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license back into the Commission, unless the parties have entered into an agreement which allows the PARS licensee to continue to operate on a mutually agreed upon basis. If the parties cannot agree on a schedule or an alternative arrangement, requests for extension will be accepted and reviewed on a case-by-case basis. The Commission will grant such extensions only if the incumbent can demonstrate that:

(1) It cannot relocate within the six-month period (*e.g.*, because no alternative spectrum or other reasonable option is available), and;

(2) The public interest would be harmed if the incumbent is forced to terminate operations (*e.g.*, if public safety communications services would be disrupted).

(k) *Reimbursement and relocation expenses in the 2110–2130 MHz and 2160–2180 MHz bands.* Whenever an ET licensee in the 2110–2130 MHz and 2160–2180 MHz band relocates a paired PARS link with one path in the 2110–2130 MHz band and the paired path in the 2160–2180 MHz band, the ET license will be entitled to reimbursement pursuant to the procedures described in §§ 27.1160 through 27.1174 of this chapter.

[61 FR 29689, June 12, 1996, as amended at 70 FR 19309, Apr. 13, 2005; 71 FR 29834, May 24, 2006]

§ 22.603 488–494 MHz fixed service in Hawaii.

Before filing applications for authorization of inter-island control and/or repeater stations, applicants must coordinate the planned channel usage with existing licensees and other applicants with previously filed applications, using the procedure outlined in § 22.150. Applicants and licensees shall cooperate fully and make reasonable efforts to resolve any channel usage conflicts. In situations where technical solutions to such conflicts cannot be devised, the FCC may select a channel or channels to assign or may designate the application(s) for hearing. To be acceptable for filing, applications and major technical amendments must contain a certification that coordination has been completed and an exhibit listing the name(s) of the licensees and applicants with which the planned channel usage has been coordinated.

POINT-TO-MULTIPOINT OPERATION

§ 22.621 Channels for point-to-multipoint operation.

The following channels are allocated for assignment to transmitters utilized within point-to-multipoint systems that support transmitters that provide public mobile service. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz. No new licenses will be issued for any 900 MHz frequencies in this section. See part 101, subpart O of this chapter for treatment of incumbents and for new licensing procedures. Incumbents under part 22 are subject to the restrictions of part 101, subpart O of this chapter but may make permissible modifications, transfers, assignments, or renew their licenses using procedures, forms, fees, and filing requirements of part 22.

Public Mobile Pool

(25 kHz bandwidth)

928.8625	959.8625	928.9375	959.9375
928.8875	959.8875	928.9625	959.9625
928.9125	959.9125	928.9875	959.9875

(12.5 kHz bandwidth)

928.85625	959.85625	928.93125	959.93125
928.86875	959.86875	928.94375	959.94375
928.88125	959.88125	928.95625	959.95625
928.89375	959.89375	928.96875	959.96875
928.90625	959.90625	928.98125	959.98125
928.91875	959.91875	928.99375	959.99375

Private Radio General Access Pool

(25 kHz bandwidth)

956.2625	956.3125	956.3625	956.4125
956.2875	956.3375	956.3875	956.4375
928.0125	952.0125	928.1875	952.1875
928.0375	952.0375	928.2125	952.2125
928.0625	952.0625	928.2375	952.2375
928.0875	952.0875	928.2625	952.2625
928.1125	952.1125	928.2875	952.2875
928.1375	952.1375	928.3125	952.3125
928.1625	952.1625	928.3375	952.3375

(12.5 kHz bandwidth)

956.25625	956.30625	956.35625	956.40625
956.26875	956.31875	956.36875	956.41875
956.28125	956.33125	956.38125	956.43125
956.29375	956.34375	956.39375	956.44375
928.00625	952.00625	928.18125	952.18125
928.01875	952.01875	928.19375	952.19375
928.03125	952.03125	928.20625	952.20625
928.04375	952.04375	928.21875	952.21875
928.05625	952.05625	928.23125	952.23125
928.06875	952.06875	928.24375	952.24375
928.08125	952.08125	928.25625	952.25625
928.09375	952.09375	928.26875	952.26875
928.10625	952.10625	928.28125	952.28125
928.11875	952.11875	928.29375	952.29375
928.13125	952.13125	928.30625	952.30625
928.14375	952.14375	928.31875	952.31875
928.15625	952.15625	928.33125	952.33125
928.16875	952.16875	928.34375	952.34375

Private Radio Power Pool

(25 kHz bandwidth)

928.3625	952.3625	928.6125	952.6125
928.3875	952.3875	928.6375	952.6375
928.4125	952.4125	928.6625	952.6625
928.4375	952.4375	928.6875	952.6875
928.4625	952.4625	928.7125	952.7125
928.4875	952.4875	928.7375	952.7375
928.5125	952.5125	928.7625	952.7625
928.5375	952.5375	928.7875	952.7875
928.5625	952.5625	928.8125	952.8125
928.5875	952.5875	928.8375	952.8375

(12.5 kHz bandwidth)

928.35625	952.35625	928.60625	952.60625
928.36875	952.36875	928.61875	952.61875
928.38125	952.38125	928.63125	952.63125
928.39375	952.39375	928.64375	952.64375
928.40625	952.40625	928.65625	952.65625
928.41875	952.41875	928.66875	952.66875
928.43125	952.43125	928.68125	952.68125
928.44375	952.44375	928.69375	952.69375
928.45625	952.45625	928.70625	952.70625
928.46875	952.46875	928.71875	952.71875
928.48125	952.48125	928.73125	952.73125
928.49375	952.49375	928.74375	952.74375
928.50625	952.50625	928.75625	952.75625
928.51875	952.51875	928.76875	952.76875
928.53125	952.53125	928.78125	952.78125
928.54375	952.54375	928.79375	952.79375
928.55625	952.55625	928.80625	952.80625
928.56875	952.56875	928.81875	952.81875
928.58125	952.58125	928.83125	952.83125
928.59375	952.59375	928.84375	952.84375

Public, Private, Government Shared Pool

(12.5 kHz bandwidth)

932.00625	941.00625	932.25625	941.25625
932.01875	941.01875	932.26875	941.26875
932.03125	941.03125	932.28125	941.28125
932.04375	941.04375	932.29375	941.29375
932.05625	941.05625	932.30625	941.30625
932.06875	941.06875	932.31875	941.31875
932.08125	941.08125	932.33125	941.33125
932.09375	941.09375	932.34375	941.34375
932.10625	941.10625	932.35625	941.35625
932.11875	941.11875	932.36875	941.36875
932.13125	941.13125	932.38125	941.38125
932.14375	941.14375	932.39375	941.39375
932.15625	941.15625	932.40625	941.40625
932.16875	941.16875	932.41875	941.41875
932.18125	941.18125	932.43125	941.43125
932.19375	941.19375	932.44375	941.44375
932.20625	941.20625	932.45625	941.45625
932.21875	941.21875	932.46875	941.46875
932.23125	941.23125	932.48125	941.48125
932.24375	941.24375	932.49375	941.49375

UHF Channels in Specified Urban Areas

Boston

470.0125	473.0125	482.0125	485.0125
470.0375	473.0375	482.0375	485.0375
470.0625	473.0625	482.0625	485.0625
470.0875	473.0875	482.0875	485.0875
470.1125	473.1125	482.1125	485.1125
470.1375	473.1375	482.1375	485.1375
470.1625	473.1625	482.1625	485.1625
470.1875	473.1875	482.1875	485.1875
470.2125	473.2125	482.2125	485.2125
470.2375	473.2375	482.2375	485.2375
470.2625	473.2625	482.2625	485.2625
470.2875	473.2875	482.2875	485.2875

Chicago, Cleveland

470.0125	473.0125	476.0125	479.0125
470.0375	473.0375	476.0375	479.0375
470.0625	473.0625	476.0625	479.0625
470.0875	473.0875	476.0875	479.0875
470.1125	473.1125	476.1125	479.1125
470.1375	473.1375	476.1375	479.1375
470.1625	473.1625	476.1625	479.1625
470.1875	473.1875	476.1875	479.1875
470.2125	473.2125	476.2125	479.2125
470.2375	473.2375	476.2375	479.2375
470.2625	473.2625	476.2625	479.2625
470.2875	473.2875	476.2875	479.2875

New York-Northeastern New Jersey

470.0125	470.1625	476.0125	476.1625
470.0375	470.1875	476.0375	476.1875
470.0625	470.2125	476.0625	476.2125
470.0875	470.2375	476.0875	476.2375
470.1125	470.2625	476.1125	476.2625
470.1375	470.2875	476.1375	476.2875

Dallas-Forth Worth

482.0125	482.1625	485.0125	485.1625
482.0375	482.1875	485.0375	485.1875
482.0625	482.2125	485.0625	485.2125
482.0875	482.2375	485.0875	485.2375
482.1125	482.2625	485.1125	485.2625
482.1375	482.2875	485.1375	485.2875

Detroit

476.0125	479.0125	482.0125	485.0125
476.0375	479.0375	482.0375	485.0375
476.0625	479.0625	482.0625	485.0625
476.0875	479.0875	482.0875	485.0875
476.1125	479.1125	482.1125	485.1125
476.1375	479.1375	482.1375	485.1375
476.1625	479.1625	482.1625	485.1625
476.1875	479.1875	482.1875	485.1875
476.2125	479.2125	482.2125	485.2125
476.2375	479.2375	482.2375	485.2375
476.2625	479.2625	482.2625	485.2625
476.2875	479.2875	482.2875	485.2875

Houston

488.1625	491.1625	488.2375	491.2375
488.1875	491.1875	488.2625	491.2625
488.2125	491.2125	488.2875	491.2875

Los Angeles

470.0125	473.0125	506.0625	509.0625
470.0375	473.0375	506.0875	509.0875
506.0125	509.0125	506.1125	509.1125
506.0375	509.0375		

Miami

470.0125	470.1625	473.0125	473.1625
470.0375	470.1875	473.0375	473.1875
470.0625	470.2125	473.0625	473.2125
470.0875	470.2375	473.0875	473.2375
470.1125	470.2625	473.1125	473.2625
470.1375	470.2875	473.1375	473.2875

Philadelphia

500.0125	503.0125	506.0125	509.0125
500.0375	503.0375	506.0375	509.0375
500.0625	503.0625	506.0625	509.0625
500.0875	503.0875	506.0875	509.0875
500.1125	503.1125	506.1125	509.1125
500.1375	503.1375	506.1375	509.1375
500.1625	503.1625	506.1625	509.1625
500.1875	503.1875	506.1875	509.1875
500.2125	503.2125	506.2125	509.2125
500.2375	503.2375	506.2375	509.2375
500.2625	503.2625	506.2625	509.2625
500.2875	503.2875	506.2875	509.2875

Pittsburgh

470.0125	470.1625	473.0125	473.1625

470.0375	470.1875	473.0375	473.1875
470.0625	470.2125	473.0625	473.2125
470.0875	470.2375	473.0875	473.2375
470.1125	470.2625	473.1125	473.2625
470.1375	470.2875	473.1375	473.2875

San Francisco

482.0125	485.0125	488.0125	491.0125
482.0375	485.0375	488.0375	491.0375
482.0625	485.0625	488.0625	491.0625
482.0875	485.0875	488.0875	491.0875
482.1125	485.1125	488.1125	491.1125
482.1375	485.1375	488.1375	491.1375
482.1625	485.1625	488.1625	491.1625
482.1875	485.1875	488.1875	491.1875
482.2125	485.2125	488.2125	491.2125
482.2375	485.2375	488.2375	491.2375
482.2625	485.2625	488.2625	491.2625
482.2875	485.2875	488.2875	491.2875

Washington, DC

488.0125	491.0125	494.0125	497.0125
488.0375	491.0375	494.0375	497.0375
488.0625	491.0625	494.0625	497.0625
488.0875	491.0875	494.0875	497.0875
488.1125	491.1125	494.1125	497.1125
488.1375	491.1375	494.1375	497.1375
488.1625	491.1625	494.1625	497.1625
488.1875	491.1875	494.1875	497.1875
488.2125	491.2125	494.2125	497.2125
488.2375	491.2375	494.2375	497.2375
488.2625	491.2625	494.2625	497.2625
488.2875	491.2875	494.2875	497.2875

[59 FR 59507, Nov. 17, 1994; 60 FR 9890, Feb. 22, 1995, as amended at 61 FR 54099, Oct. 17, 1996; 65 FR 17448, Apr. 3, 2000]

§ 22.623 System configuration.

This section requires a minimum configuration for point-to-multipoint systems using the channels listed in § 22.621.

(a) *928–960 MHz.* The channels may be assigned, individually or paired, only to fixed transmitters in a system that controls at least four public mobile base transmitters that transmit on the same channel. If a 932–933 MHz channel and a 941–942 MHz channel are assigned as a pair, the 941–942 MHz channel must be assigned only to control transmitters; the 932–933 MHz channel may be assigned to control or fixed relay transmitters.

(b) *470–512 MHz.* These channels may be assigned only individually (unpaired), to control transmitters that directly control at least four public mobile base transmitters that transmit on the same channel. Fixed relay transmitters are not authorized.

(c) *Selection and assignment.* The FCC selects and assigns a channel when granting applications for authorization to operate a new station to transmit in the 470–512, 932–933 and 941–942 MHz frequency ranges. Applicants having a preference may request the assignment of a specific channel or channel pair, but the FCC may in some cases be unable to satisfy such requests.

§ 22.625 Transmitter locations.

This section governs where point-to-multipoint transmitters on the channels listed in § 22.621 may be located.

(a) *928–960 MHz.* In this frequency range, the required minimum distance separation between co-channel fixed transmitters is 113 kilometers (70 miles).

(b) *470–512 MHz.* The purpose of the rule in paragraph (b)(1) of this section is to define the areas in which the 470–512 MHz channels are allocated for public mobile use. The purpose of the rules in paragraphs (b)(2) and (b)(3) of this section is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur.

(1) *Control transmitter locations.* Control transmitter locations must be within 80 kilometers (50 miles) of the designated locations in this paragraph.

Urban area	N. latitude	W. longitude
Boston, MA	42°21′24.4″	71°03′22.2″
Chicago, IL	41°52′28.1″	87°38′22.2″
Cleveland, OH	41°29′51.2″	81°41′49.5″
Dallas, TX	32°47′09.5″	96°47′38.0″
Detroit, MI	42°19′48.1″	83°02′56.7″
Houston, TX	29°45′26.8″	95°21′37.8″
Los Angeles, CA	34°03′15.0″	18°14′31.3″
Miami, FL	25°46′38.6″	80°11′31.2″
New York, NY	40°45′6.4″	73°59′37.5″
Philadelphia, PA	39°56′58.4″	75°09′19.6″
Pittsburgh, PA	40°26′19.2″	79°59′59.2″
San Francisco-Oakland, CA	37°46′38.7″	122°24′43.9″
Washington, DC	38°53′51.4″	77°00′31.9″

NOTE: Coordinates are referenced to North American Datum 1983 (NAD 83).

(2) *Protection from intermodulation interference.* Control transmitter locations must be at least 1.6 kilometers (1 mile) from the main transmitter locations of all TV stations transmitting on TV channels separated by 2, 3, 4, 5, 7, or 8 TV channels from the TV channel containing the frequencies on which the control station will transmit. This requirement is intended to reduce the likelihood of intermodulation interference.

(3) *Co-channel protection from control transmitters with high antennas.* This paragraph applies only to control transmitters that utilize an antenna

height of more than 152 meters (500 feet) above average terrain. The distance between the location of such a control transmitter and the applicable protected TV station location specified in this paragraph must equal or exceed the sum of the distance from the control transmitter location to the radio horizon in the direction of the specified location and 89 kilometers (55 miles—representing the distance from the main transmitter location of the TV station to its Grade B contour in the direction of the control transmitter). The protected TV station locations in this paragraph are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(i) The protected TV station locations are as follows:

Control transmitter frequency range	Protected TV station location
470–476 MHz.	Washington, DC 38°57′17″ 77°00′17″
476–482 MHz.	Lancaster, PA 40°15′45″ 76°27′49″

(ii) The distance to the radio horizon is calculated using the following formula:

$$d = \sqrt{17 \times h}$$

where

d is the distance to the radio horizon in kilometers

h is the height of the antenna center of radiation above ground level in meters

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68946, Dec. 14, 1998, 70 FR 19309, Apr. 13, 2005]

§ 22.627 Effective radiated power limits.

The effective radiated power (ERP) of transmitters operating on the channels listed in § 22.621 must not exceed the limits in this section.

(a) *Maximum ERP.* The ERP must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
470–512	1000
928–929	50
932–933	30
941–942	600
952–960	150

(b) *470–512 MHz limits.* The purpose of the rules in paragraphs (b)(1) through (b)(3) of this section is to reduce the likelihood that interference to television receiption from public mobile operations on these channels will occur. The protected TV station locations specified in this section are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(1) *Co-channel protection.* The ERP of control transmitters must not exceed the limits in the tables in paragraphs (b)(1)(ii) and (b)(1)(iii) of this section. The limits depend upon the height above average terrain of the control transmitter antenna and the distance between the control transmitter and the nearest protected TV station location in paragraph (b)(1)(i) of this section.

(i) The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location
470–476 MHz	Jacksonville, IL, 39°45′52.2″ N. Lat. 90°30′29.5″ W. Long.
	Mt. Pleasant, MI, 43°34′24.1″ N. Lat. 84°46′21.1″ W. Long.

Control transmitter frequency range	Protected TV station location
476–482 MHz	Oxford, OH, 39°30′26.2″ N. Lat. 84°44′8.8″ W. Long.
482–488 MHz	
488–494 MHz	
494–500 MHz	
500–506 MHz	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long.
506–512 MHz	Champaign, IL, 40°04′11.1″ N. Lat. 87°54′45.1″ W. Long.
	Madison, WI, 43°03′01.0″ N. Lat. 89°29′15.4″ W. Long.
	Parkersburg, WV, 39°20′50.3″ N. Lat. 81°33′55.5″ W. Long.
	Fort Wayne, IN, 41°05′35.2″ N. Lat. 85°10′41.9″ W. Long.
	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long.
	South Bend, IN, 41°36′26.2″ N. Lat. 86°27′48.1″ W. Long.
	Philadelphia, PA, 40°02′30.4″ N. Lat. 75°14′22.6″ W. Long.
	None.
	Johnstown, PA, 40°19′47.3″ N. Lat. 78°53′44.1″ W. Long.
	Washington, DC, 38°57′49.4″ N. Lat. 77°06′16.9″ W. Long.
	Waterbury, CT, 41°31′2.3″ N. Lat. 73°00′58.4″ W. Long.

(ii) Table E–3 and E–4 apply to control transmitters in the New York-Northeastern New Jersey and Cleveland urban areas that transmit on channels in the 476–482 MHz range and to control transmitters in the Detroit urban area that transmit on channels in the 482–488 MHz range.

(iii) Tables E–5 and E–6 apply to all control transmitters except those to which Tables E–3 and E–4 apply.

(2) *Adjacent channel protection.* The ERP of control transmitters must not exceed the limits in Table E–7. The limits depend upon the height above average terrain of the control transmitter antenna and the distance between the control transmitter and the nearest protected TV station location listed in this paragraph. The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location	TV channel
470–476 MHz.	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long..	(15)
	Madison, WI, 43°03′01.0″ N. Lat. 89°29′15.4″ W. Long..	(15)
	Champaign, IL, 40°04′11.1″ N. Lat. 87°54′45.1″ W. Long..	(15)
	San Diego, CA, 32°41′48.2″ N. Lat. 116°56′13.1″ W. Long..	(15)
	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long..	(15)
	Parkersburg, WV, 39°20′50.3″ N. Lat. 81°33′55.5″ W. Long..	(15)
476–482 MHz.	South Bend, IN, 41°36′26.2″ N. Lat. 86°27′48.1″ W. Long..	(16)
	Pittsburgh, PA, 40°26′46.2″ N. Lat. 79°57′50.2″ W. Long..	(16)
	Mt. Pleasant, MI, 43°34′24.1″ N. Lat. 84°46′21.1″ W. Long..	(14)
	Scranton, PA, 41°10′58.3″ N. Lat. 75°52′19.7″ W. Long..	(16)
482–488 MHz.	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long..	(15)
	Fort Wayne, IN, 41°05′35.2″ N. Lat. 85°10′41.9″ W. Long..	(15)
488–494 MHz.	Salisbury, MD, 38°24′15.4″ N. Lat. 75°34′43.7″ W. Long..	(16)
494–500 MHz.	Philadelphia, PA, 40°02′30.4″ N. Lat. 75°14′22.6″ W. Long..	(17)
500–506 MHz.	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long..	(20)
506–512 MHz.	Harrisburg, PA, 40°20′44.3″ N. Lat. 76°52′07.9″ W. Long..	(21)

(c) *Los Angeles area.* This paragraph applies only to control transmitters in the Los Angeles urban area that utilize an antenna height of 457 or more meters (1500 or more feet) above mean sea level. The ERP of such transmitters must not exceed the following limits:

Antenna height AMSL in meters (feet)	ERP (Watts)
457 (1500) to 610 (2000)	155
611 (2001) to 762 (2500)	100
763 (2501) to 914 (3000)	70
915 (3001) to 1067 (3500)	50

Antenna height AMSL in meters (feet)	ERP (Watts)
1068 (3501) to 1219 (4000)	40
1220 (4001) to 1372 (4500)	30
1373 (4501) and above	25

TABLE E–3—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
209 (130)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
201 (125)	1000	1000	1000	1000	1000	1000	1000	850	750	725
193 (120)	1000	1000	1000	1000	900	750	675	600	550	500
185 (115)	1000	1000	800	725	600	525	475	425	375	350
177 (110)	850	700	600	500	425	375	325	300	275	225
169 (105)	600	475	400	325	275	250	225	200	175	150
161 (100)	400	325	275	225	175	150	140	125	110	100
153 (95)	275	225	175	125	110	95	80	70	60	50
145 (90)	175	125	100	75	50	.....	.....	.....	.....	.....

See § 22.627(b)(1)(ii). This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–4—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
209 (130)	1000	447	219	117	71	46
193 (120)	500	209	95	50	30	19
177 (110)	225	91	35	19	11	8
161 (100)	100	30	10	5	3	2
153 (95)	50	13	5	3	2	1

See § 22.627(b)(1)(ii). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–5—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna Height Above Average Terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
261 (162)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
257 (160)	1000	1000	1000	1000	1000	1000	1000	1000	1000	800
249 (155)	1000	1000	1000	1000	1000	875	775	700	625	575
241 (150)	1000	1000	950	775	725	625	550	500	450	400
233 (145)	850	750	650	575	500	440	400	350	320	300
225 (140)	600	575	465	400	350	300	275	250	230	225
217 (135)	450	400	335	300	255	240	200	185	165	150
209 (130)	350	300	245	200	185	160	145	125	120	100
201 (125)	225	200	170	150	125	110	100	90	80	75
193 (120)	175	150	125	105	90	80	70	60	55	50

See § 22.627(b)(1)(iii). This table applies for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–6—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
261 (162)	1000	501	282	170	110	71
241 (150)	400	209	110	60	36	23
225 (140)	225	102	50	28	16	10
209 (130)	100	48	21	11	7	5

TABLE E–6—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT MORE THAN 152 METERS)—Continued

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
193 (120)	50	19	9	5	3	2

See § 22.627(b)(1)(iii). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–7—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)								
	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
108 (67)	1000	1000	1000	1000	1000	1000	1000	1000	1000
106 (66)	1000	1000	1000	1000	1000	1000	1000	1000	750
105 (65)	1000	1000	1000	1000	1000	1000	825	650	600
103 (64)	1000	1000	1000	1000	1000	775	625	500	400
101 (63)	1000	1000	1000	1000	440	400	350	320	300
100 (62)	1000	1000	1000	525	375	250	200	150	125
98 (61)	1000	700	450	250	200	125	100	75	50
97 (60)	1000	425	225	125	100	75	50	.....	.....

See § 22.627(b)(2). This table applies to control transmitters in the Boston, Chicago, Cleveland, Detroit, Los Angeles, New York-Northeastern New Jersey, Philadelphia, Pittsburgh and Washington, DC urban areas. This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

[59 FR 59507, Nov. 17, 1994; 60 FR 9890, Feb. 22, 1995; as amended at 63 FR 68946, Dec. 14, 1998]

470–512 MHz TRUNKED MOBILE OPERATION

§ 22.651 470–512 MHz channels for trunked mobile operation.

The following channels are allocated for assignment to transmitters providing trunked public mobile service within the specified urban areas. All channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Houston

488.0125	491.0125	488.0875	491.0875
488.0375	491.0375	488.1125	491.1125
488.0625	491.0625	488.1375	491.1375

New York-Northern New Jersey

473.0125	479.0125	473.1625	479.1625
473.0375	479.0375	473.1875	479.1875
473.0625	479.0625	473.2125	479.2125
473.0875	479.0875	473.2375	479.2375
473.1125	479.1125	473.2625	479.2625
473.1375	479.1375	473.2875	479.2875

[59 FR 59507, Nov. 17, 1994; 60 FR 9891, Feb. 22, 1995]

§ 22.653 Eligibility.

Only licensees already authorized to provide trunked mobile service or their successors in interest are eligible to apply for additional use of these channels for trunked mobile service, and then only in the urban areas already authorized.

§ 22.657 Transmitter locations.

The purpose of the rules in paragraphs (a) and (b) of this section is to define the areas in which the 470–512 MHz channels are allocated for public mobile use. The purpose of the rules in paragraphs (c) through (f) of this section is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur. The protected TV station locations specified in paragraphs (d), (e)(1) and (f) of this section are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(a) *Base transmitter locations.* Base transmitter locations must be within 80 kilometers (50 miles) of the designated locations in this paragraph. Mobile transmitters must not be operated at locations more than 129 kilometers (80 miles) from the designated locations in this paragraph. Note: All coordinates are referenced to North American Datum 1983 (NAD83).