

(5) The LMS sub-band edges for multilateration systems for which emissions must be attenuated are 904.00, 909.75, 919.75, 921.75, 927.50, 927.75 and 928.00 MHz. If the 919.75–921.75 and 921.75–927.25 MHz sub-bands are aggregated by a single licensee, the emission mask limitations at the band edges at 921.75 and 927.50 MHz may be ignored. The LMS sub-band edges for non-multilateration systems for which emissions must be attenuated are 902.00, 904.00, 909.75 and 921.75 MHz.

(l) *Other frequency bands.* Transmitters designed for operation under this part on frequencies other than listed in this section must meet the emission mask requirements of Emission Mask B. Equipment operating under this part on frequencies allocated to but shared with the Federal Government, must meet the applicable Federal Government technical standards.

(m) *Instrumentation.* The reference level for showing compliance with the emission mask shall be established, except as indicated in Sections 90.210 (d), (e), and (k), using standard engineering practices for the modulation

characteristic used by the equipment under test. For measuring emissions up to and including 50 kHz from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to insure that the emission profile is developed. If video filtering is used, its bandwidth must not be less than the instrument resolution bandwidth. For frequencies more than 50 kHz removed from the edge of the authorized bandwidth a resolution of at least 10 kHz must be used for frequencies below 1000 MHz. Above 1000 MHz the resolution bandwidth of the instrumentation must be at least 1 MHz. If it can be shown that use of the above instrumentation settings do not accurately represent the true interference potential of the equipment under test, then an alternate procedure may be used provided prior Commission approval is obtained.

29. Section 90.211 is revised to read as follows:

**§ 90.211 Modulation requirements.**

Each transmitter must meet the requirements of either paragraph (a) or

(b) of this section. The requirements of this paragraph do not apply to mobile stations that are authorized to operate with a maximum power output of 2 watts or less.

(a) Transmitters utilizing analog emissions that are equipped with an audio low-pass filter and must meet the emission limitations specified in § 90.210 under all possible conditions of operation.

(b) Transmitters utilizing digital or analog emissions without an audio low-pass filter must be tested for type acceptance using the digital or analog modulating signal or signals specified by the Part 2 of this chapter. The type acceptance application must contain such information as may be necessary to demonstrate that the transmitter complies with the emission limitations specified in § 90.210.

30. Section 90.213 is revised to read as follows:

**§ 90.213 Frequency stability.**

(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following Table.

MINIMUM FREQUENCY STABILITY  
[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25 .....	<sup>1 2 3</sup> 100	100	200
25–50 .....	20	20	50
72–76 .....	5	.....	50
150–174 .....	<sup>5 11</sup> 5	<sup>6</sup> 5	<sup>4 6</sup> 5
220–222 .....	0.1	1.5	1.5
421–512 .....	<sup>7 11</sup> 5	<sup>8</sup> 5	<sup>8</sup> 5
806–821 .....	1.5	2.5	2.5
821–824 .....	1.0	1.5	1.5
851–866 .....	1.5	2.5	2.5
866–869 .....	1.0	1.5	1.5
896–901 .....	0.1	1.5	1.5
902–928 .....	2.5	2.5	2.5
929–930 .....	1.5	.....	.....
935–940 .....	0.1	1.5	1.5
1427–1435 .....	<sup>9</sup> 300	300	300
Above 2450 <sup>10</sup> .....	.....	.....	.....

<sup>1</sup> Fixed and base stations with over 200 watts transmitter power must have a frequency stability of 50 ppm except for equipment used in the Public Safety Radio Services where the frequency stability is 100 ppm.

<sup>2</sup> For single sideband operations below 25 MHz, the carrier frequency must be maintained within 50 Hz of the authorized carrier frequency.

<sup>3</sup> Travelers information station transmitters operating from 530–1700 kHz and transmitters exceeding 200 watts peak envelope power used for disaster communications and long distance circuit operations pursuant to §§ 90.242 and 90.264 must maintain the carrier frequency to within 20 Hz of the authorized frequency.

<sup>4</sup> Stations operating in the 154.45 to 154.49 MHz or the 173.2 to 173.4 MHz bands must have a frequency stability of 5 ppm.

<sup>5</sup> In the 150–174 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 2.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

<sup>6</sup> In the 150–174 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth or designed to operate on a frequency specifically designated for itinerant use or designed for low-power operation of two watts or less, must have a frequency stability of 5 ppm. Mobile stations designed to operate with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

<sup>7</sup> In the 421–512 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 1.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 0.1 ppm.