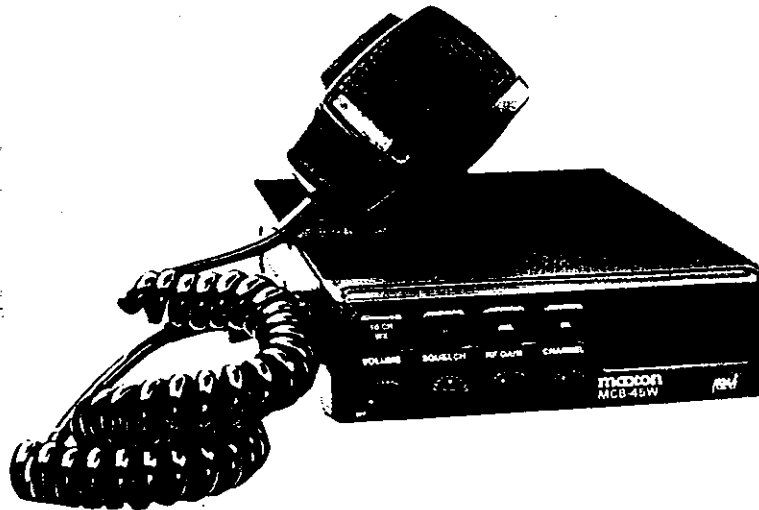


MCB-45W

MOBILE CB / WEATHER RADIO

Owner's Manual



maxon

A World of Communications

MCB-45W SPECIFICATIONS

GENERAL

CB Channels:	40
CB Frequency Range:	26.965 to 27.405 MHz
Weather Channels:	10
Weather Frequencies:	Listed on page 13
CB Frequency Control:	Phase Locked Loop Synthesizer
Weather Frequency Control:	Phase Locked Loop Synthesizer
Frequency Tolerance:	0.005%
Operating Temperature Range:	-30° C to +60° C
Input Voltage:	13.8 VDC nominal, negative ground
Channel Display:	Liquid Crystal Display (LCD)
Dimensions:	1-7/8" H x 5-7/8" W x 8-1/8" D
Weight:	2 lbs., 2.9 oz.
External Speaker (Optional):	4 W output @ 8 ohm with 3.5 mm plug

RECEIVER

Receiving System:	AM dual conversion superheterodyne
Intermediate Frequency:	1st IF: 10.695 MHz 2nd IF: 455 kHz
Sensitivity:	Less than 1 μ V for 10 dB (S+N)/N
Squelch Open Sensitivity:	Adjustable from 0.5 μ V to 1.0 mV
Audio Output Power:	2 W
Audio Distortion:	Less than 5% @ 1 kHz
Image Rejection:	80 dB typical
Adjacent Channel Rejection:	60 dB typical

TRANSMITTER

RF Output Power:	4 W (Maximum FCC Allowable)
Modulation:	90 to 100%
Spurious Output:	-60 dB or better
Output Impedance:	50 ohm unbalanced

Specifications subject to change without notice.

PRODUCT DESCRIPTION

*Thank you for choosing the Maxon MCB-45W
Mobile CB / Weather Radio.*

The MCB-45W is a combination 40 Channel Citizens Band Radio / 10 Channel Weather Receiver. Compact size makes this radio ideal for installing in personal or recreational vehicles.

MCB-45W Package Contents:

Main CB unit containing the solid state electronics and controls.
Microphone with attached expandable coiled cord.
Microphone hanger bracket and hardware.
CB unit mounting bracket and hardware.
MCB-45W Owner's Manual.
Copy of FCC Part 95, Subpart "D".
Copy of NOAA Weather Radio Network frequency reference card.

(Mobile CB antenna is not included)

YOU DO NOT NEED AN FCC LICENSE TO OPERATE THIS RADIO IN THE UNITED STATES. However, you must know and be familiar with Part 95 of the FCC Rules in regard to Subpart D of the Citizens Band Radio Service. (A copy is enclosed with this unit.)

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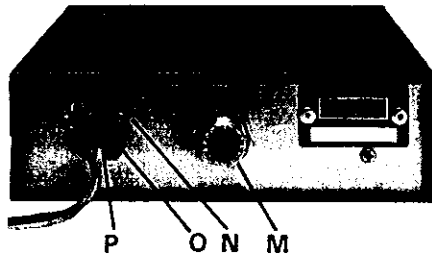
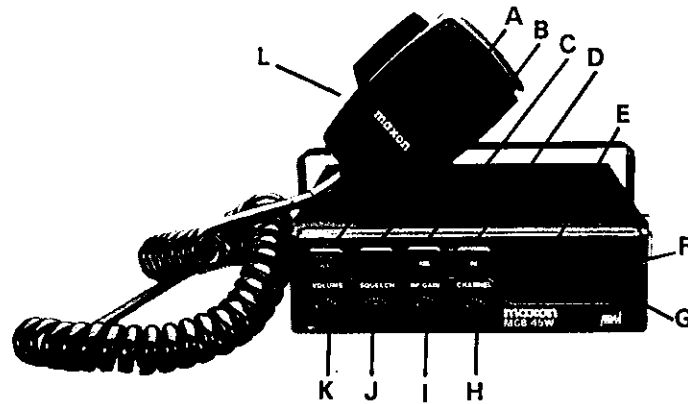
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Before operating your Maxon Citizens Band Radio, read this Owner's Manual carefully. If you have a problem, refer to the "Troubleshooting" section of this manual before returning your radio for repairs.

MCB-45W PERFORMANCE FEATURES

- Maximum legal RF output power with high level modulation in accordance with FCC Part 95 Rules.
- Receives current local National Weather Service broadcasts, and periodic marine weather broadcasts.
- Direct access to Emergency Channel 9.
- Public Address capability.
- LCD channel display indicates: the CB or Weather Channel selected, "9 EMG" when in Emergency Channel 9 position, or "PA" when in Public Address system mode.
- Switchable Automatic Noise Limiter (ANL) circuit reduces atmospheric static noise.
- Signal / power LCD meter shows the incoming signal strength, and the RF output power.
- RF gain control adjusts the receiver sensitivity of the radio.
- Side mounted 4-pin universal microphone with coiled cord and easy to operate Push-To-Talk bar.
- Equipped with external speaker jack. (External speaker not included).
- Last channel memory recalls last channel displayed.

MCB-45W MOBILE CB RADIO



MCB-45W CONTROLS AND FUNCTIONS

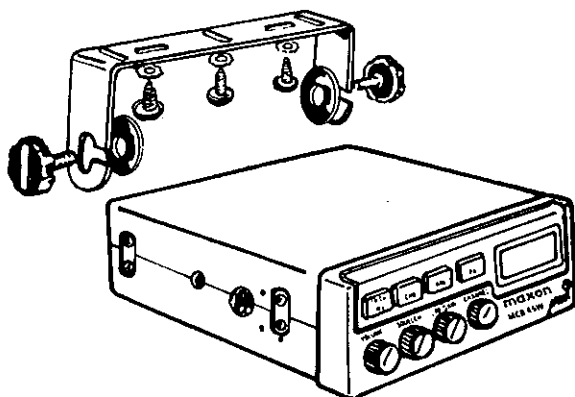
- A. **Weather mode selector (10 CH WX):** Selects weather or CB mode.
- B. **CH9 button:** Provides direct access to Emergency Channel 9.
- C. **ANL button:** Activates Automatic Noise Limiter (ANL) circuitry.
- D. **PA button:** Activates the Public Address (PA) system circuitry.
- E. **LCD channel display:** Identifies CB or weather channel numbers and Emergency Channel 9 or PA selections.
- F. **Signal / power LCD meter:** Identifies the incoming signal strength and RF output power.
- G. **TX indicator:** Indicates radio transmission is occurring.
- H. **CB/ Weather channel selector:** Selects the CB and weather channels.
- I. **RF gain control:** Adjusts the receiving sensitivity of the radio.
- J. **Squelch control:** Eliminates interference from background noise.
- K. **Power on/off - volume control:** Turns radio on / off and adjusts volume.
- L. **Microphone:** Transmits voice signals during CB and PA operations.
- M. **Antenna jack:** A SO-239 female connector is used to connect an optional mobile CB antenna.
- N. **Public Address (PA) speaker jack:** Connects an optional remote mounted PA speaker.
- O. **External speaker jack:** Connects an optional external speaker.
- P. **Fused DC power cord:** Supplies DC power to the radio unit.

MCB-45W INSTALLATION INSTRUCTIONS

Your new MCB-45W is designed to be installed under the dash or anywhere inside your vehicle. It can be mounted horizontally or vertically. Safety and convenience should be your primary considerations in deciding exactly where to locate your Maxon MCB-45W CB Radio.

CAUTION: Be sure the unit is located where it will not interfere with the driver or impair access to any controls necessary for the safe driving of the vehicle. The radio's power or antenna connecting cables must be routed and secured in such a manner as not to interfere with the operation of the brake, accelerator or other controls. Interference from either the CB unit or its connecting cables may contribute to the loss of control of the vehicle.

Installing the MCB-45W:



MCB-45W Mechanical Mounting:

1. Determine the mounting location of your MCB-45W.
2. Use the CB cabinet mounting bracket as a template for marking the location of the screw holes when mounting the CB under the dash, or at another selected location.
3. Drill the necessary holes and secure the mounting bracket with the self-tapping screws provided.

CAUTION: EXTREME CARE SHOULD BE EXERCISED WHEN DRILLING UP INTO THE DASH to avoid any damage to in-dash electronic ignition wiring, cruise control, instruments or accessory wiring.

4. Position the CB unit between the mounting bracket arms (in line with the retention knobs). Set the CB unit angle for the best operating comfort and control accessibility. Tighten the two retention knobs to secure the CB unit in place.
5. Install the microphone hanger bracket utilizing the pre-drilled mounting holes in the MCB-45W cabinet. The bracket can be attached to the vehicle dash or any other convenient location.
6. If you choose to mount the CB in a location where self-tapping screws cannot be used, determine the most secure method of fastening the CB cabinet.

MCB-45W DC Power Supply Connection:

The MCB-45W is designed for 12V DC operation in vehicles with **NEGATIVE (-) GROUND** electrical systems. Most domestic and foreign made cars and trucks use a negative ground system. **NOTE:** If your negative (-) battery terminal is connected to the motor block of your vehicle, it is a negative ground system.

CAUTION: Do not attempt to connect your MCB-45W to a **POSITIVE (+)** ground vehicle as damage may occur to the CB unit and / or to your vehicle's electrical system.

NOTE: Check your vehicle's ground requirements before you begin the installation!

Your MCB-45W should be connected using the following steps:

CAUTION: Make sure that the power on / off control is in the **OFF** position prior to completing the DC power cord wiring.

1. Remove fuse from the DC power cord.
2. Connect the **red** lead wire of the DC power cord to a positive (+) 12V DC source -- either the engine fuse block, the internal fuse box or directly to the positive (+) post of your battery. Usually the internal fuse box is the most convenient connecting point. You may wish to connect the **red** lead wire to the accessory terminal on the engine fuse block, or the ignition switch so that your CB is automatically turned off with your ignition. This will prevent any accidental battery drainage.

3. Connect the **black** lead wire to the metal chassis of the vehicle. For the best connection, remove any paint from the grounding point. A good, direct metal-to-metal ground is essential for optimum performance.
4. Replace fuse into the DC power cord.

MOBILE ANTENNA INFORMATION

Your Maxon MCB-45W requires a vehicle mount CB antenna for operation. An antenna is not included with your MCB-45W because of varying vehicle applications, individual needs, and owner cost preferences.

You may use any standard 50 ohm vehicle mount CB antenna with a PL-259 connector. Maxon mobile CB antennas, (models WTA-4WP, WTA-10M, WTA-11, or WTA-12), may be obtained from your local Maxon CB distributor.

NOTE: Please follow the antenna manufacturer's installation instructions completely. Never operate your CB radio without an antenna or with a broken antenna cable. This can result in internal damage to your CB circuitry.

- Connect the antenna securely at the antenna receptacle of the unit.
- Mount the antenna as high on the vehicle as possible.
- The more the antenna extends above the roof, the better the reception.
- If possible, mount the antenna in the center of whatever surface you have chosen.
- Keep the antenna cables away from noise sources such as the ignition system, gauges, etc.
- Make sure you have a solid metal-to-metal ground.

MCB-45W Antenna Tuning Information

Most antennas are factory tuned. However, performance can usually be improved by slightly lengthening or shortening the antenna using a Standing Wave Ratio (SWR) meter (not included). Refer to the antenna manufacturer's installation manual for the exact procedure to tune the antenna. You can purchase an SWR meter, or have your antenna checked by your CB Dealer's service department.

MAXON'S CB RADIO ANTENNA / ADAPTOR APPLICATION GUIDE

This Antenna / Adaptor Application Guide shows all the Maxon optional antennas and the adaptors required for use with various Maxon CB Radios. Refer to Optional / Replacement Maxon Accessories page for antenna descriptions.

MAXON CB RADIO MODELS	MAXON ANTENNAS			
	WTA-1	WTA-2	WTA-4W	WTA-4WP WTA-10M WTA-11 WTA-12
HCB-10	WTA-14	*	WTA-14	WTA-14
HCB-10A	NR	NR	NR	WTA-15 WTA-15
HCB-30	WTA-14	*	WTA-14	WTA-14
HCB-30A	NR	NR	NR	WTA-15 WTA-15
27-KC	NR	NR	NR	WTA-15
27-CDRL	NA	NA	WTA-16	NR
27-LP	NR	NR	NR	WTA-15
27-MCB	NA	NA	WTA-16	NR
MCB-10	NA	NA	WTA-16	NR
MCB-10A	NA	NA	WTA-16	NR
MCB-20	NA	NA	WTA-16	NR
MCB-25	NA	NA	WTA-16	NR
MCB-30	NA	NA	WTA-16	NR
MCB-40	NA	NA	WTA-16	NR
MCB-45W	NA	NA	WTA-16	NR
MCB-50	NA	NA	WTA-16	NR
MCB-50A	NA	NA	WTA-16	NR
MCB-55	NA	NA	WTA-16	NR
MCB-60	NA	NA	WTA-16	NR
MCB-60A	NA	NA	WTA-16	NR

Following are descriptions to designations shown in the above columns.
 NA = Not Applicable. Antenna listed is not used with this CB model.
 NR = Not Required. Antenna listed does not require an adaptor for use.
 * = Maxon Models HCB-10 and HCB-30 use the WTA-2H Antenna.

Adaptor #	Description of Antenna Adaptors
WTA-14	Screw-in Male Connector / BNC Female Connector
WTA-15	BNC Male Connector / SO-239 UHF Female Connector
WTA-16	PL-259 UHF Male Connector / BNC Female Connector

MCB-45W OPERATING INSTRUCTIONS

Having properly installed and wired your new CB and connected the antenna, you are now ready to adjust your radio for optimum reception and voice transmission.

1. Insert the microphone cord plug into the microphone jack (MIC). Push inward and tighten the locking nut on the end of the cord. When removing the microphone, unscrew the locking nut and gently pull out the microphone plug.
2. Turn the power on/off - volume control clockwise. Adjust to a normal radio volume level.
3. Adjust the squelch control to reduce any undesirable background noise when no signal is being received. To do this, select a channel where no signals are present, or wait until signals cease on your channel. Then, rotate the squelch control knob clockwise to a point where the background noise ceases.

NOTE: When the squelch is set properly, the speaker will remain quiet until a signal is received. In order to receive weak signals, do not set the squelch too high.

4. Re-adjust the volume to the desired listening level.
5. To connect an optional external speaker, locate the external speaker jack on the rear of the unit and insert the speaker plug into the jack. When connected, an external speaker will override the radio's internal speaker.

To use Emergency Channel 9: Press the CH9 selector. "9 EMG" will display on the LCD channel display. Press the CH9 selector again to return to normal CB operation.

To Transmit:

Press and hold the Push-To-Talk bar. Speak slowly and clearly in a normal voice, placing the microphone approximately two to three inches away from the mouth. The radio's built-in modulation control circuit will automatically adjust the microphone input level. There is no need to speak loudly.

To Receive:

Release the Push-To-Talk bar.

PA System and Optional PA Speaker Operation:

To use the Public Address feature, you must install a remote mounted PA speaker (not supplied). After the speaker is installed, insert the speaker's wired connector plug into the PA speaker jack on the back of the CB unit. To activate the PA system circuitry, press the PA selector. At this time you will no longer be able to send, or receive CB transmissions. You are now ready to broadcast through the PA speaker using the radio's microphone and volume control. Press the PA selector to return to normal CB operation.

USING THE WEATHER CHANNELS

The National Weather Service uses several special radio frequencies to provide continuous reports of local weather conditions and forecasts throughout the United States. Taped weather messages are repeated every four to six minutes on a 24-hour basis, and are routinely revised every one to three hours, or more frequently if needed.

During severe weather, the routine weather broadcasts will be interrupted with weather warning messages.

The MCB-45W Mobile CB / Weather Radio is designed to receive all of these special weather frequencies, and 3 international marine weather frequencies. A frequency reference card from the National Oceanic and Atmospheric Administration (NOAA) is enclosed to identify the frequencies broadcast in your geographical area.

The MCB-45W radio receives the National Weather Service and international marine weather broadcast frequencies listed below:

Weather Channel	01WX	162.550 MHz
Weather Channel	02WX	162.400 MHz
Weather Channel	03WX	162.475 MHz
Weather Channel	04WX	162.425 MHz
Weather Channel	05WX	162.450 MHz
Weather Channel	06WX	162.500 MHz
Weather Channel	07WX	162.525 MHz
Int'l Marine Weather	08WX	161.650 MHz
Int'l Marine Weather	09WX	161.775 MHz
Int'l Marine Weather	00WX	163.275 MHz

To Operate: Turn the radio's power on/off - volume control clockwise, and adjust to desired volume level. Press the weather mode selector (10 CH WX) and use the channel selector to select the broadcast frequency for your geographical area. Refer to the weather radio frequency chart provided with your MCB-45W.

NOTE: When switching from the CB mode to a weather frequency, the LCD will show the weather channel and "WX". The radio retains the last selected weather channel in memory, and will return to this channel when you re-enter the weather mode.

Re-adjust the volume level if necessary.

Press weather mode selector again to return to normal CB operation. The radio retains the last selected CB channel in memory, and will return to this channel when you re-enter the CB mode.

RADIO COMMUNICATION CODES

Citizens Band Radio operators have universally adopted the "10" Code for standard questions and answers. It enables them to communicate faster, easier and more understandably in noisy surroundings.

When using the code 10-1, you would say "Ten one", not "One zero dash one".

The following are some of the most common codes and their descriptions.

Code	Description	Code	Description
10-1	Receiving poorly.	10-36	Correct time is _____.
10-2	Receiving well.	10-37	Wrecker needed at _____.
10-3	Stop transmitting.	10-38	Ambulance needed at _____.
10-4	OK, message received.	10-39	Your message delivered.
10-5	Relay message.	10-41	Please turn to Channel _____.
10-6	Busy, stand by.	10-42	Traffic accident at _____.
10-7	Out of service; leaving the air.	10-43	Traffic tie-up at _____.
10-8	In service, subject to call.	10-44	I have a message for you.
10-9	Repeat message.	10-45	All units within range report.
10-10	Transmission completed, standing by.	10-50	Break channel.
10-11	Talking too fast.	10-60	What is next message number?
10-12	Visitors present.	10-62	Unable to copy; use phone.
10-13	Advise weather/ road conditions.	10-63	Network directed to.
10-16	Make pickup at _____.	10-64	Network clear.
10-17	Urgent business.	10-65	Awaiting your next message/ assignment.
10-18	Anything for us?	10-67	All units comply.
10-19	Nothing for you; return to base.	10-70	Fire at _____.
10-20	My location is _____.	10-71	Proceed with transmission in sequence.
10-21	Call by telephone	10-77	Negative contact.
10-22	Report in person to _____.	10-81	Reserve hotel room at _____.
10-23	Stand by.	10-82	Reserve room for _____.
10-24	Completed last assignment.	10-84	My telephone number is _____.
10-25	Can you contact?	10-85	My address is _____.
10-26	Disregard last information.	10-91	Talk closer to microphone.
10-27	I am moving to Channel _____.	10-93	Check my frequency on this channel.
10-28	Identify your station.	10-94	Please give me a long count.
10-29	Time is up for contact.	10-99	Mission completed; all units secure.
10-30	Does not conform to FCC rules.	10-200	Police needed at _____.
10-32	I will give you a radio check.		
10-33	Emergency traffic.		
10-34	Trouble at this station.		
10-35	Confidential Information.		

CB CHANNEL FREQUENCY CHART

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

MCB-45W TROUBLESHOOTING CHART

POSSIBLE SOLUTIONS

This CB radio has been manufactured in accordance with Maxon's exacting quality control standards. It should be handled with reasonable care. Avoid exposing it to dirt or moisture.

If you experience problems with your CB please refer to this Troubleshooting Chart.

POSSIBLE PROBLEM

POSSIBLE PROBLEM	Check power cable connection	Check fuses (in-line and main junction block)	Check squelch adjustment	Check power on / off control	Change to active channel	Check antenna connection	Fully depress Push-To-Talk bar	Check microphone connection
No sound or channel LCD	•	•		•				
Channel LCD lights, but no sound			•		•	•		•
No voice reception			•	•	•	•		•
Poor reception			•			•		
Unclear reception			•		•	•		•
Transmission problems	•				•	•	•	•

WARNING: DO NOT ATTEMPT TO MAKE ANY INTERNAL ADJUSTMENTS. Any internal adjustments must be made only by qualified technical personnel. Internal adjustments and/or modifications can lead to illegal operation as defined by FCC Rules and Regulations, Part 95. Illegal operation can result in serious consequences.

CAUTION: The fuse included with this unit is an important safety feature which must not be circumvented. **Removal of this fuse or the use of a fuse rated higher than supplied may result in overheating and/or fire and consequential damage to the unit or vehicle.** If a replacement fuse burns out, have the unit inspected and repaired by a qualified service technician.