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km (50 miles) of the center of Buffalo. The following coordinates shall be used for the centers of these areas (coordinates are referenced to North American Datum 1983 (NAD83)):

Buffalo,	42°52'52.2" North latitude.
NY.	78°52'20.1" West longitude.
Cleveland,	41°29'51.2" North latitude.
OH.	81°41'49.5" West longitude.
Detroit,	42°19'48.1" North latitude.
MI.	83°02'56.7" West longitude.

(d) Mobile operation shall be confined to within 80 km (50 miles) of the centers of Detroit, Cleveland, or Buffalo.

[52 FR 6156, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989; 58 FR 31476, June 3, 1993; 58 FR 44957, Aug. 25, 1993; 60 FR 37269, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18929, Apr. 17, 1997; 63 FR 68965, Dec. 14, 1998]

**§ 90.275 Selection and assignment of frequencies in the 421–430 MHz band.**

Applicants must specify the frequencies in which the proposed system will operate pursuant to a recommendation by a frequency coordinator certified for the pool in which the requested frequency is assigned.

[62 FR 18932, Apr. 17, 1997]

**§ 90.279 Power limitations applicable to the 421–430 MHz band.**

(a) Base station authorizations in the 421–430 MHz band will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as shown in the table below. ERP is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. EAH is calculated by subtracting the Assumed Average Terrain Elevation (AATE) as listed in table 7 of § 90.619 from the antenna height above mean sea level.

LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN THE 421–430 MHz BAND

Effective antenna height (EAH) in meters (feet)	Maximum effective radiated power (ERP) (watts)
0–152 (0–500) .....	250
Above 152–305 (above 500–1000) .....	150
Above 305–457 (above 1000–1500) .....	75

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LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN THE 421–430 MHz BAND—Continued

Effective antenna height (EAH) in meters (feet)	Maximum effective radiated power (ERP) (watts)
Above 457–610 (above 1500–2000) .....	40
Above 610–762 (above 2000–2500) .....	20
Above 762–914 (above 2500–3000) .....	15
Above 914–1219 (above 3000–4000) .....	10
Above 1219 (above 4000) .....	5

(b) The maximum transmitter power output that will be authorized for control stations is 20 watts.

[52 FR 6157, Mar. 2, 1987, as amended at 58 FR 44957, Aug. 25, 1993]

**§ 90.281 Restrictions on operational fixed stations in the 421–430 MHz band.**

(a) Except for control stations, operational fixed facilities will not be authorized in the 421–430 MHz band. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235.

(b) Control stations associated with one or more mobile relay stations will be authorized only on the assigned frequency of the associated mobile station. Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be caused to stations of licensees authorized to use the frequency for mobile service communications.

[52 FR 6158, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989]

**§ 90.283 [Reserved]**

**Subpart L—Authorization in the Band 470–512 MHz (UHF-TV Sharing)**

**§ 90.301 Scope.**

This subpart governs the authorization and use of frequencies by land mobile stations in the band 470–512 MHz on a geographically shared basis with Television Broadcast stations. Under this special sharing plan, different frequencies are allocated depending on the geographic urban area involved as

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fully detailed in the following rule sections.

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18932, Apr. 17, 1997]

**§ 90.303 Availability of frequencies.**

(a) Frequencies in the band 470–512 MHz are available for assignment as

described below. Note: coordinates are referenced to the North American Datum 1983 (NAD83).

(b) The following table lists frequency bands that are available for assignment in specific urban areas. The available frequencies are listed in § 90.311 of this part.

Urbanized area	Geographic center		Bands (MHz)	TV channels
	North latitude	West longitude		
Boston, MA .....	42°21'24.4" .....	71°03'23.2" .....	470–476, 482–488	14, 16
Chicago, IL <sup>1</sup> .....	41°52'28.1" .....	87°38'22.2" .....	470–476, 476–482	14, 15
Cleveland, OH <sup>2</sup> .....	41°29'51.2" .....	81°49'49.5" .....	470–476, 476–482	14, 15
Dallas/Fort Worth, TX .....	32°47'09.5" .....	96°47'38.0" .....	482–488	16
Detroit, MI <sup>3</sup> .....	42°19'48.1" .....	83°02'56.7" .....	476–482, 482–488	15, 16
Houston, TX .....	29°45'26.8" .....	95°21'37.8" .....	488–494	17
Los Angeles, CA <sup>4</sup> .....	34°03'15.0" .....	118°14'31.3" .....	470–476, 482–488, 506–512	14, 16, 20
Miami, FL .....	25°46'38.4" .....	80°11'31.2" .....	470–476	14
New York, NY/NE NJ .....	40°45'06.4" .....	73°59'37.5" .....	470–476, 476–482, 482–488	14, 15, 16
Philadelphia, PA .....	39°56'58.4" .....	75°09'19.6" .....	500–506, 506–512	19, 20
Pittsburgh, PA .....	40°26'19.2" .....	79°59'59.2" .....	470–476, 494–500	14, 18
San Francisco/Oakland, CA ..	37°46'38.7" .....	122°24'43.9" .....	482–488, 488–494	16, 17
Washington, DC/MD/VA .....	38°53'51.4" .....	77°00'31.9" .....	488–494, 494–500	17, 18

<sup>1</sup> In the Chicago, IL, urbanized area, channel 15 frequencies may be used for paging operations in addition to low power base/mobile usages, where applicable protection requirements for ultrahigh frequency television stations are met.

<sup>2</sup> Channels 14 and 15 are not available in Cleveland, OH, until further order from the Commission.

<sup>3</sup> Channels 15 and 16 are not available in Detroit, MI, until further order from the Commission.

<sup>4</sup> Channel 16 is available in Los Angeles, CA, for use by eligibles in the Public Safety Radio Pool.

(c) The band 482–488 MHz (TV Channel 16) is available for use by eligibles in the Public Safety Radio Pool in the following areas: New York City; Nassau, Suffolk, and Westchester counties in New York State; and Bergen County, New Jersey. All part 90 rules shall apply to said operations, except that:

(1) *Location of stations.* Base stations shall be located in the areas specified in this paragraph (c). Mobile stations may operate throughout the areas specified in this paragraph (c) and may additionally operate in areas not specified in this paragraph (c) provided that the distance from the Empire State Building (40° 44' 54.4" N, 73° 59' 8.4" W) does not exceed 48 kilometers (30 miles).

(2) *Protection criteria.* In order to provide co-channel television protection, the following height and power restrictions are required:

(i) Except as specified in paragraph (c)(2)(ii) of this section, base stations shall be limited to a maximum effective radiated power (ERP) of 225 watts at an antenna height of 152.5 meters (500 feet) above average terrain (AAT).

Adjustment of the permitted power will be allowed provided it is in accordance with the "169 kilometer Distance Separation" entries specified in Table B in 47 CFR 90.309(a) or the "LM/TV Separation 110 miles (177 km)" curve in Figure B in 47 CFR 90.309(b).

(ii) For base stations located west of the Hudson River, Kill Van Kull, and Arthur Kill, the maximum ERP and antenna height shall be limited to the entries specified in Table B in 47 CFR 90.309(a) or in Figure B in 47 CFR 90.309(b) for the actual separation distance between the base station and the transmitter site of WNEP-TV in Scranton, PA (41° 10' 58.0" N, 75° 52' 20.0" W).

(iii) Mobile stations shall be limited to 100 watts ERP in areas of operation extending eastward from the Hudson River and to 10 watts ERP in areas of operation extending westward from the Hudson River.

[69 FR 31907, June 8, 2004, as amended 72 FR 35196, June 27, 2007]