

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
STA for AMC-6 @ 72WL (May 2016)

1. Applicant

Name: Row 44 Inc. **Phone Number:** 818-706-3111
DBA Name: **Fax Number:**
Street: 4353 Park Terrace Drive **E-Mail:** smclellan@geemedia.com
City: Westlake Village **State:** CA
Country: USA **Zipcode:** 91361
Attention: Mr Simon McLellan



File # SES-S7A-20160520-00445

Call Sign E08010 Grant Date 5/23/2016
(or other identifier)

Term Dates
From 5/23/2016 To: 6/23/2016 ^{224 PEA}

Approved: Paul E. Hayes
with conditions

Applicant: Row 44, Inc.
Call Sign: E080100
File No.: SES-STA-20160520-00445
Special Temporary Authority (STA)



Call Sign E080100 Grant Date 5/23/2016
(or other identifier)
Term Dates
From 5/23/2016 To: 6/23/2016 ^{22 PCH}
Approved: Paul E. Gray

Row 44, Inc. is granted special temporary authority for a period of 30 days, beginning May 23, 2016 to operate its, 0.62 meter TECOM Ku-Stream antenna, earth stations aboard aircraft (ESAA) to communicate with the AMC-6 satellite (S2347) at the 72° W/L. orbital location using the 14.05 to 14.47 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands. Operations must be in accordance with the technical specifications contained in Row 44, Inc.'s application and are subject to the following conditions:

1. Operations under this grant of special temporary authority must be on an un-protected, non-harmful interference basis, i.e., while operating under this temporary authority Row 44, Inc. must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. Row 44, Inc. must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.
2. ESAA operations in the 14.2-14.47 GHz band shall not exceed the EIRP density limits specified in the current earth station authorization, Call Sign E080100, IBFS File No. SES-MFS-20150424-00270.
3. Operation pursuant to this authorization outside the United States in the 14.2-14.47GHz 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 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/(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. Operations pursuant to this authorization must conform to the terms of coordination agreements between the operator of the AMC-6 satellite (S2347) and operators of other Ku-band geostationary satellites within six angular degrees of the AMC-6 satellite (S2347). In the event that another GSO Fixed-Satellite Service (FSS) space station commences operations in the 14.0-14.5 GHz band at a location within six degrees of any of these space stations, aircraft earth stations 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 Row 44, Inc. demonstrates that such operation will not cause interference to the new co-frequency space station.

6. Row 44, Inc. must 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/lrfsafety) 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.

7. Row 44, Inc. 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. The licensee shall have available, at all times, the technical personnel necessary to perform supervision of remote station operations.

8. 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.

9. 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.

10. Stations authorized herein must not be used to provide air traffic control communications.

11. 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.

12. For each ESAA transmitter, Row 44, Inc. must maintain records of the following data: 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. Row 44, Inc. must comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

15. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending of future applications or future requests for special temporary authority.

16. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Row 44, Inc.'s risk.

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.

2. Contact

Name: David S. Keir **Phone Number:** 202-429-8970
Company: Lerman Senter PLLC **Fax Number:** 202-293-7783
Street: 2001 L Street, NW **E-Mail:** dkeir@lermansenter.com
 Suite 400
City: Washington **State:** DC
Country: USA **Zipcode:** 20036 -4946
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 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 CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant Change Station Location Other

6. Requested Use Prior Date
05/23/2016

7. City 8. Latitude
(dd mm ss.s h) 0 0 0.0

9. State	10. Longitude (dd mm ss.s h) 0 0 0.0
11. Please supply any need attachments. Attachment 1: Explanatory Stmt Attachment 2: Coordination Letter 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: 5px 0;">Request for special temporary authority for an initial period of 30 days commencing May 23, 2016 to operate on an interim basis using space segment capacity on AMC-6 at 72WL during the transit of the AMC-2 satellite to its new location at 85WL. See Attached Narrative.</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. <p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>	
14. Name of Person Signing Simon McLellan	15. Title of Person Signing Chief Engineer
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.

EXPLANATORY STATEMENT

Row 44, Inc., pursuant to Section 25.120(b) of the FCC's Rules, hereby requests Special Temporary Authority ("STA") for a period of thirty (30) days to operate its licensed Ku-band network of Earth Stations Aboard Aircraft ("ESAA") (Call Sign E080100), using space segment capacity on the SES, S.A. ("SES") AMC-6 satellite ("AMC-6") at 72° W.L. Beginning in about two weeks, the AMC-2 satellite currently located at 81° W.L., and on which Row 44 currently uses significant capacity, will begin transiting to a new orbital position at 85° W.L. During this transition period, Row 44 requires alternate capacity in order to maintain its current service in U.S. airspace. Given the timing of this change-over, Row 44 must begin test transmissions in preparation for shifting traffic on Monday, May 23, 2016. Accordingly, Row 44 requires an STA commencing on that date, one business day from the filing of this application.

Row 44 seeks interim authority to employ capacity on AMC-6 as this capacity is immediately available to it as short-term replacement capacity during AMC-2's drift to its new location. This application is being filed now, just one business day prior to the proposed initiation of service, because of the need first to identify alternative capacity to replace AMC-2 on a temporary basis, and the requirement to obtain coordination certification from SES for its non-conforming spectrum use. The fact that Row 44 is already engaged in provision of service to the public, and the new space segment capacity is immediately required to maintain that service, constitute extraordinary reasons for granting the requested authority on short notice. See 47 C.F.R. § 25.120(a). Other than the addition of AMC-6 as a point of communication, Row 44's operations would remain consistent with all terms and conditions of its current license. Its proposed operations on AMC-6 would be limited to conventional Ku-band capacity frequencies at 11.7 to 12.2 GHz (downlink) and 14.05 to 14.47 GHz (uplink).

Row 44's operations will not cause harmful interference into adjacent satellites operating in accordance with FCC's two-degree spacing policy. Although the proposed operations are not fully compliant with Section §25.227(a)(1)(i) of the Commission's Rules, Row 44 has obtained, and provides as an attachment hereto, a coordination certification from SES in accordance with Sections 25.227(b)(2) of the Commission's Rules. Row 44's operations will also be fully consistent with its existing agreements with the National Science Foundation and the National Aeronautics and Space Administration, and will adhere to the terms and conditions of Row 44's current license.

Under Section 25.120(b)(1) of the FCC's Rules, the International Bureau may grant an STA when the public interest supports the relief requested, and/or delay in the institution of temporary operations would be contrary to the public interest. See 47 C.F.R. § 25.120(b)(1). Such authority may be granted for a period not to exceed 30 days "if the STA request has not been placed on public notice, and an application for regular authority is not contemplated." See 47 C.F.R. § 25.120(b)(4). Because Row 44 will not be filing an application for permanent access to AMC-6 at 72° W.L., its request is thus limited to thirty (30) days duration. Row 44 anticipates that the total length of its operations using AMC-6 will be no more than six to eight

weeks, which will nonetheless require it to seek an additional STA at the end of the initial 30-day period. Once AMC-2 reaches its new location at 85° W.L., Row 44 expects to transition its traffic back to that satellite.

Grant of the authority requested in this instance will promote the public interest by permitting Row 44 to provide uninterrupted service to existing customers using capacity on the AMC-6 satellite in lieu of capacity on AMC-2. Use of AMC-6 will help maintain effective coverage of all U.S. domestic routes currently served by Row 44. Grant of the requested STA is consistent with Commission policy and will not adversely affect other authorized operations. Row 44 acknowledges that any action taken pursuant to a grant of the requested STA will be at its own risk.

* * * * *

The conventional Ku-band capacity that Row 44 seeks to use on AMC-6 is available to it immediately. Accordingly, Row 44 respectfully requests that the FCC grant it authority as of May 23, 2016, for a period of thirty (30) days, to use the AMC-6 satellite as a point of communication in the conventional Ku-band in the United States using TECOM antennas now operating under its FCC ESAA network license.



Kimberly M. Baum
Vice President Spectrum Management & Development, Americas

**Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554**

19 May 2016

Subject: Engineering Certification of SES Americom, Inc. for the AMC-6 Satellite

To whom it may concern,

This letter confirms that SES is aware that Global Eagle Entertainment, Inc. ("GEE"), licensed by the Federal Communications Commission ("FCC") as Row 44, Inc., has filed an application seeking special temporary authority ("STA") in connection with its blanket authorization from the FCC to operate technically identical Ku-band Earth Stations Aboard Aircraft ("ESAA") transmit/receive terminals (Call Sign E080100) pursuant to ITU RR 5.504A and Section 25.227 of the Commission's rules, on domestic and international flights. The STA request seeks authority for GEE's ESAA terminals to communicate with the AMC-6 satellite at 72° W.L., under the current ESAA rules, including Section 25.227, for an interim period during the relocation of the AMC-2 satellite to 85° W.L.

Based upon the contents of the STA request and the representations made to SES by GEE concerning how it will operate on AMC-6 according to its letter dated May 19, 2016:

- SES acknowledges that the proposed operation of the GEE ESAA terminals has the potential to create harmful interference to satellite networks adjacent to AMC-6 that may be unacceptable.
- SES certifies that it has completed coordination as required under the FCC's rules and that the power density levels specified by GEE are consistent with any existing coordination agreements to which SES is a party with adjacent satellite operators within +/- 6 degrees of orbital separation from AMC-6.
- If the FCC authorizes the operations proposed by GEE, SES will include the power density levels specified by GEE in all future satellite network coordination with other operators of satellites adjacent to AMC-6.

Please let us know if additional information is required.

Yours Sincerely,


Kimberly M. Baum

SES Americom, Inc.
4 Research Way
Princeton, NJ 08540
USA

Tel. +1 609 987 4000
Fax +1 609 987 4517
Enter sender e-mail
www.ses.com