

E120106 SES-STA-20121121-01032 IB2012002688
Gogo LLC

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
STA for FAA Certification Testing

1. Applicant

Name:	Gogo LLC	Phone Number:	202-870-7220
DBA Name:		Fax Number:	
Street:	5614 Connecticut Avenue, NW #288	E-Mail:	bgordon@aircell.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20015
Attention:	Mr William J Gordon		



"with conditions"
File # SES-STA-20121121-01032

Call Sign E120106 Grant Date 12/18/2012
(or other identifier)

Term Dates
From 12/19/2012 To: 01/17/2013

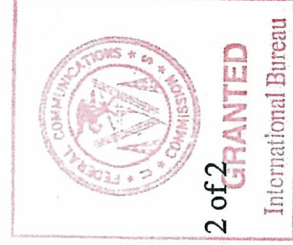
Approved: Paul E. Blas

Applicant: Gogo LLC
Call Sign: E120106
File No.: SES-STA-20121121-01032
Special Temporary Authority (STA)

Gogo LLC's request for special temporary authority (STA) to operate a single aircraft earth station for testing that will transmit in the 14.0-14.5 GHz frequency band to the following geostationary-orbit space stations: SES-1 space station, Call Sign 2807, located at the 101.0° W.L. orbital location and NSS-703 space station, Call Sign 2818, at the 47.05° W.L. orbital location IS GRANTED. The aircraft earth station will receive downlink transmissions from SES-1 and NSS-703 in the 11.7-12.2 GHz (space-to-Earth) frequency bands. Operations under this STA must be in accordance with the terms and conditions contained in Gogo's application and the Federal Communications Commission's rules not waived herein and are subject to the following conditions:

1. The temporary authority granted is for ground testing at the Detroit, MI airport (DTW) and in-flight testing over the continental U.S. and adjacent territorial waters within 500 miles of DTW.
2. Gogo LLC must not cause harmful interference to, and must not claim protection from, any other lawfully operating radio station. In the event harmful interference results from operation pursuant to this authorization, Gogo LLC must cease operations immediately upon notification of such interference, and must immediately inform the Federal Communications Commission, in writing, of the incident.
3. Operation pursuant to this authorization must be in compliance with the terms of Gogo LLC's coordination agreement with the National Science Foundation pertaining to operation of aircraft earth stations in the Ku-Band.
4. Gogo LLC may not operate in the 14.0-14.2 GHz band within line of sight of any operational National Aeronautics and Space Administration Tracking and Data Relay Satellite Service facilities.
5. Operation pursuant to this authorization must conform with the terms of coordination agreements between a) the operator of NSS-703 and operators of other Ku-band geostationary satellites within six angular degrees of NSS-703, and b) the operator of SES-1 and operators of other Ku-band geostationary satellites within six angular degrees of SES-1.
6. Communications between Gogo LLC's earth station and NSS-703 space station must be in compliance with all existing and future space station coordination agreements reached between Gibraltar and other Administrations.
7. Gogo LLC must take all necessary measures to ensure that the operation authorized does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310. 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/oet/rfsafety) 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.

8. Gogo LLC 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, and must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.
9. 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.
10. 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.
11. Stations authorized herein must not be used to provide air traffic control communications.
12. Gogo shall maintain records of the following data for each operating AES: location (latitude, longitude, altitude); aircraft attitude (pitch, yaw, roll); transmit frequency and occupied bandwidth; data rate; EIRP; and target satellite. This data shall be recorded at intervals of no more than two minutes while an AES is transmitting and every 30 seconds when aircraft roll angle is greater than 10 degrees. Gogo shall also record instances when AES pointing error exceeds 0.2 degrees. Gogo shall make this data available upon request to an FSS system operator or the Commission within 24 hours after receiving the request.
13. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending (SES-LIC-20120619-00574, SES-AMD-20120731-00709, SES-AFS-20121008-00902, and SES-STA-20121009-00907) or future applications.
14. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Gogo LLC's risk.
15. NTIA has no objections to the Special Temporary Authorization (STA) requested by Gogo LLC for Detroit, MI during the period 19 December 2012 thru 19 March 2013 under the following conditions:
 - a. That Gogo abide by the signed attached technical agreement dated July 3, 2012 between National Science Foundation and Gogo LLC.
 - b. That Gogo abide by the conditions listed in the STA request.
16. 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.



File # SES-STA-20121121-01032

Call Sign E120106 Grant Date 12/18/2012
(or other identifier)

Term Dates
From 12/19/2012 To: 01/17/2013

Approved: Paul E. Gray

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Gogo LLC (“Gogo”) hereby requests special temporary authority (“STA”) for a period of 30 days beginning no later than December 19, 2012, to operate a single Aeronautical Mobile Satellite Service (“AMSS”) transmit/receive terminal on a commercial aircraft. The AMSS terminal will communicate with the SES-1 and NSS-703 satellites in the conventional Ku-band (14-14.5 GHz uplink and 11.7-12.2 GHz downlink).¹ Grant of the requested STA is consistent with Commission precedent and will serve the public interest by enabling Gogo to perform tests necessary to comply with Federal Aviation Administration (“FAA”) equipment certification requirements.

Gogo has an application pending before the Commission for a blanket license for AMSS operations.² That application includes complete technical information regarding the Gogo AMSS system and fully describes the AeroSat terminals that will be used in this testing. Gogo incorporates that information by reference herein.

Gogo has also been granted Commission STA to perform ground-based testing of the AMSS terminals in the conventional Ku-band using the SES-1 and NSS-703 spacecraft.³ Gogo now seeks to use the same satellites for additional ground and in-flight testing necessary in connection with FAA certification.

Specifically, a single terminal will be installed on a Delta Airlines 767-300 aircraft. Testing will initially occur on the ground at the Detroit, MI airport (DTW), followed by in-flight testing in an area within 500 miles of DTW. The ground testing is expected to take a day and is currently scheduled to occur on December 20. The in-flight testing will take place over two days and is currently scheduled for December 21-22. In order to accommodate this schedule for the planned certification evaluation, Gogo respectfully requests action on this STA request by

¹ SES-1 is the primary spacecraft for the test, but Gogo seeks authority to use spot beam 2 of NSS-703 as back-up capacity if needed.

² *Gogo LLC*, Call Sign E120106, File Nos. SES-LIC-20120619-00574; SES-AMD-20120731-00709 & SES-AFS-20121008-00902 (the “Gogo AMSS Application”). The public notice period for the Gogo AMSS Application has closed, and no party has opposed grant of the application. The only comments filed involve Gogo’s proposed operations outside the conventional Ku-band. *See* Comments of EchoStar Satellite Operating Corporation, File Nos. SES-LIC-20120619-00574 *et al.*, dated Nov. 16, 2012; Comments of EchoStar Satellite Operating Corporation and DIRECTV Enterprises, LLC, File Nos. SES-LIC-20120619-00574 *et al.*, dated Nov. 16, 2012. Because the authority sought here is limited to conventional Ku-band operations, the questions raised in the comments are not relevant to the requested STA.

³ *Gogo LLC*, Call Sign E120106, File No. SES-STA-20120727-00698, granted Aug. 29, 2012 (testing authority for communications with SES-1); File No. SES-STA-20121009-00908, granted Oct. 24, 2012 (extension for SES-1 and expansion of STA to include spot beam 2 on NSS-703).

December 19. Although the testing should be completed in a few days, Gogo is seeking STA for 30 days in order to account for the possibility of delays in initiation or completion of the testing.

Grant of the requested authority will not adversely affect other licensed operations. Gogo has submitted affidavits confirming that the proposed AMSS operations using the AeroSat terminals have been coordinated with operators of the satellites within six degrees on either side of both SES-1 and NSS-703.⁴ Gogo has also entered into a coordination agreement with the National Science Foundation to protect radioastronomy operations.⁵ In any event, Gogo seeks to operate on an unprotected, non-harmful interference basis, so operations pursuant to the requested STA will not harm other regularly licensed Ku-band spectrum users.

Grant of the requested authority is consistent with prior Commission actions⁶ and will serve the public interest by permitting Gogo to continue developing a competitive AMSS network that will enhance service to air travelers and airline crew members.

⁴ *Gogo LLC*, Call Sign E120106, File No. SES-AMD-20120731-00709, Amendment Exhibit A.

⁵ *Id.*, Amendment Exhibit B.

⁶ The International Bureau has previously granted special temporary authority for other entities to perform testing of AMSS terminals pending regular licensing of AMSS operations. *See, e.g., Row 44, Inc.*, File No. SES-STA-20071121-01610, grant-stamped Dec. 11, 2007 (30-day STA for testing of AMSS terminal).

2. Contact

Name:	Karis Hastings	Phone Number:	202-599-0975
Company:	SatCom Law LLC	Fax Number:	
Street:	1317 F Street, N.W. Suite 400	E-Mail:	karis@satcomlaw.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20004 -
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 SESLIC2012061900574 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 CGB – Mobile Satellite Earth Stations

5. Type Request

- Use Prior to Grant Change Station Location Other

6. Requested Use Prior Date
12/19/2012

7. City Detroit

8. Latitude
(dd mm ss.s h) 42 12 44.8 N

9. State MI	10. Longitude (dd mm ss.s h) 83 21 12.2 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.) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">Gogo LLC (Gogo) respectfully requests special temporary authority for a period of 30 days beginning December 19, 2012, to permit operation of a single Ku-band AMSS terminal for ground and in-flight testing required for FAA equipment certification. Authority is sought pending Commission action on Gogo's underlying application as amended for an AMSS</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 William J. Gordon	15. Title of Person Signing Vice President, 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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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.

12. Description

Gogo LLC (Gogo) respectfully requests special temporary authority for a period of 30 days beginning December 19, 2012, to permit operation of a single Ku-band AMSS terminal for ground and in-flight testing required for FAA equipment certification. Authority is sought pending Commission action on Gogo's underlying application as amended for an AMSS blanket license under Call Sign E120106.