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November 1, 2018

Accepted / Filed
NOV – 1 2018

Our File No. 21616-00100

STAMP & RETURN

By Hand Delivery

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, S.W.
Room TW-A325
Washington, DC 20554

Accepted / Filed
NOV – 1 2018
Federal Communications Commission
Office of the Secretary

Re: Broadcast Station KQHR(FM), The Dalles, OR
Facility ID No. 175508, FRN # 0005853098
Request for Extension of Experimental Authority to Operate with
Asymmetrical Hybrid Digital Sideband Power
FCC File No. 20160707ACN

Dear Ms. Dortch:

On behalf of All Classical Public Media, Inc., licensee of noncommercial educational FM radio station KQHR(FM), The Dalles, Oregon, pursuant to FCC Rule 5.203, is its report detailing the methodology employed and the results obtained. Please associate this report with KQHR's June 29, 2018 submission requesting an extension of its experimental authority for one year to operate KQHR(FM) full-time with asymmetrical hybrid digital sideband power.

Please direct any questions regarding this matter to the undersigned.

Respectfully submitted,

Melodie A. Virtue

MAV:cll
cc: Rodolfo Bonacci (pdf copy via rodolfo.bonacci@fcc.gov)

All Classical
PORTLAND

All Classical Public Media, Inc.
211 SE Caruthers Street
Portland, OR 97214

November 1, 2018

Federal Communications Commission
Office of the Secretary
445 12th Street SW, Room TW-A325
Washington, DC 20554

RE: Renewal of Experimental Request 20160707ACN for KQHR, FCC Facility ID # 175508, The Dalles, OR.

This report is provided to support the request to continue the captioned KQHR Experimental Authorization, which authorizes operation at -10 dBc on the lower IBOC digital sideband and -12 dBc on the upper.

The author served as Interim Chief Engineer for a period of approximately five months (March through July) in 2018, and has personal experience with the station.

I found the digital signal as authorized to be significantly more reliable in the communities of Hood River and White Salmon, as well as in the principal community, The Dalles. Partway through my tenure, the main antenna failed, and we switched to the licensed backup antenna with an analog-only transmitter, so I did not have an opportunity to run scientific tests on the signal.

I made several trips to KQHR, using five different HD-Radio equipped vehicles. From this experience, I can verify the previous report[1] that the Experimental HD signal was easily listenable as far west as Cascade Locks, which is located approximately at the 57 dBu f(50,50) contour.

At this time, KQHR has amassed well over 12,000 hours of operation in asymmetrical hybrid mode. Not a single complaint of interference has been lodged with the licensee. All Classical Public Media continues to monitor the operation to ensure that it remains within the authorized parameters.

Thank you,

David J. Doherty
Technical Consultant

[1] Please see Exhibit A to the report dated June 15, 2017 supporting the letter request of June 22, 2107.

All Classical PORTLAND

June 15, 2017

Federal Communications Commission
Office of the Secretary
445 12th Street, SW. Room TW-A325
Washington, DC 20554

RE: Renewal of Experimental Request 20160707ACN for KQHR(FM) Hood River, Facility ID No. 175508

Regarding KQHR FM's Experimental Authorization granted by the FCC on August 1, 2016, KQHR FM respectfully submits the following report and request pursuant to the conditions of the Experimental Authority.

KQHR FM has operated fulltime with Asymmetrical Hybrid IBOC sidebands since authority was granted on August 1, 2016 for a total of over 7600 hours. The transmitter used is a Nautel NV-3.5 with 4.0 Kilowatts ERP of analog power, Digital LSB of –10dBc (0.200 kW) and -14dBc (.125 kW). KQHR FM operates in MP1 mode with two IBOC channels with data streams of 48kbps each.

In August 2016, KQHR FM announced to the public that it had made increases to its HD signal and KQHR FM continues to promote the HD signal both on-air and online. During the experimental HD broadcasts, we have notice a pronounced reduction in audio dropout rate within the primary coverage contour and an increased useable reception distance when monitoring our HD signals. HD signal quality and range now compares favorably with the FM analog signal.

Using several receivers, we have observed that HD coverage has increased by 2-8 miles in the four compass directions. Please refer to the submitted map Exhibit A in this interim report showing the range of reliable HD reception both before and after commencement of operation with Asymmetrical Hybrid IBOC sidebands under the granted experimental authorization.

Listening tests have continued and were conducted using three test receivers: 1) an HD automobile receiver, Kenwood model DNN990HD; 2) a small software-defined portable radio, Sangean HDR-16; and 3) a tabletop radio, Insignia NS-HDRAD – all of which demonstrated a marked improvement in outdoor reception especially in terrain-shielded locations as well as improved indoor building penetration.

Further testing has also shown that no broadcast interference or, degradation has been caused during the course of these experimental broadcasts. An extension of KQHR FM's experimental authorization will allow KQHR FM to conduct further tests. These tests include 1) improving HD MER (modulation error ratio) performance in our transmission; 2) testing in HD MP3 mode with an HD3 audio channel – in all tests comparing error rates with Asymmetrical Hybrid IBOC sidebands to our nominal -14dBc IBOC sidebands.

In light of these results and findings, KQHR FM proposes to the Federal Communications Commission that we continue operating with asymmetrical sidebands at the ERP granted in our original experimental license. During this operation, KQHR FM will continue to closely monitor signal reports and ensure that its transmissions remain within the parameters of our license.

Thank you for your consideration,

Larry Holtz
Vice President of Technology KQHR(FM) Facility ID No. 175508

89.9 FM in Portland
& allclassical.org

211 SE Caruthers
suite 200
Portland, OR 97214
503 943 5828

ALL CLASSICAL PORTLAND

Exhibit A

KQHR (FM) Hood River, Facility ID# 175508
HD Coverage Comparison
Pre/Post Asymmetrical Hybrid Digital Sideband Authorization 2016
Measurements taken from 7/15/2016 to 6/10/2017 by Larry Holtz,
VP of Technology, All Classical Public Media, Licensee of KQHR