

**2021 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.

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) performed numerous 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



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 Isotope, 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.



12/31/2020

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

Dated