



**MOTOROLA**

**HC700-i**  
Handheld Computer

## **Product Safety and RF Exposure for Portable Two-Way Radios.**



**BEFORE USING THIS RADIO, READ THIS  
BOOKLET WHICH CONTAINS  
IMPORTANT OPERATING INSTRUCTIONS  
FOR SAFE USAGE AND RF ENERGY  
AWARENESS AND CONTROL**

**INFORMATION AND OPERATIONAL INSTRUCTIONS  
FOR COMPLIANCE WITH RF ENERGY EXPOSURE  
LIMITS IN APPLICABLE NATIONAL AND  
INTERNATIONAL STANDARDS. ALSO READ THE  
OPERATIONAL INSTRUCTIONS FOR SAFE USAGE.**

**Caution**

### **RF Energy Exposure Awareness and Control Information and Operational Instructions for Occupational Use**

**Note:** This radio is intended for use in occupational/controlled conditions where users have full knowledge of their exposure and can exercise control over their exposure to meet the occupational limits in FCC/ICNIRP and International standards. This radio device is NOT authorized for general population consumer use

This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one form of electromagnetic energy. Other forms include, but are not limited to, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly, can cause biological damage. Very high levels of x-rays, for example, can damage tissues and genetic material.

Experts in science, engineering, medicine, health, and industry work with organizations to develop standards for safe exposure to RF energy. These standards provide recommended levels of RF exposure for both workers and the general public. These recommended RF exposure levels include substantial margins of protection.

All Motorola two-way radios are designed, manufactured, and tested to ensure they meet government-established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of two-way radios.

Government & Enterprise Mobility Solutions  
1301 E. Algonquin Road, Schaumburg, IL 60196  
Copyright © 2005 Motorola All Rights Reserved.

6802979C63-A



November, 2005

These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits:

<http://www.fcc.gov/oet/rfsafety/rf-faqs.html>  
<http://www.osha.gov/SLTC/radiofrequencyradiation/index.html>

### **Federal Communication Commission (FCC) Regulations (US markets only)**

The FCC rules require manufacturers to comply with the FCC RF energy exposure limits for portable two-way radios before they can be marketed in the U.S. When two-way radios are used as a consequence of employment, the FCC requires users to be fully aware of and able to control their exposure to meet occupational requirements.

Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your Motorola two-way radio has a RF Exposure Product Label. Do not remove this RF Exposure Label from the device. Also, your Motorola user manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

### ***Compliance with RF Exposure Standards***

Your Motorola two-way radio is designed and tested to comply with a number of national and International standards and guidelines (listed below) for human exposure to radio frequency electromagnetic energy. **This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environments.**

**Your Motorola two-way radio complies with the following RF energy exposure standards and guidelines:**

- 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
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- 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, 2003
- ANATEL ANNEX to Resolution No. 303 of July 2, 2002 "Regulation of limitation of exposure to electrical, magnetic and electromagnetic fields in the radio frequency range between 9 KHz and 300 GHz" and "Attachment to resolution # 303 from July 2, 2002"

**RF Exposure Compliance and Control Guidelines and Operating Instructions**

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures:

**Guidelines:**

- User awareness instructions should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

**Operating Instructions**

- When worn on the body, always place the radio in a Motorola-approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of non-Motorola-approved accessories may result in exposure levels, which exceed the IEEE/ICNIRP occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended use position, along side the head in the phone mode, in front of the face in the hand held mode, then ensure the antenna and the radio are kept 2.5 cm (one inch) from the body when transmitting. Keeping the radio at a proper distance is important because RF exposures decrease with increasing distance from the antenna.

## ***Hand-held Mode - Operating Instructions***

- Hold the radio in a vertical position in front of the face with the microphone (and other parts of the radio including the antenna) at least 2.5 cm (one inch) away from the nose or lips. Antenna should be kept away from the eye. Keeping the radio at a proper distance is important since RF exposures decrease with increasing distance from the antenna.



## ***Phone Mode - Operating Instructions***

- When placing or receiving a phone call, hold your radio product as you would a wireless telephone. Speak directly into the microphone.

## ***Approved Accessories***

- Use only Motorola-approved supplied or replacement antennas, batteries, and accessories. Use of non-Motorola - approved antennas, batteries and accessories may exceed IEEE/ICNIRP RF exposure guidelines. For a list of Motorola-approved antennas, batteries, and other accessories please see your dealer or local Motorola contact. Your nearest dealer can be found at the following web site:

<http://www.motorola.com/cgiss/emea/dealerlocator.html>

## ***Additional Information***

For additional information on exposure requirements or other training information, visit  
<http://www.motorola.com/rfhealth>.

## **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 Advanced Medical Technology Association (AdvaMed) recommends that a minimum separation of 15 cms (6 inches) 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 15 cms 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.

### **Use of Communication Devices While Driving**

Always check the laws and regulations on the use of radios in the areas where you drive.

- 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 or regulations so require.

## **OPERATIONAL WARNINGS**



### **WARNING**

#### **For Vehicles With Air Bags**

**Refer to vehicle manufacturer's manual prior to installation of electronic equipment to avoid interference with air bag wiring.**

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**

**(Explosive atmospheres refers to hazard classified locations that may contain hazardous gas, vapors, or dusts.)**

Turn off your radio prior to entering any area with a potentially explosive atmosphere. 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.

The areas with potentially explosive atmospheres referred to above include fuelling 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. Areas with potentially explosive atmospheres are often but not always posted.

### **Blasting Caps And Blasting 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.

## **OPERATIONAL CAUTIONS**



**Caution**

### **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 jewellery, 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.