



PUBLIC NOTICE

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DA 03-3898
December 8, 2003

MM Docket No. 99-325

COMMENT SOUGHT ON USE OF SEPARATE ANTENNAS TO INITIATE DIGITAL FM TRANSMISSIONS

Comment Date: January 8, 2004
Reply Comment Date: January 23, 2004

On July 24, 2003, the National Association of Broadcasters (NAB) submitted a report to the Commission regarding the use of separate antennas for the analog and digital components of the hybrid FM IBOC signal.¹ The report includes field tests prepared by an *ad hoc* technical group, and recommends that the Commission permit certain FM stations implementing IBOC transmissions to use separate antennas for analog and digital signals. The NAB report is available electronically at <http://www.fcc.gov/cgb/ecfs> under MM Docket No. 99-325, or from the Commission's duplicating contractor, Qualex International, 445 12th Street, SW, Room CY-B402, Washington, DC, 20554, 202-863-2893. We seek comment on the conclusions and recommendations made by the NAB report.

Stations may voluntarily initiate hybrid IBOC transmissions upon notification to the Commission. The initial grant of interim IBOC authority restricted stations to use of facilities similar to those evaluated by the National Radio Systems Committee.² As a result, stations are currently restricted to transmission systems that combine the digital and analog signals into one antenna.³ Many

¹ The term "hybrid" refers to a system which transmits both the digital and analog signals within the spectral emission mask of a single AM or FM channel.

² *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Broadcast Service*, 17 FCC Rcd 19990, 20004 (2002) ("*IBOC Order*"); see also *IBOC Notification Procedures Effective Immediately, Public Notice*, 18 FCC Rcd 5029 (2003).

³ When a single antenna is used for IBOC, the analog and digital FM signals may be combined after amplification (high-level combining), a method which results in substantial power losses for the digital signal. Stations with lower effective radiated power may combine the analog and digital signals before amplification

broadcasters, however, have expressed interest in using separate antennas for the analog and digital signals. Separate antenna configurations can be more efficient and less expensive than single-antenna designs. Consequently, the NAB convened an *ad hoc* technical group to determine whether broadcasters could use this approach without causing interference to the host station's analog signal or to other FM stations.

Based on the completed field tests, the NAB report proposes that the Commission permit FM stations implementing IBOC operations to use separate antennas for digital transmissions provided the following criteria are met:

- The digital transmission must use a licensed auxiliary antenna;
- The auxiliary antenna must be within three seconds of latitude and longitude of the main antenna; and
- The height above average terrain of the auxiliary antennas must be between 70 and 100 percent of the height above average terrain of the main antenna.

The report also recommends that the Commission authorize use of antennas specially designed with interleaved or stacked elements for analog and digital signals.

We seek comments on the test results, conclusions, and recommendations in the report of the NAB *ad hoc* technical committee. Interested parties may submit comments on or before January 8, 2004, and reply comments on or before January 23, 2004. Comments and replies should specifically reference this Public Notice. Comments and reply comments may be filed electronically at <http://www.fcc.gov/cgb/ecfs>, or on paper (an original and four copies) with the Commission's Secretary, Marlene Dortch, Federal Communications Commission, 236 Massachusetts Avenue, NE, Suite 110, Washington, DC, 20002.

Ex parte status: This is a "permit-but-disclose" rulemaking proceeding. *See Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Broadcast Service*, 15 FCC Rcd at 1745 (1999). "Permit-but-disclose" *ex parte* procedures permit interested parties to make *ex parte* presentations to the Commissioners and Commission employees and require that these presentations be disclosed in the record of the relevant proceeding. Persons making a written *ex parte* presentation to the Commissioners or Commission employees must file the written presentation with the Commission, as set forth below, no later than the next business day after the presentation. *See* 47 C.F.R. § 1.1206(b)(1). Persons making oral *ex parte* presentations must file a summary of the presentation, as set forth below, and deliver copies to the Commissioners or Commission employees involved with the presentation no later than the next business day after the presentation. *See* 47 C.F.R. § 1.1206(b)(2). All *ex parte* filings must be clearly labeled as such and must reference this Public Notice, as well as any other applicable docket or file numbers.

An original and one copy of all *ex parte* memoranda must be filed with the Commission's Secretary, Marlene Dortch, Federal Communications Commission, 236 Massachusetts Avenue, NE,

(low-level combining), in which case the transmitter efficiency is reduced.

Suite 110, Washington, DC, 20002, in accordance with 47 C.F.R. § 1.1206(b)(1). In addition, one copy of each *ex parte* memorandum should be delivered to each of the following locations: (1) the Commission's duplicating contractor, Qualex International, 445 12th Street, SW, Room 2-B450, Washington, DC, 20554. Copies of the reports and any subsequently filed documents in this matter may be obtained electronically at <http://www.fcc.gov/e-file/ecfs.html>, and on paper from Qualex International during normal business hours in the Commission's Reference Information Center located at 445 12th Street, SW, Room CY-A257, Washington, DC, 20554.

For additional information, contact Edward De La Hunt or Ann Gallagher at the Audio Division, Media Bureau at (202) 418-2700.

By: Chief, Media Bureau

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