PART 1204—SAFETY STANDARD FOR OMNIDIRECTIONAL CITIZENS BAND BASE STATION ANTENNAS

Subpart A—The Standard

Sec.

Subpart B—Certification

AUTHORITY: Secs. 2, 3, 5, 7, 9, 14, 16, 19, 25, Pub. L. 92–573, 86 Stat. 1207, 1208, 1211–17, 1220, as amended Pub. L. 95–319, sec. 1, 92 Stat. 386, Pub. L. 94–284, 90 Stat. 503; 15 U.S.C. 2051, 2052, 2054, 2056, 2058, 2063, 2065, 2068, 2074.

SOURCE: 47 FR 36201, Aug. 19, 1982, unless otherwise noted.

Subpart A—The Standard

§ 1204.1 Scope of the standard.

(a) *General.* This subpart A of part 1204 is a consumer product safety standard which prescribes safety requirements for Citizens Band omnidirectional base station antennas. The standard is intended to reduce the risk of electrocution or serious injuries occurring if the antenna contacts an electric power line while the antenna is being put up or taken down. One way that this can be accomplished is to insulate the antenna so that if it contacts the power line, there is less of a likelihood that a harmful electric current will be transmitted from the power line through the antenna and mast and ultimately through a person holding the antenna mast. Another possible way to provide this protection is to incorporate an insulating barrier between the antenna and the mast or other supporting structure, so that a harmful electric current will not pass from the antenna to a person in contact with the mast. (If this alternative were chosen, the feed cable from the antenna would have to be insulated or otherwise protected so that it would not provide an electrical path to the mast or a person touching the cable.)

(b) *Description of the standard*—(1) *Performance tests.* The standard describes two performance tests to determine if the means chosen by the manufacturer to protect against the shock hazard will provide adequate protection.

(i) First, there is an Insulating Material Effectiveness Test (§ 1204.4(d) of this subpart) in which a high voltage electrode or test rod is brought into contact with the antenna at any point within the protection zone established by § 1204.2(k) of this subpart to ensure that the insulation can withstand the voltage for 5 minutes without transmitting more than 5 milliamperes (mA) root-mean-square (rms) of electric current.

(ii) The other test is an Antenna-Mast System Test (§ 1204.4(e) of this subpart) which is intended to determine whether the means provided to protect against electrocution will withstand the stress imposed when an antenna-mast system falls onto a power line. This test consists of mounting the antenna to be tested on a specified mast and allowing the assembled antenna and mast to fall onto a power line of 14,500 volts rms phase to ground.

(2) *Recommended materials.* (i) Since a substantial portion of the accidents addressed by this standard occur when the antenna is being taken down after it has been installed in an outdoor environment for a number of years, the materials selected to provide protection from shock should be weather resistant.

(ii) Although other materials may also be suitable, materials meeting the following criteria should be reasonably weather resistant:

(A) Material composition includes an ultraviolet stabilizer or screen.

(B) Heat resistance of 212 °F (100 °C) without loss of elasticity (ANSI/ASTM D 746–79).

(C) Moisture absorption of not more than 0.2 percent (ANSI/ASTM D 570–77).

(D) For heat shrinkable sleeving, temperature flexibility to −40 °F (−40 °C) with no cracks (Mil Spec. MIL-I-23053C, 20 May 1976).

(3) *Warning:* Section 1204.5 of this subpart requires a statement in the instructions that the standard will not protect in every instance against electrocution caused by contact with power lines. This is because the standard is intended to provide protection for power line voltages of up to 14,500 volts. Some power lines carry more voltage than this. In addition, not all portions of the antenna are required to be insulated, and the antenna's mast is not required to be insulated. If the power line were to contact one of these uninsulated areas, an electrocution could occur. Furthermore, when the antenna was manufactured it may not in fact have complied with the standard, or the insulation may have deteriorated or been damaged since the antenna was manufactured. In addition, the insulation cannot withstand high voltages indefinitely, and, after a period of time, the current may penetrate the insulation. Therefore, even if a harmful amount of current is not transmitted immediately, the user should not attempt to remove an antenna that falls into electric power lines, since the insulation could break down while the antenna is being removed. For these reasons, persons handling these antennas should ensure that the antennas are kept away from power lines so that the antenna cannot contact the line while being transported, installed, or removed, even if the antenna is dropped. The Commission recommends that antennas be located at least twice the combined length of the antenna and mast from the nearest power line.

(c) *Scope.* (1) Except as noted below, the standard applies to all omnidirectional CB base station antennas that are consumer products and are manufactured or imported on or after May 24, 1983.

(2) The Commission may extend the effective date of the standard for as long as an additional 90 days for any firm which has 750 employees or fewer and, is not a subsidiary or division of a firm having more than 750 employees, and which manufactures or imports products subject to the standard, upon written application, addressed to the Associate Executive Director for Compliance and Administrative litigation, Consumer Product Safety Commission, Washington, D.C. 20207, received not later than January 17, 1983. An application for extension of the effective date shall:

(i) Identify the requesting firm as a manufacturer or importer of products subject to the standard.

(ii) State the total number of employees of the firm, including all employees of any subsidiary or division, and all employees of any firm of which the requesting firm is a subsidiary or division.

(iii) Request extension of the effective date to a specific date not later than May 27, 1983.

(iv) Explain why the requested extension of the effective date is needed.

(v) Describe all activities undertaken by the requesting firm to achieve compliance with the requirements of the standard.

(vi) State that the requesting firm will market complying products after the extended effective date.

(3) The Associate Executive Director for Compliance and Administrative Litigation will evaluate each request for extension of the effective date. The following criteria will be used in determining whether to grant an application for extension of the effective date:

(i) Does the application demonstrate that the requesting firm cannot meet the general effective date,

(ii) Does the application demonstrate that the requesting firm has made a good faith effort to achieve compliance with the requirements of the standard by the general effective date.

(iii) Does the application demonstrate that the firm is likely to produce or market complying products if the requested extension is granted.

(4) The Associate Executive Director will advise each requesting firm in writing if the requested extension is granted or denied. If the Associate Executive Director for Compliance and Administrative Litigation denies a request for extension of the effective

date, the firm may request the Commission to reconsider the denial.

(5) Section 3(a)(1) of the Consumer Product Safety Act (CPSA, 15 U.S.C. 2052(a)(1) defines the term *consumer product* as an ''article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise.'' The term does not include products that are not customarily produced or distributed for sale to, or for the use or consumption by, or enjoyment of, a consumer. A limited exception from coverage of the standard is provided by section 18(a) of the CPSA, 15 U.S.C. 2067, for certain products intended for export and meeting the requirements of section 18(b) of the CPSA.

(d) *Prohibited acts.* It is unlawful to manufacture for sale, offer for sale, distribute in commerce, or import into the United States any product subject to this standard that does not conform with the standard.

(Sec. 9(h), Pub. L. 92–573, 86 Stat. 1207, as amended, Pub. L. 95–319, 92 Stat. 386, Pub. L. 95–631, 92 Stat. 3742, Pub. L. 96–373, 94 Stat. 1366, Pub. L. 97–35, 95 Stat. 703, 15 U.S.C. 2058(h))

[47 FR 36201, Aug. 19, 1982, as amended at 48 FR 29683, June 28, 1983]

§ 1204.2 Definitions.

In addition to the definitions given in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052), the following definitions apply for the purposes of this standard.

(a) *Antenna system* means a device for radiating and/or receiving radio waves. Where they are present, the antenna system includes active elements, ground plane elements, matching networks, element-connecting hardware, mounting hardware, feed cable, and other functional or non-functional elements.

(b) *Antenna-mast system* means the completed assembly of the antenna system and the mast.

(c) *Base station* means a transmitter and/or receiver in a fixed location.

(d) *Citizens Band (CB)* means the frequency band allocated for citizen's band radio service.

(e) *Current* means the total rate at which electrical charge is transported through the antenna-mast system in response to the applied test voltage, including both capacitive and resistive components.

(f) *Electrical breakdown* means a failure of the insulating material used with the antenna, such that in the Antenna-Mast System Test of §1204.4(e) of this subpart, the current flowing through the antenna-mast system is sufficient to actuate the automatic internal cut-off of the high voltage source or exceeds the current that can be measured by the current monitoring device.

(g) *Feed cable* means the electrical cable that connects the antenna system to the transmitter and/or receiver.

(h) *Field joint* means any joint between antenna system sections or parts, or between the antenna system and the mast, that is not assembled by the antenna manufacturer.

(i) *Insulating material and insulation* mean a material that has a very small electric conductivity.

(j) *Omnidirectional antenna* means an antenna system designed or intended primarily to exhibit approximately equal signal transmission or reception capabilities in all horizontal directions simultaneously.

(k) *Protection zone* means that portion of an antenna system which can contact the test rod during the Insulating Material Effectiveness Test or can contact the power line during the Antenna-Mast System Test. This zone consists of those elements of the antenna system extending from the uppermost tip of an upright antenna downward to a point that is 12.0 inches (30.5 cm) above the top of the mast when the antenna system is mounted according to the manufacturer's instructions.

(l) *Voltage, phase to ground,* means that voltage which exists between a single phase of a three phase power system and ground.