



# **CB200-U** **CB200-M** User Guide

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# RF SAFETY & FCC COMPLIANCE

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 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.
- Observe a minimum safe distance of 20 cm from the device to the operator.

Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

1-888-225-5322 (1-888-CALL FCC) Voice: toll free 1-888-835-5322 (1-888-TELL FCC) TTY: toll free



# SAFETY & INFORMATION

The CB200 requires care in mounting and servicing. Observing the following precautions will ensure the proper function and safety of the unit.

## CAUTION!

- Do not screw through the device to mount to a surface.
- Keep the Callbox away from water, high moisture, and high temperatures.
- This equipment contains potentially hazardous voltages.
- Do not attempt to disassemble the unit.
- Except for the batteries, this unit contains absolutely no user serviceable components and all service should be completed only by qualified service personnel.
- Do not dispose of batteries in fire. The batteries may explode.
- Do not open or mutilate the batteries, they contain dangerous electrolytes.
- Operating this unit in any capacity other than its intended purpose may result in system failure and possible injury and voids any and all warranty.

# EMI COMPATIBILITY

## ELECTROMAGNETIC INTERFERENCE (EMI) COMPLIANCE

**NOTE:** Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

This device complies with part 15 of the FCC Rules and Industry Canada License-exempt RSS standard(s). Operation is subject to the following 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 of the device.
- (3) Changes or modifications made to this device, not expressly approved by Motorola, could void the authority of the user to operate this equipment.

# INDUSTRY CANADA COMPLIANCE

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## **Industry Canada (IC) statement (Canada) / Déclaration de Canada d'industrie (IC) (Canada)**

### **IC RF Exposure Statement / Déclaration d'exposition d'IC RF**

This device meets the IC requirements for RF exposure in public or uncontrolled environments.

Cet appareil est conforme aux conditions de la IC en matière de RF dans des environnements publics ou incontrôlée.

### **IC Warning / Avertissement d'IC**

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: 1. this device may not cause interference, and 2. this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada RSS standard exempts de licence (s). Son utilisation est soumise à Les deux conditions suivantes: 1. cet appareil ne peut pas provoquer d'interférences et 2. cet appareil doit accepter Toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

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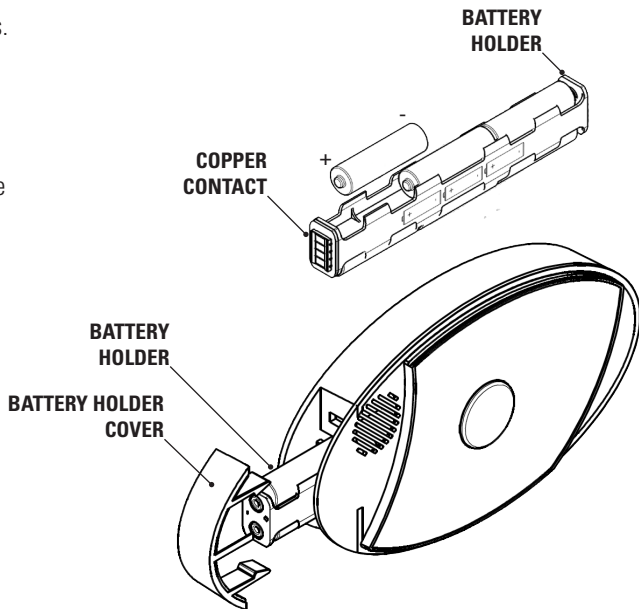
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# INSTALLING THE BATTERIES

The CB200 uses six (6) AA batteries.

1. Remove the battery holder from cardboard packaging.
2. Orient the battery holder with the four copper contacts pointed towards you.
3. Insert the batteries following battery sled sticker.
4. Insert battery holder into bottom of device with the four contacts first.
5. Replace the battery holder cover.

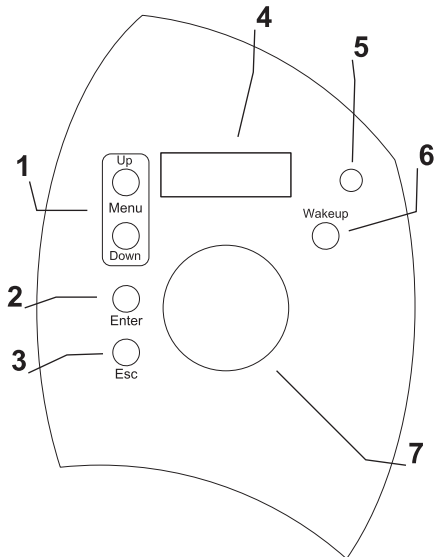


# CONTROL INTERFACE

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## Available Controls and Components

1. **Menu** Button
2. **Enter** Button
3. **Esc** Button
4. Display
5. Microphone
6. **Wake Up** Button
7. **Call** Button



# LCD DISPLAY

## Initial Power-Up

Once the batteries are installed in the unit, the Call Button blinks and LCD display shows

## Interface ENA.

If the USB Serial Interface is not to be used, press the **ESC** button to exit this mode. The default status screen will be shown on the display. If nothing is pressed, the unit will enter sleep mode after 60 seconds and the screen will clear.

## Status Screen

The Status Screen toggles the current Frequency and CTCSS setting continuously.

### CB200-U

Insert Battery

➤➤➤➤➤

INTERFACE ENA  
-ESC to EXIT-

Press **Esc**

➤➤➤➤➤

Freq No: 6  
MHZ:467.8750

CTCSS CODE: 1  
67.0 HZ ANA

### CB200-M

Insert Battery

INTERFACE ENA  
-ESC to EXIT-

Press **Esc**

Freq No: 6  
MHZ:151.6250

Channel Spacing  
12.5 KHZ

CTCSS CODE: 1  
67.0 HZ ANA

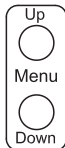
# LCD WAKEUP

13

The screen is in a blank “sleep” state during most operation, even when the system is operating. This is a feature to increase battery life and prevent tampering.

To enter the **Menu** options, press the **Wakeup** button on the unit. The large round button blinks to indicate it is awake.

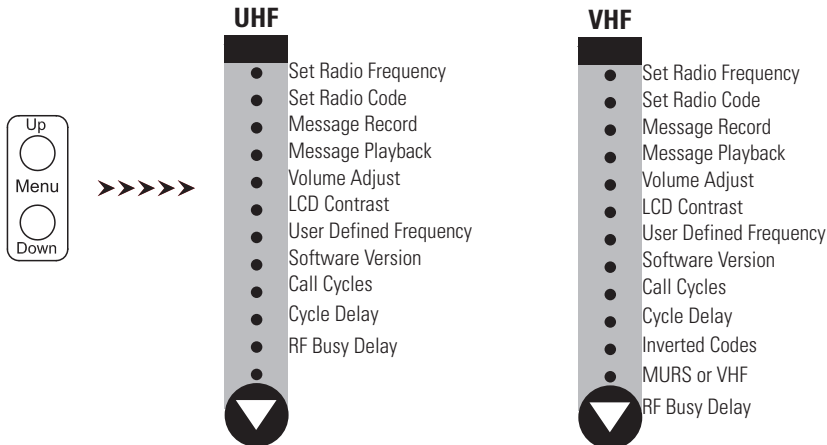
The display remains disabled until any LCD menu control button is pressed. The LCD menu control buttons are **Up** or **Down** as shown in the following.



# SCROLLING MENU

You can setup preferred features on CB200 by scrolling through the menu options. Press the **Menu** buttons to scroll through menus.

**Menu** options are presented in the order below, and the list repeats continuously.



# RADIO FREQUENCY SELECTION

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## Set Radio Frequency

When the unit is awake and displaying the Status Screen, press the **UP** or **Down** Menu buttons until **"Radio Freq?"** appears.

Radio Freq?

Press **Enter**

Old: 6 467.8750  
New: 6 467.8750

Press **Up** or **Down** to  
select new frequency

Old: 6 467.8750  
New: 2 464.5500

Press **Enter** to select new  
frequency

Old: 6 467.8750  
\*\*Freq Updated

Press **Enter** to select new  
frequency

The CB200 is now programmed with the new frequency selected.

# RADIO CODE SELECTION

## Set Code Frequency

When the unit is awake and displaying the Status Screen, press the **UP** or **Down** Menu buttons until **"Radio Code?"** appears.

Radio Code?

Press **Enter**

Old:12 100.0 Hz  
New:12 100.0 Hz

Press **Up** or **Down** to  
select new code

Old:12 100.0 Hz  
New:13 103.5 Hz

Press **Enter** to select new  
code

Old:12 100.Hz  
\*\*Code Updated

Press **Enter** to select new  
code

The CB200 is now programmed with the new CTCSS code.

# MESSAGE RECORDING

17

Press **Up** or **Down** button until “**Msg Record?**” appears.

Msg Record?

Press **Enter**

Select Message?  
Aux Message

Press **Up** or **Down** to find message to record.

Select Message?  
Local Message

Press **Enter** to select message to record.

Hold ENTER Btn  
To Record Msg

Hold **Enter** button to record a new message.

The new message automatically playback to verify it was recorded correctly. Message cannot be longer than 10 seconds.

# MESSAGE PLAYBACK

Press **Up** or **Down** button until "**Msg Playback?**" appears.

Msg Playback?

Press **Enter**

Select Message?  
Local Message

Press **Up** or **Down** to find message to playback.

Select Message?  
Radio Message

Press **Enter** to select message to playback.

-Playback Act-  
Radio Message

Select new message to playback or press **Esc** to exit.

# VOLUME ADJUSTMENT

19

Press **Up** or **Down** button until “**Volume Adjust?**” appears.

Volume Adjust?

Press **Enter**

Speaker Volume?

Press **Up** or **Down** to select which volume to adjust, then press Enter.

-Speaker Vol-  
Vol (1-63) : 45

Press **Up** or **Down** until desired volume selection is shown. The volume settings take place immediately. Press **Esc** to exit.

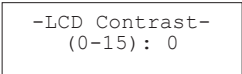
# LCD CONTRAST

Press **Up** or **Down** button until “**LCD Contrast?**” appears.



LCD Contrast?

Press **Enter**



-LCD Contrast-  
(0-15): 0

Press **Up** or **Down** until desired contrast selection is shown. The contrast settings take place immediately. Press **Esc** to exit.

If the need arises to adjust the LCD contrast, check the batteries first. The batteries may be too weak to operate the unit correctly.

# USER DEFINED FREQUENCIES

21

If the radios you are using are set to frequencies not listed in our predefined set, you can reset them in this area.

There are placeholders for 5 channels, UHF 57-61 ( VHF 6-10 ) ( Not Available in MURs )

Press **Up** or **Down** button until “**User Def Freq?**” appears.

User Def Freq?

Press **Enter**

Mem Location?  
(57-61) : 57

Press **Up** or **Down** to select which memory location to define.

57 Old: 467.8750  
New: 467.8750

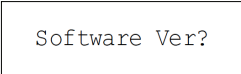
Press **Up** or **Down** to select new frequency. Press **Enter**. Press **Esc** to exit without any changes.

Press and hold **Up** or **Down** button for faster increments in the frequency change.

# SOFTWARE VERSION

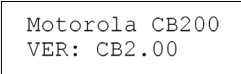
You may be asked by a field support or technical support personnel to determine the CB200 device's software version.

Press **Up** or **Down** button until "**Software Ver?**" appears.



Software Ver?

Press **Enter**



Motorola CB200  
VER: CB2.00

The software version is shown

# CALL CYCLES

23

Call Cycles refers to the repeating radio broadcasts that will occur when the call button is active.

Press **Up** or **Down** button until “**Call Cycles?**” appears.

Call Cycles?

Press **Enter**

Old: 2 cycles  
New: 2 cycles

Press **Up** or **Down** to increase or decrease the Call Cycle selection. The range is 1-30 cycles. Press **Enter** to select the new Call Cycle.

# CYCLE DELAY

Call Delay refers to the delay (in seconds) between repeating radio broadcasts that occur when the call button (or aux button) is active.

Press **Up** or **Down** button until “**Cycle Delay?**” appears.

Cycle Delay?

Press **Enter**

Old: 45 sec

New: 45 sec

Press **Up** or **Down** to increase or decrease the Cycle Delay selection. The range is 10-180 seconds. Press **Enter** to select the new Call Cycle.

# INVERTED CODES

25

When selecting digital CTCSS (squellch) codes, some receiving units may require inverted Octal numeric codes. Typically, receivers use the non-inverted codes. CB200-M is set to non-inverted by default.

**Note:** This feature only applicable for CB200-M

Press **Up** or **Down** button until “**Inverted Codes?**” appears.

Inverted Codes?

Press **Enter**

Active: NORMAL  
New = NORMAL

Press **Up** or **Down** to select between **NORMAL** and **INVERTED**. Press **Enter** to select the new setting.

**WARNING:** If the incorrect digital code is selected, the radio broadcast will not open the squellch of the receiving unit.

# CHANGING VHF TO MURS

The CB200-M can change between VHF channel set and MURs Channel Set.

**Note:** This feature only applicable for CB200-M

Press **Up** or **Down** button until "**MURs or VHF?**" appears.

MURS or VHF?

Press **Enter**

Active:MURS Only  
New = VHF

Press **Up** or **Down** to cycle through **MURS Only** and **VHF** selections. Press **Enter** to select the new value or **Esc** to exit without any changes.

# RF BUSY DELAY

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RF Busy Delay defines the amount of time after the CB200 recognizes an open channel before it makes it's radio transmission. This is helpful if you would like to set a longer time between button press and radio message or to prevent transmitting while conversations are ongoing in some environments.

Press **Up** or **Down** button until "**RF Busy Delay?**" appears.

RF Busy Delay?

Press **Enter**

Old = 3 Sec  
New = 3 Sec

Use the **Up** or **Down** to cycle through the **RF Busy Delay** selections (3-15 seconds). Press **Enter** to select the new value, or **Esc** to exit without any changes. Default setting is 3-seconds.

# MOUNTING THE DEVICE

The CB200 can be mounted to the wall using the included 3M DualLock strips or by using the optional wall mounting bracket.

## Using 3M DualLock

Ensure both the back of the callbox and the area of the surface that is being attached to is clean, flat, and dry.

1. Peel off one side of the DualLock's release backing and firmly adhere to the left side of the unit. Repeat this with the other DualLock to the right side of the callbox.
2. Once both strips of DualLock are attached to the callbox, peel off the white release backing and carefully align the unit to be level on the surface you intend to place it.

# MOUNTING THE DEVICE

3. Once the callbox appears aligned, firmly press it to the wall in one motion.

**Note:** The callbox is now removable by applying firm pressure around the exterior edge of the unit. For optional mounting accessories, please use the mounting bracket available from your Motorola CB200 distributor.

# FREQUENCY SELECTION TABLE - UHF

| Freq. No. | Freq. Value (MHz) | Freq. No. | Freq. Value (MHz) | Freq. No. | Freq. Value (MHz) |
|-----------|-------------------|-----------|-------------------|-----------|-------------------|
| 1         | 464.5000          | 13        | 461.1375          | 25        | 462.8125          |
| 2         | 464.5500          | 14        | 461.1625          | 26        | 462.8375          |
| 3         | 467.7625          | 15        | 461.1875          | 27        | 462.8625          |
| 4         | 467.8125          | 16        | 461.2125          | 28        | 462.8875          |
| 5         | 467.8500          | 17        | 461.2375          | 29        | 462.9125          |
| 6         | 467.8750          | 18        | 461.2625          | 30        | 464.4875          |
| 7         | 467.9000          | 19        | 461.2875          | 31        | 464.4875          |
| 8         | 467.9250          | 20        | 461.3125          | 32        | 464.5375          |
| 9         | 461.0375          | 21        | 461.3375          | 33        | 464.5625          |
| 10        | 461.6025          | 22        | 461.3625          | 34        | 466.0375          |
| 11        | 461.0875          | 23        | 462.7625          | 35        | 466.0625          |
| 12        | 461.1125          | 24        | 462.7875          | 36        | 466.0875          |

# FREQUENCY SELECTION TABLE - UHF

31

| Freq. No. | Freq. Value (MHz) | Freq. No. | Freq. Value (MHz) | Freq. No. | Freq. Value (MHz) |
|-----------|-------------------|-----------|-------------------|-----------|-------------------|
| 37        | 466.1125          | 49        | 467.8375          | 61        | User Defined      |
| 38        | 466.1625          | 50        | 467.8625          |           |                   |
| 39        | 466.1625          | 51        | 467.8875          |           |                   |
| 40        | 466.1875          | 52        | 467.9125          |           |                   |
| 41        | 466.2125          | 53        | 469.4875          |           |                   |
| 42        | 466.2375          | 54        | 469.5125          |           |                   |
| 43        | 466.2625          | 55        | 469.5375          |           |                   |
| 44        | 466.2875          | 56        | 469.5625          |           |                   |
| 45        | 466.3125          | 57        | User Defined      |           |                   |
| 46        | 466.3375          | 58        | User Defined      |           |                   |
| 47        | 466.3625          | 59        | User Defined      |           |                   |
| 48        | 467.7875          | 60        | User Defined      |           |                   |

# FREQUENCY SELECTION TABLE - VHF

| <b>Freq. No.</b> | <b>Freq. Value (MHz)</b> | <b>Description</b> |
|------------------|--------------------------|--------------------|
| 1                | 151.8200                 | Default Freq       |
| 2                | 151.8800                 | Default Freq       |
| 3                | 151.9400                 | Default Freq       |
| 4                | 154.5700                 | Default Freq       |
| 5                | 154.6000                 | Default Freq       |
| 6                | 154.6000                 | Custom Freq 1      |
| 7                | 154.6000                 | Custom Freq 2      |
| 8                | 154.6000                 | Custom Freq 3      |
| 9                | 154.6000                 | Custom Freq 4      |
| 10               | 154.6000                 | Custom Freq 5      |

# FREQUENCY SELECTION TABLE - MURS <sup>33</sup>

| <b>Freq. No.</b> | <b>Freq. Value</b> | <b>Bandwidth (KHz)</b> | <b>Description</b> |
|------------------|--------------------|------------------------|--------------------|
| 1                | 154.5700           | 20 KHz                 | Default Freq       |
| 2                | 154.6000           | 20 KHz                 | Default Freq       |
| 3                | 151.8200           | 11.25 KHz              | Default Freq       |
| 4                | 151.8800           | 11.25 KHz              | Default Freq       |
| 5                | 151.9400           | 11.25 KHz              | Default Freq       |
| 6                | 154.5700           | 20 KHz                 | Default Freq       |
| 7                | 154.6000           | 20 KHz                 | Default Freq       |

# CTCSS CHART (ANALOG)

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

# CTCSS CHART (DIGITAL)

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| No. | Code | No. | Code | No. | Code | No. | Code |
|-----|------|-----|------|-----|------|-----|------|
| 39  | 023  | 51  | 073  | 63  | 156  | 75  | 261  |
| 40  | 025  | 52  | 074  | 64  | 162  | 76  | 263  |
| 41  | 026  | 53  | 117  | 65  | 165  | 77  | 265  |
| 42  | 031  | 54  | 115  | 66  | 172  | 78  | 271  |
| 43  | 032  | 55  | 116  | 67  | 174  | 79  | 306  |
| 44  | 043  | 56  | 125  | 68  | 205  | 80  | 311  |
| 45  | 047  | 57  | 131  | 69  | 223  | 81  | 315  |
| 46  | 051  | 58  | 132  | 70  | 226  | 82  | 331  |
| 47  | 054  | 59  | 134  | 71  | 243  | 83  | 343  |
| 48  | 065  | 60  | 143  | 72  | 244  | 84  | 346  |
| 49  | 071  | 61  | 152  | 73  | 245  | 85  | 351  |
| 50  | 072  | 62  | 155  | 74  | 251  | 86  | 364  |

# CTCSS CHART (DIGITAL)

| No. | Code | No. | Code | No. | Code |
|-----|------|-----|------|-----|------|
| 87  | 365  | 99  | 503  | 111 | 654  |
| 88  | 371  | 100 | 506  | 112 | 662  |
| 89  | 411  | 101 | 516  | 113 | 664  |
| 90  | 412  | 102 | 532  | 114 | 703  |
| 91  | 413  | 103 | 546  | 115 | 712  |
| 92  | 423  | 104 | 565  | 116 | 723  |
| 93  | 431  | 105 | 606  | 117 | 731  |
| 94  | 432  | 106 | 612  | 118 | 732  |
| 95  | 445  | 107 | 624  | 119 | 734  |
| 96  | 464  | 108 | 627  | 120 | 743  |
| 97  | 465  | 109 | 631  | 121 | 754  |
| 98  | 466  | 110 | 632  |     |      |

# NOTES



# NOTES



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