

Instruction Manual

**22-Channel Handheld Two-Way-Radio (Walkie Talkie)
SAMCOM FWCN30A**

Main Features

- Frequency: 462.5500~467.7125 MHz
- High/Low TX Power (0.5W/0.112W) Selectable
- 22 channels
- 154 codes (50 CTCSS & 104 CDCSS)
- 5 km optimal range
- Group function (Dual-Channel Watch)
- 3 VOX levels
- 10 Call tones
- Monitor
- Scan
- Key lock function
- Built-in 1200mAh Li Polymer Battery
- Flashlight
- NOAA & Weather Alert

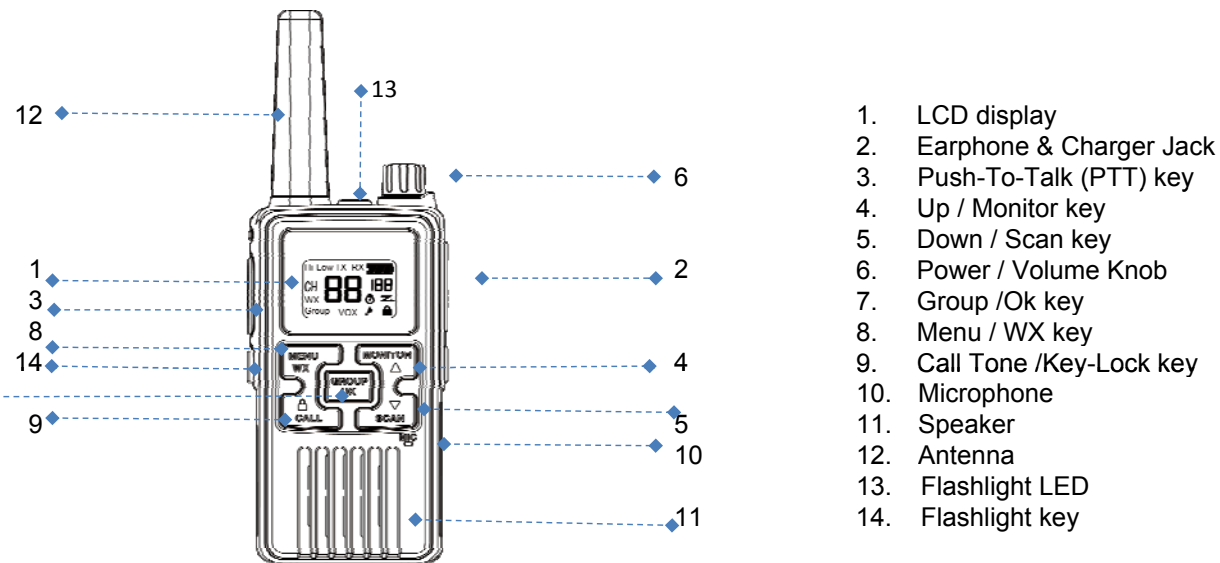


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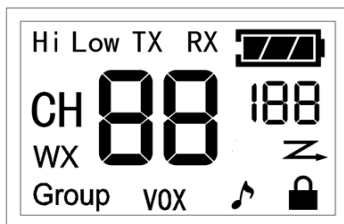
SANCON INC.

Overview



● **GROUP Button** – A broadcasting function (one-to-all) to communicate with all other radios that are programmed to monitor the same group channel (default group = CH 8). Great for home/office wide announcements or check ins.

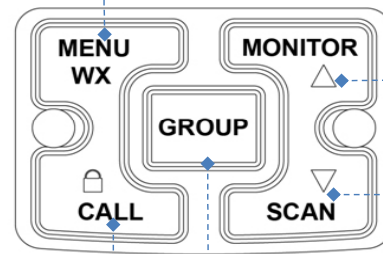
LCD Display Icons




- | | | |
|----|-------------------|------------------------------|
| 1 | RX | : Receiving status |
| 2 | TX | : Transmitting status |
| 3 | CH | : Main (Foreground) Channel |
| 4 | Group | : Group (Background) Channel |
| 5 | VOX | : VOX (Voice-activated TX) |
| 6 | WX | : Weather Receiver |
| 7 | (Battery Icon) | : Battery Level |
| 8 | 88 | : Channel Number |
| 9 | 188 | : CTCSS/CDCSS Code Number |
| 10 | Hi | : High TX Power |
| 11 | Low | : Low TX Power |
| 12 | (Lock Icon) | : Key Lock |
| 13 | (Music Note Icon) | : Key Beep |
| 14 | (Scan Icon) | : Channel Scan |

Press the MENU key, enter into the menu selecting mode and WX mode.

Press ▲ key choice the menu and monitor function,
Press ▼ key choice the menu and scan function



Keep press 3 seconds the  key to lock,
press the key call function will opened

Press the **GROUP** key to speak to all channel ,

GENERAL OPERATIONS

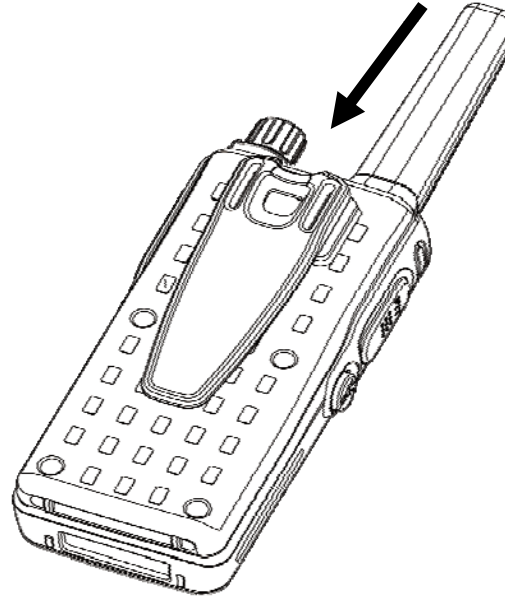
Install / Removing Belt Clip

Installing Belt Clip

- Slide the Belt clip into the slot
A “click” indicates the Belt Clip is locked into position.

Removing Belt Clip

- Pull the belt clip latch forward
- While pulling the belt clip latch, push up the belt clip



Battery on First Use

Since batteries leave factory without a fully charging, please charge the new batteries before using. Under normal circumstances, the battery on first use needs 5 hours of charging. The first three times of fully charging and discharging provides batteries the best capacity.

When you find out the battery is low, it is required to charge or replace it.

Safety Precautions

1. Do not dispose the batteries in the fire.
2. Do not dispose the batteries as household wastes, and it must be collected and treated properly.
3. Do not rip off the shell from the battery without permission.

Notes:

1. When charging, the temperature should be between 5 °C ~40 °C, otherwise it may cause the leakage or even damage the battery.
2. Please shut down the transceiver with battery loaded before charging it. The use of the transceiver while charging is ongoing will affect the normal battery charging.
3. Do not put back and charge the battery that is already full, for it will significantly reduce the cycle life.
4. Since continuous charging will shorten the life of the battery, it is unwise to place the transceiver or battery on the charger, or take the charger as a placement seat for the transceiver.
5. Do not charge the battery when it is wet. You should dry it first in order to avoid any danger.
6. If the battery's usage time is very short even when it has been charged in completely correct way, it can be concluded that the battery life is due and should be replaced by a new one.


Extension of Battery life

1. The performance of the battery will be reduced when the temperature drops below 0°C. In cold weather, it is advised to spare another battery for emergency. Please do not dispose the cold batteries that can not work at low temperature but may be usable at room temperature.
2. It may affect the normal use or charge of the battery, if it is covered with dust. Please clean the battery with dry cloth before loading or charging it.

Knowledge about Battery Storage

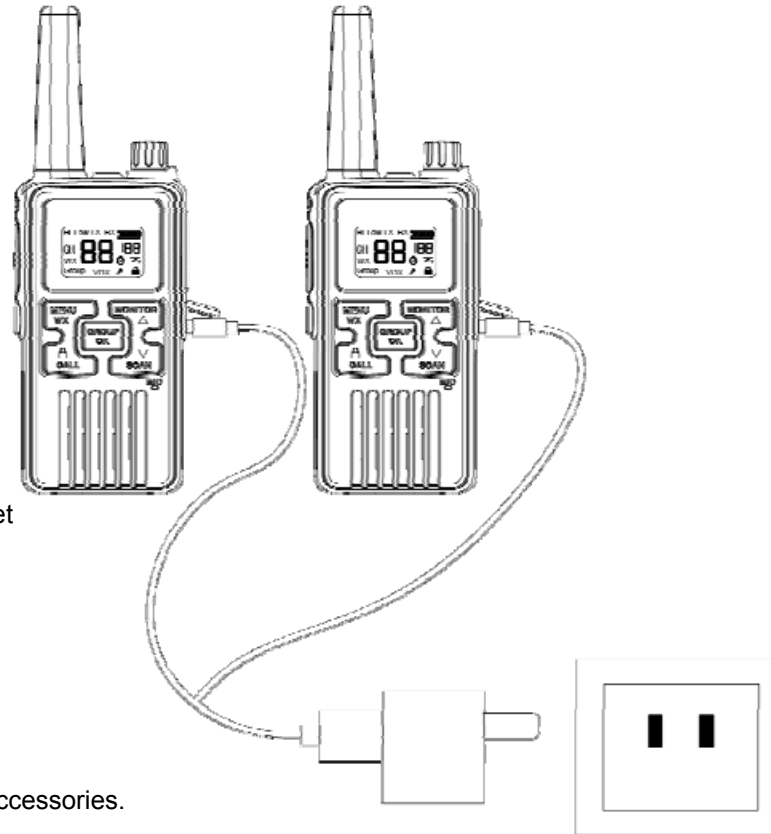
1. Since the battery will self-discharge, please do charge it fully before putting it aside so as to prevent damages caused by over discharge.
2. Please take out the battery after storage for some time to fill it, in order to avoid the reduction of the battery capacity resulting from over discharge. It is proposed for lithium-ion / lithium-polymer batteries to be filled in every 6 months of storage.
3. Please pay attention to the humidity of the battery storage environment. Batteries are supposed to be stored in the environment of room temperature, cool and dry air, to reduce the self-discharge.

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 other end into the micro USB socket on the of the radio.
- The LCD “Battery” Icon will flash.
- Each adaptor can connect 2 sets of radio for charging.
- To charge fully from empty require about 5 hours.
- After charged, unplug the adaptor from the socket



WARNING

- To avoid damage to the radio use only original accessories.
- The radio will be slightly warm during charging.

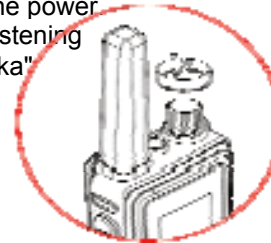
GENERAL OPERATIONS

1. TRANSMITTING RANGE

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

2. POWER ON/OFF

● Rotate the PWR/VOL control knob clockwise until a "ka-ka" sound is heard to turn on the power. When you receive calls, the knob provides you the ability to change the volume for your listening habits. When shutting down the transceiver, you need to rotate it counterclockwise a "ka-ka" sound is heard.



3. MAKING COMMUNICATIONS

The radio has 22 main frequencies and 154 CTCSS/CDCSS codes

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.

5. LISTEN TO OTHER RADIO

- The radio will automatically sound received signal from the other radio with the same channel and code, and meanwhile LCD shows the icon **RX**
- 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. 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).

7. GROUP FUNCTION (Dual-Channel Watch)

The unit has dual-channel watch function. It can monitor two channels at the same time, which are the Main (foreground) and Group (Background) channels, i.e., it can detect signal on either channel.

When the unit detects a signal on the Group channel, it will automatically sound the received signal with LCD showing "Group" icon, Group channel number and associated code number.

When you want to talk to a group of people that have their radios set the Group Channel number to be the same as yours, just do the following.


- Press & hold the GROUP key, LCD displays TX icon, indicating the radio is transmitting on the Group channel.
- 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 GROUP key.

8. SENDING CALL TONE

You can use 1 of 10 different “Call Tones” to get attention of other user on the same channel with same code.

- Press the **CALL** key and the tone will sound, LCD will display the transmit icc **TX** and your call tone will be sent.

9. SCANNING CHANNELS




- Press the **SCAN** 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.

10. MONITOR Function

- Press and hold the **MONITOR** key to have the unit sound signal or noise, whichever occurs on the main channel.
- Release the **MONITOR** key to turn off the function.

The function is useful to check for activity on the main channel before you talk. When you find the main channel busy, you can change the main channel number to a clear one. Moreover, it also can be handy for the user to verify the volume level of the radio when the radio is not receiving. You can adjust the volume, if necessary.

11. LOCK KEYS


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

12. 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.

13. High / low TX Power Selection

The radio has default high TX power option for Channels 1 to 15. When you know your party is close by, you can set the channels to low TX power option to conserve the energy of the radio's battery.

- When LCD shows the main screen, press and hold the  key for 3 seconds to change the TX power option between High and Low.

When the radio is set to High TX power, the LCD displays the icon **Hi**. When the radio is set to Low TX power, the LCD displays the icon **Low**.

Note: the channels 16 to 22 have and only have low TX power option, as per FCC regulations.

14. Flashlight FUNCTION

To use the flashlight function

- When the flashlight is not illuminating, press the Flashlight key once to turn and keep it on.
- When the flashlight is illuminating, press the Flashlight key to turn it off.



Menu Operation

Press Menu key once to firstly enter main channel selection from the main screen, press again for next function selection etc. The menu operation flow chart is as follows.

Main Screen → Main Channel → CTCSS/CDCSS → GROUP (Dual-Channel Watch) → VOX → Call Tone → Key Beep → Roger Beep → Main Screen

9. SELECT CHANNEL

To select the main channel



- Press the **MENU** key once, Main channel number will flash.
- Press  or  to select new Main channel
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and continue next function setting.

You have 10 seconds to decide before auto-reverting back to the main screen

10. CTCSS/CODE FUNCTION

This function can help you select your group (121 CTCSS/CDCSS codes) of users on the same channel.

Only the users with the same CTCSS/CDCSS code can listen and talk to each other. Please note that selecting a CTCSS/CDCSS code does not assure total privacy.

- Press the **MENU** key twice, **CTCSS/CDCSS code will flash**.
- Press  or  to select new CTCSS or CDCSS code
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and continue next function setting.

11. GROUP CHANNEL SETTING



By default, all radios have a default GROUP number channel setting of “8”. This is the channel that all radios will receive on when someone in your group presses the “Group” button to send a message to everyone.

NOTE: There is no need to change the default GROUP number unless you either:

- Are experiencing interference or cross talk from other radios or intercoms in the area on the current group channel, or
- Desire advanced functionality by organizing your radios into groups that call all receive separate group communications. For example, if you want three different buildings, each with its own group number.

This would be a more advanced configuration and is not needed for your average home or small office.

To change the GROUP Number

- Press the **MENU** key 3 times, GROUP with group channel number will flash.
- Press  or  to select new Group Channel
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and 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 **MENU** key 4 times, LCD displays **VOX** icon and VOX sensitivity digit will flash.
- Press  or 

key to select sensitivity level from “OFF, 1, 2, 3” for “OFF, Low, Medium and High respectively.

After turning on the VOX function, LCD will display **VOX** icon. Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen. or the **MENU** key to confirm and continue next function setting.




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

14. SELECTING CALL TONE

- Press the **MENU** key 5 times, LCD will display  icon and call tone number will flash.
- Press  or  to scroll between 1 to 10 and  to select a call tone or turn off the CALL function.
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and continue next function setting.




15 KEY BEEP ON/OFF

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

- Press the **MENU** key 6 times, LCD displays the  icon.
- Press  or  to turn the key beep on or off
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and 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 the **MENU** key 7 times, LCD displays the  icon.
- Press  or  to turn the Roger beep on or off
- Press the **GROUP/OK** or **PTT** key to confirm and revert back to the main screen, or the **MENU** key to confirm and continue next function setting.





WEATHER RECEIVER (WX) FUNCTION

The radio has the capability to tune in to broadcasts by the United States National Oceanic and Atmospheric Administration (NOAA) Weather Radio and Environment Canada Weather Radio. You can listen to a weather channel or set your radio to alert you to emergency weather broadcasts that interrupt routine broadcasts. When you listen to a weather channel, you cannot use your radio in scan mode or for two-way communications.

Entering the WX Mode







- In two-way radio mode with the main screen display, press and hold the key  for 3 seconds to enter WX mode, the LCD will display the icons  and  and the unit sounds a noise.

Setting the WX Channel


- In WX mode, press  key 1 time until WX channel number flashes.
- Press  or  to select the appropriate channel with good reception in your area.
- Press the  key to confirm and continue setting WX.

Setting the WX Alert

The radio can be set to respond to NOAA Weather Radio emergency messages. A special alarm tone sounds an alert and turns on the WX to give you immediate weather and emergency information.

- In WX mode, press  2 times until the icon  or  flashes
- Press  or  to turn the WX alert function On or OFF.
- Press  key to confirm and exit setting WX.

Exiting the WX Mode

- In WX set mode, press and hold the key  for 3 seconds to exit WX mode and return to two-way radio mode.
- After the WX mode is activated either manually or by receiving an alert, if no keys are pressed for 5 minutes, the WX mode will automatically revert back to two-way radio mode.

If you turn on the WX alert function and return to two-way radio mode, the LCD will display the icon **WX** on the main screen in two-way radio mode, which means the WX alert function has been activated and the radio can detect the weather channel signal and two-way radio channel signal at the same time.

FRS Channel Configuration Chart

| FRS Channel | Frequency (MHz) | Default Associated Code | TX Power | FRS Channel | Frequency (MHz) | Default Associated Code | TX Power |
|-------------|-----------------|-------------------------|----------|-------------|-----------------|-------------------------|----------|
| 1 | 462.5625 | 154 | High | 12 | 467.6625 | 146 | Low |
| 2 | 462.5875 | 134 | High | 13 | 467.6875 | 139 | Low |
| 3 | 462.6125 | 82 | High | 14 | 467.7125 | 75 | Low |
| 4 | 462.6375 | 145 | High | 15 | 462.5500 | 142 | High |
| 5 | 462.6625 | 81 | High | 16 | 462.5750 | 141 | High |
| 6 | 462.6875 | 80 | High | 17 | 462.6000 | 74 | High |
| 7 | 462.7125 | 79 | High | 18 | 462.6250 | 140 | High |
| 8 | 467.5625 | 144 | Low | 19 | 462.6500 | 73 | High |
| 9 | 467.5875 | 78 | Low | 20 | 462.6750 | 72 | High |
| 10 | 467.6125 | 143 | Low | 21 | 462.7000 | 71 | High |
| 11 | 467.6375 | 77 | Low | 22 | 462.7250 | 70 | High |

CTCSS Code Frequency Chart

| Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) | Code No. | Freq. (Hz) |
|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|
| 1 | 67.0 | 8 | 88.5 | 15 | 110.9 | 22 | 141.3 | 29 | 179.9 | 36 | 233.6 | 125 | 171.3 | 132 | 229.1 |
| 2 | 71.9 | 9 | 91.5 | 16 | 114.8 | 23 | 146.2 | 30 | 186.2 | 37 | 241.8 | 126 | 177.3 | 133 | 254.1 |
| 3 | 74.4 | 10 | 94.8 | 17 | 118.8 | 24 | 151.4 | 31 | 192.8 | 38 | 250.3 | 127 | 183.5 | | |
| 4 | 77.0 | 11 | 97.4 | 18 | 123.0 | 25 | 156.7 | 32 | 203.5 | | | 128 | 189.9 | | |
| 5 | 79.7 | 12 | 100.0 | 19 | 127.3 | 26 | 162.2 | 33 | 210.7 | 122 | 69.3 | 129 | 196.6 | | |
| 6 | 82.5 | 13 | 103.5 | 20 | 131.8 | 27 | 167.9 | 34 | 218.1 | 123 | 159.8 | 130 | 199.5 | | |
| 7 | 85.4 | 14 | 107.2 | 21 | 136.5 | 28 | 173.8 | 35 | 225.7 | 124 | 165.5 | 131 | 206.5 | | |

CDCSS Octal Code Chart

| Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code | Code No. | OCT Code |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 39 | 023 | 52 | 074 | 65 | 165 | 78 | 271 | 91 | 413 | 104 | 565 | 117 | 731 | 142 | 255 |
| 40 | 025 | 53 | 114 | 66 | 172 | 79 | 306 | 92 | 423 | 105 | 606 | 118 | 732 | 143 | 266 |
| 41 | 026 | 54 | 115 | 67 | 174 | 80 | 311 | 93 | 431 | 106 | 612 | 119 | 734 | 144 | 274 |
| 42 | 031 | 55 | 116 | 68 | 205 | 81 | 315 | 94 | 432 | 107 | 624 | 120 | 743 | 145 | 325 |
| 43 | 032 | 56 | 125 | 69 | 223 | 82 | 331 | 95 | 445 | 108 | 627 | 121 | 754 | 146 | 332 |
| 44 | 043 | 57 | 131 | 70 | 226 | 83 | 343 | 96 | 464 | 109 | 631 | 134 | 036 | 147 | 356 |
| 45 | 047 | 58 | 132 | 71 | 243 | 84 | 346 | 97 | 465 | 110 | 632 | 135 | 053 | 148 | 446 |
| 46 | 051 | 59 | 134 | 72 | 244 | 85 | 351 | 98 | 466 | 111 | 654 | 136 | 122 | 149 | 452 |
| 47 | 054 | 60 | 143 | 73 | 245 | 86 | 364 | 99 | 503 | 112 | 662 | 137 | 145 | 150 | 454 |
| 48 | 065 | 61 | 152 | 74 | 251 | 87 | 365 | 100 | 506 | 113 | 664 | 138 | 212 | 151 | 455 |
| 49 | 071 | 62 | 155 | 75 | 261 | 88 | 371 | 101 | 516 | 114 | 703 | 139 | 225 | 152 | 462 |
| 50 | 072 | 63 | 156 | 76 | 263 | 89 | 411 | 102 | 532 | 115 | 712 | 140 | 246 | 153 | 523 |
| 51 | 073 | 64 | 162 | 77 | 265 | 90 | 412 | 103 | 546 | 116 | 723 | 141 | 252 | 154 | 526 |

SAFETY TRAINING INFORMATION

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

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.

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.

- **CAUTION**

A proper antenna is the antenna supplied with this radio by the manufacture or an antenna specifically authorized by the manufacturer for use with this radio.

- **DO NOT**

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.

Unauthorized antennas,modifications or attachmens could damage the transmitter and may violate FCC regulations.

- **ALWAYS**

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.

To provide the recipients of your transmission the best sound quality, hold the antenna at least 2.5 cm 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.