

Applicant: AC BidCo LLC
Call Sign: E120106
File No.: SES-STA-20160825-00742
Special Temporary Authority



File # SES-STA-20160825-00742

Call Sign E120106 Grant Date 9/1/2016
(or other identifier)

Term Dates
From 9/1/2016 To: 10/31/2016

Approved: Paul E. Blaes

AC BidCo LLC (AC BidCo) is granted special temporary authority for a period of 60 days, beginning September 1, 2016, to operate up to 200 (0.24 meter AeroSat model HR6400 and 0.74 meter ThinKom model 2Ku) earth stations aboard aircraft (ESAA) with: (1) the AMC-3 satellite (S2162) at the 67° W.L orbital location in the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands; and (2) with the Intelsat 29e satellite (S2913) at the 50.0° W.L. orbital location in the 14.0-14.5 GHz (Earth-to-space), 11.7-12.2 GHz (space-to-Earth) and 10.95-11.7 GHz (space-to-Earth) frequency bands subject to the following conditions:

1. Operations are on an unprotected and non-harmful interference basis. AC BidCo must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.

2. Operation pursuant to this authorization must be in compliance with the terms of AC BidCo's coordination agreements with the National Science Foundation and the National Aeronautics and Space Administration pertaining to operation of ESAA in the Ku-Band.

3. 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.

4. 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 ESAA must not operate in a manner that would produce predicted 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/(m² MHz)) for $\text{THETA} \leq 40^\circ$; -112 dB(W/(m² 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.

5. Operation pursuant to this authorization must conform to the terms of coordination agreements between the operator or Intelsat 29e and AMC-3 and operators of other Ku-band geostationary satellites within six angular degrees of Intelsat 29e and AMC-3. In the event that another GSO Fixed-Satellite Service (FSS) space station commences operation in the 14.0-14.5 GHz band at a location within six degrees of this space station, ESAA operating pursuant to this temporary authority shall cease transmitting to that space station unless and until such operation has been coordinated with the new space station's operator or AC BidCo demonstrates that such operation will not cause harmful interference to the new co-frequency space station.

6. AC BidCo must operate in accordance with the off-axis EIRP spectral densities supplied to Intelsat in obtaining the satellite operator certification for Intelsat 29e and AMC-3, attached as exhibits to AC BidCo's pending application, IBFS File No. SES-MFS-20160824-00738. AC BidCo shall automatically cease emissions within 100 milliseconds if the ESAA

transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator and transmission shall not resume until AC BidCo conforms to the off-axis EIRP spectral densities supplied to the target satellite operator.

7. AC BidCo 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 [ww.fcc.gov/oet/rfsafety](http://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.

8. AC BidCo 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. AC BidCo has specified the following contact information: +1 866-943-4662 and noc@gogoair.com.

9. ESAA 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. ESAA 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 ESAA 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. For each ESAA transmitter AC BidCo shall maintain records of the following data for each operating ESAA, 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 ESAA is transmitting. The ESAA 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 . . .) in which the records values are recorded will be supplied along with the records.

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

14. AC BidCo shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

15. In connection with the provision of service in any particular country, AC BidCo is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.

16. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending application, IBFS File No. SES-MFS-20160824-00738.

17. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at AC BidCo's risk.

18. 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 filed within thirty days of the date of the public notice indicating that this action was taken.