

## Federal Communications Commission

## § 90.1213

not meet the criteria for primary status will be authorized only on a secondary, non-interference basis to base, mobile, temporary fixed, and primary permanent fixed operations.

[68 FR 38639, June 30, 2003, as amended at 69 FR 17959, Apr. 6, 2004; 74 FR 23803, May 21, 2009]

### § 90.1209 Policies governing the use of the 4940–4990 MHz band.

(a) Channels in this band are available on a shared basis only and will not be assigned for the exclusive use of any licensee.

(b) All licensees shall cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations concerned. Further, the Commission may prohibit the use of any 4.9 GHz channel under a system license at a given geographical location when, in the judgment of the Commission, its use in that location is not in the public interest.

(c) Licensees will make every practical effort to protect radio astronomy operations as specified in § 2.106, footnote US311 of this chapter.

(d) There is no time limit for which base and temporary fixed stations authorized under a 4940–4990 MHz band license must be placed in operation. Fixed point-to-point stations which are licensed on a site-by-site basis must be placed in operation within 18 months of the grant date or the authorization for that station cancels automatically.

### § 90.1211 Regional plan.

(a) To facilitate the shared use of the 4.9 GHz band, each region may submit a plan on guidelines to be used for sharing the spectrum within the region. Any such plan must be submitted to the Commission within 12 months of the effective date of the rules.

(b) Such plans must incorporate the following common elements:

(1) Identification of the document as a plan for sharing the 4.9 GHz band with the region specified along with the names, business addresses, business telephone numbers and organizational affiliations of the chairperson(s) and all members of the planning committee.

(2) A summary of the major elements of the plan and an explanation of how all eligible entities within the region were given an opportunity to participate in the planning process and to have their positions heard and considered fairly.

(3) An explanation of how the plan was coordinated with adjacent regions.

(4) A description of the coordination procedures for both temporary fixed and mobile operations, including but not limited to, mechanisms for incident management protocols, interference avoidance and interoperability.

(c) Regional plans may be modified by submitting a written request, signed by the regional planning committee, to the Chief, Wireless Telecommunications Bureau. The request must contain the full text of the modification, and a certification that all eligible entities had a chance to participate in discussions concerning the modification and that any changes have been coordinated with adjacent regions.

EFFECTIVE DATE NOTE: At 69 FR 51959, Sept. 23, 2004, paragraph (a) of § 90.1211 was stayed indefinitely.

### § 90.1213 Band plan.

(a) The following channel center frequencies are permitted to be aggregated for channel bandwidths of 5, 10, 15 or 20 MHz as described in paragraph (b) of this section. Channel numbers 1 through 5 and 14 through 18 are 1 MHz bandwidth channels, and channel numbers 6 through 13 are 5 MHz bandwidth channels.

Center frequency (MHz)	Bandwidth (MHz)	Channel numbers
4940.5 .....	1	1
4941.5 .....	1	2
4942.5 .....	1	3
4943.5 .....	1	4
4944.5 .....	1	5
4947.5 .....	5	6
4952.5 .....	5	7
4957.5 .....	5	8
4962.5 .....	5	9
4967.5 .....	5	10

Center frequency (MHz)	Bandwidth (MHz)	Channel numbers
4972.5 .....	5	11
4977.5 .....	5	12
4982.5 .....	5	13
4985.5 .....	1	14
4986.5 .....	1	15
4987.5 .....	1	16
4988.5 .....	1	17
4989.5 .....	1	18

(b) The following tables list center frequencies to be licensed for aggregated channels only. A license may contain any combination of bandwidths from aggregated channels provided that the bandwidths do not overlap. The bandwidth edges (lower and upper frequencies) are provided to aid in planning.

(1) 5 MHz bandwidth aggregation:

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4942.5 .....	1 to 5 *	4940	4945
4947.5 .....	6	4945	4950
4952.5 .....	7	4950	4955
4957.5 .....	8	4955	4960
4962.5 .....	9	4960	4965
4967.5 .....	10	4965	4970
4972.5 .....	11	4970	4975
4977.5 .....	12	4975	4980
4982.5 .....	13	4980	4985
4987.5 .....	14 to 18 *	4985	4990

\* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

(2) 10 MHz bandwidth aggregation:

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4945 .....	1 to 6 *	4940	4950
4950 .....	6 & 7	4945	4955
4955 .....	7 & 8	4950	4960
4960 .....	8 & 9	4955	4965
4965 .....	9 & 10	4960	4970
4970 .....	10 & 11	4965	4975
4975 .....	11 & 12	4970	4980
4980 .....	12 & 13	4975	4985
4985 .....	13 to 18 *	4980	4990

\* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

(3) 15 MHz bandwidth aggregation:

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4947.5 .....	1 to 7 *	4940	4955
4952.5 .....	6 to 8	4945	4960
4957.5 .....	7 to 9	4950	4965
4962.5 .....	8 to 10	4955	4970
4967.5 .....	9 to 11	4960	4975
4972.5 .....	10 to 12	4965	4980
4977.5 .....	11 to 13	4970	4985
4982.5 .....	12 to 18 *	4975	4990

\* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

(4) 20 MHz bandwidth aggregation:

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4950 .....	1 to 8 *	4940	4960

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Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4955 .....	6 to 9 .....	4945	4965
4960 .....	7 to 10 .....	4950	4970
4965 .....	8 to 11 .....	4955	4975
4970 .....	9 to 12 .....	4960	4980
4975 .....	10 to 13 .....	4965	4985
4980 .....	11 to 18 * .....	4970	4990

\* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

[77 FR 45506, Aug. 1, 2012, as amended at 78 FR 36684, June 19, 2013]

§ 90.1215 Power limits.

The transmitting power of stations operating in the 4940–4990 MHz band must not exceed the maximum limits in this section.

(a)(1) The maximum conducted output power should not exceed:

Channel bandwidth (MHz)	Low power maximum conducted output power (dBm)	High power maximum conducted output power (dBm)
1 .....	7	20
5 .....	14	27
10 .....	17	30
15 .....	18.8	31.8
20 .....	20	33

(2) High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(b) Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

(c) The maximum conducted output power is measured as a conducted emission over any interval of continuous transmission using instrumentation calibrated in terms of an RMS-equivalent voltage. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true maximum conducted output power measurement conforming to the definitions in this paragraph for the emission in question.

(d) The peak power spectral density is measured as conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total