



File # SAT-STA-20210216-00022

Call Sign S3033 Grant Date March 11, 2021
(or other identifier)

Approved by OMB
3060-0678

Term Dates
From February 23, 2021 To: period of 30 days

Approved: Merissa L. Velez
Merissa L. Velez
Chief, Satellite Policy Branch

Date & Time Filed: Feb 16 2021 9:48:53:013AM
File Number: SAT-STA-20210216-00022
Callsign:

*with conditions

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
SXM-7 Testing and Drift STA Extension Feb 2021

1. Applicant

Name:	Sirius XM Radio Inc.	Phone Number:	202-380-4000
DBA Name:		Fax Number:	202-380-4981
Street:	1221 Avenue of the Americas 35th Floor	E-Mail:	James.Blitz@siriusxm.com
City:	New York	State:	NY
Country:	USA	Zipcode:	10002 -
Attention:	James S. Blitz		

ATTACHMENT TO GRANT
 Sirius XM Radio Inc.
 IBFS File No. SAT–STA–20210216–00022

IBFS File No(s):	SAT–STA–20210216–00022	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	Sirius XM Radio Inc.	
Call Sign:	S3033	
Satellite Name:	SXM-7	
Orbital Location: (required station-keeping tolerance)	120.5° W.L. (±0.10 degrees east/west)	
Administration:	United States of America	
Nature of Service:	Satellite Digital Audio Radio Service (SDARS)	
Scope of Grant:	Special temporary authority for a period of 30 days to : (1) continue to perform in-orbit testing (IOT) of SXM-7 at the 120.5° W.L. orbital location rather than the 120.0° W.L. orbital location; ¹ (2) continue to conduct IOT in the 2315-2320 MHz and 2345-2350 MHz frequency bands; ² and (3) to perform Telemetry, Tracking, and Command (TT&C) operations necessary to maintain SXM-7 at 120.5° W.L. and drift SXM-7 to the 115.25° W.L. orbital location upon completion of IOT. ³	
Service Area(s):	Not Applicable.	
Frequencies:	Testing frequencies: 2315-2320 MHz (space-to-Earth) (Wireless Communications Service (WCS) C Block) 2320-2345 MHz (space-to-Earth) (SDARS) 2345-2350 MHz (space-to-Earth) (WCS D Block) 7025-7075 MHz (Earth-to-space) (Feeder Link)	

¹ Along with authority to construct, deploy, and operate the SXM-7 space station, Sirius XM was granted authority to perform IOT of SXM-7 at the 120.0° W.L. orbital location. Sirius XM Radio Inc., Application for Authority to Launch and Operate SDARS Replacement Spacecraft at 85.15° W.L., IBFS File No. SAT–RPL–20180430–00033 (grant stamp, October 3, 2018) (*SXM-7 License*). This grant authorizes Sirius XM to perform IOT at a different orbital location, 120.5° W.L.

² These frequency bands were not included in the original grant of authority for SXM-7. *See id.* Grant of special temporary authority for IOT using these frequency bands does not alter the frequencies authorized under the *SXM-7 License*.

³ We note that Sirius XM has indicated that during IOT it discovered issues affecting SXM-7’s operations. Thus, Sirius XM requests further extension of STA for testing in the instant application, however, it now plans to drift the satellite to the 115.25° W.L. orbital location upon completion of IOT, instead of its originally assigned orbital location of 85.15° W.L., pursuant to the flexibility afforded by condition 12 of the *SXM-7 License*. *See* Letter from Karis A. Hastings, Counsel for Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, dated February 26, 2021, in IBFS File No. SAT–STA–20210216–00022. The original planned drift of SXM-7 from 120.5° W.L. to 85.15° W.L., for which TT&C operations were authorized as part of the prior STA grants, would have resulted in drift of the satellite over a longer distance along the geostationary arc.

Sirius XM also updated technical parameters for its IOT operations on March 5, 2021, indicating (1) that, as part of IOT, it will be performing tests in which power would be applied to only eight traveling wave tube amplifiers (TWTAs) instead of the typical sixteen TWTAs powered for a nominal XM channel; (2) that this testing configuration results in transmitting a signal in linear polarization rather than circular polarization at a power level 3 dB less than the nominal XM channel; and, (3) that the frequencies used for testing will remain fully within the SDARS band, and out-of-band emissions will not be affected. *See* Letter from Karis A. Hastings, Counsel for Sirius XM Radio Inc., to Marlene H. Dortch, Secretary, FCC, dated March 5, 2021, also in IBFS File No. SAT–STA–20210216–00022 (Sirius XM March 5 Letter). Sirius XM states that based on a review of publicly-available sources, the only satellites using the SDARS band within ±10 degrees of 120.5° W.L. are operated by Sirius XM affiliates, and that the change will not adversely affect any other party, nor is it expected to affect the ongoing operations of any other Sirius XM satellite. *Id.*

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	TT&C frequencies: 2320-2345 MHz (space-to-Earth) 7025-7075 MHz (Earth-to-space)
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Operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with the Federal Communications Commission's rules not waived herein. This grant is also subject to the following conditions:

1. All operations under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, *i.e.*, Sirius XM must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating station.
2. In the event of any harmful interference under this grant of special temporary authority, Sirius XM must cease operations immediately upon notification of such interference and must inform the Commission, in writing, immediately of such an event.
3. Sirius XM must coordinate the operations of SXM-7 with existing geostationary space stations to ensure that no unacceptable interference results from its operations at the 120.5° W.L. orbital location or during drift from the 120.5° W.L. orbital location to the 115.25° W.L. orbital location.
4. SXM-7's operations at the 120.5° W.L. orbital location must be limited to IOT and must not include the provision of commercial services.
5. Sirius XM must operate only the TT&C frequencies on SXM-7 during the space station's drift from the 120.5° W.L. orbital location to the 115.25° W.L. orbital location.
6. In order to minimize interruptions to IOT operations due to stationkeeping maneuvers, Sirius XM requests a waiver of section 25.210(j) of the Commission's rules, 47 CFR § 25.210(j), to permit Sirius XM to maintain SXM-7 with a ±0.10 degree stationkeeping tolerance during IOT, as it requested in the SXM-7 license application.⁴ We grant this waiver and permit Sirius XM to operate SXM-7 at 120.5° W.L with this ±0.10 degree stationkeeping tolerance subject to the same conditions we imposed in the *SXM-7 License*.⁵ During in-orbit testing, Sirius XM must maintain the SXM-7 space station within an east-west longitudinal station-keeping tolerance of ±0.10 degrees of the 120.5° W.L. orbital location.
7. Except for the orbital location, the addition of the 2315-2320 MHz (space-to-Earth) and 2345-2350 MHz (space-to-Earth) frequency bands for IOT, and a testing configuration specific to IOT,⁶ all operations of SXM-7 under this authorization must comport with the conditions imposed in the *SXM-7 License*.⁷

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

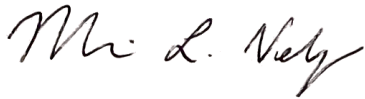
⁴ *SXM-7 License* at 2-3.

⁵ *Id.* at 2 n.1.

⁶ *See supra note 3*; Sirius XM March 5 Letter.

⁷ *See generally SXM-7 License.*

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Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).		
Action Date:	March 11, 2021	
Term Dates	From: February 23, 2021	To: period of 30 days
Approved:  Merissa L. Velez Chief, Satellite Policy Branch		

2. Contact	
Name: Karis Hastings	Phone Number: 202-599-0975
Company: SatCom Law LLC	Fax Number:
Street: 6930 Carroll Avenue Suite 720	E-Mail: karis@satcomlaw.com
City: Takoma Park	State: MD
Country: USA	Zipcode: 20912 -4499
Attention:	Relationship: Legal Counsel
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)	
3. Reference File Number SATSTA2020100200118 or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification CRY – Space Station (Geostationary)	
5. Type Request	
<input type="radio"/> Change Station Location <input checked="" type="radio"/> Extend Expiration Date <input type="radio"/> Other	
6. Temporary Orbit Location 120.5 W.L.	7. Requested Extended Expiration Date 2021-03-23 00:00:00.0

8. Description (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Sirius XM Radio Inc. seeks a further 30-day extension of the special temporary authority granted in File No. SAT-STA-20201002-00118 to test the SXM-7 satellite at 120.5 W.L. +/- 0.1 degrees and drift the satellite to 85.15 W.L. following the completion of testing. Additional testing is needed due to the discovery of payload issues with SXM-7. Sirius XM

9. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. Yes No

10. Name of Person Signing
James S. Blitz

11. Title of Person Signing
Vice President, Regulatory Counsel

12. Please supply any need attachments.

Attachment 1:

Attachment 2:

Attachment 3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

8. Description

Sirius XM Radio Inc. seeks a further 30-day extension of the special temporary authority granted in File No. SAT-STA-20201002-00118 to test the SXM-7 satellite at 120.5 W.L. +/- 0.1 degrees and drift the satellite to 85.15 W.L. following the completion of testing. Additional testing is needed due to the discovery of payload issues with SXM-7. Sirius XM incorporates by reference the supporting information provided in File No. SAT-STA-20201002-00118.