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(c) Controlling the transmission or reception of facsimile material.

[28 FR 13032, Dec. 5, 1963, as amended at 36 FR 2562, Feb. 6, 1971; 38 FR 22479, Aug. 21, 1973]

§ 23.12 Use of radiotelegraph emissions by radiotelephone stations.

The licensee of a point-to-point radiotelephone station may be authorized to use type N0N, A1A, A2A, F1B, or F2B emission for identification, for test purposes or for the exchange of service messages.

[49 FR 48701, Dec. 14, 1984]

§ 23.13 Types of emission.

Stations in the international fixed public radiocommunication services may be authorized to use any of the types of emission or combinations thereof, described in part 2 of this chapter, as well as new types which may be developed: *Provided*, That harmful interference to adjacent operations is not caused thereby, *And provided further*, That the intelligence to be transmitted will use the bandwidth requested to a degree of efficiency compatible with the current state of the art. A determination of the possibilities of interference will be made as outlined in § 23.20. In certain cases frequencies or emissions may be authorized on a temporary basis to determine if interference will occur. During normal operations, emissions shall be centered about an assigned frequency. Non-centered emissions may be employed for short periods of time as needed to avoid interfering signals or meet fluctuating traffic loading: *Provided*, That the occupied bandwidth of these emissions be contained within the authorized bandwidth, *And provided further*, That prior to any such use, the Commission be notified of the reference frequency or frequencies proposed to be used in lieu of the assigned frequency.

[38 FR 22479, Aug. 21, 1973]

§ 23.14 Emission, bandwidth, modulation and transmission characteristics.

In the services under this part emissions are designated by their classification and their necessary bandwidth in accordance with the following procedures:

(a) *Designation of emissions in applications.* In applying for new frequency assignments for emissions not presently authorized, the emissions proposed to be used shall be described and their bandwidths specified as outlined in part 2 of this chapter.

(b) *Designation of emissions in authorizations.* The emission designations used in authorizations will indicate only the maximum value of the necessary bandwidth for each type of modulation authorized.

(c) *New types of emissions.* If application is made for a type of emission not covered by part 2 of this chapter, a full description of the emission must be provided and, if possible, measurements of its occupied bandwidth.

[38 FR 22479, Aug. 21, 1973, as amended at 49 FR 48701, Dec. 14, 1984]

§ 23.15 Emission limitations.

(a) For all transmitters placed into operation after September 19, 1973, and for all transmitters after September 19, 1975, which operate on frequencies below 30 MHz:

(1) The occupied bandwidth of emission shall be confined within the least possible spectrum space consistent with the state of the art and the required quality of transmission, and in no event shall be more than the authorized bandwidth.

(2) Spurious emissions of transmitters of mean power of 50 kilowatts or less shall be attenuated at least 40 decibels below the mean power of the fundamental without exceeding the power of 50 milliwatts.

(3) Spurious emissions of transmitters of mean power exceeding 50 kilowatts shall be attenuated at least 60 decibels below the mean power of the fundamental and every effort should be made to keep the level of spurious emissions below the power of 50 milliwatts.

(b) For all transmitters placed into operation after September 19, 1973, and for all transmitters after September 19, 1975, which operate on frequencies above 30 MHz, the mean powers of emissions shall be attenuated below

the mean output power of the transmitter in accordance with the following schedule:

(1) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels;

(2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 decibels;

(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: at least 43 plus 10 log (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(c) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than that specified in this section.

[38 FR 22479, Aug. 21, 1973; 38 FR 24901, Sept. 11, 1973]

§ 23.16 Frequency tolerances.

(a) The frequency tolerance for stations in the International Fixed Public Radiocommunications Services shall be maintained as prescribed in the following table:

Frequency range	Tolerances applicable to new transmitters installed after September 19, 1973, and to all transmitters after September 19, 1975	
	Percent	Parts per million
10 to 50 kHz	.1	1000
50 to 535 kHz	.02	200
1605 to 30,000 kHz	.0015	15
30 to 50 MHz	.002	20
50 to 000 MHz	.0005	5
1000 to 1850 MHz	.001	10
1850 to 1990 MHz	.02	200
1990 to 2500 MHz	.001	10
2500 to 10,500 MHz	.03	300
10,500 to 40,000 MHz	.05	500

(b) Until September 19, 1975, the frequency tolerance of transmitters installed at stations in these services before September 19, 1973, and operating within the frequency bands set forth below, shall be maintained within the following limits:

Frequency range	Tolerance (percent)
10 to 50 kHz	0.1
50 to 535 kHz	0.02
1605 to 30000 kHz	0.003
Above 30 MHz	(1)

[1] As set forth in the radio station license.

[38 FR 27386, Oct. 3, 1973]

§ 23.17 Frequency measurement.

Each station shall provide for the measurement of all frequencies assigned thereto, and establish a procedure for checking them regularly. These measurements shall be made by means independent of the frequency control of the transmitter and shall be of accuracy sufficient to detect deviation from the assigned frequency within one-half of the allowed tolerance. A record shall be kept of the results and dates of all frequency measurements.

[38 FR 22480, Aug. 21, 1973]

§ 23.18 Authorization of power.

(a) *Authorized power.* Power, when designated in the respective station license for a particular transmitter or transmitters, is peak envelope power for transmitters having full, unkeyed carrier, single sideband or independent sideband emissions, and mean power for transmitters having other emissions, unless specifically expressed otherwise. Designation of effective radiated power may appear in the station license in addition to designation of power for a transmitter or transmitters, when deemed necessary by the Commission.

(b) *Use of minimum power.* In the interest of avoiding interference to other operations, all stations shall radiate only as much power as is necessary to ensure a satisfactory service.

[38 FR 22480, Aug. 21, 1973]

§ 23.19 Use of directional antennas.

Insofar as is practicable, directional antennas, of type consistent with the current state of art, shall be used on all circuits for both transmitting and receiving.

[38 FR 22480, Aug. 21, 1973]