



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

Scanned by IW1AXR

Downloaded by
RadioAmateur.EU

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.

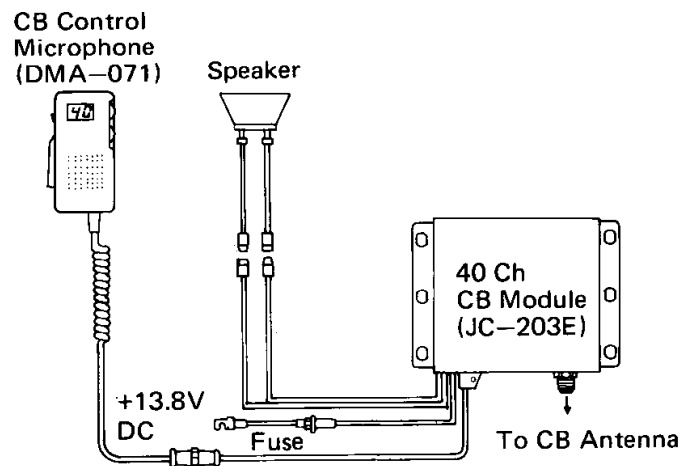
FEATURES

- **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.

CONNECTION



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.

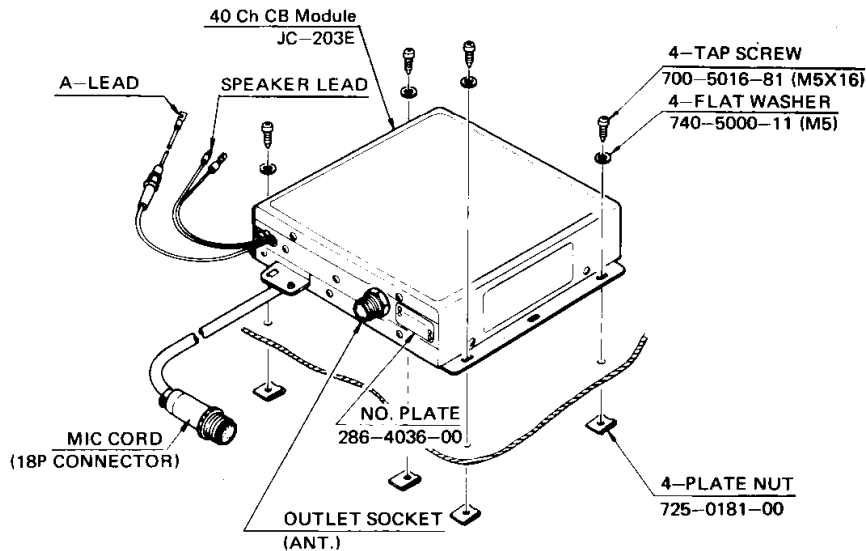
The positive lead for your CB radio has to be connected to the positive terminal of the battery. This can be done by connecting it to the accessory terminal of the ignition switch, to the fuse block, or to any "hot" lead.

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.

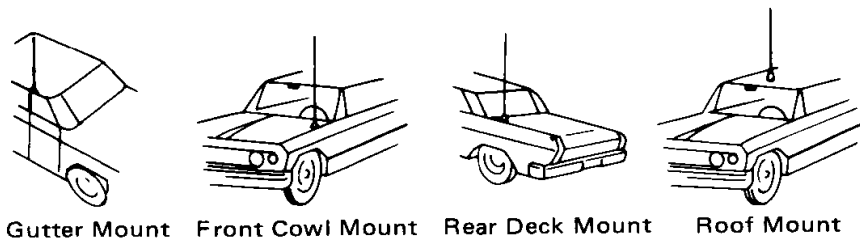
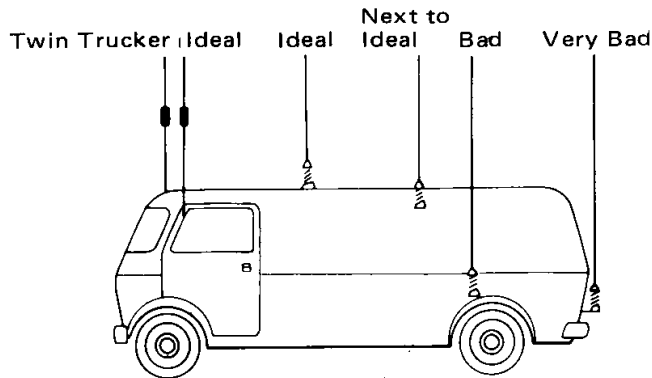
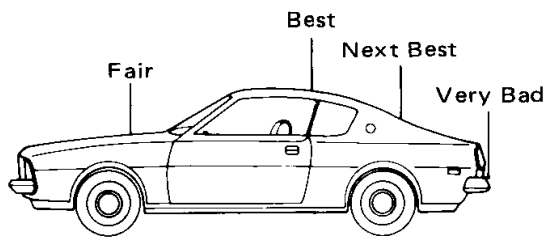
CB Antenna

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

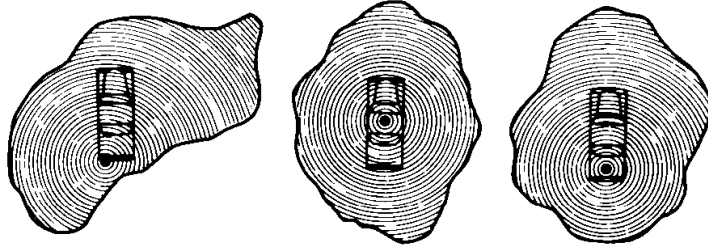
the transceiver should be grounded. A standard antenna connector (type SO 239) is provided on the transceiver for easy connection to a standard PL 259 cable termination.

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.

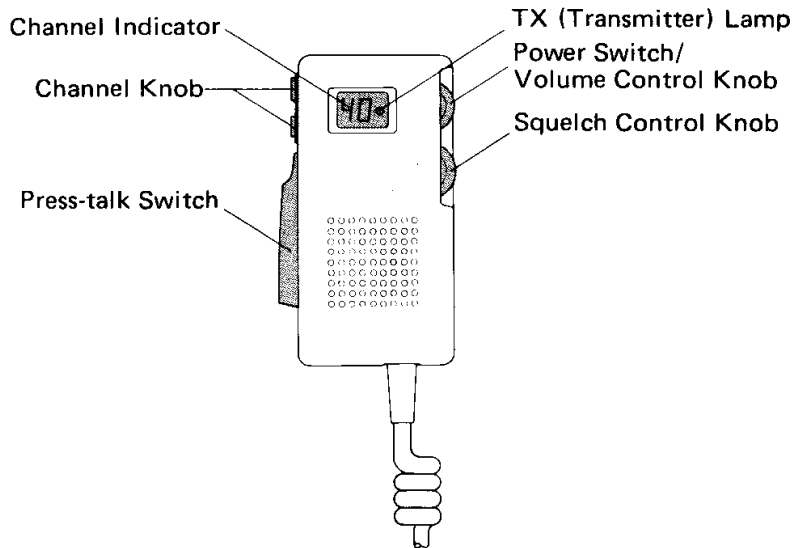
CB Antenna Matching/Tuning

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)



- **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

Code	
No.	Meaning
10-1	Receiving Poorly
10-2	Receiving Well
10-3	Stop Transmitting
10-4	OK, Message Received
10-5	Relay Message
10-6	Busy, Stand By
10-7	Out Of Service, Leaving Air
10-8	In Service, Subject To Call
10-9	Repeat Message
10-10	Transmission Completed, Standing By
10-11	Talking Too Rapidly
10-12	Visitors Present
10-13	Advise Weather/Road Conditions
10-16	Make Pickup At
10-17	Urgent Business
10-18	Anything For Us?
10-19	Nothing For You, Return To Base
10-20	My Location Is
10-21	Call By Telephone
10-22	Report In Person To
10-23	Stand By
10-24	Completed Last Assignment
10-25	Can You Contact ?
10-26	Disregard Last Information
10-27	I Am Moving To Channel
10-28	Identify Your Station
10-29	Time Is Up For Contact
10-30	Does Not Conform To F.C.C. Rules
10-32	I Will Give You A Radio Check
10-33	EMERGENCY TRAFFIC AT THIS STATION
10-34	Trouble At This Station, Help Needed
10-35	Confidential Information
10-36	Correct Time Is
10-37	Wrecker Needed At
10-38	Ambulance Needed At

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 Mike
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 μ V for 10 dB S/N
Audio Fidelity (1 kHz, 0 dB)	400 Hz -5 \pm 4 dB 3,000 Hz -13 \pm 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 μ V
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 \pm 5 dB 3,000 Hz: -4 \pm 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)

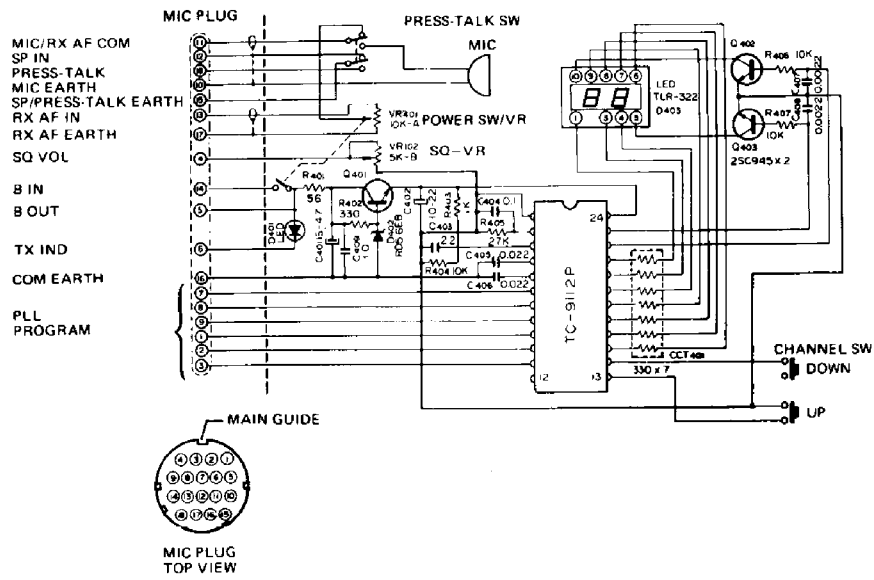
Breaker '21	Cut into CB Channel
Bug Out	Leaving a Channel
Chopped Top	Short Antenna
Chicken Coop	Weighing Station
County Mouny	Local Police
Cub Scouts	Sheriff's Men
Double Nickels	55 MPH (Nat'l Speed Limit)
Drop the Hammer	Step Down on the Gas
Flappers	Ears
Flip Side	Return Trip
Four Wheeler	Passenger 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
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)



Copyright © 1988 by Motorola, Inc. All rights reserved. This document is the property of Motorola, Inc. and is to be used only for the specific application for which it is prepared.

