

**Walkie-Talkie Family Radio**

**PMR VC200**

**with VOX and stopwatch**

# **User's Manual**

## 1. Operation Buttons

PMR Family Radio Service has the following 8 operation buttons:

- POWER
- PTT
- UP
- DOWN
- MODE
- MONITOR
- LOCK / STOP
- CALL / START

## 2. Selectable Features and Operating Methods

### 2.1 Turn the PMR On

- To turn on the unit, press and hold the [POWER] button until the LCD display shows as in fig 1 and a beep sounds
- After 0.5 second, the LCD display will change to the figure 2 the LED will flash every 2 seconds to indicate the PMR is on and is in the NORMAL operating mode.
- In the NORMAL operating mode, the LCD display will show the current channel number, current CTCSS code, current volume level, and other icons depending on the status stored.

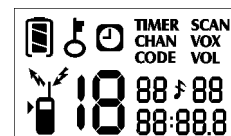


Fig 1

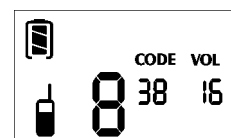


Fig 2

### 2.2 To Turn the PMR Off

- To turn the PMR off, press and hold the [POWER] button for 1 second until the display clears.

### 2.3 To Adjust the Volume

- In the NORMAL operating mode, press the [UP] or [DOWN] buttons to adjust the radio's volume level from 1 to 16. A key tone beep will indicate the volume changes if speaker is not on.
- When holding the [UP] or [DOWN] button, the volume level will be automatically continuously increased or decreased. The key tone beep will not be heard when volume level is continuously changed.
- The key tone beep is also disabled when changing the volume during receiving status.

### 2.4 Key Tones

- Key tones can be disabled by holding down the [MONITOR] button while turning the power on. A key tone disabled icon will be displayed on the LCD screen to indicate key tone feature has been disabled. (Fig. 3)
- Turn off radio, to restore the key tone, turn the PMR off, then holding the [MONITOR] button, turn the power back on, the key tone will return.
- The [PTT] button does not have key tone even when the key tone feature is enabled.

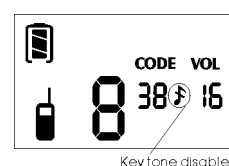


Fig 3

### 2.5 Set Channel Number

- From the NORMAL operating mode, press the [MODE] button once, the CHAN icon begins to flash to indicate the radio is in the CHANNEL SETTING mode instead of the NORMAL mode (Fig 4)
- Press the [UP] or [DOWN] button to select a new channel. Holding the [UP] or [DOWN] button will continuously increase or decrease the channel number.
- The radio will return to the NORMAL mode after 5 seconds if no button is pressed or when the [PTT] button is pressed, the unit will enter the CTCSS CODE SELECTION menu mode if you press the [MODE] button once more.

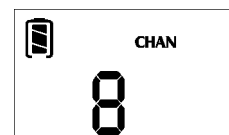


Fig 4

#### Remark:

- Anytime in the menu-setting mode, the PMR will return to the NORMAL mode after 5 seconds if no button is pressed.
- Anytime in the menu-setting mode, the PMR will return back to the NORMAL mode immediately if the [PTT] button

is pressed. No transmission is activated at this time.

## 2.6 Set CTCSS Code

- From the NORMAL operating mode, press [MODE] button 2 times, the CODE icon begin to flash to indicate entering the CTCSS CODE SETTING mode. (Fig 5)
- Press the [UP] or [DOWN] button to select a new code while the CODE icon is flashing. Select Codes 1 to 38

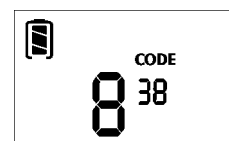


Fig 5

## 2.7 Set the Scanning Feature

- From the NORMAL operating mode, press [MODE] button 3 times, the LCD display changes to indicate entering the SCAN SETTING mode. (Fig 6)
- Anytime when entering this mode, the scanning feature is disabled in default. Press the [UP] button to use the scanning feature and [DOWN] button to disable it. (Fig 7)
- The PMR will start scanning when it returns to the NORMAL operating mode and the scanning feature is enabled. The channel number is scrolled during scanning.
- VOX feature will be temporarily disabled during scanning (Ref. 2.9).
- [MONITOR] button will be temporarily disabled during scanning (Ref. 3.1)



Fig 6

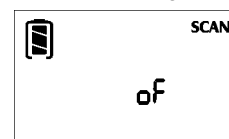
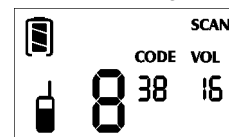


Fig 7

The Scan feature allows users to monitor channels of other transmitting radios. When the PMR detects channel activity, it stops scanning and stay at the active channel for 2 seconds. If the CTCSS code is matched at this time, the user can listen to the transmission of other PMR, otherwise, only the BUSY icon is turned on to indicate the channel is used by others. If the user wants to use this channel, just press and release [PTT] button to stop scanning and the newest scanned channel on the LCD display will replace the previously selected channel.

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Fig

The radio will continuously scan up to the next active channel after 2 seconds if nothing is pressed.

The radio will exit scanning and resume the previously selected channel if the [MODE] button is pressed at any time during scanning.



Fig 9



## 2.8 Setting Call-Ring Tone Feature

- From the NORMAL operating mode, press the [MODE] button 4 times, the PMR will enter the CALL-RING SETTING mode. The LCD display changes as fig 9, the large numeric display shows the current call-ring number, and 'CA tone' is flashes.
- Press the [UP] or [DOWN] button to change the call-ring number (there are 10 different types), the different call-ring tone can be heard during changing.

While the [UP] button is pressed during transmitting status, or the [CALL] button is pressed in the NORMAL operating mode, the PMR will transmit the selected call-ring tone. While holding the button as described above, the PMR will keep transmitting a call-ring tone for a maximum of 10 seconds.

Fig 10

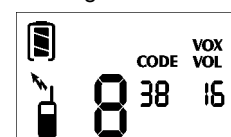
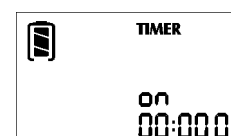


Fig 11

## 2.9 Setting Vox Sensitivity

- From the NORMAL operating mode, press the [MODE] button 5 times, the PMR enters the VOX SETTING mode. The current

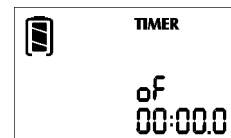


sensitivity level will be shown as large numeric display and the VOX icon begins to flash. (Fig 10)

- The [UP] or [DOWN] button can change the sensitivity level. The most sensitive level is level 1 and 0 means to disable the VOX function.
- The VOX feature will be temporarily disabled during setting, receiving, transmitting, Fig12 scanning and monitoring.

When the VOX feature is in use, the PMR will transmit at least 2 seconds while it detects that the voice level is higher than the selected sensitive level. That means even if the voice level is not detected, the UNIT will still transmit for 2 more seconds.(Fig 11)

Fig 13



## 2.10 Setting the Stop-Watch Feature

- From the NORMAL operating mode, press the [MODE] button 6 times, The TIMER icon begins to flash to indicate you are entering STOP-WATCH SETTING mode. (Fig 12)
- Press the [UP] button to enable the stopwatch timer feature and the [DOWN] button to disable it. (Fig 13)

Pressing the [START] button once in the NORMAL operating mode will make the stopwatch run. Pressing the [START] button again will stop the display of the stopwatch, it runs in background and the TIMER icon is flashing. Pressing the [START] button again will make the stopwatch run continuously... Pressing the [STOP] button will stop the running of the stopwatch, either in the foreground or background, and display the total elapsed time. Press the [STOP] button again it will clear the stopwatch to zero. (Fig 14)

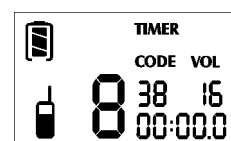


Fig 14

## 2.11 Set the Auto-Power-Off Feature (APO)

- From the NORMAL operating mode, press the [MODE] button 7 times, the PMR enters the APO SETTING mode, the APO icon is flashing and the large numeric display shows the current period of APO time. (Fig 15)
- Pressing the [UP] or [DOWN] button can change the APO time (from 1 to 3 hours, 0 will disable the APO)

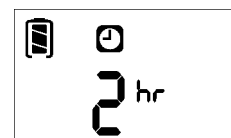


Fig 15

Auto-Power-Off feature can make the PMR turn itself off after a certain period of inactivity. This feature is used to prevent unexpected battery consumption.

During the APO period, pressing any buttons will reset the APO timer. If no button is pressed during the selected period, the PMR will sound a warning tone every 5 seconds and the APO icon will flash during the last minute before APO. If no button is pressed, the PMR will turn itself off after one minute.

## 3. Other Features and Operating Method

### 3.1 Receive Monitor

In the NORMAL operating mode, press the [MONITOR] button and hold for 1 second to turn off the auto-squelch. The signals on the current channel can be heard. Release [MONITOR] to turn the auto-squelch function back on.

During scanning, the Receive Monitor feature can not be activated (Ref.2.7).

During the Receive Monitor mode, the VOX feature will be temporarily disabled even it is activated (Ref. 2.9).

### 3.2 Sending messages (TALK)

- Press and hold the [PTT] button, the user can speak into the PMR microphone. The LED indicator and the TRANSMIT indicator glow continuously when transmitting.
- To receive messages, release the [PTT] button.
- If [UP] button is pressed while transmitting, the PMR will send out the selected Call-Ring tone with the microphone muted. The Call-Ring tone can also be heard the own speaker.

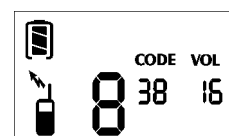


Fig 16

- During transmitting, the Timeout Timer feature can prevent accidental continuous transmission. It emits a warning tone and stops transmission if the [PTT] button is pressed over 60 continuous seconds.

### 3.3 Key Lock Feature

- Press and hold the [LOCK/STOP] button for 1 second, the LOCK feature is on and its icon also appears. (Fig 17)
- Press and hold [LOCK/STOP] button again for 1 second, the LOCK feature is disabled and its icon also disappears.

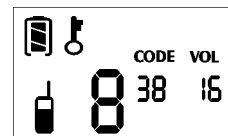


Fig 17

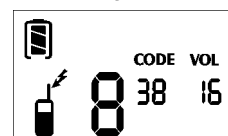
The Key-Lock feature allows the user to disable the [UP], [DOWN], [CALL/START] and [MODE] buttons so that the radio settings cannot be changed accidentally. [PTT], [MONITOR] and [POWER] remain functional.

When pressing [PTT] to transmit, the [UP] button will be temporarily enabled to activate the Call-Ring feature.

### 3.4 BUSY indicator (RSSI indicator)

Anytime when the PMR detects a valid signal on the selected channel, the BUSY indicator will appear, but the speaker only will work when matching CTCSS code (Fig 18)

During receiving, the VOX feature will be temporarily disabled even if it is activated (Ref.2.9). Fig 18



### 3.5 Use of Auxiliary Microphone Jack and Earphone Jack

The PMR has an Auxiliary Microphone and Earphone jack. If an ear phone is pushed in the jack on the top of the radio, the speaker of the radio will be disabled and replaced by the earphone, the combination of auxiliary microphone and auxiliary [PTT] button is the same as the one of microphone and [PTT] button.

You can use the auxiliary mic with PTT switch or you can use auxiliary mic without the switch together with the VOX function to activate transmission.

### 3.6 LCD Back Light

Whenever a button (except [PTT]) is pressed, the LCD back light will illuminate for 5 seconds.

### 3.7 Power Saving Feature

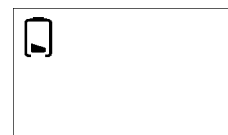
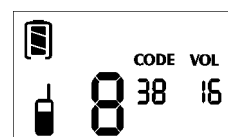
In the NORMAL operating mode (standby to receive), the Power Saving feature will put the PMR's RF section in an ON/OFF duty cycle to save battery power. The ON/OFF duration is about 120ms ON and 480ms OFF.

If SCAN function is activated, the RF receive section will not have a power saving cycle and will continue to scan for channel activity.

### 3.8 Battery level / Low Battery Indication

There is a Battery Meter indicator in the LCD display panel. When the battery power is low, the battery icon will flash and a warning beep will sound every 3 minutes or when you press the PTT button to indicate the battery needs to be recharged. If there is no action for a period of time, the PMR will turn off the LCD display and disable all buttons except the POWER button.

Place the PMR in the charging base and charge for 10-14 hours.



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#### 4. List of Call Ring Tone Types

| Tone No | Tone Name | Usage                                      |
|---------|-----------|--------------------------------------------|
| 1       | Ring_1    | Call-Ring tone type 1                      |
| 2       | Ring_2    | Call-Ring tone type 2                      |
| 3       | Ring_3    | Call-Ring tone type 3                      |
| 4       | Ring_4    | Call-Ring tone type 4                      |
| 5       | Ring_5    | Call-Ring tone type 5 (Music)              |
| 6       | Ring_6    | Call-Ring tone type 6 (Music)              |
| 7       | Ring_7    | Call-Ring tone type 7 (Music)              |
| 8       | Ring_8    | Call-Ring tone type 8 (Music)              |
| 9       | Ring_9    | Call-Ring tone type 9 (Music)              |
| 10      | Ring_10   | Call-Ring tone type 10 (Music)             |
| 11      | Alert     | Normal key tone for button pressed         |
| 12      | Alarm     | Low battery alarm tone.                    |
| 13      | Warning   | Pressing [PTT] button over 60 seconds      |
| 14      | Power-On  | Signal tone when radio's power turned on;  |
| 15      | Power-Off | Signal tone when radio's power turned off; |

#### 5. List of Channel Frequencies

| Channel Frequency Chart (PMR) |                 |
|-------------------------------|-----------------|
| Channel                       | Frequency (MHz) |
| 1                             | 446.00625       |
| 2                             | 446.01875       |
| 3                             | 446.03125       |
| 4                             | 446.04375       |
| 5                             | 446.05625       |
| 6                             | 446.06875       |
| 7                             | 446.08125       |
| 8                             | 446.09375       |

**6. List of 38 CTCSS Code Frequencies**

| No. | Frequency<br>(Hz) | No. | Frequency<br>(Hz) | No. | Frequency<br>(Hz) |
|-----|-------------------|-----|-------------------|-----|-------------------|
| 1   | 67.0              | 14  | 107.2             | 27  | 167.9             |
| 2   | 71.9              | 15  | 110.9             | 28  | 173.8             |
| 3   | 74.4              | 16  | 114.8             | 29  | 179.9             |
| 4   | 77.0              | 17  | 118.8             | 30  | 186.2             |
| 5   | 79.7              | 18  | 123.0             | 31  | 192.8             |
| 6   | 82.5              | 19  | 127.3             | 32  | 203.5             |
| 7   | 85.4              | 20  | 131.8             | 33  | 210.7             |
| 8   | 88.5              | 21  | 136.5             | 34  | 218.1             |
| 9   | 91.5              | 22  | 141.3             | 35  | 225.7             |
| 10  | 94.8              | 23  | 146.2             | 36  | 233.6             |
| 11  | 97.4              | 24  | 151.4             | 37  | 241.8             |
| 12  | 100.0             | 25  | 156.7             | 38  | 250.3             |
| 13  | 103.5             | 26  | 162.2             |     |                   |