

### RADIO STATION AUTHORIZATION

Name: SES Americom, Inc. Call Sign: KB27

Authorization Type: Modification of License File Number: SES-MOD-20150416-00220

Non Common Carrier Grant date: 12/25/2015 Expiration Date: 11/10/2023

Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

#### A) Site Location(s)

# Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)1	5990 SOLANO VERDE DRIVE SOMIS, VENTURA, CA 93066	34°19'31.0"N	118°59'44.4"W	307	27

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning November 10, 2008 (3 AM Eastern Standard Time) and ending November 10, 2023 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

#### **B)** Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

For the text of these provisions, re		Max EIRP	Max EIRP Density		Special Provisions			
# Frequency (MHz)	1 Our izutio		Tx/Rx Mode	/Carrier	•		(Refer to Section H)	Modulation/ Services
1)5925.0000-6425.0000	H,V	17M5F8W	Tx	89.90	62.90	1		
2)5925.0000-6425.0000	H,V	25M0F8W	Tx	89.90	62.90	1		
3)5925.0000-6425.0000	H,V	36M0F7W	Tx	89.90	66.80	1		
4)5925.0000-6425.0000	H,V	36M0F8W	Tx	89.90	66.80	1		
5)5925.0000-6425.0000	H,V	50K0F1D	Tx	40.00	29.00	1		
6)5925.0000-6425.0000	H,V	50K0F3E	Tx	40.00	33.00	1		
7)5925.0000-6425.0000	H,V	5M00F8W	Tx	88.90	57.90	1		
8)5925.0000-6425.0000	H,V,L,	R NON	Tx	57.30	57.30	1		TEST CARRIER
9)5925.0000-6425.0000	H,V,L,	R 1M00F9D	Tx	81.30	57.30	1		TELECOMMAND

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FOT U	ie text of these provisions, re	ier to Section H.		Max	Max EIRP		Special			
#	Frequency (MHz)	Polarization Code Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services		
10) 5	925.0000-6425.0000	H,V,L,R 100KD7W	Tx	68.10	54.10	1		DIGITAL DATA		
11) 5	925.0000-6425.0000	H,V,L,R 100KG7W	Tx	68.10	54.10	1		DIGITAL DATA		
12) 5	925.0000-6425.0000	H,V,L,R 36M0D7W	Tx	83.60	44.10	1		DIGITAL VIDEO, DATA	AUDIO	AND
13) 5	925.0000-6425.0000	H,V,L,R 36M0G7W	Tx	83.60	44.10	1		DIGITAL VIDEO, DATA	AUDIO	AND
14) 5	850.0000-5925.0000	H,V,L,R NON	Tx	57.30	57.30	1		TEST CARRIER		
15) 5	850.0000-5925.0000	H,V,L,R 1M00F9D	Tx	81.30	57.30	1		TELECOMMAND		
16)5	850.0000-5925.0000	H,V,L,R 100KD7W	Tx	68.10	54.10	1		DIGITAL DATA		
17) 5	850.0000-5925.0000	H,V,L,R 100KG7W	Tx	68.10	54.10	1		DIGITAL DATA		
18) 5	850.0000-5925.0000	H,V,L,R 36M0F8W	Tx	83.30	56.30	1		ANALOG VIDEO		
19)5	850.0000-5925.0000	H,V,L,R 36M0D7W	Tx	83.60	44.10	1		DIGITAL VIDEO, DATA	AUDIO	AND
20) 5	850.0000-5925.0000	H,V,L,R 36M0G7W	Tx	83.60	44.10	1		DIGITAL VIDEO, DATA	AUDIO	AND
21) 3'	700.0000-4200.0000	H,V,L,R 1M00F9D	Rx			1		TELEMETRY		
22) 3'	700.0000-4200.0000	H,V,L,R NON	Rx			1		TRACKING BEACON		
23) 3'	700.0000-4200.0000	H,V,L,R 100KD7W	Rx			1		DIGITAL DATA		
24) 3'	700.0000-4200.0000	H,V,L,R 100KG7W	Rx			1		DIGITAL DATA		
25) 3'	700.0000-4200.0000	H,V,L,R 36M0F8W	Rx			1		ANALOG VIDEO		
26) 3'	700.0000-4200.0000	H,V,L,R 36M0D7W	Rx			1		DIGITAL VIDEO, DATA	AUDIO	AND
27) 3'	700.0000-4200.0000	H,V,L,R 36M0G7W	Rx			1		DIGITAL VIDEO, DATA	AUDIO	AND
28) 3	625.0000-3650.0000	H,V,L,R 1M00F9D	Rx			1		TELEMETRY		
29)3	625.0000-3650.0000	H,V,L,R NON	Rx			1		TRACKING BEACON		
30)3	625.0000-3650.0000	H,V,L,R 100KG7W	Rx			1		DIGITAL DATA		
31) 3	625.0000-3650.0000	H,V,L,R 100KG7W	Rx			1		DIGITAL DATA		

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For the text of these provisions, refer to Section H.

For the text of these provisions, refer to Section H.				Max EIRP		Max EIRP Density		Special Provisions				
#	Frequency (MHz)	Polarization Code	n Emission	Tx/Rx Mode	/Carrier	•	Associated Antenna	(Refer to Section H)	Modulati Service			
32) 36	625.0000-3650.0000	H,V,L,R	36M0F8W	Rx			1		ANALOG V	/IDEO		
33) 36	625.0000-3650.0000	H,V,L,R	36M0D7W	Rx			1		DIGITAL DATA	VIDEO,	AUDIO	
34) 36	625.0000-3650.0000	H,V,L,R	36M0G7W	Rx			1		DIGITAL DATA	VIDEO,	AUDIO	
35)64	423.5000-6423.5000	H,V	3M00F8W	Tx	87.80	66.80	2					
36) 59	925.0000-6425.0000	H,V	17M5F8W	Tx	89.90	62.90	2					
37) 59	925.0000-6425.0000	H,V	25M0F8W	Tx	89.90	62.90	2					
38) 59	925.0000-6425.0000	H,V	36M0F7W	Tx	89.90	66.80	2					
39) 59	925.0000-6425.0000	H,V	36M0F8W	Tx	89.90	66.80	2					
40)59	925.0000-6425.0000	H,V	50K0F1D	Tx	40.00	29.00	2					
41) 59	925.0000-6425.0000	H,V	50K0F3E	Tx	40.00	33.00	2					
42) 59	925.0000-6425.0000	H,V	5M00F8W	Tx	88.90	57.90	2					
43)64	423.5000-6423.5000	H,V	3M00F8W	Tx	87.80	66.80	3					
44) 59	925.0000-6425.0000	H,V	17M5F8W	Tx	89.90	62.90	3					
45) 59	925.0000-6425.0000	H,V	25M0F8W	Tx	89.90	62.90	3					
46)59	925.0000-6425.0000	H,V	36M0F7W	Tx	89.90	66.80	3					
47) 59	925.0000-6425.0000	H,V	36M0F8W	Tx	89.90	66.80	3					
48) 59	925.0000-6425.0000	H,V	50K0F1D	Tx	40.00	29.00	3					
49)59	925.0000-6425.0000	H,V	50K0F3E	Tx	40.00	33.00	3					
50) 59	925.0000-6425.0000	H,V	5M00F8W	Tx	88.90	57.90	3					
51)64	423.5000-6423.5000	H,V	3M00F8W	Tx	87.80	66.80	4					
52) 59	925.0000-6425.0000	H,V	17M5F8W	Tx	89.90	62.90	4					
53) 59	925.0000-6425.0000	H,V	25M0F8W	Tx	89.90	62.90	4					
54) 59	925.0000-6425.0000	H,V	36M0F7W	Tx	89.90	66.80	4					

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AND

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#### **B) Particulars of Operations**

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarizatio Code	on Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services	
55) 592	25.0000-6425.0000	H,V	36M0F8W	Tx	89.90	66.80	4			
56) 592	25.0000-6425.0000	H,V	50K0F1D	Tx	40.00	29.00	4			
57) 592	25.0000-6425.0000	H,V	50K0F3E	Tx	40.00	33.00	4			
58) 592	25.0000-6425.0000	H,V	5M00F8W	Tx	88.90	57.90	4			

#### **C) Frequency Coordination Limits**

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East West Limit Limit	Elevation (Degrees) East West Limit Limit	Azimuth (Degrees) East West Limit Limit	Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
1)	5925.0000-6425.0000	53.0W-188.0W	11.1-08.6	104.1-257.8	24.46 1	
2)	5925.0000-6425.0000	53.0W-188.0W	11.1-08.6	104.1-257.8	24.46 1	
3)	5850.0000-5925.0000	145.0W-188.0W	41.4-08.6	220.9-257.8	24.46 1	
4)	3700.0000-4200.0000	53.0W-188.0W	11.1-08.6	104.1-257.8	1	
5)	3625.0000-3650.0000	145.0W-188.0W	41.4-08.6	220.9-257.8	1	
6)	5925.0000-6425.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	17.4 2	
7)	3700.0000-4200.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	2	
8)	5925.0000-6425.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	17.4 3	
9)	3700.0000-4200.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	3	
10)	5925.0000-6425.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	17.4 4	
11)	3700.0000-4200.0000	69.0W-150.0W	24.1-38.2	115.3-226.8	4	

#### **D) Points of Communications**

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to Permitted Space Station List
- 2) 1 to NSS-9 (S2756) @ 177 W.L. (Netherlands-licensed)
- 3) 1 to INTELSAT 18 (S2817) @ 180 degrees E.L. (U.S.-licensed)

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#### E) Antenna Facilities

	Site ID	Antenna ID		Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1		1	1	13	VERTEX	13 KPC	307	14.9 AGL/ 321.9 AMSL	
	Max Ga	ins(s):	53.5	dBi @	4.0000 GHz 56.8	dBi @ 6.000	00 GHz		
	Maximu	ım total input	power	at antenn	a flange (Watts) =	3,090.30			
	Maximu	ım aggregate d	output E	IRP for a	ll carriers (dBW) =	89.90			
1		2	1	13	E SYSTEMS	C23508-N10	307	14.9 AGL/ 321.9 AMSL	
	Max Ga	ins(s):	53.2	dBi @	4.0000 GHz 56.9	dBi @ 6.000	00 GHz		
	Maximu	m total input	power	at antenn	a flange (Watts) =	3,090.30			
	Maximu	m aggregate d	output E	IRP for a	ll carriers (dBW) =	89.90			
1		3	2	11	SCIENTIFIC ATLANTA	8007	307	12.8 AGL/ 319.7 AMSL	
	Max Ga	ins(s):	51.4	dBi @	4.0000 GHz 55.0	dBi @ 6.000	00 GHz		
	Maximu	m total input	power	at antenn	a flange (Watts) =	3,090.30			
	Maximu	ım aggregate d	output E	IRP for a	ll carriers (dBW) =	89.90			
1		4	2	11	HARRIS	5260	307	12.8 AGL/ 319.7 AMSL	
	Maximu	-	power		4.0000 GHz 55.2 a flange (Watts) = .ll carriers (dBW) =	dBi @ 6.000 3,090.30 89.90	00 GHz		

#### **G)** Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

#### H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 310 --- This transmitting earth station is granted to operate the frequency band 3650-3700 MHz on a secondary basis (see U.S. Table of Frequency Allocations footnote NG169) and shall immediately cease operation upon notification of harmful interference into any service that has primary status.
  - 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.

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#### H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
  - 2510 --- Waiver of Section 25.203 (e) of the Commission's Rules and Regulations is granted for the beam intersections listed in the application(s) for this facility.
  - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
  - 5208 --- The licensee shall take all necessary measures to ensure that the antenna 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 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. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. 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.
  - 5216 --- All operations shall be on a non-common carrier basis.
  - 9659 --- The licensee is afforded 30 days from the date of issuance of this license to decline it as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.
- 90133 --- Operations with the point of communication ALSAT or Permitted list must comply with the routine licensing provisions of parts 25 of Title 47 of the Code of Federal Regulations.
- 90134 --- Operations with the satellite points of communication are limited to the frequencies identified on the FCC Current Authorizations List and the FCC Market Access List.
- 90262 --- This authorization to operate in the 3625-3650 MHz frequency band on a primary basis is granted pursuant to having been filed prior to the effective date of the 3.5 GHz rules, July 23, 2015. See Section 2.106, Footnote US107(a) adopted in GN Dkt No. 12-354, FCC 15-147 (rel. Apr. 21, 2015).

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#### B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R.§ 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulates is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.

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