

long as the internal transmitter control system, itself, is neither accessed from telephone positions in the public switched telephone network, nor used dial-up circuits in the public switched telephone network. Licensees with complex communications systems involving fixed systems whose base stations are controlled by such systems may automatically access these base stations through the microwave or operational fixed systems from positions in the PSTN, so long as the base stations and mobile units meet the requirements of §90.483 and if a separate circuit is provided for each mode of transmitter operation (*i.e.*, conventional, dial-up or internal).

(3) The system must be designed so that upon completion of a transmission, the base station transmitter(s) will close down automatically within 3 seconds.

(4) To guard against malfunctions, the system must also be designed so that the base station(s) will be deactivated by an automatic timing device when a modulated signal is not transmitted for a period of three (3) consecutive minutes.

(5) The system must include automatic monitoring equipment, installed at the base station transmitter site(s), which will prevent the activation of the system when signals of other co-channel stations are present.

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 67125, Nov. 23, 1979; 47 FR 17521, Apr. 23, 1982]

#### INTERCONNECTED SYSTEMS

##### § 90.476 Interconnection of fixed stations and certain mobile stations.

(a) Fixed stations and mobile stations used to provide the functions of fixed stations pursuant to the provisions of §§90.35(c)(11), 90.35(c)(42), and 90.267 are not subject to the interconnection provisions of §§90.477 and 90.483 and may be interconnected with the facilities of common carriers.

(b) Mobile stations used to provide the functions of base and mobile relay stations pursuant to the provisions of §§90.35(c)(11), 90.35(c)(42), and 90.267 are not subject to the provisions of §90.477(d)(3) and may be interconnected

with the facilities of common carriers subject to the provisions of §§90.477(d)(1), 90.477(d)(2), 90.477(e), and 90.483.

(c) The provisions of this section do not apply to commercial mobile radio service providers, as defined in part 20 of this chapter.

[50 FR 15152, Apr. 17, 1985, as amended at 59 FR 59965, Nov. 21, 1994; 62 FR 18934, Apr. 17, 1997]

##### § 90.477 Interconnected systems.

(a) Applicants for new land stations to be interconnected with the public switched telephone network must indicate on their applications (class of station code) that their stations will be interconnected. Licensees of land stations that are not interconnected may interconnect their stations with the public switched telephone network only after modifying their license. See §1.929 of this chapter. In all cases a detailed description of how interconnection is accomplished must be maintained by licensees as part of their station records. See §90.433 of this part.

(b) In the frequency ranges 806–824 MHz, 851–869 MHz, 896–901 MHz, and 935–940 MHz, interconnection with the public switched telephone network is authorized under the following conditions:

(1) Interconnected operation is on a secondary basis to dispatch operation. This restriction will not apply to trunked systems or on any channel assigned exclusively to one licensee.

(2) Interconnection may be accomplished at any location through a separate or shared interconnection device. When land stations subject to this part are multiple licensed or shared by authorized users, arrangements for telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit cost sharing basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangement must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or

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user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing and the Commission upon request. In all cases, arrangements with the duly authorized carrier must disclose the number of licensees and users and the nature of the use.

(c) Interconnection of facilities in the Radiolocation Service (subpart F) will not be permitted.

(d) In the frequency ranges below 800 MHz, interconnection with the public switched telephone network is authorized under the following conditions:

(1) Interconnected operation is on a secondary basis to dispatch operation. This restriction will not apply to trunked systems or on any channel assigned exclusively to one licensee.

(2) Interconnection may be accomplished at any location through a separate or shared interconnection device. When land stations subject to this part are multiple licensed or shared by authorized users, arrangements for telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit cost sharing basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangement must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing and the Commission upon request. In all cases, arrangements with the duly authorized carrier must

disclose the number of licensees and users and the nature of the use.

(3) For licensees in the Industrial/Business Pool and those licensees who establish eligibility pursuant to § 90.20(a)(2) of this part, except for §§ 90.20(a)(2)(i) and 90.20(a)(2)(ii) of this part and medical emergency systems in the 450–470 MHz band, interconnection will be permitted only where the base station site or sites proposed stations are located 120 km (75 mi.) or more from the designated centers of the urbanized areas listed below. If these licensees seek to connect within 120 km (75 mi.) of the 25 cities, they must obtain the consent of all co-channel licensees located both within 120 km (75 mi.) of the center of the city; and within 120 km (75 mi.) of the interconnected base station transmitter. The consensual agreements among the co-channel licensees must specifically state the terms agreed upon and a statement must be submitted to the Commission indicating that all co-channel licensees have consented to the use of interconnection. If a licensee has agreed to the use of interconnection on the channel, but later decides against the use of interconnection, the licensee may request that the co-channel licensees reconsider the use of interconnection. If the licensee is unable to reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed to the use of interconnection and the new licensee does not agree, the new licensee may request that the co-channel licensees reconsider the use of interconnection. If the new licensee cannot reach an agreement with co-channel licensees it may request that the Commission reassign it to another channel.

NOTE: Coordinates are referenced to North American Datum 1983 (NAD83).

Urban area	North latitude	West longitude
New York, New York-Northeastern New Jersey .....	40°45'06.4"	73°59'37.5"
Los Angeles-Long Beach, California .....	34°03'15.0"	118°14'31.3"
Chicago, Illinois-Northwestern Indiana .....	41°52'28.1"	87°38'22.2"
Philadelphia, Pennsylvania/New Jersey .....	39°56'58.4"	75°09'19.6"
Detroit, Michigan .....	42°19'48.1"	83°02'56.7"
San Francisco-Oakland, California .....	37°46'38.7"	122°24'43.9"
Boston, Massachusetts .....	42°21'24.4"	71°03'23.2"

Urban area	North latitude	West longitude
Washington, DC/Maryland/Virginia .....	38°53'51.4"	77°00'31.9"
Cleveland, Ohio .....	41°29'51.2"	81°41'49.5"
St Louis, Missouri/Illinois .....	38°37'45.2"	90°12'22.4"
Pittsburgh, Pennsylvania .....	40°26'19.2"	79°59'59.2"
Minneapolis-St. Paul, Minnesota .....	44°58'56.9"	93°15'43.8"
Houston, Texas .....	29°45'26.8"	95°21'37.8"
Baltimore, Maryland .....	39°17'26.4"	76°36'43.9"
Dallas-Fort Worth, Texas .....	32°47'09.5"	96°47'38.0"
Milwaukee, Wisconsin .....	43°02'19.0"	87°54'15.3"
Seattle-Everett, Washington .....	47°36'31.4"	122°20'16.5"
Miami, Florida .....	25°46'38.4"	80°11'31.2"
San Diego, California .....	32°42'53.2"	117°09'24.1"
Atlanta, Georgia .....	33°45'10.4"	84°23'36.7"
Cincinnati, Ohio/Kentucky .....	39°06'07.2"	84°30'34.8"
Kansas City, Missouri/Kansas .....	39°04'56.0"	94°35'20.8"
Buffalo, New York .....	42°52'52.2"	78°52'20.1"
Denver, Colorado .....	39°44'58.0"	104°59'23.9"
San Jose, California .....	37°20'15.8"	121°53'27.8"

(e) Additional frequencies shall not be assigned to enable any licensee to employ a preferred interconnection capability.

(f) Paging systems operating on frequencies in the bands below 800 MHz are not subject to the interconnection provisions of § 90.477(d)(3).

[47 FR 17520, Apr. 23, 1982, as amended at 48 FR 29518, June 27, 1983; 50 FR 15152, Apr. 17, 1985; 51 FR 14998, Apr. 22, 1986; 51 FR 37401, Oct. 22, 1986; 52 FR 15501, Apr. 29, 1987; 52 FR 29856, Aug. 12, 1987; 53 FR 1025, Jan. 15, 1988; 58 FR 44961, Aug. 25, 1993; 61 FR 6576, Feb. 21, 1996; 62 FR 18934, Apr. 17, 1997; 63 FR 68966, Dec. 14, 1998]

**§ 90.483 Permissible methods and requirements of interconnecting private and public systems of communications.**

Interconnection may be accomplished by commercial mobile service providers licensed under this part by any technically feasible means. Interconnection may be accomplished by private mobile service providers either manually or automatically under the supervision and control of a transmitter control operator at a fixed position in the authorized system of communications or it may be accomplished under the supervision and control of mobile operators, and is subject to the following provisions:

(a) Where a system is interconnected manually at a fixed control point, the control point operator must maintain the capability to turn the carrier of the transmitter off or to de-activate the

system completely when circumstances warrant such action.

(b) When the system is interconnected automatically it may be supervised at the control point or in mobile units.

(1) For control point supervision, the following is required:

(i) The control point operator must maintain the capability to turn the carrier of the transmitter off or to deactivate the system completely when circumstances warrant such action.

(ii) When a frequency is shared by more than one system, automatic monitoring equipment must be installed at the base station to prevent activation of the transmitter when signals of co-channel stations are present and activation would interfere with communications in progress. Licensees may operate without the monitoring equipment if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not necessary, but later decides that the monitoring equipment is necessary, the licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If