

Preliminary Draft

Unbridled CB Radio Owner's Manual

Version 1.1



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1.1	9/11/06	EW	Added FCC Provisions

1.0 Operation

1.1 Activating The CB

To activate the CB radio, press the COM button on the communications controller (see Figure 1). You should now see the “CB” characters on the lower left portion of the radio display.



Figure 1 – Communications Control

1.2 Selecting A Channel

!!WARNING!!

Set CB channel, squelch, threshold, and volume before riding to minimize the need for adjustments on the road. Excessive adjustments while riding is an unnecessary distraction that can lead to loss of vehicle control resulting in death or serious injury.

Press and hold the COM button on the communications controller for approximately 1 second or until the “CHANNEL ADJUST” screen appears on the radio display. Use the same COM button to increase the CB channel. Use the ICOM button to decrease the CB channel.

1.3 Adjusting CB Volume

Press the MODE button on the main radio controller (see Figure 2) several times until "CB VOLUME" is shown on the radio display. Use the + and – buttons on the main radio controller to increase or decrease the CB volume.



Figure 2 – Main Radio Controller

1.4 Adjusting Squelch

CAUTION

There are no adjustments internal to the CB transceiver chassis that can be performed without risking non-compliance with Federal Communications Commission (FCC) rules. Refer to the Original Equipment Manufacturer for any service required during the warranty period. For transmitter service after the warranty period, refer to a certified repair center. Any frequency determining components, such as crystals, or power determining semiconductors, etc., should only be replaced with the original component manufacturers part or equivalent. Substitutes may result in violation of FCC rules.

Use the SQ (squelch) button on the communications controller to increase or decrease the CB squelch.

1.5 Transmitting (TX)

To transmit, press and hold the PTT (Push-To-Talk) button located on the communications controls. The PTT button must be pressed for the duration of the transmission. When transmitting, a "TX" symbol will be shown in the lower portion of the radio display (see Figure 3 below).



Figure 3 – TX shown on main radio display

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1.6 Receiving (RX)

CB reception will be automatic once the CB has been activated and the squelch level has been selected. When receiving, a "RX" symbol will be shown in the lower portion corner of the radio display (see Figure 4 below).



Figure 4 – RX shown on main radio display

2.0 FCC Provisions

The following FCC rules and guidelines must be understood and followed by the CB user(s):

2.1 What are the Citizens Band Radio Services?

The Citizens Band Radio Services are:

- The Citizens Band (CB) Radio Service--a private, two-way, short-distance voice communications service for personal or business activities of the general public. The CB Radio Service may also be used for voice paging.
- The Family Radio Service (FRS)--a private, two-way, very short-distance voice and data communications service for facilitating family and group activities. The rules for this service are contained in subpart B of this part.
- The Low Power Radio Service (LPRS)--a private, short-distance communication service providing auditory assistance to persons with disabilities, persons who require language translation, and persons in educational settings, health care assistance to the ill, law enforcement tracking services in cooperation with law enforcement, and point-to-point network control communications for Automated Marine Telecommunications System (AMTS) coast stations licensed under part 80 of this chapter. The rules for this service are listed under subpart G of this part. Two-way voice communications are prohibited.
- The Medical Implant Communications Service (MICS)--an ultra-low power radio service for the transmission of non-voice data for the purpose of facilitating diagnostic and/or therapeutic functions involving implanted medical devices. The rules for this service are contained in subpart I of this part.
- The Wireless Medical Telemetry Service (WMTS)--a private, short distance data communication service for the transmission of patient medical information to a central monitoring location in a hospital or other medical facility. Voice and video communications are prohibited. Waveforms such as electrocardiograms (ECGs) are not considered video. The rules for this service are contained in subpart H of this part.
- The Multi-Use Radio Service (MURS)--a private, two-way, short-distance voice or data communications service for personal or business activities of the general public. The rules for this service are contained in subpart J of this part.
- Dedicated Short-Range Communications Service On-Board Units (DSRCS-OBUs). The rules for this service are contained in subpart L of this part. DSRCS-OBUs may communicate with DSRCS Roadside Units (RSUs), which are authorized under part 90 of this chapter. DSRCS, RSU, and OBU are defined in Sec. 90.7 of this chapter.

2.2 How do I use these rules?

You must comply with these rules (See CB Rule 21 Sec. 95.421, for the penalties for violations) when you operate a station in the CB

Service from:

(1) Within or over the territorial limits of places where radio services are regulated by the FCC (see CB Rule 5, Sec. 95.405);

(2) Aboard any vessel or aircraft registered in the United States; or

(3) Aboard any unregistered vessel or aircraft owned or operated by a United States citizen or company.

(a) Your CB station must comply with technical rules found in subpart E of part 95.

(b) Where the rules use the word ``you", ``you" means a person operating a CB station.

(c) Where the rules use the word ``person," the rules are concerned with an individual, a corporation, a partnership, an association, a joint stock company, a trust, a state, territorial or local government unit, or other legal entity.

(d) Where the rules use the term ``FCC", that means the Federal Communications Commission.

(e) Where the rules use the term ``CB station", that means a radio station transmitting in the CB Radio Service.

2.3 Am I eligible to operate a CB station?

You are authorized to operate a CB station unless:

(a) You are a foreign government, a representative of a foreign government, or a federal government agency; or

(b) The FCC has issued a cease and desist order to you, and the order is still in effect.

2.4 Do I need a license?

You do not need an individual license to operate a CB station. You are authorized by this rule to operate your CB station in accordance with the rules in this subpart.

2.5 Where may I operate my CB station?

You are authorized to operate your CB station from:

(a) Within or over any area of the world where radio services are regulated by the FCC. Those areas are within the territorial limits of:

- (1) The fifty United States
- (2) The District of Columbia
- (3) Caribbean Insular areas
- (4) Commonwealth of Puerto Rico
- (5) Navassa Island
- (6) United States Virgin Islands (50 islets and cays)
- (7) Pacific Insular areas
- (8) American Samoa (seven islands)
- (9) Baker Island
- (10) Commonwealth of Northern Mariana Islands
- (11) Guam Island.
- (12) Howland Island
- (13) Jarvis Island

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- (14) Johnston Island (Islets East, Johnston, North and Sand)
 - (15) Kingman Reef
 - (16) Midway Island (Islets Eastern and Sand)
 - (17) Palmyra Island (more than 50 islets)
 - (18) Wake Island (Islets Peale, Wake and Wilkes)

(b) Any other area of the world, except within the territorial limits of areas where radio services are regulated by--

- (1) An agency of the United States other than the FCC. (You are subject to its rules.)
- (2) Any foreign government. (You are subject to its rules.)

(c) An aircraft or ship, with the permission of the captain, within or over any area of the world where radio services are regulated by the FCC or upon or over international waters. You must operate your CB station according to any applicable treaty to which the United States is a party.

(d) Anyone intending to operate a CB station on the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra in a manner that could pose an interference threat to the Arecibo Observatory shall notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or electronically, of the location of the unit. Operators may wish to consult interference guidelines, which will be provided by Cornell University. Operators who choose to transmit information electronically should e-mail to: prcz@naic.edu.

(1) The notification to the Interference Office, Arecibo Observatory shall be made 45 days prior to commencing operation of the unit. The notification shall state the geographical coordinates of the unit.

(2) After receipt of such notifications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections. The operator will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory. If the Commission determines that an operator has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, the unit may be allowed to operate.

2.6 Are there any special restrictions on the location of my CB station?

(a) If your CB station is located on premises controlled by the Department of Defense you may be required to comply with additional regulations imposed by the commanding officer of the installation.

(b) If your C/B station will be constructed on an environmentally sensitive site, or will be operated in such a manner as to raise environmental problems, under Sec. 1.1307 of this chapter, you must provide an environmental assessment, as set forth in Sec. 1.1311 of this chapter, and undergo the environmental review, Sec. 1.1312 of this chapter, before commencement of construction.

2.7 On what channels may I operate?

(a) Your CB station may transmit only on the following channels (frequencies):

<u>CHANNEL</u>	<u>FREQUENCIES (MHz)</u>
1.....	26.965
2.....	26.975
3.....	26.985
4.....	27.005
5.....	27.015
6.....	27.025
7.....	27.035
8.....	27.055
9.....	27.065
10.....	27.075
11.....	27.085
12.....	27.105
13.....	27.115
14.....	27.125
15.....	27.135
16.....	27.155
17.....	27.165
18.....	27.175
19.....	27.185
20.....	27.205
21.....	27.215
22.....	27.225
23.....	27.255
24.....	27.235
25.....	27.245
26.....	27.265
27.....	27.275
28.....	27.285
29.....	27.295
30.....	27.305
31.....	27.315
32.....	27.325
33.....	27.335
34.....	27.345
35.....	27.355
36.....	27.365
37.....	27.375
38.....	27.385
39.....	27.395
40.....	27.405

See paragraph (b) of this section.

(b) Channel 9 may be used only for emergency communications or for traveler assistance.

(c) You must, at all times and on all channels, give priority to emergency communication messages concerning the immediate safety of life or the immediate protection of property.

(d) You may use any channel for emergency communications or for traveler assistance.

(e) You must share each channel with other users.

(f) The FCC will not assign any channel for the private or exclusive use of any particular CB station or group of stations.

(g) The FCC will not assign any channel for the private or exclusive use of CB stations transmitting single sideband or AM.

2.8 How high may I put my antenna?

(a) Antenna means the radiating system (for transmitting, receiving or both) and the structure holding it up (tower, pole or mast). It also means everything else attached to the radiating system and the structure.

(b) If your antenna is mounted on a hand-held portable unit, none of the following limitations apply.

(c) If your antenna is installed at a fixed location, it (whether receiving, transmitting or both) must comply with either one of the following:

- (1) The highest point must not be more than 6.10 meters (20 feet) higher than the highest point of the building or tree on which it is mounted; or
- (2) The highest point must not be more than 18.3 meters (60 feet) above the ground.

(d) If your CB station is located near an airport, and if your antenna structure is more than 6.1 meters (20 feet) high, you may have to obey additional restrictions. The highest point of your antenna must not exceed one meter above the airport elevation for every hundred meters of distance from the nearest point of the nearest airport runway. Differences in ground elevation between your antenna and the airport runway may complicate this formula. If your CB station is near an airport, you may contact the nearest FCC field office for a worksheet to help you figure the maximum allowable height of your antenna. Consult part 17 of the FCC's Rules for more information.

Warning: Installation and removal of CB station antennas near Power lines is dangerous. For your safety, follow the installation directions included with your antenna.

2.9 What equipment may I use at my CB station?

(a) You must use an FCC certificated CB transmitter at your CB station. You can identify an FCC certificated transmitter by the certification label placed on it by the manufacturer. You may examine a list of certificated equipment at any FCC Field Office or at FCC Headquarters. Use of a transmitter, which is not FCC certificated voids, your authority to operate the station.

(b) You must not make, or have made, any internal modification to a certificated CB transmitter. (See CB Rule 25, Sec. 95.425). Any internal modification to a certificated CB transmitter cancels the certification, and use of such a transmitter voids your authority to operate the station.

2.10 How much power may I use?

(a) Your CB station transmitter power output must not exceed the following values under any conditions:

AM (A3)--4 watts (carrier power) SSB--12 watts (peak envelope power)

(b) If you need more information about the power rule, see the technical rules in subpart E of part 95.

(c) Use of a transmitter which has carrier or peak envelope power in excess of that authorized voids your authority to operate the station.

2.11 May I use power amplifiers?

(a) You may not attach the following items (power amplifiers) to your certificated CB transmitter in any way:

- (1) External radio frequency (RF) power amplifiers (sometimes called linears or linear amplifiers); or
- (2) Any other devices which, when used with a radio transmitter as a signal source, are capable of amplifying the signal.

(b) There are no exceptions to this rule and use of a power amplifier voids your authority to operate the station.

(c) The FCC will presume you have used a linear or other external RF power amplifier if--

- (1) It is in your possession or on your premises; and
- (2) There is other evidence that you have operated your CB station with more power than allowed by CB Rule 10, Sec. 95.410.

(d) Paragraph (c) of this section does not apply if you hold a license in another radio service which allows you to operate an external RF power amplifier.

2.12 What communications may be transmitted?

(a) You may use your CB station to transmit two-way plain language communications. Two-way plain language communications are communications without codes or coded messages. Operating signals such as ``ten codes" are not considered codes or coded messages. You may transmit two-way plain language communications only to other CB stations, to units of your own CB station or to authorized government stations on CB frequencies about--

(1) Your personal or business activities or those of members of your immediate family living in your household;

(2) Emergencies (see CB Rule 18, Sec. 95.418);

(3) Traveler assistance (see CB Rule 18, Sec. 95.418); or

(4) Civil defense activities in connection with official tests or drills conducted by, or actual emergencies announced by, the civil defense agency with authority over the area in which your station is located.

(b) You may use your CB station to transmit a tone signal only when the signal is used to make contact or to continue communications. (Examples of circuits using these signals are tone operated squelch and selective calling circuits.) If the signal is an audible tone, it must last no longer than 15 seconds at one time. If the signal is a subaudible tone, it may be transmitted continuously only as long as you are talking.

(c) You may use your CB station to transmit one-way communications (messages which are not intended to establish communications between two or more particular CB stations) only for emergency communications, traveler assistance, brief tests (radio checks) or voice paging.

2.13 What communications are prohibited?

(a) You must not use a CB station--

- (1) In connection with any activity which is against federal, state or local law;
- (2) To transmit obscenity, indecent or profane words, language or meaning;
- (3) To interfere intentionally with the communications of another CB station;
- (4) To transmit one-way communications, except for emergency communications, traveler assistance, brief tests (radio checks), or voice paging;

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- (5) To advertise or solicit the sale of any goods or services;
 - (6) To transmit music, whistling, sound effects or any material to amuse or entertain;
 - (7) To transmit any sound effect solely to attract attention;
 - (8) To transmit the word ``MAYDAY" or any other international distress signal, except when your station is located in a ship, aircraft or other vehicle which is threatened by grave and imminent danger and you are requesting immediate assistance;
 - (9) To communicate with, or attempt to communicate with, any CB station more than 250 kilometers (155.3 miles) away;
 - (10) To advertise a political candidate or political campaign; (you may use your CB radio for the business or organizational aspects of a campaign, if you follow all other applicable rules);
 - (11) To communicate with stations in other countries, except General Radio Service stations in Canada; or
 - (12) To transmit a false or deceptive communication.

(b) You must not use a CB station to transmit communications for live or delayed rebroadcast on a radio or television broadcast station. You may use your CB station to gather news items or to prepare programs.

2.14 May I be paid to use my CB station?

- (a) You may not accept direct or indirect payment for transmitting with a CB station.
- (b) You may use a CB station to help you provide a service, and be paid for that service, as long as you are paid only for the service and not for the actual use of the CB station.

2.15 Who is responsible for communications I make?

You are responsible for all communications which are made by you from a CB station.

2.16 Do I have to limit the length of my communications?

You must limit your CB communications to the minimum practical time.

- (b) If you are communicating with another CB station or stations, you, and the stations communicating with you, must limit each of your conversations to no more than five continuous minutes.
- (c) At the end of your conversation, you, and the stations communicating with you, must not transmit again for at least one minute.

2.17 Do I identify my CB communications?

You need not identify your CB communications.

- (a) You are encouraged to identify your CB communications by any of the following means:
 - (1) Previously assigned CB call sign;
 - (2) K prefix followed by operator initials and residence zip code;
 - (3) Name; or

(4) Organizational description including name and any applicable operator unit number.

(b) You are encouraged to use your "handle" only in conjunction with the methods of identification listed in paragraph (b) of this section.

2.18 How do I use my CB station in an emergency or to assist a traveler?

You must at all times and on all channels, give priority to emergency communications.

(a) When you are directly participating in emergency communications, you do not have to comply with the rule about length of transmissions (CB Rule 16, Sec. 95.416). You must obey all other rules.

(b) You may use your CB station for communications necessary to assist a traveler to reach a destination or to receive necessary services. When you are using your CB station to assist a traveler, you do not have to obey the rule about length of transmissions (CB Rule 16, Sec. 95.416). You must obey all other rules.

(c) You may use your CB station to transmit one-way communications concerning highway conditions to assist travelers.

2.19 May I operate my CB station transmitter by remote control?

(a) You may not operate a CB station transmitter by radio remote control.

(b) You may operate a CB transmitter by wire line remote control if you obtain specific approval in writing from the FCC. To obtain FCC approval, you must show why you need to operate your station by wire line remote control. If you receive FCC approval, you must keep the approval as part of your station records. See CB Rule 27, Sec. 95.427.

(c) Remote control means operation of a CB transmitter from any place other than the location of the CB transmitter. Direct mechanical control or direct electrical control by wire from some point on the same premises, craft or vehicle as the CB transmitter is not considered remote control.

2.20 May I connect my CB station transmitter to a telephone?

You may connect your CB station transmitter to a telephone if you comply with all of the following:

- (1) You or someone else must be present at your CB station and must--
 - (i) Manually make the connection (connection must not be made by remote control);
 - (ii) Supervise the operation of the transmitter during the connection;
 - (iii) Listen to each communication during the connection; and
 - (iv) Stop all communications if there are operations in violation of these rules.

- (2) Each communication during the telephone connection must comply with all of these rules.

- (3) You must obey any restriction that the telephone company places on the connection of a CB transmitter to a telephone.

- (b) The CB transmitter you connect to a telephone must not be shared with any other CB station.

- (c) If you connect your CB transmitter to a telephone, you must use a phone patch device with has been registered with the FCC.

2.21 What are the penalties for violating these rules?

- (a) If the FCC finds that you have willfully or repeatedly violated the Communications Act or the FCC Rules, you may have to pay as much as \$10,000 for each violation, up to a total of \$75,000. (See section 503(b) of the Communications Act.)
- (b) If the FCC finds that you have violated any section of the Communications Act or the FCC Rules, you may be ordered to stop whatever action caused the violation. (See section 312(b) of the Communications Act.)
- (c) If a Federal court finds that you have willfully and knowingly violated any FCC Rule, you may be fined up to \$500 for each day you committed the violation. (See section 502 of the Communications Act.)
- (d) If a Federal court finds that you have willfully and knowingly violated any provision of the Communications Act, you may be fined up to \$10,000 or you may be imprisoned for one year, or both. (See section 501 of the Communications Act.)

2.22 How do I answer correspondence from the FCC?

- (a) If it appears to the FCC that you have violated the Communications Act or these rules, the FCC may send you a discrepancy notice.
- (b) Within the time period stated in the notice, you must answer with:
 - (1) A complete written statement about the apparent discrepancy;
 - (2) A complete written statement about any action you have taken to correct the apparent violation and to prevent it from happening again; and
 - (3) The name of the person operating at the time of the apparent violation.
- (c) If the FCC sends you a letter asking you questions about your CB radio station or its operation, you must answer each of the questions with a complete written statement within the time period stated in the letter.
- (d) You must not shorten your answer by references to other communications or notices.
- (e) You must send your answer to the FCC office which sent you the notice.
- (f) You must keep a copy of your answer in your station records. (See CB Rule 27, Sec. 95.427.)

2.23 What must I do if the FCC tells me that my CB station is causing interference?

If the FCC tells you that your CB station is causing interference for technical reasons you must follow all instructions in the official FCC notice. (This notice may require you to have technical adjustments made to your equipment.)

You must comply with any restricted hours of CB station operation which may be included in the official notice.

2.24 How do I have my CB station transmitter serviced?

You may adjust an antenna to your CB transmitter and you may make radio checks. (A radio check means a one-way transmission for a short time in order to test the transmitter.)

(a) You are responsible for the proper operation of the station at all times and are expected to provide for observations, servicing and maintenance as often as may be necessary to ensure proper operation. You must have all internal repairs or internal adjustments to your CB transmitter made in accordance with the Technical Regulations (see subpart E). The internal repairs or internal adjustments should be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users in those services.

(b) Except as provided in paragraph (d) of this section, each internal repair and each internal adjustment of a CB transmitter in which signals are transmitted must be made using a non-radiating ("dummy") antenna.

(c) Brief test signals (signals not longer than one minute during any five minute period) using a radiating antenna may be transmitted in order to:

- (1) Adjust an antenna to a transmitter;
- (2) Detect or measure radiation of energy other than the intended signal; or
- (3) Tune a receiver to your CB transmitter.

2.26 May I make any changes to my CB station transmitter?

You must not make or have any one else make any internal modification to your CB transmitter.

(a) Internal modification does not include:

- (1) Repair or servicing of a CB station transmitter (see CB Rule 24, Sec. 95.424); or
- (2) Changing plug-in modules, which were certificated as part of your CB transmitter.

(b) You must not operate a CB transmitter, which has been modified by anyone in any way, including modification to operate on unauthorized frequencies or with illegal power. (See CB Rules 9 and 11, Sec. 95.409 and 95.411.)

2.27 Do I have to make my CB station available for inspection?

(a) If an authorized FCC representative requests to inspect your CB station, you must make your CB station and records available for inspection.

(b) A CB station includes all of the radio equipment you use. Your station records include the following documents, as applicable.

(c) A copy of each response to an FCC violation notice or an FCC letter. (See CB Rule 22, Sec. 95.422.)

(d) Each written permission received from the FCC. (See CB Rule 19, Sec. 95.419.)

2.28 How do I contact the FCC?

- FCC National Call Center at 1-888-225-5322.
- FCC World Wide Web homepage: <http://www.fcc.gov>.
- In writing, to FCC, Attention: CB, 1270 Fairfield Road, Gettysburg, PA 17325-7245.