

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
E970336 STA for Addl IOT and Move of QuetzSat 1 to 61.5

1. Applicant

<b>Name:</b>	SES Americom, Inc.	<b>Phone Number:</b>	202-478-7137
<b>DBA Name:</b>		<b>Fax Number:</b>	202-478-7101
<b>Street:</b>	1129 20th Street NW Suite 1000	<b>E-Mail:</b>	daniel.mah@ses.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20036 -
<b>Attention:</b>	Daniel C.H. Mah		

*"With conditions"*



**File #** SES-STA-2012-0917-00826

**Call Sign** E970336 **Grant Date** 09/24/2012  
(or other identifier)

**Term Dates**  
**From** 09/24/2012 **To:** 10/23/2012

**Approved:** Paul E Black

Applicant: SES Americom Inc.  
Call Sign: E970336  
File No.: SES-STA-20120917-00826  
Special Temporary Authority (STA)

SES Americom Inc. (SES) is granted, under the following conditions, special temporary authority to operate with the foreign-licensed QuetzSat-1 spacecraft, a U.K. registered and licensed space object. The earth station will be used for additional in-orbit testing of the satellite at 67.1 W.L. and to perform tracking, telemetry and command functions at 67.1 W.L. and during and after a planned move of the spacecraft to 61.5 W.L. in the 17.3-17.8 GHz (Earth-to-space) and 12.2-12.7 GHz (space-to-Earth) frequency bands.

1. This authorization is limited to operations within the parameters defined in those specified in the Appendix A of the application narrative.
2. All operations shall be on an unprotected and non-harmful interference basis, SES, E970336, shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
3. In the event that any harmful interference is caused as a result of operations of the Quetzsat-1 satellite, SES 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 special temporary authority is solely at SES's own risk.

*"With conditions"*

 <b>GRANTED</b> International Bureau	<b>File #</b> <u>SES-STA-20120917-00826</u>
	<b>Call Sign</b> <u>E970336</u> <b>Grant Date</b> <u>09/24/2012</u>
	<b>Term Dates</b> <b>From</b> <u>09/24/2012</u> <b>To:</b> <u>10/23/2012</u>
	<b>Approved:</b> <u>Paul E. Blaw</u>

<b>2. Contact</b>	
<b>Name:</b> Karis A. Hastings	<b>Phone Number:</b> 202-599-0975
<b>Company:</b> SatCom Law LLC	<b>Fax Number:</b>
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<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20004 -
<b>Attention:</b>	<b>Relationship:</b> 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 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 type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other	
6. Requested Use Prior Date	
7. City Moorpark	8. Latitude (dd mm ss.s h) 34 19 31.0 N

9. State CA	10. Longitude (dd mm ss.s h) 118 59 41.0 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.) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">SES Americom, Inc. ('SES') requests special temporary authority for a period of 30 days beginning on September 24 to permit earth station E970336 to communicate with the foreign-licensed QuetzSat-1 spacecraft. The earth station will be used for additional in-orbit testing of the satellite at 67.1 W.L. and to perform tracking, telemetry and command</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 Daniel C.H. Mah	15. Title of Person Signing Regulatory Counsel
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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## **12. Description**

SES Americom, Inc. ('SES') requests special temporary authority for a period of 30 days beginning on September 24 to permit earth station E970336 to communicate with the foreign-licensed QuetzSat-1 spacecraft. The earth station will be used for additional in-orbit testing of the satellite at 67.1 W.L. and to perform tracking, telemetry and command functions at 67.1 W.L. and during and after a planned move of the spacecraft to 61.5 W.L.

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of Application by )  
 )  
SES AMERICOM, INC. ) Call Sign E970336  
 )  
For Special Temporary Authority to )  
Communicate with QuetzSat-1 to Perform )  
Additional In-Orbit Testing at 67.1° W.L. )  
And for TT&C During Move to 61.5° W.L. )

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

By this application, SES Americom, Inc. (“SES Americom,” doing business as “SES”) respectfully requests special temporary authority (“STA”) for a period of up to 30 days, commencing on or about September 24, 2012, to permit SES to use its South Mountain, CA earth station E970336 to communicate with the QuetzSat-1 spacecraft. Specifically, SES proposes to use E970336 to conduct additional in-orbit testing (“IOT”) of QuetzSat-1 at 67.1° W.L. In addition, SES seeks authority to perform Tracking, Telemetry and Command (“TT&C”): (a) while QuetzSat-1 remains at 67.1° W.L.; (b) during a planned relocation of the satellite to 61.5° W.L.; and (c) on-station once the satellite arrives at 61.5° W.L. As discussed below, grant of the requested authority is in the public interest.

QuetzSat-1 is a foreign-licensed Direct Broadcast Satellite (“DBS”) spacecraft.<sup>1</sup> The Commission previously authorized the use of the E970336 earth for initial operational

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<sup>1</sup> QuetzSat-1 is currently operating under a U.K. Outer Space Act license and will be registered as a U.K. space object. The U.K. Space Agency has indicated that it has no objection to the proposed temporary operation of QuetzSat-1 at 61.5° W.L.

testing of QuetzSat-1 at 67.1° W.L. after it was successfully launched on September 29, 2011.<sup>2</sup> SES expects to receive instructions from its customer, EchoStar 77 Corporation (“EchoStar”), to relocate the satellite temporarily to 61.5° W.L. and to perform associated testing prior to doing so. At 61.5° W.L., the satellite will provide bridge service pending the delayed launch of EchoStar 16.

Transmissions from the E970336 earth station to QuetzSat-1 during the additional IOT will conform to the technical characteristics described in Attachment A. The additional IOT proposed here will evaluate a slightly different configuration for QuetzSat-1. The additional IOT will involve verifying the performance characteristics and antenna patterns of this alternate configuration, and will include the following tests: satellite power amplifier transfer characteristics; satellite transponder characteristics; antenna mapping; and EIRP, SFD, and polarization isolation checks. Some tests will involve transmitting saturating CW carriers to the satellite in the DBS bands.<sup>3</sup>

The proposed operations will not adversely affect adjacent satellite operators. Coordination of the additional IOT is underway with adjacent DBS satellite operators. The nearest operational DBS satellites are the EchoStar satellites at the nominal 61.5° W.L. orbital location and the Telesat Canada Nimiq 5 spacecraft at 72.7° W.L. EchoStar (or an affiliate thereof) is the sole customer on QuetzSat-1; the sole licensee of the DBS spacecraft at the nominal 61.5° W.L. orbital location; and the sole customer of all of the DBS capacity on Nimiq

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<sup>2</sup> See File No. SES-STA-20110729-00873 (grant-stamped Sept. 12, 2011) (“E970336 STA”). The authority was extended in File No. SES-STA-20110928-01151 (grant-stamped Oct. 24, 2011).

<sup>3</sup> The technical details regarding QuetzSat-1’s alternate configuration at 61.5° W.L., including a completed Schedule S and a narrative technical appendix, will be filed separately with the Commission.



5 at 72.7° W.L. Accordingly, SES expects coordination of IOT to be completed before testing begins.

The drift of the spacecraft will be coordinated with other spacecraft operators consistent with industry practice. Furthermore, as with the original E970336 STA, SES will accept interference from any regularly authorized network and will terminate operations if SES is notified that such a network is experiencing harmful interference.<sup>4</sup>

The positioning of QuetzSat-1 at 61.5° W.L. and the use of E970336 to perform on-station TT&C with QuetzSat-1 has been coordinated with EchoStar Satellite Operating Corporation, the licensee of other DBS satellites at that orbital location.

Grant of this request is in the public interest. The additional QuetzSat-1 testing will facilitate evaluation of the spacecraft's performance and ensure that QuetzSat-1 is fully operational before the satellite commences providing commercial services at 61.5° W.L. The requested TT&C authority will facilitate the safe operation of QuetzSat-1.

SES hereby certifies that no party to this application is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

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<sup>4</sup> See *id.*

For the foregoing reasons, SES respectfully requests special temporary authority to communicate with QuetzSat-1 for a period of up to 30 days in order to perform additional in-orbit testing and conduct TT&C as described herein.

Respectfully submitted,  
SES AMERICOM, INC.

By: /s/ Daniel C.H. Mah

Of Counsel  
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Dated: September 17, 2012

**ATTACHMENT A**  
**E970336 Technical Information**

TT&C Emissions

Emission Designator: 1M00G7W  
Max EIRP: 86.5 dBW  
Max EIRP Density: 62.5 dBW/4kHz  
Tx Frequency Range: 17300-17800 MHz  
Rx Frequency Range: 12200-12700 MHz  
Polarization: Left and Right Circular

IOT Emissions

Emission Designator: 1K00K3N  
Max EIRP: 86.5 dBW  
Max EIRP Density: 92.5 dBW/4kHz  
Tx Frequency Range: 17300-17800 MHz  
Rx Frequency Range: 12200-12700 MHz  
Polarization: Left and Right Circular

Emission Designator: N0N  
Max EIRP: 86.5 dBW  
Max EIRP Density: 92.5 dBW/4kHz  
Tx Frequency Range: 17300-17800 MHz  
Rx Frequency Range: 12200-12700 MHz  
Polarization: Left and Right Circular

Emission Designator: 24M0G7W  
Max EIRP: 86.5 dBW  
Max EIRP Density: 48.7 dBW/4kHz  
Tx Frequency Range: 17300-17800 MHz  
Rx Frequency Range: 12200-12700 MHz  
Polarization: Left and Right Circular

Emission Designator: 24M0F3D  
Max EIRP: 86.5 dBW  
Max EIRP Density: 48.7 dBW/4kHz  
Tx Frequency Range: 17300-17800 MHz  
Rx Frequency Range: 12200-12700 MHz  
Polarization: Left and Right Circular