

FCC Policy on Human Exposure to Radiofrequency Electromagnetic Fields

The FCC is required by the National Environmental Policy Act of 1969 to evaluate the effect of emissions from FCC-regulated transmitters on the quality of the human environment. At the present time there is no federally-mandated radio frequency (RF) exposure standard. However, several non-government organizations, such as the American National Standards Institute ([ANSI](#)), the Institute of Electrical and Electronics Engineers, Inc. ([IEEE](#)), and the National Council on Radiation Protection and Measurements (NCRP) have issued recommendations for human exposure to RF electromagnetic fields. The potential hazards associated with RF electromagnetic fields are discussed in [OET Bulletin No. 56](#), "Questions and Answers About the Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields."

On August 1, 1996, the Commission adopted the NCRP's recommended Maximum Permissible Exposure limits for field strength and power density for the transmitters operating at frequencies of 300 kHz to 100 GHz. In addition, the Commission adopted the specific absorption rate (SAR) limits for devices operating within close proximity to the body as specified within the ANSI/IEEE C95.1-1992 guidelines. (See [Report and Order, FCC 96-326](#)) The Commission's requirements are detailed in Parts 1 and 2 of the FCC's Rules and Regulations [47 C.F.R. 1.1307(b), 1.1310, 2.1091, 2.1093].

Certain applicants are required to routinely perform an environmental evaluation with respect to determining compliance with the Commission's exposure limits. In the event that an applicant determines the site is not within compliance, the submission of an Environmental Analysis is required. The SAR limits for portable and mobile devices became effective August 7, 1996. The Commission's limits for field strength and power density became effective October 15, 1997 for all services except the Amateur Radio Service. The new limits became effective for the Amateur Radio Service on January 1, 1998. As of September 1, 2000 all FCC licensees were required to be in compliance with the FCC's RF exposure limits (See 47 C.F.R. 1.1307(b)(5)).

The following services and devices are generally required to routinely perform an environmental evaluation. However many transmitters licensed under these service categories may be excluded from routine evaluation if they meet certain height and power thresholds (see [OET Bulletin 65](#) for exclusion criteria).

- Experimental Radio Service - Part 5
- Radio Frequency Devices - Part 15
- Multipoint Distribution Service - Part 21, subpart K
- Paging and Radiotelephone Service - Part 22, subpart E
- Cellular Radiotelephone Service - Part 22, subpart H
- Personal Communications Services - Part 24
- Satellite Communications - Part 25
- General Wireless Communications Service - Part 26
- Wireless Communications Service - Part 27
- Radio Broadcast Services - Part 73
- Experimental, auxiliary, and special broadcast and other program distributional services - Part 74
- Stations in the Maritime Service - Part 80
- Private Land Mobile, Paging Operations - Part 90

- Private Land Mobile, "covered" Specialized Mobile Radio - Part 90
- Amateur Radio Service - Part 97
- Local Multipoint Distribution service - Part 101, subpart L

Mobile and portable devices used as follows:

- Cellular Radio Service
- Personal Communications Service
- Satellite Communications Branch
- General Wireless Communications Service
- Wireless Communications Service
- Maritime Service
- "Covered" Specialized Mobile Radio Service
- Unlicensed PCS and millimeter wave devices

The Commission issued a [Second Memorandum Opinion and Order](#) on August 25, 1997 to address petitions regarding the adoption of new exposure limits. OET has revised OST Bulletin No. 65, to provide guidance on acceptable methods of determining compliance with the Commission's new exposure limits. The revised bulletin, [OET Bulletin 65, Evaluating Compliance With FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields](#) was issued simultaneously with the release of the [Second MO&O](#).

Any questions on the Commission's policies with respect to radio frequency electromagnetic fields should be addressed to:

[RF Safety Program](#)

Federal Communications Commission
Office of Engineering and Technology
45 L Street NE
Washington, DC 20554