

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
STA Request for AMC-1 (129.15 WL) – Sept. 2015

1. Applicant

Name:	Row 44 Inc.	Phone Number:	818-706-3111
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City:	Westlake Village	State:	CA
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Attention:	Mr. Simon McLellan		



File # SES-STA-20150928-00639
E080100
Call Sign _____ Grant Date 10-7-15
(or other identifier)
Term Dates
From: 10-7-15 To: 12-6-15
Approved: [Signature]

Applicant: Row 44, Inc.
Call Sign: E080100
File No.: SES-STA-20150928-00639
Special Temporary Authority (STA)



File # SES-STA-20150928-00639
E080100
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Approved: Paul E. Hales

Row 44, Inc. is granted special temporary authority for a period of 60 days to operate up to 100 aeronautical terminals (0.62 meter TECOM Ku-Stream antenna) to communicate with AMC-1 (Call Sign S2445) at the 129.15° W.L. orbital location using the 14.0-14.5GHz (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 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 with the terms of coordination agreements between the operator of AMC-1 and operators of other Ku-band geostationary satellites within six angular degrees of AMC-1. 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 for each operating aircraft earth station (AES), 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 AES 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 applications or future requests for special temporary authority. E.g. IBFS File No. SES-MFS-20150928-00635

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.