

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of )  
 )  
Digital Audio Broadcasting Systems ) MM Docket No. 99-325  
And Their Impact On the Terrestrial Radio )  
Broadcast Service )

To: The Media Bureau

**COMMENTS OF NATIONAL PUBLIC RADIO, INC.**

**Introduction**

National Public Radio, Inc. ("NPR") hereby submits its Comments in response to the Public Notice requesting comment on a study conducted by the National Association of Broadcasters ("NAB") regarding the use of separate antennas for the analog and digital components of the hybrid FM In-band, On-channel ("IBOC") signal.<sup>1</sup>

NPR is a non-profit membership corporation which produces and distributes noncommercial educational programming, including *All Things Considered*<sup>®</sup>, *Morning Edition*<sup>®</sup>, *Talk of the Nation*<sup>®</sup>, and *Performance Today*<sup>®</sup>, for broadcast by more than 750 public radio stations nationwide. NPR's member licensees, comprising a variety of community licensees, school boards and other local institutions, Native American tribes, and private and public colleges and universities, are themselves significant producers of news, informational and

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<sup>1</sup> Public Notice, Comment Sought on Use of Separate Antennas to Initiate Digital FM Transmissions, DA 03-3898, MM Docket No. 99-325, rel. Dec. 8, 2003 [hereinafter "Public Notice"]; Report of the National Association of Broadcasters in MM Docket No. 99-325 (filed July 24, 2003) [hereinafter "NAB Report"].

cultural programming. NPR also operates the Public Radio Satellite Interconnection System and provides representation and other services to its Member stations.

**I. NPR Supports Authorization of Dual Antennas to Initiate Digital FM Transmissions**

NPR is a long-standing advocate of the development of terrestrially based digital radio, including IBOC.<sup>2</sup> Because NPR and its member licensees also operate with limited resources, we have a direct interest in identifying ways to minimize IBOC implementation costs, while assuring robust and relatively interference free analog and digital services during the transition to digital radio. Accordingly, because of the potential cost savings associated with a separate antenna implementation approach to FM IBOC,<sup>3</sup> we have been keenly interested in the work of the NAB Technical Group convened to examine the issue.

Based on the results described in the NAB Report, NPR supports authorization of the dual antenna transmission method recommended in the NAB Report. It appears to be a cost effective means of adding FM IBOC at higher power FM stations which should result in expedited inauguration of digital audio services to the American people.

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<sup>2</sup> Since 1987, NPR has urged the Commission to consider the spectrum needs of advanced radio systems and generally supported the Commission's efforts to do so. See, e.g., Comments of National Public Radio, Inc., Advanced Television Systems and Their Impact on the Existing Television Broadcast Service, MM Docket No. 87-268, filed Nov. 18, 1987; Comments of National Public Radio, Inc., Amendment of the Commission's Rules with Regard to the Establishment and Regulation of New Digital Audio Radio Services, GEN Docket No. 90-357, filed Nov. 13, 1990; Further Reply Comments of National Public Radio, Inc., In the Matter of Creation of a Low Power Radio Service, MM Docket No. 99-25, filed Nov. 15, 1999. Comments of National Public Radio, Inc., In the Matter of Digital Audio Broadcasting Systems And Their Impact On the Terrestrial Radio Broadcast Service, MM Docket No. 99-325, filed Jan. 24, 2000.

<sup>3</sup> See NAB Report at 2 ("The use of a separate antenna results in smaller transmitters, lower cost of equipment acquisition and operation, and reduced floor space requirements in the transmitter room.").

While we support the approach recommended in the NAB Report, we note that the real world implementation of dual antennas will provide important additional data on host compatibility in a variety of circumstances beyond the successful initial tests performed to date. Additional data could indicate that slightly wider vertical or horizontal spacing tolerances may be achievable without compromising host compatibility. Implementation of the recommended approach could also reveal specific system design issues that result in less-than-optimal transmission system performance. Accordingly, the Commission should remain receptive to any additional data warranting a modification or expansion of the parameters of the initial interim dual antenna authorization.

**II. The Commission Should Liberally Grant Experimental Authorizations Requested by Stations That Cannot Readily Meet the Conditions Set Forth in the NAB Report**

While the parameters for dual antenna operation proposed in the NAB Report are likely to encompass many FM stations, they undoubtedly will exclude others. In lieu of a further comprehensive study examining more permissive parameters, we urge the Commission to grant experimental authorizations liberally to permit individual stations to operate dual antennas at variance with the parameters set forth in the NAB Report.<sup>4</sup>

The NAB Report recommends the blanket authorization of dual antenna transmission facilities that meet the following conditions:

1. The digital transmission must use a licensed auxiliary antenna;
2. The auxiliary antenna must be within three seconds of latitude and longitude of the main antenna; and
3. 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.<sup>5</sup>

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<sup>4</sup> See 47 C.F.R. § 73.1510.

<sup>5</sup> Public Notice at 2.

While we do not anticipate stations requesting experimental authority to utilize unlicensed auxiliary antennas, the third condition (affecting the height above average terrain of the auxiliary antenna) appears particularly ripe for flexibility.

We note that the Commission's rule regarding experimental broadcast authorizations is designed to protect the integrity of the existing service and of the spectrum generally.<sup>6</sup> Accordingly, the granting of experimental authorizations in this context should only to benefit the public interest, by facilitating the transition to FM IBOC and by enhancing the Commission's understanding of the technology.<sup>7</sup>

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<sup>6</sup> See 47 C.F.R. § 73.1510(c) (setting conditions for experimental authorizations).

<sup>7</sup> Such an approach is also consistent with the NAB Report, which "recommends that separate antenna operations outside of the criteria listed be considered by the FCC on a case by case basis." NAB Report at 3 n.5.

## **Conclusion**

For the foregoing reasons, NPR supports the approval of dual antenna operation based on the NAB Report, but urges the Commission to liberally grant station requests for experimental authorization to operate with dual antennas reasonably at variance with the parameters set forth in the NAB Report.

Respectfully submitted,

NATIONAL PUBLIC RADIO, INC.

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