Approved by OMB
3060–0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATIONEnter a description of this application to identify it on the main menu:
GX Aviation Honeywell STA Request

1. Applicant

Name:	ISAT US Inc.	**Phone Number:**	202–248–5158
DBA Name:		**Fax Number:**	202–248–5186
Street:	1101 Connecticut Avenue NW Suite 1200	**E–Mail:**	chris.murphy@inmarsat.com
City:	Washington	**State:**	DC
Country:	USA	**Zipcode:**	20036 –
Attention:	Mr Chris Murphy		

FEDERAL COMMUNICATIONS COMMISSION
GRANTED
International Bureau

File # SES-STA-20150703-00446
Call Sign E140114 Grant Date 7/7/2015
(or other identifier)
Term Dates
From 7/25/2015 To: 8/24/2015
Approved: Paul E Blais

Applicant: ISAT US, Inc.
Call Sign: E140114
File No.: **SES-STA-20150703-00446**
Special Temporary Authority (STA)

ISAT US, Inc. is granted special temporary authority for a period of 30 days, commencing July 25, 2015, to operate one aircraft earth station (Honeywell MCS-8200 fuselage-mount user terminal) for testing that will to communicate with the Inmarsat-5Fl geostationary orbit space station at the 62.6° E.L. orbital location, using the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands. Operations must be in accordance with the technical specifications contained in ISAT US, Inc.'s application, and are subject to the following conditions:

1. The temporary authority granted is for acceptance testing of the Honeywell MCS-8200 terminal. Operations are limited to testing outside the United States over international waters and in foreign airspace while the single aircraft earth station is mounted on board a United States-flagged aircraft and remotely controlled through Inmarsat's gateway facility located in Fucino, Italy, and its Network Operations Center in London, England.

2. Operations under this grant of special temporary authority must be on an unprotected, non-harmful interference basis, *i.e.,* while operating under this temporary authority ISAT US, Inc. must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. ISAT US, Inc. must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.

3. The aircraft earth station authorized herein must cease transmissions when the antenna-to-GSO skew angle produces off-axis EIRP spectral density emissions greater than the limits in Section 25.138 of the Commission's rules. *See* 47 C.F.R. § 25.138. The aircraft earth station may resume transmissions once the risk of harmful interference has passed.

4. ISAT US, Inc. must take all necessary measures to ensure that the antenna does not create potential exposure of humans to radio frequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oetlrfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers. The licensee shall ensure installation of terminals on aircraft by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the aircraft and equipment. A terminal exhibiting radiation exposure levels exceeding 1.0 m W/cm2 in accessible areas, such as at the exterior surface of the radome, shall have a label attached to the surface of the terminal warning about the radiation hazard and shall include thereon a diagram showing the regions around the terminal where the radiation levels could exceed 1.0 mW/cm2.

5. ISAT US, Inc. must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized, for discussing interference concerns with other licensees and U.S. Government agencies.

6. Aircraft earth stations authorized herein must employ a tracking algorithm that is resistant to capturing and tracking adjacent satellite signals, and each station must be capable of inhibiting its own transmission in the event it detects unintended satellite tracking.

7. Aircraft earth stations authorized herein must be monitored and controlled by a ground-based network control and monitoring center. Such stations must be able to receive "enable transmission" and "disable transmission" commands from the network control center and must cease transmission immediately after receiving a "parameter change" command until receiving an "enable transmission" command from the network control center. The network control center must monitor operation of each aircraft earth station to determine if it is malfunctioning, and each aircraft earth station must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed-satellite service network.

8. Station authorized herein must not be used to provide air traffic control communications.

9. Operation in the territory or airspace of any country other than the United States must be in compliance with the applicable laws, regulations, and licensing procedures of that country, as well as with the conditions of this authorization.

10. Communications between ISAT US, Inc.'s earth station and Inmarsat-5Fl space station must be in compliance with all existing and future space station coordination agreements reached between the United Kingdom and other Administrations.

11. ISAT US, Inc. must maintain records of the following data for each operating aircraft earth station (AES), a record of the aircraft location (i.e., latitude/longitude/altitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than one year. Records shall be recorded at time intervals no greater than one (1) minute while the AES is transmitting. The operator shall make this data available, in the form of a comma delimited electronic spreadsheet, within 24 hours of a request from the Commission, NTIA, or a frequency coordinator for purposes of resolving harmful interference events. A description of the units (i.e., degrees, minutes, MHz, etc.) in which the records values are recorded will be supplied along with the records.

12. Antenna elevation for all operations must be at least 5 degrees above the geographic horizon while the aircraft is on the ground.

13. ISAT US, Inc. must comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

14. Operations authorized pursuant to this license are operations by U.S.-registered aircraft anywhere within the coverage area/frequency bands identified in the application for the satellite listed as a point of communication. Authorization for operations by U.S.-registered aircraft outside U.S. territory, pursuant to this license, does not constitute a grant of access to the market in the United States under the Commission's DISCO II policies.

15. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending applications or future requests for special temporary authority. E.g. IBFS File No. SES-LIC-20141030-00832.

16. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at ISAT US, Inc.' s risk.

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. Petitions for reconsideration under Section 1.106 or applications for

review under Sections 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be made within thirty days of the date of the public notice indicating that this action was taken.

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Term Dates

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Approved: Paul E Blaes

2. Contact

Name:	Chris Murphy	**Phone Number:**	202–248–5158
Company:	ISAT US Inc.	**Fax Number:**	202–248–5186
Street:	1101 Connecticut Ave, NW Suite 1200	E–Mail:	chris.murphy@inmarsat.com
City:	Washington	**State:**	DC
Country:	USA	**Zipcode:**	–
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 SESLIC2014103000832 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 CGV – Fixed Satellite VSAT System

5. Type Request

◉ Use Prior to Grant ○ Change Station Location ○ Other

6. Requested Use Prior Date 07/25/2015	
7. City	8. Latitude (dd mm ss.s h) 0 0 0.0

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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.

ISAT US Inc.
Request for Extension of Special Temporary Authority
IB File Nos. SES-STA-20150304-00112; SES-STA-20150522-00306
Exhibit A

Description of STA Request

ISAT US Inc. ("ISAT US") hereby requests a 30-day special temporary authority ("STA") with respect to its Global Xpress ("GX") aviation Honeywell antenna testing using the same technical parameters for which it was previously authorized under IB File No. SES-STA 20150304-00112; SES-STA-20150522-00306 ("GX Aviation Honeywell Antenna STAs") in May and June 2015.

The Inmarsat flight testing planned for May and extended to June 2015 met expectations for initial flight tests and the antenna was operated in full compliance with the GX Aviation Honeywell Antenna STAs. The testing took place during the authorized period with multiple flights. Inmarsat did not receive any reports of interference during the tests. ISAT US now plans to begin another stage of testing. This new stage includes validation of improvements made based upon experience gained during the first flight tests. The next stage will also include a Federal Aviation Administration Supplemental Type Certification ("STC") flight for the Boeing 757 aircraft type.

More specifically, ISAT US seeks (i) authority to conduct testing of the Honeywell antenna mounted on a United States-flagged aircraft in the 29.5-30.0/19.7-20.2 GHz frequency bands using the Inmarsat-5 F1 satellite, located at the 62.6° E.L. orbital location, (ii) outside the United States over international waters and in foreign airspace, and (iii) operated through Inmarsat's gateway facility located in Fucino, Italy.

In summary, the request for authority to conduct the testing will follow the same technical parameters as the initial GX Aviation Honeywell Antenna STA requests. Grant of the requested STA will serve the public interest, convenience and necessity because it will help ensure that the GX Honeywell antenna performs according to its design specifications by facilitating the assessment of the prototype earth station and will enable Inmarsat to proceed in implementing its ultimate plans to deploy the aeronautical antennas for the provision of broadband access service. As detailed in the GX Aviation Honeywell Antenna STA applications and underlying license application (File No. SES-LIC-20141030-00832; Call Sign E140114), facilitating the ultimate availability of broadband access on board aircraft will help satisfy the rapidly growing demand and consumer expectations for ubiquitous Internet connectivity on land, at sea, and in the air. The Commission previously has granted STA under similar circumstances, as well as permanent authority to operate Ka-band mobile earth stations on board aircraft.

Therefore, ISAT US respectfully requests that the Commission grant its STA for 30 days, beginning July 25th.