Citizens Band Radio Component System

CB Control Microphone
  Digital LED Channel Readout
  Channel Selector, Squelch Control
  Power/Volume Control
  TX Indicator
  Press-talk Switch

Model DMA-071

40 Ch CB Module
  Solid State with Digital Frequency Synthesis and Phase Locked Loop Circuitry

Model JC-203E
F.C.C. LICENSE - U.S.A.

Two CB license forms are prepacked with all Clarion CB Units. The two forms are:
1. F.C.C. Form 505 - application for Class D CB License
2. F.C.C. Form 555B - temporary permit for Class D CB License

Before transmitting, you must apply for F.C.C. Class D Citizens' Radio Service License, using F.C.C. Form 505. Complete the form and mail with fee of $4.00 to this special F.C.C. address for expedited processing of your application.

Federal Communications Commission
Gettysburg, Pennsylvania 17326

F.C.C. Form 555B, temporary permit, is only to be used if you want to legally use your CB transceiver while your regular application, F.C.C. form 505, is being processed by the F.C.C.

This form is legal only when you have applied for a Class D CB License by mailing in a completed Form 505 with a $4.00 filing fee. Do not mail Form 555B, it is your temporary permit.

By law you must also read and know Part 95 of the F.C.C. Rules and Regulations: they apply to the operation of a Class D Citizens' Band unit. Copies of this regulation are available from U.S. Government printing office or by mail from the Superintendent of Documents, Government Printing Office, Washington D.C. 20402. Part 95 is priced at $1.50 and its GPO number is 004-000-00324-1.

Eligibility: Any citizen of the United States 18 years of age or older is eligible to apply for a CB license. Persons under the age of 18 may operate a CB radio under the direct supervision of a person who is licensed.

Also, a person who is not a citizen of the United States, who has a temporary or permanent U.S. address and is acting as a private citizen and not as a representative of a foreign government may obtain a license. Foreign governments, or their representatives, are not eligible for a CB license.

NOTE: The technical information, diagrams, and charts provided in this manual are supplied for the use of a qualified holder of a first or second class radiotelephone license in servicing this transceiver. It is the user’s responsibility to see that this unit is operating at all times in accordance with the F.C.C. Citizens' Radio Service regulations.

If you install or service your own transceiver, do not attempt to make any transmitter tuning adjustment. Transmitter adjustments are prohibited by the F.C.C. unless you hold a first or second class radiotelephone license or are in the presence of a person holding such a license. A Citizens’ Band or Amateur license is not sufficient.
FEATURES

- **Phase Locked Loop (PLL) Synthesizer**
  Stabilized frequency is obtained by employing 3 crystals and one LSI.

- **Full Channel Selection**
  Covers the entire 40 channel Citizens' Band to allow flexible operation.

- **Automatic Channel Selection**
  A dual speed automatic channel selection system is employed. Depressing the switch advances the channel selection one channel. If the switch is held down, the channels are rapidly scanned. The system operates in both UP and DOWN functions.

- **Convenient Operation**
  Convenient squelch control, power switch/volume control, TX (transmitter) lamp and channel indicator on the microphone.

- **Digital LED**
  Easy to read LED channel indicators.

PLEASE NOTE

1. This equipment conforms to F.C.C. type acceptance and equipment certification. In order to employ it, a license is required, according to F.C.C. rules.

2. Power supply voltage of this equipment is DC 13.8 V (negative ground).

3. Observe that this unit is properly and securely connected to the 40 Ch CB Transceiver Unit.

4. When installing in a vehicle, to the extent possible avoid locations subject to high temperature, such as near the output duct of a car heater. Also take care that equipment does not become wet.
Your transceiver's ground (negative) lead should at this point be connected to a point which contacts the frame or chassis of the vehicle to the negative (−) side of the battery. The positive lead for your CB radio has to be connected to the positive terminal of the battery. This can be done by connecting it to the accessory terminal of the ignition switch, to the fuse block, or to any "hot" lead.

**NOTE:**
1. Make it sure to connect the speaker lead as specified, or the unit won’t operate properly.
2. When connecting the mic. connector, turn off the power switch.
INSTALLATIONS

40 Ch CB Module (JC-203E)

Noise and Interference from Ignition
The noise you might hear from your CB radio is caused by the electrical ignition system. In most new cars, this does not present a problem.
The area which can produce engine noise and interference on your radio is the alternator/generator and sparkplugs.
Sound signs of ignition noise are a popping sound which varies with engine speed. The remedy for this interference is an ignition suppressor available everywhere.
The alternator/generator produces a whining sound that varies with engine speed. A noise filter will remedy this sound.

CB Antenna
A vertical whip antenna is best suited for mobile use. A non-directional antenna must be used for best results in any case. The base loaded whip antenna will normally provide effective communication. For greater range and more reliable operation, a full quarter-wave whip should be used. Either of these antennas use the metal car body as a ground plane and the shield of the base lead as well as the metal case of
the transceiver should be grounded. A standard antenna connector (type SO 239) is provided on the transceiver for easy connection to a standard PL 259 cable termination.

The performance of your CB two-way radio system depends on the proper choice of a 50 ohm ground-plane, vertical CB antenna. Clarion Mobile Antennas are designed to give you the maximum versatility in location with first class performance. The antenna location on your vehicle is very important.
CB Directional Patterns

Though CB mobile antennas are designed to be omnidirectional, their location on the car body will tend to make them slightly directional usually toward the greatest area of the car.

CB Antenna Matching/Tuning
Optimum performance in mobile transmitting and receiving may be achieved by tuning or matching your antenna and transceiver. This can be achieved by using a Clarion VSWR meter, and tuning to get a minimum VSWR on channel 19 by minute adjustments in the length of the antenna.
(As a reference, the reading less than 1.5 VSWR would be required.)

OPERATION

CB Control Microphone (DMA-071)

Channel Indicator
Channel Knob
Press-talk Switch
TX (Transmitter) Lamp
Power Switch/Volume Control Knob
Squelch Control Knob
■ Power Switch/Volume Control
   The power goes on when this switch is turned clockwise. Turn it further to adjust the volume.

■ Squelch Knob
   Set the squelch knob to the position where the noise is inaudible and adjust the sensitivity.
   You may have to re-adjust, depending on the ambient conditions.
   Turn this knob fully to the right when the received signals are faint.

■ TX (Transmitter) Lamp
   This lamp lights up red during CB transmissions.

■ Channel Knob
   Depress the Up side instantly and one channel goes up. Do the same manner at the Down side and one channel goes down. When the Up and Down switches are depressed approximately over one second, the channel goes continually Up or Down.

■ Press-talk Switch
   You can start transmitting if you speak into the microphone and press this switch at the same time.

■ Channel Indicator
   The CB channel number is indicated by this red display.

■ Transceiver
   1) Turn the power switch clockwise to switch on the power.
   2) Select the CB channel from among the 40 available channels with this channel knob.
   3) Adjust the sensitivity with the squelch knob.
   4) Push microphone press-talk switch to transmit. Speaking too loudly or holding the microphone too close to the mouth will cause distortion. Hold the microphone about 3 to 4 inches from the mouth when speaking.
### CB TERMS

#### The "10" Signals

<table>
<thead>
<tr>
<th>No.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-1</td>
<td>Receiving Poorly</td>
</tr>
<tr>
<td>10-2</td>
<td>Receiving Well</td>
</tr>
<tr>
<td>10-3</td>
<td>Stop Transmitting</td>
</tr>
<tr>
<td>10-4</td>
<td>OK, Message Received</td>
</tr>
<tr>
<td>10-5</td>
<td>Relay Message</td>
</tr>
<tr>
<td>10-6</td>
<td>Busy, Stand By</td>
</tr>
<tr>
<td>10-7</td>
<td>Out Of Service, Leaving Air</td>
</tr>
<tr>
<td>10-8</td>
<td>In Service, Subject To Call</td>
</tr>
<tr>
<td>10-9</td>
<td>Repeat Message</td>
</tr>
<tr>
<td>10-10</td>
<td>Transmission Completed, Standing By</td>
</tr>
<tr>
<td>10-11</td>
<td>Talking Too Rapidly</td>
</tr>
<tr>
<td>10-12</td>
<td>Visitors Present</td>
</tr>
<tr>
<td>10-13</td>
<td>Advise Weather/Road Conditions</td>
</tr>
<tr>
<td>10-16</td>
<td>Make Pickup At</td>
</tr>
<tr>
<td>10-17</td>
<td>Urgent Business</td>
</tr>
<tr>
<td>10-18</td>
<td>Anything For Us?</td>
</tr>
<tr>
<td>10-19</td>
<td>Nothing For You, Return To Base</td>
</tr>
<tr>
<td>10-20</td>
<td>My Location Is</td>
</tr>
<tr>
<td>10-21</td>
<td>Call By Telephone</td>
</tr>
<tr>
<td>10-22</td>
<td>Report In Person To</td>
</tr>
<tr>
<td>10-23</td>
<td>Stand By</td>
</tr>
<tr>
<td>10-24</td>
<td>Completed Last Assignment</td>
</tr>
<tr>
<td>10-25</td>
<td>Can You Contact</td>
</tr>
<tr>
<td>10-26</td>
<td>Disregard Last Information</td>
</tr>
<tr>
<td>10-27</td>
<td>I Am Moving To Channel</td>
</tr>
<tr>
<td>10-28</td>
<td>Identify Your Station</td>
</tr>
<tr>
<td>10-29</td>
<td>Time Is Up For Contact</td>
</tr>
<tr>
<td>10-30</td>
<td>Does Not Conform To F.C.C. Rules</td>
</tr>
<tr>
<td>10-32</td>
<td>I Will Give You A Radio Check</td>
</tr>
<tr>
<td>10-33</td>
<td>EMERGENCY TRAFFIC AT THIS STATION</td>
</tr>
<tr>
<td>10-34</td>
<td>Trouble At This Station, Help Needed</td>
</tr>
<tr>
<td>10-35</td>
<td>Confidential Information</td>
</tr>
<tr>
<td>10-36</td>
<td>Correct Time Is</td>
</tr>
<tr>
<td>10-37</td>
<td>Wrecker Needed At</td>
</tr>
<tr>
<td>10-38</td>
<td>Ambulance Needed At</td>
</tr>
</tbody>
</table>
10:39  Your Message Delivered
10:41  Please Tune To Channel
10:42  Traffic Accident At.
10:43  Traffic Tieup At.
10:44  I Have A Message For You (or.
10:45  All Units Within Range Please Report
10:46  Assist Motorist
10:50  Break Channel.
10:60  What is Next Message Number?
10:62  Unable To Copy, Use Phone
10:63  Net Directed To.
10:64  Net Clear
10:65  Awaiting Your Next Message/Assignment
10:67  All Units Comply
10:70  Fire At.
10:71  Proceed With Transmission In Sequence
10:73  Speed Trap At.
10:75  You Are Causing Interference
10:77  Negative Contact
10:81  Reserve Hotel Room For.
10:82  Reserve Room For
10:84  My Telephone Number Is
10:85  My Address Is
10:89  Radio Repairman Needed At
10:90  I Have TVI
10:91  Talk Closer To Me
10:92  Your Transmitter Is Out Of Adjustment
10:93  Check My Frequency On This Channel
10:94  Please Give Me A Long Count
10:95  Transmit Dead Carrier For 5 Seconds
10:99  Mission Completed, All Units Secure
10:200  Police Needed At

CB Slang
A Big 10-4  O.K. Over & Out
Apple      A CB Addict
Back Door  Last Rig in a Convoy
Ballet Dancer  A Swaying Antenna
Bear’s Den  Police Station
Bear in the Air  Police Helicopter
Beast      A CB Rig
## SPECIFICATIONS

### CB TRANSCEIVER SECTION

**Receiver**
- Frequency Range (MHz): 26.965 to 27.405
- Sensitivity: 1 μV for 10 dB S/N
- Audio Fidelity (1 kHz, 0 dB): 400 Hz −5 ± 4 dB, 3,000 Hz −13 ± 5 dB
- A.G.C. Figure of Merit (input 94 dB for 10 dB range): More than 80 dB
- Squelch Sensitivity (Threshold): Less than 0.5 μV
- Image Rejection: More than 50 dB
- IF Rejection: More than 60 dB
- Spurious Suppression: More than 50 dB
- Audio Maximum Output Power: More than 3 W

**Transmitter**
- Frequency Range (MHz): 26.965 to 27.405
- RF Output: 4 watts max./13.8 V
- Spurious Suppression: More than 60 dB
- Frequency Tolerance: Less than 0.005%
- Frequency Response: 1 kHz: 0 dB, 300 Hz: −4 ± 5 dB, 3,000 Hz: −4 ± 5 dB

**General**
- Power Supply: DC 13.8 V negative ground, Less than 2.0 A
- Speaker Load Impedance: 8 ohms
- Dimensions: JC-203E
  - Width: 172 mm (6.77″)
  - Height: 47 mm (1.85″)
  - Depth: 170 mm (6.69″)
- Weight: JC-203E 1.45 kg (3.197 lbs)
Breaker '21 Cut into CB Channel
Bug Out Leaving a Channel
Chopped Top Short Antenna
Chicken Coop Weighing Station
County Mounty Local Police
Cub Scouts Sheriff's Men
Double Nickels 55 MPH (Nat'l Speed Limit)
Drop the Hammer Step Down on the Gas
Flappers Ears
Flip Side Return Trip
Four Wheeler Passenger Car
Front Door First Rig in a Convoy
Good Buddy Any Other CB'er
Green Stamps Traffic Ticket
Local Yokel Small Town Policeman
Negatory No
One Eyed Monster Television
Plain Wrapper Unmarked Police Car
Play Dead Stand By
Roger O.K.
Seat Cover Girl in Car
Smokey Bear Highway Patrol
Tiajuana Taxi Police Car with Light Flashing

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

CB Control Microphone (DMA-071)