Subpart C—Digital Audio Broadcasting

SOURCE: 72 FR 45692, Aug. 15, 2007, unless otherwise noted.

§ 73.401 Scope.

This subpart contains those rules which apply exclusively to the digital audio broadcasting (DAB) service, and are in addition to those rules in Subparts A, B, C, G and H which apply to AM and FM broadcast services, both commercial and noncommercial.

§ 73.402 Definitions.

(a) *DAB.* Digital audio broadcast stations are those radio stations licensed by the Commission and use the In-band On-channel (''IBOC'') system for broadcasting purposes.

(b) *In Band On Channel DAB System.* A technical system in which a station's digital signal is broadcast in the same spectrum and on the same channel as its analog signal.

(c) *Hybrid DAB System.* A system which transmits both the digital and analog signals within the spectral emission mask of a single AM or FM channel.

(d) *Extended hybrid operation.* An enhanced mode of FM IBOC DAB operation which includes additional DAB subcarriers transmitted between the analog FM signal and the inner edges of the primary DAB sidebands.

(e) *Primary AM DAB Sidebands.* The two groups of hybrid AM IBOC DAB subcarriers which are transmitted 10 to 15 kHz above carrier frequency (the upper primary DAB sideband), and 10 to 15 kHz below carrier frequency (the lower primary DAB sideband).

(f) *Multicasting.* Subdividing the digital bitstream into multiple channels for additional audio programming uses.

(g) *Datacasting.* Subdividing the digital bitstream into multiple channels for additional data or information services uses.

§ 73.403 Digital audio broadcasting service requirements.

(a) Broadcast radio stations using IBOC must transmit at least one over-the-air digital audio programming stream at no direct charge to listeners. In addition, a broadcast radio station must simulcast its analog audio programming on one of its digital audio programming streams. The DAB audio programming stream that is provided pursuant to this paragraph must be at least comparable in sound quality to the analog programming service currently provided to listeners.

(b) Emergency information. The emergency information requirements found in § 73.1250 shall apply to all free DAB programming streams.

§ 73.404 Interim hybrid IBOC DAB operation.

(a) The licensee of an AM or FM station, or the permittee of a new AM or FM station which has commenced program test operation pursuant to § 73.1620, may commence interim hybrid IBOC DAB operation with digital facilities which conform to the technical specifications specified for hybrid DAB operation in the *First Report and Order* in MM Docket No. 99–325, as revised in the Media Bureau's subsequent *Order* in MM Docket No. 99–325. FM stations are permitted to operate with hybrid digital effective radiated power equal to one percent (−20 decibels below carrier (dBc)) of authorized analog effective radiated power and may operate with up to ten percent (−10 dBc) of authorized analog effective radiated power in accordance with the procedures set forth in the Media Bureau's *Order* in MM Docket No. 99–325. An AM or FM station may transmit IBOC signals during all hours for which the station is licensed to broadcast.

(b) In situations where interference to other stations is anticipated or actually occurs, AM licensees may, upon notification to the Commission, reduce the power of the primary DAB sidebands by up to 6 dB. Any greater reduction of sideband power requires prior authority from the Commission via the filing of a request for special temporary authority or an informal letter request for modification of license.

(c) Hybrid IBOC AM stations must use the same licensed main or auxiliary antenna to transmit the analog and digital signals.

(d) FM stations may transmit hybrid IBOC signals in combined mode; *i.e.*, using the same antenna for the analog

and digital signals; or may employ separate analog and digital antennas. Where separate antennas are used, the digital antenna:

(1) Must be a licensed auxiliary antenna of the station;

(2) Must be located within 3 seconds latitude and longitude from the analog antenna;

(3) Must have a radiation center height above average terrain between 70 and 100 percent of the height above average terrain of the analog antenna.

(e) Licensees must provide notification to the Commission in Washington, DC, within 10 days of commencing IBOC digital operation. The notification must include the following information:

(1) Call sign and facility identification number of the station;

(2) Date on which IBOC operation commenced;

(3) Certification that the IBOC DAB facilities conform to permissible hybrid specifications;

(4) Name and telephone number of a technical representative the Commission can call in the event of interference;

(5) FM digital effective radiated power used and certification that the FM analog effective radiated power remains as authorized;

(6) Transmitter power output; if separate analog and digital transmitters are used, the power output for each transmitter;

(7) If applicable, any reduction in an AM station's primary digital carriers;

(8) If applicable, the geographic coordinates, elevation data, and license file number of the auxiliary antenna employed by an FM station as a separate digital antenna;

(9) If applicable, for FM systems employing interleaved antenna bays, a certification that adequate filtering and/or isolation equipment has been installed to prevent spurious emissions in excess of the limits specified in § 73.317;

(10) A certification that the operation will not cause human exposure to levels of radio frequency radiation in excess of the limits specified in § 1.1310 of this chapter and is therefore categorically excluded from environmental processing pursuant to § 1.1306(b) of this chapter. Any station that cannot certify compliance must submit an environmental assessment (''EA'') pursuant to § 1.1311 of this chapter and may not commence IBOC operation until such EA is ruled upon by the Commission.

[72 FR 45692, Aug. 15, 2007, as amended at 75 FR 17877, Apr. 8, 2010]

Subpart D—Noncommercial Educational FM Broadcast Stations

SOURCE: 28 FR 13651, Dec. 14, 1963. Redesignated at 72 FR 45692, Aug. 15, 2007.

§ 73.501 Channels available for assignment.

(a) The following frequencies, except as provided in paragraph (b) of this section, are available for noncommercial educational FM broadcasting:

Frequency (MHz)	Channel No.
87.9	[1] 200
88.1	201
88.3	202
88.5	203
88.7	204
88.9	205
89.1	[2] 206
89.3	207
89.5	208
89.7	209
89.9	210
90.1	211
90.3	212
90.5	213
90.7	214
90.9	215
91.1	216
91.3	217
91.5	218
91.7	219
91.9	220

[1] The frequency 87.9 MHz, Channel 200, is available only for use of existing Class D stations required to change frequency. It is available only on a noninterference basis with respect to TV Channel 6 stations and adjacent channel noncommercial educational FM stations. It is not available at all within 402 kilometers (250 miles) of Canada and 320 kilometers (199 miles) of Mexico. The specific standards governing its use are contained in § 73.512.

[2] The frequency 89.1 MHz, Channel 206, in the New York City metropolitan area, is reserved for the use of the United Nations with the equivalent of an antenna height of 150 meters (492 feet) above average terrain and effective radiated power of 20 kW and the Commission will make no assignments which would cause objectionable interference with such use.

(b) In Alaska, FM broadcast stations operating on Channels 200–220 (87.9–91.9