCD display **VOX** icon and VOX sensitivity digit will flash.
- Press  or  key to select sensitivity level from "OF, 1, 2, 3" for "OFF, Low, Medium and High respectively.
- After turning on the VOX function, LCD will display **VOX** icon. Press PTT to confirm and quit.






Please speak close to the mic in order to activate VOX function.

#### 13. SENDING CALL TONE

You can use 1 of 10 different "Call Tones" to get attention of other user on the same channel.





- Press the  key and the tone will sound, LCD will display the transmit icon  and  icon and your call tone will be sent.

#### 14. SELECTING CALL TONE

- Press the  key 6 times, LCD display  icon and call tone number will flash.
- Press  or  key to select your desired call tone.
- Press the PTT key to confirm and quit or press  to continue next function setting.





#### 15. KEY TONE ON/OFF

The unit has the function to turn the beep tone on or off.





- Press  key 7 times, LCD display "t o".
- Press  or  key to turn on (LCD display ON icon) or turn off (LCD display OF icon).
- Press PTT to confirm and quit or press  to continue next function setting.

#### 16. ROGER BEEP






The roger beep function enables a short tone signal which is transmitted after releasing the PTT button.

- Press  key 8 times, LCD display "r o".
- Press  or  key to turn on (LCD display ON icon) or turn off (LCD display OF icon).
- Press PTT to confirm and quit or press  to continue next function setting.



**17. AUTO POWER OFF (APO)**

- Press  key 9 times, LCD display **APO** icon.
- Press  or  key to select auto power off time from 0 to 6 hours.
- Press PTT key to confirm and quit or press  to return to Main screen.
- After turning on the function, LCD will display **APO** icon and automatically turn off at designated time.





**18. SCANNING CHANNELS**

- Press the  key once and LCD will display  and radio will start scanning.
- LCD display shows the scanning channel one by one.
- It will stop at those channels with signal for a while.
- Press  or  key to continue scanning.
- Or if you want to use this channel, press PTT to confirm and your radio will change to this channel.
- If there is no signal, it will continue to scan. Press the PTT key and it will stay on the current selected channel and quit the scanning function. Or press  to quit and enter next function setting.

**19. MONITOR**

- Press and hold  key to break the squelch noise and open (un-squelch) the frequency for monitor function. Release the  key to stop.

**20. KEY LOCK**

- Press and hold  key for 3 second, LCD display  icon.
- All keys are locked except PTT and  key.
- To unlock, press and hold  key for 3 second again.

**21. MICROPHONE / EARPHONE JACK**

The unit is equipped with a microphone / Earphone jack located at the right side. You can use an optional earphone (not included) for handsfree function.

**SPECIFICATIONS**

Operation Frequency Range : 462 ~ 467MHz  
Modulation : FM  
RF Output Power : < 500mW e.r.p  
Channels : 10  
CTCSS sub-code : 3  
Power Supply : AAA battery x 4

Channel Frequency Table

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	467.7125	6	467.5875
2	467.6875	7	467.5625
3	467.6625	8	462.7125
4	467.6375	9	462.6875
5	467.6125	0	462.6625

CTCSS Sub-Code Frequency Table

Code	Frequency (Hz)
1	110.9
2	136.5
3	186.2

This radio has been tested and complies with the FCC RF exposure limits for “General population.” In addition, your SANCON 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:

KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03, 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 Potential y Hazardous Electromagnetic Fields— RF and Microwave.

**To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for general population use, always adhere to the following CAUTION guidelines:**



**CAUTION**

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC 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 (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch.

- **ALWAYS** use SANCON authorized accessories (antennas, batteries, belt clips, speaker/mics, etc). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded. Body-worn operations are restricted to belt-clips, holsters or similar accessories that have no metallic component in the assembly and that provide at least 1.5 cm separation between the device, including its antenna, and the user's body. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from mouth, and slightly off to one side. 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 assure that this radio operates within the FCC RF exposure limits of this radio.

### **Electromagnetic Interference/Compatibility**

During transmissions, your SANCON 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.

This device complies with Part 95 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.

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

Important: Do not hold down CALL for more than 10 seconds. The FCC does not allow you to send a continuous tone for more than 10 seconds at a time on FRS frequencies.