

IONIZING RADIATION / NONIONIZING RADIATION

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§1910.96 Ionizing Radiation. Redesignated as §1910.1096.

§1910.97 Nonionizing Radiation.

(a) Electromagnetic radiation.

(1) Definitions applicable to this paragraph.

(i) The term “**electromagnetic radiation**” is restricted to that portion of the spectrum commonly defined as the radio frequency region, which for the purpose of this specification shall include the microwave frequency region.

(ii) Partial body irradiation. Pertains to the case in which part of the body is exposed to the incident electromagnetic energy.

(iii) Radiation protection guide. Radiation level which should not be exceeded without careful consideration of the reasons for doing so.

(iv) The word “**symbol**” as used in this specification refers to the overall design, shape, and coloring of the rf radiation sign shown in Figure G-11.

(v) Whole body irradiation. Pertains to the case in which the entire body is exposed to the incident electromagnetic energy or in which the cross section of the body is smaller than the cross section of the incident radiation beam.

(2) Radiation protection guide.

(i) For normal environmental conditions and for incident electromagnetic energy of frequencies from 10 MHz to 100 GHz, the radiation protection guide is 10 mW/cm.² (milliwatt per square centimeter) as averaged over any possible 0.1-hour period. This means the following:

Power density: 10 mW./cm.² for periods of 0.1-hour or more.

Energy density: 1 mW.-hr./cm.² (milliwatt hour per square centimeter) during any 0.1-hour period.

This guide applies whether the radiation is continuous or intermittent.

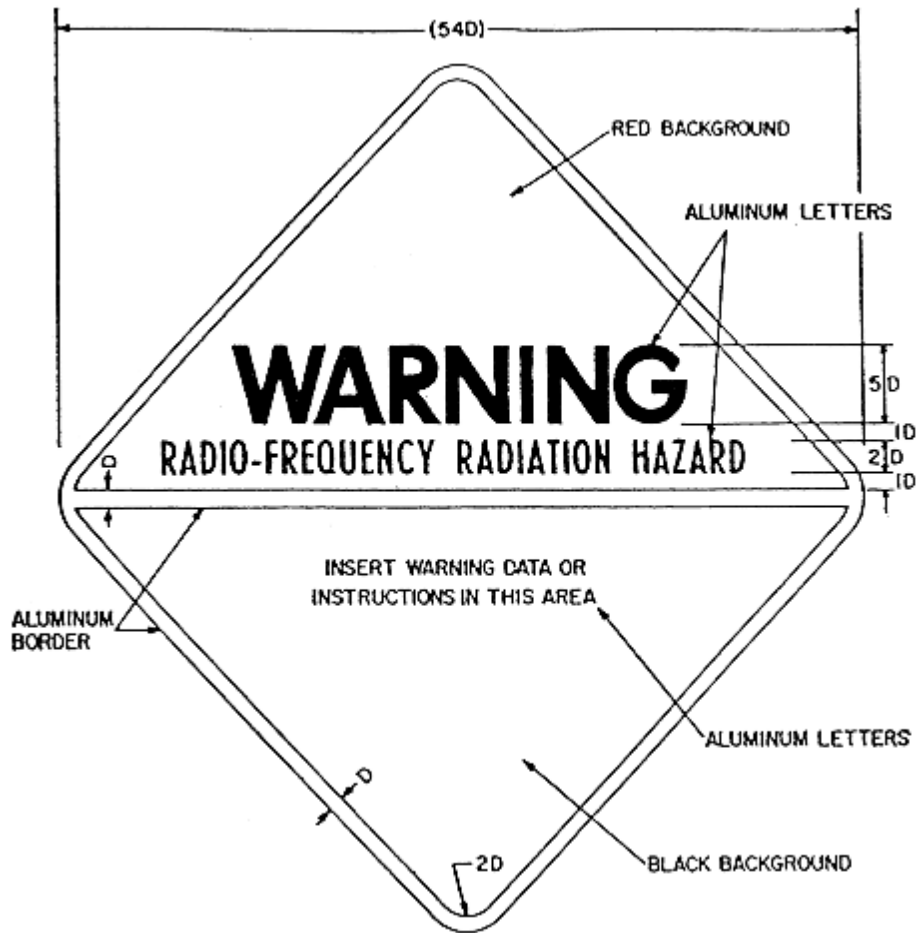
(ii) These formulated recommendations pertain to both whole body irradiation and partial body irradiation. Partial body irradiation must be included since it has been shown that some parts of the human body (e.g., eyes, testicles) may be harmed if exposed to incident radiation levels significantly in excess of the recommended levels.

(3) Warning symbol.

(i) The warning symbol for radio frequency radiation hazards shall consist of a red isosceles triangle above an inverted black isosceles triangle, separated and outlined by an aluminum color border. The words “Warning – Radio-Frequency Radiation Hazard” shall appear in the upper triangle. See Figure G-11.

(ii) American National Standard Safety Color Code for Marking Physical Hazards and the Identification of Certain Equipment, Z53.1-1953, which is incorporated by reference as specified in §1910.6, shall be used for color specification. All lettering and the border shall be of aluminum color.

(iii) The inclusion and choice of warning information or precautionary instructions is at the discretion of the user. If such information is included it shall appear in the lower triangle of the warning symbol.



1. Place handling and mounting instructions on reverse side.
2. D = Scaling unit.
3. Lettering: Ratio of letter height to thickness of letter lines.
 - Upper triangle: 5 to 1 Large
 - 6 to 1 Medium
 - Lower triangle: 4 to 1 Small
 - 6 to 1 Medium
4. Symbol is square, triangles are right-angle isosceles.

Figure G-11

Radio-Frequency Radiation Hazard Warning Symbol

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(4) Scope. This section applies to all radiations originating from radio stations, radar equipment, and other possible sources of electromagnetic radiation such as used for communication, radio navigation, and industrial and scientific purposes. This section does not apply to the deliberate exposure of patients by, or under the direction of, practitioners of the healing arts.

[39 FR 23502, June 27, 1974]

Stat. Auth.: ORS 654.025(2) and 656.726(3).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 2-1992, f. 2/6/92, ef. 5/1/92.

OR-OSHA Admin. Order 4-1997, f. 4/2/97, ef. 4/2/97.