

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
STA Request to Test Gateway in Santa Clara, CA

**I. Applicant**

<b>Name:</b>	HNS License Sub, LLC	<b>Phone Number:</b>	301-428-5893
<b>DBA Name:</b>		<b>Fax Number:</b>	301-428-2818
<b>Street:</b>	11717 Exploration Lane	<b>E-Mail:</b>	jennifer.manner@echostar.com
<b>City:</b>	Germantown	<b>State:</b>	MD
<b>Country:</b>	USA	<b>Zipcode:</b>	20876 -
<b>Attention:</b>	Jennifer Manner		


30 days "Extension with conditions"

File # SES-STA-20151030-00786

Call Sign E150087 Grant Date 01/20/2016  
(or other identifier)

From 01/21/2016 To 02/19/2016

Approved: Paul E. Blum



The stamp is a red circular seal of the Federal Communications Commission (FCC) with the text "FEDERAL COMMUNICATIONS COMMISSION" around the perimeter. Below the seal, the word "GRANTED" is printed in large, bold, red letters, and "International Bureau" is printed in smaller red letters below that.


Applicant: HNS License Sub, LLC  
Call Sign: E150087  
File No.: SES-STA-20151030-00786  
Special Temporary Authority (STA)

HNS License Sub, LLC is granted extension to Special Temporary Authority for 30 days beginning January 21, 2016, to use its Santa Clara, CA, Ka-band earth station, to communicate with: the AMC-15 satellite (call sign S2180) at orbital location 105° W. L. Primary satellite; the EchoStar XVII (Jupiter 1) satellite (call sign S2753) at 107.1° W.L. orbital location; the AMC-16 satellite (call sign S2181) at 85° W.L. orbital location; the EchoStar IX satellite (call sign S2179) at 121° W.L. orbital location; the Galaxy 28(nee IA-8) S2160/Telstar 8(IA-8) S2205 at 89°W.L. orbital location; and ViaSat-1 satellite (call sign S2747) at 115° W.L. orbital location to test gateway Earth station to provide advanced broadband satellite services under the following conditions:

1. Operations are restricted to center frequency 29.6875 GHz (Earth-to-space) within coordinated emission and power limits and on 19.7 – 20.2 GHz (space-to-Earth) frequency band.
2. All operations under this grant of STA shall be on an unprotected and non-harmful interference basis. HNS License Sub, LLC- shall not cause harmful interference to, and shall not claim protection from interference by any other lawfully operating radio communication system.
3. Grant of this STA is without prejudice to any determination that the Commission may make regarding pending or future HNS License Sub, LLC applications.
4. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at HNS License Sub, LLC's risk.

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

*30 days* *"Extension with conditions"*

 <b>GRANTED</b> International Bureau	File # <u>SES-STA-20151030-00786</u>
	Call Sign <u>E150087</u> Grant Date <u>01/20/2016</u> (or other identifier)
	Term Dates From <u>01/21/2016</u> To <u>02/19/2016</u>
	Approved: <u>Paul E. Hines</u>

**Request for Special Temporary Authority**

Pursuant to Section 25.120(b)(4),<sup>1</sup> HNS License Sub, LLC (Hughes) requests special temporary authority (STA) for a period of 30 days starting on January 21, 2016 to test a fixed Earth station in Santa Clara, CA.<sup>2</sup> Grant of this STA serves the public interest as Hughes needs to run time sensitive testing of new gateway Earth stations to ensure that they are properly installed.

The Earth station which we are seeking STA authority for testing will be used as one of the gateways for the Jupiter 2 (EchoStar XIX) satellite network.<sup>3</sup> An application for permanent authority for this Earth station is currently pending.<sup>4</sup>

Grant of this STA is in the public interest because it will enable Hughes to ensure that the earth station antenna is properly installed and can successfully operate with the Jupiter 2 satellite. Testing will only occur in a frequency range where Fixed Satellite Services operate on a primary basis (29.5 GHz to 30.0 GHz). Hughes agrees to perform this test on a non-interference basis. Accordingly, there is no interference concern.

For purposes of this STA, Hughes requests authority for the Earth station to communicate with the AMC-15 satellite at 105° W.L. (call sign S2180). This is the primary satellite that Hughes will transmit to for the testing purposes. Hughes' testing may require the Earth station to transmit to the following FCC authorized space stations:

- EchoStar XVII (Jupiter 1) satellite at 107.1 W.L. (call sign S2753),
- AMC-16 satellite at 85° W.L. (call sign S2181),
- EchoStar IX satellite at 121° W.L. (call sign S2179),
- Galaxy 28 (nee IA-8) S2160/Telstar 8(IA-8) S2205 at 89°W.L, and
- ViaSat-1 satellite at 115° W.L. (call sign S2747)

Accordingly, Hughes requests special temporary authority to transmit to those satellites as well. The location data and technical parameters for the testing are provided in Attachment 1 provided with the application.

For the reasons stated herein, Hughes request that the Commission grant the STA request no later than January 20, 2016.

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<sup>1</sup> 47 C.F.R. § 25.120(b)(4).

<sup>2</sup> While an STA is being requested for 30 days, testing is planned to occur over approximately a four day time period within the 30 days.

<sup>3</sup> The FCC has authorized the Jupiter 2 (EchoStar XIX) satellite at 97.1° W.L. to access the U.S. market. *See* IBFS File Nos. SAT-LOI-20110809-00148 (granted Jul 27, 2012) and SAT-MOD-20141201-00127 (granted Jun. 23, 2015). The Jupiter 2 satellite is a next generation satellite, which will provide increased capacity for Hughes' satellite broadband services.

<sup>4</sup> *See* IBFS File No. SES-LIC-20150604-00343.

**Technical Data for Special Temporary Authority Request**

Location (City, State, Coordinates)	Santa Clara, CA Latitude: 37 °21 '54.7 "N Longitude: 121 °57 '39.6 "W
Site Elevation	16.2 meters
Antenna Diameter	5.6m
Height Above the Ground	6.0m
Antenna Gain Transmit	61.9 dB
Antenna Gain Receive	61.9 dB
Total Input Power at antenna flange	Up to 6 dBW (4 watts)
Total EIRP for all carries (dBW)	67.9 dBW
Transmit Frequency Range	29.6875 GHz
Receive Frequency Range	19.7-20.2 GHz
Transmit antenna polarization	Left Hand Circular
Receive antenna polarization	Right Hand Circular
Maximum Bandwidth	4kHz
Maximum EIRP per carrier (dBW)	67.9 dBW
Maximum EIRP Density per Carrier (dBW/4kHz)	67.9 dBW/4kHz
Transmit Modulation	Continuous Wave (CW)
Receive Modulation	Continuous Wave (CW)
Range of Satellite Arc E/W Limit	85° W.L to 121° W.L.
Earth Station Azimuth Angle Eastern Limit	128.9°
Antenna Elevation Angle Eastern Limit	32.10°
Earth Station Azimuth Angle Western Limit	168.8°
Antenna Elevation Angle Western Limit	46.1°
Maximum EIRP Density toward the Horizon	0.34 dBW/4kHz
Will the tests be operated by remote?	No

**2. Contact**

<b>Name:</b>	Jennifer A. Manner	<b>Phone Number:</b>	301-428-5893
<b>Company:</b>	HNS License Sub, LLC	<b>Fax Number:</b>	301-428-2818
<b>Street:</b>	11717 Exploration Lane	<b>E-Mail:</b>	jennifer.manner@echostar.com
<b>City:</b>	Germantown	<b>State:</b>	
<b>Country:</b>	USA	<b>Zipcode:</b>	20876 -
<b>Attention:</b>		<b>Relationship:</b>	

(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 SESLIC2015060400343 or Submission ID

4a. Is a fee submitted with this application?

- If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).
- Governmental Entity     Noncommercial educational licensee
- Other (please explain):

4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station

5. Type Request

- Use Prior to Grant                       Change Station Location                       Other

6. Requested Use Prior Date  
01/21/2016

7. City Santa Clara

8. Latitude  
(dd mm ss.s h) 37 21 54.7 N

9. State CA	10. Longitude (dd mm ss.s h) 121 57 39.6 W
11. Please supply any need attachments. Attachment 1: Narrative                      Attachment 2: Technical Data                      Attachment 3:	
12. 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.) <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">30 Day STA request to test gateway Earth station in Santa Clara, CA for Jupiter 2 (EchoStar XIX). See attached narrative.</div>	
13. 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. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing Alexander Gerdenitsch	15. Title of Person Signing Senior Principal Engineer, Regulatory Affairs
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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