

## § 90.633

purposes of this section as being beyond a 100-mile radius of the designated centers of the following urbanized areas: New York, NY; Los Angeles, CA; Chicago, IL; Philadelphia, PA; San Francisco, CA; Detroit, MI; Boston, MA; Houston, TX; Washington, DC; Dallas-Fort Worth, TX; Miami, FL; Cleveland, OH; St. Louis, MO; Atlanta, GA; Pittsburgh, PA; Baltimore, MD; Minneapolis-St. Paul, MN; Seattle, WA; San Diego, CA; and Tampa-St. Petersburg, FL. The coordinates for the centers of these areas are those referenced in § 90.635, except that the coordinates (referenced to North American Datum 1983 (NAD83)) for Tampa-St. Petersburg are latitude 28°00'1.1" N, longitude 82°26'59.3" W.

(e) Except as provided in § 90.629, licensees of trunked facilities must complete construction within one year.

(f) If a station is not placed in permanent operation, in accordance with the technical parameters of the station authorization, within one year, except as provided in § 90.629, its license cancels automatically. For purposes of this section, a base station is not considered to be placed in operation unless at least two associated mobile stations, or one control station and one mobile station, are also placed in operation. An SMR licensee with facilities that have discontinued operations for 90 continuous days is presumed to have permanently discontinued operations, unless the licensee notifies the Commission otherwise, using FCC Form 601, prior to the end of the 90 day period and provides a date on which operation will resume, which date must not be in excess of 30 additional days.

(g) Wide area systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. Remote or satellite stations of wide area systems in the Public Safety, Special Emergency, Telephone Maintenance, and Power Radio Services may be authorized on a primary basis if such stations are the first to be authorized in their area of operation on the frequency or group of frequencies. Remote or satellite stations of wide area systems in all other services will be authorized only on a secondary, non-interference basis to cochannel licensees.

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To determine system loading, the total number of mobile units and control stations operating in the wide-area system shall be counted with respect to the total number of base station frequencies assigned to the system.

(h) Regional, statewide, or ribbon configuration systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. In a ribbon, regional or statewide system, a mobile station will be counted for channel loading purposes only for the base station facility in the geographic area in which it primarily operates. If this cannot be determined, it will be counted fractionally over the number of base station facilities with which it communicates regularly.

[47 FR 41032, Sept. 16, 1982]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.631, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.fdsys.gov](http://www.fdsys.gov).

### § 90.633 Conventional systems loading requirements.

(a) Non-SMR conventional systems of communication will be authorized on the basis of a minimum loading criteria of seventy (70) mobile stations for each channel authorized.

(b) A channel will not be assigned to additional licensees when it is loaded to 70 mobile stations. Where a licensee does not load a channel to 70 mobiles the channel will be available for assignment to other licensees. All authorizations for conventional systems are issued subject to this potential channel sharing condition.

(c) Except as provided in § 90.629 of this part, licensees of conventional systems must place their authorized stations in operation not later than one year after the date of grant of the system license.

(d) If a station is not placed in operation within one year, except as provided in Section 90.629 of this part, the license cancels automatically. For purposes of this section, a base station is not considered to be in operation unless at least one associated mobile station is also in operation.

(e) A non-SMR licensee may apply for additional frequency pairs if its authorized conventional channel(s) is loaded to seventy (70) mobiles. Applications may be considered for additional channels in areas where spectrum is still available and not applied for, even if the already authorized channel(s) is not loaded to 70 mobile units, upon an appropriate demonstration of need.

(f) Wide area systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. For loading purposes, if the total number of mobile stations justifies the total number of authorized based frequencies in a given area, the system will be construed to be loaded.

(g) Regional, statewide, or ribbon configuration systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. In a ribbon, regional or statewide system, a mobile station will be counted for channel loading purposes only for the base station facility in the geographic area in which it primarily operates. If this cannot be determined, it will be counted fractionally over the number of base station facilities with which it communicates regularly.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51929, Nov. 15, 1983; 56 FR 65860, Dec. 19, 1991; 59 FR 59966, Nov. 21, 1994; 62 FR 18935, Apr. 17, 1997; 64 FR 10397, Mar. 4, 1999]

TECHNICAL REGULATIONS REGARDING THE USE OF FREQUENCIES IN THE 806-824 MHz, 851-869 MHz, 896-901 MHz, AND 935-940 MHz BANDS

**§ 90.635 Limitations on power and antenna height.**

(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TABLE—EQUIVALENT POWER AND ANTENNA HEIGHTS FOR BASE STATIONS IN THE 851-869 MHz AND 935-940 MHz BANDS WHICH HAVE A REQUIREMENT FOR A 32 KM (20 MI) SERVICE AREA RADIUS

Antenna height (ATT) meters (feet)	Effective radiated power (watts) <sup>1,2,4</sup>
Above 1,372 (4,500) .....	65
Above 1,220 (4,000) to 1,372 (4,500) .....	70
Above 1,067 (3,500) to 1,220 (4,000) .....	75
Above 915 (3,000) to 1,067 (3,500) .....	100
Above 763 (2,500) to 915 (3,000) .....	140
Above 610 (2,000) to 763 (2,500) .....	200
Above 458 (1,500) to 610 (2,000) .....	350
Above 305 (1,000) to 458 (1,500) .....	600
Up to 305 (1,000) .....	≥ 1,000

<sup>1</sup> Power is given in terms of effective radiated power (ERP).  
<sup>2</sup> Applicants in the Los Angeles, CA, area who demonstrate a need to serve both the downtown and fringe areas will be permitted to utilize an ERP of 1 kw at the following mountaintop sites: Santiago Park, Sierra Peak, Mount Lukens, and Mount Wilson.  
<sup>3</sup> Stations with antennas below 305 m (1,000 ft) (AAT) will be restricted to a maximum power of 1 kw (ERP).  
<sup>4</sup> Licensees in San Diego, CA, will be permitted to utilize an ERP of 500 watts at the following mountaintop sites: Palomar, Otay, Woodson and Miguel.

[70 FR 61062, Oct. 20, 2005]

**§ 90.637 Restrictions on operational fixed stations.**

(a) Except for control stations, operational fixed operations will not be authorized in the 806-824 MHz, 851-869 MHz, 896-901 MHz, or 935-940 MHz bands. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235 or in paragraph (c) of this section.

(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.

(c) Trunked and conventional systems that have exclusive-use status in their respective geographic areas may conduct fixed ancillary signaling and data transmissions subject to the following requirements:

(1) All operations must be on a secondary, non-interference basis to the primary mobile operation of any other licensee.

(2) The output power at the remote site must not exceed 30 watts.