

(5) The transmitter shall be equipped with suitable meters and jacks so that appropriate voltage and current measurements may be made while the transmitter is in operation.

(c) The following additional requirements apply to digital heterodyne translators:

(1) The maximum rated power output (digital average power over a 6 MHz channel) shall not exceed 30 watts for transmitters operating on channels 14-69 and 3 watts for transmitters operating on channels 2-13; and

(2) The transmitter shall contain circuits which will maintain the digital average power output constant within 1 dB when the strength of the input signal is varied over a range of 30 dB.

(d) Certification will be granted only upon a satisfactory showing that the transmitter is capable of meeting the requirements of paragraph (b) of this section, pursuant to the procedures described in § 74.750(e).

[69 FR 69336, Nov. 29, 2004]

**§ 74.796 Modification of digital transmission systems and analog transmission systems for digital operation.**

(a) The provisions of § 74.751 shall apply to the modification of digital low power TV and TV translator transmission systems and the modification of existing analog transmission systems for digital operation.

(b) The following additional provisions shall apply to the modification of existing analog transmissions systems for digital operation, including installation of manufacturers' certificated equipment ("field modification kits") and custom modifications.

(1) The modifications and related performance-testing shall be undertaken by a person or persons qualified to perform such work.

(2) The final amplifier stage of an analog transmitter modified for digital operation shall not have an "average digital power" output greater than 25 percent of its previous NTSC peak sync power output, unless the amplifier has been specifically refitted or replaced to operate at a higher power.

(3) Analog heterodyne translators, when modified for digital operation, will produce a power output (digital av-

erage power over the 6 MHz channel) not exceeding 30 watts for transmitters operating on channels 14-69 and 3 watts for transmitters operating on channels 2-13.

(4) After completion of the modification, suitable tests and measurements shall be made to demonstrate compliance with the applicable requirements in this section including those in § 74.795. Upon installation of a field modification kit, the transmitter shall be performance-tested in accordance with the manufacturer's instructions.

(5) The station licensee shall notify the Commission upon completion of the transmitter modifications. In the case of custom modifications (those not related to installation of manufacturer-supplied and FCC-certificated equipment), the licensee shall certify compliance with all applicable transmission system requirements.

(6) The licensee shall maintain with the station's records for a period of not less than two years the following information and make this information to the Commission upon request:

(i) A description of the modifications performed and performance tests or, in the case of installation of a manufacturer-supplied modification kit, a description of the nature of the modifications, installation and test instructions and other material provided by the manufacturer;

(ii) Results of performance-tests and measurements on the modified transmitter; and

(iii) Copies of related correspondence with the Commission.

(c) In connection with the on-channel conversion of existing analog transmitters for digital operation, a limited allowance is made for transmitters with final amplifiers that do not meet the attenuation of the Simple emission mask at the channel edges. Station licensees may obtain equivalent compliance with this attenuation requirement in the following manner:

(1) Measure the level of attenuation of emissions below the average digital power output at the channel edges in a 500 kHz bandwidth; measurements made over a different measurement bandwidth should be corrected to the equivalent attenuation level for a 500

**§ 74.801**

kHz bandwidth using the formula given in § 74.794;

(2) Calculate the difference in dB between the 46 dB channel-edge attenuation requirement of the Simple mask;

(3) Subtract the value determined in the previous step from the authorized effective radiated power (“ERP”) of the analog station being converted to digital operation. Then subtract an additional 6 dB to account for the approximate difference between analog peak and digital average power. For this purpose, the ERP must be expressed in decibels above one kilowatt: ERP(dBk) = 10 log ERP(kW);

(4) Convert the ERP calculated in the previous step to units of kilowatts; and

(5) The ERP value determined through the above procedure will produce equivalent compliance with the attenuation requirement of the simple emission mask at the channel edges and should be specified as the digital ERP in the minor change application for an on-channel digital conversion. The transmitter may not be operated to produce a higher digital ERP than this value.

[69 FR 69336, Nov. 29, 2004]

**Subpart H—Low Power Auxiliary Stations**

**§ 74.801 Definitions.**

*Cable television system operator.* A cable television operator is defined in § 76.5(cc) of the rules.

*Low power auxiliary station.* An auxiliary station authorized and operated pursuant to the provisions set forth in this subpart. Devices authorized as low power auxiliary stations are intended to transmit over distances of approximately 100 meters for uses such as wireless microphones, cue and control communications, and synchronization of TV camera signals.

*Motion picture producer.* Motion picture producer refers to a person or organization engaged in the production or filming of motion pictures.

*Television program producer.* Television program producer refers to a person or organization engaged in the production of television programs.

*Wireless assist video device.* An auxiliary station authorized and operated

**47 CFR Ch. I (10–1–05 Edition)**

by motion picture and television program producers pursuant to the provisions of this subpart. These stations are intended to transmit over distances of approximately 300 meters for use as an aid in composing camera shots on motion picture and television sets.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, March 16, 1977, as amended at 43 FR 14662, Apr. 7, 1978; 51 FR 4603, Feb. 6, 1986; 51 FR 9966, Mar. 24, 1986; 54 FR 41842, Oct. 12, 1989; 68 FR 12772, Mar. 17, 2003]

**§ 74.802 Frequency assignment.**

(a) Frequencies within the following bands may be assigned for use by low power auxiliary stations:

- 26.100–26.480 MHz
- 54.000–72.000 MHz
- 76.000–88.000 MHz
- 161.625–161.775 MHz (except in Puerto Rico or the Virgin Islands)
- 174.000–216.000 MHz
- 450.000–451.000 MHz
- 455.000–456.000 MHz
- 470.000–488.000 MHz
- 488.000–494.000 MHz (except Hawaii)
- 494.000–608.000 MHz
- 614.000–806.000 MHz
- 944.000–952.000 MHz

(b) Operations in the bands allocated for TV broadcasting, listed below, are limited to locations removed from existing co-channel TV broadcast stations by not less than the following distances unless otherwise authorized by the FCC. (See § 73.609 for zone definitions.)

(1) 54.000–72.000 MHz and 76.000–88.000 MHz:

- Zone I 105 km (65 miles)
- Zones II and III 129 km (80 miles)

(2) 174.000–216.000 MHz

- Zone I 97 km (60 miles)
- Zones II and III 129 km (80 miles)

(3) 470.000–608.000 MHz and 614.000–806.000 MHz.

All zones 113 km (70 miles)

(c) Specific frequency operation is required when operating within the bands allocated for TV broadcasting.

(1) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.