

multilateration systems will share the 919.75-921.75 MHz band on a co-equal basis. Licensing will be on the basis of Economic Areas (EAs) for multilateration systems, with one exclusive EA license being issued for each of these three sub-bands. Except as provided in paragraph (f) of this section, multilateration EA licensees may be authorized to operate on only one of the three multilateration bands within a given EA. Additionally, EA multilateration LMS licenses will be conditioned upon the licensee's ability to demonstrate through actual field tests that their systems do not cause unacceptable levels of interference to 47 CFR part 15 devices.

(e) Multilateration EA-licensed systems and grandfathered AVM systems (see §90.363) are authorized on a shared basis and must cooperate in the selection and use of frequencies in accordance with Section 90.173(b).

(f) Multilateration EA licensees may be authorized to operate on both the 919.75-921.75 MHz and 921.75-927.25 MHz bands within a given EA (see §90.209(b)(10)).

(g) Multilateration LMS systems whose primary operations involve the provision of vehicle location services, may provide non-vehicular location services.

(h) Non-multilateration stations are authorized to operate on a shared, non-exclusive basis in the 902-904 MHz and 909.75-921.75 MHz sub-bands. Non-multilateration systems and multilateration systems will share the 919.75-921.75 MHz band on a co-equal basis. Non-multilateration LMS systems may not provide non-vehicular location services. The maximum antenna height above ground for non-multilateration LMS systems is 15 meters.

(i) Non-multilateration LMS licenses will be issued on a site-by-site basis, except that municipalities or other governmental operatives may file jointly for a non-multilateration license covering a given U.S. Department of Commerce Bureau of Economic Analysis Economic Area (EA). Such an application must identify all planned sites. After receiving the license, the non-multilateration EA licensee must notify the Commission if sites are de-

leted or if new sites are added, before those sites may be put into operation.

[60 FR 15253, Mar. 23, 1995, as amended at 62 FR 52044, Oct. 6, 1997]

§90.355 LMS operations below 512 MHz.

Applications requiring not more than 25 kHz bandwidth per frequency in the 25-50 MHz, 150-170 MHz, and 450-512 MHz bands may use either base-mobile frequencies currently assigned the applicant, or be assigned base-mobile frequencies available in the service in which eligibility has been established, provided that:

(a) For transmission between vehicles and base stations, each frequency in a single-frequency mode of operation will provide location data for approximately 200 vehicles, or both frequencies in a two-frequency mode of operation will provide location data for approximately 400 vehicles, except that for frequencies in the 450-512 MHz band that are assigned in pairs in accordance with the allocation plan for the band, the requirement is that location data be provided for approximately 200 vehicles for each frequency pair; and a showing is made that 50 percent of the vehicles will be in operation within the system by the end of the second year of the initial license term, and 70 percent will be in operation within the system by the end of the initial license term; except that if these vehicle loading standards will not be met, frequencies will be assigned only on a secondary non-interference basis to any authorized radiotelephony operation.

(b) The minimum separation between a proposed LMS station and the nearest co-channel base station of another licensee operating a voice system is 75 miles (120 km) for a single frequency mode of operation or 35 miles (56 km) for a two-frequency mode of operation. Where the minimum mileage separation cannot be achieved, agreement to the use of F1D, F2D, G1D, G2D or P0N emission must be received from all existing co-channel licensees using voice emissions within the applicable mileage limits. If there is interference with voice operations and required agreement was not received, or operation was authorized on a secondary non-interference basis, the licensee of the

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LMS system is responsible for eliminating the interference.

(c) Frequencies additional to any assigned under paragraph (a) of this section will not be assigned to the same licensee at any stations located within 64 km (40 miles) of any station in which the licensee holds an interest until each of such licensee's frequencies for LMS operation is shown to accommodate not less than 90 percent of the frequency loading requirements specified in paragraph (a) of this section.

§ 90.357 Frequencies for LMS systems in the 902–928 MHz band.

(a) Multilateration LMS systems will be authorized on the following LMS sub-bands:

LMS Sub-band	Forward Link ¹
904.000–909.750 MHz	927.750–928.000 MHz.
919.750–921.750 MHz ²	927.500–927.750 MHz.
921.750–927.250 MHz	927.250–927.500 MHz.

¹Forward links for LMS systems may also be contained within the LMS sub-band. However, the maximum allowable power in these sub-bands is 30 watts ERP in accordance with § 90.205(j).

²The frequency band 919.750–921.750 MHz is shared co-equally between multilateration and non-multilateration LMS systems.

(b) Non-multilateration LMS systems will be authorized on the following frequency bands:

LMS Sub-band¹

902.000–904.000 MHz
909.750–921.750 MHz

¹Applicants for non-multilateration LMS systems should request only the minimum amount of bandwidth necessary to meet their operational needs.

[60 FR 15253, Mar. 23, 1995, as amended at 60 FR 37277, July 19, 1995]

§ 90.359 Field strength limits for EA-licensed LMS systems.

EA-licensed multilateration systems shall limit the field strength of signals transmitted from their base stations to 47 dBuV/m at their EA boundary.

[62 FR 52044, Oct. 6, 1997]

§ 90.361 Interference from part 15 and Amateur operations.

Operations authorized under parts 15 and 97 of this chapter may not cause harmful interference to LMS systems in the 902–928 MHz band. These operations will not be considered to be causing harmful interference to a

multilateration LMS system operating in one of the three EA sub-bands (see § 90.357(a)) if they are non-video links operating in accordance with the provisions of parts 15 or 97 of this chapter and at least one of the following conditions are met:

(a) It is a field disturbance sensor operating under § 15.245 of this chapter and it is not operating in the 904–909.750 or 919.750–928.000 MHz sub-bands; or

(b) It does not employ an outdoor antenna; or

(c) If it does employ an outdoor antenna, then if:

(1) The directional gain of the antenna does not exceed 6 dBi, or if the directional gain of the antenna exceeds 6 dBi, it reduces its transmitter output power below 1 watt by the proportional amount that the directional gain of the antenna exceeds 6 dBi; and

(2) Either:

(i) The antenna is 5 meters or less in height above ground; or

(ii) The antenna is more than 5 meters in height above ground but less than or equal to 15 meters in height above ground and either:

(A) Adjusts its transmitter output power below 1 watt by 20 log (h/5) dB, where h is the height above ground of the antenna in meters; or

(B) Is providing the final link for communications of entities eligible under subpart B or C of this part, or is providing the final link for communications of health care providers that serve rural areas, elementary schools, secondary schools or libraries.

[60 FR 15253, Mar. 23, 1995, as amended at 62 FR 52044, Oct. 6, 1997]

§ 90.363 Grandfathering provisions for existing AVM licensees.

(a) These provisions authorize grandfathered operation by automatic vehicle monitoring (AVM) systems licensed on or before February 3, 1995. To attain grandfathered status for their stations, existing multilateration AVM licensees must file, on or before May 22, 1995, applications to modify their station licenses to comply with the band plan shown in § 90.357(a). These applications to modify must identify the multilateration sub-band or sub-bands in which the applicants intend to operate their LMS system stations, once