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May 12, 2021

Submitted via Email

Media Bureau, Audio Division
Federal Communications Commission
45 L Street, N.E.
Washington, D.C. 20554

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 June 11, 2022, 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. 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 experimental authorization for this operation by letter dated June 11, 2020 (FCC File No. 20200505AAD), copy attached. The authorization is currently due to expire on June 11, 2021. In connection with this request for extension of the experimental authorization, GPTC provides the enclosed documentation/previous technical materials detailing methodology employed and the results obtained in connection with WJSP-FM’s ongoing 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 neither 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 Persh
Barry S. Persh

Enclosures

cc: Priscilla M. Lee, Priscilla.Lee@fcc.gov
Rodolfo Bonacci, Rodolfo.Bonacci@fcc.gov

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

MEDIA BUREAU
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June 11, 2020

Derek Teslik, Esq.
Gray Miller Persh LLP
2233 Wisconsin Avenue, NW
Suite 226
Washington, DC 20007

Re: WJSP-FM, Warm Springs, Georgia
Georgia Public Telecommunications
Commission
Facility ID No. 23927
File No. 20200505AAD

Request for Experimental Authority

Dear Mr. Teslik:

The staff has under consideration the May 5, 2020 request for experimental authority (Request), submitted on behalf of Georgia Public Telecommunications Commission (GPTC), licensee of noncommercial educational FM Station WJSP-FM, Warm Springs, Georgia,¹ to permit WJSP-FM 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.²

The Request states that GPTC is seeking experimental authority to operate WJSP-FM with lower sideband (LSB) digital effective radiated power (ERP) of -10 dBc³ and upper sideband (USB) digital ERP of -14 dBc.⁴ In support of the Request, GPTC submitted an engineering study showing that the proposed operation complies fully with the contour

¹ File Number BLED-20131101AGM. Station WJSP(FM), Facility ID No. 23927, is licensed to operate on channel 201C (88.1 megahertz) using 100 kilowatts (kW) ERP circularly polarized directional antenna at 461 meters antenna radiation center height above average terrain.

² 47 CFR § 5.203 (Section 5.203).

³ Decibels relative to analog carrier.

⁴ Analog ERP is 100 kW, H&V

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.

Our review indicates that the proposed Station WJSP-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 WJSP-FM may operate with increased digital ERP as follows:

Analog ERP:	100 kilowatts (kW) ⁷
Digital LSB ERP: ⁸	5.0 kW
Digital USB ERP:	2.0 kW

This experimental authority expires on **June 11, 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

Rodolfo F. Bonacci
Assistant Division Chief
Audio Division
Media Bureau

cc: Georgia Public Telecommunications Commission (via email)

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

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.

**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), licensee of noncommercial educational FM Station WJSP-FM, Warm Springs, Georgia,¹ to request permission for WJSP-FM 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.²

GPTC requests experimental authority to operate WJSP-FM with lower sideband (LSB) digital effective radiated power (ERP) of -10 dBc³ and upper sideband (USB) digital ERP of -14 dBc. In support of this request GPTC is submitting the methodology that will be employed for testing under the requested experimental authorization, as follows. Columbus, Georgia, a major community located within the 60 dBu contour, which is located on the Chattahoochee River. The Chattahoochee River is the state border between Georgia and Alabama and the border between the cities of Columbus and Phenix City, Alabama. The terrain elevations vary between 210 feet and 280 feet over short distances, which results in significant terrain shadowing in the areas of Columbus and Phenix City along the riverfront. GPTC will prepare terrain profile graphs and perform drive tests throughout Columbus and Phenix City to determine whether there is significant improvement in digital reception within the terrain shadowed areas resulting from the increased -10 dBc LSB operation compared to the -14 dBc LSB operation.

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 and the request meets the requirements for experimental

¹ 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.

² 47 CFR § 5.203 (Section 5.203).

³ Decibels relative to analog carrier.

operations set forth in Section 5.203. Accordingly, a request is being made to operate station WJSP-FM with digital ERP as follows:

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

A report detailing the methodology employed and the results obtained will be submitted following the conclusion of the experimental operation.

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

May 1, 2020

**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 THE CONCLUSION OF
THE 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 conclude the experimental authorization to operate asymmetrical FM HD sidebands at its Warm Springs GA station WJSP-FM.

On April 28th, 2020 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 156-mile route was pre-established from outside the southern extent of WJSP-FM coverage area into and around Columbus GA, along with convenient, safe pull-off sample locations along the route spaced approximately every 14.3 miles outside the urban area and then approximately every 2.7 miles in the combined Columbus GA / Phenix City AL urban area. The route was then driven twice on the same day (4/28/20), 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. The transmitter’s RF output power was set them same for both drives, 18.5 kW. The WJSP-FM signal was observed using the OEM stereo receiver head unit in a 2019 Cadillac XT5 with HD Radio capability. 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 at sample location 6 in Richland GA which is approximately 52.7 miles due south of the WJSP-FM transmit site and 0.4 miles outside the WJSP-FM 60 dBu service contour. It was observed that the WJSP-FM HD signal is robust throughout the Columbus GA / Phenix City AL urban area canvassed during the campaign, with the transmitter set at both its licensed -14 dB symmetrical HD Radio sidebands and its experimental authorization’s asymmetrical sidebands of -14 dB upper sideband and -10 dB lower sideband.

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-FM HD, analog solid
- Observation rating 4** = WJSP-FM HD received but unreliable, in and out

Observation rating 5 = WJSP-FM HD perfect / reliable
Sample location(s) 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-FM TX site (miles)
1	1	1	104.2
2	1	1	90.5
3	1	1	80.7
4	1	1	75.8
5	2	2	66.9
6	3	5	52.7
7	5	5	38.3
8	5	5	33.4
9	5	5	32.1
10	5	5	32.6
11	5	5	32.3
12	5	5	29.4
13	5	5	26.3
14	5	5	26.9
15	5	5	28.6
16	5	5	29.5
17	5	5	31.3
18	5	5	29.0
19	5	5	29.0
20	5	5	23.7

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 location(s) 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 WJSP-FM’s analog reception. Therefore, it is believed that the experimental authorization was justified and successful.

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

April 28, 2020

