

§ 90.245

available for assignment to base stations.

(5) A mobile station associated with mobile relay station(s) may not be authorized to operate on a frequency below 25 MHz.

(c) Technical requirements for mobile relay stations.

(1) Each new mobile relay station with an output power of more than one watt, and authorized after January 1, 1972, that is activated by signals below 50 MHz shall deactivate the station upon cessation of reception of the activating continuous coded tone signal. Licensees may utilize a combination of digital selection and continuous coded tone control where required to insure selection of only the desired mobile relay station.

(2) Mobile relay stations controlled by signals above 50 MHz or authorized prior to January 1, 1972, to operate below 50 MHz are not required to incorporate coded signal or tone control devices unless the transmitters are consistently activated by undesired signals and cause harmful interference to other licensees. If activation by undesired signals causes harmful interference, the Commission will require the installation of tone control equipment within 90 days of a notice to the licensee.

(3) Except in the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), each new mobile-relay station authorized after January 1, 1972, shall be equipped for automatic deactivation of the transmitter within 5 seconds after the signals controlling the station cease.

(4) Except in the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), each new mobile-relay station authorized after January 1, 1972, during periods that is not controlled from a manned fixed control point; shall have an automatic time delay or clock device that will deactivate the station not more than 3 minutes after its activation by a mobile unit.

(5) In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), each mo-

47 CFR Ch. I (10-1-12 Edition)

bile relay station, regardless of the frequency or frequencies of the signal by which it is activated shall be so designated and installed that it will be deactivated automatically when its associated receiver or receivers are not receiving a signal on the frequency or frequencies which normally activate it.

(6) Multiple mobile relay station radio systems shall use wireline or radio stations on fixed frequencies for any necessary interconnect circuits between the mobile relay stations.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 40177, Oct. 15, 1984; 50 FR 13606, Apr. 5, 1985; 50 FR 39680, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 54 FR 39740, Sept. 28, 1989; 56 FR 19603, Apr. 29, 1991; 56 FR 32517, July 17, 1991; 60 FR 37268, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18928, Apr. 17, 1997; 74 FR 23803, May 21, 2009]

§ 90.245 Fixed relay stations.

Except where specifically provided for, fixed relay stations shall be authorized to operate only on frequencies available for use by operational fixed stations.

§ 90.247 Mobile repeater stations.

A mobile station authorized to operate on a mobile service frequency above 25 MHz may be used as a mobile repeater to extend the communications range of hand-carried units subject to the following:

(a) Mobile repeaters and/or associated hand-carried transmitters may be assigned separate base/mobile frequencies for this use in addition to the number of frequencies normally assignable to the licensee.

(b)-(c) [Reserved]

(d) In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), use of mobile repeaters is on a secondary basis to the stations of any other licensee. Hand carried units used in connection with mobile repeaters on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3) may operate only above 150 MHz and are limited to a maximum output power of six watts. The frequency and maximum power shall be specified in the station authorization.

(e) In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), the output power of a mobile repeater station, when transmitting as a repeater station on the frequency used for communication with its associated pack-carried or hand-carried units, shall not exceed 6 watts except when the same frequency is also used by the same station for direct communication with vehicular mobile units or with one or more base stations.

(f) When automatically retransmitting messages originated by or destined for hand-carried units, each mobile station shall activate the mobile transmitter only with a continuous access signal, the absence of which will deactivate the mobile transmitter. The continuous access signal is not required when the mobile unit is equipped with a switch that activates the automatic mode of the mobile unit and an automatic time-delay device that deactivates the transmitter after any uninterrupted transmission period in excess of 3 minutes. For the purposes of this rule section the continuous access signal can be achieved by use of digital or analog methods.

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18928, Apr. 17, 1997; 75 FR 19284, Apr. 14, 2019]

§ 90.248 Wildlife and ocean buoy tracking.

(a) The frequency bands 40.66–40.70 MHz and 216–220 MHz may be used for the tracking of, and the telemetry of scientific data from, ocean buoys and animal wildlife.

(b) Transmitters operating under the provisions of this section are not subject to the technical standards contained in §§ 90.205–90.217. In lieu thereof, the transmitters shall comply with the provisions in this section.

(c) Classes of emission are limited to N0N, A1A, A2A, A2B, F1B, J2B, F2A, F2B, and/or F8E.

(d) The authorized bandwidth shall not exceed 1 kHz.

(e) *Frequency stability.* (1) For transmitters operating in the 40.66–40.70 MHz frequency band, the frequency stability shall be sufficient to ensure that, at the carrier frequency employed, the

sum of the authorized bandwidth plus the bandwidth required for frequency stability are confined within this band.

(2) In the 216–220 MHz frequency band, transmitters shall employ a minimum frequency stability of 0.005 percent (50 parts per million). The carrier frequency shall be selected to ensure that the sum of the authorized bandwidth plus the bandwidth required for frequency stability are confined within this band.

(3) The frequency stability standards shall be met over a temperature range of –30° to +50° centigrade at normal supply voltage and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of +20 °C. For battery operated equipment, the equipment tests shall be performed using a new battery.

(f) The maximum peak transmitter output (carrier) power shall not exceed 1 milliwatt for airborne wildlife applications, 10 milliwatts for terrestrial wildlife applications or 100 milliwatts for ocean buoys.

(g) Emissions appearing outside of the authorized bandwidth shall be attenuated below the carrier power by at least 26 dB, following the procedures specified in § 90.210(m).

[63 FR 64208, Nov. 19, 1998]

§ 90.249 Control stations.

Control stations associated with land mobile stations under this part shall be authorized to operate subject to the following:

(a) *Frequencies for control stations.* (1) Control stations may be authorized to operate on frequencies available for use by operational fixed stations.

(2) A control station associated with mobile relay station(s) may, at the option of the applicant, be assigned the frequency of the associated mobile station. In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), such a control station may be assigned any mobile service station frequency available for assignment to mobile stations. Such operation is on a secondary basis to use of the frequency for regular mobile service communications.