



# 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.

FCC License is not required. This device operates on frequencies authorized for use in the Multi-Use Radio Service (MURS). MURS frequencies are available for unlicensed business or personal use.

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-M 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. 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.

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## **DISCLAIMER**

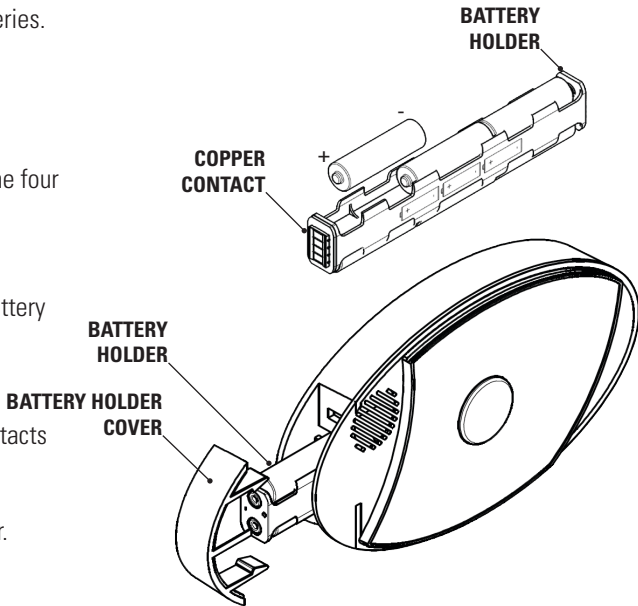
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# INSTALLING THE BATTERIES

The CB200-M uses six (6) AA batteries.

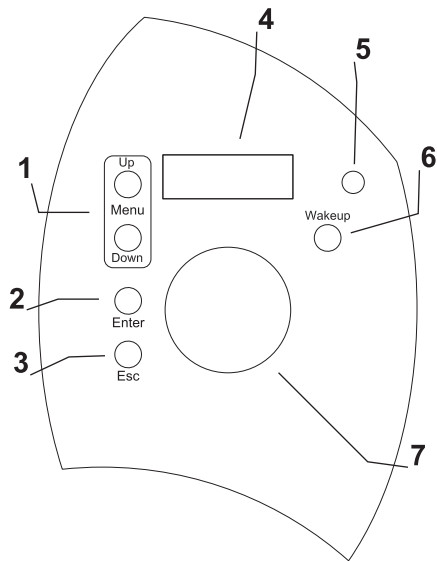
1. Remove the battery holder from cardboard packaging.
2. Orient the battery holder with the four copper contacts pointed towards you.
3. Insert the batteries following battery sled sticker.
4. Insert battery holder into bottom of device with the four contacts first.
5. Replace the battery holder cover.



# CONTROL INTERFACE

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

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## Initial Power-Up

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

### Interface ENA.



## CB200-M

Insert Battery

```
INTERFACE ENA
-ESC to EXIT-
```

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.



Press **Esc**

```
Freq No: 6
MHZ:154.5700
```

```
CTCSS CODE: 1
67.0 HZ ANA
```

```
Channel Spacing
12.5 KHZ
```

## Status Screen

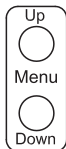
The Status Screen toggles the current Frequency and CTCSS setting continuously.

# LCD WAKEUP

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.

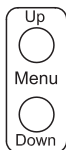
The display remains disabled until any LCD menu control button is pressed. The LCD menu control buttons are **Up** or **Down** as shown in the following.



# SCROLLING MENU

You can setup preferred features on CB200-M 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.



## MURS

- Set MURS Channel Number
- Set Radio Code
- Message Record
- Message Playback
- Volume Adjust
- LCD Contrast
- Software Version
- Call Cycles
- Cycle Delay
- Inverted Codes
- RF Busy Delay



# MURS CHANNEL SELECTION

## Set MURS Channel Number

When the unit is awake and displaying the Status Screen, press the

**UP** or **Down** Menu buttons until "**MURS Chan No?**" appears.

```
MURS Chan No?
```

Press **Enter**

```
Old:6 154.5700  
New:6 154.5700
```

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

```
Old:6 154.5700  
New:2 154.6000
```

Press **Enter** to select new  
channel

```
Old:6 154.5700  
**Chan Updated
```

Press **Enter** to select new  
channel

The CB200-M is now programmed with the new channel selected.

# RADIO CODE SELECTION

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## Set Squelch 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 squelch code

Channel No 1-7?  
Ch:1 154.5700

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

Old:12 100.0 Hz  
New:13 103.5 Hz

Press **Enter** to select  
new squelch code

Channel No 1-7?  
Ch:3 151.8200

Press **Enter** to select  
new channel

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

Press **Enter** to select  
new squelch code

The CB200-M is now programmed with the new CTCSS squelch code.

# MESSAGE RECORDING

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

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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

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.

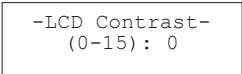
# LCD CONTRAST

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

A rectangular box representing a screen displaying the text "LCD Contrast?".

LCD Contrast?

Press **Enter**

A rectangular box representing a screen displaying the text "-LCD Contrast- (0-15): 0".

-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.

# SOFTWARE VERSION

You may be asked by a field support or technical support personnel to determine the CB200-M 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

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

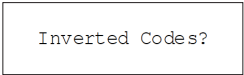
Press **Up** or **Down** to increase or decrease the Cycle Delay selection. The range is 10-180 seconds. Press **Enter** to select the new Call Cycle.

# INVERTED CODES

When selecting digital CTCSS (squelch) 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.

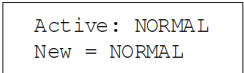
**Note:** This feature only applicable for CB200-M

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 squelch of the receiving unit.

# RF BUSY DELAY

RF Busy Delay defines the amount of time after the CB200-M 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?
```

```
Old = 3 Sec  
New = 3 Sec
```

Press **Enter**

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

**Note:** The callbox can be removed 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-M distributor.

## 26 FREQUENCY SELECTION TABLE - MURS

Freq. No.	Freq. Value	CTCSS Code	Bandwidth (KHz)	Description
1	154.5700	0	20 KHz	Default Freq / Code
2	154.6000	0	20 KHz	Default Freq / Code
3	151.8200	57 (131)	11.25 KHz	Default Freq / Code
4	151.8800	57 (131)	11.25 KHz	Default Freq / Code
5	151.9400	57 (131)	11.25 KHz	Default Freq / Code
6	154.5700	57 (131)	20 KHz	Default Freq / Code
7	154.6000	57 (131)	20 KHz	Default Freq / Code

**Note:** the CTCSS Code shown is the default setting. The CTCSS squelch code can be changed by the user. (Refer to the **Radio Code Selection** section on page 15.)

# CTCSS CHART (ANALOG)

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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)

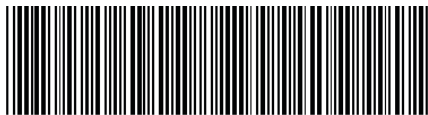
No.	Code	No.	Code	No.	Code	No.	Code
39	023	51	073	63	156	75	261
40	025	52	074	64	162	76	263
41	026	53	117	65	165	77	265
42	031	54	115	66	172	78	271
43	032	55	116	67	174	79	306
44	043	56	125	68	205	80	311
45	047	57	131	69	223	81	315
46	051	58	132	70	226	82	331
47	054	59	134	71	243	83	343
48	065	60	143	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



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