

FCC RULES

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

Code of Federal Regulations, Title 47, Chapter 1 Excerpts October 2009 Edition

§ 90.242 Travelers' Information Stations.

- (a) The frequencies 530 through 1700 kHz in 10 kHz increments may be assigned to the Public Safety Pool for the operation of Travelers' Information Stations subject to the following conditions and limitations.
 - (1) [Reserved]
 - (2) Each application for a station or system shall be accompanied by:
 - (i) A statement certifying that the transmitting site of the Travelers' information Station will be located at least 15 km (9.3 miles) measured orthogonally outside the measured 0.5 mV/m daytime contour (0.1 mV/m for Class A stations) of any AM broadcast station operating on a first adjacent channel or at least 130 km (80.6 miles) outside the measured 0.5 mV/m daytime contour (0.1 mV/m for Class A stations) of any AM broadcast station operating on the same channel, or, if nighttime operation is proposed, outside the theoretical 0.5 mV/m-50% nighttime sky wave contour of a U.S. Class A station. If the measured contour is not available, then the calculated 0.5 mV/m field strength contour shall be acceptable. These contours are available at the concerned AM broadcast station and FCC offices in Washington, DC.
 - (ii) In consideration of possible cross modulation and inter-modulation interference effects which may result from the operation of a Travelers' Information Station in the vicinity of an AM broadcast station on the second or third adjacent channel, the applicant shall certify that it has considered these possible effects and, to the best of its knowledge, does not foresee interference occurring to broadcast stations operating on second or third adjacent channels.
 - (iii) A map showing the geographical location of each transmitter site and an estimate of the signal strength at the contour of the desired coverage area. For a cable system, the contour to be shown is the estimated field strength at 60 meters (197 feet) from any point on the cable. For a conventional radiating antenna, the estimated field strength contour at 1.5 km (0.93 mile) shall be shown. A contour map comprised of actual on-the-air measurements shall be submitted to the Commission within 60 days after station authorization or completion of station construction, whichever occurs later. A sufficient number of points shall be chosen at the specified distances (extrapolated measurements are acceptable) to adequately show compliance with the field strength limits.
 - (iv) For each transmitter site, the transmitter's output power, the type of antenna utilized, its length (for a cable system), its height above ground, distance from transmitter to the antenna, and the elevation above sea level at the transmitting site.
 - (3) Travelers' Information Stations will be authorized on a primary basis on 530 kHz and on a secondary basis to stations authorized on a primary basis in the band 535-1705 kHz.
 - (4) A Travelers' Information Station authorization may be suspended, modified, or withdrawn by the Commission without prior notice or right to hearing if necessary to resolve interference conflicts, to implement agreements with foreign governments, or in other circumstances warranting such action.
 - (5) The transmitting site of each Travelers' Information Station shall be restricted to the immediate vicinity of the following specified areas: Air, train, and bus transportation terminals, public parks and historical sites, bridges, tunnels, and any intersection of a Federal Interstate Highway with any other Interstate, Federal, State, or local highway.
 - (6) A Travelers' Information Station shall normally be authorized to use a single transmitter. However, a system of stations, with each station in the system employing a separate transmitter, may be authorized for a specific area provided sufficient need is demonstrated by the applicant.
 - (7) Travelers' Information Stations shall transmit only noncommercial voice information pertaining to traffic and road conditions, traffic hazard and travel advisories, directions, availability of lodging, rest stops and service stations, and descriptions of local points of interest. It is not permissible to identify the commercial name of any business whose service may be available within or outside the coverage area of a Travelers' Information Station. However, to facilitate announcements concerning departures/arrivals and parking areas at air, train, and bus terminals, the trade name identification of carriers is permitted.
- (b) Technical standards.
 - (1) The use of 6K00A3E emission will be authorized, however N0N emission may be used for purposes of receiver quieting, but only for a system of stations employing "leaky" cable antennas.

- (2) A frequency tolerance of 100 Hz shall be maintained.
- (3) For a station employing a cable antenna, the following restrictions apply:
 - (i) The length of the cable antenna shall not exceed 3.0 km (1.9 miles).
 - (ii) Transmitter RF output power shall not exceed 50 watts and shall be adjustable downward to enable the user to comply with the specified field strength limit.
 - (iii) The field strength of the emission on the operating frequency shall not exceed 2 mV/m when measured with a standard field strength meter at a distance of 60 meters (197 feet) from any part of the station.
- (4) For a station employing a conventional radiating antenna(s) (ex. vertical monopole, directional array) the following restrictions apply:
 - (i) The antenna height above ground level shall not exceed 15.0 meters (49.2 feet).
 - (ii) Only vertical polarization of antennas shall be permitted.
 - (iii) Transmitter RF output power shall not exceed 10 watts to enable the user to comply with the specified field strength limit.
 - (iv) The field strength of the emission on the operating frequency shall not exceed 2 mV/m when measured with a standard field strength meter at a distance of 1.50 km (0.93 miles) from the transmitting antenna system.
- (5) For co-channel stations operating under different licenses, the following minimum separation distances shall apply:
 - (i) 0.50 km (0.31 miles) for the case when both stations are using cable antennas.
 - (ii) 7.50 km (4.66 miles) for the case when one station is using a conventional antenna and the other is using a cable antenna.
 - (iii) 15.0 km (9.3 miles) for the case when both stations are using conventional antennas.
- (6) For a system of co-channel transmitters operating under a single authorization utilizing either cable or conventional antennas, or both, no minimum separation distance is required.
- (7) An applicant desiring to locate a station that does not comply with the separation requirements of this section shall coordinate with the affected station.
- (8) Each transmitter in a Travelers Information Station shall be equipped with an audio low-pass filter. Such filter shall be installed between the modulation limiter and the modulated stage. At audio frequencies between 3 kHz and 20 kHz this filter shall have an attenuation greater than the attenuation at 1 kHz by at least: $60 \log_{10}(f/3)$ decibels, where "f" is the audio frequency in kHz. At audio frequencies above 20 kHz, the attenuation shall be at least 50 decibels greater than the attenuation at 1 kHz.

[43 FR 54791, Nov. 22, 1978; 44 FR 67118, Nov. 23, 1979; 49 FR 48712, Dec. 14, 1984, as amended at 54 FR 39740, Sept. 28, 1989; 56 FR 64874, Dec. 12, 1991; 62 FR 18928, Apr. 17, 1997; 65 FR 60877, Oct. 13, 2000; 67 FR 63289, Oct. 11, 2002; 72 FR 35195, June 27, 2007; 73 FR 25497, May 6, 2008]

§ 90.425 Station Identification.

Stations licensed under this part shall transmit identification in accordance with the following provisions:

- (a) Identification procedure. Except as provided for in paragraphs (d) and (e) of this section, each station or system shall be identified by the transmission of the assigned call sign during each transmission or exchange of transmissions, or once each 15 minutes (30 minutes in the Public Safety Pool) during periods of continuous operation. The call sign shall be transmitted by voice in the English language or by International Morse Code in accordance with paragraph (b) of this section. If the station is employing either analog or digital voice scrambling, or nonvoice emission, transmission of the required identification shall be in the unscrambled mode using A3E, F3E or G3E emission, or International Morse, with all encoding disabled. Permissible alternative identification procedures are as follows:
 - (1) A mobile relay stations call sign may be used to identify the associated control and mobile stations, except in the Public Safety Pool where the stations operate on frequencies below 450 MHz. Alternatively, a base station (including a mobile relay station) which is controlled by radio may be identified by the transmission of the call sign of the station at which communications originate.
 - (2) One or more fixed relay stations may be identified by the transmission of the call signs of the stations at which the communications originate.

- (3) When a mobile station transmits on a different frequency than its associated base station, the assigned call sign of either the mobile station or the base station may be transmitted. Further, a single mobile unit in the licensee's authorized geographic area of operation may transmit station identification on behalf of any other operating mobile units in the fleet.
 - (4) Use of an identifier other than the assigned call sign.
 - (i) In the Public Safety Pool, mobile units licensed to a governmental entity and which operate on frequencies above 30 MHz may use an identifier which contains, at a minimum, the name of the licensee if the licensee maintains at the station a list of the special identifiers to be used by the mobile units.
 - (ii) In the Industrial/Business Pool, licensees may request the Commission's local Engineer-in-Charge to approve the use of special mobile unit identifiers in lieu of the assigned call sign. Such requests, however, will not be granted where it appears that harmful interference to international operations may be caused by stations below 50 MHz, or by stations operating in areas within 80 km (50 miles) of an international boundary, or where it appears that the proposed method of identification will not adequately distinguish the mobile units of the applicant from the mobile units of other licensees in the area.
 - (iii) In the Industrial/Business Pool, railroad licensees (as defined in § 90.7) may identify stations by the name of the railroad and the train number, cabooses number, engine number, or the name of the fixed wayside station. If none of these forms is practicable, any similar name or number may be designated by the railroad concerned for use by its employees in the identification of fixed points or mobile units, provided that a list of such identifiers is maintained by the railroad. An abbreviated name or the initials of the railroad may be used where such are in general usage. In those areas where it is shown that no difficulty would be encountered in identifying the transmission of a particular station (as, for example, where stations of one licensee are located in a yard isolated from other radio installations), approval may be given to a request from the licensee for permission to omit the station identification.
 - (5) Use of identifiers in addition to assigned call signs. Nothing in this section shall be construed as prohibiting the transmission of station or unit identifiers which may be necessary or desirable for system operation, provided that they are transmitted in addition to the assigned station call sign or other permissible form of identification.
- (b) Use of automatic Morse code identification equipment. Automatically activated equipment may be used to transmit station identification in International Morse Code pursuant to the following conditions:
- (1) The signal output of the automatic identification equipment shall be connected to the transmitter at the microphone input or any other manufacturer-provided signal input terminal and shall be adjusted to produce 40 percent \pm 10 percent of the maximum permissible modulation or deviation level. This adjustment shall be performed when all other modulating signals are absent.
 - (2) The Morse code transmission rate shall be maintained between 20 and 25 words per minute.
 - (3) The frequency of the keyed tone comprising the identification signal shall be 1200 \pm 800 Hz. A licensee may be required to change the frequency in order to prevent interference to the operations of another co-channel licensee.
 - (4) Should activation of automatic Morse code identification equipment interrupt the communications of another co-channel licensee, the Commission may require the use of equipment which will delay automatic station identification until such co-channel communications are completed.
- (c) Special provisions for identification in the Radiolocation Service.
- (1) Stations in the Radiolocation Service are not required to identify except upon specific instruction from the Commission or as required by paragraph (c)(2) of this section.
 - (2) Stations in the Radiolocation Service operating on frequencies above 3400 kHz that employ spread spectrum techniques shall transmit a two letter manufacturer's designator, authorized by the Commission on the station authorization, at the beginning and ending of each transmission and once every 15 minutes during periods of continuing operation. The designator shall be transmitted in International Morse Code at a speed not exceeding 25 words per minute, and the spread spectrum mode of operation shall be maintained while the designator is being transmitted. The identifying signal shall be clearly receivable in the demodulated audio of a narrow-band FM receiver.
- (d) General exemptions. A station need not transmit identification if:
- (1) It is a mobile station operating on the transmitting frequency of the associated base station.
 - (2) It is a mobile station in the Public Safety Pool using F1E or G1E emission.
 - (3) It is transmitting for telemetering purposes or for the activation of devices which are employed solely as a means of attracting attention, or for remote control purposes, or which is retransmitting by self-actuating means, a radio signal received from another radio station or stations.

- (4) It is any type of radiopositioning or radar station authorized in a service other than the Radiolocation Service.
 - (5) It is used solely for automatic vehicle monitoring or location.
 - (6) It is a paging station authorized in accordance with the provisions of § 90.20(a)(2)(v).
 - (7) It is a mobile station employing non-voice emissions and the associated base station identifies on behalf of the mobile unit(s).
 - (8) It is a base or mobile station in the 220–222 MHz band authorized to operate on a nationwide basis in accordance with subpart T of this part.
 - (9) It is a wireless microphone station operating in accordance with the provisions of § 90.265(b).
 - (10) It is a Roadside Unit in a DSRC system.
- (e) Special provisions for stations licensed under this part that are classified as CMRS providers under part 20 of this chapter.
- (1) Station identification will not be required for 929–930 MHz nationwide paging licensees or MTA or EA-based SMR licensees. All other CMRS stations will be required to comply with the station identification requirements of this paragraph.
 - (2) CMRS stations subject to a station identification requirement will be permitted to use a single call sign for commonly owned facilities that are operated as part of a single system. The call sign must be transmitted each hour within five minutes of the hour, or upon completion of the first transmission after the hour.
 - (3) CMRS stations granted exclusive channels may transmit their call signs digitally. The station licensee must provide the Commission with information sufficient to decode the digital transmission to ascertain the transmitted call sign.

[43 FR 54791, Nov. 22, 1978]

§ 90.405 Permissible Communications.

- (f) Stations licensed under this part may transmit only the following types of communication:
- (1) Any communication related directly to the imminent safety-of-life or property;
 - (2) Communications directly related and necessary to those activities which make the licensee eligible for the station license held under this part. In addition, when communication service is provided under the cooperative sharing provisions of § 90.179, the licensee providing such service may transmit communications related to the activities for which the parties receiving the service would be eligible to be licensed.
 - (3) Communications for testing purposes required for proper station and system maintenance. However, each licensee shall keep such tests to a minimum and shall employ every measure to avoid harmful interference.
- (g) The provisions contained in paragraph (a) of this section do not apply where a single base station licensee has been authorized to use a channel above 470 MHz on an exclusive basis, or to stations licensed under this part that are classified as CMRS providers under part 20 of this chapter.

[50 FR 6182, Feb. 14, 1985, as amended at 59 FR 59965, Nov. 21, 1994]

§ 90.407 Emergency Communications.

The licensee of any station authorized under this part may, during a period of emergency in which the normal communication facilities are disrupted as a result of hurricane, flood, earthquake or similar disaster, utilize such station for emergency communications in a manner other than that specified in the station authorization or in the rules and regulations governing the operation of such stations. The Commission may at any time order the discontinuance of such special use of the authorized facilities.

[49 FR 36376, Sept. 17, 1984]