

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Prior(Closed) Authorization : FCC WEB Reproduction
 Unofficial Copy

Name: AC BIDCO LLC

Call Sign: E120106
File Number: SES-LIC-20120619-00574

Authorization Type: License
Non Common Carrier **Grant Date:** 05/01/2013 **Expiration Date:** 05/01/2028

Nature of Service: Mobile Satellite Service

Class of Station: Mobile Earth Station

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1)	1	Operate up to 1000 (0.24 m terminals) GoGo Network Ops. Cen. Tel 866 943 4662 Itasca, DuPage, IL, 60143			0.0	NA	

Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.

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 Wednesday, May 01, 2013 (3 AM Eastern Standard Time) and ending Monday, May 01, 2028 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is Thursday, May 01, 2014 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

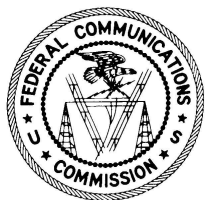
B) Particulars of Operations

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.

#	Frequency	Polarization	Emission	Tx/Rx Mode	Max EIRP /Carrier	Max EIRP Density	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	14000.0000 - 14500.0000	H,V	4M10G7D	T	42.80	12.70	AES1		DIGITAL DATA SERVICES
2)	14000.0000 - 14500.0000	H,V	6M00G7D	T	44.40	12.70	AES1		DIGITAL DATA SERVICES
3)	14000.0000 - 14500.0000	H,V	6M56G7D	T	44.43	12.28	AES1		DIGITAL DATA SERVICES
4)	14000.0000 - 14500.0000	H,V	6M94G7D	T	44.45	12.05	AES1		DIGITAL DATA SERVICES
5)	14000.0000 - 14500.0000	H,V	8M00G7D	T	44.50	11.49	AES1		DIGITAL DATA SERVICES
6)	12250.0000 - 12750.0000	H,V	30M0G7D	R			AES1		Digital Data Services
7)	11700.0000 - 12200.0000	H,V	30M0G7D	R			AES1		Digital Data Services
8)	11450.0000 - 11700.0000	H,V	30M0G7D	R			AES1		Digital Data Services
9)	10950.0000 - 11200.0000	H,V	30M0G7D	R			AES1		Digital Data Services

C) Frequency Coordination

#	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)	14000.0000 - 14500.0000	302.0E-302.0E	5.0 - 5.0	0.0 - 0.0	-3.9	AES1



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2)	14000.0000 - 14500.0000	101.0W-101.0W	5.0 - 5.0	0.0 - 0.0	-3.9	AES1	
3)	14000.0000 - 14500.0000	47.0W-47.1W	5.0 - 5.0	0.0 - 0.0	-3.9	AES1	
4)	14000.0000 - 14500.0000	315.0E-315.0E	5.0 - 5.0	0.0 - 0.0	-3.9	AES1	
5)	12250.0000 - 12750.0000	166.0E-166.0E	5.0 - 5.0	0.0 - 0.0		AES1	
6)	11450.0000 - 11700.0000	47.0W-47.1W	5.0 - 5.0	0.0 - 0.0		AES1	
7)	14000.0000 - 14500.0000	166.0E-166.0E	5.0 - 5.0	0.0 - 0.0	-3.9	AES1	
8)	11700.0000 - 12200.0000	101.0W-101.0W	5.0 - 5.0	0.0 - 0.0		AES1	
9)	10950.0000 - 11200.0000	47.0W-47.1W	5.0 - 5.0	0.0 - 0.0		AES1	
10)	11700.0000 - 11950.0000	315.0E-315.0E	5.0 - 5.0	0.0 - 0.0		AES1	
11)	11700.0000 - 12200.0000	302.0E-302.0E	5.0 - 5.0	0.0 - 0.0		AES1	
12)	12500.0000 - 12750.0000	47.0W-47.1W	5.0 - 5.0	0.0 - 0.0		AES1	
13)	11700.0000 - 11950.0000	47.0W-47.1W	5.0 - 5.0	0.0 - 0.0		AES1	
14)	12500.0000 - 12750.0000	338.0E-338.0E	5.0 - 5.0			AES1	
15)	14000.0000 - 14500.0000	338.0E-338.0E	5.0 - 5.0		-3.9	AES1	
16)	11450.0000 - 11700.0000	302.0E-302.0E	5.0 - 5.0		0.0	AES1	
17)	12250.0000 - 12500.0000	72.1E-72.1E	5.0 - 5.0	- 0.0		AES1	
18)	14000.0000 - 14500.0000	72.1E-72.1E	5.0 - 5.0		-3.9	AES1	

D) Point of Communications

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

- 1) 1 to SES-1 (S2807) @ 101 degrees W.L. (U.S.-licensed)
- 2) 1 to NSS-703 (S2818) @ 47.05 degrees W.L. (UK/Gibraltar-licensed)
- 3) 1 to INTELSAT 19 (S2850) @ 166.0 degrees E.L. (U.S.-licensed)
- 4) 1 to INTELSAT 14 (S2785) @ 45 degrees W.L. (U.S.-licensed)
- 5) 1 to INTELSAT 21 (S2863) @ 58.0 degrees W.L. (U.S.-licensed)
- 6) 1 to SES-4 (S2828) @ 22 degrees W.L. (Netherlands-licensed)
- 7) 1 to INTELSAT 22 (S2846) @ 72.1 degrees E.L. (U.S.-licensed)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (Meters)	Manufacturer	Model Number	Site Elevation	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	AES1	1000	0.24	AeroSat	HR6400	0.0	0.0 AGL/ 0.0 AMSL	

Max Gains(s):31.8 dBi @ 11.7000 GHz 29.0 dBi @ 14.4700 GHz

Maximum total input power at antenna flange (Watts) = 35.48

Maximum aggregate output EIRP for all carriers (dBW)44.5



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F) Remote Control

1	SES 1 Teleport 2823 Grimville Rd Woodbine, Carroll, MD +1 703 367 7300	Call Sign:	E920698
1	NSS 703 Teleport 2323 Grimville Rd Mount Airy, Carroll, MD +1 703 367 7300	Call Sign:	E070181
1	IS 19 Teleport 961 ANSELMO COURT Napa, Napa, CA +1 800 321 3959	Call Sign:	E980460
1	IS 19 Teleport 961 ANSELMO COURT Napa, Napa, CA +1 800 321 3959	Call Sign:	E980467
1	IntelSat Teleport 17633 Technology Blvd Hagerstown, Washington, MD +1 800 321 3959	Call Sign:	E120051
1	IS 21 Teleport 17633 Technology Blvd Hagerstown, Washington, MD +1 800 321 3959	Call Sign:	E030051
1	IS 14 Teleport 2857 Fork Creek Church Road Ellenwood, Dekalb, GA +1 800 321 3959	Call Sign:	E940333
1	IS 14 Teleport 2857 Fork Creek Church Road Ellenwood, Dekalb, GA +1 800 321 3959	Call Sign:	E090093
1	SES-4 Teleport 8000 Gainsford Ct. Bristow, Prince William, VA, 20136 1 703 367 7300	Call Sign:	E020071
1	SES-4 Teleport 8000 Gainsford Ct. Bristow, Prince William, VA, 20136 1 703 367 7300	Call Sign:	E000696

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:

1010 Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.



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H) Special and General Provisions

- 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.
- 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.
- 3219 All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
- 90052 When the aircraft earth station network is put into operation, the licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the network was put into operation and will remain operational during the license period unless the license is submitted for cancellation.
- 90053 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. 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. 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 mW/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.
- 90054 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 satellites listed as points of communication. Operations authorized pursuant to this license also include operations by non-U.S.-registered aircraft within U.S. territory, including territorial waters.
- 90055 The aircraft earth stations are authorized, on a secondary basis, to transmit in the 14.0-14.5 GHz frequency band to the following geostationary-orbit space stations: SES-4 (Call Sign S2828) at 22° W.L.; Intelsat 14 (Call Sign S2785) at 45° W.L.; NSS-703 (Call Sign S2818) at 47.05° W.L.; Intelsat 21 (Call Sign S2863) at 58° W.L.; SES-1 (Call Sign S2807) at 101° W.L.; Intelsat 19 (Call Sign S2850) at 166° E.L.; and Intelsat 22 (Call Sign S2846) at 72.1° E.L. The aircraft earth stations authorized herein must immediately terminate operations upon notification that such operation is causing harmful interference to any radio system in the 14.0-14.5 GHz frequency band authorized on a primary basis in conformance with the U.S. Table of Frequency Allocations or authorized on a secondary basis prior to the effective date of this authorization. The aircraft earth stations authorized herein cannot claim protection from harmful interference from any radio system in the 14.0-14.5 GHz frequency band authorized on a primary basis in conformance with the U.S. Table of Frequency Allocations or authorized on a secondary basis prior to the effective date of this authorization.
- 90056 Reception of downlink transmissions is on a non-interference, non-protected basis from the following geostationary-orbit space stations: SES-4 (Call Sign S2828) at 22° W.L. in the 12.5-12.75 GHz frequency band; Intelsat 14 (Call Sign S2785) at 45° W.L. in the 11.7-11.95 GHz frequency band; NSS-703 (Call Sign S2818) at 47.05° W.L. in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-11.95 GHz, and 12.5-12.75 GHz frequency bands; Intelsat 21 (Call Sign S2863) at 58° W.L. in the 11.45-11.7 GHz and 11.7-12.2 GHz frequency bands; SES-1 (Call Sign S2807) at 101° W.L. in the 11.7-12.2 GHz frequency band; Intelsat 19 (Call Sign S2850) at 166° E.L. in the 12.25-12.75 GHz frequency band; and Intelsat 22 (Call Sign S2846) at 72.1° E.L. in the 12.25 - 12.5 GHz frequency band. The aircraft earth station operations authorized herein must accept interference from any radio station operating in conformance with the U.S. Table of Frequency Allocations.
- 90057 Operation pursuant to this authorization must be in compliance with the terms of the licensee's coordination agreements with the National Science Foundation and the National Aeronautics and Space Administration pertaining to operation of aircraft earth stations in the Ku-Band.



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H) Special and General Provisions

- 90059 Communications between Gogo LLC's aircraft earth stations and the NSS-703 space station must be in compliance with all existing and future space station coordination agreements reached between the United Kingdom and other Administrations.
- 90060 Communications between Gogo LLC's aircraft earth stations and the SES-4 space station must be in compliance with all existing and future space station coordination agreements reached between the Netherlands and other Administrations.
- 90061 When operating in international airspace within line-of-sight of the territory of a foreign administration where Fixed Service networks have a primary allocation in the 14.0-14.5 GHz band, an aircraft earth station must not produce ground-level power flux density (pfd) in such territory in excess of the following values unless the foreign administration has imposed other conditions for protecting its FS stations: $-132 + 0.5 \times \text{THETA dB(W/(m}^2 \text{ MHz))}$ for $\text{THETA} \leq 40^\circ$; $-112 \text{ dB(W/(m}^2 \text{ MHz))}$ for $40^\circ < \text{THETA} \leq 90^\circ$. Where: THETA is the angle of arrival of the radio frequency wave in degrees above the horizontal, and the aforementioned limits relate to the pfd and angles of arrival that would be obtained under free space propagation conditions.
- 90062 Operation pursuant to this authorization outside the United States in the 14.0-14.5 GHz band must be in compliance with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band.
- 90063 Gogo LLC must maintain a U.S. point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein.
- 90064 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.
- 90065 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.
- 90066 Stations authorized herein must not be used to provide air traffic control communications.
- 90067 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.
- 90068 The licensee must maintain records of the following data for each operating aircraft earth station: location (latitude, longitude, altitude); aircraft attitude (pitch, yaw, roll); transmit frequency and occupied bandwidth; data rate; EIRP; and target satellite. This data must be recorded at intervals of no more than two minutes while an aircraft earth station is transmitting and every 30 seconds when aircraft roll angle is greater than 10 degrees. The licensee must also record instances when aircraft earth station pointing error exceeds 0.2 degrees. The licensee must make this data available upon request to a fixed-satellite service system operator or the Commission within 24 hours after receiving the request.
- 90071 Waiver of the Table of Frequency Allocation, Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, is granted for space-to-Earth operations, on an unprotected, non-interference basis, in the 11.7-12.2 GHz, 10.95-11.2 GHz, and 11.45-11.7 GHz frequency bands. Waivers of Footnote NG104 of the Table of Frequency Allocation, and Footnote 2 of Section 25.202(a)(1) of the Commission's rules, 47 C.F.R. §§ 2.106 and 25.202(a)(1), are also granted for space-to-Earth operations, on an unprotected, non-interference basis, in the 10.95-11.2 GHz and 11.45-11.7 GHz frequency bands in the United States. Waivers are granted pending favorable action on any conforming modification application filed pursuant to Revisions to Part 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands, IB Docket No. 12-376 (Docket Name: Notice of Proposed Rulemaking and Report and Order, FCC 12-161, 27 FCC Rcd 16510, 16552-56, para. 114-118 (2012)).



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H) Special and General Provisions

- 90073 Reception of downlink transmissions in the 11.95-12.2 GHz frequency band from Intelsat 14 (Call Sign S2785) at 45° W.L. is not permitted by this authorization. Intelsat 14's authorization does not include those frequencies. (IBFS File No. SAT-RPL-20090123-00007).
- 90075 Licensee is afforded 30 days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.
- 90078 In the event that a non-geostationary orbit satellite system commences operations in the 14.0-14.5 GHz frequency band, Gogo LLC must cease operations unless such operations have been coordinated with the operator of the NGSO system or Gogo LLC has demonstrated that its operations will not cause harmful interference to the NGSO system.
- 90079 Antenna elevation for all operations must be at least 5 degrees above the geographic horizon while the aircraft is on the ground.
- 90080 Gogo LLC shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.
- 90081 All operations shall be on a non-common carrier basis.



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H) Special and General Provisions

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.