

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
STA Request to Add Satmex 5 - February 2014

1. Applicant

Name:	Row 44 Inc.	Phone Number:	818-706-3111
DBA Name:		Fax Number:	
Street:	4353 Park Terrace Drive	E-Mail:	jcostello@row44.com
City:	Westlake Village	State:	CA
Country:	USA	Zipcode:	91361
Attention:	Mr James Costello		




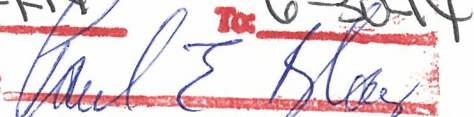
GRANTED  
International Bureau

File: SES-STA-20140205-00054  
Call Sign: 080100 Grant Date: 5-1-14  
(or other identifier)  
From: 5-1-14 To: 6-30-14  
Approved: [Signature]

20121023-00963/SES-AFS-20130920-00833/SES-AFS-20140203-00029.

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

17. 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.

 <b>GRANTED</b> International Bureau	File #	SESSTA-20140205-00054		
	Call Sign	G080100	Grant Date	5-1-14
	(or other identifier)			
	From	5-1-14	Term Dates	To: 6-30-14
	Approved:			

Conditions:

Applicant: Row 44 Inc.

File No.: SES-STA-20140205-00054

Call Sign: E080100

Row 44, Inc. is granted special temporary authority for a 60-day period to communicate with Satmex 5 (Call Sign S2589) at the 114.9° W.L. orbital location using the 14.0-14.5 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's application and are subject to the following conditions:

1. Operation under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, *i.e.*, while operating under this temporary authority Row 44 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 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 Row 44'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.
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 aircraft earth station 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/(m<sup>2</sup> MHz)) for  $\text{THETA} \leq 40^\circ$ ;  $-112$  dB(W/(m<sup>2</sup> 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 of Satmex 5 and operators of other Ku-band geostationary satellites within six angular degrees of Satmex 5. 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 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 demonstrates that such operation will not cause harmful interference to the new co-frequency space station.
6. Row 44 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/rf/safety](http://www.fcc.gov/oet/rf/safety)) 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.

7. Row 44 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. Row 44 must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.

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. For each transmitter, Row 44 shall 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 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.

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

13. Row 44 shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

14. In connection with the provision of service in any particular country, Row 44 is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.

15. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending applications. *E.g.* IBFS File Nos. SES-MOD-

<b>2. Contact</b>			
<b>Name:</b>	David S. Keir	<b>Phone Number:</b>	(202) 429-8970
<b>Company:</b>	Lerman Senter PLLC	<b>Fax Number:</b>	(202) 293-7783
<b>Street:</b>	2000 K Street, NW Suite 600	<b>E-Mail:</b>	dkeir@lermansenter.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20006 -
<b>Attention:</b>	David S. Keir	<b>Relationship:</b>	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 SESAFS2014020300029 or Submission ID			
4a. Is a fee submitted with this application?			
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input type="radio"/> Other (please explain):			
4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station			
5. Type Request			
<input checked="" type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input type="radio"/> Other			
6. Requested Use Prior Date			
03/10/2014			
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: ATTACHMENT 1	Attachment 2: 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;"> <p>Row 44, Inc. seeks special temporary authority for a 60-day period commencing March 10, 2014 to operate its licensed Ku-band Earth Stations Aboard Aircraft network (Call Sign E080100) using conventional Ku-band capacity (11.7-12.2/14.0-14.5 GHz) on Satmex 5 at 114.9 degrees W.L. during the pendency of its application for permanent modification of</p> </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.	
14. Name of Person Signing James B. Costello	15. Title of Person Signing Vice President, Engineering
<p>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).</p>	

## **FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to [PRA@fcc.gov](mailto:PRA@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

**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.**

## 12. Description

Row 44, Inc. seeks special temporary authority for a 60-day period commencing March 10, 2014 to operate its licensed Ku-band Earth Stations Aboard Aircraft network (Call Sign E080100) using conventional Ku-band capacity (11.7-12.2/14.0-14.5 GHz) on Satmex 5 at 114.9 degrees W.L. during the pendency of its application for permanent modification of its license to add this (and other satellites) as a point of communication. See Attachment 1.



### **EXPLANATORY STATEMENT**

Row 44, Inc. hereby requests Special Temporary Authority (“STA”) for a period of sixty (60) days, pursuant to Section 25.120(b) of the FCC’s Rules, to operate its licensed Ku-band network of Earth Stations Aboard Aircraft (“ESAA”), under Call Sign E080100, with an additional satellite point of communication, Satmex 5 at 114.9° W.L. Row 44 has filed an application seeking permanent authority to operate with this satellite (as well as three other additional satellites) as a new point of communication, and seeks an STA to permit initiation of service while this underlying application remains pending. *See* File No SES-MOD-20121023-00963, as amended by File Nos SES-AFS-20130920-00833 and SES-AFS-20140203-00029 (“Modification Application”). Row 44’s STA operation would change its current authority only through the addition of Satmex 5 as a point of communication, and its operations would otherwise remain consistent with all terms and conditions of its current license. Proposed operations on Satmex 5 would be limited to conventional Ku-band capacity frequencies at 11.7 to 12.2 GHz (downlink) and 14.0 to 14.5 GHz (uplink).

All technical and other required information concerning Row 44’s planned use of Satmex 5 is contained in the underlying application, including a coordination certification letter signed by Satmex with respect to the Satmex 5 satellite. *See* Modification Application, File No. SES-AFS-20140203-00029, Exhibit B. Row 44’s planned operations will also be fully consistent with its existing agreements with the National Science Foundation and the National Aeronautics and Space Administration, consistent with the terms 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 60 days if the STA Request itself has not appeared on public notice but the applicant has filed (or even plans to file) a request for permanent authority for the parameters and facilities requested. *See* 47 C.F.R. § 25.120(b)(3).

Grant of the authority requested in this instance will affirmatively serve the public interest by permitting Row 44 to continue to expand its ESAA network for the benefit of both air travelers and airline crew members. Addition of Satmex 5 to Row 44’s existing authority will provide new and more effective coverage of its primary U.S. service area (CONUS), as well as portions of Mexico. Access to this new capacity is particularly necessary at this time because the space segment currently available to Row 44 on the Horizons 1 satellite, which was part of Row 44’s initial authorization, has proven insufficient to meet increasing user demands. Specifically, Satmex 5 will support traffic from a U.S. carrier airline operating primarily within the western

U.S., with routes extending into Mexico. This will provide both enhanced performance and make new areas of operation available to U.S. airline passengers.

The conventional Ku-band capacity that Row 44 seeks to use on Satmex 5 will be available in the very near term. Accordingly, Row 44 respectfully requests that the FCC grant it authority commencing on or before March 10, 2014 to use the Satmex 5 satellite as a point of communication in the conventional Ku-band under its FCC ESAA network license.