

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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

**REPLY COMMENTS OF  
THE NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters (NAB)<sup>1</sup> hereby replies to comments received in response to the recent *Public Notice*<sup>2</sup> in the pending digital audio broadcasting proceeding. The Notice sought further comment on technical studies concerning a requested voluntary increase in digital power for FM digital broadcasters, up to a maximum of 10 percent of a station's authorized analog power. The power increase was requested by 18 radio broadcasters (representing over 1200 FM radio stations) and the four largest manufacturers of broadcast transmission equipment (Joint Parties).<sup>3</sup>

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<sup>1</sup> The National Association of Broadcasters is a trade association that advocates on behalf of free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the Courts.

<sup>2</sup> *Public Notice*, DA 09-1127, MM Docket No. 99-325, May 22, 2009 (Notice).

<sup>3</sup> Joint Parties *Ex Parte* letter, filed in MM Docket No. 99-325, June 10, 2008 (Joint Parties request).

Here, as was the case in response to the initial Public Notice requesting comment on the proposed power increase,<sup>4</sup> the preponderance of parties (and the vast majority of commercial broadcasters) support expeditious grant of the Joint Parties request so as to extend and bolster digital coverage throughout analog service areas and inside buildings.<sup>5</sup> As was also the case in response to the initial Public Notice, other commenters have expressed reservations about the impact of a full 10 dB increase in digital power on analog operations, with public broadcasters again supporting the need for a power increase but preferring to await the results of further testing in order to establish a more managed power increase.<sup>6</sup>

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<sup>4</sup> *Public Notice*, DA 08-2340, MM Docket No. 99-325, October 23, 2008 (Initial Public Notice).

<sup>5</sup> See, e.g., Comments of Backyard Broadcasting, LLC, Beasley Broadcast Group, Inc., Black Crow Media Group, L.L.C., Bonneville International Corp., Broadcast Electronics, Inc., Broadcaster Traffic Consortium LLC, CBS Radio Inc., Clear Channel Communications, Inc., Commonwealth Broadcasting Corporation, Continental Electronics Corp., Cox Radio, Inc., Emmis Communications Corporation, Entercom Communications Corp., Greater Media, Inc., Harris Corporation, Journal Broadcast Corporation, Lincoln Financial Media Company, Nassau Broadcasting Partners, L.P., Nautel Maine Inc., NRG Media, LLC, Sacred Heart University, Inc. in MM Docket No. 99-325 (filed July 6, 2009) (Joint Commenters); Comments of Brian J. Kirby in MM Docket No. 99-325 (filed June 17, 2009); Comments of iBiquity Digital Corporation in MM Docket No. 99-325 (filed July 6, 2009); FM HD Radio System Performance At Elevated Digital Carrier Levels Test Reports, Charles River Broadcasting Company in MM Docket No. 99-325 (filed July 6, 2009) (WKLB-FM additional tests).

<sup>6</sup> See, e.g., Comments of National Public Radio, Inc. in MM Docket No. 99-325 (filed July 6, 2009) (NPR); Comments of the American Public Media Group in MM Docket No. 99-325 (filed July 6, 2009); Comments of Western States Public Radio, Eastern Region Public Media, Public Radio in Mid America, California Public Radio in MM Docket No. 99-325 (filed July 6, 2009); Comments of Creative Educational Media Corp., Inc. in MM Docket No. 99-325 (filed June 17, 2009); Comments of American University (WAMU) in MM Docket No. 99-325 (filed July 6, 2009); Comments of Calvary Chapel of Twin Falls, Inc. in MM Docket No. 99-325 (filed June 17, 2009).

NAB previously filed comments and reply comments in this proceeding.<sup>7</sup> We rely on those reply comments as a response to certain issues re-iterated in this latest round of comments,<sup>8</sup> and focus these replies primarily on new points raised in response to the Notice that may affect the Commission's consideration and timing of the power increase.

Interference Concerns Can Be Managed and Do Not Warrant Further Delay in Granting the Requested Power Increase

First and foremost, NAB appreciates the concerns of those commenters who acknowledge the need to increase digital power but are concerned about the impact of a 10 dB power increase on analog reception. Many of these commenters prefer to wait for results of further testing or to slowly ramp up power or to increase power only case by case.<sup>9</sup> As previously stated,<sup>10</sup> NAB agrees that we must protect analog service and immediately remediate instances of harmful interference within protected analog contours should they occur.

But NAB believes that the record in this proceeding, including recently submitted experimental data, demonstrates that the Commission can immediately authorize a voluntary digital power increase of up to 10 percent of authorized digital power without

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<sup>7</sup> Comments of the National Association of Broadcasters in MM Docket No. 99-325, filed December 5, 2008 (NAB 2008 Comments); Reply Comments of the National Association of Broadcasters in MM Docket No. 99-325, filed January 12, 2009 (NAB Reply Comments).

<sup>8</sup> See, e.g., Comments of Prometheus Radio Project in MM Docket No. 99-325 (filed July 6, 2009); See NAB Reply Comments at 7-8.

<sup>9</sup> See, e.g., Commenters listed in fn. 6 *supra*; Comments of WSOU in MM Docket No. 99-325 (filed July 2, 2009); Comments of Mullaney Engineering, Inc. in MM Docket No. 99-325 (filed July 6, 2009); Comments of Delmarva Broadcasting Company in MM Docket No. 99-325 (filed June 19, 2009).

<sup>10</sup> Comments of NAB in MM Docket No. 99-325, at 8-10 (filed July 6, 2009) (NAB Comments); NAB Reply Comments at 4.

concerns of widespread or unmanageable situations of interference to analog broadcasting. Our confidence in this result is premised on the real world, worst case studies submitted by iBiquity and discussed by the Joint Parties predicting no harmful interference in the vast majority of situations;<sup>11</sup> the overly-conservative nature of the computer simulations submitted by NPR (assuming all stations to be broadcasting in digital and at 10 dB higher power);<sup>12</sup> the results of recent and long-running experimental operations at higher power that have resulted in *no* demonstrated instances of interference within protected contours;<sup>13</sup> and the expected gradual implementation of higher power levels and digital operations. We further believe the Commission can quickly step in to resolve instances of interference that may occur.

The Requested Power Increase Is Needed to Ensure that Consumers Benefit from the Continued Roll-Out of HD Radio

The benefits of an immediate digital power increase are compelling. In fact, the record shows that the requested power increase is necessary to the continued, successful roll-out of digital radio. The need to improve digital coverage and building penetration with increased digital power is acknowledged by the overwhelming majority of the commenters in this proceeding, with the variance in comments centering on how, how much and when to authorize a power increase. But as explained in detail by iBiquity and Joint Commenters,<sup>14</sup> further delay in authorizing a power increase risks the steady roll-out of and substantial investment in digital radio by broadcasters, consumers, auto manufacturers and new portable device makers.

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<sup>11</sup> See Joint Parties *Ex Parte* letter, filed in MM Docket No. 99-325, at 2, 8 (June 10, 2008); Joint Commenters at 8.

<sup>12</sup> See NAB 2008 Comments at 8-9.

<sup>13</sup> See *id.* at 8; NAB Comments at 7-8.

<sup>14</sup> iBiquity at 4-5; Joint Commenters at 2-3.

More specifically, iBiquity cautions against perpetuating the regulatory uncertainty resulting from continued delay on the requested power increase, which is contributing to slowed station digital conversions and reluctance to invest in higher power equipment, as well as raising questions by automobile and receiver manufacturers anxious to improve digital coverage.<sup>15</sup> Similarly, Joint Commenters believe that significant, pro-consumer investment in HD Radio technology is at risk.<sup>16</sup> They fear that the conversion to digital will be stalled as a result of the very conservative digital power levels currently authorized, pointing out that in-vehicle listening is interrupted with reception gaps and fading due to shadowing and terrain issues; that indoor digital reception is impeded and even precluded by the inability of current digital signals to penetrate buildings; and that listeners accustomed to receiving a station's analog service may lose the digital signal and particularly the digital multicast streams.

NAB agrees with Joint Commenters that real world tests submitted for the record in this proceeding, including recent submissions of experimental testing by WRAT(FM) and WKLB-FM, demonstrate that these digital reception limitations can be significantly ameliorated by voluntary FM digital power increases of up to 10 dB. *Id.* at 4, 5. WKLB-FM's recent tests confirm that an increase of 10 dB is necessary to achieve indoor HD Radio digital reception comparable to existing indoor analog reception. *Id.* at 6. If listeners, particularly new listeners, are precluded from experiencing HD Radio reception that is comparable to analog in terms of coverage or building penetration,

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<sup>15</sup> iBiquity at 4.

<sup>16</sup> Nearly 2,000 radio stations have invested substantial amounts in HD Radio transmission equipment and have created more than 1,000 digital multicast streams, substantially enhancing the diversity of programming available to their listeners. More than 100 HD Radio receiver models are commercially available and auto manufacturers have made available HD Radio receivers in 70 vehicle lines. Joint Commenters at 2-4.

widespread and effective implementation of HD Radio service will be severely impeded.

*Id.*

NAB also concurs that digital coverage comparable to that of analog will promote the wide deployment of innovative supplementary digital applications. Applications are being developed by the Broadcaster Traffic Consortium, which can provide up-to-the minute, location based information including real-time traffic reports, weather alerts and Amber Alerts to portable devices and in-dash automobile systems. *Id.* at 7. Another application is being developed for digital radio that would dramatically enhance the Emergency Alert System by automatically turning on HD Radio receivers and tuning them to a participating station when the Emergency Alert warning system is activated.

*Id.* at 7-8.

Finally, commenters point to the upcoming (now actual<sup>17</sup>) introduction of portable HD Radio devices and the importance of higher power to portable and indoor reception of these new devices.<sup>18</sup> Early anecdotal experience of NAB staff with the just-introduced Insignia NS-HD01 portable HD Radio receiver has confirmed the reception performance challenges of small portable HD Radio receivers cited in our comments, especially when used for indoor reception.<sup>19</sup> As described by the Joint Commenters, at 7, portable device and indoor reception issues would be significantly ameliorated by the proposed 10 dB power increase. The retail availability of this unit now for sale at Best

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<sup>17</sup> See *First Portable HD Radio Receiver Hits Stores*, July 13, 2009, <http://radioink.com/Article.asp?id=1407929&spid=24698>.

<sup>18</sup> iBiquity at 4-5; Joint Commenters at 6-7.

<sup>19</sup> NAB Comments at 4. See also, *HD Radio without the "wall wart,"* July 12, 2009, <http://technology360.typepad.com/technology360/2009/07/hd-radio-without-the-wall-wart.html>.

Buy stores nationwide<sup>20</sup> intensifies the urgency of the power increase request, as public opinion on the viability of portable HD Radio devices will be forming in the consumer marketplace, and bad first impressions are difficult to overcome in consumer product marketing.

Clearly, the record in this proceeding shows significant concerns about the successful implementation of HD Radio, the continued introduction and success of new products and ramped-up production runs -- concerns generated in part by continued inaction on the requested power increase. Development of and transitions to new services can be seriously impeded by uncertainty, particularly regulatory uncertainty. Now is the time for the Commission to approve a voluntary increase in digital power. Further delay in doing so will only exacerbate uncertainty that may be creeping into the digital radio marketplace.

#### A Meaningful Digital Power Increase Should Be Adopted Immediately

As discussed above and in our previous comments, NAB believes the Commission can now grant the Joint Parties request of a 10 dB power increase without concern of widespread interference. But if the Commission determines that further consideration of the 10 dB increase is warranted, it should without delay adopt some meaningful interim power increase.

Extended real world testing of elevated digital power levels by WKLB-FM submitted in this proceeding<sup>21</sup> demonstrate that an increase, to be meaningful, must be

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<sup>20</sup> *Best Buy Releases First-Ever Portable HD Radio Receiver*, July 13, 2009, [http://www.bestbuyinc.com/news\\_center/07-13-09/best-buy%C2%AE-releases-first-ever-portable-hd-radio-receiver](http://www.bestbuyinc.com/news_center/07-13-09/best-buy%C2%AE-releases-first-ever-portable-hd-radio-receiver).

<sup>21</sup> WKLB-FM additional tests.

at least 6 dB. As discussed by Joint Commenters and iBiquity,<sup>22</sup> Greater Media's WKLB-FM has conducted testing since December that shows that all of the station's digital fade outs in areas located within 25 miles of the station's transmitter were eliminated with a 10 dB power increase, but that significant signal losses continued with a 5 dB increase. In additional testing with a power increase of 6 dB, WKLB-FM found significantly improved digital reception, but still experienced occasional losses of the digital signal within its protected contour.<sup>23</sup> It is important to note that WKLB-FM found no incidents of cognizable interference within the protect contours of adjacent channel stations resulting from its experimental operations with a 10 dB increase in power.<sup>24</sup>

While NPR has submitted a proposal for an interim power increase in its recent comments,<sup>25</sup> it appears to be extremely conservative. It is our understanding that NPR's proposal would allow for very little, if any, increase in power for most metropolitan area stations, including those that have been on air experimentally for an extended period with a 10 dB power increase, and with no reports of cognizable interference.<sup>26</sup> NPR's approach would thus be of little utility in extending digital coverage now (or in assuring the digital radio marketplace that digital coverage will

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<sup>22</sup> Joint Commenters at 13-14; iBiquity at 5-6.

<sup>23</sup> WKLB-FM additional tests; See *also* Interim Report, Station WKLB-FM, Waltham, Massachusetts, Experimental Operations with IBOC Power Levels Above the Currently Permitted Value of -20 dB Relative to Analog Power, May 5, 2009, submitted as an attachment to Request for Extension of Experimental Authorization Station WKLB-FM, Waltham, Massachusetts, FCC File No. -20081031ACO.

<sup>24</sup> See NAB Comments at 6-7. Experimental testing at another Greater Media station, WRAT(FM), with 10 dB increased power over five months similarly found that no interference to any FM station was reported or observed. See *id.* at 7.

<sup>25</sup> NPR at 12-15.

<sup>26</sup> See Reply Comments of Joint Commenters in MM Docket No. 99-325, at 6-7 and Exhibit C, filed July 17, 2009.



improve), and is contrary to the real world findings of stations operating experimentally with a 10 dB increase in power.

NAB urges the Commission to act immediately to authorize an increase in digital power so broadcasters can improve their digital coverage within their protected analog contours, enhance reception of their multicast program channels, improve in-building reception and offer consumers a quality listening experience on new portable devices now coming into the marketplace.

Respectfully submitted,



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