

(b) *System parameters*—(1) *Channel spacing*. The initial spacing for digitally modulated emissions shall be 10 kHz. However, interleaved channels with a separation of 5 kHz may be used in accordance with the appropriate protection criteria appearing in Resolution 543 (WRC-03), provided that the interleaved emission is not to the same geographical area as either of the emissions between which it is interleaved.

(2) *Channel utilization*. Channels using digitally modulated emissions may share the same spectrum or be interleaved with analog emissions in the same high frequency broadcasting (HFBC) band, provided the protection afforded to the analog emissions is at least as great as that which is currently in force for analog-to-analog protection. Accomplishing this may require that the digital spectral power density (and total power) be lower by several dB than is currently used for either DSB or SSB emissions.

(c) *Emission characteristics*—(1) *Bandwidth and center frequency*. A full digitally modulated emission will have a 10 kHz bandwidth with its center frequency at any of the 5 kHz center frequency locations in the channel raster currently in use within the HFBC bands. Among several possible “simulcast” modes are those having a combination of analog and digital emissions of the same program in the same channel, that may use a digital emission of 5 kHz or 10 kHz bandwidth, next to either a 5 kHz or 10 kHz analog emission. In all cases of this type, the 5 kHz interleaved raster used in HFBC shall be adhered to in placing the emission within these bands.

(2) *Frequency tolerance*. The frequency tolerance shall be 10 Hz. See Section 73.757(b)(2), notes 1 and 2.

(3) *Audio-frequency band*. The quality of service, using digital source coding within a 10 kHz bandwidth, taking into account the need to adapt the emission coding for various levels of error avoidance, detection and correction, can range from the equivalent of monophonic FM (approximately 15 kHz) to the low-level performance of a speech codec (of the order of 3 kHz). The choice of audio quality is connected to the needs of the broadcaster and listener, and includes the consider-

ation of such characteristics as the propagation conditions expected. There is no single specification, only the upper and lower bounds noted in this paragraph.

(4) *Modulation*. Quadrature amplitude modulation (QAM) with orthogonal frequency division multiplexing (OFDM) shall be used. 64-QAM is feasible under many propagation conditions; others such as 32-, 16- and 8-QAM are specified for use when needed.

(5) *RF protection ratio values*. The protection ratio values for analogue and digital emissions for co-channel and adjacent channel conditions shall be in accordance with Resolution 543 (WRC-03) as provisional RF protection ratio values subject to revision or confirmation by a future competent conference.

[70 FR 46677, Aug. 10, 2005]

#### § 73.759 Auxiliary transmitters.

Upon showing that a need exists for the use of auxiliary transmitters, a license may be issued provided that:

(a) Auxiliary transmitters may be installed either at the same location as the main transmitters or at another location.

(b) [Reserved]

(c) The auxiliary transmitters shall be maintained so that they may be put into immediate operation at any time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitters.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the rules and regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with § 73.3542 of this chapter.)

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitters shall be tested at least once each week to determine that they are in proper operating condition and that they are adjusted to the proper frequency except

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that in the case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) of this section is satisfactory. A record shall be kept of the time and result of each test. Such records shall be retained for a period of two years.

(e) The auxiliary transmitters shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less but not greater than the authorized power of the main transmitters.

[28 FR 13696, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972; 60 FR 55480, Nov. 1, 1995. Redesignated at 70 FR 46677, Aug. 10, 2005]

#### § 73.760 Alternate main transmitters.

The licensee of an international broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown and that the following conditions are met: Both transmitters:

- (a) Are located at the same place;
- (b) Shall have the same power rating; and
- (c) Shall meet the construction, installation, operation, and performance requirements of good engineering practice.

[37 FR 25843, Dec. 5, 1972. Redesignated at 70 FR 46677, Aug. 10, 2005]

#### § 73.761 Modification of transmission systems.

Specific authority, upon filing formal application (FCC Form 309) therefor, is required for any of the following changes:

- (a) Change involving an increase or decrease in the power rating of the transmitters.
- (b) A replacement of the transmitters as a whole.
- (c) Change in the location of the transmitting antenna.
- (d) Change in location of main studio, if it is proposed to move the main studio to a different city from that specified in the license.

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(e) Change in the power delivered to the antenna.

(f) Change in frequency control and/or modulation system.

(g) Change in direction or gain of antenna system.

Other changes, not specified above in this section, may be made at any time without the authority of the Commission: *Provided*, That the Commission shall be immediately notified thereof and such changes shall be shown in the next application for renewal of license.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[38 FR 18895, July 16, 1973, as amended at 44 FR 65765, Nov. 15, 1979. Redesignated at 70 FR 46677, Aug. 10, 2005]

#### § 73.762 Time of operation.

(a) All international broadcasting stations shall operate in accordance with the times indicated on their seasonal schedules.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority from the FCC. However, in such cases, the FCC shall be immediately notified in writing of such limitation or discontinuance of operation and shall subsequently be notified when the station resumes regular operation.

(c) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating for a temporary period of more than 10 days, the station may not limit or discontinue operation until it requests and receives specific authority to do so from the FCC. When the station subsequently resumes regular operation after such limited operation or discontinuance of operation, it shall notify the FCC in Washington, DC. The license of a broadcasting station that fails to transmit broadcast signals for any consecutive 12-month period expires as a matter of