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MEMBER, DISTRICT OF COLUMBIA BAR
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January 5, 2023

BY EMAIL / PDF

Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street, NE
Washington DC 20554

ATTENTION: Media Bureau, Audio Division
RE: Rhode Island Public Radio
FM Broadcast Station WNPB, Facility ID No. 163899, Newport RI
SUBJECT: Interim Report on Asymmetric Digital Operation and
Request for Extension of Experimental Authorization

Dear Ms. Dortch:

On behalf of Rhode Island Public Radio, licensee of Noncommercial Educational FM Broadcast Station WNPB, Facility ID 163899, Newport, Rhode Island, and pursuant to Section 73.1510 of the Commission's rules, I transmit herewith its interim report on asymmetric digital operation pursuant to experimental authority granted in File No. 20200117AAS, and its request for an extension of such experimental authorization.

Kindly communicate any questions directly to this office.

Respectfully submitted,



John Wells King

JWK/

cc: WNPB Online Public Inspection File

**2023 REPORT ON PROGRESS OF ASYMMETRICAL DIGITAL POWER OPERATION
ON FM BROADCAST STATION WNPN (89.3FM) NEWPORT, RHODE ISLAND
CHANNEL 207B 7.0KW 254 m HAAT Facility ID 163899**

The Public's Radio (d/b/a Rhode Island Public Radio, Inc), licensee of FM broadcast station WNPN 89.3FM Newport, RI, hereby submits this annual report for experimental authority to continue to test DAB IBOC radio operation with asymmetrical power levels in the digital sidebands. As per application file number 20200117AAS granted 02/07/2020 and beginning Monday 02/10/2020, WNPN has been operating with digital Effective Radiated Power (ERP) as follows:

1. -14 dBc (4% of analog power, or 140 watts) digital power on the lower side band (LSB).
2. -10 dBc (10% of analog power, or 350 watts) digital power on the upper side band (USB).

The equipment used is a Nautel GV15 FM transmitter running AUI 4.4.1.8 software, into a Shively 6016-1/4-DA 4-panel directional FM antenna. An Omnia 9 audio processor and a Nautel Multicast Plus Exporter/Importer are employed. All this equipment was purchased as part of the same project to construct WNPN at its current facility in Tiverton, RI, in early- to mid-2018. Activating asymmetrical sideband operations was a five minute procedure; the GV15 is designed to do it, and do so easily, as seen from the screencap on page 3.

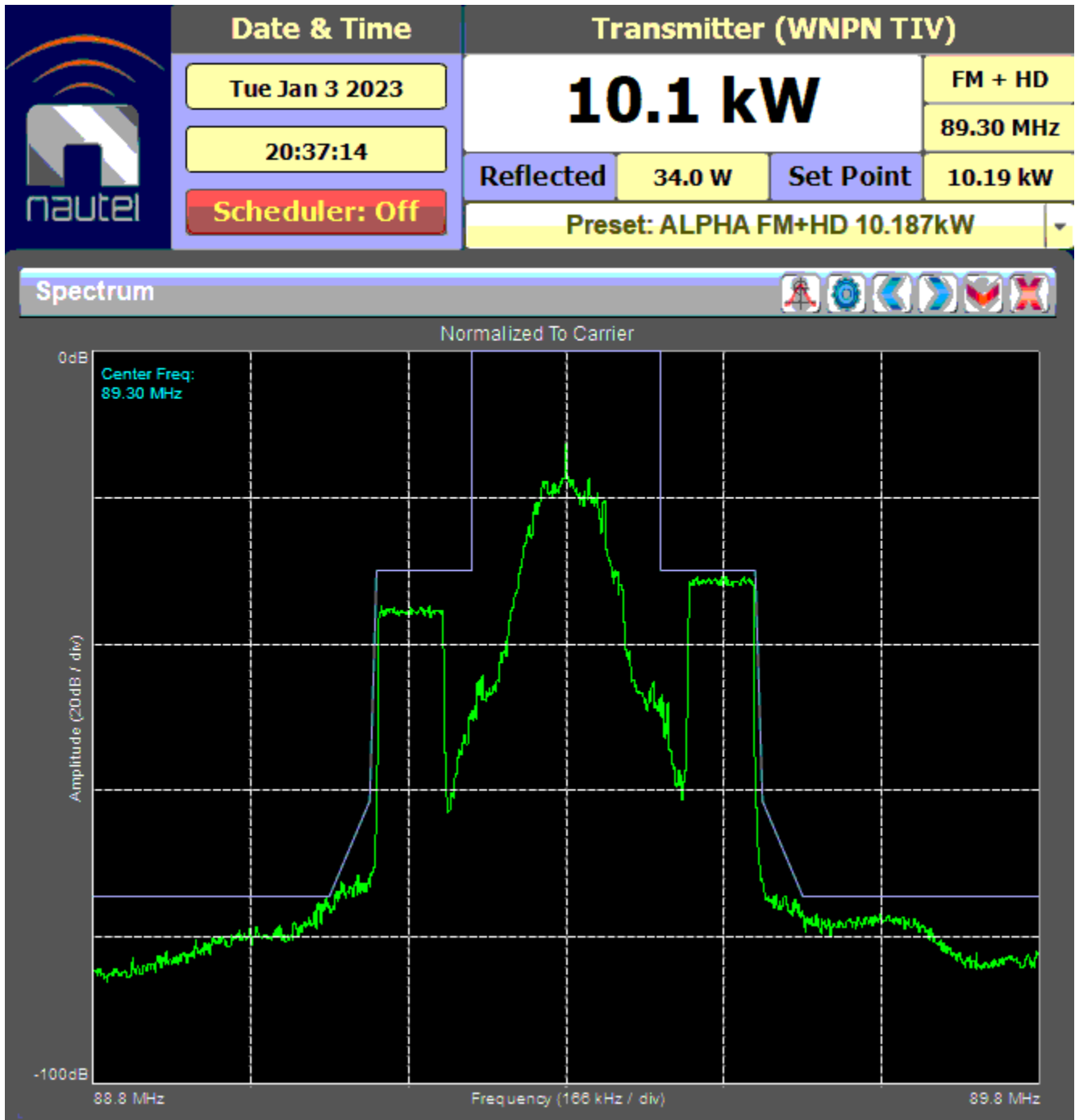
Spectral mask compliance is confirmed using the internal spectrum analyzer on the GV15. The GV15's AUI (Advanced User Interface) has no logged instances of "reduced IBOC injection" nor "RF spectrum mask foldback", either of which would be indications that the transmitter had detected RF energy exceeding the spectrum mask. The built-in spectrum analyzer consistently shows a display like this screencap on page 2.

We have received no interference complaints from listeners regarding asymmetrical IBOC injection levels.

Our engineer (Aaron Read) continues to perform drive-tests using a Directed DMHD1000 add-on HD Radio tuner to his 2014 Honda CR-V LX prior to, and after, the increase in USB power from -14 to -10dBc and while it was difficult to notice significant improvement to the HD1 coverage, it was noticeable that the HD2 channel "dropped out" far less frequently. Especially in challenging reception areas such as: Downtown (Providence), College Hill (Providence), Watchemoket Square (East Providence), Rumford (East Providence) Darlington (Pawtucket), and Downtown (Pawtucket). The experience is characterized as going from "occasional yet annoying dropouts for a few seconds each" to "almost no dropouts at all". This has been considered a success.

We believe public interest would be served by continuing this experimental authority for WNPN.

Sincerely,
Aaron Read



Screenshot taken at 8:37pm ET on Tuesday January 3, 2023

Presets : Current Settings

	General	Main Audio	SCA	RDS
Load	Preset Name: Current Settings			
Save	Output Power: 10.187 kW			
Save New	Frequency: 89.30 MHz			
Delete	Mode: FM + HD			
	IBOC Injection (Lower): -14.0 dB			
	IBOC Injection (Upper): -10.0 dB			
	HD PA Voltage: 53.0 V			
	HD Power Boost Priority: Efficiency			

Screencap taken at 8:38pm ET on Tuesday January 3, 2023

Certification

This technical statement was prepared by Aaron Read, I.T. & Engineering Director of The Public's Radio. Mr. Read has been working with the firm in this role since 2012. Prior to that, he has served in radio broadcast engineering roles dating back to 2000, including working as a professional wireless engineering consultant for Isotrope, LLC (d/b/a Broadcast Signal Lab) from 2002 to 2008. He is a graduate of Boston University. As a professional in the field of telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



01/03/2023

AARON READ
I.T. & Engineering Director
The Public's Radio 89.3FM

Dated