Foster Garvey

1000 Potomac Street N.W.
Suite 200
Washington, D.C. 20007

Main: 202.965.7880
Fax: 202.965.1729
foster.com

Direct Phone: 202.298.2527
melodie.virtue@foster.com

July 6, 2020

VIA EMAIL DELIVERY: Rodolfo.Bonacci@FCC.gov

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

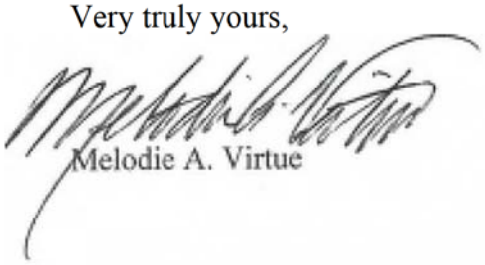
Re: ***Final Report Detailing the Methodology Employed and the Results Obtained for its Experimental Authorization to Use Hybrid Digital FM In-Band On-Channel with Asymmetric Power in the Digital Sidebands***
Radio Station KING-FM(NCE), Seattle, WA
Facility ID No. 11755
Classic Radio
File Nos. 20150403ABZ, 20160310ABH, 20170306AJF, 20180305ABG, and 20190304AEZ

Dear Mr. Bonacci:

Transmitted herewith on behalf of Classic Radio, licensee of Station KING-FM, Seattle, Washington, pursuant to FCC Rule 5.203(d), is its final report detailing the methodology employed and the results obtained regarding KING-FM's experimental operation initially granted on April 13, 2015 in 20150403ABZ that concluded on April 6, 2020. A copy of the last extension of the experimental authority requiring that a final report be filed is attached for convenience. (Note that Classic Radio obtained a new experimental authorization in FCC File No. 20200309AAR, granted March 25, 2020, starting a new five-year period.)

Should you have any questions regarding this matter, kindly communicate directly with this office.

Very truly yours,



Melodie A. Virtue

MAV:cll
Attachment
cc: Priscilla Lee (pdf copy via email Priscilla.Lee@fcc.gov)

98.1 KING FM
363 Mercer Street, Suite 200
Seattle, WA 98109
RE: Final Report of Experimental Request 20150403ABZ

June 24, 2020

Regarding 98.1 KING FM's Experimental Authorization granted by the FCC on April 13, 2015, KING FM respectfully submits the following final report pursuant to the grant of KING FM's Experimental Authority.

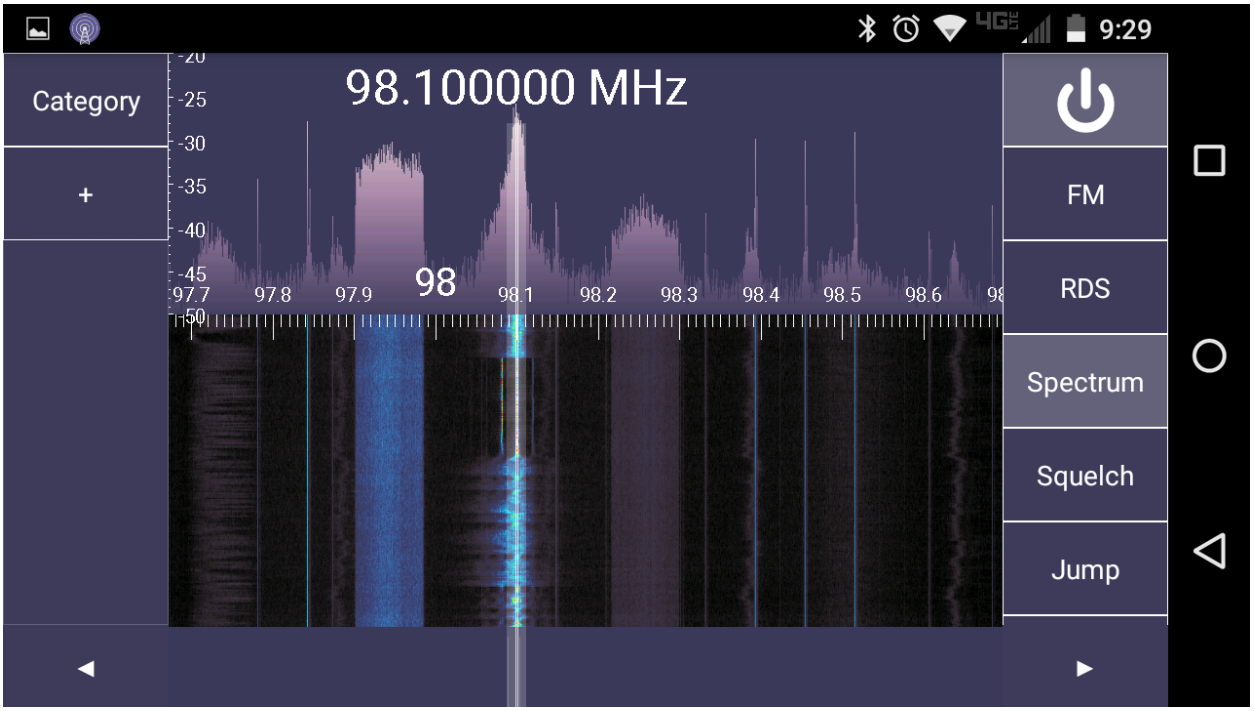
KING FM has operated with Asymmetrical Hybrid IBOC sidebands full-time since authority was granted on April 13, 2015, for a total of 45,452 hours. The transmitter used is a Nautel GV-30 with 68 Kilowatts ERP of analog power, digital LSB of -10dBc (6.8kW) and USB of -14dBc (2.7 kW). From April 13 2015 – May 19 2019 KING FM operated with three IBOC channels with data streams of 64kbps, 32kbps, 24kbps. From May 20 2019 – present KING FM has operated with two IBOC channels with data streams of 67kbps and 32kbps.

During the five 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 cars. According to www.HDRadio.com, currently there are 40 automobile manufactures that include HD receivers in a car dashboard as standard equipment. Reports from KING FM listeners suggest a large majority of HD listening is done in cars.

Informal listening tests indicate that the increased HD signal strength allows the IBOC signal to more closely match the analog FM transmission (see Exhibit A & Exhibit B). KING FM has continued its testing using 2 HD automobile receivers as well as a small personal HD receiver; all three receivers demonstrated a marked improvement in outdoor reception and building/tunnel permeation. KING FM has also used two Inovonics 632 HD receivers and two consumer-grade tabletop receivers (brands are Boston and Accurian) to monitor HD signals from the studio facility.

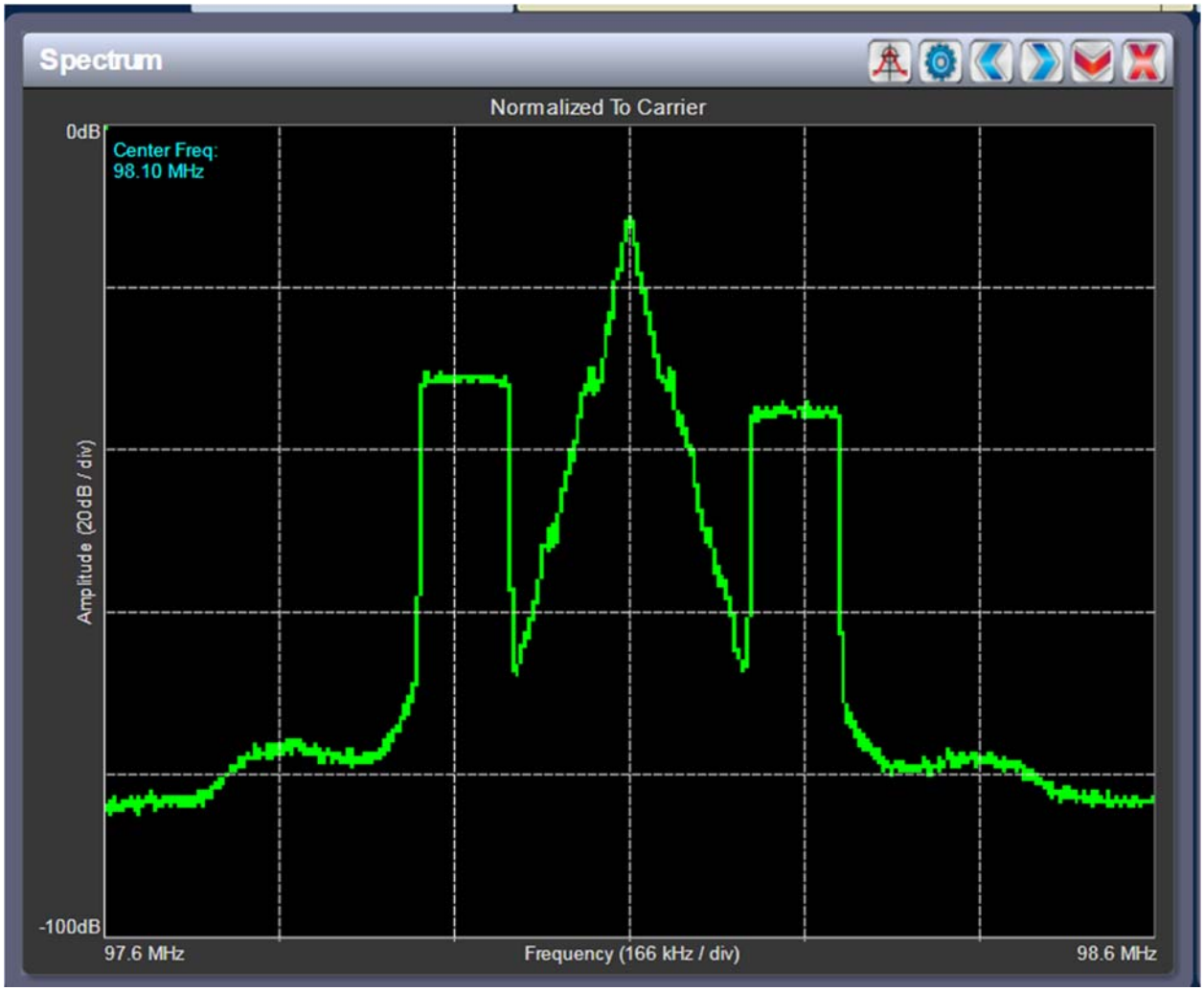
Five years of testing and monitoring has demonstrated that no broadcast interference or degradation was caused during the course of KING FM's experimental broadcasts and that all transmissions remained within the parameters of our license.

Exhibit A



Spectrum analyzer image taken with SDR Touch showing relationship between KING FM's main analog carrier and asymmetrical sidebands in Seattle, WA (2019)

Exhibit B



Spectrum analyzer image from Nautel HD Transmitter User Interface showing relationship between KING FM's main analog carrier and asymmetrical sidebands in Seattle, WA (2020)

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
TELEPHONE: (202) 418-2957
GROUP FACSIMILE: (202) 418-1411
INTERNET ADDRESS: Priscilla.Lee@fcc.gov

March 15, 2019

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. 20190304AEZ

Request for Extension of Experimental Authority

Dear Counsel:

The staff has under consideration the above-referenced March 4, 2019 request for extension of experimental authority[1] submitted on behalf of Classic Radio, licensee of noncommercial educational FM station KING-FM, Seattle, Washington,[2] 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. The extension of experimental authority is requested pursuant to Section 5.203 of the Commission's Rules.[3]

The request states that Classic Radio is seeking continued experimental authority to operate KING-FM with lower sideband (LSB) digital effective radiated power (ERP) of -10 dBc[4] (3.4 kW) and upper sideband (USB) digital ERP of -14 dBc (1.35 kW).[5] In support of the extension request, as required, Classic Radio submitted an interim report of the methodology used and results obtained during the current experimental operation. Classic Radio states that it has continued listening tests on the experimental operation and finds that the digital operation using asymmetric digital sideband powers has

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[1] File No. 20150403ABZ (granted 4/13/2015), as extended by File Nos. 20160310ABH, 20170306AJF, and 20180305ABG

[2] File Number BMLED-20110502AEJ

[3] 47 CFR § 5.203 (Section 5.203).

[4] Decibels relative to analog carrier.

[5] Analog ERP is 68 kilowatts ("kW"), H&V

increased the KING-FM digital coverage to more closely match the KING-FM analog coverage. Finally, Classic Radio indicates that there have been no complaints of interference from any party.

Classic Radio request for extension of experimental authority for KING-FM meets the requirements for experimental operations set forth in Section 5.203. Accordingly, the extension request is HEREBY GRANTED. This experimental authority expires on **April 6, 2020.** 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.

Pursuant to Section 5.71(c) of the Commission's rules, a broadcast experimental authorization is issued for a one year period and may be renewed for an additional term not exceeding five years upon an adequate showing of need.[6] Upon expiration of this experimental authority, KING-FM's experimental operation using asymmetric digital sideband powers will have reached the five year renewal limit set forth in Section 5.71(c), and no further renewals of this authority will be granted.

Sincerely,

Rodolfo F. Bonacci
Assistant Division Chief
Audio Division
Media Bureau

cc: Classic Radio

[6] 47 CFR § 5.71(c) (Section 5.71(c)).