

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
E120072 STA for Nimiq 2 to Lino Lakes

1. Applicant

Name: Inmarsat Inc. Phone Number: 703-883-7444  
DBA Name: Fax Number: 202-248-5177  
Street: 1101 Connecticut Avenue, NW E-Mail: giselle.creaser@inmarsat.com  
Suite 1200  
City: Washington State: DC  
Country: USA Zipcode: 20036  
Attention: Giselle Creaser



File # SES-STA-20180814-02199  
E120072  
Call Sign Grant Date 9-4-18  
(or other identifier)  
Term Dates  
From: 9-5-18 To: 9-12-18  
Approved: *[Signature]*

<b>2. Contact</b>	
<b>Name:</b> Giselle Creeser	<b>Phone Number:</b> 703-883-7444
<b>Company:</b> Innarsat Inc.	<b>Fax Number:</b> 202-248-5177
<b>Street:</b> 1101 Connecticut Avenue, NW Suite 1200	<b>E-Mail:</b> giselle.creeser@innarsat.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20036 -
<b>Attention:</b>	<b>Relationship:</b> Same
(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 SESLIC2012042600397 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 CGX - Fixed Satellite Transmit/Receive Earth Station	
5. Type Request	
<input checked="" type="radio"/> Use Prior to Grant	<input type="radio"/> Change Station Location <input checked="" type="radio"/> Other
6. Requested Use Prior Date	
7. City/Lino Lakes	8. Latitude (dd mm ss.s h) 45 7 56.0 N

9. State MN	10. Longitude (dd mm ss.s h) 93 5 44.0 W
11. Please supply any need attachments. Attachment 1: STA Request Attachment 2: 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.) Inmarsat requests STA to communicate with the Nimiq-2 satellite at 28 W.L. with the Lino Lakes Satellite Access Station (SAS) for 7-day period starting September 4, 2018.	
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. Yes <input checked="" type="radio"/> No <input type="radio"/>	
14. Name of Person Signing Giselle Creeser	15. Title of Person Signing Director, Regulatory
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.**



File # SES-STA-20180814-02199  
E120072  
Call Sign E120072 Grant Date 9-4-18  
(or other identifier)  
Term Dates  
From: 9-5-18 To: 9-12-18  
Approved: Paul E. [Signature]

Applicant: Inmarsat Inc.  
Call Sign: E120072  
File No.: SES-STA-20180814-02199  
Special Temporary Authority (STA)

Inmarsat Inc. was granted special temporary authority for seven days, commencing on September 5, 2018, to conduct testing of its 13.2 meter fixed earth station antenna in Lino Lakes, MN with the Nimiq-2 satellite at the 28° W. L. orbital location in the 29500-30000 MHz (Earth-to-space) and 19700-20200 MHz (space-to-Earth) frequency bands to assess its antenna performance at low elevation angles during spacecraft emergency events under the following conditions:

1. Operational parameters shall be: uplink eirp at Lino Lake of 47 dBW, uplink polarization LHCP, downlink power flux density at ground -132 dBW/m<sup>2</sup>, downlink satellite eirp 31 dBW, downlink polarization RHCP, continuous wave (CW), and earth station antenna elevation angle shall be 7-11 degrees.
2. Operations shall be on an unprotected basis and shall not claim protection from interference caused to it by any other lawfully operating station.
3. If any harmful interference is caused as a result of STA operation, Inmarsat Inc. shall cease operations immediately upon notification of such an event, and shall inform the Commission immediately, in writing, of the event.
4. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Inmarsat Inc.'s own risk.
5. Operations shall comply with Section 25.138 of the Commission's rules, 47 CFR § 25.138, and will be operated through the SAS authorized under E120072, SES-LIC-20120426-00397 and monitored by the Inmarsat Network Operations Center (NOC) telephone: +44 207 728 1616.
6. Inmarsat must coordinate its space-to-Earth operations with the SAS in the 18.3-18.8 GHz and 19.7-20.2 GHz frequency bands with the U.S. Federal Systems, including Federal operations to earth stations in foreign countries, in accordance with footnote US334 to the United States Table of Frequency Allocations, 47 CFR § 2.106.
7. The 17.8-20.2 GHz band is shared with U.S. Government space stations and associated earth stations in the Fixed-Satellite Service. The satellite network of which this is a cooperating earth station is subject to coordination under US334 and operation of this earth station will be subject to any technical constraints resulting from this coordination.
8. Grant of this special temporary authority does not constitute U.S. market access under 47 CFR §§ 25.131(j)(2) and 25.137.
9. Grant of this authorization is without prejudice to any determination that the Commission may make regarding Inmarsat Inc's pending or future filings.

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

Summary of Ka- band Frequency Technical Information  
Notification for grant with NTIA

Applicant: Inmarsat, Inc.  
File No.: SES-STA-20180814-02199  
Call Sign: E120072  
Special Temporary Authority (STA)

Purpose of STA operation: Inmarsat requests authority to conduct antenna performance testing to verify reliable communications and operations with satellite Nimiq-2 (Canadian licensed) at orbital location 28° W when at low elevation angles for spacecraft emergency scenarios. Testing operations will be held at Inmarsat's authorized Lino Lakes Gateway facility, Lino Lakes, Minnesota (FCC IBFS File No. SES-LIC-20120426-00397). Operational use of continuous wave (CW) will be transmitted at interval of 10 MHz across the Ka-band frequency range to evaluate the antenna . Nimiq-2 satellite operates with 2.9° inclination. Antenna elevation angles from the Lino Lake Gateway facility to the Nimiq-2 satellite varies from seven and eleven degrees towards the horizon. All operations will be monitored by the Inmarsat Network Operations Center.

**Start Date: September 4, 2018**

**End Date: September 10, 2018**

Site Location: Lino Lakes Satellite Access Station  
Lino Lakes, MN

Latitude/Longitude: N/A

Transmit frequency: 29500-30000 MHz  
Receive frequency: 19700-20200 MHz

Polarization: LHCP, RHCP  
Antenna elevation angles: 7°-11°  
Antenna size (m): 13.2  
Antenna Model: 13.2m Ka-band  
Antenna manufacturer: GDSatcom

Ant. Tx gain (dBi): 69.1 dBi@ 29.5 GHz, 69.3 dBi@30 GHz  
Ant. Rx gain (dBi): 65.0 dBi@ 19.7 GHz, 65.3 dBi @ 20.2 GHz

Frequency (MHz)	Emission Designator	max. eirp (dBW)
29500-30000	CW	47
19700-20200	CW	31

Satellite: Nimiq-2@ 28°W (Canadian licensed)

Condition:

1. Inmarsat must coordinate its space-to-Earth operations with the SAS in the 18.3-18.8 GHz and 19.7-20.2 GHz frequency bands with the U.S. Federal Systems, including Federal operations to earth stations in foreign countries, in accordance with footnote US334 to the United States Table of Frequency Allocations, 47 C.F.R. 2.106.
2. The 17.8 - 20.2 GHz band is shared with U.S. Government space stations and associated earth stations in the Fixed-Satellite Service. The satellite network of which this is a cooperating earth station is subject to coordination under US334 and operation of this earth station will be subject to any technical constraints resulting from this coordination.