



Request for Extension of
Experimental Authorization:
NCE Station WJSP-FM, Warm Springs, GA. ID
23927 to WSJP-FM

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STAMP & RETURN

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December 19, 2018

Accepted / Filed

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554
ATTN: Media Bureau, Audio Division

DEC 19 2018

Federal Communications Commission
Office of the Secretary

Re: Request for Extension of Experimental Authorization
Georgia Public Telecommunications Commission
NCE Station WJSP-FM, Warm Springs, GA (Fac. ID 23927)

Dear Ms. Dortch:


On behalf of Georgia Public Telecommunications Commission ("GPTC"), licensee of noncommercial educational radio station WJSP-FM, Warm Springs, Georgia, we respectfully request a twelve (12) month extension, up to and including January 25, 2020, for the experimental authorization previously granted to allow testing of hybrid digital FM in-band on-channel ("IBOC") operation with asymmetrical power levels in the digital sidebands. See FCC File No. 20171219AEY. This request is submitted pursuant to Section 5.203, *et. seq.*, of the FCC's Rules, 47 C.F.R. §5.203.

The FCC granted the initial experimental authorization for this operation by letter dated January 23, 2015 (FCC File No. 20130617ACS), and most recently granted an extension on January 25, 2018 (File No. 20171219AEY, copy enclosed). The authorization is currently due to expire on January 25, 2019. In connection with this request for extension of the experimental authorization, GPTC provides the enclosed interim report detailing progress, methodology employed and the results obtained in connection with WJSP-FM's authorized IBOC operation with asymmetrical power levels in the digital sidebands.

GPTC respectfully submits that the public interest will be well served by the requested extension for WJSP-FM's continued experimental authorization by permitting GPTC to obtain additional experience and continue to provide improved service to its local community with IBOC operation including asymmetrical power levels in the digital sidebands.

GPTC hereby certifies that GPTC, nor any party to the application, is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862. Should any questions arise concerning this matter, kindly contact this office.

Sincerely,


Barry S. Persh

Enclosures

cc: Susan N. Crawford, FCC (Susan.Crawford@fcc.gov)

**TECHNICAL STATEMENT OF JEFFREY C. GEHMAN OF THE FIRM OF
KESSLER AND GEHMAN ASSOCIATES, INC., CONSULTING ENGINEERS
IN SUPPORT OF THE FILING BY
GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION
REGARDING A REQUEST FOR EXTENSION OF
EXPERIMENTAL AUTHORIZATION TO OPERATE ITS
WJSP FM STATION WITH ASYMMETRICAL HD RADIO SIDEBANDS**

This Technical Statement has been prepared in support of the filing by Georgia Public Telecommunications Commission ("GPTC") to request extension of the experimental authorization to operate asymmetrical FM HD sidebands at its Warm Springs GA station WJSP.

On December 17th, 2018 a field observations campaign was performed by Jeffrey C. Gehman to compare WJSP FM's licensed -14 dB symmetrical HD Radio sidebands to its current experimental authorization's asymmetrical sidebands of -14 dB upper sideband and -10 dB lower sideband and record the real-world difference of the higher-powered lower sideband.

A 188-mile route was pre-established from the southern extent of WJSP coverage area past the WJSP transmit site to its northern coverage area extent, along with convenient, safe pull-off sample locations along the route spaced approximately every 5 miles. The route was then driven twice on the same day (12/17/18), once from south-to-north while the station's transmitter was set to the licensed -14 dB symmetrical HD Radio sidebands, and then again from north-to-south while the station's transmitter was set to the experimental authorization's asymmetrical sidebands of -14 dB upper sideband and -10 dB lower sideband. For both drives the transmitter output power was set at 100%. The WJSP signal was observed using the stock stereo receiver head unit in a 2019 Cadillac XT5 with HD Radio. A chart of the results is included below as Figure 1. These results demonstrate that a significant improvement in HD reception was observed and logged over an approximately 10-mile stretch in the SE portion of the coverage area in the vicinity of Vienna/Lilly/Byromville, GA and the 15-mile stretch in the northern portion of the coverage area in the vicinity of Atlanta and Sandy Springs, GA.

Legend for Figure 1

Observation rating 1 = No WJSP FM signal at all or very poor

Observation rating 2 = No WJSP FM HD, analog sketchy

Observation rating 3 = No WJSP HD, analog solid

Observation rating 4 = WJSP HD received but unreliable, in and out

Observation rating 5 = WJSP HD perfect / reliable

Sample locations where the Asymmetrical signal was superior

Figure 1

Sample Location #	Logged rating of the observed FM HD reception with -14 dB symmetrical sidebands (100% TPO)	Logged rating of the observed FM HD reception with -14 dB upper sideband and -10 dB lower sideband (100% TPO)	Sample location distance from WJSP TX site (miles)
1	4	4	80.2
2	5	5	76.7
3	2	3	72.5
4	4	5	68.4
5	5	5	64.1
6	5	5	59.0
7	5	5	54.5
8	5	5	50.8
9	5	5	46.5
10	5	5	41.3
11	5	5	37.0
12	5	5	35.3
13	5	5	31.7
14	5	5	27.1
15	5	5	22.8
16	5	5	18.6
17	5	5	14.2
18	5	5	10.4
19	5	5	6.3
20	5	5	2.6
21	5	5	2.0
22	5	5	5.8
23	5	5	10.8
24	5	5	15.7
25	5	5	20.5
26	5	5	25.6
27	5	5	30.5
28	5	5	32.5
29	5	5	37.6
30	5	5	40.7
31	5	5	44.8
32	5	5	48.3
33	5	5	51.6
34	5	5	55.4
35	2	2	59.6
36	2	4	64.9
37	2	4	69.0
38	4	5	75.1
39	2	2	77.3

The attached **Exhibit 1** is a map exhibit showing **1)** the campaign route, **2)** WJSP FM's 60 dBu coverage contour, **3)** an 80-mile radius reference contour which was previously established as the outermost fringe where WJSP FM's analog signal ceases to be received, and **4)** the Sample Locations, including the locations where asymmetrical sideband HD reception was superior to symmetrical sideband reception; these locations are highlighted **green**.

In conclusion, operation of WJSP FM's higher powered -10 dB lower asymmetrical sideband results in a significant reception improvement which more closely replicates WJCT FM's analog reception. Therefore, it is believed that the requested renewal of the experimental authorization is justified.

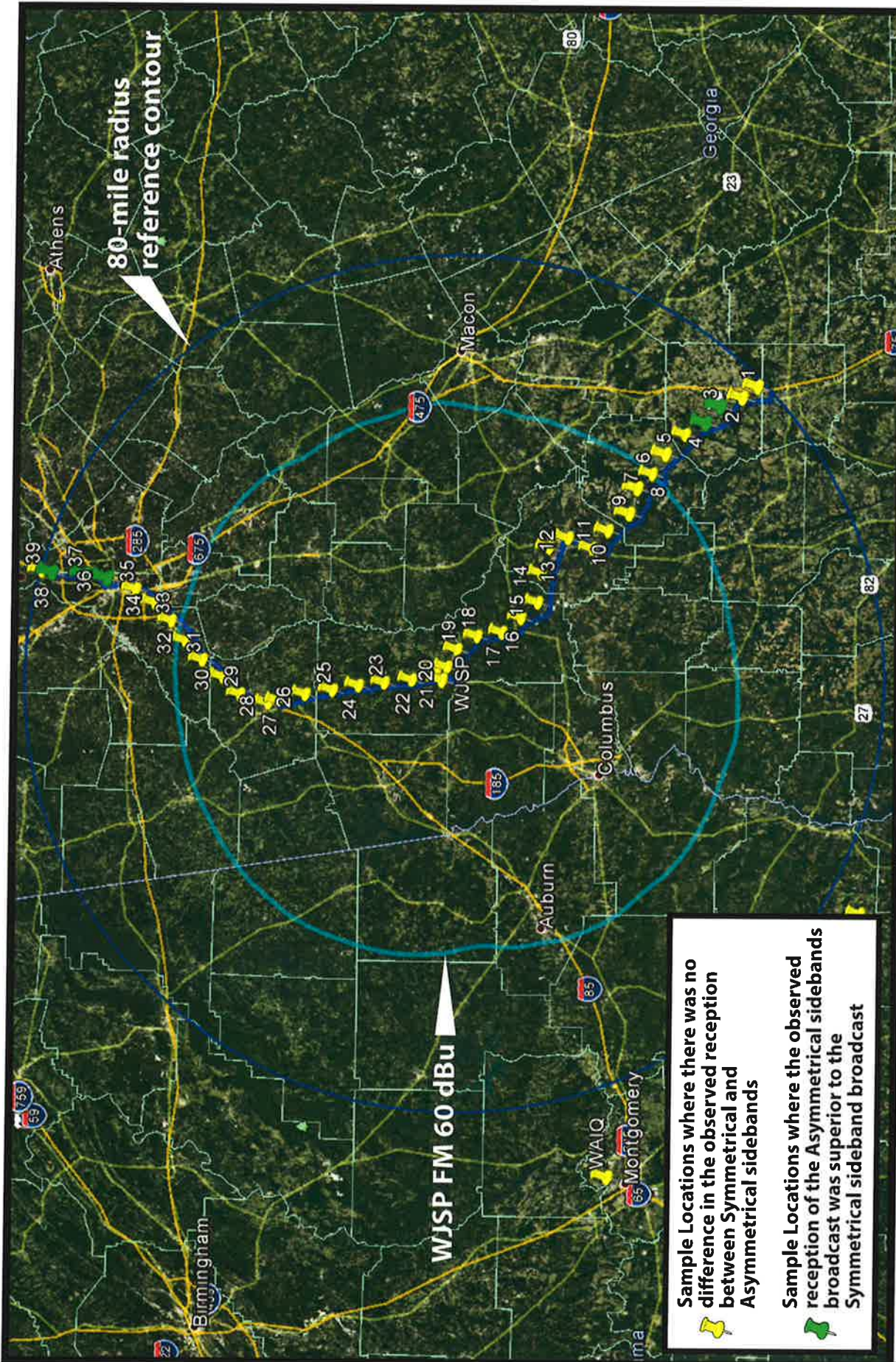
This technical statement has been prepared by Jeffrey C. Gehman who is an associate of Kessler and Gehman Associates, Inc. with offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1986. He states under penalty of perjury that the information contained in this statement is true and correct to the best of his knowledge and belief.

KESSLER AND GEHMAN ASSOCIATES, INC.



Jeffrey C. Gehman
Engineering Associate

December 18, 2018



GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION
 WJSP-FM WARM SPRINGS, GEORGIA

20181218

Exhibit 1

Sample Locations where there was no difference in the observed reception between Symmetrical and Asymmetrical sidebands
 Asymmetrical sidebands

Sample Locations where the observed reception of the Asymmetrical sidebands broadcast was superior to the Symmetrical sideband broadcast
 Symmetrical sideband broadcast

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MEDIA BUREAU
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January 25, 2018

Barry S. Persh, Esq.
Gray Miller Persh LLP
1200 New Hampshire Avenue, NW
Suite 410
Washington, DC 20036

Re: WJSP-FM, Warm Springs, Georgia
Georgia Public Telecommunications
Commission
Facility ID No. 23927
File No. 20171219AEY

**Request for Extension of
Experimental Authority**

Dear Counsel:

The staff has under consideration the above-referenced December 19, 2017, request for extension of experimental authority (Request),¹ submitted on behalf of Georgia Public Telecommunications Commission (GPTC), licensee of noncommercial educational FM Station WJSP-FM, Warm Springs, Georgia,² to permit WJSP-FM to continue to conduct testing of hybrid FM in-band on-channel (IBOC) operation with asymmetric power levels in the digital sidebands. The experimental authority is requested pursuant to Section 5.203 of the Commission's Rules.³

The Request states that GPTC seeks extension of its experimental authority to operate WJSP-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 the Request, as required, GPTC submitted an interim report detailing the methodology employed and the progress and results of its testing under the current experimental authorization. GPTC reports that recent drive testing throughout the WJSP-FM service area showed that there is significant improvement in digital reception resulting from the increased LSB digital ERP operation, and that the improved digital reception closely replicates WJSP-FM's analog reception.

¹ File No. 20161215ACH (Original underlying experimental authority is File No. 20151216ASL).

² File Number BLED-20131101AGM. WJSP-FM, Facility ID No. 23927, is licensed to operate on channel 201C (88.1 megahertz) using 100 kilowatts (kW) effective radiated power (ERP), a circularly polarized directional antenna, and 461 meters antenna radiation center height above average terrain, at a transmitter site described by geographic coordinates 32° 51' 08" North Latitude, 84° 42' 04" West Longitude, referenced to 1927 North American Datum.

³ 47 CFR § 5.203 (Section 5.203).

⁴ Decibels relative to analog carrier.

Our review of the Request indicates that the proposed WJSP-FM experimental operation complies with the contour nonoverlap and other technical requirements of the Media Bureau's Order, adopted January 27, 2010, in Mass Media Docket No. 99-325,⁵ and the Request meets the requirements for experimental operations set forth in Section 5.203. Accordingly, the Request **IS HEREBY GRANTED**. Station WJSP-FM may operate with digital ERP as follows:

Analog ERP:	100 kilowatts (kW), Max-DA, H&V ⁶
LSB Digital ERP: ⁷	5.0 kW
USB Digital ERP:	2.0 kW.

This experimental authority expires on **January 25, 2019**. 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,



Susan N. Crawford
Senior Engineer
Audio Division
Media Bureau

cc: Georgia Public Telecommunications Commission

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

⁶ All ERP values rounded in accordance with 47 CFR § 73.212(a).

⁷ 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.