

**FEDERAL COMMUNICATIONS COMMISSION  
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WASHINGTON DC 20554**

MEDIA BUREAU  
AUDIO DIVISION  
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July 26, 2012

Mark J. Prak, Esq.  
Brooks, Pierce, McLendon, Humphrey & Leonard, LLP  
Box 1800  
Raleigh, North Carolina 27601

Re: North Carolina Central University  
WNCU(FM), Durham, North Carolina  
Facility Identification Number: 49162  
Request for Experimental Authority

Dear Counsel:

The staff has under consideration the request filed on June 22, 2012, on behalf of North Carolina Central University ("NCCU"), for experimental authority pursuant to 47 C.F.R. § 73.1510. NCCU requests authority to test IBOC operation with asymmetrical power levels in the digital sidebands.

The proposed experimental operation would maintain the current digital effective radiated power ("ERP") of -14 dBc<sup>1</sup> on the lower sideband ("LSB") and would increase the digital ERP to -10 dBc on the upper sideband ("USB"). NCCU provides an engineering study which demonstrates that the proposed operation complies with the contour nonoverlap provisions of the Media Bureau's January 29, 2010, Order.<sup>2</sup>

Our review indicates that the proposed operation meets the contour nonoverlap provisions of the *Order*. We find that the Public Interest would be served by grant of the requested experimental authority, in that the results of the experimental operation would provide information as to the practicality of asymmetrical sideband IBOC operation by FM stations, currently the subject of a Commission Inquiry.<sup>3</sup>

Accordingly, the requested experimental authority IS HEREBY GRANTED. Station WNCU may

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<sup>1</sup> Decibels relative to analog carrier.

<sup>2</sup> *Order, Digital Audio Broadcasting Systems and their Impact on the Terrestrial Radio Service*, MM Docket No. 99-325, 25 FCC Rcd 1182 (MB 2010); hereinafter "*Order*".

<sup>3</sup> *See Public Notice, Digital Audio Broadcasting Systems and their Impact on the Terrestrial Radio Service*, MM Docket No. 99-325, 26 FCC Rcd 15309 (MB 2011).

operate with increased digital power not to exceed the following:<sup>4</sup>

Transmitter Power Output:

Analog:	10.5 kW
Digital LSB	0.21 kW
Digital USB	0.53 kW

Effective Radiated Power:

Analog:	50 kW (Max-DA, H&V)
Digital LSB	1.0 kW (Max-DA, H&V)
Digital USB	2.5 kW (Max-DA, H&V)

It will be necessary to reduce digital power or cease IBOC operation if complaints of interference are received. A report detailing the methodology employed and the results obtained must be submitted within **ninety** days following the conclusion of the experimental operation pursuant to 47 C.F.R. § 73.1510(d). The report should describe the test procedures in detail, should identify those adjacent channel stations vulnerable to interference and note any additional interference observed during the tests. The report should also characterize the observed changes in digital coverage.

This experimental authority expires on **July 26, 2013**. Any request for extension of this authority should be filed at least thirty days prior to the expiration date and must include an interim version of the aforementioned report that details the progress of the experimental program as of the filing date.

Sincerely,



Charles N. Miller, Engineer  
Audio Division  
Media Bureau

cc: North Carolina Central University

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<sup>4</sup> Note that the actual individual sideband powers are 3 dB lower than the nominal power, because of the effect of summing the two sidebands to obtain the overall digital ERP. For example, if a station operates with symmetric sidebands, each -13 dBc (5% of analog carrier level) the total digital power in the upper and lower sidebands is -10 dBc (10% of analog carrier). In the instant case, the upper sideband TPO and ERP are -13 dBc and the lower sideband TPO and ERP are -17 dBc.