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February 17, 2021

VIA EMAIL DELIVERY: Rodolfo.Bonacci@FCC.gov

Mr. Rodolfo F. Bonacci
Assistant Division Chief
Audio Division, Media Bureau
Federal Communications Commission

Re: Broadcast Station KING-FM (NCE), Seattle, WA
Facility ID No. 11755
FRN # 0020868501
Request for Extension of Experimental Authority to Operate with
Asymmetrical Hybrid Digital Sideband Power
FCC File No. 20200309AAR

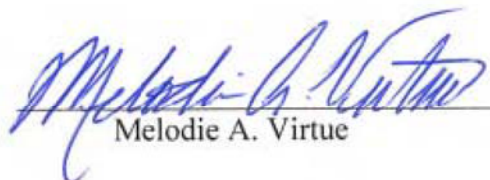
Dear Mr. Bonacci:

On behalf of Classic Radio ("Classic"), licensee of non-commercial educational FM radio station KING-FM, Seattle, Washington, pursuant to FCC Rule 5.203, this letter is written to request an extension of its experimental authority for one year to operate KING-FM full-time with asymmetrical hybrid digital sideband power. The initial authorization was granted by letter dated March 25, 2020, from Rodolfo F. Bonacci in the Audio Division of the Media Bureau. A copy of that letter is attached along with the report from KING-FM Operations Director, Rachele Hales, detailing the methodology employed and the results obtained.

Enclosed is the Anti-Drug Abuse Certification of the licensee. No filing fee is required for this type of request.

Please direct any questions regarding this matter to the undersigned.

Respectfully submitted,



Melodie A. Virtue

MAV:c11

Attachment

cc: James D. Bradshaw (pdf copy via email James.Bradshaw@fcc.gov)

FEDERAL COMMUNICATIONS COMMISSION
445 12th STREET, SW
WASHINGTON, DC 20554

MEDIA BUREAU
AUDIO DIVISION
APPLICATION STATUS: (202) 418-2730
HOME PAGE: www.fcc.gov/media/radio/audio-division/

PROCESSING ENGINEER: Priscilla M. Lee
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March 25, 2020

Melodie A. Virtue, Esq.
Garvey Schubert Barer
1000 Potomac Street, NW
Suite 200
Washington, DC 20007-3501

Re: KING-FM, Seattle, Washington
Classic Radio
Facility ID No.: 11755
File No. 20200309AAR

Request for Experimental Authority

Dear Counsel:

The staff has under consideration the above-referenced March 9, 2020 request for experimental authority submitted on behalf of Classic Radio, licensee of noncommercial educational FM station KING-FM, Seattle, Washington,¹ to permit KING-FM to continue to conduct testing of hybrid digital FM in-band on-channel (IBOC) operation with asymmetric power levels in the digital sidebands.² The experimental authority is requested pursuant to Section 5.203 of the Commission's Rules.³

The request states that Classic Radio is seeking experimental authority to operate KING-FM with lower sideband (LSB) digital effective radiated power (ERP) of -10 dBc⁴ and upper sideband (USB) digital ERP of -14 dBc. In support of its request, Classic Radio submitted an engineering study showing that the proposed operation complies fully with the contour nonoverlap requirements of the Media Bureau's *Order* adopted January 27, 2010, in MM Docket No. 99-325⁵ for operation with -10 dBc LSB digital ERP.

¹ File Number BMLED-20110502AEJ

² Classic Radio is requesting a new experimental authority to continue with the asymmetric power digital sideband operation. KING-FM's current experimental authority expires on 4/6/2020.

³ 47 CFR § 5.203 (Section 5.203).

⁴ Decibels relative to analog carrier.

⁵ See *Digital Audio Broadcasting Systems And Their Impact on the Terrestrial Radio Broadcast Service*, Order, 25 FCC Rcd 1182 (2010) ("*Order*").

Our review indicates that the proposed Station KING-FM operation complies with the contour nonoverlap and other technical requirements of the *Order*⁶ and the request for experimental authority meets the requirements for experimental operations set forth in Section 5.203. Accordingly, the request is HEREBY GRANTED. Station KING-FM may operate with increased digital ERP as follows:

Analog ERP:	68 kilowatts (kW) Max-DA, H&V ⁷
Digital LSB ERP: ⁸	3.4 kW
Digital USB ERP:	1.35 kW

This experimental authority expires on **March 25, 2021**. This authority is specifically conditioned on the lack of objectionable interference. A report detailing the methodology employed and the results obtained must be submitted within 90 days following the conclusion of the experimental operation. Any request for extension of this experimental authority should be filed at least 30 days prior to the expiration date of the authority. Additionally, an extension request must include an interim version of the aforementioned report that details the progress of the experimental operation as of the filing date of the request.

Sincerely,

Rodolfo F. Bonacci
Assistant Division Chief
Audio Division
Media Bureau

cc: Classic Radio via email
Erik Swanson via email

⁶ *Id.*

⁷ All ERP values rounded in accordance with 47 CFR § 73.212(a).

⁸ Digital ERP values shown are for MP1 service mode. The licensee must adjust the station's asymmetric total digital sideband ERP values in accordance with NRSC guideline "NRSC-G202-A, FM IBOC Total Digital Sideband Power for Various Configurations" (April 2016) if operating using a service mode other than MP1.

98.1 KING FM
363 Mercer St., Ste 200
Seattle, WA 98109
RE: Renewal of Experimental Request 20200309AAR

February 9, 2021

Regarding 98.1 KING FM's Experimental Authorization granted by the FCC on March 25, 2020, KING FM respectfully submits the following report and request pursuant to the conditions of the Experimental Authority.

KING FM has operated with Asymmetrical Hybrid IBOC sidebands fulltime since authority was first granted on April 13, 2015 for a total of 51,048 hours. The transmitter used is a Nautel GV-30 with 68 Kilowatts ERP of analog power, Digital LSB of -10dBc (6.8kW) and -14dBc (2.7kW). KING FM currently operates with two IBOC channels with data streams of 96kbps (HD-1) and 16kbps (HD-2).

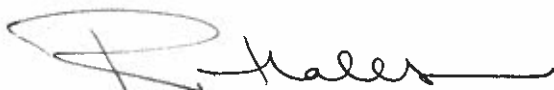
During six years of experimental HD broadcasts KING FM has seen an increased public awareness of our HD signals and HD technology in general. We affirm this is due to the improvement in our HD transmission and the abundance of HD receivers in the marketplace, most notably in vehicles. Statistics presented by HD Radio (via <https://hdradio.com/broadcasters>) show that there are more than 253 different vehicle models available with HD Radio and all major automakers are shipping vehicles equipped with HD Radio to North America. Reports from KING FM listeners suggest a large majority of HD Radio listening is done in cars.

Informal listening tests indicate that the optimized signal strength of HD allows the IBOC signal to more closely match the analog FM transmission (see Exhibit A). KING FM has continued its testing using 2 dedicated Inovonics 632 receivers and 2 small HD receivers (1 each Boston and Accurian) located within our studio facility, as well as 3 HD automobile receivers. All seven receivers demonstrated a marked improvement in outdoor reception and building/tunnel permeation.

Ongoing testing and monitoring over six years has shown no objectionable broadcast interference or degradation was caused during the course of KING FM's experimental broadcasts and that all transmissions remained within the parameters of KING FM's license. An extension of KING FM's experimental authorization will allow KING FM to continue providing feedback to Nautel on the efficacy of the asymmetrical sideband operation of its transmitter.

With the above results and findings taken into account, KING FM proposes to the Federal Communications Commission that it continues operating with asymmetrical sidebands at the ERP granted in our latest experimental license. During this operation, KING FM will continue to closely monitor signal reports and ensure that its transmissions comply with the contour nonoverlap and other technical specifications of our license.

Thank you for your consideration,



Rachele Hales
Operations Director
Classic Radio & 98.1 KING FM
Facility ID No. 11755

Exhibit A

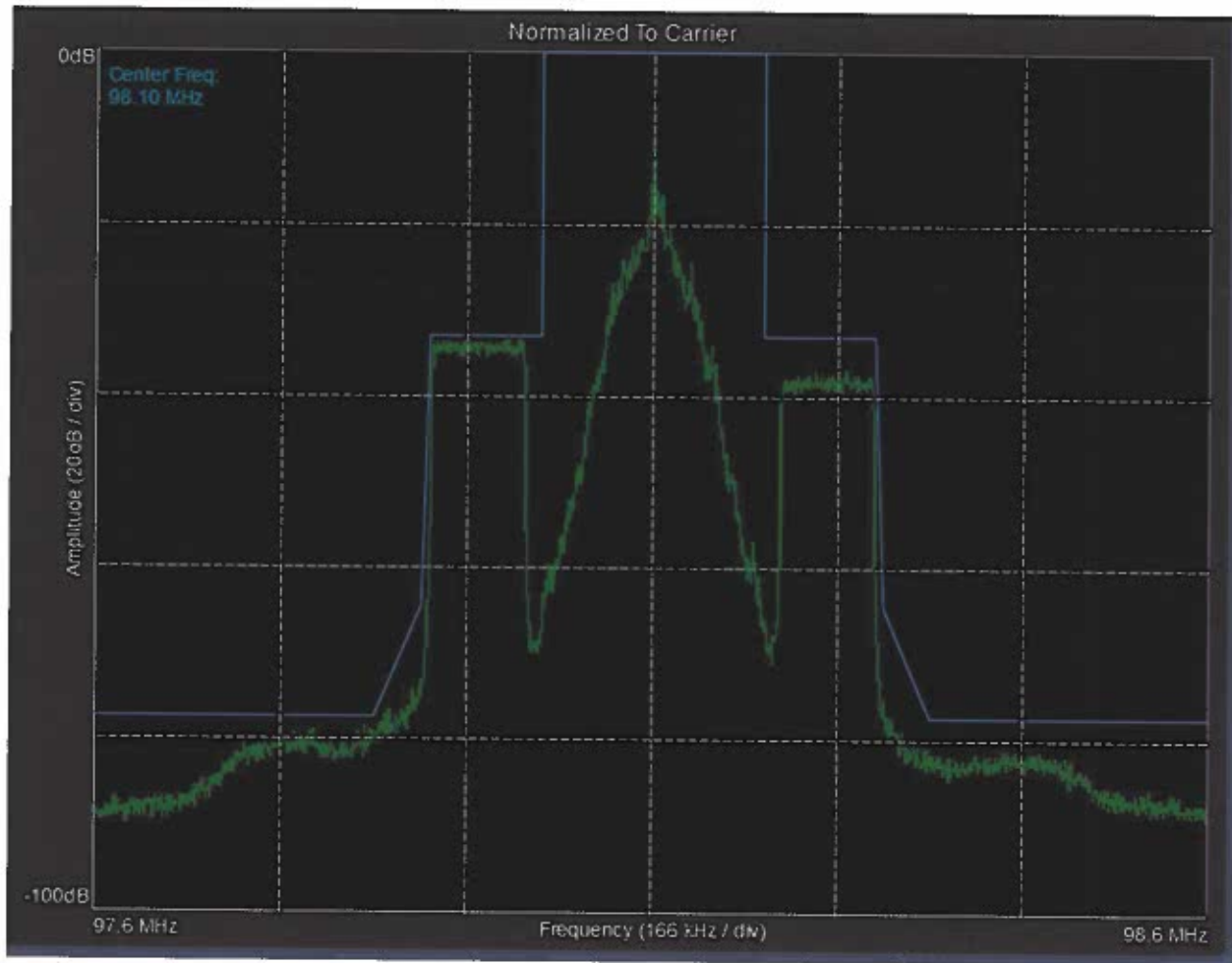


Exhibit A Spectrum analyzer image from Nautel HD Transmitter User Interface showing relationship between KING FM's main analog carrier and asymmetrical sidebands in Seattle, WA (2021)

ANTI -DRUG ABUSE CERTIFICATION

The applicant certifies that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. §862a, or, in the case of a non-individual applicant (e.g. corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. §1.2002(b).

☒ Yes

☐ No

Name of Applicant:

Classic Radio

Signature:



Title:

CEO

Date:

2-9-21