

## § 15.202

the holder of the grant of certification must test each installation prior to initiation of normal operation to verify compliance with the technical standards and must maintain a list of all installations and records of measurements. For perimeter protection systems operating outside of the frequency bands allocated to television broadcast stations, upon receipt of a grant of certification, further testing of the same or similar type of system or installation is not required.

[54 FR 17714, Apr. 25, 1989, as amended at 68 FR 68546, Dec. 9, 2003]

### § 15.202 Certified operating frequency range.

Client devices that operate in a master/client network may be certified if they have the capability of operating outside permissible part 15 frequency bands, provided they operate on only permissible part 15 frequencies under the control of the master device with which they communicate. Master devices marketed within the United States must be limited to operation on permissible part 15 frequencies. Client devices that can also act as master devices must meet the requirements of a master device. For the purposes of this section, a master device is defined as a device operating in a mode in which it has the capability to transmit without receiving an enabling signal. In this mode it is able to select a channel and initiate a network by sending enabling signals to other devices. A network always has at least one device operating in master mode. A client device is defined as a device operating in a mode in which the transmissions of the device are under control of the master. A device in client mode is not able to initiate a network.

[70 FR 23040, May 4, 2005]

### § 15.203 Antenna requirement.

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this sec-

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tion. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

[54 FR 17714, Apr. 25, 1989, as amended at 55 FR 28762, July 13, 1990]

### § 15.204 External radio frequency power amplifiers and antenna modifications.

(a) Except as otherwise described in paragraphs (b) and (d) of this section, no person shall use, manufacture, sell or lease, offer for sale or lease (including advertising for sale or lease), or import, ship, or distribute for the purpose of selling or leasing, any external radio frequency power amplifier or amplifier kit intended for use with a part 15 intentional radiator.

(b) A transmission system consisting of an intentional radiator, an external radio frequency power amplifier, and an antenna, may be authorized, marketed and used under this part. Except as described otherwise in this section, when a transmission system is authorized as a system, it must always be marketed as a complete system and must always be used in the configuration in which it was authorized.

(c) An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator. An intentional radiator may be authorized with multiple antenna types.

(1) The antenna type, as used in this paragraph, refers to antennas that

have similar in-band and out-of-band radiation patterns.

(2) Compliance testing shall be performed using the highest gain antenna for each type of antenna to be certified with the intentional radiator. During this testing, the intentional radiator shall be operated at its maximum available output power level.

(3) Manufacturers shall supply a list of acceptable antenna types with the application for equipment authorization of the intentional radiator.

(4) Any antenna that is of the same type and of equal or less directional gain as an antenna that is authorized with the intentional radiator may be marketed with, and used with, that intentional radiator. No retesting of this system configuration is required. The marketing or use of a system configuration that employs an antenna of a different type, or that operates at a higher gain, than the antenna authorized with the intentional radiator is not permitted unless the procedures specified in §2.1043 of this chapter are followed.

(d) Except as described in this paragraph, an external radio frequency power amplifier or amplifier kit shall be marketed only with the system configuration with which it was approved and not as a separate product.

(1) An external radio frequency power amplifier may be marketed for indi-

vidual sale provided it is intended for use in conjunction with a transmitter that operates in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands pursuant to §15.247 of this part or a transmitter that operates in the 5.725-5.825 GHz band pursuant to §15.407 of this part. The amplifier must be of a design such that it can only be connected as part of a system in which it has been previously authorized. (The use of a non-standard connector or a form of electronic system identification is acceptable.) The output power of such an amplifier must not exceed the maximum permitted output power of its associated transmitter.

(2) The outside packaging and user manual for external radio frequency power amplifiers sold in accordance with paragraph (d)(1) of this section must include notification that the amplifier can be used only in a system which it has obtained authorization. Such a notice must identify the authorized system by FCC Identifier.

[69 FR 54034, Sept. 7, 2004]

**§ 15.205 Restricted bands of operation.**

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110 .....	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505 .....	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905 .....	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128 .....	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775 .....	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775 .....	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218 .....	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825 .....	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225 .....	123-138	2200-2300	14.47-14.5
8.291-8.294 .....	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366 .....	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675 .....	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475 .....	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293 .....	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025 .....	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725 .....	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41 .....			

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.  
<sup>2</sup> Above 38.6

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed

the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using