



SAFETY AND GENERAL INFORMATION

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION
READ THIS INFORMATION BEFORE USING YOUR RADIO

The information provided in this document supersedes the general safety information contained in user guides published prior to October 2000. For information regarding radio use in a hazardous atmosphere please refer to the Factory Mutual (FM) Approval Manual Supplement or Instruction Card, which is included with radio models that offer this capability.

RADIO FREQUENCY (RF) OPERATIONAL CHARACTERISTICS

To transmit (talk) you must push the Push-To-Talk button; to receive (listen) you must release the Push-To-Talk button. When the radio is transmitting, it generates radio frequency (RF) energy; when it is receiving, or when it is off, it does not generate RF energy.

RADIO OPERATION AND EME EXPOSURE

Your Motorola radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy (EME):

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95.1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

© 1998, 2001 by Motorola, Inc.
Commercial, Government and Industrial Solutions Sector
8000 W. Sunrise Boulevard,
Ft. Lauderdale, FL 33322
Printed in U.S.A. 2/01 All rights reserved.



68P81087C79-B

- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 1999 (applicable to wireless phones only)

To assure optimal radio performance and make sure human exposure to radio frequency electromagnetic energy is within the guidelines set forth in the above standards, always adhere to the following procedures:

Two-way Radio Operation

When using your radio, **hold the radio in a vertical position with the microphone one to two inches (2.5 to 5 centimeters) away from the lips.**



Body-worn Operation

To maintain compliance with FCC RF exposure guidelines, if you wear a radio on your body when transmitting, always place the radio in a **Motorola approved clip, holder, holster, case, or body harness for this product.** Use of non-Motorola-approved accessories may exceed FCC RF exposure guidelines. **If you do not use a Motorola approved body-worn accessory and are not using the radio in the intended use positions along side of the head in the phone mode or in front of the face in the two-way radio mode, then ensure the antenna and radio is kept the following minimum distances from the body when transmitting:**

- **Phone or Two-way radio mode: one inch (2.5 centimeters)**
- **Data operation using any data feature with or without an accessory cable: one inch (2.5 centimeters)**

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the radio and may violate FCC regulations.

DO NOT hold the antenna when the radio is "IN USE." Holding the antenna affects call quality and may cause the radio to operate at a higher power level than needed.

Approved Accessories

For a list of approved Motorola accessories look in the appendix or accessory section of your radio's User Guide.

ELECTROMAGNETIC INTERFERENCE/COMPATIBILITY

NOTE: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed or otherwise configured for electromagnetic compatibility.

Facilities

To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

- **Pacemakers**
The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches (15 centimeters) be maintained between a handheld wireless radio and a pacemaker. These recommendations are consistent with those of the U.S. Food and Drug Administration.

Persons with pacemakers should:

- ALWAYS keep the radio more than 6 inches (15 centimeters) from their pacemaker when the radio is turned ON.
- not carry the radio in the breast pocket.
- use the ear opposite the pacemaker to minimize the potential for interference.
- turn the radio OFF immediately if you have any reason to suspect that interference is taking place.

Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

SAFETY AND GENERAL

Use While Driving

Check the laws and regulations on the use of radios in the area where you drive. Always obey them.

When using your radio while driving, please:

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.



OPERATIONAL WARNINGS

WARNING

FOR VEHICLES WITH AN AIR BAG

Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

POTENTIALLY EXPLOSIVE ATMOSPHERES

Turn off your radio prior to entering any area with a potentially explosive atmosphere, unless it is a radio type especially qualified for use in such areas as "Intrinsically Safe" (for example, Factory Mutual, CSA, UL, or CENELEC). Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

NOTE: The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.

BLASTING CAPS AND AREAS

To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.



Caution

OPERATIONAL CAUTIONS

ANTENNAS

Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result.

BATTERIES

All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewelry, keys, or beaded chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

MOBILE RADIO OPERATION AND EME EXPOSURE

To assure optimal radio performance and that human exposure to radio frequency electromagnetic energy is within the guidelines referenced earlier in this document, transmit only when people outside the vehicle are at least the minimum lateral distance away from a properly installed, externally-mounted antenna.

Table 1 lists the minimum lateral distance for several different ranges of rated radio power.

Table 1 Rated Power and Lateral Distance

Rated Power of Vehicle-installed Mobile Two-way Radio	Minimum Lateral Distance from Transmitting Antenna
Less than 7 watts	8 inches (20 centimeters)
7 to 15 watts	1 foot (30 centimeters)
16 to 50 watts	2 feet (60 centimeters)
More than 50 watts	3 feet (90 centimeters)

ANTENNA INSTALLATION

Mobile Antennas

Recommended mobile antenna installations are limited to metal body vehicles at the center of the roof and center of the trunk deck locations.

The antenna installation must additionally be in accordance with:

- The requirements of the antenna manufacturer/supplier
- Instructions in the Radio Installation Manual

Fixed Site Antennas

Mobile radio equipment is sometimes installed at a fixed location and operated as a control station or as a fixed unit. In such cases the antenna installation must comply with the following requirements in order to assure optimal performance and make sure human exposure to radio frequency electromagnetic energy is within the guidelines set forth in the above standards.

- The antenna must be mounted outside the building.
- Mount the antenna on a tower if at all possible.
- If the antenna is to be mounted on a building then it must be mounted on the roof.
- As with all fixed site antenna installations, it is the responsibility of the licensee to manage the site in accordance with applicable regulatory requirements and may require additional compliance actions such as site survey measurements, signage, and site access restrictions in order to insure that exposure limits are not exceeded.